



# Camp Bonneville Advisory Group Meeting Agenda

February 21, 2024, 4:00 PM – 6:00 PM

Luke Jensen Sports Complex in the  
LJSP Bud Van Cleve Community Meeting Room  
4000 NE 78<sup>th</sup> Street, Vancouver, WA 98665, and  
Virtual Meeting via Microsoft Teams

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<b><u>Advisory Group Members:</u></b> Allen Thomas Dr. Ann Palkovich Shaw Gregory Shaw Michael Conway Mary Lennox Tom Dennison Stephen Jones	4:00 PM	<b>Introductions</b> – Reacquainting ourselves as members of the Camp Bonneville Advisory Group.
	4:15 PM	<b>Charter</b> – Review and have members sign.
	4:30 PM	<b>Detailed examination of the Prospective Purchase Consent Decree (PPCD), County Deed, Feasibility of Suitability for Early Transfer (FOSET), and the Camp Bonneville Land Re-Use Plan.</b>
<b><u>Next Meeting:</u></b> March 20, 2024 <i>Microsoft Teams and In-Person</i>	5:45 PM	<b>Close out remarks</b> – Summary of key points, next meeting review.

*This meeting will be recorded and posted on the Camp Bonneville website:  
<https://clark.wa.gov/public-works/camp-bonneville?year=2024>*



# Camp Bonneville Advisory Group Charter

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## **Purpose**

This charter establishes the foundation for a committee dedicated to conducting an examination of cleanup objectives and reviewing evidence that either identifies further cleanup or supports the conclusion that no further action is required for specific projects within the scope of the Sitewide Cleanup Action Plan (the "Plan"). The committee's primary role is to review what cleanup has been completed, determine further cleanup that needs to be addressed and furnish advisory feedback to Clark County, focusing on the effective implementation and progression of the Plan. The culmination of this advisory process will be a comprehensive report delivered to the Clark County Council, designed to inform, and guide the council's decisions regarding environmental restoration and public health safeguards. Through its diligent oversight and expert recommendations, the committee aims to ensure that the Plan's execution aligns with standards of environmental integrity and community well-being.

## **Background:**

The Citizen Advisory Group (CAG) was put on hold in 2011 and community engagement was integrated into the Washington State Department of Ecology's (WSDOE) public engagement process. Since the project has completed the munitions cleanup and is finalizing the final site cleanup action plan, the County is starting up the CAG in preparation of the sitewide cleanup action plan that WSDOE will be completing.

## **Values**

- Committee members are welcome to offer recommendations on the sitewide cleanup action plan. Meeting minutes will be taken and posted on the project website to ensure transparency of the process. Members of the public may attend meetings for observation but will not be permitted to participate.
- CAG members are required to focus their recommendations and deliberations on the broader public interest and community needs, ensuring that personal biases and individual interests do not influence their guidance.

## **Composition**

The committee's composition, approved by the Clark County Council, includes a diverse mix of community representatives and County staff to capture a wide array of perspectives, ensuring deliberations and recommendations reflect the community's diverse interests and concerns. Members are tasked with the crucial duty of disclosing any conflicts of interest, and maintaining the committee's focus on unbiased, community-centric outcomes. This dedication to transparency and integrity is fundamental to achieving the committee's goals ethically and effectively.

## **Roles and Responsibilities**

### **Clark County Staff & Leadership**

Organize, facilitate, and schedule meetings. Ensure that all members of the Committee have input and are equally valued. Act as a liaison for Clark County and provide an understanding and documentation of the cleanup to the Committee. Consider recommendations made by the Committee. Work with WSDOE and the Department of Defense (DOD) on the Plan.

### **Committee Members**

Act as representative of the community and groups they may represent. Committee members must put forward the interests of the community or groups over their interests. Attend and actively participate in

meetings, review reference documents, *Plan* drafts, and communicate information with the group they may represent.

**Ground Rules**

- CAG members will be respectful of each other, participants, and County Staff.
- CAG members will not act or discuss issues in any way that undermines the group process.
- CAG members are free to speak on their behalf to the press, officials, or others; however, if any of the matters discussed relate to topics addressed by the CAG, then the member shall make it clear that they are speaking only on behalf of themselves and that they are not speaking on behalf of the CAG or Clark County. CAG members will notify staff immediately of any communications of this nature.
- CAG members will review documents before attending meetings where the documents will be discussed.
- CAG members will allow other members to be heard during discussions, ensuring everyone has an opportunity to speak and respecting the facilitator's role in managing dialog. CAG members will hold comments and statements until identified by the facilitator.
- Recommendations to the County Council will use a consensus model. A majority vote will be used by the CAG if consensus cannot be obtained. The County Staff will determine when to use the majority vote.

**Existing Assumptions**

CAG member's review of the cleanup, identifying further cleanup actions and recommendations will be respected. It's important to note that the ultimate plan decision rests with WSDOE.

The cleanup plan approved by the DOD and WSDOE will be viewed as the approved and final scope of work.

**Meeting Schedule**

- Committee meetings planned over the next 12 months.
- Meetings will continue to be hybrid, as appropriate. Members are encouraged to attend in person.
- Meetings should be scheduled at least two weeks in advance.

**Sponsor Approval:**

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Rocky Houston, Division Manager, Parks & Lands  
Division

**Committee Member Acknowledgement:**

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Michael Conway

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Tom Dennison

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Mary Lennox

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Stephen Jones

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Ann Palkovich Shaw

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Gregory Shaw

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Allen Thomas



<b>Date:</b>	2/6/2024		
<b>To:</b>	Amber Emery, Deputy County Manager	<b>From:</b>	Rocky Houston, Parks & Lands Manager
<b>RE:</b>	Camp Bonneville Advisory Group	<b>CC:</b>	Priya Dhanapal, PW Deputy Directory Erik Harrison, Program Manager II

**Background:**

On January 10<sup>th</sup>, 2024, we presented a series of questions to Council during Council time to ensure that we were moving forward with the Camp Bonneville Advisory Group consistent with their wishes. This was based off questions we had received from members of the advisory group. Below is a summary of the questions we asked and the direction we received from Council.

Here are the questions that staff asked and what staff’s response/recommendation was.

- **Why do we have a 12-month schedule and appointments for 12 months?**
  - Direction was to have an advisory group for a 12-to-18- month period, as such we have communicated a 12-month initial period for this advisory group.
- **Why are we requiring members to sign a charter?**
  - The charter is used by steering committees and limited duration advisory groups to provide clarity of the purpose of the advisory group, any deliverables and ground rules for the advisory group. It is a tool to provide consistency for the County and the members of the advisory group.
- **Why bylaws are not being used instead of a charter?**
  - Bylaws are generally developed by a Board or Commission or long-standing advisory group and is developed by the members of that group. This group is a limited duration and limited focus advisory group.
- **Is this advisory group replacing the Citizen Advisory Group that ended in 2011?**
  - No. This is a County facilitated group. The Department of Ecology managed the prior group and has elected to utilize their normal public participation process after 2011.
- **Will this advisory group be part of the master planning process?**
  - No. The master planning process is a separate process and will be brought back to Council at that time for direction.
- **What is the deliverable for the Advisory Group?**
  - The deliverable is participating in a review of the clean-up work completed and identifying what clean-up work needs to still be completed. Furthermore, a report will be provided to Council on the clean-up status.

**Council Direction:**

- A short-term advisory group that is focused on reviewing the clean-up actions and identify what clean-up actions still needs to be completed.
- A charter is needed to provide clarity for members of their role and responsibilities.
- This advisory group is not part of the master planning process.
- Discussion on considering a consultant to review the long-term use of the site. It would be a separate process.



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SCOTT G. WEBER, CLERK  
CLARK COUNTY

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**STATE OF WASHINGTON  
CLARK COUNTY SUPERIOR COURT**

STATE OF WASHINGTON,  
DEPARTMENT OF ECOLOGY,  
  
Plaintiff,  
  
v.  
  
CLARK COUNTY, WASHINGTON  
  
Defendant.

NO. 06-2-05340-4

**AMENDED PROSPECTIVE  
PURCHASER CONSENT DECREE**

RE: CAMP BONNEVILLE  
MILITARY RESERVATION

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Exhibit A: Regional Map  
Exhibit B: Map of RAU 1  
Exhibit C: Map of RAU 2A  
Exhibit D: Map of RAU 2B  
Exhibit E: Map of RAU 2C  
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Exhibit G: Legal Descriptions of Property  
Exhibit H: RAU 2A Cleanup Action Plan  
Exhibit I: RAU 3 Cleanup Action Plan  
Exhibit J: Project Schedule

1 **I. INTRODUCTION**

2 1. In 2006, this prospective purchaser consent decree (Decree) was made and  
3 entered into by and between the State of Washington, Department of Ecology (Ecology), Clark  
4 County, Washington (Clark County), and the Bonneville Conservation, Restoration, and  
5 Renewal Team LLC (BCRRT LLC). The mutual objectives of Ecology, Clark County, and the  
6 BCRRT LLC were to provide for remedial actions at a facility where there have been releases  
7 or threatened releases of hazardous substances and to resolve the potential liability of Clark  
8 County and the BCRRT LLC for remedial actions within the facility. This Decree required  
9 Clark County and the BCRRT LLC to remediate the Camp Bonneville Military Reservation as  
10 defined in this Decree. The remedial actions were described in Section X of this Decree and in  
11 the attached exhibits.

12 2. Ecology, Clark County, and BCRRT LLC now seek to amend this Decree. In  
13 amending the Decree with respect to BCRRT LLC, the mutual objectives of Ecology, Clark  
14 County, and BCRRT LLC are to dismiss BCRRT LLC from this Decree. The mutual  
15 objectives of Ecology and Clark County in amending this Decree are to update the terms and  
16 conditions of this Decree and to continue to provide for remedial actions at this facility where  
17 there have been releases or threatened releases of hazardous substances and to resolve the  
18 potential liability of Clark County for remedial actions within the facility. The amended  
19 Decree requires Clark County to remediate the Camp Bonneville Military Reservation as  
20 defined in this amended Decree and exhibits hereto.

21 3. A Joint Motion to Amend the Decree entered in this action is being filed  
22 simultaneously with this Decree, as amended. An answer has not been filed, and there has not  
23 been a trial on any issue of fact or law in this case. However, the Parties wish to resolve the  
24 issues raised by Ecology's Complaint. In addition, the Parties agree that settlement of these  
25 matters without litigation is reasonable and in the public interest and that entry of this Decree is  
26 the most appropriate means of resolving these matters.



1           4.     In signing this amended Decree, Ecology and Clark County agree to its entry  
2 and agree to be bound by its terms as provided herein.

3           5.     By entering into this Decree, Ecology and Clark County do not intend to  
4 discharge non-settling Parties from any liability they have with respect to the matters alleged in  
5 the Complaint. The Parties retain the right to seek reimbursement, in whole or in part, from  
6 any liable persons for sums expended under this Decree, and Ecology retains the right to  
7 initiate enforcement action against any liable person not a Party to this Decree.

8           6.     This Decree shall not be construed as proof of liability or responsibility for any  
9 releases of hazardous substances or cost for remedial action nor an admission of any facts;  
10 provided, however, that Clark County shall not challenge the jurisdiction of Ecology in any  
11 proceeding to enforce this Decree.

12           7.     The Court is fully advised of the reasons for entry of this Decree, and good  
13 cause having been shown, it is hereby ORDERED, ADJUDGED, AND DECREED as follows:

14                           **II.     AUTHORITY, JURISDICTION, AND VENUE**

15           8.     This Court has jurisdiction over the subject matter and over the Parties pursuant  
16 to Chapter 70.105D RCW, the Model Toxics Control Act (MTCA), and pursuant to Chapter  
17 70.105 RCW, the Hazardous Waste Management Act (HWMA). Venue is proper in Clark  
18 County pursuant to RCW 70.105D.050(5)(b) and RCW 4.12.025.

19           9.     Pursuant to RCW 70.105.120, the Washington State Attorney General, at the  
20 request of Ecology, has authority to bring actions to enforce any requirement in the HWMA.

21           10.    Pursuant to RCW 70.105D.040(5), the Washington State Attorney General has  
22 the authority to agree to a settlement with a person not currently liable for remedial action at a  
23 facility who proposes to purchase, redevelop, or reuse the facility, provided Ecology  
24 determines, after public notice and comment, that:

25           (A)    The settlement will yield substantial new resources to facilitate cleanup;  
26

1 (B) The settlement will expedite remedial action consistent with the rules adopted  
2 under MTCA; and

3 (C) Based on available information, the redevelopment or reuse of the facility is not  
4 likely to contribute to any existing release or threatened release at the Site, interfere with any  
5 remedial actions that may be needed at the Site, or increase health risks to persons at or in the  
6 vicinity of the Site.

7 11. Pursuant to RCW 70.105D.040(4)(b), such a settlement shall be entered as a  
8 consent decree issued by a court of competent jurisdiction.

### 9 III. PARTIES BOUND

10 12. This Decree shall apply to and be binding upon the signatories to this Decree  
11 (Parties). The undersigned representative of each Party hereby certifies that he or she is fully  
12 authorized to enter into this Decree and to execute and legally bind such party to comply with  
13 the Decree. Clark County agrees to undertake the actions required of it by the terms and  
14 conditions of this Decree and not to contest state jurisdiction regarding this Decree. Clark  
15 County shall provide a copy of this Decree to all agents, contractors, and subcontractors  
16 retained to perform work required by this Decree and shall ensure that all work undertaken by  
17 such contractors and subcontractors will be in compliance with the Decree.

### 18 IV. DEFINITIONS

19 13. Unless otherwise expressly provided herein, the definitions set forth in Chapter  
20 70.105D RCW and Chapter 173-340 WAC shall control the meanings of the terms used in this  
21 Decree. Whenever the terms listed below are used in this Decree or in the attachments hereto,  
22 the following definitions shall apply:

23 (A) "Decree" means this Prospective Purchaser Consent Decree, all amendments  
24 thereto, and each of the exhibits attached to this Decree. Unless otherwise specified, "Decree"  
25 means the most current amended version of the Prospective Purchaser Consent Decree. All  
26

1 exhibits are integral and enforceable parts of this Decree. In the event of conflict between this  
2 Decree and any exhibit attached to this Decree, this Decree shall control.

3 (B) "Section" means a portion of this Decree identified by a Roman numeral and  
4 including one or more Paragraphs.

5 (C) "Paragraph" means a portion of this Decree identified by an Arabic Numeral.

6 (D) "Parties" means the Washington State Department of Ecology (Ecology) and  
7 Clark County, Washington (Clark County).

8 (E) "Bonneville Conservation, Restoration, and Renewal Team LLC" or "BCRRT  
9 LLC" means the conservation non-profit that acquired the Property through the early transfer  
10 process described in Section VI.A and undertook certain remedial actions required of it under  
11 this Decree.

12 (F) "Site" means all potentially contaminated areas where hazardous substances  
13 originating from within the Property boundary may have come to be located. The Site is a  
14 "facility" as defined at RCW 70.105D.020(5). The Site is herein referred to as the Camp  
15 Bonneville Site.

16 (G) "Property" means the Camp Bonneville Military Reservation (CBMR), which is  
17 located in Clark County, Washington, approximately twelve (12) miles northeast of the center  
18 of the City of Vancouver. The terms "Property," "Camp Bonneville Military Reservation,"  
19 and "CBMR" all refer to the property that is the subject of this Decree. The Property lies along  
20 both banks of Lacamas Creek, a tributary of the Columbia River, and occupies approximately  
21 3,840 acres. The Property is further described in Exhibit G, attached hereto, and incorporated  
22 by reference. The location of the Property is also illustrated in Exhibit A, attached hereto.  
23 Prior to the entry of this Decree and completion of the early transfer process described in  
24 Section VI.A of this Decree, the Army owned 3,020 acres of the Property and leased the  
25 remaining 820 acres of the Property from the Washington State Department of Natural  
26

1 Resources (DNR). The Property includes the entire 3,840 acres. The Property consists of the  
2 “Early Transfer Parcel” and the “DNR Parcels,” as defined in this Section of the Decree.

3 (H) “Early Transfer Parcel” means the approximately 3,020-acre parcel of the  
4 Property being transferred to Clark County by the Army under the process described in Section  
5 VI.A of this Decree. A legal description and an illustration of the parcel are provided  
6 respectively in Exhibits G and A, attached hereto.

7 (I) “DNR Parcels” means the two parcels of the Property, totaling approximately  
8 820 acres, that were owned by DNR and leased to the Army at the time of entry of this Decree.  
9 The two parcels are adjacent to the Early Transfer Parcel and respectively located northeast  
10 and south of the Early Transfer Parcel. These parcels were transferred to Clark County and  
11 then immediately to BCRRT on June 2, 2009. A legal description and an illustration of the  
12 two parcels are provided respectively in Exhibits G and A, attached hereto.

13 (J) “Central Impact Target Area” or “CITA” means the approximately 465-acre  
14 fenced portion of the Property identified and illustrated in Exhibit A. The CITA served as the  
15 target area for several of the firing ranges at the CBMR, including the 105 and 155 millimeter  
16 artillery ranges.

17 (K) “Dangerous wastes” means any dangerous waste as defined in RCW  
18 70.105.010(5) and any dangerous waste designated by rule pursuant to Chapter 70.105 RCW,  
19 including, as defined in WAC 173-303-040, any solid waste designated in WAC 173-303-070  
20 through 173-303-100 as dangerous waste, extremely hazardous waste, or mixed waste.  
21 Dangerous wastes are “hazardous substances” under RCW 70.105D.020(10)(a).

22 (L) “Dangerous constituents” means, as defined in WAC 173-303-040 and  
23 173-303-64610(4), any constituent identified in WAC 173-303-9905 or 40 C.F.R. Part 264  
24 Appendix IX; any constituent that caused a solid waste to be listed as a dangerous waste or to  
25 exhibit a dangerous characteristic under Chapter 173-303 WAC or to meet a dangerous waste  
26

1 criteria under Chapter 173-303 WAC; and any constituent defined as a hazardous substance  
2 under RCW 70.105D.020(10).

3 (M) "Solid waste" means, as defined in WAC 173-303-016(3), any discarded  
4 material that is not excluded by WAC 173-303-017(2) or that is not excluded by variance  
5 granted under WAC 173-303-017(5), and includes military munitions identified as a solid  
6 waste in WAC 173-303-578(2).

7 (N) "Military munitions" means, as defined in WAC 173-303-040, all ammunition  
8 products and components produced or used by or for the U.S. Department of Defense or the  
9 U.S. Armed Services for national defense or security, including military munitions under the  
10 control of the Department of Defense, the U.S. Coast Guard, the U.S. Department of Energy,  
11 and National Guard personnel. As further defined in WAC 173-303-040, the term "military  
12 munitions" includes: Confined gaseous, liquid, and solid propellants, explosives, pyrotechnics,  
13 chemical and riot control agents, smokes and incendiaries used by Department of Defense  
14 components, including bulk explosives and chemical warfare agents, chemical munitions,  
15 rockets, guided and ballistic missiles, bombs, warheads, mortar rounds, artillery ammunition,  
16 small arms ammunition, grenades, mines, torpedoes, depth charges, cluster munitions and  
17 dispensers, demolition charges, and devices and components thereof. For the purposes of this  
18 Decree, the term "military munitions" also means all ammunition products and components  
19 produced or used with the permission of the U.S. Department of Defense or the U.S. Armed  
20 Services for national defense or security.

21 (O) "Munitions and Explosives of Concern" or "MEC" distinguishes specific  
22 categories of military munitions that may pose unique explosives safety risks and means  
23 (1) Unexploded ordnance (UXO), as defined in 10 U.S.C. § 101(e)(5)(A) through (C),  
24 WAC 173-303-040, and this Decree; (2) Discarded military munitions (DMM), as defined in  
25 10 U.S.C. § 2710(e)(2); or (3) Munitions constituents (MC) (e.g., TNT, RDX), as defined in  
26 10 U.S.C. § 2710(e)(3), present in high enough concentrations to pose an explosive hazard.

1 (P) "Unexploded ordnance" or "UXO" means, as defined in WAC 173-303-040,  
2 military munitions that have been primed, fused, armed, or otherwise prepared for action; have  
3 been fired, dropped, launched, projected, or placed in such a manner as to constitute a hazard  
4 to operations, installations, personnel, or material; and remain unexploded either by  
5 malfunction, design, or any other cause.

6 (Q) "Anomalies Selection Board" or "ASB" means the Board that reviews data  
7 regarding surface and subsurface anomalies and makes decisions regarding the further  
8 investigation and remediation of those anomalies based on that data. The members of the ASB  
9 shall be selected by the mutual agreement of the project coordinators and include at least one  
10 representative from the U.S. Army. If the project coordinators are unable to agree on the  
11 membership of the ASB or if the ASB is unable to reach mutual agreement on the further  
12 investigation or remediation of anomalies, then Ecology's project coordinator will issue a  
13 written decision. Clark County may request review of any decision by Ecology's project  
14 coordinator in accordance with the dispute resolution process set forth in Section XVI of  
15 this Decree.

16 (R) "Step-out clearance" means that if an item of MEC or a pattern of similar  
17 forensic evidence of a particular type of military munitions is found within a boundary grid of  
18 a designated clearance area, then the clearance area shall be expanded (stepped-out) by adding  
19 new grid(s) adjacent to the grid of concern and the new grid(s) shall be cleared. If a new grid  
20 extends beyond the Property perimeter fence line, then that grid shall only be cleared up to, but  
21 not beyond, that fence line and Ecology and the Army shall be notified. This adaptive  
22 management process shall continue as long as MEC or forensic evidence of a particular type of  
23 military munitions continues to be found in a boundary grid.

## 24 V. STATEMENT OF FACTS

25 14. Ecology makes the following factual findings without any express or implied  
26 admission by Clark County.

1           15.     The Camp Bonneville Military Reservation (CBMR or the Property), is located  
2 in Clark County, Washington, approximately twelve (12) miles northeast of the center of the  
3 City of Vancouver. The Property lies along both banks of Lacamas Creek, a tributary of the  
4 Columbia River, and occupies approximately 3,840 acres.

5           16.     Prior to the entry of this Decree and the completion of the early transfer process  
6 described in Section VI.A of this Decree, the Army owned 3,020 acres of the Property and  
7 leased the remaining 820 acres from the DNR. Through the early transfer process described in  
8 Section VI.A of this Decree, Clark County acquired the Early Transfer Parcel from the Army.  
9 Upon acquisition of that parcel, Clark County immediately conveyed ownership of it by  
10 quitclaim deed to the BCRRT LLC. The DNR Parcels were transferred to Clark County and  
11 then immediately to BCRRT on June 2, 2009.

12           17.     The U.S. War Department and its successor agency, the Department of Defense,  
13 owned and operated the Camp Bonneville Military Reservation for military training since  
14 1909. Units of the Army, Army Reserve, Marine Corps Reserve, Navy Reserve, Coast Guard  
15 Reserve, and National Guard have trained on the CBMR. The CBMR has also been used by  
16 Federal, State, and local law enforcement agencies for small arms training. A small arms range  
17 on the CBMR is currently operated by the Federal Bureau of Investigation. The CBMR was  
18 placed on the Base Realignment and Closure (BRAC) list and closed in 1995. Prior to the  
19 entry of this Decree and the completion of the early transfer process described in Section VI.A  
20 of this Decree, the CBMR was under the control and authority of the garrison commander of  
21 Fort Lewis.

22           18.     Between 1909 and 1995, unused military munitions, both live and practice,  
23 were stored at the Camp Bonneville Military Reservation. These unused military munitions  
24 included artillery ammunition, mortar ammunition, air-launched rockets, shoulder-fired  
25 rockets, guided missiles, bombs, land mines (practice only), grenades, fuses, and small arms  
26

1 ammunition. Some of these military munitions were disposed of at the CBMR by open burn /  
2 open detonation (OB/OD).

3 19. Between 1909 and 1995, military munitions, both live and practice, were used  
4 at the Camp Bonneville Military Reservation. These used military munitions included artillery  
5 ammunition, mortar ammunition, shoulder-fired rockets, land mines (practice only), grenades,  
6 and small arms ammunition. These military munitions were primed, fused, armed, or  
7 otherwise prepared for action, and then fired, launched, or projected from, or placed at or on,  
8 the CBMR.

9 (A) Some of the military munitions used at the CBMR exploded, fragmenting the  
10 munitions.

11 (B) Some of the military munitions used at the CBMR did not explode, either by  
12 malfunction, design, or some other cause. These munitions are referred to as "unexploded  
13 ordnance" or "UXO."

14 20. At least eight firing ranges at the Camp Bonneville Military Reservation had  
15 safety fans that extended beyond the boundary of the CBMR. Between 1909 and 1995,  
16 military munitions were used at those firing ranges. Some of the military munitions used at  
17 those firing ranges, including 105 and 155 millimeter artillery and 4.2 mortar projectiles, had  
18 ranges that extended beyond the boundary of the CBMR. Based on these findings of fact, there  
19 is a possibility that military munitions may have landed off-range, beyond the boundary of the  
20 CBMR. These used military munitions may include both UXO and the fragments and  
21 constituents of exploded munitions.

22 21. Between 1909 and 1995, some of the used military munitions at the Camp  
23 Bonneville Military Reservation, including both UXO and munitions fragments, were  
24 recovered and collected, and then disposed of at the CBMR by OB/OD.



1           22.    Several areas throughout the Camp Bonneville Military Reservation were used  
2 for the disposal of military munitions. At least three areas of the CBMR were used for the  
3 disposal of military munitions by OB/OD.

4           23.    At the time the Camp Bonneville Military Reservation was closed in 1995,  
5 some of the military munitions used during military activities, including both UXO and the  
6 fragments and constituents of exploded munitions, were left in place at the CBMR and may  
7 have been left in place or migrated beyond the boundary of the CBMR.

8           24.    Between 1909 and 1995, diesel fuel, fuel oil, pesticides, solvents, lead and  
9 chromium-containing paint, and other hazardous materials were also used at the Camp  
10 Bonneville Military Reservation.

11           25.    Investigations since 1995 by the Army and its contractors at the Camp  
12 Bonneville Site have shown that these historical military and maintenance operations have  
13 resulted in the presence of the following substances at the Site:

14           (A)    The presence of diesel fuel, fuel oil, pesticides, and xylenes in the soil;

15           (B)    The presence of volatile organic compounds, including 1,1,1-trichloroethane, in  
16 the soil and ground water;

17           (C)    The presence of military munitions used or disposed of at the Site, including  
18 explosives, UXO, munitions, and munitions fragments in the soil;

19           (D)    The presence of the constituents of those military munitions, including  
20 perchlorate and the explosive compounds RDX and HMX in the soil and ground water.

21           26.    Military munitions have been found in several areas throughout the Camp  
22 Bonneville Military Reservation. Because of the historical military and maintenance  
23 operations described above, including the storage, use, and disposal of military munitions, the  
24 presence of additional military munitions is strongly suspected. Because forests were located  
25 within several of the firing ranges when they were active, Ecology also has reason to believe  
26

1 that some of the military munitions used at those ranges are embedded in the trees located  
2 within those firing ranges.

3 27. People live adjacent to the Camp Bonneville Military Reservation and rely on  
4 ground water as a source of drinking water. The CBMR is also inhabited by numerous species  
5 of wildlife and borders both sides of Lacamas Creek, which is a tributary of the Columbia  
6 River.

7 28. Since this Decree was entered in September 2006, significant cleanup has been  
8 accomplished at the Site and additional data was obtained regarding the nature and extent of  
9 hazardous substances, dangerous and solid waste, and military munitions.

10 29. The foregoing information is contained in the following documents:

- 11 (A) Hart Crowser, Inc., *Petroleum Contaminated Soil Investigation, Former Tank*  
12 *No. 7-CMBPN, Building No. 4475, Camp Bonneville, Vancouver, Washington,*  
*Contact No. DACA67-93-D-1004, Delivery Order No. 53, September 11, 1996.*
- 13 (B) Woodward-Clyde Federal Services, *Final Environmental Baseline Survey*  
14 *Report, Camp Bonneville, Washington, Contract No. DACA67-95-D-1001,*  
*January 30, 1997.*
- 15 (C) Hart Crowser, Inc., *Final Lead-Based Paints and Soil-Metals Survey Report,*  
16 *Camp Bonneville, Washington, Contract No. DACA67-93-D-1004, Delivery*  
*Order No. 49, February 28, 1997.*
- 17 (D) Hart Crowser, Inc., *Pre-Demolition Survey, CS Gas Chamber Building, Camp*  
18 *Bonneville, Vancouver, Washington, Contract No. DACA67-93-D-1004,*  
*Delivery Order No. 52, February 28, 1997.*
- 19 (E) U.S. Army Corps of Engineers, *U.S. Department of Defense Program Base*  
20 *Realignment and Closure Ordnance, Ammunition and Explosives Final*  
21 *Archives Search Report – Report Plates, Camp Bonneville, Clark County,*  
*Washington, July 1997.*
- 22 (F) U.S. Army Corps of Engineers, *U.S. Department of Defense Program Base*  
23 *Realignment and Closure Ordnance, Ammunition and Explosives Final*  
*Archives Search Report – Conclusions and Recommendations, Camp*  
*Bonneville, Clark County, Washington, July 1997.*
- 24 (G) U.S. Army Corps of Engineers, *U.S. Department of Defense Program Base*  
25 *Realignment and Closure Ordnance, Ammunition and Explosives Final*  
26 *Archives Search Report – References, Camp Bonneville, Clark County,*  
*Washington, July 1997.*

- 1 (H) Prezant Associates, Inc., *Final Asbestos Surveys Report, Camp Bonneville,*  
2 *Vancouver, Washington, Volumes I-III,* Contract No. DACA67-95-D-1018,  
3 *Delivery Order No. 4,* November 7, 1997.
- 4 (I) Cecon Corporation, *Drain Line and PCS Removal, Final Report, Camp*  
5 *Bonneville, Vancouver, Washington,* Contract No. DACA67-96-M-0890,  
6 *December 1997.*
- 7 (J) UXB International, Inc., *Removal Report Ordnance and Explosive (OE)*  
8 *Sampling, Camp Bonneville, Vancouver, Washington,* Contract No.  
9 *DACA87-97-D-006,* Delivery Order No. 10, August 31, 1998.
- 10 (K) Shannon & Wilson, Inc., *Final Multi-Sites Investigation Report, Camp*  
11 *Bonneville, Vancouver, Washington, Volumes 1-5,* Contract No.  
12 *DACA67-94-D-1014,* Delivery Order Numbers 10 and 17, July 1999.
- 13 (L) URS Greiner Woodward Clyde, *Final Supplemental Archive Search Report,*  
14 *Camp Bonneville, Vancouver, Washington,* Contract No. DACA67-98-D-1005,  
15 *Delivery Order No. 3,* August 15, 1999.
- 16 (M) Shannon & Wilson, Inc., *Final Landfill 4 Investigation Report, Camp*  
17 *Bonneville, Washington,* Contract No. DACA67-94-D-1014, August 1999.
- 18 (N) Gary Struthers Associates, Inc., *Final Closure Report, Environmental*  
19 *Restoration, Multi-Sites, Camp Bonneville, Washington,* Contract No.  
20 *DACA67- 95-G-0001,* Task Order 58, February 2001.
- 21 (O) Hart Crowser, Inc., *Final Project Completion Report, Surface Water*  
22 *Investigation of Lacamas Creek and Tributaries, Camp Bonneville, Vancouver,*  
23 *Washington,* Contract No. DACA67-98-D-1008, Delivery Order No. 20,  
24 *March 10, 2000.*
- 25 (P) U.S. Army Corps of Engineers, *Final GIS-Based Historical Time Sequence*  
26 *Analysis, Camp Bonneville, Washington,* August 2000.
- (Q) URS Greiner Woodward Clyde, *BRAC HTRW Site Closure Report for Landfills*  
*1, 2, and 3; Former Burn Area; Buildings 1962 and 1963; Grease Pits at the*  
*Camp Bonneville and Camp Killpack Cantonments; Former Sewage Pond; and*  
*Hazardous Materials Accumulation Point, Camp Bonneville, Washington,*  
*Contract No. DACA67-98-D-1005, Delivery Order No. 43, September 2000.*
- (R) UXB International, Inc., *Final Removal Report, Ordnance and Explosive*  
*Removal Action, Camp Bonneville, Vancouver, Washington,* Contract No.  
*DACA87-97-D-006,* Delivery Order No. 13, October 12, 2000.
- (S) Parsons Engineering Science, Inc., *Final Reconnaissance Work Plan,*  
*Additional Site Characterization, Camp Bonneville, Vancouver, Washington,*  
*October 2001.*
- (T) Gary Struthers Associates, Inc., *Final Closure Report, Environmental*  
*Restoration, Pesticide Building #4126 and Ammunition Bunkers #2953, #2951*

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and #2950, Camp Bonneville, Washington, Contract No. DACA67- 95-G-0001 T.O.58, December 2001.

- (U) Parsons Environmental, *Draft Reconnaissance Results, Small Arms Ranges, Camp Bonneville, Vancouver, WA*, Contract No. DACA87-95-D-0018, January 2002.
- (V) Gary Struthers Associates, Inc., *Final Closure Report, Environmental Restoration, Drum Burial Area, Camp Bonneville, Washington*, Contract No. DACA67-95-G-0001 T.O. 58, April 2002.
- (W) Project Performance Corporation, *Final Field Work Report – Investigation and Monitoring of Site-Wide Ground Water and Ground Water Investigations for Remedial Action Unit 2B*, April 2003.
- (X) URS Corp., *Final Report, Landfill Area 4 / Demolition Area 1 Expanded Site Inspection, Camp Bonneville, Washington*, Contract No. DACA67-98-D-1005, Delivery Order 0054, May 2003.
- (Y) Parsons Infrastructure & Technology Group, Inc., *Final Reconnaissance Summary Report, Camp Bonneville, Vancouver, Washington*, Contract No. DACA87-00-D-0038, Delivery Order 0017, May 2003.
- (Z) Atlanta Environmental Management, Inc., *Final Site Investigation Report, Small Arms Ranges and Demolition Areas 2 and 3, Camp Bonneville, Vancouver, Washington*, Contract No. DACA65-03-F-0002, September 2003.
- (AA) Project Performance Corporation, *Draft Remedial Investigation Report for Remedial Action Unit 2B, Camp Bonneville, Vancouver, Washington*, GSA Contract No. GS-10F-0028J, September 2003.
- (BB) Project Performance Corporation, *Draft Remedial Investigation / Feasibility Study Report for Small Arms Ranges, Camp Bonneville, Vancouver, Washington*, GSA Contract No. GS-10F-0028J, October 2003.
- (CC) PBS Engineering and Environmental, *Final Ground Water Sampling and Analysis Report, 4th Quarter 2003, Camp Bonneville, Vancouver, Washington*, Contract No. DAAD11-03-F-0115, May 2004.
- (DD) PBS Engineering and Environmental, *Draft Ground Water Sampling and Analysis Report, 1st Quarter 2004, Camp Bonneville, Vancouver, Washington*, Contract No. DAAD11-03-F-0115, May 2004.
- (EE) URS Corp., *Final Cleanup Action Plan for Remedial Action Unit 1, Camp Bonneville, Vancouver, Washington*, Contract No. DACA67-02-D-2003, July 2004.
- (FF) Parsons, *Draft Remedial Investigation / Feasibility Study Report for Remedial Action Unit 3, Camp Bonneville, Vancouver, Washington*, GSA Contract No. DACA87-00-D-0038, November 2004.

- 1 (GG) PBS Engineering and Environmental, *Final Ground Water Sampling and*  
2 *Analysis Report, 2nd Quarter 2004, Camp Bonneville, Vancouver, Washington,*  
3 Contract No. DAAD11-03-F-0115, January 2005.
- 4 (HH) PBS Engineering and Environmental, *Final Ground Water Sampling and*  
5 *Analysis Report, 3rd Quarter 2004, Camp Bonneville, Vancouver, Washington,*  
6 Contract No. DAAD11-03-F-0115, January 2005.
- 7 (II) CALIBRE, *Draft Final Remedial Investigation / Feasibility Study Report for*  
8 *Small Arms Ranges, Camp Bonneville, Vancouver, Washington, GSA Contract*  
9 No. GS-10F-0028J, March 2005.
- 10 (JJ) CALIBRE, *Draft Final Work Plan for Interim Actions at Small Arms Range*  
11 *Berms and Fire Support Areas, Camp Bonneville, Vancouver, Washington,*  
12 GSA Contract No. FS-10F-0028J, March 2005.
- 13 (KK) CALIBRE, *Final Site Investigation Report for Demolition Areas 2 and 3, Camp*  
14 *Bonneville, Vancouver, Washington, GSA Contract No. GS-10F-0028J,*  
15 March 2005.
- 16 (LL) CALIBRE, *Draft Final Groundwater Data Evaluation Report, Camp Bonneville,*  
17 *Vancouver, Washington, GSA Contract No. GS-10F-0028J, April 2005.*
- 18 (MM) PBS Engineering and Environmental, *Final Ground Water Sampling and*  
19 *Analysis Report, 4th Quarter 2004, Camp Bonneville, Vancouver, Washington,*  
20 Contract No. DAAD11-03-F-0115, July 2005.
- 21 (NN) PBS Engineering and Environmental, *Final Ground Water Sampling and*  
22 *Analysis Report, 1st Quarter 2005, Camp Bonneville, Vancouver, Washington,*  
23 Contract No. DAAD11-03-F-0115, July 2005.
- 24 (OO) Parsons, Camp Bonneville, Site Specific Fact Sheets, Remedial Action Unit 3,  
25 Vancouver, Washington, prepared for Army Corps of Engineers, August 2005.
- 26 (PP) PBS Engineering and Environmental, *Draft Ground Water Sampling and*  
*Analysis Report, 2nd Quarter 2005, Camp Bonneville, Vancouver, Washington,*  
Contract No. DAAD11-03-F-0115, August 2005.
- (QQ) PBS Engineering and Environmental, *Draft Ground Water Sampling and*  
*Analysis Report, 3rd Quarter 2005, Camp Bonneville, Vancouver, Washington,*  
Contract No. DAAD11-03-F-0115, November 2005.
- (RR) Tetra Tech, Inc, *Final Interim Removal Action Report, Landfill 4/Demolition*  
*Area 1, Camp Bonneville, Vancouver, Washington, Contract No.*  
DAAD11-03-F-0102, November 2005.
- (SS) CALIBRE, Groundwater Data Evaluation Report, Camp Bonneville,  
Vancouver, Washington, May 2006.
- (TT) BCRRT LLC, Draft Preliminary Assessment of Artillery Firing Points, Impact  
Areas and "Pop-Up Pond" Sediments, November 2006.

- 1 (UU) BCRRT LLC, Emergency Action Work Plan RAU 3, October 2006.
- 2 (VV) BCRRT LLC, Supplemental Groundwater Remedial Investigation Report,  
3 December 2006.
- 4 (WW) BCRRT LLC, Emergency Actions – After Action Report RAU 3, January 2007.
- 5 (XX) MKM, Explosive Safety Submission, January 2007.
- 6 (YY) BCRRT LLC, Supplemental Soil Remedial Investigation Work Plan for Central  
7 Impact Target Area and Firing Points, January 2007.
- 8 (ZZ) BCRRT LLC, Emergency Action Work Plan RAU 3, Addendum 1, Fence  
9 Replacement and Repair and Sign Replacement, February 2007.
- 10 (AB) BCRRT LLC, Emergency Action Report for the Perimeter and CITA Fence  
11 Lines, February 2007
- 12 (AC) BCRRT LLC, RAU3 Interim Action Work Plan, April 2007.
- 13 (AD) BCRRT LLC, Final Remedial Investigation Report for Demolition Areas 2 & 3  
14 (RAU 2B), January 2007.
- 15 (AE) MKM, Explosive Safety Submission, Amendment 1, July 2007.
- 16 (AF) BCRRT LLC, Emergency Actions – Emergency Action Report Addendum 2,  
17 Remedial Action Unit 3, July 2007.
- 18 (AG) BCRRT LLC, Final RI/FS Report Small Arms Ranges, RAU 2A, August 2007.
- 19 (AH) BCRRT LLC, RAU 3 IAWP Addendum No. 1, MEC Cleanup of 2.36-inch  
20 Rocket Range Target Area, September 2007.
- 21 (AI) MKM, Explosive Safety Submission, Amendment 2, October 2007.
- 22 (AJ) BCRRT LLC, RAU 3 IAWP Addendum No. 2, MEC Surface Clearance of the  
23 Central Valley Floor and the Environmental Study Area, October 2007.
- 24 (AK) BCRRT LLC, Final RAU 2A Cleanup Action Plan, December 2007.
- 25 (AL) BCRRT LLC, Final RI/FS for RAU 3, February 2008.
- 26 (AM) BCRRT LLC, Draft Perchlorate Evaluation Landfill 4/Demolition Area 1,  
RAU 2C, February 2008.
- (AN) BCRRT LLC, Draft Report on Soil and Sediment Investigations at  
Artillery/Mortar Firing Points, Artillery/Mortar Impact Areas, and “Pop-up”  
Pond, February 2008.
- (AO) BCRRT LLC, RAU 3 IAWP Addendum No. 3, Geo-physical mapping of the  
Central Valley Floor using EM-61 Technology, April 2008.

- 1 (AP) BCRRT LLC, 2.36-Inch Rocket Range After Action Report, April 2008.  
2 (AQ) BCRRT LLC, Final Operation Plan RAU 2A, May 2008.  
3 (AR) BCRRT LLC, RAU 3 IAWP Addendum No. 4 MEC Surface Clearance Actions  
4 along 10-foot transects in the Western Slopes Area, June 2008.  
5 (AS) BCRRT LLC, Environmental Study Area After Action Report, March 2009.  
6 (AT) BCRRT LLC, After Action Report Roads and Trails, April 2009.  
7 (AU) BCRRT LLC, Final Supplemental RI/FS, May 2009.  
8 (AV) BCRRT LLC, Draft CAP RAU 3, May 2009.  
9 (AW) BCRRT LLC, Draft RI/FS for Site-wide Groundwater RAU 2C, August 2009.  
10 (AX) BCRRT LLC, draft Final Interim Action Work Plan for Excavation and  
11 Replacement of Fill Soils Under and Adjacent to RAU 2A-16, September 2009.  
12 (AY) BCRRT LLC, RAU2A-21 Boundary Delineation Work Plan, January 2010.  
13 (AZ) Michael Baker Jr., Inc., Draft Interim Action Work Plan, Excavation and  
14 Replacement of Lead-Impacted Fill Soils Under and Adjacent to RAU 2A-16,  
15 January 2010.  
16 (BA) Washington State Department of Ecology, Final RAU 3 CAP, September 2010.  
17 (BB) BCRRT LLC, PBS Engineering, Quarterly Groundwater Reports 2006–2009.  
18 (BC) BCRRT LLC, RAU 3 IAWP Addendum No. 5 Central Impact Target Area  
19 (CITA), June 2009.  
20 (BD) Clark County Public Works, Explosive Safety Submission for the Central  
21 Valley Floor and Associated Wetlands, February 2011.  
22 30. This and any additional information regarding the Camp Bonneville Site may be  
23 found in the Ecology site file.

## 24 VI. PROPERTY TRANSFERS, MTCA CLEANUP, AND 25 COUNTY REDEVELOPMENT

### 26 A. CERLCA Early Transfer

31. The Comprehensive Environmental Response, Compensation and Liability Act  
(CERCLA), 42 U.S.C. § 9601-9675, provides that contaminated federal property may, under  
certain conditions, be transferred to local ownership prior to the completion of remedial

1 activities. This process is known as “early transfer” and is described at 42 U.S.C.  
2 § 9620(h)(3)(C). This particular CERCLA early transfer is a conservation conveyance under  
3 10 U.S.C. § 2694(a). A conservation conveyance limits the use of the Property to conservation  
4 purposes.

5 32. Under the CERCLA early transfer process, the Army conveyed the Early  
6 Transfer Parcel to Clark County on September 29, 2006. That conveyance did not involve the  
7 DNR Parcels, which were owned by DNR and leased to the Army. On September 29, 2006,  
8 the County conveyed the property to the BCRRT. The DNR Parcels were conveyed to Clark  
9 County on June 2, 2009. Clark County conveyed the DNR Parcels to BCRRT on June 2, 2009.  
10 The terms and conditions of the CERCLA early transfer are set forth in the following  
11 documents:

12 (A) Finding of Suitability for Early Transfer (FOSET). The Army determined that  
13 the Early Transfer Parcel was suitable for early transfer. The Army’s determination is set forth  
14 in the FOSET. At a facility not on the National Priorities List (NPL), the Governor of the state  
15 in which the facility is located makes the final determination that the property is suitable for  
16 transfer pursuant to 42 U.S.C. § 9620(h)(3)(C)(i). Camp Bonneville is not on the NPL, thus  
17 Governor Gregoire reviewed the FOSET and determined that the Early Transfer Parcel was  
18 suitable for early transfer.

19 (B) Environmental Services Cooperative Agreement (ESCA). Prior to entry of the  
20 original Decree in 2006, the Army and Clark County entered into an ESCA, a cooperative  
21 agreement that provided funding for the environmental work necessary to meet the Cleanup  
22 and Long-Term Obligations of this Decree for the Property. Clark County has reimbursed  
23 BCRRT LLC for the performance of the Cleanup Obligations. On August 12, 2011, the Army  
24 and the County entered into an amended ESCA to address non-MEC cleanup at the Site. The  
25 amended ESCA provides funding to the County to perform site management, non-MEC  
26 remediation and long-term obligations. On August 12, 2011, the Army and the County also



1 entered into a new, separate ESCA with respect to the remediation of MEC in accordance with  
2 the Cleanup Action Plan (CAP) for RAU 3. Together, the amended and new ESCAs provide  
3 funding from the Army to the County to complete the environmental work and Cleanup  
4 Obligations as set forth in this Decree in a phased manner. The first phase of the new ESCA  
5 will provide funds to address the cleanup of MEC at the Central Valley Floor and associated  
6 Wetlands areas in accordance with the CAP for RAU 3 and the ongoing cleanup of hazardous  
7 waste in the Early Transfer Parcel. Later phases will be funded as they are ready for cleanup  
8 and as required herein.

9 (C) Deed. Following the original entry of this Decree in 2006, the Army executed a  
10 deed (Deed) conveying the Early Transfer Parcel to Clark County, which Clark County  
11 subsequently transferred to BCRRT. The Deed sets forth restrictions and interim land  
12 use controls.

13 **B. Transfer From BCRRT LLC To Clark County For Undertaking Cleanup**  
14 **Obligations And Redevelopment**

15 33. Clark County and BCRRT have reached an agreement regarding the transfer of  
16 the Property.

17 34. Prior to the entry of this amended Decree, BCRRT will convey title to the  
18 property to Clark County. Upon obtaining title to the property, Clark County's obligations  
19 under this Decree are effective. This PPCD and its associated and incorporated exhibits  
20 provide for the clean up of Camp Bonneville. Clark County shall undertake the cleanup  
21 obligations as set forth in this Decree. Clark County's Cleanup Obligations under this Decree  
22 are subject to the County receiving funds from the Army through the ESCA that are sufficient  
23 to complete the Cleanup Obligations as set forth in this Decree. As described above in Section  
24 VI.A, the Army will provide the County with the necessary funds through the amended and  
25 new ESCAs using a phased approach consistent with how the Cleanup Obligations under this  
26 Decree are phased. This phased approach to fund the Cleanup Obligations in this Decree is

1 acceptable in this unique early transfer scenario because the parties are not currently able to  
2 price later cleanup phases with accuracy, additional data may further inform Cleanup  
3 Obligations, and phased funding provides for greater cleanup contract performance  
4 management.

5 35. Upon completion of the Cleanup Obligations set forth in this Decree, the  
6 County intends to redevelop the Property for use by the citizens of Clark County as a regional  
7 park. The County's reuse plan is available at [http://www.clark.wa.gov/publicworks/bonneville](http://www.clark.wa.gov/publicworks/bonneville/index.html)  
8 [/index.html](http://www.clark.wa.gov/publicworks/bonneville/index.html).

## 9 VII. ECOLOGY DETERMINATIONS

### 10 A. Determinations For MTCA Prospective Purchaser Consent Decree

11 36. When this Decree was originally entered in 2006, Ecology had not identified  
12 Clark County or the BCRRT LLC as potentially liable persons under RCW 70.105D.020(16).  
13 When BCRRT LLC acquired the Property, it became liable as an "owner or operator" under  
14 RCW 70.105D.040(1)(a). This Decree was entered prior to Clark County or the BCRRT LLC  
15 acquiring an interest in the Property and resolved their potential liability for known or  
16 suspected contamination at the Site.

17 37. Upon entry of this Decree, Clark County obtained the Early Transfer Parcel  
18 from the Army pursuant to the CERCLA early transfer process described in Section VI.A of  
19 this Decree. Clark County immediately conveyed ownership of it to the BCRRT LLC for the  
20 purpose of meeting its Cleanup Obligations under this Decree.

21 38. Prior to the entry of this Decree, as amended, BCRRT LLC will transfer title of  
22 the property to Clark County.

23 39. This Decree contains a program of remedial actions designed to protect human  
24 health and the environment from the known, suspected, or threatened release of hazardous  
25 substances at the Property based upon Clark County's Reuse Plan described in Paragraph 35 of  
26 this Decree. The program is described in Section X of this Decree. The program, which

1 includes both Cleanup Obligations and Long-Term Obligations, covers the entire Property,  
2 including both the Early Transfer Parcel and the DNR Parcels.

3 40. Under this Decree as amended, Clark County is responsible for undertaking the  
4 Cleanup Obligations described in Section VI.B of this Decree, subject to the conditions  
5 described in Section VI.B. Those obligations are more specifically described in Section X.B of  
6 this Decree.

7 41. The ESCAs cover and provide funding for the Cleanup Obligations, Long-Term  
8 Obligations, and Ecology Oversight Costs as described in Section XIII (Remedial Action  
9 Costs). The ESCAs are described in Section VI.A of this Decree.

10 42. The County proposes to redevelop the 3,020-acre portion of the Property  
11 currently owned by the Army as a County regional park and wildlife refuge. The proposed  
12 redevelopment project is described in Section VI.B of this Decree.

13 43. Pursuant to 42 U.S.C. § 9620(h)(3)(C)(i), the Governor of the State of  
14 Washington determined that the Early Transfer Parcel is suitable for early transfer. The  
15 Army's determination of suitability and the findings supporting that determination are set forth  
16 in the FOSET.

17 44. Based on the foregoing facts and determinations, Ecology has determined that  
18 this settlement will yield substantial new resources to facilitate cleanup and expedite remedial  
19 action at the Site consistent with the rules adopted under MTCA.

20 45. Based on this settlement and the foregoing facts and determinations, Ecology  
21 has determined that the redevelopment of the Site is not likely to contribute to any existing or  
22 threatened releases at the Site, interfere with any remedial actions that may be needed at the  
23 Site, or increase health risks to persons at or in the vicinity of the Site.

24 46. Based on the foregoing facts and determinations, the Washington State Attorney  
25 General has authority under RCW 70.105D.040(5) to agree to a settlement with Clark County  
26 and enter into this Decree.

1 **B. Determinations Under The Model Toxics Control Act (MTCA)**

2 47. The Site is a "facility" as defined in RCW 70.105D.020(4).

3 48. The Property is a portion of the facility.

4 49. Certain substances found at the facility are "hazardous substances" as defined in  
5 RCW 70.105D.020(10).

6 50. Based on the presence of these hazardous substances at the facility and all  
7 factors known to Ecology, there are releases and threatened releases of hazardous substances  
8 from the facility, as defined in RCW 70.105D.020(25).

9 51. The releases and threatened releases of hazardous substances from the facility  
10 pose a threat to human health and the environment.

11 52. Based on the foregoing facts, Ecology believes the remedial action required by  
12 this Decree is in the public interest.

13 **C. Determinations Under The Hazardous Waste Management Act (HWMA)**

14 53. The Site is a "facility" as defined in RCW 70.105.010(11) and in WAC  
15 173-303-040.

16 54. The Property is a portion of the facility.

17 55. The military munitions located at the facility are "solid wastes" as defined in  
18 WAC 173-303-016(3) and Paragraph 13(N) of this Decree.

19 56. Certain military munitions located at the facility are also "dangerous wastes"  
20 and/or "dangerous constituents" as defined in RCW 70.105.010(5) and WAC 173-303-040,  
21 and in Paragraph 13(K) and (L) of this Decree.

22 57. Based on the presence of these military munitions at the facility and all factors  
23 known to Ecology, there are releases and threatened releases of dangerous wastes and/or  
24 dangerous constituents from the facility, as defined in WAC 173-303-040.



1 associated with those areas and any risks to human health and the environment  
2 associated with such contamination.

3 (3) Remedial Action Unit 2C (RAU 2C) consists of Landfill Area 4 and  
4 Demolition Area 1, identified and illustrated in Exhibit E, and addresses any  
5 contamination associated with those areas and any risks to human health and the  
6 environment associated with such contamination.

7 (C) Remedial Action Unit 3 (RAU 3) consists of any area at the Property where  
8 military munitions have come to be located and addresses any contamination associated with  
9 those areas and any risks to human health and the environment associated with such  
10 contamination. RAU 3 is identified and illustrated in Exhibit F.

11 62. The remedial action units defined in this Decree may be subdivided or  
12 combined by agreement of the Parties. Additional remedial action units may also be created by  
13 agreement of the Parties. Any such agreement will become an integral and enforceable part of  
14 this Decree upon entry by the Court as an amendment to this Decree.

## 15 IX. STATUS OF REMEDIAL ACTIONS

### 16 A. Overview

17 63. After the Base Realignment and Closure (BRAC) Commission identified the  
18 Camp Bonneville Military Reservation for closure in 1995, the Army conducted several site  
19 investigations and archive searches to identify releases or threatened releases of hazardous  
20 substances throughout the Site. Based on those initial investigations, the Army identified  
21 releases or threatened releases of hazardous substances in several areas throughout the Site and  
22 conducted several remedial actions to address those releases.

23 64. By letter dated July 1, 2002, Ecology notified the Army of its status as a  
24 "potentially liable person" under RCW 70.105D.040 after notice and opportunity for comment.

25 65. On February 4, 2003, Ecology issued Enforcement Order No. 03TCPHQ-5286  
26 (Order) to the Army pursuant to the authority of RCW 70.105D.050(1) and the authority of

1 Chapter 70.105 RCW and WAC 173-303-64630. The Order required the Army to conduct  
2 additional remedial actions to facilitate the comprehensive investigation and clean up of the  
3 Site.

4 66. On June 16, 2004, Ecology issued the First Amendment of Enforcement Order  
5 No. 03TCPHQ-5286 to the Army. The amendment divided RAU 3 into two subunits  
6 (RAU 3A and RAU 3B), modified the schedule and work to be performed for those two  
7 subunits, and updated the status of remedial actions. The Order, as amended, remained in  
8 effect until this PPCD was entered into by the State, Clark County, and BCRRT LLC, and the  
9 transfer of the Early Transfer Parcel from the Army to Clark County in 2006. After the entry  
10 of the PPCD in 2006, Ecology rescinded the Order.

11 67. The remedial actions conducted by the Army prior to the entry of this Decree,  
12 including those conducted prior to the issuance of the Order, and by the BCRRT LLC during  
13 this Decree, are described below.

14 **B. Remedial Action Unit 1 (18 Areas That The Army Independently Remediated  
15 Prior To October 2006)**

16 68. In 1997, based on the initial site investigations and archive searches, the Army  
17 identified releases and threatened releases of hazardous substances at the 20 areas comprising  
18 RAU 1. From August 1996 to July 1999, the Army conducted several remedial investigations  
19 of those areas. In 1999 and 2000, the Army conducted several independent cleanup actions to  
20 address the contamination identified during those remedial investigations.

21 69. Under the original Order, the Army submitted to Ecology in April 2003 a draft  
22 Cleanup Action Plan (CAP) for RAU 1. The draft CAP described the investigations and  
23 cleanup actions conducted and the results of those investigations and actions. The draft CAP  
24 also described whether further action is required and the nature of any such action. In April  
25 2004, after the Army revised the draft CAP based on Ecology's comments, the draft CAP was  
26 submitted for public comment. As of the effective date of the amended Order, the draft CAP

1 had not been finalized. Under the amended Order, the Army submitted and Ecology approved  
2 the final CAP in July 2004. As of the effective date of this Decree in 2006, the restrictive  
3 covenants required under the CAP had not been recorded.

4 70. After this Decree was entered, BCRRT LLC recorded the restrictive covenant  
5 required by the CAP in October 2006. In January 2008, Ecology issued a "No Further Action"  
6 determination for RAU 1. As of the effective date of this amended Decree, remedial action at  
7 RAU 1 is completed.

8 **C. Remedial Action Unit 2A (21 Small Arms Ranges)**

9 71. In 1997, based on the initial site investigations and archive searches, the Army  
10 identified releases and threatened releases of hazardous substances at the 21 small arms ranges  
11 comprising RAU 2A. In November 2001, the Army conducted additional investigations to  
12 better define the location and geographic characteristics of the small arms ranges. Each range  
13 has a separate RAU designation (e.g., RAU 2A-1 is the designation for small arms range 1).

14 72. Under the original Order, the Army submitted to Ecology in April 2003 a draft  
15 Interim Action Work Plan for RAU 2A. In May 2003, Ecology submitted comments on that  
16 draft Work Plan. In September 2003, the Army submitted to Ecology a draft final Work Plan.  
17 Ecology approved that draft final Work Plan. As of the effective date of the amended Order,  
18 the draft final Work Plan had not been submitted for public comment and finalized. As of the  
19 effective date of this Decree, the draft final Interim Action Work Plan for RAU 2A had still not  
20 been submitted for public comment and finalized.

21 73. Under the original Order, the Army also completed in April 2003 the remedial  
22 investigation of RAU 2A. The findings of that investigation are presented in the Field Work  
23 Report, which was finalized in September 2003. Based on the results of that investigation, the  
24 Army submitted to Ecology a draft Remedial Investigation/Feasibility Study (RI/FS) Report in  
25 October 2003. Ecology submitted comments on that draft report in December 2003. As of the  
26 effective date of the amended Order, the draft final RI/FS Report had not been submitted to



1 Ecology. Under the amended Order, the Army completed and submitted to Ecology the draft  
2 final RI/FS Report in March 2005. Ecology approved that draft report. As of the effective  
3 date of this Decree in 2006, the draft final RI/FS Report for RAU 2A had not been submitted  
4 for public comment and finalized.

5 74. After this Decree was entered in 2006, Ecology submitted the draft final RI/FS  
6 Report for public comment in January 2007. The BCRRT LLC completed and issued the final  
7 RI/FS Report in August 2007 which Ecology approved.

8 75. Pursuant to this Decree, the BCRRT LLC prepared and submitted a draft  
9 Cleanup Action Plan (CAP) report to Ecology in September 2007. Ecology submitted the draft  
10 CAP for public comment in October 2007. The final CAP report was submitted by BCRRT  
11 LLC and approved by Ecology in December 2007. Based on the final CAP, the BCRRT LLC  
12 prepared and submitted a draft Operation Plan (Work Plan) to Ecology in May 2008. In  
13 August 2008, Ecology approved the final Operations Plan.

14 76. Under the original Decree, the BCRRT LLC implemented the operations plan at  
15 all twenty-one (21) small arms ranges (RAU 2A-1 through 21) in September 2008. As of the  
16 effective date of this amended Decree, analytical results of confirmatory soil sampling indicate  
17 that remediation work at nineteen (19) of the twenty-one (21) ranges has been completed.

18 77. In October 2008, BCRRT LLC received analytical results from confirmational  
19 soil samples taken from the range floor showing that the 1000-inch rifle and machine gun  
20 range, RAU 2A-16, was constructed on lead-impacted fill soils. In September 2009,  
21 BCRRT LLC submitted a draft Interim Action Work Plan for Excavation and Replacement of  
22 Fill Soils Under and Adjacent to RAU 2A-16. In January 2010, BCRRT LLC submitted a  
23 draft final work plan to Ecology. As of the effective date of this amended Decree, the draft  
24 work plan, which is an addendum to the final RAU 2A CAP, has not been finalized.

25 78. A common feature of cleanup actions for the MEC-impacted areas of the Site is  
26 to conduct "step-out" activities. Step-out, in this case, is an additional sampling that is

1 conducted at a location one-half the grid size outward from a confirmational sample location, if  
2 that confirmational sample result is above the applicable cleanup level and the sample location  
3 is at a defined contamination zone boundary. If results of the additional step-out sample are  
4 still above cleanup level then another, further step-out sample will be taken at the same one-  
5 half grid size distance outward from the previous step-out sampling location. This process will  
6 continue until a sample meets the cleanup level. Location of the sample that meets cleanup  
7 level indicates the actual extent of the contamination zone. In September 2009, BCRRT LLC  
8 was conducting step-out activities at rifle range RAU 2A-21 when it discovered additional  
9 contamination. This additional contamination was outside the scope of the known RAU 2A-21  
10 contaminated area. This discovery required BCRRT LLC to submit a RAU 2A-21 Boundary  
11 Delineation Work Plan. The work plan was approved by Ecology and implemented by  
12 BCCRT LLC in January 2010. Findings of this investigation are presented in a draft RAU 2A-  
13 21 Boundary Delineation Action Report, submitted to Ecology in February 2010. As of the  
14 effective date of this amended Decree, the draft report has not been finalized.

15 79. As of the effective date of this amended Decree, lead contamination remains at  
16 two small arms ranges (RAU 2A-16 and RAU 2A-21) and stockpiles of excavated but  
17 untreated lead-contaminated soil remain on RAU 2A. The CAP for RAU 2A may be amended  
18 after the effective date of this Decree and after any required public comment, to reflect new  
19 information and any decision by Ecology to alter RAU 2A cleanup requirements based on such  
20 information.

21 **D. Remedial Action Unit 2B (Open Burning/Demolition Areas 2 And 3)**

22 80. In 1997, based on the initial site investigations and archive searches, the Army  
23 identified releases and threatened releases of hazardous substances at Demolition Area 2 and  
24 Demolition Area 3, the two OB/OD areas comprising RAU 2B.

25 81. Under the original Order, the Army completed in April 2003 the remedial  
26 investigation of RAU 2B. The findings of that investigation are presented in the Field Work

1 Report, which was finalized in September 2003. Based on the results of that investigation, the  
2 Army also submitted to Ecology a draft Remedial Investigation (RI) Report in September  
3 2003. Ecology submitted comments on that draft RI Report in November 2003. As of the  
4 effective date of the amended Order, the draft final RI Report for RAU 2B had not been  
5 submitted to Ecology.

6 82. Under the amended Order, the Army submitted the draft final RI Report  
7 (Site Investigation Report) in March 2005. The RI report concluded that no active remediation  
8 was required at RAU 2B. Ecology approved that draft report. As of the effective date of  
9 this Decree in 2006, the draft final RI Report had not been submitted for public comment  
10 and finalized.

11 83. After the entry of this Decree, Ecology submitted the draft final RI Report for  
12 public comment in January 2007. Ecology approved the final RI Report in June 2007. In  
13 March 2009, Ecology issued a "No Further Action" determination for RAU 2B. As of the  
14 entry of this amended Decree remedial action at RAU 2B is completed.

15 **E. Remedial Action Unit 2C (Landfill 4/Demolition Area 1)**

16 84. In 1997, based on the initial site investigations and archive searches, the Army  
17 identified releases and threatened releases of hazardous substances at Landfill Area 4 /  
18 Demolition Area 1, the area comprising RAU 2C. In August 1999, the Army conducted  
19 several additional investigations.

20 85. Under the original Order, the Army submitted to Ecology in December 2003 a  
21 draft Interim Action Work Plan for RAU 2C. In April 2004, after the Army revised the draft  
22 Work Plan based on Ecology's comments, it was submitted for public comment. In May 2004,  
23 the Army submitted the final Interim Action Work Plan for RAU 2C. The Army began  
24 mobilization and site preparation work required under that plan in May 2004. As of the  
25 effective date of the amended Order, the Army had not completed the work required under that  
26 Work Plan. Under the amended Order, the Army completed implementation of the Work Plan

1 in January 2005. Activities and findings of the interim action are presented in the Interim  
2 Removal Action Report, which was finalized in November 2005.

3 86. Under the original Order, the Army also completed in February 2003 a remedial  
4 investigation of ground water for RAU 2C. The findings of that investigation are presented in  
5 the Field Work Report, which was finalized in May 2003. Based on the results of that  
6 investigation and the impact of the forthcoming interim actions to address soil contamination,  
7 Ecology determined that further investigation of the ground water was required. As of the  
8 effective date of the amended Order, the draft RI/FS Report for RAU 2C had not been  
9 submitted to Ecology. Under the amended Order, the Army continued to monitor  
10 contamination levels in ground water at RAU 2C on a quarterly basis pursuant to the Site-Wide  
11 Ground Water Investigation Work Plan. Findings of this investigation are presented in Ground  
12 Water Sampling and Analysis Reports. However, as of the effective date of this Decree in  
13 2006, the draft RI/FS Report for RAU 2C had still not been submitted to Ecology.

14 87. After the entry of this Decree in 2006, the BCRRT LLC submitted the draft  
15 RI/FS in August 2009 and submitted a Perchlorate Evaluation Report to Ecology in February  
16 2008. Based on Ecology comments, the BCRRT LLC submitted a Revised Perchlorate  
17 Evaluation Report on January 2009. This report covers exposure analysis from historical soil  
18 and ground water data, data trend analysis, and recommendations for additional data  
19 requirements to address perchlorate in ground water at Landfill 4.

20 88. Pursuant to this Decree, BCRRT LLC continued to monitor contamination  
21 levels in ground water at RAU 2C on a quarterly basis pursuant to the Final Supplemental  
22 Ground Water Remedial Investigation Work Plan. Findings of this investigation are presented  
23 in Ground Water Sampling and Analysis Reports. As of the entry of this amended Decree, the  
24 draft RI/FS has not been submitted for public comment.

1 **F. Remedial Action Unit 3 (Site-Wide Munitions Contamination)**

2 89. In 1997, based on the initial site investigations and archive searches, the Army  
3 determined that military munitions, including UXO, are present in several areas throughout the  
4 Site. In 1998, to determine the nature and extent of UXO throughout the Site, the Army  
5 conducted an investigation of the Site using a statistically-based sampling methodology. As a  
6 result of this investigation, the Army conducted a time-critical removal action on two former  
7 ordnance ranges and a surface clearance of Demolition Area 1.

8 90. In November 1998, the Army submitted to Ecology and the U.S. Environmental  
9 Protection Agency (EPA) a draft Engineering Evaluation and Cost Analysis (EE/CA) report  
10 based on the findings of the statistically-based investigation. This report identified locations of  
11 UXO, the hazards associated with UXO, the risks posed by UXO to future users of the land,  
12 and risk management alternatives, including a description of the effectiveness and cost of those  
13 alternatives. The Army submitted a second draft to Ecology and EPA in April 1999. Based on  
14 the inadequacy of the statistically-based sampling approach, Ecology and EPA determined that  
15 there was insufficient data to support the findings of the draft EE/CA.

16 91. In 2001, the Army evaluated the available photographic evidence to help  
17 identify areas of concern (AOCs) and areas of potential concern (AOPCs) throughout the Site.  
18 The Army subsequently conducted an instrument-aided reconnaissance effort to identify  
19 ordnance-related activities, as well as terrain and vegetation characteristics, associated with  
20 each of the previously identified AOCs and AOPCs. In 2002, the Army used this information,  
21 along with previously collected information, to conduct a screening analysis and develop a  
22 Conceptual Site Model (CSM). To test the CSM within designated reuse areas, the Army  
23 initiated a second phase of instrument-aided reconnaissance within the designated reuse areas.

24 92. Under the original Order, the Army completed the second phase of the  
25 instrument aided reconnaissance in February 2003. The findings of that reconnaissance effort  
26 are presented in the Field Work Report, which was finalized in May 2003. As of the effective

1 date of the amended Order, the draft RI/FS Report for RAU 3 had not been submitted to  
2 Ecology.

3 93. Under the amended Order, RAU 3 was administratively divided into two  
4 subunits, RAU 3A and RAU 3B, which were defined in Part IV of that Order.

5 94. Under the amended Order, the Army submitted to Ecology a draft RI/FS Report  
6 for RAU 3 in November 2004. Ecology submitted its comments on that draft report in  
7 February 2005. In August 2005, Ecology submitted the draft RI/FS Report for public  
8 comment. In response to the comments received, Ecology completed a Responsiveness  
9 Summary. As of the effective date of this Decree in 2006, the RI/FS Report had not been  
10 finalized based on the comments received.

11 95. After the entry of this Decree in 2006, BCRRT LLC submitted a draft final  
12 RI/FS to Ecology in April 2007. After responding to Ecology's comments, the final RI/FS was  
13 submitted to Ecology in February 2008. However, Ecology required a supplemental  
14 investigation of RAU 3. The BCRRT LLC then conducted a supplemental investigation of  
15 RAU 3 and presented the findings of this investigation in a draft Supplemental RI/FS Report to  
16 Ecology in October 2008. After responding to Ecology comments, BCRRT submitted a final  
17 Supplemental RI/FS to Ecology in May 2009.

18 96. In October 2008, BCRRT LLC submitted a draft Cleanup Action Plan (CAP) to  
19 Ecology. In May 2009, after responding to Ecology comments, BCRRT LLC submitted a  
20 revised draft CAP to Ecology in May 2009. In June 2009, Ecology issued the draft CAP for  
21 public comment. After reviewing comments from the public, Ecology finalized the CAP in  
22 September 2010. As of the effective date of this amended Decree, implementation of the final  
23 CAP has not yet begun.

24 97. Pursuant to the Decree, in October 2006 BCRRT LLC submitted an Emergency  
25 Action Work Plan (EAWP) which Ecology approved. The EAWP addressed MEC surface  
26 clearance and avoidance activities needed to support fence replacement/repair and signage

1 replacement along property and Central Impact Target Area (CITA) perimeter fences. These  
2 actions were done nearly immediately after the entry of the Decree and were necessary to  
3 protect the public and provide site security. Field activities performed by BCRRT LLC under  
4 the EAWP are presented in the February 2007 Emergency Action Report for the Perimeter and  
5 CITA Fence Lines which was approved by Ecology in March 2009. As of the effective date of  
6 this amended Decree, implementation of the final EAWP has been completed.

7 98. BCRRT LLC submitted a draft Interim Action Work Plan (IAWP) to Ecology  
8 in December 2006. The IAWP addresses MEC surface clearance along roads and trails and at  
9 small arms ranges that have been designated for cleanup under RAU 2A. Ecology approved  
10 the final IAWP in April 2007 after public comment. BCRRT LLC began implementation of  
11 the IAWP in April 2007; however, as of the effective date of this amended Decree all remedial  
12 actions specified in the IAWP have not been completed.

13 99. In September 2007, Ecology approved Addendum No. 1 to the IAWP.  
14 Addendum No. 1 expands the scope of the IAWP to include MEC cleanup of a 2.36-inch  
15 Rocket Range Target Area discovered during the implementation of the IAWP. Remedial  
16 actions required by Addendum No. 1 of the IAWP have been completed.

17 100. In October 2007, Ecology approved Addendum No. 2 to the IAWP, which  
18 expanded the scope of the IAWP to cover MEC surface clearance of the Central Valley Floor  
19 (CVF) and the Environmental Study Area (ESA). As of the effective date of this amended  
20 Decree, the remedial actions required in Addendum No. 2 of the IAWP have not been  
21 completed.

22 101. In March 2008, BCRRT LLC submitted a draft Addendum No. 3 to the IAWP,  
23 to Ecology. Addendum No. 3 allowed the use of geo-physical mapping of the Central Valley  
24 Floor using EM-61 Technology for detecting munitions. Ecology approved the draft  
25 Addendum in April 2008.  
26

1 102. In June 2008, Ecology approved Addendum No. 4 to the IAWP, which expands  
2 the scope of the IAWP to cover MEC Surface Clearance Actions along 10-foot transects in the  
3 Western Slopes Area.

4 103. In March 2009, BCRRT LLC submitted a draft Addendum No. 5 to the IAWP  
5 to Ecology. Addendum No. 5 further expands the scope of IAWP to include MEC surface and  
6 subsurface clearances at fifteen (15) hard target areas in the Central Impact Target Area  
7 (CITA). Ecology submitted comments on the draft addendum in April 2009. In May 2009,  
8 Ecology submitted the draft final Addendum No. 5 for public comment. BCRRT LLC  
9 submitted the final Addendum No. 5 to Ecology in June 2009. Ecology approved the final  
10 Addendum No. 5 in June 2009. As of the effective date of this amended Decree, remedial  
11 actions, as specified in Addendum No. 5 of the IAWP, have not been completed.

12 **G. Investigation And Monitoring Of Site-Wide Ground Water**

13 104. In February 2002, the Army developed a Site-Wide Ground Water Investigation  
14 Work Plan to analyze ground water at the property boundary of the Camp Bonneville Military  
15 Reservation using sentinel wells. The work plan was designed to help determine whether  
16 on-site ground water contamination has migrated beyond the property boundary of the CBMR.  
17 In December 2002, the Army installed four monitoring well pairs at the western property  
18 boundary near Lacamas Creek. The findings of that investigation are presented in the Field  
19 Work Report, which was finalized in April 2003 under the original Order. As of the effective  
20 date of the amended Order, the draft Long-Term Ground Water Monitoring and Contingency  
21 Plan had not been submitted to Ecology.

22 105. Under the amended Order, the Army continued to monitor ground water in  
23 site-wide monitoring wells. Findings of this investigation are presented in Ground Water  
24 Sampling and Analysis Reports. As of the effective date of this Decree in 2006, the draft  
25 Long-Term Ground Water Monitoring and Contingency Plan had not been submitted to  
26 Ecology.





1           109. Clark County is responsible for undertaking the Cleanup Obligations defined in  
2 Section VI of this Decree. Those obligations are more specifically described in Section X.C of  
3 this Decree. Clark County shall make all reasonable efforts to secure access rights for those  
4 portions of the Property not owned or controlled by it where Cleanup Obligations will be  
5 undertaken pursuant to this Decree. Clark County is also responsible for undertaking the  
6 Long-Term Obligations described in Section X.C of this Decree. Clark County is not required  
7 under this Decree to undertake any Long-Term Obligations on any portion of the Property that  
8 it does not own or lease.

9           110. Clark County agrees to undertake remedial actions and to conduct such actions  
10 in accordance with Chapter 173-340 WAC unless otherwise specifically provided for herein.  
11 Clark County agrees not to perform any remedial actions outside the scope of this Decree  
12 unless the Parties agree to amend the Decree to cover those actions.

13           111. The Parties acknowledge that while the Site may encompass areas beyond the  
14 boundaries of the Property, this Decree does not require Clark County to develop or conduct  
15 any remedial actions in any area beyond the boundaries of the Property. The Parties agree that  
16 the remedial actions required under this Decree shall be limited to the areas within the  
17 boundaries of the Property.

18 **B. Work To Be Performed**

19           The work to be performed is generally described below. The Project Schedule  
20 document which is Exhibit J to this Decree provides the schedules for the work.

21           1. **RAU 2A**

22           112. Cleanup work remains to be completed at two small arms ranges, RAU 2A-16  
23 and RAU 2A-21. After the entry of this Decree, Clark County shall submit a draft amendment  
24 to the RAU 2A CAP to complete lead remediation at the remaining two small arms ranges.  
25 The draft amendment shall describe proposed changes to the remedy from excavation of  
26 lead-contaminated soil to the potential new remedial alternatives, (1) partial excavation and

1 capping of the lead-contaminated soil with a clean soil cap, or (2) capping of the  
2 lead-contaminated soil with a clean soil cap. The draft amendment shall include a full  
3 description of each alternative and technical rationale for the draft amendment. Any change to  
4 the RAU 2A CAP shall be subject to public comment pursuant to WAC 173-340-600 and the  
5 requirements of the Public Participation Plan. Ecology will review and consider any public  
6 comments before approving any amendment to the RAU 2A CAP. Any work plans or other  
7 documents needed to implement any amendment to the RAU 2A CAP shall be subject to  
8 Ecology review and approval. Clark County shall submit deliverables for Ecology review and  
9 approval, in accordance with the project schedule shown, Exhibit J.

10 **2. RAU 2C**

11 113. Clark County shall continue to monitor the general ground water quality at the  
12 Site. Clark County shall continue to monitor trends of contaminants in ground water at  
13 Landfill 4 and include any new findings in the development of a draft final RI/FS for RAU 2C.  
14 Clark County shall submit deliverables for Ecology review and approval, in accordance with  
15 the schedule shown in the project schedule, Exhibit J.

16 **3. RAU 3—Phase I**

17 114. The work required in the Final RAU 3 CAP will be implemented by Clark  
18 County in phases. Phase I will commence after the entry of this amended Decree and is funded  
19 as described in Section VI.A. Phases II-IV are as currently envisioned by the Parties. The  
20 parties recognize that order of future phases may change.

21 115. For Phase I (Central Valley Floor), Clark County shall conduct subsurface MEC  
22 clearance of the Central Valley Floor and associated Wetlands as required in the final CAP for  
23 RAU 3. Clark County shall submit deliverables for Ecology review and approval, in  
24 accordance with the schedule shown in the project schedule, Exhibit J.  
25  
26

1           **4.     RAU 3—Phase II**

2           116. For Phase II (CITA and Firing Points), Clark County shall conduct MEC  
3 surface and subsurface clearance of the CITA and Firing Points as required in the final CAP  
4 for RAU 3. Clark County shall submit deliverables for Ecology review and approval, in  
5 accordance with the schedule shown in the project schedule, Exhibit J.

6           **5.     RAU 3—Phase III**

7           117. For Phase III (Demolition Areas 1 & 2), Clark County shall conduct MEC  
8 surface clearance of Demolition Areas 1 and 2 as required in the final CAP for RAU 3. Clark  
9 County shall submit deliverables for Ecology review and approval, in accordance with the  
10 schedule shown in the project schedule, Exhibit J.

11          **6.     RAU 3—Phase IV**

12          118. For Phase IV (Western Slopes), Clark County shall conduct surface clearance of  
13 the Western Slopes as required in the final CAP for RAU 3. Clark County shall submit  
14 deliverables for Ecology review and approval, in accordance with the schedule shown in the  
15 project schedule, Exhibit J.

16          **C.     Long-Term Obligations**

17          119. Clark County shall be responsible for undertaking Long-Term Obligations.  
18 Clark County is not required under this Decree to undertake any Long-Term Obligations on  
19 any portion of the Property that it does not own or lease.

20          120. If Clark County does not acquire ownership of the DNR Parcels prior to  
21 issuance of the Notice of Completion for RAU 3 under Section XII of this Decree, then Clark  
22 County shall not be responsible for any Long-Term Obligations on the DNR Parcels unless and  
23 until Clark County acquires ownership of or ownership interest in the DNR Parcels.

24          121. The Long-Term Obligations for each RAU will be specified in the final  
25 Long-Term Operation and Maintenance Plan for that RAU. Upon issuance of the Notice of  
26 Completion for the Property under Section XII of this Decree, all of the Long-Term

1 Obligations for the Property will be specified in the final Long-Term Operation and  
2 Maintenance Plan for the Property. Additional Long-Term Obligations are specified in this  
3 Decree.

4 **D. Description Of Deliverables**

5 122. The Remedial Investigation Work Plan prepared for a RAU shall conform to the  
6 requirements in Chapter 173-340 WAC and shall include, but shall not be limited to, the  
7 following plans:

- 8 (A) Work Plan;
- 9 (B) Health and Safety Plan;
- 10 (C) Sampling and Analysis Plan;
- 11 (D) Quality Assurance Plan;
- 12 (E) Data Management Plan; and
- 13 (F) Cultural and Historical Resources Protection Plan.

14 123. The Emergency Action Report shall include, but shall not be limited to, the  
15 following information:

- 16 (A) Summary of any emergency actions conducted;
- 17 (B) Results of any emergency actions conducted; and
- 18 (C) Description of each item of MEC found during the emergency action, including,

19 but not limited to, the following information:

- 20 (1) Identification of the MEC item;
- 21 (2) Description of the fusing condition of the MEC item; and
- 22 (3) Description of the location and depth of the MEC item.

23 124. The Interim Action Report prepared for a RAU shall include, but shall not be  
24 limited to, the following information:

- 25 (A) Summary of any interim actions conducted;
- 26 (B) Results of any interim actions conducted; and

1 (C) Description of each item of MEC found during the interim action, including, but  
2 not limited to, the following information:

- 3 (1) Identification of the MEC item;
- 4 (2) Description of the fusing condition of the MEC item; and
- 5 (3) Description of the location and depth of the MEC item.

6 125. The Cleanup Action Report prepared for a RAU shall include, but shall not be  
7 limited to, the following information:

- 8 (A) Summary of any remedial investigations conducted;
- 9 (B) Summary of any interim or cleanup actions conducted;
- 10 (C) Results of any interim or cleanup actions conducted;
- 11 (D) Results of any compliance monitoring conducted; and
- 12 (E) Description of each item of MEC found during the investigation and cleanup of  
13 the RAU, including, but not limited to, the following information:

- 14 (1) Identification of the MEC item;
- 15 (2) Description of the fusing condition of the MEC item; and
- 16 (3) Description of the location and depth of the MEC item.

17 126. The MEC Findings Report prepared for RAU 3 shall include a description of  
18 each item of MEC found at the Property during the investigation and cleanup of the Property,  
19 including items of MEC found during an investigation or cleanup conducted under a  
20 RAU other than RAU 3. The description of each item of MEC shall include, but shall not be  
21 limited to, the following information:

- 22 (A) Identification of the MEC item;
- 23 (B) Description of the fusing condition of the MEC item; and
- 24 (C) Description of the location and depth of the MEC item.

25 127. The Long-Term Operation and Maintenance Plan prepared for a RAU shall  
26 include all actions at the RAU that are necessary to ensure the long-term effectiveness of the

1 cleanup completed at the RAU by Clark County under Section X.B of this Decree. The  
2 Long-Term Operation and Maintenance Plan prepared for the Property shall combine together  
3 the final Long-Term Operation and Maintenance Plan for each RAU and include all actions on  
4 the Property that are necessary to ensure the long-term effectiveness of the cleanup completed  
5 by Clark County under Section X.B of this Decree.

6 128. Clark County shall include a Cultural and Historical Resources Protection Plan  
7 as part of any remedial investigation work plan, emergency action work plan, interim action  
8 work plan, cleanup action plan, or long-term operation and maintenance plan. The plan shall  
9 include, but shall not be limited to, the following information:

10 (A) Plan for identifying cultural and historical resources; and

11 (B) Plan for protecting identified cultural and historical resources.

12 129. Clark County shall include a Cultural and Historical Resources Protection  
13 Report as part of any emergency action report, interim action report, cleanup action report, or  
14 UXO findings report. The report shall include a description of each cultural resource found  
15 during the implementation of the plan. The description of each cultural resource shall include,  
16 but shall not be limited to, the following information:

17 (A) Identification of the cultural resource; and

18 (B) Description of the disposition of the cultural resource.

19 **E. Due Dates For Deliverables**

20 130. If the final day of any time period falls on a Saturday, Sunday, or a state or  
21 federal legal holiday, the time period shall be extended to the next working day. Any time  
22 period scheduled to begin on the occurrence of an act or event shall begin on the day after the  
23 act or event. The deliverable due date shall be considered satisfied if the deliverable is  
24 received electronically on the date due, and the "original" hard copy is received within two (2)  
25 working days.  
26

1 **F. Submittal Of Deliverables**

2 131. In accordance with WAC 173-340-840(2), Clark County shall submit to  
3 Ecology an electronic copy and three (3) hard copies of each deliverable identified in this  
4 Order (including both draft and draft final documents). The electronic copy must be submitted  
5 in a format compatible with, and approved by, Ecology. Ecology may require additional  
6 copies to meet public participation and interagency coordination needs.

7 **G. Review, Comment, And Approval Process For Deliverables**

8 132. Clark County shall submit deliverables to Ecology in accordance with the  
9 schedule set forth in Exhibit J. From the date Ecology receives the draft document, the  
10 following process will ensue:

11 (A) Within thirty (30) calendar days of receiving Clark County's draft document,  
12 Ecology will notify Clark County in writing of whether the draft document is adequate.

13 (1) If Ecology identifies inadequacies in the draft document, then Ecology  
14 will provide Clark County with comments. Any such inadequacies may be discussed  
15 during the monthly Project Coordinator Meetings.

16 (2) If Ecology does not identify inadequacies in the draft document, then  
17 Ecology will, at its discretion, approve the draft document. A draft document only  
18 becomes "final" upon Ecology approval.

19 (B) Within thirty (30) calendar days of receiving Ecology's comments on a draft  
20 document, Clark County will submit to Ecology a "draft final" document along with a response  
21 to comments identifying how comments were addressed.

22 (C) Within thirty (30) calendar days of receiving Clark County's draft final  
23 document and response to comments on the draft document, Ecology will notify Clark County  
24 in writing of whether the draft final document adequately addresses Ecology's comments on  
25 the draft document.  
26



1 (1) If Ecology identifies inadequacies in the draft final document and/or the  
2 response to comments, then Ecology will, at its discretion, either revise and approve the  
3 document or require Clark County to revise and resubmit the document within thirty  
4 (30) calendar days for approval.

5 (2) If Ecology does not identify inadequacies in the draft final document or  
6 the response to comments, then, within thirty (30) calendar days, Ecology will, at its  
7 discretion, approve the draft final document. A draft final document only becomes  
8 "final" upon Ecology approval.

9 (D) In accordance with WAC 173-340-430(6), prior to the approval of a draft final  
10 interim action work plan, Ecology will provide or require public notice and opportunity for  
11 comment on the document and proposed interim action as required under WAC  
12 173-340-600(16). After review and consideration of the comments received during the public  
13 comment period, Ecology will, at its discretion, either approve the document or require Clark  
14 County to revise and resubmit the document within thirty (30) calendar days for approval.

15 (E) In accordance with WAC 173-340-350(5), prior to approval of a draft final  
16 remedial investigation or feasibility study report, Ecology will provide or require public notice  
17 and opportunity to comment on the document, as required under WAC 173-340-600(13).  
18 After review and consideration of the comments received during the public comment period,  
19 Ecology will, at its discretion, either approve the document or require Clark County to revise  
20 and resubmit the document within thirty (30) calendar days for approval.

21 (F) In accordance with WAC 173-340-380(2), prior to approval of a draft final  
22 CAP, Ecology will provide or require public notice and opportunity for comment on the  
23 document, as required under WAC 173-340-600(14). After review and consideration of the  
24 comments received during the public comment period, Ecology will, at its discretion, either  
25 approve the document or require Clark County to revise and resubmit the document within  
26 thirty (30) calendar days for approval.

1 133. Ecology may extend the thirty (30) calendar day period for reviewing and  
2 commenting on a document by providing oral or written notification to Clark County, prior to  
3 expiration of the thirty (30) calendar day period. Ecology will provide an estimate of the time  
4 required for completion of its review.

5 134. Clark County may request an extension of the thirty (30) calendar day period  
6 for submitting a document and responses to comments by providing written notification to  
7 Ecology prior to expiration of the thirty (30) calendar day period. Any such request must be  
8 made in accordance with Section XI of this Decree.

9 **H. Enforceability And Implementation Of Deliverables**

10 135. Upon approval by Ecology, each of the deliverables identified in this Decree  
11 shall be incorporated by reference and become an integral and enforceable part of this Decree,  
12 and shall be implemented by Clark County in accordance with its terms and schedules, and in  
13 accordance with the applicable laws and the applicable CAPs.

14 **XI. EXTENSION OF SCHEDULE**

15 136. Clark County may request an extension of schedule. An extension of schedule  
16 shall be granted only when a request for an extension is submitted in a timely fashion,  
17 generally at least fourteen (14) calendar days prior to expiration of the deadline for which the  
18 extension is requested, and good cause exists for granting the extension. All extensions shall  
19 be requested in writing. The request shall specify:

- 20 (A) The deadline that is sought to be extended;
- 21 (B) The length of the extension sought;
- 22 (C) The reason(s) for the extension; and
- 23 (D) Any related deadline or schedule that would be affected if the extension were  
24 granted.

1 137. The burden shall be on Clark County to demonstrate to the satisfaction of  
2 Ecology that the request for such extension has been submitted in a timely fashion and that  
3 good cause exists for granting the extension. Good cause includes, but is not limited to:

4 (A) Circumstances beyond the reasonable control and despite the due diligence of  
5 Clark County including delays caused by unrelated third parties or Ecology, such as (but not  
6 limited to) delays by Ecology in reviewing, approving, or modifying documents submitted by  
7 Clark County;

8 (B) Acts of God, including fire, flood, blizzard, extreme temperatures, storm, or  
9 other unavoidable casualty; or

10 (C) Endangerment as described in Section XXV of this Decree.

11 However, neither increased costs of performance of the terms of the Decree nor changed  
12 economic circumstances shall be considered circumstances beyond the reasonable control of  
13 Clark County.

14 138. Ecology shall act upon any written request for extension in a timely fashion.  
15 Ecology shall give Clark County written notification in a timely fashion of any extensions  
16 granted pursuant to this Decree. A requested extension shall not be effective until approved by  
17 Ecology or, if required, by the Court. Unless the extension is a substantial change, it shall not  
18 be necessary to amend this Decree pursuant to Section XXXIV of this Decree when a schedule  
19 extension is granted.

20 139. An extension shall only be granted for such period of time as Ecology  
21 determines is reasonable under the circumstances. Ecology may grant schedule extensions  
22 exceeding ninety (90) calendar days only as a result of:

23 (A) Delays in the issuance of a necessary permit which was applied for in a timely  
24 manner;

25 (B) Other circumstances deemed exceptional or extraordinary by Ecology; or

26 (C) Endangerment as described in Section XXV of this Decree.



1 oversight costs under the amended ESCA described in Paragraph 32(B). The ESCA is  
2 described in Section VI.A of this Decree. The County shall use the funding provided in the  
3 amended ESCA to pay Ecology's costs. The amended ESCA further provides that the Army  
4 will pay Ecology's fair and reasonable oversight costs above the fixed amount in the amended  
5 ESCA with the prior approval of the Army's Grants Officer. Ecology will endeavor to contact  
6 the Army's Grants Officer as soon as it reasonably anticipates its oversight costs may exceed  
7 the amount in the amended ESCA. The County agrees to pay the required amount within  
8 ninety (90) days of receiving from Ecology an itemized statement of costs that includes a  
9 summary of costs incurred, an identification of involved staff, and the amount of time spent by  
10 involved staff members on the project. A general statement of work performed will be  
11 provided upon request. Itemized statements shall be prepared quarterly. Pursuant to WAC  
12 173-340-550(4), failure to pay Ecology's costs within ninety (90) days of receipt of the  
13 itemized statement will result in interest charges at the rate of twelve percent (12%) per annum,  
14 compounded monthly, provided, that in the event the Army delays payment or contests the  
15 amount of the Payment request, Clark County shall not be responsible for any delay due to the  
16 Army's action or inaction. Any such delay shall not affect or delay the work to be performed  
17 by the County under this Decree. Ecology reserves all its rights to seek to recover its costs  
18 under RCW 70.105D.050(3).

19 Pursuant to Chapter 70.105D.055 RCW, Ecology also has authority to recover  
20 unreimbursed remedial action costs by filing a lien against real property subject to the remedial  
21 actions.

1 **XIV. PROJECT COORDINATION**

2 **A. Designated Project Coordinators**

3 143. The project coordinator for Ecology is:

4 Name: Ben Forson  
5 Address: Toxics Cleanup Program  
6 P.O. Box 47600  
7 Olympia, WA 98504-7600  
8 Telephone: (360) 407-7227  
9 Fax: (360) 407-7154  
10 E-mail: bfor461@ecy.wa.gov

11 144. The project coordinator for Clark County is:

12 Name: Jerry Barnett  
13 Address: Clark County Department of Public Works  
14 P.O. Box 5000  
15 Vancouver, WA 98666-5000  
16 Telephone: (360) 397-2446  
17 Fax: (360) 759-6212  
18 E-mail:

19 145. Each project coordinator shall be responsible for overseeing the implementation  
20 of this Decree. The Ecology project coordinator will be Ecology's designated representative at  
21 the Property. To the maximum extent possible, communications among Ecology and Clark  
22 County and all documents, including reports, approvals, and other correspondence concerning  
23 the activities performed pursuant to the terms and conditions of this Decree, shall be directed  
24 through the project coordinators. The project coordinators may designate, in writing, working  
25 level staff contacts for all or portions of the implementation of the remedial work required by  
26 this Decree. The project coordinators may agree to minor changes to the work to be performed  
without formal amendments to this Decree. Minor changes will be documented in writing by  
Ecology. Substantial changes shall require amendment of this Decree.

146. Any Party may change its respective project coordinator. Written notification shall be given to the other Parties at least ten (10) calendar days prior to the change.

1 **B. Project Coordinator Meetings (Monthly)**

2 147. Project coordinator meetings shall be held on a monthly basis. Upon the  
3 agreement of the Parties, telephone conference calls may be held in lieu of face-to-face  
4 meetings. Additional project coordinator meetings may be held by agreement of the Parties.  
5 Project coordinator meetings shall include a discussion of the topics required to be addressed  
6 as part of the Quarterly Progress Reports (see Paragraph 148 of this Decree).

7 **C. Progress Reports (Quarterly)**

8 148. Clark County shall submit to Ecology written quarterly progress reports which  
9 describe the actions taken during the previous quarter to implement the requirements of this  
10 Decree. The progress report shall include the following:

11 (A) Description of on-Property actions taken during the previous quarter;

12 (B) Description of on-Property actions scheduled to be taken during the next  
13 quarter;

14 (C) Identification of deliverables submitted during the previous quarter and the  
15 dates of submittal;

16 (D) Identification of deliverables anticipated for submittal during the next quarter  
17 and the anticipated dates of submittal;

18 (E) Description of any deviation from the required actions not otherwise  
19 documented in project plans or amendment requests;

20 (F) Description of any deviation from the schedule during the previous quarter and  
21 any planned deviation in the next quarter;

22 (G) For any deviation in schedule, a plan for attempting to recover lost time and  
23 maintain compliance with the schedule;

24 (H) All field and laboratory data, including all validated and non-validated data,  
25 received or generated by Clark County during the previous quarter and an identification of the  
26 source of the sample; and

1 (I) Description of any key staffing changes.

2 149. All progress reports shall be submitted by the tenth (10th) calendar day of each  
3 quarter. Unless otherwise specified, progress reports and any other documents submitted  
4 pursuant to this Decree shall be sent by certified mail, return receipt requested, to Ecology's  
5 project coordinator.

6 **XV. PERIODIC REVIEW**

7 150. As remedial action, including ground water monitoring, continues at the  
8 Property, the Parties agree to review the progress of remedial action at the Property, and to  
9 review the data accumulated as a result of Property monitoring as often as is necessary and  
10 appropriate under the circumstances. At least every five years after the initiation of cleanup  
11 action at the Property (mobilization), the Parties shall meet to discuss the status of the Property  
12 and the need, if any, of further remedial action at the Property. Clark County shall submit a  
13 report to Ecology ninety (90) calendar days before every 5-year anniversary of the date of  
14 dismissal that addresses the review criteria in WAC 173-340-420. This provision shall remain  
15 in effect for the duration of the Decree.

16 **XVI. RESOLUTION OF DISPUTES**

17 151. In the event a dispute arises as to an approval, disapproval, proposed change, or  
18 other decision or action by Ecology's project coordinator, or an itemized billing statement  
19 under Section XIII of this Decree (Remedial Action Costs), the Parties shall utilize the dispute  
20 resolution procedure set forth below.

21 (A) Upon receipt of the Ecology project coordinator's written decision or the  
22 itemized billing statement, Clark County has fourteen (14) calendar days within which to  
23 notify Ecology's project coordinator in writing of its objection to the decision.

24 (B) The Parties' project coordinators shall then confer in an effort to resolve the  
25 dispute. If the project coordinators cannot resolve the dispute within fourteen (14) calendar  
26 days, Ecology's project coordinator shall issue a written decision.



1 (C) The objecting Party may then request section management review of the  
2 decision. This request shall be submitted in writing to the Land and Aquatic Cleanup  
3 Headquarters Section Manager (Section Manager) of the Toxics Cleanup Program within  
4 seven (7) calendar days of receipt of Ecology's project coordinator's decision.

5 (D) Ecology's Section Manager shall conduct a review of the dispute and shall  
6 endeavor to issue a written decision regarding the dispute within thirty (30) calendar days of  
7 the request for review.

8 (E) If the objecting Party finds Ecology's Section Manager's decision unacceptable,  
9 the objecting Party may then request final management review of the decision. This request  
10 shall be submitted in writing to the Toxics Cleanup Program Manager within seven (7)  
11 calendar days of receipt of the Section Manager's decision.

12 (F) Ecology's Program Manager shall conduct a review of the dispute and shall  
13 endeavor to issue a written decision regarding the dispute within thirty (30) calendar days of  
14 the request for review of the Section Manager's decision. The Program Manager's decision  
15 shall be Ecology's final decision on the disputed matter.

16 152. If Ecology's final written decision is unacceptable to Clark County, the County  
17 has the right to submit the dispute to the Court for resolution. The Parties agree that one judge  
18 should retain jurisdiction over this case and shall, as necessary, resolve any dispute arising  
19 under this Decree. In the event Clark County presents an issue to the Court for review, the  
20 Court shall review the action or decision of Ecology on the basis of whether such action or  
21 decision was arbitrary and capricious and render a decision based on such standard of review.

22 153. The Parties agree to only utilize the dispute resolution process in good faith and  
23 agree to expedite, to the extent possible, the dispute resolution process whenever it is used.  
24 Where either Party utilizes the dispute resolution process in bad faith or for purposes of delay,  
25 the other Party may seek sanctions.  
26

1 154. Implementation of these dispute resolution procedures shall not provide a basis  
2 for delay of any activities required in this Decree, unless Ecology agrees in writing to a  
3 schedule extension or the Court so orders.

#### 4 **XVII. PERFORMANCE**

5 155. All work performed pursuant to this Decree shall be under the direction and  
6 supervision, as necessary, of a licensed professional engineer or licensed hydrogeologist, or  
7 equivalent, with expertise and experience in hazardous waste site investigation and cleanup.  
8 Clark County shall notify Ecology in writing of the identity of such engineer(s) or  
9 hydrogeologist(s), or their equivalents, and of any contractors and subcontractors to be used in  
10 carrying out the terms of this Decree, in advance of their involvement at the Property.

11 156. Any construction work performed pursuant to this Decree shall be under the  
12 supervision of a professional engineer or a qualified technician under the direct supervision of  
13 a professional engineer. The professional engineer must be registered in the State of  
14 Washington, except as provided in RCW 18.43.130.

15 157. Any removal and/or disposal of MEC performed pursuant to this Decree shall  
16 be under the supervision of a Senior UXO supervisor (SUXOS) identified by Clark County and  
17 approved by Ecology. The SUXOS must be an "explosives or munitions emergency response  
18 specialist" as defined in WAC 173-303-040. Clark County shall notify Ecology as to the  
19 identity and qualifications of the SUXOS it has selected. The selection of the SUXOS is  
20 subject to Ecology approval, which shall not be unreasonably withheld. Clark County shall  
21 provide a copy of this Decree to the SUXOS and shall require that all work undertaken by the  
22 SUXOS to remove and/or dispose of MEC will be in compliance with this Decree.

#### 23 **XVIII. COMPLIANCE WITH APPLICABLE LAWS**

24 158. All actions carried out by Clark County pursuant to this Decree shall be done in  
25 accordance with all applicable federal, state, and local requirements, including requirements to  
26 obtain necessary permits and approvals, except as provided in RCW 70.105D.090.

1           159. Pursuant to RCW 70.105D.090(1), Clark County is exempt from the procedural  
2 requirements of Chapters 70.94, 70.95, 70.105, 77.55, 90.48, and 90.58 RCW and of any laws  
3 requiring or authorizing local government permits or approvals. However, Clark County shall  
4 comply with the substantive requirements of such permits or approvals. A list of such permits  
5 and approvals and/or the substantive requirements of those permits and approvals as they are  
6 known to be applicable at the time of issuance of any RI/FS Report or CAP for any RAU shall  
7 be included in the respective RI/FS Report or CAP for that RAU and shall be binding and  
8 enforceable requirements of this Decree.

9           160. Clark County has a continuing obligation to determine whether additional  
10 permits or approvals addressed in RCW 70.105D.090(1) would otherwise be required for the  
11 remedial action under this Decree. In the event Clark County or Ecology determines that  
12 additional permits or approvals addressed in RCW 70.105D.090(1) would otherwise be  
13 required for the remedial action under this Decree, it shall promptly notify the other Parties of  
14 this determination. Ecology shall determine whether Ecology or Clark County shall be  
15 responsible to contact the appropriate state and/or local agencies. If Ecology so requires, Clark  
16 County shall promptly consult with the appropriate state and/or local agencies and provide  
17 Ecology with written documentation from those agencies of the substantive requirements those  
18 agencies believe are applicable to the remedial action. Ecology shall make the final  
19 determination on the additional substantive requirements that must be met by Clark County  
20 and on how Clark County must meet those requirements. Ecology shall inform Clark County  
21 in writing of these requirements. Once established by Ecology, the additional requirements  
22 shall be enforceable requirements of this Decree. Clark County shall not begin or continue the  
23 remedial action potentially subject to the additional requirements until Ecology makes its final  
24 determination.



1 Decree. The draft plan shall be subject to the review, comment, and approval process in  
2 Paragraph 132 of this Decree.

3 166. Ecology shall maintain the responsibility for public participation at the  
4 Property. However, Clark County shall cooperate with Ecology, and shall:

5 (A) If agreed to by Ecology, prepare drafts of public notices and fact sheets at  
6 important stages of the remedial action, such as the submission of work plans, remedial  
7 investigation/feasibility study reports, cleanup action plans, and engineering design reports. As  
8 appropriate, Ecology will edit, finalize, and distribute such fact sheets and prepare and  
9 distribute public notices of Ecology's presentations and meetings;

10 (B) Notify Ecology's project coordinator prior to the preparation of all press  
11 releases and fact sheets, and before major meetings with the interested public and local  
12 governments. Likewise, Ecology shall notify Clark County prior to the issuance of all press  
13 releases and fact sheets, and before major meetings with the interested public and local  
14 governments. For all press releases, fact sheets, meetings, and other outreach efforts by Clark  
15 County that do not receive prior Ecology approval, Clark County shall clearly indicate to its  
16 audience that the press release, fact sheet, meeting, or other outreach effort was not sponsored  
17 or endorsed by Ecology;

18 (C) Upon reasonable advance notice, participate in public presentations on the  
19 progress of the remedial action at the Property. Participation may be through attendance at  
20 public meetings to assist in answering questions, or as a presenter; and

21 (D) In cooperation with Ecology, arrange and/or continue information repositories  
22 to be located at the following locations:

- 23 (1) Department of Ecology  
24 Toxics Cleanup Program  
25 300 Desmond Drive  
26 Lacey, Washington  
By appt: (360) 407-7224  
[www.wa.gov/ecology/tcp/cleanup.html](http://www.wa.gov/ecology/tcp/cleanup.html)

1 (2) Washington State University Vancouver Library  
2 14204 NE Salmon Creek Avenue  
3 Vancouver, Washington  
4 Attn: Collection Development Coordinator  
5 Phone: (360) 546-9694

6 At a minimum, copies of all public notices, fact sheets, and press releases; quality assured  
7 monitoring data; remedial action plans and reports; supplemental remedial planning  
8 documents; and all other similar documents relating to performance of the remedial action  
9 required by this Decree shall be promptly placed in these repositories.

10 **XXI. ACCESS**

11 167. Ecology or any Ecology authorized representatives shall have full authority to  
12 enter and freely move about the Property at all reasonable times for the purposes of, *inter alia*:  
13 inspecting records, operation logs, and contracts related to the work being performed pursuant  
14 to this Decree; reviewing Clark County's progress in carrying out the terms of this Decree;  
15 conducting such tests or collecting such samples as Ecology may deem necessary; using a  
16 camera, sound recording, or other documentary type equipment to record work done pursuant  
17 to this Decree; and verifying the data submitted to Ecology by Clark County. Clark County  
18 shall make all reasonable efforts to secure access rights for those portions of the Property not  
19 owned or controlled by Clark County where remedial activities or investigations will be  
20 performed pursuant to this Decree. Ecology or any Ecology authorized representative shall  
21 give reasonable notice before entering any portion of the Property owned or controlled by  
22 Clark County unless an emergency prevents such notice. Where access to the Property is  
23 restricted due to the presence of military munitions, with reasonable prior notice Clark County  
24 shall supply sufficient personnel trained in ordnance recognition and avoidance to enable  
25 Ecology or any Ecology authorized representative to carry out the purposes of this Paragraph.  
26 All Parties with access to the Property pursuant to this Paragraph shall comply with approved

1 health and safety and Explosive Safety plans. Ecology employees and their representatives  
2 shall not be required to sign any liability release or waiver as a condition of Property access.

### 3 **XXII. SAMPLING AND DATA SUBMITTAL**

4 168. With respect to the implementation of this Decree, Clark County shall make the  
5 results of all reconnaissance, sampling, laboratory reports, and/or test results generated by  
6 them, or on their behalf, available to Ecology. Pursuant to WAC 173-340-840(5), Clark  
7 County shall submit those results in accordance with Section XIV of this Decree and as  
8 follows:

9 (A) Within thirty (30) calendar days of the generation by Clark County or on their  
10 behalf, of any field or laboratory data, including any validated and non-validated data, Clark  
11 County shall submit such data to Ecology. The data shall include a list of hazardous  
12 substances analyzed for, but not detected. In accordance with Ecology's Toxic Cleanup  
13 Program Policy 840 (Data Submittal Requirements), the data shall be submitted in both printed  
14 and electronic formats and the electronic format shall be compatible with Ecology's data  
15 management systems.

16 (B) If preliminary analysis of samples indicates a potential imminent and substantial  
17 endangerment to public health, then Clark County shall notify Ecology immediately.

18 169. If requested by Ecology, Clark County shall allow split or duplicate samples to  
19 be taken by Ecology and/or its authorized representatives of any samples collected by Clark  
20 County pursuant to the implementation of this Decree. Clark County shall notify Ecology  
21 seven (7) calendar days in advance of any sample collection or work activity at the Property.  
22 Ecology shall, upon request, allow split or duplicate samples to be taken by Clark County or its  
23 authorized representatives of any samples collected by Ecology pursuant to the implementation  
24 of this Decree provided it does not interfere with Ecology's sampling. Ecology shall provide  
25 the quality assured and quality controlled results of any sampling conducted by Ecology to  
26 Clark County within fourteen (14) calendar days of receipt of same. Without limitation on

1 Ecology's rights under Section XXI of this Decree, Ecology shall endeavor to notify Clark  
2 County prior to any sample collection activity unless an emergency prevents such notice.

3 170. In accordance with WAC 173-340-830(2)(a), all hazardous substance analyses  
4 shall be conducted by a laboratory accredited under Chapter 173-50 WAC for the specific  
5 analyses to be conducted, unless otherwise approved by Ecology.

6 **XXIII. REPORTING OF ADDITIONAL RELEASES**

7 171. In accordance with WAC 173-340-300, Clark County shall notify Ecology in  
8 writing of any discovery of any previously unidentified release, including any previously  
9 unidentified area of military munitions, within thirty (30) calendar days of the discovery. Any  
10 release discovered after the effective date of this Decree that requires remedial action may be  
11 addressed as part of an existing RAU or as a separate RAU by agreement of the Parties. Any  
12 such agreement will become an integral and enforceable part of this Decree upon entry by the  
13 Court as an amendment to this Decree.

14 **XXIV. RETENTION AND SUBMITTAL OF RECORDS**

15 172. During the pendency of this Decree and for ten (10) years from the date this  
16 Decree is no longer in effect as provided in Section XXXIII of this Decree, Clark County shall  
17 preserve all records, reports, documents, and underlying data in its possession relevant to the  
18 implementation of this Decree and shall insert a similar record retention requirement into all  
19 contracts with project contractors and subcontractors. Upon request of Ecology, Clark County  
20 shall make all records available to Ecology and allow access for review within a reasonable  
21 time.

22 173. In accordance with WAC 173-340-850, Clark County shall submit a copy of  
23 any requested records relevant to this Decree within thirty (30) calendar days after receipt of  
24 Ecology's written request.



1 **XXV. ENDANGERMENT**

2 174. If, for any reason, Ecology determines that any activity being performed at the  
3 Property is creating or has the potential to create a danger to human health or the environment,  
4 Ecology may direct Clark County to cease such activities for such period of time as it deems  
5 necessary to abate the danger. Clark County shall immediately comply with such direction.

6 175. If, for any reason, Clark County determines that any activity being performed at  
7 the Property is creating or has the potential to create a danger to human health or the  
8 environment, they may cease such activities. Clark County shall notify Ecology's project  
9 coordinator as soon as possible, but no later than twenty-four (24) hours after making such  
10 determination or ceasing such activities. Upon Ecology's direction, Clark County shall  
11 provide Ecology with documentation of the basis for the determination or cessation of such  
12 activities. If Ecology disagrees with Clark County's cessation of activities, it may direct them  
13 to resume such activities.

14 176. If Ecology concurs with or orders a work stoppage pursuant to this Section,  
15 Clark County's obligations with respect to the ceased activities shall be suspended until  
16 Ecology determines the danger is abated, and the time for performance of such activities, as  
17 well as the time for any other work dependent upon such activities, shall be extended, in  
18 accordance with Section XI of this Decree, for such period of time as Ecology determines is  
19 reasonable under the circumstances.

20 177. Nothing in this Decree shall limit the authority of Ecology, its employees,  
21 agents, or contractors to take or require appropriate action in the event of an emergency.

22 **XXVI. IMPLEMENTATION OF REMEDIAL ACTION**

23 178. If Ecology determines that Clark County has failed without good cause to  
24 implement the remedial action, in whole or in part, then Ecology may, after providing notice to  
25 and an opportunity to respond by Clark County, perform any or all portions of the remedial  
26 action that remain incomplete. Ecology will consider Clark County's response prior to

1 performing any or all portions of the remedial action that remain incomplete. Clark County  
2 must respond within seven (7) calendar days of receipt of Ecology's notice. If Ecology  
3 performs all or portions of the remedial action because of Clark County's failure to comply  
4 with its obligations under this Decree, Clark County shall reimburse Ecology for the costs of  
5 doing such work, provided that Clark County is not obligated under this Section to reimburse  
6 Ecology for costs incurred for work inconsistent with or beyond the scope of this Decree.

7 **XXVII. TRANSFER OF INTEREST IN PROPERTY**

8 179. No voluntary conveyance or relinquishment of title, easement, leasehold, or  
9 other interest in all or any portion of the Property shall be consummated without provision for  
10 continued operation and maintenance of any containment system, treatment system, and/or  
11 monitoring system installed or implemented pursuant to this Decree.

12 180. Prior to Clark County's transfer of any interest in all or any portion of the  
13 Property, and during the effective period of this Decree, Clark County shall provide a copy of  
14 this Decree to any prospective purchaser, lessee, transferee, assignee, or other successor in said  
15 interest; and, at least thirty (30) calendar days prior to any transfer, Clark County shall notify  
16 Ecology of said transfer. Upon transfer of any interest, Clark County shall restrict uses and  
17 activities to those consistent with this Decree and notify all transferees of the restrictions on the  
18 use of the Property.

19 **XXVIII. COVENANT NOT TO SUE UNDER MTCA**

20 **A. Covenant Not To Sue**

21 181. In consideration of Clark County's compliance with the terms and conditions of  
22 this Decree, Ecology covenants not to institute legal or administrative actions against Clark  
23 County regarding the release or threatened release of hazardous substances covered by this  
24 Decree.

25 182. This Decree covers only the Site specifically defined in Section IV of this  
26 Decree and those hazardous substances that Ecology knows are located at the Site as of the

1 date of entry of this Decree. This Decree does not cover any other hazardous substance or  
2 area. Ecology retains all of its authority relative to any substance, area or entity not covered by  
3 this Decree.

4 183. This Covenant Not to Sue shall have no applicability whatsoever to:

5 (A) Criminal liability;

6 (B) Liability for damages to natural resources; and

7 (C) Liability of potentially liable persons other than Clark County.

8 184. If factors not known to Ecology at the time of entry of the settlement agreement  
9 are discovered and present a previously unknown threat to human health or the environment,  
10 the Court shall amend this Covenant Not to Sue.

11 **B. Reopeners**

12 185. Ecology specifically reserves the right to institute legal or administrative action  
13 against Clark County to require it to perform additional remedial actions at the Property and to  
14 pursue appropriate cost recovery, pursuant to RCW 70.105D.050, under the following  
15 circumstances:

16 (A) Upon Clark County's failure to meet the requirements of this Decree, including,  
17 but not limited to, failure of the remedial action to meet the cleanup standards established  
18 pursuant to this Decree;

19 (B) Upon Ecology's determination that remedial action beyond the terms of this  
20 Decree is necessary to abate an imminent and substantial endangerment to human health and  
21 the environment;

22 (C) Upon the availability of new information regarding factors previously unknown  
23 to Ecology, including the nature or quantity of hazardous substances at the Property, and  
24 Ecology's determination, in light of this information, that further remedial action is necessary  
25 at the Property to protect human health or the environment; or  
26

1 (D) Upon Ecology's determination, based on new information and prior to the  
2 issuance of a Notice of Completion for a RAU under Section XII of this Decree, that additional  
3 remedial actions are necessary at that RAU to achieve cleanup standards within the reasonable  
4 restoration time frame established pursuant to this Decree.

5 186. Ecology's reservations in this subsection and in Paragraph 185 are subject to the  
6 County receiving sufficient funds from the Army to perform such additional remedial actions  
7 and to pay such appropriate cost recovery.

#### 8 **XXIX. CONTRIBUTION PROTECTION UNDER MTCA**

9 187. With regard to claims for contribution against Clark County the Parties agree  
10 that Clark County is entitled to protection against claims for contribution for matters addressed  
11 in this Decree as provided by RCW 70.105D.040(4)(d).

#### 12 **XXX. CLAIMS AGAINST THE STATE**

13 188. Clark County hereby agrees that it has no claim of right to recover any costs  
14 accrued in implementing the remedial action required by this Decree from the State of  
15 Washington or any of its agencies; and further, that they have no claim of right against the  
16 State Toxics Control Account or any Local Toxics Control Account for any costs incurred in  
17 implementing this Decree. Except as provided above, however, Clark County expressly  
18 reserves its right to seek to recover any costs incurred in implementing this Decree from any  
19 other potentially liable person.

#### 20 **XXXI. INDEMNIFICATION**

21 189. Clark County agrees to indemnify and save and hold the State of Washington,  
22 its employees, and agents harmless from any and all claims or causes of action for death or  
23 injuries to persons or for loss or damage to property arising from or on account of acts or  
24 omissions of Clark County, its officers, employees, agents, or contractors in entering into and  
25 implementing this Decree. However, Clark County shall not indemnify the State of  
26 Washington nor save nor hold its employees and agents harmless from any claims or causes of

1 action arising out of the negligent acts or omissions of the State of Washington, or the  
2 employees or agents of the State, in implementing the activities pursuant to this Decree.

3 **XXXII. PUBLIC NOTICE AND WITHDRAWAL OF CONSENT**

4 190. This Decree has been the subject of public notice and comment under  
5 RCW 70.105D.040(4)(a). As a result of this process, Ecology has determined that:

6 (A) This Decree will yield substantial new resources to facilitate cleanup;

7 (B) This Decree will expedite remedial action consistent with the rules adopted  
8 under MTCA; and

9 (C) Based on available information, the redevelopment or reuse of the Property is  
10 not likely to contribute to any existing or threatened release at the Site, interfere with any  
11 remedial action that may be needed at the Site, or increase health risks to persons at or in the  
12 vicinity of the Site.

13 191. If the Court withholds or withdraws its consent to this amended Decree, it shall  
14 be null and void at the option of any Party and the accompanying Complaint shall be dismissed  
15 without costs and without prejudice. In such an event, no Party shall be bound by the  
16 requirements of this Decree.

17 **XXXIII. DURATION OF THE DECREE AND RETENTION  
18 OF JURISDICTION**

19 192. The remedial program required pursuant to this Decree shall be maintained and  
20 continued until Clark County has received written notification from Ecology that the  
21 requirements of this Decree have been satisfactorily completed. This Decree shall remain in  
22 effect until dismissed by this Court. When dismissed, Section XXVIII, Covenant Not to Sue,  
23 and Section XXIX, Contribution Protection, shall survive.

24 **XXXIV. AMENDMENT OF THE DECREE**

25 193. This Decree may only be amended by a written stipulation among the Parties to  
26 this Decree that is entered by the Court or by order of the Court. Such amendment shall

1 become effective upon entry by the Court. Agreement to amend shall not be unreasonably  
2 withheld by any Party to the Decree.


3 194. Clark County shall submit any request for an amendment to Ecology for  
4 approval. Ecology shall indicate its approval or disapproval in a timely manner after the  
5 request for amendment is received. If the proposed amendment represents a substantial  
6 change, Ecology will provide public notice and opportunity for comment. Reasons for  
7 disapproval of a proposed amendment shall be stated in writing. If Ecology does not agree to a  
8 proposed amendment, the disagreement may be addressed through the dispute resolution  
9 procedures described in Section XVI of this Decree.

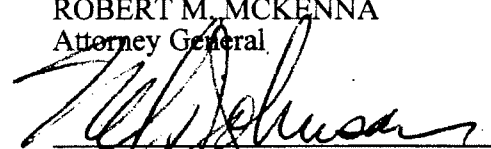
10 **XXXV. EFFECTIVE DATE OF THE DECREE**

11 195. This amended Decree is effective upon the date it is entered by the Court.

12 STATE OF WASHINGTON  
13 DEPARTMENT OF ECOLOGY

ROBERT M. MCKENNA  
Attorney General

14   
15 JIM PENDOWSKI  
16 Program Manager  
17 Toxics Cleanup Program

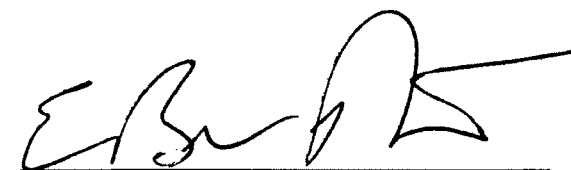
  
18 NELS JOHNSON, WSBA # 28616  
19 Assistant Attorney General

20 Date: 3/29/12

21 Date: 3/29/2012

22 CLARK COUNTY

23   
24 MARC BOLDT, Chair  
25 Board of County Commissioners

  
26 E. BRONSON POTTER, WSBA # 9102  
Attorney for Clark County

Date: \_\_\_\_\_

Date: 4/10/12

27 ENTERED this 2<sup>nd</sup> day of May 2012.

  
28 JUDGE ROBERT A LEWIS  
29 Clark County Superior Court

**FINDING OF SUITABILITY FOR EARLY  
TRANSFER  
(FOSET)**

**CAMP BONNEVILLE**

**CLARK COUNTY, WASHINGTON**

**August 2006**

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## LIST OF ACRONYMS

AAR	after action report
ACM	asbestos containing material
AOC	area of concern
AOPC	area of potential concern
ARAR	Applicable or Relevant and Appropriate Requirements
ASR	archive search report
AST	aboveground storage tanks
BCRT	Bonneville Conservation, Restoration, and Renewal Trust, LLC
Bldg.	building
BRAC	Base Realignment and Closure
BRACD	Base Realignment and Closure Division
CCSO	Columbia Cascades Support Office
CERCLA	Comprehensive Environmental Response, Compensation and Liability Act
CFR	Code of Federal Regulations
CITA	Central Impact Target Area
cys	cubic yards
DDESB	Department of Defense Explosive Safety Board
DDT	4,4-dichlorodiphenotrichloroethane
DMM	discarded military munitions
DoD	Department of Defense
DNT	2,4-dinitrotoluene
EBS	environmental baseline survey
ECCR	Environmental Covenants, Conditions, and Restrictions
ECP	Environmental Condition of Property
EOD	explosives ordnance disposal
ESCA	Environmental Services Cooperative Agreement
ESS	explosive safety submission
FAC	facility
FBI	Federal Bureau of Investigation
FOSET	finding of suitability for early transfer
HMX	octahydro-1,3,5,7-tetranitro-tetrazocine
IRA	interim removal action
IRP	Installation Restoration Program
LBP	lead-based paint

LRA	local redevelopment authority
LUCIP	Land Use Control Implementation Plan
MCL	maximum contaminant level
MD	munitions debris
MEC	munitions and explosives of concern
mg/kg	milligrams per kilogram
mm	millimeter
MOA	Memorandum of Agreement
MRS	munitions response site
MTCA	Washington State Model Toxics Control Act
NEPA	National Environmental Policy Act
NFA	no further action
NPS	National Park Service
NPS-CCSO	National Park Service – Columbia Cascade Support Office
OB/OD	open burn/open demolition
OE	ordnance and explosives
PAH	polynuclear aromatic hydrocarbons
PCB	polychlorinated biphenyl
PCS	petroleum contaminated soil
PETN	pentaerythritol tetranitrate
POL	petroleum, oils and lubricants
PPCD	Prospective Purchase Consent Decree
PRGs	preliminary remediation goals
RAU	remedial action unit
RDX	hexahydro-1,3,5-trinitro-1,3,5 triazine
SHPO	State Historic Preservation Office
RI	remedial investigation
SI	site investigation
2,4,T	2,4,5-trichlorophenoxyacetic acid
TA	Training Area (Range)
TEC	Topographical Engineer Center
TNT	trinitrotoluene
ug/l	microgram per liter
USATCES	U.S. Army Technical Center for Explosives Safety
U.S.C.	United States Code
USACE	U.S. Army Corps of Engineers
U.S. EPA	US Environmental Protection Agency

UST            underground storage tank  
UXO            unexploded ordnance  
WAC            Washington Administrative Code  
WDOE          Washington Department of Ecology  
WDNR          State of Washington Department of Natural Resources

# **FINDING OF SUITABILITY FOR EARLY TRANSFER**

**(FOSET)**

**Camp Bonneville, Clark County, Washington**

**August 2006**

## **1. INTRODUCTION**

The Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) § 120(h)(3)(C) allows federal agencies to transfer Property before all necessary cleanup action has been taken. Transfers under CERCLA § 120(h)(3)(C) entitled “Deferral” are commonly referred to as “Early Transfers.” For a facility not listed on the United States Environmental Protection Agency (U.S. EPA) National Priorities List (NPL), Section 120(h)(3)(C) allows the Governor of the State to defer the requirement that the United States provide a covenant in the deed that conveys the property warranting that all remedial action necessary to protect human health and the environment has been taken before the date of transfer. The United States will provide the warranty after transfer when all the response actions necessary to protect human health and the environment have been taken. Response actions will be performed in accordance with the regulatory requirements documented in the Washington Department of Ecology (WDOE) Prospective Purchaser Consent Decree (PPCD), executed by Clark County and the Bonneville Conservation, Restoration and Renewal Trust (BCRRT) and funded by the Army through an Environmental Services Cooperative Agreement (ESCA). The Army and Clark County will execute a Memorandum of Agreement (MOA) setting forth the terms of the transfer of Camp Bonneville, including assurances that all remedial actions necessary to protect human health and the environment will be taken.

The period between the transfer of title and the making of this final warranty is known as the “deferral period.” The intent is to assist communities in expediting the reuse of former defense facilities. By enabling local reuse authorities and other stakeholders to obtain full ownership of property earlier, these parties gain greater control over the future of their community.

The Governor of the State may approve the Early Transfer if the Governor determines that the property is suitable for transfer on the basis of the following findings:

- The property is suitable for transfer for the use intended by the Grantee, and the intended use is consistent with protection of human health and the environment;

- The deed or other agreement proposed to govern the transfer between the United States and the recipient of the property contains the assurances set forth in CERCLA §120(h)(3)(C)(ii), including: (a) the protection of human health and the environment; (b) no disruption of any pending or ongoing response actions or corrective actions, or oversight activities; (c) provision for schedules for investigation and completion of response actions; and (d) the use covenants/restrictions, as specified in Attachment 1 – CERCLA Notice, Covenant, and Access Provisions And Other Deed Provisions and in Attachment 2 – Environmental Covenants, Conditions, and Restrictions (ECCR) necessary for any ongoing or planned environmental restoration activities to protect human health and the environment and/or benefit site security and human safety after the Early Transfer;
- The federal agency that requests the deferral has provided notice, by publication in a newspaper of general circulation in the vicinity of the property, of the proposed transfer and of the opportunity for the public to submit, within a period of no less than 30 days after the date of the notice, written comments on the suitability of the property for transfer;
- The deferral and transfer of the property will not substantially delay any necessary response actions at the property.

Department of Defense (DoD) and Army policy requires that the Military Department proposing an Early Transfer of property prepare a Finding of Suitability for Early Transfer (FOSET). This FOSET will be submitted as part of a “Covenant Deferral Request” from the Army for approval by the Governor of the State of Washington.

## **2. PURPOSE**

The purpose of this FOSET is to document the environmental condition of Camp Bonneville (hereafter referred to as the Property) for Early Transfer to Clark County, Washington, the designated Local Reuse Authority (LRA), prior to completing all remedial actions, consistent with the planned reuse, CERCLA §120(h)(3), and DoD and Army policy. In addition, the FOSET identifies use restrictions (in the ECCR) necessary to protect human health and the environment, or to benefit site security and human safety after the Early Transfer.

## **3. PROPERTY INFORMATION**

### **3.1. Background**

The Property is located in Clark County, Washington in the western foothills of the Cascade Mountain Range, approximately 12 miles northeast of Vancouver, Washington (Figure 1 - Regional Map Camp Bonneville). The Property was established in 1909 as a drill field and rifle range for Vancouver Barracks. In 1912, an appropriation was made to expand

facilities to include target ranges and a road leading to the installation. There are two cantonment areas in Camp Bonneville: Camp Bonneville and Camp Killpack (Figures 2 and 3). These cantonments were built during the 1920s and 1930s and include 49 buildings. Camp Bonneville consists of 3,840 acres. The Property under consideration of the early transfer consists of 3,020 acres of Camp Bonneville owned by the Army. The Army leases an additional 820 acres from the Washington Department of Natural Resources (WDNR). The WDNR leased property will be remediated in accordance with the PPCD and the ESCA, however it is not part of this property transfer.

Camp Bonneville's primary mission was to provide a training camp for active, reserve, and guard units of the United States Army, Navy, Marine Corps, and Coast Guard. Training exercises generally included weapons training with small arms ammunition, assault weapons, and field and air defense artillery. Between 1909 and 1995, live and practice munitions including artillery and mortar rounds, shoulder-fired rockets, land mines (practice only), grenades, and small-arms ammunition were stored and used on the Property. In the 1980s, the Property was also used for non-military purposes including religious retreats, picnicking, camping, educational purposes, and pistol training for the State Police. The Federal Bureau of Investigation (FBI) currently operates a small-arms range on the Property. Records indicate that military munitions were disposed of by open burning or open detonation (OB/OD). The Property was closed in 1995 by the Base Realignment and Closure (BRAC) Commission.

### **3.2. Property Description**

The Property for Early Transfer consists of 3,020-acres of land including the following site improvements (buildings, facilities, utilities, and ranges):

- **Camp Bonneville Cantonment**

Buildings: 1815, 1826, 1828, 1833, 1837, 1847, 1848, 1857, 1864, 1867, 1911, 1920, 1922, 1923, 1930, 1932, 1934, 1940, 1942, 1980, and 1997

Facilities: 1981-flagpole, 1992-water well pump house, 1995-sewage lift station, 1999-sewage lagoon, 2663-water reservoir, 2950-ammunition magazine, 2951-ammunition magazine, and 2953-ammunition magazine

Utilities: electric, gas, sanitary and water



- **Camp Killpack Cantonment**

Buildings: 4125, 4126, 4155, 4314, 4316, 4325, 4327, 4337, 4345, 4348, 4356, 4364, 4366, 4368, 4377, 4378, 4387, 4389, 4398, 4475, 4475A, 4475B, 4476, 4476A, and 4483

Facilities: 4522 - water well pump house and 4532 - water reservoir

Utilities: electric, gas, sanitary and water

- **Ranges:** U001A-observation tower, U001B-covered training area, U001C-bleachers, U002A-observation tower, U002B-observation tower, U003B-covered training area, U004A-observation tower, U004B-covered training area, U004C-bleachers, U005A-observation tower, U006A-observation tower, U006B-observation tower, U007A-observation tower, U008A-observation tower, U008B-covered training area, U010A-observation tower, U010B-covered training area.
- **Other:** An underground natural gas pipeline (owned by the Northwest Pipeline) traverses the southwestern corner of the Property. The right of way was issued by the Bureau of Land Management in 1992 for a 30 year term. The gas pipeline and the 820 acres leased from WDNR are not included in this transfer. The Army intends to transfer all other federal property, inclusive of all buildings, facilities, and utilities, in “as-is” condition. Additional information on the Property, and a complete list of site improvements included in the Early Transfer are provided in Table 1 - Description of Property and Table 2 - Buildings and Facilities Included in the Early Transfer.

### 3.3. Remedial Action Unit (RAU) Descriptions

The Property has been investigated, and where appropriate, a response (removal or remediation) has been conducted. The sites where these activities have occurred are organized into remedial action units (RAUs) based on the known and/or suspected presence of CERCLA hazardous substances, petroleum products, or munitions and explosives of concern (MEC). See Figures 4 – 8.

- RAU 1 consists of 20 sites where CERCLA hazardous substances or petroleum products were known and/or suspected to have been stored, released, or disposed.

- RAU 2A consists of the small-arms ranges.
- RAU 2B is Demolition Area 2 and Demolition Area 3.
- RAU 2C is Demolition Area 1/Landfill 4.
- RAU 3 consists of munitions response sites (MRS) throughout the Property that are known and suspected to contain MEC.

Open burning (OB) or open detonation (OD) activities are known or suspected to have occurred at various demolition sites. Munitions response activities (e.g., investigations, geophysical surveys, aerial photograph analysis, reconnaissance actions, and interim removal actions) have been conducted at RAU 3 MRS since 1998.

Additional information on the RAUs is provided in Section 4.1 Munitions and Explosives of Concern, and Section 4.2 Environmental Remediation Sites.

#### **4. ENVIRONMENTAL CONDITION OF THE PROPERTY**

A determination of the environmental condition of the Property has been made based on the January 1997 *Final Environmental Baseline Survey (EBS) Report, Camp Bonneville, Washington* report, the July 1997 *U.S. Department of Defense Program Base Realignment and Closure Ordnance, Ammunition and Explosives Final Archives Search Report*, the July 1999 *Final Multi-Sites Investigation Report, Camp Bonneville, Vancouver, Washington*, the October 2000 *Final Removal Report Ordnance Explosive Removal Action, Camp Bonneville, Vancouver, Washington*, the July 2004 *Final Cleanup Action Plan, Remedial Action Unit 1, Camp Bonneville, Vancouver, Washington*, and other environmental investigation, remediation, and MEC documents. The information provided herein is a result of a complete search of agency files during the development of this FOSET. A complete list of documents that provide information on the environmental condition of the Property is included as Attachment 3 - Document List.

The EBS established Environmental Condition of Property (ECP) categories for the Property. Subsequent environmental response actions have been completed. As a result, the ECP categories established by the EBS have been revised. The current ECP categories are provided in Table 1 - Description of Property. ECP categories apply to CERCLA hazardous substances and petroleum product disposal or release.

#### **4.1. Munitions and Explosives of Concern (MEC)**

Based on a review of existing records and available information, there is evidence MEC is present on certain areas of the Property. The Property was used for OB/OD and live-fire training. The term “MEC” means military munitions that may pose unique explosives safety risks, including: (A) unexploded ordnance (UXO), as defined in 10 U.S.C. §101(e)(5); (B) discarded military munitions (DMM), as defined in 10 U.S.C. §2710(e)(2); or (C) munitions constituents (e.g., TNT, RDX), as defined in 10 U.S.C. §2710(e)(3), present in high enough concentrations to pose an explosive hazard.

The transferee will be required to conduct munitions responses at MRS that contain MEC, on Camp Bonneville, to the degree that fully satisfies the requirements of both the Department of Defense Explosive Safety Board (DDESB) and the Washington Department of Ecology (WDOE). The transferee must prepare an Explosives Safety Submission (ESS) or explosives site plan for review and approval by the US Army Technical Center for Explosives Safety (USATCES) and the DDESB. The ESS provides MRS-specific data (e.g., munitions-related activities that occurred: types of munitions potentially present, potential exposures, property end use) that provides the basis for the design of the selected munitions response actions and outlines the explosives safety provisions and protective measures that will be taken during and after a munitions response to protect both munitions response workers and the general public. An explosives site plan provides the explosives safety quantity distances needed to ensure safety from areas (e.g., magazines) to be used for the storage of any demolition explosives (commercial or military) that may be needed to detonate recovered military munitions and for the planned demolition of MEC. An explosives site plan is also required to address the explosives safety quantity distances for the munitions response area boundaries should an unintentional detonation occur. The transferee can obtain guidance on when and how to submit the ESS and site plans from USATCES.

The transferee must have a USATCES and DDESB-approved ESS and/or explosives safety site plan prior to:

- Conducting any activity on the Property that will require intentional contact with MEC;
- Placement of explosives on Camp Bonneville that are required to support (i.e., destroy MEC encountered) any munitions response conducted;

- Conducting any intrusive activity within an MRS identified during prior or future characterization;
- Providing construction support (on-site) where the likelihood of encountering MEC is determined to be moderate to high.

A single ESS may cover one or all of the above requirements. An ESS and/or explosives site plan will contain the information required by DoD 6055.9-Std (Ammunition and Explosive Safety Standards), Chapter 12, as revised by DDESB on December 14, 2004. In addition, the ESS must address any specific agreements reached with WDOE on required actions.

The transferee will submit the ESS and/or an explosives site plans, and any required amendments through the USATCES for initial review, Army-level approval and for forwarding to DDESB for approval. ESS, explosives site plans, and any amendments must be submitted to USATCES in a timely manner (at least 90 days prior to any on-site activities that meet the above conditions) to avoid delays. Although the final documentation must be submitted in hard copy, frequent and early coordination using electronic means is encouraged.

The transferee will submit an After Action Report (AAR) to the DDESB through the USATCES upon completion of the munitions response as specified in the DDESB-approved ESS and any amendments. The AAR must certify that the completed munitions response was performed per the DDESB-approved ESS. The DDESB will normally only review the AAR for adequacy, commenting only when the actions stated in the AAR did not meet the actions specified in the ESS.

The Army will perform oversight as outlined in the ESS, ESCA or other controlling documents. The DDESB will not perform any additional oversight.

Clark County shall develop a detailed land use control implementation plan (LUCIP) to help ensure the safety of people (on-site personnel, the general public) from any explosive hazards associated with MEC known or suspected to be present. At a minimum, the plan should include explosives safety training requirements, warning measures, training requirements, land use restrictions, and address any physical barriers required. The LUCIP should address those areas where MEC is known or suspected to be present and any adjacent (abutting) property potentially impacted by explosive hazards known or suspected to be present or providing direct access to such areas.

RAU 3 is the remedial action unit that addresses all MRS known or suspected to contain MEC throughout Camp Bonneville. Because different areas require different degrees of a munitions response, RAU 3 has been divided into 17 distinct MRS for discussion in Table 1 and Table 8: Airstrip, Camp Bonneville Cantonment, Camp Killpack, Bonneville Parade Ground, OB/OD Areas, Target Areas, Central Impact Target Area, Firing Points, West Side of Proposed Park, Roads and Trails, Wildlife Management Area, Current FBI Training Area, Designated Reuse Areas Located Outside the Park, Southwest Lacamas Valley, South Central Lacamas Valley, North Central Lacamas Valley and Northeast Lacamas Valley. The following is a brief description of each MRS and munitions response that has occurred within RAU 3. Table 1 and Table 8 contain additional information.

**RAU 3 Characterization and Removal Activities.** Several site characterization studies and munitions responses (removal actions) have been completed at RAU 3. These are summarized below.

- **Archives Search Report 1997** – USACE’s St. Louis District conducted a site inspection, historical records search and interviews of former Camp Bonneville personnel. Records reviewed included the national archives, military archives, and military, state, and local libraries. The ASR outlined the nature and degree to which MEC may potentially be present contamination at Camp Bonneville and included a figure that identified nine locations where MEC was encountered.
- **MEC Site Characterization 1998** – The purpose of this action was to determine the presence and density of MEC at the Property. During the characterization, 16 UXO items, 213 pounds of munitions debris (MD) and 185 pounds of cultural debris<sup>1</sup> were recovered and disposed.
- **Time-critical Removal Action 1998** – This action consisted of a surface removal of ten acres at Demolition Area 1/Landfill 4. During this removal action, eight UXO, which included two 2.75-inch HEAT rockets and six 35-millimeter (mm) LAW sub-caliber practice rounds with spotting charges, were recovered.

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<sup>1</sup> Cultural debris is defined as scrap metal found on operation ranges or munitions response sites which is not related to munitions or range operations. Such debris includes, but is not limited to: rebar, household items, automobile parts, fence posts and fence wire. Cultural debris is not a cultural resource as defined in Section 106 of the National Historic Preservation Act.

- **Supplemental Archives Search Report 1999** – This search was performed to fill data gaps identified in the 1997 ASR. Primarily, data gaps associated with potential munitions located beyond the border of the installation. The Supplemental ASR included a review of background information and interviews with residents surrounding Camp Bonneville.
- **Time-critical Removal Action (TCRA) 1999** - The purpose of this action was to remove all live and inert MEC and any MD in the two former M203 rifle grenade ranges (TA 8 and TA 9 - 12 acres combined) to a depth of two feet. The action was expanded to 19 acres that included a buffer zone around the two former ranges. During this TCRA, three UXO items (all 40mm M382 practice projectiles), 3,800 pounds of inert MD, and 684 pounds of cultural debris were recovered and disposed. USACE has issued a Statement of Munitions Response to MEC for the unrestricted use, to a depth of two feet, for these areas; however, this site has not been closed by WDOE.
- **Topographical Engineering Center (TEC) Analysis of Aerial Photographs 2000** – The TEC was retained to analyze a series of historical aerial photographs for the Camp Bonneville area. The objective was to identify and map features seen on the historical photos. The features identified included areas (e.g., impact areas, firing ranges, demolition activity, firing positions, trenches, ground scars, training areas and/or areas of general ground disturbance) where munitions-related activities may have occurred.
- **Training Range 8 and Training Range 9 - 2000** - Geophysical surveys and munitions response (removal) actions were conducted at TA 8 and TA 9 to a depth of two feet. During these responses, 9 UXO items were removed and detonated.
- **Instrument-aided Field Reconnaissance 2001** - The action was to confirm the location and characterize any MEC-related characteristics of Areas of Concern (AOCs) and Areas of Potential Concern (AOPCs) identified during an examination of historical aerial photographs of the Property. During this action, 79 of the original 677 AOC/AOPC sites were determined to require in-field reconnaissance. In addition, two UXO (105mm high explosive projectile and a 2.36-inch rocket) were encountered on the central impact area, and 20 MD items were recovered during this action.

- **Instrument-aided Field Reconnaissance - 2002** - This action was conducted to supplement the 2001 Instrument-aided Field Reconnaissance, and included 1,200 acres of a proposed future regional park, and 46 miles of existing trails and roadways at the Property. No MEC was encountered. During this action, 38 inert MD items were recovered and disposed.
- **Landfill 4/ Demo 1 Removal Action** – The Interim Removal Action (IRA) report, which was submitted as draft to WDOE in June 2005, details the soil cleanup performed at the site. This work included the removal and disposal of OB/OD ordnance, landfill materials and specified associated contaminated soil. The excavation of the soil involved disposal of the soil that was above the Washington State Model Toxics Control Act (MTCA) Method B cleanup levels for protection of groundwater for explosives, propellants, volatile organic compounds and heavy metals. The excavation was completed in December 2004 with concurrence by WDOE. The IRA report validates and documents that any UXO, UXO disposal/demilitarization, landfill excavation (i.e. removal of debris and impacted soil), and disposal of all excavated material were completed per approved work planning documents, and all associated regulations established by WDOE and local agencies. Deviations from the planning documents are addressed to show where deviations occurred, the rationale for the change, and the concurrence of the changes by WDOE.

The above actions have addressed over 2,400 acres of the Property including MRS known and suspected to contain MEC, all existing trails and roads, and a proposed future regional parkland. The results of the actions led to site characterization and analysis of cleanup alternatives presented in the November 2004 *Draft Remedial Investigation/Feasibility Study, Remedial Action Unit 3, Camp Bonneville, Washington*.

Additional information on MEC can be found in the October 2000 *Final Removal Report Ordnance Explosive Removal Action, Camp Bonneville, Vancouver, Washington*, and the November 2004 *Draft Remedial Investigation/Feasibility Study, Remedial Action Unit 3, Camp Bonneville, Washington*. A summary of MEC discovered on the Property is provided in Table 8 – Notification of Munitions and Explosives of Concern. The deed will include the MEC notification provided in the ECCRs.

## 4.2. Environmental Remediation Sites

- **Remedial Action Unit 1.** Remedial Action Unit 1 consists of 20 sites where CERCLA hazardous substances or petroleum product disposal or release were known or suspected to have occurred. These sites have been thoroughly investigated. The 20 sites of RAU 1 are provided in Table 1 – Description of Property. Those sites shown in bold type are sites that required a remediation. All active remediation has been completed and the sites are awaiting final approval by WDOE. (URS Greiner Woodward Clyde, 2004). The locations of the 20 sites are shown on Figure 4- RAU 1.
- **Remedial Action Unit 2A.** Based on the USACE's base-wide reconnaissance, a site investigation of small-arms ranges was conducted (U.S. Army Corps of Engineers, 1997a, 1997b, 1997c and 2000). Soil samples were collected and analyzed for the by-products of arms use including metals, perchlorate, and explosives compounds. Metals (primarily lead) were detected at some ranges at concentrations that exceed regulatory criteria for soil. The ranges are described in Table 1 – Description of Property and are shown on Figure 5- Remedial Action Unit 2A.
- **Remedial Action Unit 2B.** Arsenic, barium, copper, and mercury were detected at concentrations that required a terrestrial ecological evaluation. The evaluation concluded that the metals are not a potential threat to ecological receptors. The location of the RAU is shown on Figure 6- Remedial Action Unit 2B.
- **Remedial Action Unit 2C.** Metals (barium, copper, and chromium) were detected in the soil at concentrations that exceed regulatory criteria. Metal exceedances were addressed as part of the MRS soil remediation. (See Section 4.1 Munitions and Explosives of Concern for additional information.) The groundwater at this site has been affected by past site activities. Groundwater tests detected HMX at 3.5 micrograms per liter (ug/l), RDX at 97 ug/l, perchlorate at 270 ug/l, 1,1-dichloroethene at 27 ug/l, methylene chloride at 0.5 ug/l, 1,1-dichloroethane at 37 ug/l, 1,1,1-trichloroethane at 170 ug/l, dichlorodifluoromethane at 180 ug/l, and tetrachloroethene at 0.7 ug/l (all test results are shown as maximum analyte concentrations). Surface and ground water monitoring will continue in this area. The location of the RAU is shown on Figure 7- Remedial Action Unit 2C.



The environmental investigations and remediations performed at the Property were conducted per CERCLA, the National Contingency Plan, and State regulation and guidance, most notably the Washington State Model Toxics Control Act (MTCA). A detailed description of the investigations and remediations performed at each remedial action unit is found in Table 1-Description of Property. Figures showing the location of each RAU are provided in Figure 4 - RAU-1, Figure 5 - RAU 2A, Figure 6 - RAU 2B, Figure 7 - RAU - 2C, and Figure 8 - RAU 3.

### **4.3 Storage, Release, or Disposal of Hazardous Substances**

Hazardous substances were stored for one year or more and were released or disposed of on the Property in excess of reportable quantities specified in 40 Code of Federal Regulations (CFR) Part 373. Buildings 1815 and 4522 are associated with water treatment at Camp Bonneville cantonment area and Camp Killpack cantonment area and contain sodium hypochlorite (bleach), a CERCLA listed hazardous substance used in water treatment.

Hazardous substances were released at the sites listed below. The extent of soil and groundwater affected by these substances that required remediation was known; however, the quantity of these substances cannot be reliably estimated. The release or disposal of these hazardous substances was remediated at the time of the release, as part of the Installation Restoration Program (IRP) or will be remediated by Clark County after the Property is transferred.

- **Remedial Action Unit 1.** Building 4475, Suspect Drum Burial Site, Former CS Gas Training Building, and Ammunitions Storage Magazines (Facility No. 2953). Excavation was conducted at each of these areas with the contaminated soil being removed to an off-site facility. No further remedial action was required.
- **Remedial Action Unit 2A.** There is lead in soil at concentrations that require remediation at the sites listed below. These sites will be remediated as part of the ESCA included in Early Transfer agreements.
  - 25 Meter Machine Gun Range;
  - Combat Pistol Range – Berm and Pop-up Berms;
  - 1,000 Foot Range,
  - 1,000 Foot Machine Gun and Moving Target Range;
  - Rifle Ranges 1 & 2 – Long Berm;

- Rifle Ranges 1 & 2 – Short Berm;
  - Field Firing Range and Pistol Range;
  - 25 Meter M60 Range/Pistol Range;
  - Field Fire Rifle Range 1 & 2 – Pop-up Berms only;
  - Undocumented Pistol Range.
- **Remedial Action Unit 2C.** Demolition Area 1/Landfill 4 has been investigated for soil and groundwater contamination. In 2004, approximately 5,000 cubic yards of soil were removed and disposed of off-site. Groundwater monitoring wells were installed on the down gradient side of the landfill and the sample results indicate contamination of explosives, propellants and chlorinated solvents. Groundwater contamination will be addressed in the ESCA, which is included in the Early Transfer agreements.

See Section 4.2 Environmental Remediation Sites for additional information. A summary of the buildings and sites where hazardous substance activities have occurred is provided in Table 1 - Description of Property and Table 3 – Notification of Hazardous Substance Storage, Release, or Disposal.

#### 4.4. Petroleum and Petroleum Products

##### 4.4.1. Underground and Aboveground Storage Tanks (USTs/ASTs)

- **Current UST/AST Sites** - There are no USTs, and 26 petroleum ASTs on the Property. Petroleum product releases occurred at the following sites: Buildings 1828, 1833, 1837, 1922, 1932, 1940, 1942, and 1980 (all 275-gallon diesel ASTs). The releases of petroleum products were remediated at the time of the AST closures. As indicated in the July 2004 *Cleanup Action Plan, Remedial Action Unit 1, Camp Bonneville, Vancouver, Washington*, the remediations have been completed and no further actions are required.
- **Former UST/AST Sites** - There were two USTs on the Property that were used for the storage of petroleum products. Petroleum product releases occurred at the following UST site: Building 4475 (a 300-gallon diesel UST). The release was remediated as part of the UST closure. Approximately 375 cubic yards of petroleum-contaminated soil and 250 gallons of diesel-contaminated water were disposed of at an off-site facility. The excavation

was backfilled to grade. The UST formerly located at Building 4476 was removed in 1978. According to the January 1997 *Environmental Baseline Survey Report for Camp Bonneville, Washington* there was no evidence of a petroleum product release.

A summary of UST/AST petroleum product activities is provided in Table 4 - Notification of Petroleum Product Storage and Table 5 - Notification of Petroleum Products Release or Disposal.

#### **4.4.2. Non-UST/AST Storage, Release, or Disposal of Petroleum Products**

There was non-UST/AST storage of petroleum products (waste oil and petroleum, oils, and lubricants) in excess of 55 gallons for one year or more at Buildings 4475A and 4475B. The petroleum products were used in association with vehicle maintenance activities. There is no evidence of petroleum releases as a result of these activities. All non-UST/AST petroleum product storage operations in excess of 55 gallons have been terminated on the Property.

#### **4.5 Polychlorinated Biphenyls**

There are 20 pole-mounted electrical transformers on the Property. Records supplied by the Fort Lewis Directorate of Public Works indicate that the transformers are non-polychlorinated biphenyl (PCB) type or non-PCB transformers, which is defined by the Toxic Substance Control Act as transformers that contain less than 1.5 parts per million PCB. The transformers are located in the Camp Bonneville cantonment, pistol range, and buildings 1940 and 1815. This equipment is operational, properly labeled in accordance with federal and state regulations, and has been determined not to be leaking. For a complete list of electrical transformers on the Property, see Table 6 - Notification of Electrical Transformers.

Due to the age of the buildings within the early transfer property, some light fixture ballasts are suspected to contain PCBs and must be managed in accordance with applicable federal, state and local regulations prior to any removal/demolition actions. The conveyance deed will contain the PCB notification and covenant contained in the ECCRs.

#### **4.6 Asbestos**

Asbestos, in a variety of non-friable and friable forms, has been reported in 22 structures in the Camp Bonneville Cantonment, 19 structures in the Camp Killpack Cantonment, and four range structures. The majority of these asbestos containing materials (ACM), both in

term of number of findings and in terms of quantity, are non-friable as that term is defined in Federal and Washington State regulation. Non-friable ACM findings include floor tiles, linoleum, and associated mastics and adhesives; roofing materials; fire door cores; window putty; and wall and ceiling panels. Table 7 lists the ACM found at the site by building number, general description, quantity, condition, and asbestos content.

Under Washington State Regulations, friability for asbestos is defined as material that can be crushed or pulverized by normal hand pressure. Non-friable ACM is not required to be managed as ACM under this regulation. Of the ACM, only six items have been identified as friable materials, as follows (Note: all quantities are approximations):

- 270 square feet of white linoleum, rated as Condition 1 – Good, under kitchen linoleum in Building 4155 at the Camp Killpack Cantonment (This building was originally a barracks, but more recently it has been used as the caretaker’s residence. It is not currently in use.)
- 1,000 square feet of white board or drywall, rated as Condition 4 – Moderate to Significant Damage and Loss of Integrity, in the ceiling of Building 1828 at the Camp Bonneville Cantonment (This building was used as an enlisted personnel barracks. It is currently not in use.)
- 1,000 square feet of transite siding, rated as Condition 4 – Moderate to Significant Damage and Loss of Integrity, on Building 1864 at the Camp Bonneville Cantonment (This building was and is used as the Grounds and Maintenance Shop.)
- 25 square feet of white interior or drywall, rated as Condition 3 – Isolated Areas of Damage, in Building 1930 at the Camp Bonneville Cantonment (This building was used as cold storage for the mess hall and is currently not in active use.)
- Two pipe elbows “hard mudded” with insulation, rated as Condition 1 – Good, in Building 1934 at the Camp Bonneville Cantonment (This building is the latrine for the barracks area.)

- Six square feet of white fiber board, rated as Condition 1 – Good, in Building 1980 at the Camp Bonneville Cantonment (This building was originally an open dining facility, but more recently it was used for the Command Post.)

This information is based on the following documents:

- *Management Plan for Asbestos Surveys – Camp Bonneville, Vancouver, Washington* (June 1997)
- *Asbestos Survey for camp Bonneville, Vancouver, Washington* (November 1997)

The friable asbestos has not been removed or encapsulated and will not present an unacceptable risk to human health because no occupation or use of those buildings will be permitted prior to all ACM being abated. Buildings with friable asbestos are not being used and are locked. Asbestos warning signs have been posted on the affected buildings. As a requirement of transfer, the Grantee agrees to perform the required asbestos abatement or remediation of the buildings prior to using or occupying the buildings. This use and occupation restriction is included in Attachment 2.

#### **4.7 Lead-Based Paint**

The following buildings tested positive for lead based paint (LBP): 1920, 1922, 1930, 1932, 1934, 1942, 1963, 1964, 1967, 1980, 4125, 4145, 4316, 4325, 4364, 4366, 4368, 4377, 4387, 4389, 4475, and 4532. The concentrations of lead in the soil at Buildings 1963, 4126, 4155, 4314, 4316, 4345, 4366, 4368, 4387, 4389, and 4475 exceed the WDOE MTCA residential soil criteria for lead of 250 mg/kg. Abatement of LBP and lead-paint affected soil have not been conducted. The Property was used for residential purposes (primarily barracks). The Grantee intends to use the Property for conservation purposes in the future. See the February 1997 *Final Lead-Based Paints and Soil-Metals Survey Report, Camp Bonneville, Vancouver, Washington* for additional information. The deed will include the lead-based paint notification and covenant provided in Attachment 2.

#### **4.8 Radiological Material**

Based on the Environmental Baseline Survey, the use of radiological items at the Property was confined to low-light-level weapons sights containing promethium-147 or tritium,

and luminous dials and instruments containing low levels of tritium and radium. These items were transported back to the base of origin after training was completed; therefore, disposal of radiological materials at Camp Bonneville is unlikely. These items are no longer stored at the Property. There is no evidence of any release of radiological materials at these buildings.

#### **4.9 Radon**

A radon survey has not been performed at the Property. There are no existing buildings with basements on the property; therefore a radon survey is not required.

#### **4.10 Groundwater**

Monitoring wells have been installed in strategic areas on the Property to assess the groundwater quality on an installation-wide and site-specific basis for potential impacts associated with past site activities. Monitoring wells are located at the southern property boundary (sentinel wells), Demolition Area 2, Demolition Area 3, Building 1864 (Pesticide Storage/Mixing Building) and at Demolition Area 1/Landfill 4. Additional information can be found in several groundwater sampling reports starting in December 2003 through May 2006. A summary of the investigation and remediation sites is provided in Table 1 – Description of Property; the sites are shown on Figure 4 - Remedial Action Unit 1.

Groundwater was sampled from two monitoring wells near Building 1864 to investigate the potential for pesticide contamination. Chemical analyses of the groundwater from these wells did not indicate any measurable concentrations of pesticides.

Groundwater at Demolition Area 2, Demolition Area 3, and at the outlet of Lacamas Creek on the installation boundary was first monitored in 2003. The Army has conducted eight complete quarterly rounds of sampling on these monitoring wells, including chemical analyses for explosives, propellants, total and dissolved heavy metals, volatile organic compounds and water quality parameters. Additionally, the boundary wells included sampling for semi-volatile organic compounds, and gasoline/diesel/oil range petroleum hydrocarbons. In summary, after eight quarters of groundwater monitoring, there are no chemicals of concern with concentrations that would trigger further investigations.

The groundwater at Demolition Area 1/Landfill 4 (RAU 2C) has been affected by past site activities. Explosives and propellants (DNT, RDX, and perchlorate) were detected in the soil and groundwater at concentrations that exceed screening criteria. The 2005 interim

removal action (excavation and offsite disposal of approximately 5,000 cubic yards of contaminated soil) included the source area where the explosives and propellant compounds were affecting the groundwater.

A continued sampling regime has not been established with WDOE, however the previously established quarterly sampling efforts will be continued until a new monitoring program is agreed upon by Clark County/BCRT and WDOE.

#### **4.11 Surface Water**

According to the March 2000 *Final Project Completion Report, Surface Water Investigation of Lacamas Creek, Camp Bonneville, Vancouver, Washington*, the results of water samples collected from Lacamas Creek indicate that Demolition Area 1/Landfill 4 has not impacted the water quality of Lacamas Creek. There are no locations on the Property where site activities are known to have affected the quality of surface water. The water quality of Lacamas Creek is monitored at Demolition Area 1/Landfill 4 by collecting groundwater samples from monitoring wells located downgradient of Demolition Area 1/Landfill 4, and before reaching Lacamas Creek.

#### **4.12 Pesticide, Herbicide, and Fungicide**

Pesticide, herbicide, and fungicide use at the Property is limited to manufacturer-recommended usage and is applied by certified pest control personnel from Fort Lewis. Records indicate that 2,4,5-T, 2,4-dichlorophenoxyacetic acid, and DDT were stored in Buildings 4126 and 1864 until 1980 when these materials were moved to Fort Lewis. Pesticides are not currently stored on the Property. Past herbicide use appears to have been limited to roadways, and possibly the cantonment areas and ranges. Small-scale mixing and loading was historically done in Building 4475, but there is no evidence of spills at this location.

### **5. ADJACENT PROPERTY CONDITIONS**

The Army has leased two parcels (approximately 820 acres) of Department of Natural Resources (DNR) property; one parcel is located to the northeast and another is south of Camp Bonneville. These leased parcels are not included in the Early Transfer property of Camp Bonneville. A southwestern portion of the northeastern DNR leased property falls within the Central Impact Target Area, which contains explosive hazards from its past use as an artillery target area. Although the parcels leased from DNR are not part of the Early Transfer under this FOSET, any response conducted on these parcels will be consistent with the PPCD and ESCA.

The Supplemental ASR that was completed in 1999 was initiated primarily to look at the potential for munitions to be encountered beyond the installation's boundary. From this ASR, it was determined that off-site characterization studies were not warranted unless a munitions response conducted on the Property's boundary indicated that MEC was most likely present off-site. Characterization studies conducted to date continue to support the 1999 Supplemental ASR's conclusion. The transferee is obligated to notify the Army if a munitions response within the Property's boundary indicates that MEC is most likely off-site. The Army will reassess whether there is verifiable evidence of MEC in areas outside of the Property and determine if a response is required. There are no known adjacent property conditions that impact the environmental condition of Camp Bonneville.

## **6. CULTURAL RESOURCES**

The Army completed a "Cultural Resource Survey of Selected Areas, Camp Bonneville, Clark County, Washington" in May 2003 (Sadler 2003). This study summarized all previous cultural resource surveys on Camp Bonneville and conducted additional field surveys. The additional field surveys were initially targeted at 741 acres considered to be high probability areas for the presence of cultural resources as determined by consultation with Washington State Historic Preservation Office (SHPO) and specified by agreement with the Army and the SHPO. Three small areas totaling 7.5 acres were added to the study area when background research suggested cultural resources might be present in these areas. A total of 392 acres was subjected to systematic pedestrian survey or shovel-testing. The remaining 356.5 acres were not physically surveyed because field inspection revealed environmental conditions judged likely to preclude the existence of significant archaeological resources (steep slopes, 252 acres); or environmental conditions that precluded field survey (wetland areas, 72.5 acres); or because safety factors precluded survey actions (potential unexploded ordnance in the M203 HE Grenade Ranges, 32 acres).

Two historic-period sites (45-CL-528 and 45-CL-529); one site with both prehistoric and historic components (45-CL-318); and 16 isolated finds have been recorded on the Property (see Sadler 2003: Appendix B). The Washington State Historic Preservation Officer concurred with the Army's determination that none of these sites or isolated finds is eligible for the National Register of Historic Places in correspondence dated September 13, 2002 and June 17, 2003.



The Cultural Resource Survey (Sadler 2003) concluded that additional prehistoric archaeological sites may remain undiscovered even in previously surveyed areas, as well as in buried alluvial contexts in the Lacamas Creek valley, or in the M203 HE Grenade Ranges that were not available for survey due to the possibility of unexploded ordnance.

The Cultural Resource Survey (Sadler 2003) did not examine areas outside the Camp Bonneville boundary. A review of archaeological site records housed at the Washington Department of Archaeology and Historic Preservation indicates that at least one large prehistoric site with a diverse artifact assemblage is located within one mile of the Camp Bonneville boundary. The existence of such a site in a similar upland environment and in close proximity to Camp Bonneville suggests an increased likelihood that significant cultural resources may remain undiscovered within the Camp Bonneville boundary.

In Cowlitz Indian Tribe Resolution No. 05-29, issued to the Office of the Secretary of the Army, the Cowlitz Tribal Council declared the presence of a series of historic and prehistoric Indian villages, burial grounds, and trails on or near Camp Bonneville, and declared site number 45-CL-318 and surrounding property as a sacred site; and further resolved that actions on the said sacred site are not endorsed to take place without government-to-government consultation with the Cowlitz Indian Tribe.

In 1997, the National Parks Service-Columbia Cascades Support Office (NPS-CCSO) entered into an agreement with the Department of the Army, Headquarters I Corps, and Fort Lewis for a National Register of Historic Places evaluation of buildings and landscapes at Camp Bonneville. The NPS-CCSO completed the evaluation and documentation in 1999. Based on this information, the Army concluded that the Camp Bonneville and Camp Killpack cantonment areas at Camp Bonneville are not eligible for listing in the National Register of Historic Places. The Washington State Historic Preservation Officer concurred with the Army's determination that Camp Bonneville and Camp Killpack are not eligible for listing in the National Register of Historic Places in correspondence dated April 14, 1999.

The Army, the Washington State Historic Preservation Officer (SHPO) and the Advisory Council on Historic Preservation (ACHP) entered into a "Programmatic Agreement for the Closure and Disposal of Camp Bonneville, Washington" in 1998. The Programmatic Agreement satisfies the Army's responsibility to take into account the effects of the undertaking on historic properties in accordance with Section 106 of the National Historic Preservation Act of 1966, as amended. In order to address any conditions that may have changed since the original agreement

in 1998, an amendment to the Programmatic Agreement has been developed in consultation with SHPO, the ACHP, Clark County, the Cowlitz Indian Tribe, the Chinook Indian Tribe, the Yakama Nation, and the Confederated Tribes of the Grand Ronde Community of Oregon.

To ensure that significant cultural resources are protected, a “No Dig/Land Disturbance Restriction” and a “Preservation Covenant for Conveyance of Property that May Include Archeological Sites” has been included in Attachment 2 – Environmental Covenants, Conditions, and Restrictions (ECCR). A plan describing specific procedures to be followed in the event of the inadvertent discovery of archaeological objects, archaeological sites, or human remains is included as Attachment 5 - Archaeological Monitoring and Inadvertent Discovery Plan for Remedial Actions Associated with the Removal of Munitions and Explosives of Concern (MEC) at Camp Bonneville, Washington.

## **7. ENVIRONMENTAL REMEDIATION AGREEMENTS**

Except for the implementation of land use controls, all remediation activities at RAU 1 have been completed and no further remedial actions are required. A site investigation has been completed at RAU2B and the draft final RI report has not been submitted for public comment. Additional actions are proposed for RAU 2A, RAU 2C, and RAU 3. See Section 4.1 Munitions and Explosives of Concern, Section 4.2 Environmental Remediation Sites, and Table 9 – Remediation Schedule for additional information. The deed will include a provision in the CERCLA Notice, Covenant, and Access Provisions and Other Deed Provisions (Attachment 1) reserving the Army’s right to conduct response actions on the Property. Clark County will conduct remediation via an ESCA with the Army and in accordance with a PPCD issued by WDOE to Clark County and the BCRRT.

## **8. INTENDED REUSE**

Clark County is the authorized LRA for the Property and in September 1998 (updated in February 2003 and finalized in November 2005) published the Camp Bonneville Draft Reuse Plan (Reuse Plan). The Army is transferring the Property to Clark County under a conservation conveyance. The Reuse Plan identifies the Property reuse as recreational, with nine specific components: regional park, law enforcement training center, rustic retreat center/outdoor school, Native American cultural center, Clark College environmental education, trails and nature area, FBI firing range, timber resource management area, and habitat restoration. Approximately 800 acres of the 3,020 acres at Camp Bonneville will be dedicated as a regional park area. The Reuse Plan is considered by the Army as the primary document that describes the intended reuse of the Property. See Figure 9 - Reuse Plan Land Uses for the locations of the reuse components.

The proposal to transfer this property has been adequately assessed and evaluated for (a) the presence of hazardous substances and contamination on the property, (b) environmental impacts anticipated from the intended use of the property, (c) the presence of MEC on the property, and (d) the adequacy of use restrictions and notifications to ensure that it is protective of human health and the environment.

## **9. REGULATORY/PUBLIC COORDINATION**

The WDOE and the public were notified of the initiation of this FOSET. Regulatory/public comments received during the 30-day public comment period were reviewed and incorporated, as appropriate. A copy of the regulatory/public comments and the Army Responses are included as Attachment 4 – Responsiveness Summary.

## **10. NATIONAL ENVIRONMENTAL POLICY ACT COMPLIANCE AND CONSISTENCY WITH LOCAL REUSE PLAN**

The environmental impacts associated with the proposed transfer of the Property have been analyzed in accordance with the National Environmental Policy Act (NEPA). The results of this analysis have been documented in the October 2001 *Environmental Assessment for Disposal and Reuse of Camp Bonneville, Washington*. The NEPA analysis and subsequent investigations have identified several general conditions for the transfer of the property:

- Where a munitions response to MEC, is determined to be impractical or infeasible, restrictive covenants shall be placed in the deed allowing access only to authorized persons who have UXO safety training and prohibiting terrain-disruptive activities in areas known or suspected to contain UXO, to ensure safety and to protect human health and the environment.
- Following transfer or conveyance, the Army shall retain the right to conduct investigations and surveys, to have government personnel and contractors conduct field activities, and to construct, operate, maintain or undertake remedial action at contaminated sites that the Army has created due to former Army operations or activities.
- In order to provide for the continued protection of jurisdictional wetlands, the Army shall notify the Grantee of its responsibility to comply with Section 404 of the Clean Water Act if development is planned that could adversely affect such wetlands.
- The Army shall notify the new owner(s) that their redevelopment activities should be conducted in compliance with the requirements of the Endangered Species Act.

- The deed shall contain a notice and covenant whereby the Grantee agrees that it shall be responsible for any future asbestos remediation found to be necessary.
- The deed shall contain a notice and covenant whereby the Grantee agrees that it shall be responsible for any future abatement of lead-based paint found to be necessary.
- Title to easements and rights-of-way of record burdening the Property for utilities and other infrastructure-related purposes will not be affected by the conveyance of the Property.

All encumbrances and conditions identified in such analysis as necessary to protect human health or the environment have been incorporated into the FOSET. Change of intended reuse in any significant manner prior to transfer from federal ownership, may require the supplementation of the Environmental Assessment of the Property. Any further environmental analysis required by a change in use shall be solely the responsibility of the Grantee.

## **11. ENVIRONMENTAL COVENANTS, CONDITIONS, AND RESTRICTIONS**

Based on the January 1997 *Final Environmental Baseline Survey Report, Camp Bonneville, Washington*, the July 1997 *U.S. Department of Defense Program Base Realignment and Closure Ordnance, Ammunition and Explosives Final Archives Search Report*, the July 1999 *Final Multi-Sites Investigation Report, Camp Bonneville, Vancouver, Washington*, the October 2000 *Final Removal Report Ordnance Explosive Removal Action, Camp Bonneville, Vancouver, Washington*, the July 2004 *Final Cleanup Action Plan, Remedial Action Unit 1, Camp Bonneville, Vancouver, Washington* and other environmental studies, and in consideration of the intended use of the Property, certain terms and conditions are required for the proposed transfer. These terms and conditions are set forth in Attachment 1 – CERCLA Notice, Covenant, and Access Provisions and Other Deed Provisions and in Attachment 2 –ECCR and will be incorporated in the deed to the Property.

## **12. REQUIREMENTS FOR REMEDIAL, CORRECTIVE AND RESPONSE ACTIONS, OPERATIONS, AND LAND USE CONTROLS**

The Army's environmental investigation and remediation of hazardous substances at the Property have been conducted in accordance with the Department of Army Installation Restoration Program requirements, as part of the Defense Environmental Restoration Program, 10 U.S.C. Sections 2701-2708, the Washington State MTCA and the Hazardous Waste Management Act. The Property is being disposed of consistent with CERCLA Section 120 and Executive Order 12580. The ongoing environmental investigation and remediation of hazardous substances and MEC on the Property after transfer will be accomplished by Clark County under

the provisions of the Environmental Services Cooperation Agreement. In executing the ESCA, Clark County will assume responsibility for achieving regulatory closure of the sites located on the Property, in accordance with all applicable local, state, and federal laws and regulations. Clark County will be required to implement interim and, as may be necessary, long-term land use controls (LUCs) and complete regulatory closure for these sites in accordance with the provisions of a PPCD between Clark County and WDOE.

### **13. RESPONSE ACTION ASSURANCES**

As part of the Early Transfer, CERCLA §120(h)(3)(C)(ii) requires that the deed or other agreement contain the following assurances:

- Provide for any necessary covenants/restrictions on the use of the Property to ensure the protection of human health and the environment;
- Provide that there will be covenants/restrictions on use as necessary to ensure that required investigations, response actions, and oversight activities will not be disrupted;
- Provide that all necessary response actions will be taken, and identify the schedules for investigation and completion of all necessary response actions, as approved by the appropriate regulatory agency; and
- Provide that the Army will submit a budget request to the Director of the Office of Management and Budget that adequately addresses schedules for the investigation and completion of all necessary response actions, subject to congressional authorizations and appropriations.

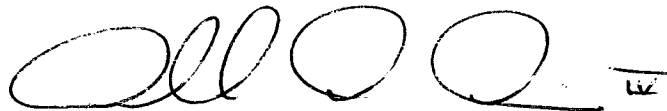
#### **13.1. Land Use Controls**

Prior to the completion of necessary environmental restoration, the conveyance deed or other agreement will require the Grantee to adhere to the land use controls identified in the ECCR, which will be incorporated in the deed. Land use restrictions, notifications, covenants, conditions and institutional controls will be implemented to ensure that the intended use of the property is consistent with the requirements of CERCLA Section 120 (h)(3)(C) for the protection of human health and the environment. These land use controls are necessary for any ongoing or planned environmental restoration activities to protect human health or the environment after the early transfer. These provisions shall ensure any required future remedial investigations, response actions, and oversight activities will not be interrupted. The land use controls will remain in effect until terminated, removed, or modified with WDOE concurrence.

- The covenant under CERCLA §120(h)(3)(A)(ii)(II) warranting that any additional remedial action under CERCLA found to be necessary after the grant of the deferred warranty with respect to such hazardous substances remaining on the Property at the time of transfer shall be conducted by the United States.
- The clause as required by CERCLA §120(h)(3)(A)(iii) granting the United States access to the Property in any case in which remedial action or corrective action is found to be necessary after the date of transfer.

In accordance with CERCLA §120(h)(3)(C)(iii), when all response actions necessary to protect human health and the environment with respect to any substance remaining on the Property on the date of transfer have been taken, the United States shall execute and deliver to the Grantee an appropriate document containing a warranty that all such response actions have been taken. The making of the warranty shall be considered to satisfy the requirements of CERCLA §120(h)(3)(A)(ii)(I).

As required under CERCLA § 120(h)(1) and DoD FOSET Guidance, a description of remedial action taken, if any, and notification of hazardous substance activities shall be provided in the deed. See Table 1 - Description of Property, Table 3 - Notification of Hazardous Substance Storage, Release, or Disposal, Table 4 - Notification of Petroleum Product Storage, and Table 5 - Notifications of Petroleum Products Release, or Disposal.



Addison D. Davis, IV  
Deputy Assistant Secretary of the Army  
(Environmental, Safety and Occupational Health)  
OASA(I&E)

Enclosures

# TABLES

**Table 1- Description of Property**

<b>Table 1</b>				
<b>DESCRIPTION OF PROPERTY*</b>				
Site/Area	EBS Parcel Designation	Description	Investigation/Remediation	ECP Category
<b>Remedial Action Unit 1</b>				
Landfill 1 (Historic Landfill)	2 (7) HR(P)	This site (small shallow depression) was identified as a landfill based on the presence of bottle fragments. There is no record of when the site may have been used or what other materials it may contain.	In December 1997, a field reconnaissance and geophysical survey were performed in the area of landfill 1. The exact location of the landfill could not be determined and it was determined that the site may have been a former homestead.	1
Landfill 2 (Sewage Lagoons and Historic Landfill)	3 (7) HR(P)	This landfill was discovered in 1978 during the construction of the sewage lagoon. The landfill may have been used from the 1940s to the 1950s; however, the type and quantity of material located at this site is unknown.	<p>A UXO avoidance/screening and electromagnetic survey identified pipes, vehicle parts, wiring and one undetonated 2.76-inch light anti-tank weapon, which was disposed of by the Ft Lewis EOD. A soil gas survey of the site detected chloroform, which was determined to be a possible sample or analytical procedure contaminant. Three borings were advanced around the landfill (one up-gradient and two down-gradient), sampled and converted to monitoring wells. One soil sample was collected from each boring and tested for TPH, VOCs, SVOCs, PCBs, pesticides, nitroaromatic and nitramine explosives, PETN, cyanide, TOC, and PPL metals. Test results of soil samples indicate TPH, VOCs, SVOCs, PCBs, pesticides, cyanide, and explosive compounds including PETN and PA were below the detection limit for all samples. PETN was detected in one sample at an estimated concentration of 0.22 mg/kg. There are no regulatory screening levels for PETN. Various metals were detected at concentrations above one or more of the regulatory cleanup criteria for soils; however, only copper (134 mg/kg) was detected above background levels (114 mg/kg).</p> <p>Groundwater samples were collected from the two down-gradient wells and tested for TPH, VOCs, SVOCs, PCBs, pesticides, nitroaromatic and nitramine explosives, PETN, cyanide, TOC, and PPL metals (total and dissolved). Test results show no detectable levels of TPH, SVOCs, explosives compounds, PCBs, and pesticides. Naphthalene was detected at an estimated quantity (below its cleanup criteria). Numerous metals were detected in the groundwater samples but at concentrations below regulatory cleanup levels except for arsenic. Arsenic was detected above the U.S. EPA Region 3 risk-based criterion (0.000045 mg/l) and the MTCA screening level (0.00005 mg/l), but below the Federal MCL.</p>	3



**Table 1**

**DESCRIPTION OF PROPERTY\***

<b>Site/Area</b>	<b>EBS Parcel Designation</b>	<b>Description</b>	<b>Investigation/Remediation</b>	<b>ECP Category</b>
Former Burn Area (Historic Burn Site)	4 (7) HR(P)	The former burn area is located immediately north of Landfill 3 and southeast of the existing sewage lagoon. The area was reportedly used to burn wood and debris, although there is no record of the length of use or list of materials burned. The area has apparently not been used since the 1980s.	A UXO avoidance/screening survey was performed across the former burn site. In December 1997, surface and near-surface soil samples were collected in and adjacent to the area. All test results were below regulatory cleanup levels, site-specific background concentrations for metals, or below MTCA levels for thallium and zinc.	3
Landfill 3 (Trash Burial Site)	5 (7) HR(P)	This former landfill is located southeast of the existing sewage plant, and at its closest point is 20 feet west of Lacamas Creek. The landfill was reportedly used in the 1970s and 1980s. Uncovered objects include domestic appliances and paint cans.	A UXO avoidance/screening and electromagnetic survey identified corrugated metal, pipes, drums, and wiring. No UXO debris was observed. A soil gas survey of the Landfill 3 area detected no analytes above the testing instrument's detection limit. The results of soil sampling conducted around the perimeter of the landfill showed no analyte concentrations above regulatory cleanup levels or site-specific background levels for metals. Groundwater samples were collected from one up gradient and three down-gradient wells located at the perimeter of the landfill. All test results were below regulatory cleanup levels.	3
Grease Pits - Bonneville	6 (7) HR(P)	There are two former grease pits north of Building 1828. The grease pits consist of corrugated metal pipes that extend into an underground pit filled with gravel. The pits were built to accept grease from nearby mess halls and are reported to have been used from the mid-1930s to the 1990s.	Two soil borings were advanced immediately adjacent to the grease pit. Two soil samples were collected from each boring and tested for TPH, VOCs, SVOCs, PCBs, pesticides, and PPL metals.  One of the two soil samples collected at the grease pit contained the pesticide lindane at 2.0 mg/kg (cleanup concentration is 0.769 mg/kg). The presence of lindane at this concentration does not pose an unacceptable risk to human health or the environment because there are no complete exposure pathways. Numerous metals were detected, but at concentrations below the regulatory cleanup levels. The concentrations of arsenic and chromium detected exceeded the regulatory cleanup level, but were below the site-specific background concentrations.	3
Above Ground Storage Tank Sites  <b>Building T-1932</b>	7 (2) PS	This site includes the entire Property. There are twenty-six 275-gal. diesel ASTs in the two cantonment areas (Bonneville and Killpack). The ASTs were used for heating buildings. All buildings are reported to have	All ASTs were visually inspected for evidence of a release. Stained soil, odors, and/or elevated PID readings were observed at eight AST locations. In 1998, soil samples were collected from the eight AST locations and tested for TPH. Test results indicate that seven samples had concentrations above the MTCA for TPH (2,000mg/kg). In 1998, soil excavations began at the seven AST locations. Confirmatory samples were	2

**Table 1**

**DESCRIPTION OF PROPERTY\***

Site/Area	EBS Parcel Designation	Description	Investigation/Remediation	ECP Category
		been converted to electrical heat.	<p>collected and tested for TPH. Three AST locations had confirmatory sample test results that exceeded the MTCA for TPH. Additional excavations took place at two of these locations followed by another round of confirmatory sampling, which showed no results above the MTCA for TPH. Additional excavations could not be done at Building 1932 (third location) because the excavation could have undermined the building. The maximum TPH concentration detected in the confirmatory sample from this building was 2,690 mg/kg. It is assumed that there could be as much as 33 cys of TPH contaminated soil remaining beneath this building. The WDOE concurred that leaving the TPH contaminated soil in place was acceptable.</p> <p>All contaminated soil, except as noted above, was disposed of at an off-site facility. All excavations were backfilled to grade. No further removal actions are required at this time. If the building is demolished in the future, additional soil sampling and removal may be required.</p>	
<p>Burned Buildings 1962 &amp; 1983</p> <p style="text-align: center;">Building 1962</p> <p style="text-align: center;">Building 1983</p>	<p style="text-align: center;">8 (7) HR(P)</p> <p style="text-align: center;">8 (7) HR(P)</p>	<p>Former Building 1962 was located near the southeast corner of Camp Bonneville cantonment area. The building was burned in place at an unknown date. The debris was removed to an unknown location, leaving no visible trace of the building.</p> <p>Former Building 1983 was located near the southeast corner of Camp Bonneville cantonment area. The building was burned in place at an unknown date. The debris was removed to an unknown location, leaving no visible trace of the building.</p>	<p>A geophysical survey of the area detected building materials at a specific location, which was assumed to be the footprint of former Building 1962. Surface soil samples were collected from within the assumed building footprint and immediately adjacent to the footprint. All test results were below the regulatory cleanup level.</p> <p>A geophysical survey of the area detected building materials at a specific location, which was assumed to be the footprint of former Building 1983. Surface soil samples were collected from within the assumed building footprint and immediately adjacent to the footprint. All test results were below the regulatory cleanup level.</p>	<p style="text-align: center;">3</p> <p style="text-align: center;">3</p>
<p>Pesticide Storage/Mixing Building 1964</p>	<p style="text-align: center;">9 (7) HR(P)</p>	<p>This wood-framed building was originally constructed in 1955 as a fire station and later</p>	<p>Surface, subsurface, and groundwater samples were collected at the site and tested for TPH, VOCs, (subsurface samples only) SVOCs, chlorinated</p>	<p style="text-align: center;">4</p>

**Table 1**

**DESCRIPTION OF PROPERTY\***

Site/Area	EBS Parcel Designation	Description	Investigation/Remediation	ECP Category
		<p>used to store and mix pesticides. Pesticides including 2,4,5-T, 2,4-D, and DDT were reportedly stored in this building. More recently, the building was used as the grounds shop where equipment, vehicles, small gasoline containers and car batteries are stored. A sink inside the building drained to a dry well.</p>	<p>pesticides, PCBs, organophosphorus pesticides, chlorinated herbicides, and PL metals. Test results indicate that surface and sub-surface soil samples had concentrations of various metals (cadmium, chromium and lead) above regulatory cleanup levels. The concentrations of cadmium and lead exceeded background levels. Groundwater samples collected from the two monitoring wells installed at the site contained no analytes above regulatory criteria.</p> <p>Remediations began in June 2000 that included soil excavations to an average depth of 0.8 feet bgs. Confirmatory samples were collected from the excavation, and the test results indicated that the concentration of TPH (diesel and heavy oil range) and lead exceeded cleanup criteria. Based on that data, the excavation was extended to 2.7 feet bgs (average). Confirmatory samples were collected, and all test results showed target analyte concentrations to be below their respective cleanup criteria.</p> <p>The contaminated soil excavation was completed in 2000, and all contaminated soil was disposed of at an off-site facility. The excavation was backfilled to grade.</p>	
<p>CS Gas Training Building 1834 (Building 1834 CS Gas Chamber)</p>	<p>10 (1)</p>	<p>This building was used for chemical warfare training, but records indicate that only CS was used. This is a wood frame one-story post-on-pier converted barracks. This facility was used for gas mask training for an unknown period of time.</p>	<p>In preparation for demolishing Building 1834, a survey was conducted that included testing soil samples for CS gas and its breakdown products, field screening surface soil samples for lead, and screening the building for asbestos. A surface soil sample was collected from beneath the building and another sample was collected from 10 feet (approximately) in the prevailing downwind direction from the building. No CS gas or its breakdown products, lead, or asbestos were detected in the soil or building components above regulatory cleanup criteria.</p> <p>The building was demolished and the debris was disposed of off-site at a municipal landfill.</p>	<p>3</p>
<p>Grease Pit - Killpack (Grease Pit)</p>	<p>11 (7) HR(P)</p>	<p>This grease pit is located on the east side of the former mess hall (Building 4389). The grease pit consists of two corrugated metal pipes that extend into an underground pit filled with gravel. The pit was built to accept grease from the</p>	<p>Two soil borings were advanced immediately adjacent to the grease pit. Two soil samples were collected from each boring and tested for TPH, VOCs, SVOCs, PCBs, pesticides, and PPL metals.</p> <p>VOCs and PCBs were not detected. No organic compounds were detected in the two soil samples collected at this pit. Numerous metals were detected.</p>	<p>3</p>

**Table 1**

**DESCRIPTION OF PROPERTY\***

Site/Area	EBS Parcel Designation	Description	Investigation/Remediation	ECP Category
		mess hall and is reported to have been used from the mid-1930s to the 1990s.	Chromium, lead, and thallium were detected above regulatory cleanup levels, but below site-specific concentrations. Arsenic was detected above its regulatory cleanup and site-specific background levels. Arsenic does not pose an unacceptable risk to human health or the environment because there are no complete exposure pathways.	
<b>Maintenance Pit (Building 4475)</b>	12 (7) PR(P)/HR(P)	Building 4475 had a maintenance pit that reportedly received waste oil and antifreeze associated with vehicle maintenance activities. The concrete floor of the building currently covers the pit. Small-scale pesticide mixing and loading occurred in the building.	Six soil samples were collected from two borings advanced at the Maintenance pit. The soil samples collected at the drainage pit were tested, and the results showed unidentified hydrocarbons, VOCs, SVOCs and chlorinated pesticides at concentrations below regulatory criteria. No PCBs were detected in any of the samples. Several metals were detected above the regulatory cleanup concentration (arsenic, chromium, and lead) but below site-specific background concentrations with the exception of one sample, which had a lead concentration above background.  In June 2000, all accessible lead-contaminated soils were excavated and disposed of at an off-site facility. The excavation was stopped to avoid undermining the building. Contaminated soil may be present beneath the building. Potential contaminants may include petroleum hydrocarbons, VOCs, SVOCs, metals. The excavation was backfilled to grade. No further removal actions are required at this time. If the building is demolished in the future, additional soil sampling may be required.	4
Hazardous Materials Accumulation Point (Buildings 4475B and 4476A)	13 (7) PR(P)/HR(P)	The January 1997 <i>Environmental Baseline Survey Report for Camp Bonneville, Washington</i> indicates that Buildings 4475B and 4476A stored hazardous substances. The <i>July 2004 Final Cleanup Action Plan, Remedial Unit 1, Camp Bonneville, Vancouver, Washington</i> identified Building 4475a, in addition to Buildings 4475B and 4476, as storing hazardous materials (antifreeze and POLs). Building 4476 consists of three masonry block walls on a concrete slab floor. The open front of the structure is	Two soil samples were collected from directly in front of the site and tested for TPH, SVOCs, PCBs, Pesticides, and PPL metals. Pesticides and PCBs were not detected at concentrations above the testing instrument's reporting limits. Test results show hydrocarbon compounds and metals at concentrations below the regulatory cleanup or background concentrations. The contents of a sump located in Building 4475B were tested, and the results showed unknown hydrocarbons. The contents were removed from the sump and disposed of at an off-site facility. Visual inspection of the sump found no crack or outlets, and the concrete was observed to be in good condition.	3

**Table 1**

**DESCRIPTION OF PROPERTY\***

Site/Area	EBS Parcel Designation	Description	Investigation/Remediation	ECP Category
		<p>secured with locking metal gates. Building 4475B is used to store POLs associated with vehicle maintenance, and Building 4476A is a storage shed that contains a 1,000-gal. diesel AST with secondary containment. The site is also referred to as the Covered Vehicle Maintenance Storage building. Drums of antifreeze and waste oil, as well as the temporary storage of hazardous material have been stored in this building. The building currently contains empty drums.</p>		
<p>Wash Rack 1 (Former Vehicle Maintenance Rack and UST)</p>	<p>14 (7) PR(P)</p>	<p>This wash rack is located near Building 4476. The wash rack was constructed of timbers and demolished in the early 1980s. Wastewater from washing operations discharged directly onto the ground. A UST was reportedly located adjacent to the wash rack, and was removed in 1978.</p>	<p>Two surface and two subsurface soil samples were collected from this site. Test results indicate that all analyte concentrations were below regulatory cleanup criteria. Petroleum hydrocarbons were detected in all samples but at concentrations below the MTCA Method A cleanup criteria. Metals were detected above regulatory cleanup criteria, but below background levels.</p>	<p>2</p>
<p>Pesticide Storage Building 4126 (Building 4126)</p>	<p>16 (7) HR(P)</p>	<p>This building was used to store 55-gal. drums of the pesticides 2,4,5-T, 2,4-D, and DDT until 1977. The building was constructed of wood and included skids on the bottom of the building. It is reported that the building was moved to various locations at Camp Bonneville.</p>	<p>Soil samples and an indoor floor sample were collected and tested for chlorinated pesticides and herbicides, PCBs, PPL metals (plus barium) and TPH (gasoline and diesel ranges). Test results on these samples indicate that pesticides (4,4-DDT, 4,4-DDD, 4,4-DDE, beta-BHC, lindane, 2,4-D, 2,4-DB, 2,4,5-T, and MCPPE), petroleum hydrocarbons, and several metals were detected but at concentrations below regulatory cleanup and background concentrations. Polychlorinated biphenyls were not detected at concentrations exceeding the laboratory reporting limit. Petroleum hydrocarbons were detected in floor samples above regulatory cleanup standards. Lead was detected in a surface soil sample above regulatory cleanup and background concentrations.</p> <p>Based on the floor and soil sample results, the building was dismantled and soil was excavated under the building footprint to a depth of one foot. Confirmatory samples were collected and test results show no analyte concentration above regulatory cleanup criteria. The</p>	<p>4</p>

<b>Table 1</b>				
<b>DESCRIPTION OF PROPERTY*</b>				
<b>Site/Area</b>	<b>EBS Parcel Designation</b>	<b>Description</b>	<b>Investigation/Remediation</b>	<b>ECP Category</b>
			building debris and excavated soils were disposed of at an off-site facility. The excavation was backfilled to grade.	
Former Sewage Pond	17 (7) HR(P)	The former sewage pond is located in the Camp Bonneville cantonment area, although the exact location and dimensions are unknown. The pond is reported to have been unlined and used for a short period of time ending in 1978.	A UXO avoidance/screening and electromagnetic survey identified fence posts: no UXO debris was observed. No organic compounds were detected in the soil or groundwater samples collected at the pond. Antimony, cadmium, copper, chromium, and thallium were detected, but at concentrations below regulatory concentrations. One of 17 soil samples had arsenic concentrations above the regulatory and site-specific background concentrations.	3
Drum Disposal Area (Suspect Drum Burial Site)	18 (7) HR(P)	This area is reported to contain an unknown number of buried drums. There is no information on the contents of the drums.	<p>An electromagnetic survey of the area identified anomalies. Soil borings were advanced in this area and samples collected. No SVOCs, PCBs, pesticides, or explosive compounds were detected in the samples, and there was no evidence of the presence of explosives. Petroleum hydrocarbons, certain VOCs, and metals were detected, but at concentrations below regulatory cleanup criteria and/or background concentrations.</p> <p>In 2000, the area was excavated to remove buried drums and debris (paint cans, corrugated metal, scrap metal and barbed wire). Twenty-six test pits were excavated to assess the area of drum disposal. Soil samples collected from the tests pits, and samples of rainwater that had accumulated in the pits were tested. The soil sample test results indicated that toluene, arsenic, barium, chromium and methoxychlor exceeded regulatory cleanup criteria. The rainwater sample test results indicate that naphthalene, ethyl benzene, toluene, and lead were present above cleanup levels. A second EM survey was conducted to determine if buried objects could have caused or contributed to the contamination. Thirteen additional anomalies were identified and investigated by trenching. One excavation contained among other things paint cans and paint. The other trenches contained scrap metal, reinforcement bars, barbed wire and firing point survey markers.</p> <p>Cleanup activities were initially conducted to address the debris, but later to address the organic compounds and metal detected in the test pits. Approximately 110 tons of soil and debris were excavated and disposed of at an off-site facility. Confirmatory sample results indicate all target analyte concentrations were either not</p>	4

**Table 1**

**DESCRIPTION OF PROPERTY\***

Site/Area	EBS Parcel Designation	Description	Investigation/Remediation	ECP Category
			detected or below regulatory cleanup criteria. The excavation was backfilled to grade.	
Paint and Solvent Disposal Area (Suspect Disposal Site)	19 (7) HR(P)	This area is reported to contain waste paints and solvents.	<p>An electromagnetic survey of the area was conducted in July 1998. The survey identified two anomalies suspected of being disposal areas. Two soil borings were advanced at each of these locations, and soil samples were collected. Test results of these samples showed that the concentrations of VOCs, SVOCs, PCBs, pesticides, and explosives compounds were below the testing instrument's detection limits. Petroleum hydrocarbons and metals were detected, but at concentrations below regulatory cleanup criteria. Arsenic and chromium were detected at concentrations above regulatory cleanup criteria, but below background concentrations.</p> <p>In June 2000, cleanup activities were conducted to remove the debris, which included a paint can, paint chips, pipes, and wires. Confirmatory samples were not collected because the soil sample test results did not identify analyte concentrations above regulatory cleanup of background criteria. The excavation was backfilled to grade and the debris was disposed of at an off-site facility.</p> <p>A notification of hazardous substance, storage, release, or disposal is not required because this cleanup was not a result of a CERCLA listed hazardous substance.</p>	2
Wash Rack 2 (Wash Point)	20 (7) PR(P)/HR(P)	This area is associated with a former vehicle washing point south of Building 4475, and consists of a gravel pullout on the side of the road, and a water hose. The water hose was used to rinse dirt and mud off vehicles returning from training exercises. There is no oil-water separator at this wash point.	The January 1997 <i>Environmental Baseline Survey Camp Bonneville, Washington</i> (EBS) states that there were no obvious indications of potential environmental impacts at the wash point or the areas where wash water would drain. The EBS also indicates that there is a low probability of being a potential source of contamination.	1
Former CS Gas Training Building	25 (7) HR(P)	This site is located in the central part of the installation north of Firing Range 7. The exact location of the building and the period of time it was in use are not known. The site is the location of a former building used for tear gas training. Records suggest that	<p>Five soil borings were advanced in the area and soil samples were collected. Test results indicate that CS gas and cyanide were not detected. Semi-volatile organic compounds were detected but at concentrations below regulatory criteria. Lead was detected above regulatory cleanup and background criteria.</p> <p>In June 2000, contaminated soil excavation activities commenced. The excavation extended to 3-feet below</p>	4

**Table 1**

**DESCRIPTION OF PROPERTY\***

Site/Area	EBS Parcel Designation	Description	Investigation/Remediation	ECP Category
		the building was destroyed by fire in the late 1970s. The building number is not known.	grade. Confirmatory sample test results indicate that all analyte concentrations were below MTCA cleanup criteria. The excavation was backfilled to grade and all contaminated soil was disposed of at an off-site facility.	
Ammunitions Storage Bunkers (Facility Nos. 2950, 2951, and 2953)	NA	These bunkers were constructed in 1976 to store various munitions. They range in size from 4 sq. ft. to 100 sq. ft. The magazines are fenced.	<p>In 1998, fifteen sampling locations (nine at the largest bunker and three each at the two smaller bunkers) were selected for the collection of surface and subsurface soil samples. A soil boring was also advanced at each bunker based on the results of the surface soil tests from soil samples collected from inside the bunkers. Wipe samples were collected from the floors in each magazine. The soil samples collected from inside the bunker and the wipe sample tests results show RDX (below reporting levels) and all the PPL metals except selenium and thallium in Facility 2950. Arsenic, beryllium, cadmium, chromium, lead, and mercury were detected in the soil samples collected from inside the bunker at concentrations that exceed the MTCA cleanup criteria. Arsenic, beryllium, and cadmium concentrations were also above background levels. PETN was detected in one bunker; however, there is no established cleanup concentration for PETN. No organic compounds were detected above reporting limits in the surface soil samples collected outside the bunker. Arsenic, cadmium, chromium, and lead were detected at concentrations above MTCA cleanup criteria and background levels in the surface soil samples collected outside the bunker. In 2001, surface and subsurface soil samples were collected from Facility 2953. PETN, picric acid, and 2,4-dinitrotoulene were detected in the surface soil samples at concentrations below MTCA cleanup criteria. No ordnance compounds or propellants were detected in the subsurface soil samples. Metals were detected in the surface soil samples. Arsenic and chromium were detected above MTCA cleanup criteria. Lead was detected above the MTCA cleanup criteria and background levels.</p> <p>In May 2001, contaminated soils at the three bunker were excavated to 1-foot below grade. Confirmatory samples were collected and the test results indicated no residual contaminants above regulatory criteria or background levels. The excavations were backfilled and the contaminated soil and wood from pallets inside the bunker were disposed of at an off-site facility. The interior surfaces of the bunker were cleaned.</p>	4



**Table 1**

**DESCRIPTION OF PROPERTY\***

Site/Area	EBS Parcel Designation	Description	Investigation/Remediation	ECP Category
<b>Remedial Action Unit 2A</b>				
small-arms ranges	(1)	Individual small-arms range descriptions are provided below.	<p>The following is a general description of the investigations and remediations conducted at the 21 small-arms ranges.</p> <p>The U.S. Army Corps of Engineers (1997) prepared an archive search report (ASR) to collect information pertinent to the small -arms ranges at Camp Bonneville. The small arms ranges were investigated as part of the base-wide reconnaissance effort. As a result of this reconnaissance, a site investigation was conducted that consist of gridding the small-arms ranges and collecting soil samples. The soil samples were tested for total metals, perchlorate, explosives, and lead. Arsenic and barium were the only metals detected above background levels. Perchlorate was not detected in the soil samples. The compound 2, 4-dinitrotoluene (DNT) was the only explosive compound detected in the soil, and at concentrations that range from 4.9 to 20 mg/kg. The U.S. EPA Region 9 residential and industrial use criteria for DNT in soil are 120 and 1,800 mg/kg, respectively. The concentration of arsenic detected in one soil sample exceeded the WDOE unrestricted use criteria of 20 mg/kg. Barium was detected in soil samples at concentrations that range from 133 to 227 mg/kg. The WDOE ecological use criterion for barium in soil is 102 mg/kg. The U.S. EPA, Region 9 residential and industrial use criteria for barium are 5,400 mg/kg and 100,000 mg/kg, respectively. Seventy-seven of 1,535 soil samples collected from the small-arms ranges had lead concentrations exceeding regulatory criteria. Lead concentrations in soil range from 120 mg/kg to 12,300 mg/kg. The WDOE for lead in soil criteria for ecological, unrestricted, and industrial use are 118, 250 mg/kg, and 1,000 mg/kg, respectively. The U.S. EPA, Region 9 residential and industrial use criteria for lead in soil are 400 mg/kg and 750 mg/kg, respectively.</p> <p>Some OE sampling and removal activities were conducted in the area of the small-arms ranges as part of a site-wide effort performed by UXB (1998). See RAU 3 for additional information.</p>	see below
<b>1,000-Foot Range, 1,000-Foot Machine Gun and Moving Target Range</b>	1	The 1,000-foot range began operation in 1943. A machine gun and moving target ranges were added to the 1,000 foot range in 1958. The M1 rifle	Remediation will be performed in accordance with the PPCD.	6

**Table 1**

**DESCRIPTION OF PROPERTY\***

Site/Area	EBS Parcel Designation	Description	Investigation/Remediation	ECP Category
		and the M1 1919 machine gun, both 30 caliber, were used at this range. The 1,000-foot range is located to the south of the Camp Bonneville cantonment area, south of Lacamas Creek. The area of the range from the Creek to the berms is flat with moderate tree growth mixed with some open areas. Both the berms were cut into the hillside.		
1952-TEC-22 Boundary Range	1	The identification of this site (Undocumented Small Arms Range) was based on a scarred area observed on a 1952 aerial photograph. This site is west of the Camp Bonneville cantonment area, with an apparent east-west extending range. The area is characterized by mature forest with moderate undergrowth, and steadily increases in elevation from east to west. An old road is located at the west end of the area and may have served as a partial backstop to the range.	No total metals, perchlorate, explosives, or lead were detected at concentrations above regulatory criteria in soil samples collected from this site.	1
<b>25Meter M60/Pistol Range</b>	1	The pistol range was first used in the late 1950s as a non-record fire range using the M1911A1 (45 caliber) pistol. The 25M M60 range was added in the early 1970's and was used for firing the 30 caliber carbine, the M16 rifle (5.56mm), the M14 (7.62mm), and the 50 caliber machine gun. These ranges are located northeast of the Camp Bonneville cantonment area, and north of the Lagoon Ponds. The 25M M60 range consists of an open area with a 10-foot embankment cut into the hillside. Large trees are present on the hillside	Two soil samples collected from this site had lead concentrations of 136 mg/kg and 219 mg/kg. Remediation will be performed in accordance with the PPCD.	6

**Table 1**

**DESCRIPTION OF PROPERTY\***

Site/Area	EBS Parcel Designation	Description	Investigation/Remediation	ECP Category
		immediately beyond the apparent range berm.		
<b>25Meter Machine Gun Range</b>	1	The 25M Machine Gun Range was first used in the 1960s for live-fire exercises with weapons such as the M1 rifle (30 caliber) and the M14 rifle (7.62 mm). This range was also used for live-fire training using 30 caliber machine guns. The 25M and machine gun ranges are located south of the Camp Bonneville cantonment area near the southern boundary of the Property. This range and the 3.5-inch Rocket Range occupy the same area. The firing point for the 25M and machine gun range is located next to the main north-south road from the Camp Bonneville cantonment area. The firing point is still present along with the observation tower, one low berm and one high berm. Approximately 200 feet beyond the berms, the area consists of mature forest with areas of thick underbrush.	The explosive residue (DNT) was detected in soil samples collected from the muzzle blast zone at concentrations that range from 4.9 mg/kg to 20 mg/kg, which are below regulatory criteria. Eleven soil samples had lead concentrations that ranged from 120 mg/kg to 26,300 mg/kg. Remediation will be performed in accordance with the PPCD.	6
<b>25M Record Fire Field Range</b>	1	The 25M Record Fire Field Range was first used in 1958, and was used for measuring the accuracy of 30- and 50-caliber weapons. The Field Firing Range, which extended southward beyond the 25M range, was added in 1959 and also used both the 30- and 50-caliber weapons, but was not intended for accuracy testing. Both ranges are located south of the Camp Bonneville cantonment area, south of Lacamas Creek. There were no noticeable backdrops or berms, but the elevation of the area continually increases.	Six soil samples collected from this site had lead concentrations that ranged from 150 mg/kg to 8,880 mg/kg. The WDOE ecological, unrestricted, and industrial use criteria for lead in soil are 118, 250 mg/kg, and 1,000 mg/kg, respectively. The U. S. EPA, Region 9 residential and industrial use criteria for lead in soil are 400 mg/kg and 750 mg/kg, respectively. Remediation will be performed in accordance with the PPCD.	6

**Table 1**

**DESCRIPTION OF PROPERTY\***

Site/Area	EBS Parcel Designation	Description	Investigation/Remediation	ECP Category
		moving away from the firing point.		
500-Inch Anti-Aircraft (AA) Range	1	<p>This area is located in the vicinity of the Field Firing Ranges, southeast of the Camp Bonneville cantonment area. The 500-inch AA range was first used in the early 1940s for pedestal-mounted machine gun (22 caliber) fire training on overhead targets, parachute targets, climbing and diving targets, and horizontal targets. The firing point for this range is located in a flat grassy area between the Rifle Ranges and Lacamas Creek. The range safety fan extends to the southeast and overlaps a portion of the Artillery Impact Area. The range safety fan is forested with mature trees, contains multiple creeks, and has a single passable road traversing the area from north to south.</p>	No total metals, perchlorate, explosives, or lead were detected in soil samples collected from this site at concentrations above regulatory criteria.	1
Anti-Aircraft (AA) Range	1	<p>This area is located in the vicinity of the Field Firing Ranges, south of the Camp Bonneville cantonment area. The AA range was first used in the early 1940s for pedestal mounted machine gun (22 caliber) fire training on overhead targets, parachute targets, climbing and diving targets, and horizontal targets. The firing point for this range is located in a flat grassy area between the Rifle Ranges and Lacamas Creek. The range safety fan extends to the southeast and overlaps a portion of the Artillery Impact Area. The range safety fan is forested with mature trees, contains multiple creeks, and has a single passable road</p>	No total metals, perchlorate, explosives, or lead were detected in soil samples collected from this site at concentrations above regulatory criteria.	1

**Table 1**

**DESCRIPTION OF PROPERTY\***

<b>Site/Area</b>	<b>EBS Parcel Designation</b>	<b>Description</b>	<b>Investigation/Remediation</b>	<b>ECP Category</b>
		traversing the area from north to south.		
Close Combat Range	1	The Close Combat Range was first used sometime in the early 1970s for live-fire training with 30- and 50-caliber weapons in an automated pop-up target course. The range is located in the northern part of Camp Bonneville near Demolition Area 1. The majority of the area is covered with a moderate growth of large trees and some areas of brush. Overall, the area has a slight incline to the south with the western edge containing a more moderate slope.	Barium was detected in two soil samples at concentrations of 145 mg/kg and 227 mg/kg.	3
<b>Combat Pistol Range</b>	1	The Combat Pistol Range was first used during the late 1980s and included the use of M1911 (45 caliber), M9 (9mm), and 38- Special handguns. It is unknown whether this range was a free-fire or a record-fire range. This range is located south of the Camp Bonneville cantonment area, and south of Buck Creek. The Combat Pistol Range extends to the east toward the southwest portion of the Artillery Impact Area. Immature trees characterize the vegetation on the western portion of the range, while the eastern portion of the range (beyond the range poles) contains a mature older growth forest.	Two soil samples contained lead at concentrations of 165 mg/kg and 785 mg/kg. The WDOE ecological, unrestricted, and industrial use criteria for lead in soil are 118, 250 mg/kg, and 1,000 mg/kg, respectively. The U. S. EPA, Region 9 residential and industrial use criteria for lead in soil are 400 mg/kg and 750 mg/kg, respectively. Remediation will be performed in accordance with the PPCD.	6
<b>Field Firing Ranges 1 &amp; 2</b>	1	The Field Firing Ranges were first used in the mid-1950s for live-fire training using the M1 Rifle (30 caliber). The Pistol Range is part of the Field Firing Ranges and these ranges are located southeast of	Eight soil samples had lead concentrations that range from 125mg/kg to 7,150 mg/kg. The WDOE ecological, unrestricted, and industrial use criteria for lead in soil are 118, 250 mg/kg, and 1,000 mg/kg, respectively. The U. S. EPA, Region 9 residential and industrial use criteria for lead in soil are 400 mg/kg and 750 mg/kg, respectively. Remediation will be	6

**Table 1**

**DESCRIPTION OF PROPERTY\***

Site/Area	EBS Parcel Designation	Description	Investigation/Remediation	ECP Category
		<p>the Camp Bonneville cantonment area. Both ranges are located in a small open field and are bordered to the north and east by berms 150 feet in length and 200 feet in length, respectively. Beyond the eastern berm is a wetland that extends to the tree line where the terrain begins to incline uphill toward the southern end of the Impact Area. The Firing Ranges' fans extend to the southeast and are back-dropped by the hillsides of the southern Artillery Impact Area.</p>	<p>performed in accordance with the PPCD.</p>	
<p>Rifle Ranges 1&amp;2/Field Fire Rifle Ranges 1 &amp; 2</p> <p><b>Rifle Ranges 1&amp;2</b></p>	<p>1</p>	<p>The ASR describes the Rifle Ranges as two distinct ranges, Rifle Range 1 and Rifle Range 2. The main range is Rifle Range 1 while Rifle Range 2 is the safety fan for Rifle Range 1. Both ranges were first used in the mid 1920s for live-fire accuracy training using M1 Rifles (30 caliber). Rifle Range 1 is located along the southern edge of the Camp Bonneville cantonment area and extends to the east across the old parade ground, crosses Lacamas Creek, and terminates at the eastern edge of a pond where a north/south line of pull targets is located. The firing point is located near the road to the west of the Camp Bonneville cantonment area. Rifle Range 2 starts along the eastern edge of Lacamas Creek, extends eastward across an open field, and continues past the pond and wetland area to a terminus point near the eastern boundary of the Artillery Impact Area.</p>	<p>Arsenic and barium were detected in soil samples at 22.9 mg/kg and 202 mg/kg, respectively. Eighteen soil samples had lead concentrations that ranged from 130 mg/kg to 4,330 mg/kg. The WDOE unrestricted use criteria for arsenic in soil is 20 mg/kg. The WDOE ecological, unrestricted, and industrial use criteria for lead in soil are 118, 250 mg/kg, and 1,000 mg/kg, respectively. The U. S. EPA, Region 9 residential and industrial use criteria for lead in soil are 400 mg/kg and 750 mg/kg, respectively. The WDOE ecological use criterion for barium in soil is 102 mg/kg. The U.S. EPA, Region 9 residential and industrial use criteria for barium in soil is 5,400 mg/kg and 100,000 mg/kg, respectively. Remediation will be performed in accordance with the PPCD.</p>	<p>6</p> <p>6</p>

**Table 1**

**DESCRIPTION OF PROPERTY\***

<b>Site/Area</b>	<b>EBS Parcel Designation</b>	<b>Description</b>	<b>Investigation/Remediation</b>	<b>ECP Category</b>
<b>Field Fire, Rifle Ranges 1 &amp; 2</b>	1	This area was first used in the 1950s for 30- and 50-caliber weapons. The range is located east of the Camp Bonneville cantonment area, overlapping Rifle Range 2 and a portion of Rifle Range 1. Lacamas Creek borders the range on the north and a man-made pond is at the end of the range near the north/south line of pull targets. Field Firing Rifle Range 2 safety fan widens significantly to the northeast and southeast with a terminus point near the eastern boundary of the Artillery Impact Area.	Soil test results show two samples with barium detected at concentrations of 146 mg/kg and 194 mg/kg. Two soil samples contained lead in concentrations of 149 mg/kg and 2,300 mg/kg. The WDOE ecological, unrestricted, and industrial use criteria for lead in soil are 118, 250 mg/kg, and 1,000 mg/kg, respectively. The U. S. EPA, Region 9 residential and industrial use criteria for lead in soil are 400 mg/kg and 750 mg/kg, respectively. The WDOE ecological use criterion for barium in soil is 102 mg/kg. The U.S. EPA, Region 9 residential and industrial use criteria for barium in soil is 5,400 mg/kg and 100,000 mg/kg, respectively. Remediation will be performed in accordance with the PPCD.	
Infiltration Course-North	1	The infiltration course (North) was first used in the early 1940s for live-fire training using the M1919 Machine Gun (30-caliber). This course is located southeast of the Camp Bonneville Cantonment Area in the same vicinity as the Pistol Range/Field Firing Ranges. The land surface elevation in the area was raised during the construction of these ranges, due to the presence of wetlands. Features associated with the Infiltration Course (North) are no longer present due to the construction of the Rifle and Field Firing Ranges.	No total metals, perchlorate, explosives, or lead were detected at concentrations above regulatory criteria in soil samples collected from this site.	1
Infiltration Course-South	1	The Infiltration Course (South) was first used in the early 1970s where 30-caliber carbines, M16 Rifles (5.56mm), M14 Rifles (7.62mm) and 50-caliber machine guns were used for live fire training. This course is characterized by a flat open grassed area located near the southern property boundary.	Lead was detected in one soil sample at a concentration of 151 mg/kg.	3
Machine Gun Range-North	1	The Machine Gun Range (North) was first used in the mid 1950s for live fire training	Barium was detected in two soil samples at concentrations of 178 mg/kg and 200 mg/kg. Lead was detected in one soil sample at a concentration of 158	3

**Table 1**

**DESCRIPTION OF PROPERTY\***

Site/Area	EBS Parcel Designation	Description	Investigation/Remediation	ECP Category
		using the M1919 (30-caliber machine gun). The range extends southeast from the Camp Killpack cantonment area with the firing point located adjacent to the western edge of the cantonment area, just north of the former Commanding Officer's residence. The range slopes gently to the southeast and is characterized by mature forest north of Lacamas Creek and by flat open fields southeast of the creek. Dense underbrush is located predominantly in the areas where Lacamas Creek traverses the range.	mg/kg.	
Machine Gun Range-South	1	The Machine Gun Range (South) was first used in the mid 1920's for free-firing training using M1919 Machine Guns (30-caliber). This range is located in the southwest corner of the Property and extends in a northwest/southeast direction, nearly parallel to the natural gas pipeline right-of-way located in the area. A gentle upward slope in both directions from the point characterizes the topography of the range where Lacamas Creek traverses the range. Very dense underbrush covers the majority of the eastern area of the range with the exception of the portion located within the pipeline right-of-way.	Barium was detected in one soil sample at concentration of 192 mg/kg. Lead was detected in two soil samples at concentrations of 135 mg/kg and 423 mg/kg.	3
Pistol Range	1	The Pistol Range was first used in the mid- 1980s for live-fire training using the M1911A1 pistol (45 caliber). This range is part of the Field Firing Ranges and is located southeast of the Camp	No total metals, perchlorate, explosives, or lead were detected at concentrations above regulatory criteria in soil samples collected from this site.	1



**Table 1**

**DESCRIPTION OF PROPERTY\***

Site/Area	EBS Parcel Designation	Description	Investigation/Remediation	ECP Category
		<p>Bonneville cantonment area. Both ranges are located in a small open field and are bordered to the north and east by berms 150 feet in length and 200 feet in length, respectively. Beyond the eastern berm is a wetland that extends to the tree line where the terrain begins to incline uphill toward the southern end of the Impact Area. The Firing Ranges' fans extend to the southeast and are back-dropped by the hillsides of the southern Artillery Impact Area. The firing point for the Pistol Range is located in the same area as the Field Firing Ranges, with the fan extending in the same direction, but wider and extending more to the south.</p>		
<p>Sub-Caliber Range 1</p>	<p>1</p>	<p>The M31 Sub-Caliber Range 1 is located in the southwestern portion of the installation. The ranges extend from the northeast to the southwest and are bordered on the west by Lacamas Creek and to the east by the main north-south installation roadway. The southwest terminus of the range is located just behind the pipeline right-of-way. The range is characterized by relatively flat terrain with areas of moderate to very dense underbrush. Some portions of the ranges, primarily in the areas near the creek and small streams, contain brush that was characterized as impassable. Mature trees define the outer perimeter of the range and numerous small trees are scattered throughout the range.</p>	<p>No total metals, perchlorate, explosives, or lead were detected at concentrations above regulatory criteria in soil samples collected from this site.</p>	<p>1</p>

Table 1				
DESCRIPTION OF PROPERTY*				
Site/Area	EBS Parcel Designation	Description	Investigation/Remediation	ECP Category
		Many small creeks were encountered throughout the range, flowing east to west toward Lacamas Creek.		
Sub-Caliber Range 2	1	The M31 Sub-Caliber Range 2 is located in the southwestern portion of the installation. The range extend from the northeast to the southwest and are bordered on the west by Lacamas Creek and to the east by the main north-south installation roadway. The southwest terminus of the range is located just behind the pipeline right-of-way. The range is characterized by relatively flat terrain with areas of moderate to very dense underbrush. Some portions of the ranges, primarily in the areas near the creek and small streams, contain brush that was characterized as impassable. Mature trees define the outer perimeter of the range and numerous small trees are scattered throughout the range. Many small creeks were encountered throughout the range, flowing.	No total metals, perchlorate, explosives, or lead were detected at concentrations above regulatory criteria in soil samples collected from this site.	1
Sub-Machine Gun Range	1	The Submachine Gun Range was first used in the late 1950s for M3 Sun-Machine Gun (45-caliber) training. This range is located in the northern part of Camp Bonneville, just south of Demolition Area 1, and to the northeast of the Camp Bonneville cantonment area. The landscape in the area currently consists of a gentle sloping open area changing into a moderate slope with moderate coverage of larger trees to the northwest.	Barium was detected in one soil sample at a concentration of 133 mg/kg.	3

**Table 1**

**DESCRIPTION OF PROPERTY\***

Site/Area	EBS Parcel Designation	Description	Investigation/Remediation	ECP Category
TF Range	1	Training at the TF Range took place in the late 1950s and consisted of record-firing of small arms (22-, 30-, 50-caliber, and 7.62 mm) and machine gun firing. The TF Range is located due east of the Camp Bonneville Cantonment Area along the south edge of the lagoon ponds. Lacamas Creek borders the area to the south and east. This range encompasses approximately three quarters of the current Ammunition Supply Point.(ASP) facility. Most of the area slopes gently to the south toward the Creek; with the exception of the eastern area that is flat and open. The remainder of the area is moderate in tree growth and covered with dense brush.	Barium was detected in one soil sample at a concentration of 163 mg/kg.	3
<b>Undocumented Pistol Range</b>	1	No description is available, but some report figures show the range to be located north of the 25M Range, south of west of the Field Firing Range, and south of the Rifle Range.	Lead was detected in one soil samples at a concentration of 154 mg/kg. Remediation will be performed in accordance with the PPCD.	6

**Table 1**

**DESCRIPTION OF PROPERTY\***

Site/Area	EBS Parcel Designation	Description	Investigation/Remediation	ECP Category
<b>Remedial Action Unit 2B</b>				
Demolition Area (DA 2)	22 (7) HR(P)	<p>The exact location of activities at DA2 is unknown. Site walks/field inspections have not resulted in the identification of specific suspect areas. It was reported by site workers that the DA 2 area was historically used for destruction of unwanted ordnance. The general suspect area was identified through interpretation of historic aerial photographs and is located on the southwest-facing side slope at the head of Lacamas Creek Valley. The DA 2 area is approximately 60 feet in diameter, forested with dense under story vegetation on mostly steep slopes.</p>	<p>Three monitoring wells ranging from 17 feet to 37 feet bgs were installed around DA 2 and four sentinel wells (all cluster wells) ranging in depth from 13 feet to 40 feet were installed south of Lacamas Creek along the installation boundary. The monitoring well samples collected at DA 2 were tested for explosives, perchlorate, total and dissolved metals, and several water quality parameters. The sentinel well samples were tested for TPH (diesel and gasoline ranges) explosives perchlorate, total and dissolved metals, VOCs, SVOCs, and water quality parameters.</p> <p>Test results of monitoring well samples indicate that no explosives, perchlorate, or total and dissolved metals were detected at concentrations at or above regulatory screening or cleanup criteria. Nitrate/nitrate was detected at concentrations above Federal drinking water standards; however, confirmatory test results show the concentration of nitrate/nitrate to be below Federal drinking water standards.</p> <p>Test results of the sentinel well samples indicate that no VOCs, SVOCs, or TPH (gasoline range) were detected above the testing instrument's detection limit. Total petroleum hydrocarbons (diesel range) was detected, but below MTCA standards. Perchlorate and nitrite/nitrate were detected; however, confirmatory test results (of select sentinel wells) show the concentration of perchlorate to be below the testing instrument's detection limit, and the concentration of nitrite/nitrate to be below the Federal drinking water standards.</p> <p>Soil samples were collected from the center of the site, and the cardinal coordinates at 100 feet from the center of the site. Soil samples were also collected from a berm located along the south side of DA 2. One sample was collected from the center of the berm and the others were collected from 15 feet on either side of the center sample. The samples were tested for explosives, perchlorate, and metals.</p> <p>Test results of soil samples collected from the site and the berm indicate that no explosives or perchlorate were detected above the testing instrument's reporting limits. Arsenic was the only metal detected at concentrations above screening levels or cleanup criteria. Arsenic was detected in 15 soil samples at concentrations that range from 20.7 mg/kg to 30.1 mg/kg. Six samples had arsenic concentrations above the MTCA cleanup level for arsenic (20 mg/kg); however, all arsenic concentrations were below the Clark County background concentration for arsenic (60.8 mg/kg).</p>	4
Demolition Area 3 (DA 3)	NA	<p>DA 3 is a surface depression that may be an excavation or possibly a detonation crater. The location is about 2000 feet upstream of the base boundary in Lacamas Creek</p>	<p>Four monitoring wells, including one cluster well (two closely-spaced wells screened at different depths) ranging in depth from 15 feet to 37 feet bgs were installed around Demolition Area 3 (DA 3), and four sentinel wells (all cluster wells) ranging in depth from 13 feet to 40 feet were installed south of Lacamas Creek along the installation boundary. The monitoring well samples collected at DA 3 were tested for</p>	4

**Table 1**

**DESCRIPTION OF PROPERTY\***

Site/Area	EBS Parcel Designation	Description	Investigation/Remediation	ECP Category
		<p>Valley. The crater is approximately 20 feet in diameter and 10 feet deep. DA 3 is located west of the gas pipeline right-of-way that crosses Camp Bonneville. DA 3 may have been used for detonation of unwanted ordnance. The crater is situated several hundred feet south of Lacamas Creek in an area where the valley is wide and relatively flat. The ground surface at DA 3 is hummocky with seasonal wetland vegetation.</p>	<p>explosives, perchlorate, total and dissolved metals, and several water quality parameters. The sentinel well samples were tested for TPH (diesel and gasoline ranges) explosives perchlorate, total and dissolved metals, VOCs, SVOCs, and water quality parameters.</p> <p>Test results of monitoring well samples collected at DA 3 indicate that no explosives or total metals were detected at concentrations at or above regulatory criteria. Perchlorate and nitrate were detected above the U.S. EPA PRG; however, confirmatory tests show the concentration of perchlorate to be below the testing instrument's detection limits, and the concentration of nitrate to be below Federal drinking water standards. Dissolved arsenic was detected at 9.86 ug/l, which is above the cleanup standard of 5 ug/l, but below the U.S. EPA proposed MCL of 10 ug/l.</p> <p>Test results of groundwater samples collected from the sentinel wells indicate that no VOCs, SVOCs, or TPH (gasoline range) were detected above the testing instrument's detection limit. Total petroleum hydrocarbons (diesel range) was detected, but below MTCA standards. Perchlorate and nitrite/nitrate were detected in sentinel wells; however, confirmatory sample test results (of select sentinel wells) show the concentration of perchlorate to be below the testing instrument's detection limit, and the concentration of nitrite/nitrate to be below the Federal drinking water standards.</p> <p>During well drilling at DA 3, soil samples were collected and tested. Test results indicate explosives were detected but at concentrations below U.S. EPA Region 3 Residential Risk-based concentration of 4.7 mg/kg.</p> <p>A surface water sample was collected from standing water inside the depression. Test results of this sample indicate no explosives, perchlorate or metals above the testing instrument's detection limits.</p> <p>Soil samples were collected from borings advanced immediately around the depression and from a nearby location where metallic debris was found and later removed and disposed. All soil samples were tested for explosives, perchlorate, and total metals. Test results of soil boring samples indicate no explosives or perchlorate concentrations above the testing instrument's reporting limit. Test results of soil samples collected from the former debris piles indicate no explosives, perchlorate, or picric acid. Metals were detected in samples collected from the borings and the debris pile but at concentrations at background levels and/or below screening or cleanup levels. Arsenic, barium, copper, and mercury were detected at concentrations that required a terrestrial ecological evaluation. The evaluation determined that these metals are not a potential threat to ecological receptors. No ordnance and explosives sampling and removal activities were conducted at this site, but a 37mm practice round was recovered from an old crushed burn barrel found at the site.</p>	

**Table 1**

**DESCRIPTION OF PROPERTY\***

Site/Area	EBS Parcel Designation	Description	Investigation/Remediation	ECP Category
<b>Remedial Action Unit 2C</b>				
<b>Demolition Area 1 and Landfill 4</b>	21 (7) HR(P)	<p>This area, located in the north-central part of the Property, was a former ordnance burn and ordnance detonation site and a landfill. The site slopes downward to the west, toward the north fork of Lacamas Creek, which flows southward into the main branch of Lacamas Creek. Several patches of soil on the site surface were reported to have a pinkish-red hue and were generally devoid of vegetation. The cause of this discoloration was not known; however, similarly discolored soil had been reported at other sites where explosives contamination had been detected in shallow soil. A firebreak surrounds the area just outside of a barbed-wire fence line. Surface debris consisted primarily of metal scraps such as wiring, metal shards, and automobile parts. Vancouver Barracks reportedly used the site for the disposal of building demolition debris during the mid-1960s. In addition, the site has been used by a number of groups and agencies, including the Army, Portland Air National Guard (PANG), local fire departments and law-enforcement for training and disposal operations. Reportedly, the site has been used for the disposal of firearms, destruction of AIM 7E Sparrow Missiles and Mark 38 rocket motors, and for demolition training.</p>	<p>A site investigation (SI) was conducted in 1998-1999 to evaluate the potential for contamination resulting from past uses of the landfill. The SI included a UXO avoidance survey, geophysical survey, surface and subsurface sampling, and groundwater sampling. Test results of soil samples indicate concentrations of various metals. Only barium, copper, and chromium were detected at concentrations exceeding the regulatory/risk-based criteria. One or more SVOCs, insecticides, herbicides and VOCs were detected, but at concentrations below screening criteria. The only groundwater constituent detected at a concentration exceeding a screening level was RDX (44 ug/l). This compound was detected in the down-gradient well only.</p> <p>Surface water investigations of nearby streams were conducted in 1998 and 1999. Both investigations included the collection and analysis of stream water samples, which were extensively tested. Both investigations concluded that the activities conducted at the landfill do not appear to have affected the stream(s) investigated (primarily Lacamas Creek).</p> <p>In 2001, an expanded site investigation (ESI) of the landfill was conducted based on the previous detection of RDX. The ESI focused primarily on groundwater and included the installation of eight monitoring wells (one well could not be used because it was dry). Four quarterly rounds (July 2001, October 2001, January 2002, and April 2002) of groundwater sampling were conducted. Well samples were also collected in January 2003. Samples collected from the wells were tested for explosives residues, nitroguanidine, perchlorate ion, VOCs, SVOCs, organochlorine herbicides PPL metals (total and dissolved), total cyanide TPH and water quality parameters. Tests results indicate that explosives and propellants (2,4-DNT, RDX, and perchlorate) were detected in all but one monitoring well, and were also detected in the up-gradient well. These constituents were detected in concentrations exceeding screening criteria in the initial groundwater sampling rounds and the final sampling round. Dichlorofluoromethane, 1,1,1-TCA, 1,1-DCE, and PCE were also detected above screening levels.</p> <p>In 2004, approximately 5,000 cys of contaminated soil (metals and commercially available fireworks) was removed (interim action), sifted to remove MEC and MC, and disposed of at an off-site facility. The excavation was backfilled to grade. The monitoring wells at the site will be sampled on a quarterly basis.</p>	5

**Table 1**

**DESCRIPTION OF PROPERTY\***

Site/Area	EBS Parcel Designation	Description	Investigation/Remediation	ECP Category
<b>Remedial Action Unit 3</b> (the following information pertains exclusively to munitions and explosives of concern (MECs))				
Site Wide Actions	NA	RAU 3 consists of all artillery and mortar firing points and safety fans. Collectively these areas cover most of the Property. Specific areas within RAU 3 are described further below.	MEC characterization and removal activities have been conducted at Camp Bonneville. UXB International, Inc. (1998) conducted a site-wide OE sampling and removal action; UXB (2000) also conducted an OE sampling and removal action at Training Area 8 (TA 8) and at TA 9, and Parsons Engineering Science, Inc. (2004) completed a remedial investigation/feasibility study (RI/FS) of RAU 3. Two hundred and seven grids were established throughout the site. Each grid measured 100 x 100 feet (a total area of approximately 50 acres). UXO technicians investigated 2,468 anomalies finding 25 live UXO; 212.7 pounds of OE-related scrap, and 185 pounds of non-OE related scrap. As a result of this effort, UXB returned and conducted a sampling and removal action in an 18.9-acre area encompassing TA 8 and TA 9. In addition, UXB conducted a preliminary survey of 1.5 acres at Demolition Area 1. During this action, 106, 341 areas were excavated. Nine UXO items were removed and disposed of. In addition, 3,888 pounds of OE scrap and 683 pounds of non-OE scrap were removed. A total of 16,004 discrete reconnaissance data waypoints have been collected, analyzed, and mapped using digital technology and GIS geo-spatial analysis during the 2001/2002 site reconnaissance efforts. Over 2,400 acres of the 3,980 total acres were reviewed using techniques for munitions and explosives of concern (MEC) and related activities. A solitary UXO item (105 mm artillery shell) was located in the Central Impact Target Area. A total of 58 inert munitions debris (MD) were located and recovered during the reconnaissance field efforts. The MD items included a total of 27 expended pyrotechnic devices, 7 expended smoke grenades, 9 expended practice 40mm projectiles, and 15 expended practice rockets and rocket motors.	NA
Airstrip		The 4.5- acre airstrip is located along an open area near the main entrance.	No MEC was found during an investigation of this area.	NA
Camp Bonneville Cantonment		This 5.1-acre area is comprised of buildings and open grassy areas.	No MEC was found during an investigation of this area.	NA
Camp Killpack		This 5-acre area was previously used for troop barracks.	No MEC was found during an investigation of this area.	NA
Bonneville Parade Ground		This is an open grassy area.	No MEC was found during an investigation of this area.	NA

**Table 1**  
**DESCRIPTION OF PROPERTY\***

<b>Site/Area</b>	<b>EBS Parcel Designation</b>	<b>Description</b>	<b>Investigation/Remediation</b>	<b>ECP Category</b>
OB/OD Areas		This 6.5-acre area consists of 3 demolition areas.	Subsurface removal action is completed at demolition area 1.	NA
Target Area		These areas combine to be approximately 12 acres.	A potential MEC-risk was identified during investigation.	NA
Central Impact Target Area		This 465-acre area was previously used as an artillery target area.	A MEC-risk was identified during investigation.	NA
Firing Points		The 19-acre Firing Points area consists of 6 mortar firing points, 7 artillery firing points, 1 rifle grenade firing point and 1 3.5-inch rocket firing point.	No MEC was found during an investigation of this area.	NA
West Side of Proposed Park		This 600-acre area was historically used as a maneuver area.	No MEC was found during an investigation of this area.	NA
Roads and Trails		The roads and trails have been in use for approximately 35 years.	No MEC was found during an investigation of this area.	NA
Wildlife Management Area		This 2050-acre area was used as a former range and maneuver areas.	A potential MEC-risk was identified during investigation.	NA
Current FBI Training Area		The parcel will continue to be used for FBI training until October 2006.	A potential MEC-risk was identified during investigation.	NA
Designated Reuse Areas Located Outside the Park		This area includes a former combat pistol range.	A potential MEC-risk was identified during investigation.	NA
Southwest Lacamas Valley		This 98-acre area was historically used for small arms training.	A potential MEC-risk was identified during investigation.	NA
South Central Lacamas Valley		Historically, this area was used extensively for training.	A potential MEC-risk was identified during investigation..	NA
North Central Lacamas Valley		This 140-acre area was used for training.	No MEC was found during an investigation of this area.	NA
Northeast Lacamas Valley		This area was used for small areas training.	A potential MEC-risk was identified during investigation.	NA



**Table 1**

**DESCRIPTION OF PROPERTY\***

<b>Site/Area</b>	<b>EBS Parcel Designation</b>	<b>Description</b>	<b>Investigation/Remediation</b>	<b>ECP Category</b>
<b>Surrounding Army Property</b> (the following information pertains to environmental impacts to soil and groundwater that may have been a result of past operational activities not associated with MECs)				
All undeveloped portions of the Property including all buildings not otherwise listed on this table. All buildings may contain lead-based paint and asbestos-containing materials.	1 (1)	This site/area applies to the entire Property except all other EBS parcels. <i>CERCLA hazardous substances and petroleum products</i> - this area has no history of storage, release, or disposal or migration from adjacent properties of CERCLA hazardous substances or petroleum products.	<i>CERCLA hazardous substances and petroleum products</i> - No changes to the EBS parcel designation. There has been no documented storage of hazardous substances or petroleum products; nor has there been a release, disposal, or migration from an adjacent Property of hazardous substances or petroleum products within this parcel.	1
Building 1815	23 (2) HS	Building 1815 is associated with wastewater treatment.	This building stores more than the CERCLA reportable quantity of 12% sodium hypochlorite. The sodium hypochlorite is used for water treatment	1
Building 4522	24 (2) HS	Building 4522 is associated with wastewater treatment.	This building stores more than the CERCLA reportable quantity of 12% sodium hypochlorite. The sodium hypochlorite is used for water treatment.	1
Building 4475 LUST (Underground Storage Tank)	15 (5) PR	In 1995 a 275-gal. AST and a 275-gal. UST and appurtenances were removed/excavated. There was some evidence of a release from the UST, which was remediated.	In 1995, a 300-gallon diesel UST and appurtenances were removed from the east side of Building 4475. Soil samples were collected that confirmed a release of diesel fuel. This resulted in the excavation of 375 cys of petroleum-contaminated soil and the removal of 250 gallons of diesel-contaminated water. Benzene, toluene, ethyl benzene, xylene were not detected in any samples, and PCBs were not detected in a soil sample collected from a nearby drainage ditch. All contaminated soil and water were disposed of at an off-site facility. The excavation was backfilled to grade.	2

**ECP Category Descriptions:**

- Category 1.** - areas where no release or disposal of hazardous substances or petroleum products has occurred (including no migration of these substances from adjacent areas). However, the area may have been used to store hazardous substances or petroleum products;
- Category 2.** - areas where only a release or disposal of petroleum products and/or their derivatives has occurred (including migration of petroleum products from adjacent areas);
- Category 3.** - areas where a release, disposal, and/or migration of hazardous substances has occurred, but at concentrations that do not require a removal or remedial action;
- Category 4.** - areas where a release, disposal, and/or migration of hazardous substances has occurred, and all remedial actions necessary to protect human health and the environment have been taken;
- Category 5.** - areas where a release, disposal, and/or migration of hazardous substances has occurred, and removal or remedial actions are underway but all required remedial actions have not yet taken place;
- Category 6.** - areas where a release, disposal, and/or migration of hazardous substances has occurred, but required actions have not yet been implemented;
- Category 7.** - areas that are not evaluated or require additional evaluation

\*MEC-related investigation throughout the RAUs is included in the discussion of RAU-3.

**Table 1**

**DESCRIPTION OF PROPERTY\***

Site/Area	EBS Parcel Designation	Description	Investigation/Remediation	ECP Category
<p><b>Notes:</b></p> <ol style="list-style-type: none"> <li>1) Site names shown in parenthesis are derived from the January 1997 <i>Environmental Baseline Survey for Camp Bonneville, Washington</i>. Site names not shown in parenthesis are generally accepted as the current site/area name and were derived from the State of Washington Dept. of Ecology Enforcement Order No. 03TCPHQ-5286.</li> <li>2) Sites shown in bold type have residual CERCLA hazardous substances in the soil above regulatory criteria. Protection against unacceptable risks to human health and the environment will be achieved at these sites by institutional controls or further environmental remediation.</li> <li>3) The Property to be transferred includes all Army-owned site improvements: roadway, trails, buildings, facilities and utilities.</li> <li>4) Ammunitions Storage Bunkers (Facility Nos. 2950, 2951, and 2953), and Demolition Area 3 were not included in January 1997 <i>Environmental Baseline Survey for Camp Bonneville, Washington</i>.</li> <li>5) Unless otherwise noted all buildings at Camp Bonneville are qualified in the January 1997 <i>EBS</i> for the potential presence of asbestos containing materials and lead-based paints.</li> <li>6) Water quality parameters include the following tests; chloride, sulfate, total alkalinity, dissolved organic carbon, nitrite/nitrate as nitrogen, total organic carbons and total suspended solids.</li> <li>7) The EBS categories listed in this table are based on the following document: <ul style="list-style-type: none"> <li>• January 1997 <i>Environmental Baseline Survey Report for Camp Bonneville, Washington</i>.</li> </ul> </li> </ol>		<p><b>Acronyms:</b></p> <p>ACM = asbestos containing material  Approx. = approximately  ASR = archive search report  AST = above-ground storage tank  bgs = below ground surface  Bldg. = building  CERCLA = Comprehensive Environmental Response, Compensation and Liability Act  CS = 2-chlorobenzalmononitrile  cyds = cubic yards  DNT = 2,4-dinitrotoluene  EBS = environmental baseline survey  EOD = Explosives Ordnance Detachment  fac. = facility  gal = gallon  GPR = ground penetrating radar  HVAC = heating, ventilation, and air conditioning  LBP = lead-based paints  LUST = leaking underground storage tank  MECs = munitions and explosives of concern  mg/kg = milligrams per kilogram  MTCA = Model Toxics Control Act  NA = not applicable  PA = picric acid  PCBs = polychlorinated biphenyls  PETN = pentaerythritol tetranitrate  PID = photionization device  POLs= petroleum oils and lubricants  PPL Metals = priority pollutant metals  PRG = preliminary remediation goal  RAU = Remedial Action Unit  RDX = hexahydro-1,3,5-trinitro-1,3,5-triazine  RI/FS = remedial investigation/feasibility study  sq.ft. = square feet  SVOCs = Semi-volatile organic compounds  TOC = total organic carbon  ug/l = micrograms per liter</p>		

**Table 2: Buildings and Facilities Included in the Early Transfer**

<b>Table 2</b>				
<b>BUILDINGS AND FACILITIES INCLUDED IN THE EARLY TRANSFER</b>				
<b>Building Number</b>	<b>Construction Type</b>	<b>Year Built</b>	<b>Past Use</b>	<b>Current Use</b>
<b>Camp Bonneville Cantonment Facilities</b>				
1815	Metal building with a concrete floor	1976	Well Pump House and Water Treatment	Well Pump House and Water Treatment. Twelve percent sodium hypochlorite is stored in typical quantities of up to 10 gallons.
1826	Wood building with a wood floor. The forced air heating, ventilation, air conditioning (HVAC) is powered by a 275-gallon diesel aboveground storage tank (AST).	1927	Barracks (enlisted UPD)	Barracks
1828	Wood building with a wood floor. The forced air HVAC is powered by a 275-gallon diesel AST.	1933	Barracks (enlisted UPD)	Barracks
1833	Wood building with a concrete floor. The forced air HVAC is powered by a 275-gallon diesel AST.	1927	Latrine (Sep Toilet/shower)	Latrine
1837	Wood building with a concrete floor. The forced air HVAC is powered by a 275-gallon diesel AST.	1927	Barracks (enlisted UPD)	Barracks
1847	Wood building with a concrete floor. The forced air HVAC is powered by a 275-gallon diesel AST	1927	Barracks (enlisted UPD)	Barracks
1848	Wood building with a concrete floor. The forced air HVAC is powered by two 275-gallon diesel ASTs	1933	Mess Hall (Dining Facility)	Mess Hall
1857	Wood building with a concrete floor. The forced air HVAC is powered by a 275-gallon diesel AST	1927	Barracks (enlisted UPD)	Barracks
1864	Wood building with transite siding and a concrete floor. This building has no HVAC.	1955	Grounds Shop (Engineering/Housing Mnt)	Grounds Shop. Provides storage of miscellaneous grounds equipment including three all-terrain vehicles (ATVs), small gas containers, and automotive batteries.
1867	Wood building with a concrete floor. The forced air HVAC is powered by a 275-gallon diesel AST	1927	Barracks (enlisted UPD)	Barracks

**Table 2**  
**BUILDINGS AND FACILITIES INCLUDED IN THE EARLY TRANSFER**

<b>Building Number</b>	<b>Construction Type</b>	<b>Year Built</b>	<b>Past Use</b>	<b>Current Use</b>
1911	Wood building with a concrete floor. The forced air HVAC is powered by two 275-gallon diesel ASTs	1933	Barracks (enlisted UPD)	Barracks
1920	Wood building with a concrete floor. The forced air HVAC is powered by a 275-gallon diesel AST	1933	Barracks (enlisted UPD)	Barracks
1922	Wood building with a concrete floor. The forced air HVAC is powered by two 275-gallon diesel ASTs	1933	Barracks (enlisted UPD)	Barracks
1923	No information	1933	Sep Toilet/Shower	Unknown
1930	Wood building with a concrete floor. The forced air HVAC is powered by a 275-gallon diesel AST	1933	Storage (Cold Storage Inst)	Storage
1932	Wood building with a concrete floor. The forced air HVAC is powered by two 275-gallon diesel ASTs	1933	Barracks (enlisted UPD)	Barracks
1934	Wood building with a concrete floor. The forced air HVAC is powered by two 275-gallon diesel ASTs	1933	Latrine (Sep Toilet/Shower)	Latrine
1940	Wood building with a concrete floor. The forced air HVAC is powered by a 275-gallon diesel AST	1933	Day Room (Exchange Branch)	Day Room/Classroom
1942	Wood building with a concrete floor. The forced air HVAC is powered by two 275-gallon diesel ASTs	1933	Barracks (enlisted UPD)	Barracks
1963	Wood building with wood floor. This building has no HVAC.	1928	Storage	Storage. Items associated with engineering, such as paint, wood, sacks of concrete, and nails are stored in this building.
1980	Wood building with a concrete floor. The forced air HVAC is powered by a 275-gallon diesel AST	1928	Open Dining Facility	Command Post
1981	Flagpole	1995	Flagpole	Flagpole
1992	Metal building with a concrete floor. This building has no HVAC.	1978	Water Well Pump House	Water Well Pump House
1995	Metal building with a concrete floor. This building has no HVAC.	1978	Sewage Lift Station	Sewage Lift Station

**Table 2**  
**BUILDINGS AND FACILITIES INCLUDED IN THE EARLY TRANSFER**

<b>Building Number</b>	<b>Construction Type</b>	<b>Year Built</b>	<b>Past Use</b>	<b>Current Use</b>
1997	Concrete with 275-gallon diesel tank for backup power.	1978	Sewage Treatment Chemical Storage	Sewage Treatment Chemical Storage. Up to 10 gallons of 12 percent sodium hypochlorite is stored in this building.
1999	Sewage lagoon	1978	Sewage lagoon	Sewage lagoon
2663	Concrete reservoir with sheet metal roof on a wood frame. This building has no HVAC.	1952	Reservoir (water supply building)	Reservoir
2950	Subsurface concrete building with a concrete floor. This building has no HVAC.	1976	Ammunition Magazine	Ammunition Bunker. Various types of ammunition brought on site by units using the facility are stored in this building.
2951	Subsurface concrete building with a concrete floor. This building has no HVAC.	1976	Ammunition Magazine	Ammunition Bunker. Various types of ammunition brought on site by units using the facility are stored in this building.
2953	Subsurface concrete building with a concrete floor. This building has no HVAC.	1976	Ammunition Magazine	Ammunition Bunker. Various types of ammunition brought on site by units using the facility are stored in this building.
<b>Camp Killpack Cantonment Facilities</b>				
4125	Wood building with a wood floor. The HVAC is electric-powered.	1958	Storage	Storage. This open structure is used as a carport to store vehicles.
4126	Wood building with a wood floor. The HVAC is electric-powered.	1958	Storage	No longer in use.
4155	Wood building with a wood floor. The HVAC is electric-powered.	1935	Barracks (Enlisted UPH)	Housing
4314	Wood building with a wood floor. The HVAC is electric-powered.	1935	Barracks (Enlisted UPH)	Barracks
4316	Wood building with a wood floor. The HVAC is electric-powered.	1935	Barracks (Enlisted UPH)	Barracks
4325	Wood building with a wood floor. The HVAC is electric-powered.	1935	Barracks (Enlisted UPH)	Barracks
4327	Wood building with a wood floor. The HVAC is electric-powered.	1935	Barracks (Enlisted UPH)	Barracks
4337	Wood building with a wood floor. The HVAC is electric-powered.	1991	Latrine	Latrine
4345	Wood building with a wood floor. The HVAC is electric-powered.	1935	Barracks (Enlisted UPH)	Barracks

**Table 2**  
**BUILDINGS AND FACILITIES INCLUDED IN THE EARLY TRANSFER**

<b>Building Number</b>	<b>Construction Type</b>	<b>Year Built</b>	<b>Past Use</b>	<b>Current Use</b>
4348	Wood building with a wood floor. The HVAC is electric-powered.	1935	Barracks (Enlisted UPH)	Barracks
4356	Wood building with a wood floor. The HVAC is electric-powered.	1936	Barracks (Enlisted UPH)	Barracks
4364	Wood building with a concrete floor. The forced air HVAC is powered by a 275-gallon diesel AST.	1935	Latrine	Latrine
4366	Wood building with a wood floor. The HVAC is electric-powered.	1936	Barracks (Enlisted UPH)	Barracks
4368	Wood building with a wood floor. The HVAC is electric-powered.	1935	Barracks (Enlisted UPH)	Barracks
4377	Wood building with a wood floor. The HVAC is electric-powered.	1935	Barracks (Enlisted UPH)	Barracks
4378	Wood building with a concrete floor. This building has no HVAC.	1935	Storage	Storage. Items associated with grounds maintenance, such as lawnmowers, small gasoline containers, 32-ounce containers of oil, and motorized weed cutters are stored in this building.
4387	Wood building with a wood floor. The HVAC is electric-powered.	1935	Barracks (Enlisted UPH)	Barracks
4389	Wood building with a wood floor. The HVAC is electric-powered.	1935	Mess Hall (Dining Facility)	Mess Hall
4398	Wood building with a wood floor. The HVAC is electric-powered.	1935	Barracks (Enlisted UPH)	Range Control
4475	Wood building with a concrete floor. This building has no HVAC. There is a 275-gallon AST outside this building.	1937	Vehicle Maintenance	Vehicle Maintenance. This building is used to store vehicles and items associated with vehicle repair.
4475A	Metal shed with metal floor.	1992	Hazardous Materials Storage	Hazardous Materials Storage. A 55-gallon drum of oil and several containers of antifreeze were stored in this building.
4475B	Metal shed with a metal floor.	1992	Hazardous Materials Storage	Hazardous Material Storage. Four 5-gallon drums of oil, four 5-gallon drums of anti freeze, and eight 5-gallon drums of transmission oil were observed stored in this building

**Table 2**  
**BUILDINGS AND FACILITIES INCLUDED IN THE EARLY TRANSFER**

<b>Building Number</b>	<b>Construction Type</b>	<b>Year Built</b>	<b>Past Use</b>	<b>Current Use</b>
4476	Cinderblock shed with a concrete floor.	1990	Covered Storage (Flammable Material Storage)	Covered Storage. Vehicle maintenance storage, miscellaneous supplies for vehicle maintenance, including a 55-gallon drum used to collect waste oil are stored in this building.
4476A	Metal roof with concrete secondary containment.	1994	1,000-gallon AST	This building provides covered storage for a 1,000-gallon AST with secondary containment.
4483	Wood building with concrete floor.	1993	Fire Station (Vehicle Storage Shed)	Fire Station. This building is the relocated fire station, and one fire truck is stored here.
4522	Metal building with a concrete floor.	1950	Water Well Pump and Water Treatment Building (Water Supply Bldg.)	35 gal. of 12 percent sodium hypochlorite is stored in this building.
4532	Concrete reservoir with sheet-metal roof on wood frame.	1950	Reservoir	Reservoir
<b>Range Facilities</b>				
U001A	Wood frame and walls, asphalt shingle roof, and no insulation.	1991	Observation Tower	Observation Tower
U001B	Wood frame and walls, asphalt shingle roof, and no insulation.	1995	Covered Training Area	Covered Training Area
U001C <sup>2</sup>	Wood frame and walls, asphalt shingle roof, and no insulation.	1995	Covered Training Area (Bleachers)	Covered Training Area (bleachers)
U002A	Wood frame and walls, asphalt shingle roof, and no insulation.	1957	Observation Tower	Observation Tower
U002B	Wood frame, no walls, corrugated roof, and no insulation.	1995	Covered Training Area	Covered Training Area
U003B	Wood frame, no walls, corrugated roof, and no insulation.	1995	Covered Training Area	Covered Training Area
U004A	Wood frame and walls, sheet metal roof, and no insulation.	1991	Observation Tower	Observation Tower
U004B	Wood frame, no walls, asphalt shingle roof, and no insulation.	1995	Covered Training Area	Covered Training Area
U004C	Metal frame, three walls with corrugated metal siding, corrugated metal roof, and no insulation.	1995	Covered Training Area (Bleachers)	Covered Training Area (Bleachers)
U005A	Wood frame and walls, sheet metal roof, and no insulation.	1992	Observation Tower	Observation Tower

**Table 2**  
**BUILDINGS AND FACILITIES INCLUDED IN THE EARLY TRANSFER**

<b>Building Number</b>	<b>Construction Type</b>	<b>Year Built</b>	<b>Past Use</b>	<b>Current Use</b>
U006A	Wood frame and walls, sheet metal roof, and no insulation.	1995	Observation Tower	Observation Tower
U006B	Wood frame and walls, sheet metal roof, and no insulation.	1995	Observation Tower	Observation Tower
U007	Not inspected	1957	Heavy Demolition	Heavy Demolition
U007A	Treated heavy lumber.	1976	Observation Tower	Observation Tower
U008A	Wood frame and walls, sheet metal roof, and no insulation.	1995	Observation Tower	Observation Tower
U008B	Wood frame, no walls, corrugated roof, and no insulation.	1995	Covered Training Area	Covered Training Area
U010A	Wood frame and walls, sheet metal roof, and no insulation.	1992	Observation Tower	Observation Tower
U010B	Wood frame, no walls, corrugated roof, and no insulation.	1991	Covered Training Area	Covered Training Area
FBI Range	Not available	1995	Not Applicable	FBI-owned buildings, including an office, a gun cleaning room, a classroom, and a range observation Tower.
<b>Notes:</b> 1) The Property descriptions may have multiple names. Property descriptions shown in parentheses are derived from records provided by the Fort Lewis Office of Real Property. All other Property descriptions were derived from the January 1997 <i>Environmental Baseline Survey Report Camp Bonneville, Washington.</i> 2) Information not on records provided by the Fort Lewis Office of Real Property.			<b>Acronyms:</b> AST = above ground storage tank CS = 2-chlorobenzamalonitrile FBI = Federal Bureau of Investigation HVAC = heating ventilation and air conditioning Mnt = maintenance Sep = septic	





**Table 3**

**NOTIFICATION OF HAZARDOUS SUBSTANCE STORAGE, RELEASE OR DISPOSAL**

Building Number	Name of Hazardous Substance(s)	Date of Storage, Release, or Disposal	Remedial Actions
<p><b>Building 4126</b> Pesticide Storage</p>	<p>2,4,5-trichlorophenoxyacetic acid (2,4,5-T), 2,4-dichlorophenoxyacetic acid, 4,4-dishlorodiphenotrichloroethant (DDT)</p> <p style="text-align: center;">Lead</p>	<p>Unknown to 1977</p> <p style="text-align: center;">Unknown</p>	<p>Records indicate that this building stored 55-gallon drums of 2,4,5-trichlorophenoxyacetic acid (2,4,5-T), 2,4-dichlorophenoxyacetic acid, and 4,4-dishlorodiphenotrichloroethant (DDT) until 1977 when these materials were moved to Building 1864, see above.</p> <p>Soil samples and an indoor floor sample were collected and tested for chlorinated pesticides and herbicides, PCBs, PPL metals (plus barium) and TPH (gasoline and diesel ranges). Test results on these samples indicate that pesticides (4,4-DDT, 4,4-DDD, 4,4-DDE, beta-BHC, lindane, 2,4-D, 2,4-DB, 2,4,5-T, and MCPP), petroleum hydrocarbons, and several metals were detected but at concentrations below regulatory cleanup and background concentrations. Polychlorinated biphenyls were not detected at concentrations exceeding the laboratory reporting limit. Petroleum hydrocarbons were detected in floor samples above regulatory cleanup standards. Lead was detected in a surface soil sample above regulatory cleanup and background concentrations.</p> <p>Based on the floor and soil sample results, the building was dismantled and soil was excavated under the building footprint to a depth of 1-foot. Confirmatory samples were collected and test results show no analyte concentration above regulatory cleanup criteria. The building debris and excavated soils were disposed of at an off-site facility. The excavation was backfilled to grade.</p>
<p>4475</p>	<p>Broad-leaf herbicides</p>	<p>Unknown</p>	<p>Pesticides were formerly stored in this building. The duration and volume of pesticide storage is not known.</p>
<p>Building 4475 (Maintenance Pit)</p>	<p style="text-align: center;">Lead</p>	<p>Unknown</p>	<p>Six soil samples were collected from two borings advanced at the Maintenance pit. The soil samples collected at the drainage pit were tested, and the results showed unidentified hydrocarbons, VOCs, SVOCs and chlorinated pesticides at concentrations below regulatory criteria. No PCBs were detected in any of the samples. Several metals were detected above the regulatory cleanup concentration (arsenic, chromium, and lead) but below site-specific background concentrations with the exception of one sample, which had a lead concentration above background.</p> <p>In June 2000, all accessible lead-contaminated soils were excavated and disposed of at an off-site facility. The excavation was stopped to avoid undermining the building. Contaminated soil may be present beneath the</p>

**Table 3**

**NOTIFICATION OF HAZARDOUS SUBSTANCE STORAGE, RELEASE OR DISPOSAL**

Building Number	Name of Hazardous Substance(s)	Date of Storage, Release, or Disposal	Remedial Actions
			building. Potential contaminants may include petroleum hydrocarbons, VOCs, SVOCs, metals. The excavation was backfilled to grade.
Suspect Drum Burial Site (Drum Disposal Area)	Arsenic Barium Chromium Methoxychlor Toluene	Unknown	<p>An electromagnetic survey of the area identified anomalies. Soil borings were advanced in this area and samples collected. No SVOCs, PCBs, pesticides, or explosive compounds were detected in the samples, and there was no evidence of the presence of explosives. Petroleum hydrocarbons, certain VOCs, and metals were detected, but at concentrations below regulatory cleanup criteria and/or background concentrations.</p> <p>In 2000, the area was excavated to remove buried drums and debris (paint cans, corrugated metal, scrap metal and barbed wire). Twenty-six test pits were excavated to assess the area of drum disposal. Soil samples collected from the tests pits, and at some locations rainwater that accumulated in the pits, were tested. The soil sample test results indicate that toluene, arsenic, barium, chromium and methoxychlor exceeded regulatory cleanup criteria. The rainwater sample test results indicate that naphthalene, ethyl benzene, toluene, and lead above cleanup levels. A second EM survey was conducted to determine if buried objects could have caused or contributed to the contamination. Thirteen additional anomalies were identified and investigated by trenching. One excavation contained among other things, paint cans and paint. The other trenches contained scrap metal, reinforcement bars, barbed wire and firing point survey markers.</p> <p>Cleanup activities were initially conducted to address the debris, but later to address the organic compounds and metals detected in the test pits. Approximately 110 tons of soil and debris was excavated and disposed of at an off-site facility. Confirmatory sample results indicate all target analyte concentrations were either not detected or below regulatory cleanup criteria. The excavation was backfilled to grade.</p>
Former CS Gas Training Building (Former CS Gas Training Building Site)	Lead	Unknown	<p>Five soil borings were advanced in the area and soil samples were collected. Test results indicate that CS gas and cyanide were not detected. Semi-volatile organic compounds were detected but at concentrations below regulatory criteria. Lead was detected above regulatory cleanup and background criteria.</p> <p>In June 2000, contaminated soil excavation activities were commenced. The excavation extended to 3-feet below grade. Confirmatory sample test results indicate that all analyte concentrations were below MTCA cleanup criteria. The excavation was backfilled to grade and all contaminated soil was disposed of at an off-site facility.</p>

**Table 3**

**NOTIFICATION OF HAZARDOUS SUBSTANCE STORAGE, RELEASE OR DISPOSAL**

<b>Building Number</b>	<b>Name of Hazardous Substance(s)</b>	<b>Date of Storage, Release, or Disposal</b>	<b>Remedial Actions</b>
Ammunitions Storage Bunkers (Facility Nos. 2950, 2951, and 2953)	Lead	Unknown	<p>In 1998, fifteen sampling locations (nine at the largest magazine and three each at the two smaller magazines) were selected for the collection of surface and subsurface soil samples. A soil boring was also advanced at each magazine based on the results of the surface soil tests from soil samples collected from inside the magazines. Wipe samples were collected from the floors in each magazine. The soil samples collected from inside the magazines, and the wipe sample tests results show RDX (below reporting levels) and all the PPL metals except selenium and thallium in Building 2950. Arsenic, beryllium, cadmium, chromium, lead, and mercury were detected in the soil samples collected from inside the magazines at concentrations that exceed the MTCA cleanup criteria. Arsenic, beryllium, and cadmium concentrations were also above background levels. PETN was detected in one magazine; however, there is no established cleanup concentration for PETN. No organic compounds were detected above reporting limits in the surface soil samples collected outside the magazines. Arsenic, cadmium, chromium, and lead were detected at concentrations above MTCA cleanup criteria and background levels in the surface soil samples collected outside the magazines. In 2001, surface and subsurface soil samples were collected from Building 2953. PETN, picric acid, and 2,4-dinitrotoulene were detected in the surface soil samples at concentrations below MTCA cleanup criteria. No ordnance compounds or propellants were detected in the subsurface soil samples. Metals were detected in the surface soil samples. Arsenic and chromium were detected above MTCA cleanup criteria. Lead was detected above the MTCA cleanup criteria and background levels.</p> <p>In May 2001, contaminated soils at the three magazines were excavated to one foot below grade. Confirmatory samples were collected and the test results indicated no residual contaminants above regulatory criteria or background levels. The excavations were backfilled and the contaminated soil and wood from pallets inside the magazines were disposed of at an off-site facility. The interior surfaces of the magazines were cleaned.</p>
<b>Remedial Action Unit 2A</b>			
25Meter M60/Pistol Range	Lead	Unknown	Two soil samples collected from this site had lead concentrations of 136 mg/kg and 219 mg/kg.
25Meter Machine Gun Range	Lead	Unknown	The explosive residue (DNT) was detected in soil samples collected from the muzzle blast zone at concentrations that range from 4.9 mg/kg to 20 mg/kg, which are below regulatory criteria. Eleven soil samples had lead concentrations that ranged from 120 mg/kg to 26,300 mg/kg.
25Meter Record Fire Field Range	Lead	Unknown	Six soil samples collected from this site had lead concentrations that ranged from 150 mg/kg to 8,880 mg/kg.

**Table 3**

**NOTIFICATION OF HAZARDOUS SUBSTANCE STORAGE, RELEASE OR DISPOSAL**

<b>Building Number</b>	<b>Name of Hazardous Substance(s)</b>	<b>Date of Storage, Release, or Disposal</b>	<b>Remedial Actions</b>
Machine Gun Range- North	Barium and Lead	Unknown	Barium was detected in two soil samples at concentrations of 178 mg/kg and 200 mg/kg. Lead was detected in one soil sample at a concentration of 158 mg/kg.
Machine Gun Range- South	Barium and Lead	Unknown	Barium was detected in one soil sample at concentration of 192 mg/kg. Lead was detected in two soil samples at concentrations of 135 mg/kg and 423 mg/kg.
Infiltration Course-South	Lead	Unknown	Lead was detected in one soil sample at a concentration of 151 mg/kg.
Sub-machine Gun Range	Barium	Unknown	Barium was detected in one soil sample at a concentration of 133 mg/kg.
Field Firing Ranges 1 & 2	Lead	Unknown	Eight soil samples had lead concentrations that range from 125mg/kg to 7,150 mg/kg.
TF Range	Barium	Unknown	Barium was detected in one soil sample at a concentration of 163 mg/kg.
Combat Pistol Range	Lead	Unknown	Two soil samples contained lead at concentrations of 165 mg/kg and 785 mg/kg.
Close Combat Range	Barium	Unknown	Barium was detected in two soil samples at concentrations of 145 mg/kg and 227 mg/kg.
Rifle Ranges 1&2	Arsenic, Barium and Lead	Unknown	Arsenic and barium were detected in soil samples at 22.9 mg/kg and 202 mg/kg, respectively. Eighteen soil samples had lead concentrations that ranged from 130 mg/kg to 4,330 mg/kg.
Field Fire Rifle Ranges 1 & 2	Barium and Lead	Unknown	Soil test results show two samples with barium detected at concentrations of 146 mg/kg and 194 mg/kg. Two soil samples contained lead in concentrations of 149 mg/kg and 2,300 mg/kg.
Undocumented Pistol Range	Lead	Unknown	Lead was detected in one soil samples at a concentration of 154 mg/kg.
<b>Remedial Action Unit 2B</b>			
No sites			
<b>Remedial Action Unit 2C</b>			
Demolition Area 1 and Landfill 4	RDX 2,4-DNT Perchlorate Dichlorofluoromethane 1,1,1-TCA 1,1-DCE PCE	Unknown	A site investigation (SI) was conducted in 1998-1999 4 to evaluate the potential for contamination resulting from past uses of the landfill. The SI included a UXO avoidance survey, geophysical survey, surface and subsurface sampling, and groundwater sampling. Test results of soil samples indicate concentrations of various metals. Only barium, copper, and chromium were detected at concentrations exceeding the regulatory/risk-based criteria. One or more SVOCs, insecticides, herbicides and VOCs were detected, but at concentrations below screening criteria. The only groundwater constituent detected at a concentration exceeding a screening level was RDX (44 ug/l). This compound was detected in the down-gradient well only.

**Table 3**

**NOTIFICATION OF HAZARDOUS SUBSTANCE STORAGE, RELEASE OR DISPOSAL**

Building Number	Name of Hazardous Substance(s)	Date of Storage, Release, or Disposal	Remedial Actions
			<p>Surface water investigations of nearby streams were conducted in 1998 and 1999. Both investigations included the collection and analysis of stream water samples, which were extensively tested. Both investigations concluded that the activities conducted at the landfill do not appear to have affected the stream(s) investigated (primarily Lacamas Creek).</p> <p>In 2001, an expanded site investigation (ESI) of the landfill was conducted based on the previous detection of RDX. The ESI focused primarily on groundwater and included the installation of eight monitoring wells (one well could not be used because it was dry). Four quarterly rounds (July 2001, October 2001, January 2002, and April 2002) of groundwater sampling were conducted. Well samples were also collected in January 2003. Samples collected from the wells were tested for explosives residues, nitroguanidine, perchlorate ion, VOCs, SVOCs, organochlorine herbicides PPL metals (total and dissolved), total cyanide TPH and water quality parameters. Tests results indicate that explosives and propellants (2,4-DNT, RDX, and perchlorate) were detected in all but one monitoring well, and were also detected in the up-gradient well. These constituents were detected in concentrations exceeding screening criteria in the initial groundwater sampling rounds and the final sampling round. Dichlorofluoromethane, 1,1,1-TCA, 1,1-DCE, and PCE were also detected above screening levels.</p> <p>In 2004, approximately 5,000 cys of contaminated soil was removed (interim action) and disposed of at an off-site facility. The excavation was backfilled to grade. The monitoring wells at the site will be sampled on a quarterly basis.</p>

**Remedial Action Unit 3**

No sites			
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The information contained in this notice is required under the authority of regulations promulgated under section 120(h) of the Comprehensive Environmental Response, Liability, and Compensation Act (CERCLA or 'Superfund') 42 U.S.C. §9620(h). This table provides information on the storage of hazardous substances for one year or more in quantities greater than or equal to 1,000 kilograms or the hazardous substance's CERCLA reportable quantity (which ever is greater). In addition, it provides information on the known release of hazardous substances in quantities greater than or equal to the substances CERCLA reportable quantity. See 40 CFR Part 373.

**Table 3**

**NOTIFICATION OF HAZARDOUS SUBSTANCE STORAGE, RELEASE OR DISPOSAL**

Building Number	Name of Hazardous Substance(s)	Date of Storage, Release, or Disposal	Remedial Actions																																																																																				
<p><b>Notes:</b></p> <p>1) Sites and chemical compounds shown in bold type: records indicate that a CERCLA hazardous substance was stored, released, or disposed of at the identified facility at or above its reportable quantity.</p> <p>2) Sites and chemical compounds <u>not</u> shown in bold type: records indicate a CERCLA hazardous substance was released or disposed of at the site/area indicated; however, the quantity is not known. These sites generally relate to a known or suspected release of a CERCLA hazardous substance that was detected at concentrations that require cleanup, the hazardous substance.</p> <p>3) Chemical Abstract Service Registry Numbers:</p> <table border="1"> <thead> <tr> <th>Analyte</th> <th>Case #</th> <th>Reportable Quantity (lbs)</th> </tr> </thead> <tbody> <tr><td>• Arsenic</td><td>7440382</td><td>1</td></tr> <tr><td>• Barium</td><td>7440-39-3</td><td>-</td></tr> <tr><td>• beta-BHC</td><td>319857</td><td>1</td></tr> <tr><td>• Cadmium</td><td>7440439</td><td>1</td></tr> <tr><td>• Chromium</td><td>440473</td><td>1</td></tr> <tr><td>• Chlorobenzalmalononitrile</td><td>2698411</td><td>-</td></tr> <tr><td>• 2,4-D</td><td>94757</td><td>100</td></tr> <tr><td>• 2,4-DB</td><td>94826</td><td>-</td></tr> <tr><td>• 1,1-DCE</td><td>75354</td><td>5000</td></tr> <tr><td>• 4,4-DDT</td><td>50293</td><td>1</td></tr> <tr><td>• 4,4-DDD</td><td>72548</td><td>1</td></tr> <tr><td>• 4,4-DDE</td><td>72559</td><td>1</td></tr> <tr><td>• Dichlorofluoromethane</td><td>75434</td><td>-</td></tr> <tr><td>• DNT</td><td>121142</td><td>1000</td></tr> <tr><td>• Lead</td><td>7439921</td><td>1</td></tr> <tr><td>• Lindane</td><td>58999</td><td>1</td></tr> <tr><td>• Methoxychlor</td><td>72435</td><td>1</td></tr> <tr><td>• MCPP</td><td>7085190</td><td>-</td></tr> <tr><td>• 2,4,5-T</td><td>93765</td><td>100</td></tr> <tr><td>• 1,1,1-TCA</td><td>71556</td><td>1</td></tr> <tr><td>• TCE</td><td>79016</td><td>1000</td></tr> <tr><td>• Toluene</td><td>108-88-3</td><td>1000</td></tr> <tr><td>• PCB</td><td>1336363</td><td>10</td></tr> <tr><td>• PCE</td><td>127184</td><td>1</td></tr> <tr><td>• Perchlorate</td><td>14797730</td><td>-</td></tr> <tr><td>• RDX</td><td>121824</td><td>-</td></tr> <tr><td>• Sodium hypochlorite</td><td>7681529</td><td>100</td></tr> </tbody> </table>			Analyte	Case #	Reportable Quantity (lbs)	• Arsenic	7440382	1	• Barium	7440-39-3	-	• beta-BHC	319857	1	• Cadmium	7440439	1	• Chromium	440473	1	• Chlorobenzalmalononitrile	2698411	-	• 2,4-D	94757	100	• 2,4-DB	94826	-	• 1,1-DCE	75354	5000	• 4,4-DDT	50293	1	• 4,4-DDD	72548	1	• 4,4-DDE	72559	1	• Dichlorofluoromethane	75434	-	• DNT	121142	1000	• Lead	7439921	1	• Lindane	58999	1	• Methoxychlor	72435	1	• MCPP	7085190	-	• 2,4,5-T	93765	100	• 1,1,1-TCA	71556	1	• TCE	79016	1000	• Toluene	108-88-3	1000	• PCB	1336363	10	• PCE	127184	1	• Perchlorate	14797730	-	• RDX	121824	-	• Sodium hypochlorite	7681529	100	<p><b>Acronyms:</b></p> <p>CERCLA = Comprehensive Environmental Compensation liability Act</p> <p>CFR = Code of Federal Regulations</p> <p>CS = 2-chlorobenzalmalononitrile</p> <p>D = dichlorophenoxy acetic acid</p> <p>DB = dichlorophenoxy butyric acid</p> <p>DCE = dichloroethylene</p> <p>DDD = dichlorodiphenyldichloroethane</p> <p>DDE = dichlorodiphenyldichloroethylene</p> <p>DDT = dichlorodiphenyltrichloroethane</p> <p>DNT = 2,4-dinitrotoluene</p> <p>EM = electromegnetic</p> <p>ESI = expanded site investigation</p> <p>Lbs = pounds</p> <p>MCPP =2-(2-methyl-4-chlorophenoxy) propionic acid</p> <p>MTCA = Model Toxics Control Act</p> <p>PCB = polychlorinated biphenyls</p> <p>PCE = Tetrachloroethylene</p> <p>PETN = pentaerythritol tetranitrate</p> <p>PPL Metals = priority pollutant metals</p> <p>T = trichlorophenoxyacetic acid</p> <p>TCA = trichloroethane</p> <p>TCE = Trichloroethylene</p> <p>TPH = total petroleum hydrocarbons</p> <p>RDX = hexahydro-1,3,5-trinitro-1,3,5-triazine</p> <p>SVOC = semi-volatile organic compounds</p> <p>U.S.C. = United States Code</p> <p>U.S. EPA = United States, Environmental Protection Agency</p> <p>VOC = volatile organic compounds</p>
Analyte	Case #	Reportable Quantity (lbs)																																																																																					
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**Table 4: Notification of Petroleum Product Storage**

<b>Table 4</b>								
<b>NOTIFICATION OF PETROLEUM PRODUCT STORAGE</b>								
<b>Building Number</b>	<b>Tank ID</b>	<b>Tank Type</b>	<b>Number of Tanks</b>	<b>Tank Capacity (gallons)</b>	<b>Tank Contents</b>	<b>Release From Tank</b>	<b>Tank Removal Date</b>	<b>Closure Received*</b>
1826	Unknown	AST	1	275	Diesel Fuel	No	N/A	No
1828 <sup>3</sup>	Unknown	AST	1	275	Diesel Fuel	No	N/A	Yes
1833 <sup>3</sup>	Unknown	AST	1	275	Diesel Fuel	No	N/A	No
1837 <sup>3</sup>	Unknown	AST	1	275	Diesel Fuel	No	N/A	No
1847	Unknown	AST	1	275	Diesel Fuel	No	N/A	No
1848	Unknown	AST	2	275	Diesel Fuel	No	N/A	No
1857	Unknown	AST	1	275	Diesel Fuel	No	N/A	No
1867	Unknown	AST	1	275	Diesel Fuel	No	N/A	No
1911	Unknown	AST	2	275	Diesel Fuel	No	N/A	No
1920	Unknown	AST	1	275	Diesel Fuel	No	N/A	No
1922 <sup>3</sup>	Unknown	AST	2	275	Diesel Fuel	No	N/A	No
1932 <sup>3</sup>	Unknown	AST	2	275	Diesel Fuel	No	N/A	No
1934	Unknown	AST	2	275	Diesel Fuel	No	N/A	No
1940 <sup>3</sup>	Unknown	AST	1	275	Diesel Fuel	No	N/A	No
1942 <sup>3</sup>	Unknown	AST	2	275	Diesel Fuel	No	N/A	No
1980 <sup>3</sup>	Unknown	AST	1	275	Diesel Fuel	No	N/A	No
1997	Unknown	AST	1	275	Diesel Fuel	No	N/A	No
4364	Unknown	AST	1	275	Diesel Fuel	No	N/A	No
<b>4475<sup>2</sup></b>	Unknown	AST	1	275	Diesel Fuel	No	1995	No
<b>4475<sup>2</sup></b>	Unknown	UST	1	300	Diesel Fuel	No	1995	No
<b>4476<sup>2</sup></b>	Unknown	UST	1	275	Gasoline	No	1978	No
4476A <sup>1</sup>	Unknown	AST	1	1,000	Diesel Fuel	No	N/A	No
4483	Unknown	AST	1	275	Diesel Fuel	No	N/A	No



**Table 4**

**NOTIFICATION OF PETROLEUM PRODUCT STORAGE**

<b>Building Number</b>	<b>Tank ID</b>	<b>Tank Type</b>	<b>Number of Tanks</b>	<b>Tank Capacity (gallons)</b>	<b>Tank Contents</b>	<b>Release From Tank</b>	<b>Tank Removal Date</b>	<b>Closure Received*</b>
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**Notes:**

- 1) The January 1997 *Environmental Baseline Survey Report Camp Bonneville, Washington*. identifies this AST, but it is not included in the EBS tally of 24 ASTs. Further, the July 2004 *Cleanup Action Plan Remedial Action Unit 1 Camp Bonneville, Washington* lists the total number of ASTs as 26. This number has been verified, but still does not include the 1,000-gallon AST located at Building 4476A.
- 2) Buildings shown in bold type: the AST/UST has been removed. See Table 5 for additional information on these ASTs/USTs.
- 3) ASTs where a product release has occurred. All releases have been remediated.

\*Addressed in the July 2004 *Cleanup Action Plan Remedial Action Unit 1 Camp Bonneville, Washington* which is pending public comment and final approval by WDOE.

**Acronyms:**

AST = above ground storage tank  
 N/A = not applicable  
 UST = underground storage tank

**Table 5: Notification of Petroleum Products Release or Disposal**

<b>Table 5</b>					
<b>NOTIFICATION OF PETROLEUM PRODUCTS RELEASE OR DISPOSAL</b>					
<b>EBS Parcel</b>	<b>Location</b>	<b>Material</b>	<b>Storage, Release, Disposal and Tank Identification</b>	<b>Duration</b>	<b>Remediation</b>
7	Camp Bonneville ASTs	Diesel Fuel	26-275 gal ASTs	Unknown	<p>There are 26-275 gallon ASTs on the Property. Twenty three are located at the Camp Bonneville cantonment and 3 are located at the Camp Killpack cantonment. The ASTs are reported to have been used since the 1920s and 1930s to store diesel for heating. In July 1999, the Camp Killpack ASTs were reportedly still being used.</p> <p>All ASTs were visually inspected for evidence of a release. Stained soil, odors, and/or elevated PID readings were observed at eight AST locations (Bldgs. 1828, 1833, 1837, 1922, 1932, 1940, 1942, and 1980). In 1998, soil samples were collected from the eight AST locations and tested for TPH. Test results indicate that seven samples had concentrations above the MTCA for TPH (2,000mg/kg). In 1998, soil excavations began at the seven AST locations. Confirmatory samples were collected and tested for TPH. Three AST locations had confirmatory sample test results that exceeded the MTCA for TPH. Additional excavations took place at two of these locations followed by another round of confirmatory sampling, which showed no results above the MTCA for TPH. Additional excavations could not be done at Building 1932 (third location) because the excavation could have undermined the building. The maximum TPH concentration detected in the confirmatory sample from this building was 2,690 mg/kg. It is assumed that there could be as much as 33 cys of TPH contaminated soil remaining beneath this building. The WDOE concurred that leaving the TPH contaminated soil in place was acceptable.</p> <p>All contaminated soil, except as noted above, was disposed of at an off-site facility. All excavations were backfilled to grade.</p>
15	Building 4475	No. 2 Fuel Oil	1-300-gal. UST	Unknown (UST removed in 1995)	<p>In 1995, a 300-gal. diesel UST and appurtenances were removed from the east side of Building 4475. This tank was connected to a 275-gal. Diesel AST, which was removed at the same time. Holes were observed in the UST and the underlying soils appeared to have been affected by a product release. Soil samples collected from the base of the excavation were tested, and regulated concentrations of petroleum hydrocarbons (greater than 200 mg/kg) were</p>

**Table 5**

**NOTIFICATION OF PETROLEUM PRODUCTS RELEASE OR DISPOSAL**

<b>EBS Parcel</b>	<b>Location</b>	<b>Material</b>	<b>Storage, Release, Disposal and Tank Identification</b>	<b>Duration</b>	<b>Remediation</b>
					<p>detected. The cleanup standard has since changed to 2,000 mg/kg. The excavation was backfilled.</p> <p>A subsurface investigation was performed to determine the extent of contamination. Soil borings were advanced in and around the excavation and soil samples were collected and tested for petroleum hydrocarbons and VOCs. Only one sample had regulated concentrations of petroleum hydrocarbons; no VOCs were detected. A soil sample was also collected from a nearby drainage ditch approximately 20 feet from the excavation. Test results showed that this sample contained 9,600 mg/kg petroleum hydrocarbons.</p> <p>From November 1996 to October 1997 approximately 375 cys of petroleum-contaminated soils were removed from the former UST location (Bldg. 4475 and the drainage ditch), and disposed of at an off-site location. Confirmatory sample test results indicate that all hydrocarbon detections are below the regulatory cleanup concentrations.</p>
NA	Building 4476	Gasoline	1-275 gallon UST	Unknown (UST removed in 1978)	The January 1997 <i>Environmental Baseline Survey Report Camp Bonneville, Washington</i> indicates that documentation concerning the UST removal was not located; however, personnel interviewed as part of the EBS survey indicated that the excavation had no gasoline odor, and that the tank appeared intact.
<p><b>Notes:</b></p> <p>1) According to the January 1997 <i>Environmental Baseline Survey for Camp Bonneville, Washington</i>, a 275-gal. gasoline UST was reportedly removed in 1978 during the construction of Building 4476. The tank was reported to be intact and there was no indication of a release.</p> <p>2) All actions reported in this table have been completed, and additional information can be found in the following document: July 2004 <i>Cleanup Action Plan Remedial Action Unit 1 Camp Bonneville, Washington</i>.</p>				<p><b>Acronyms:</b></p> <p>AST = Above ground storage tank  cys = Cubic yards  gal. = gallon  mg/kg = milligrams per kilogram  No. = number  UST = Underground storage tank  VOCs = Volatile organic compounds</p>	

**Table 6: Notification of Electrical Transformers**

<b>Table 6</b>						
<b>NOTIFICATION OF ELECTRICAL TRANSFORMERS</b>						
<b>BUILDING/LOCATION</b>	<b>NUMBER OF TRANSFORMERS</b>	<b>SERIAL NUMBER</b>	<b>TYPE</b>	<b>KVA</b>	<b>STATUS</b>	<b>PCB CONTENT</b>
Camp Bonneville Gate	1	H530615-67K	PM	10	Active	No-PCB
Pump House	1	85-1-8	PM	15	Active	< 1ppm
Latrine	1	85-1-10	PM	15	Active	< 1 ppm
Pistol Range	1	85-1-15	PM	25	Active	1 ppm
Bldg. 1867	1	85-1-7	PM	15	Active	< 1 ppm
Bldg. 1940	1	85-1-11	PM	25	Active	1.2 ppm
Bldg. 1940	1	85-1-16	PM	25	Active	1.4 ppm
Bldg. 1094	1	85-1-14	PM	25	Active	< 1ppm
Bldg. 1815	1	85-1-4	PM	15	Active	1 ppm
Sewerage Treatment Plant	1	85-1-13	PM	25	Active	< 1ppm
A.H.A.	1	85-1-5	PM	15	Active	< 1ppm
Bldg. 1942	1	85-1-12	PM	25	Active	< 1ppm
Bldg. 4155	1	85-1-9	PM	15	Active	< 1ppm
Bldg. 4345	1	881109380	PM	75	Active	No-PCB
Bldg. 4345	1	881109382	PM	75	Active	No-PCB
Bldg. 4345	1	881109381	PM	75	Active	No-PCB
Bldg. 4368	1	8810009650	PM	25	Active	No-PCB
Bldg. 4368	1	8810009651	PM	25	Active	No-PCB
Bldg. 4368	1	8810009652	PM	25	Active	No-PCB
Bldg. 4378	1	85-1-21	PM	50	Active	< 1 ppm
<p><b>Notes:</b></p> <p>1) Those electrical transformers with PCB content "No-PCB": the PCB content is based on the manufacturer label.</p> <p>2) All electrical transformers are reported to be properly labeled, or have a manufacturer's nameplate indicating the PCB content.</p> <p>3) The information shown on this table is based on electrical transformer maintenance records provided by the Fort Lewis Directorate of Public Works.</p>			<p><b>Abbreviations:</b></p> <p>GM – Ground-mounted                      KVA = kilovolts                      PM – Pole mounted                      ppm = parts per million</p>			

**Table 7: Location of Remaining Asbestos**

<b>Table 7</b>					
<b>NOTIFICATION OF THE PRESENCE OF REMAINING ASBESTOS CONTAINING MATERIALS</b>					
<b>Building</b>	<b>Description</b>	<b>ACM Type And Quantity</b>	<b>Status Of ACM</b>	<b>Condition Of ACM</b>	<b>Comment</b>
4155	9" x 9" tan vinyl floor tile	660 sq. ft.	Non-Friable	1 <sup>1</sup>	Assumed to contain asbestos
4155	12" x 12" white vinyl floor tile with brown rock pattern	120 sq. ft.	Non-Friable	1	2 to 3% Chrysotile
4155	White linoleum under top kitchen linoleum	270 sq. ft.	Friable	1	80% Chrysotile
4155	Mastic associated with white linoleum under top kitchen linoleum	270 sq. ft.	Non-Friable	1	75% Chrysotile
4314	Fire Door	2 each	Non-Friable	1	Assumed to contain asbestos
4314	White cloth flex connector	2 each	Non-Friable	1	Assumed to contain asbestos
4316	Fire Door	2 each	Non-Friable	1	Assumed to contain asbestos
4316	White cloth flex connector	2 each	Non-Friable	1	Assumed to contain asbestos
4325	Fire Door	2 each	Non-Friable	1	Assumed to contain asbestos
4325	White cloth flex connector	2 each	Non-Friable	1	Assumed to contain asbestos
4327	Fire Door	2 each	Non-Friable	1	Assumed to contain asbestos
4327	White cloth flex connector	2 each	Non-Friable	1	Assumed to contain asbestos
4337	Ceramic tile mastic	850 sq. ft.	Non-Friable	1	Material was inaccessible at the time of the survey
4337	Fire door	6 each	Non-Friable	1	Assumed to contain asbestos
4345	Fire Door	2 each	Non-Friable	1	Assumed to contain asbestos
4345	White cloth flex connector	2 each	Non-Friable	1	Assumed to contain asbestos
4348	Fire Door	2 each	Non-Friable	1	Assumed to contain asbestos
4348	White cloth flex connector	2 each	Non-Friable	1	Assumed to contain asbestos
4348	Exterior window putty	48 ft	Non-Friable	1	<1 to 2% Chrysotile
4356	Fire Door	2 each	Non-Friable	1	Assumed to contain asbestos
4356	White cloth flex connector	2 each	Non-Friable	1	Assumed to contain asbestos
4366	Fire Door	2 each	Non-Friable	1	Assumed to contain asbestos
4366	White cloth flex connector	2 each	Non-Friable	1	Assumed to contain asbestos
4366	Exterior window putting	48 ft	Non-Friable	1	<1 to 2% Chrysotile
4368	Fire door	5 each	Nine-Friable	1	Assumed to contain asbestos
4377	Fire Door	2 each	Non-Friable	1	Assumed to contain asbestos
4377	White cloth flex connector	2 each	Non-Friable	1	Assumed to contain asbestos
4378	Exterior window putty	48 ft	Non-Friable	1	2 to 5% Chrysotile
4387	Fire Door	2 each	Non-Friable	1	Assumed to contain asbestos
4389	Fire Door	2 each	Non-Friable	1	Assumed to contain asbestos
4389	Roof penetration sealant	20 ft.	Nine-Friable	1	2 to 10% Chrysotile
4398	Fire Door	8 each	Non-Friable	1	Assumed to contain asbestos
4475	Window putty	7 each	Non-Friable	1	3% Chrysotile
4475	Cement asbestos board	20 sq. ft.	Non-Friable	1	Assumed to contain asbestos
4475	9" x 9" White mottled floor tile	90 sq. ft.	Non-Friable	1	Assumed to contain asbestos
4522	Miscellaneous gaskets	7 each	Non-Friable	1	Assumed to contain asbestos
1815	Fire Door	1 each	Non-Friable	1	Assumed to contain asbestos
1815	Miscellaneous gaskets	5 each	Non-Friable	1	Assumed to contain asbestos

**Table 7**  
**NOTIFICATION OF THE PRESENCE OF REMAINING ASBESTOS CONTAINING MATERIALS**

Building	Description	ACM Type And Quantity	Status Of ACM	Condition Of ACM	Comment
1826	Fire Door	4 each	Non-Friable	1	Assumed to contain asbestos
1826	Exterior window putty	16 ft	Non-Friable	1	5% Chrysotile
1828	Fire Door	2 each	Non-Friable	1	Assumed to contain asbestos
1828	Cement asbestos board <sup>2</sup>	1000 sq. ft.	Assumed friable	4	Assumed to contain asbestos
1828	Exterior window putty	8 ft	Non-Friable	1	5% Chrysotile
1833	Fire Door	2 each	Non-Friable	1	Assumed to contain asbestos
1837	Fire Door	4 each	Non-Friable	1	Assumed to contain asbestos
1847	Fire Door	4 each	Non-Friable	1	Assumed to contain asbestos
1848	Fire Door	7 each	Non-Friable	1	Assumed to contain asbestos
1848	Exterior window putty	26 ft	Non-Friable	1	5% Chrysotile
1848	MAG installation around hot cooking surfaces	300 sq. ft.	Non-Friable	1	Assumed to contain asbestos
1848	Door gasket	2 each	Non-Friable	1	Assumed to contain asbestos
1857	Fire Door	2 each	Non-Friable	1	Assumed to contain asbestos
1864	CAB transite siding	1000 sq. ft.	Friable	4	Assumed to contain asbestos
1867	Fire Door	4 each	Non-Friable	1	Assumed to contain asbestos
1911	Fire Door	14 each <sup>3</sup>	Non-Friable	1	Assumed to contain asbestos
1911	Mastic for Material 06 (brown vinyl floor sheeting)	1940 sq.ft.	Non-Friable	3	15% Chrysotile
1920	Fire Door	2 each	Non-Friable	1	Assumed to contain asbestos
1922	Fire Door	2 each	Non-Friable	1	Assumed to contain asbestos
1922	Mastic for Material 06 (brown vinyl floor sheeting)	1940 sq.ft.	Non-Friable	3	<1 to 15% Chrysotile
1930	Fire Door	2 each	Non-Friable	1	Assumed to contain asbestos
1930	White interior board	25 sq. ft.	Friable	3	85% Chrysotile
1932	Fire Door	2 each	Non-Friable	1	Assumed to contain asbestos
1932	Exterior window putty	26 ft	Non-Friable	1	3% Chrysotile
1934	Fire Door	4 each	Non-Friable	1	Assumed to contain asbestos
1934	Hard-mudded elbows	2 each	Friable	1	Assumed to contain asbestos
1934	Exterior window putty	26 ft	Non-Friable	1	3% Chrysotile
1934	Mastic for shower walls	435 sq. ft.	Non-Friable	1	1 to 2% Chrysotile
1940	Fire Door	4 each	Non-Friable	1	Assumed to contain asbestos
1940	Mastic for material 06 (12" x 12" tan mottled vinyl floor tile)	2630 sq. fr.	Non-Friable	3	Assumed to contain asbestos <sup>4</sup>
1942	Fire Door	2 each	Non-Friable	1	Assumed to contain asbestos
1942	Mastic for Material 06 (brown red vinyl floor sheeting)	1940 sq. ft.	Non-Friable	3	<2 to 3% Chrysotile
1963	Three tab roofing	1250 sq. ft.	Non-Friable	1	<1 to 2% Chrysotile
1980	Fire Door	14 each <sup>5</sup>	Non-Friable	1	Assumed to contain asbestos
1980	Exterior window putty	11 each	Non-Friable	1	2% Chrysotile
1980	Mastic for Material 06 (brown red vinyl floor sheeting)	520 sq. ft.	Non-Friable	2	5% Chrysotile
1980	White fiber board	6 sq. ft.	Friable	1	85% Chrysotile
1995	Miscellaneous gaskets	32 each	Non-Friable	1	Assumed to contain asbestos

**Table 7**

**NOTIFICATION OF THE PRESENCE OF REMAINING ASBESTOS CONTAINING MATERIALS**

<b>Building</b>	<b>Description</b>	<b>ACM Type And Quantity</b>	<b>Status Of ACM</b>	<b>Condition Of ACM</b>	<b>Comment</b>
1997	Miscellaneous gaskets	19 each	Non-Friable	1	Assumed to contain asbestos
U004A	Three tab roofing	40 sq. ft.	Non-Friable	1	Assumed to contain asbestos
U004A	Black roof felt paper	40 sq. ft.	Non-Friable	1	Assumed to contain asbestos
U005A	Three tab roofing	40 sq. ft.	Non-Friable	1	Assumed to contain asbestos
U005A	Black roof felt paper	40 sq. ft.	Non-Friable	1	Assumed to contain asbestos
U006A	Three tab roofing	40 sq. ft.	Non-Friable	1	Assumed to contain asbestos
U006A	Black roof felt paper	40 sq. ft.	Non-Friable	1	Assumed to contain asbestos
U010A	Three tab roofing	40 sq. ft.	Non-Friable	1	Assumed to contain asbestos
U010A	Black roof felt paper	40 sq. ft.	Non-Friable	1	Assumed to contain asbestos

**Notes:**

1. Condition Assessments

<b>Category</b>	<b>General</b>	<b>Response</b>
1	Friable and non-friable material in good condition	Implement as part of the operations and maintenance (O&M) Plan.
2	Friable material showing signs of isolated areas of damage (< 10%)	Recommend abatement and implementation as part of the O&M plan.
3	Friable material showing signs of isolated areas of damage (> 10%)	Recommend abatement as soon as possible and implementation as part of the O&M plan
4	Friable material with areas of moderate to significant damage and loss of integrity	Recommend abatement as soon as possible and implementation as part of the O&M plan
5	Highly friable and severely damage	Recommend regulation of the area, abatement as soon as possible, and completion of Notification of Significantly Damaged Materials form.

2. The cement asbestos board was listed in the Building 1828 summary table (Prezant Associates, Inc, 1997), but was not listed in the "Surveyed Material and Results" table.

3. Fourteen doors were listed in the Building 1911 summary table (Prezant Associates, Inc, 1997), but only 2 were listed in the "Surveyed Material and Results" table.

4. The mastic was listed as containing asbestos in the Building 1940 summary table (Prezant Associates, Inc., 1997), but listed as "No detectable asbestos" in the "Surveyed Material and Results" table.

5. Fourteen doors were listed in the Building 1980 summary table (Prezant Associates, Inc, 1997), but only 5 were listed in the "Surveyed Material and Results" table.

6. ACM = asbestos containing material

7. sq. ft. = square feet

8. ft = feet

**TABLE 8 – NOTIFICATION OF MUNITIONS AND EXPLOSIVES OF CONCERN**

<b>Table 8</b>			
<b>NOTIFICATION OF MUNITIONS AND EXPLOSIVES OF CONCERN</b>			
<b>Site</b>	<b>Site Description</b>	<b>Date of MEC Activity</b>	<b>Munitions Response Actions</b>
<p><b>Unexploded Ordnance</b> – Based on past reuse of the Property, the potential for MEC exists anywhere on site. Specific information regarding known target areas with higher likelihood of MEC is included below.</p>			
Landfill 2 (Sewage Lagoons and Historic Landfill)	This landfill was discovered in 1978 during the construction of the sewage lagoon. The landfill may have been used from the 1940s to the 1950s; however, the type and quantity of material located at this site is unknown.	Unknown	A UXO avoidance/screening and electromagnetic survey identified pipes, vehicle parts, wiring and one undetonated 2.36-inch light anti-tank weapon, which was disposed of by the Ft Lewis EOD.
Demolition Area 3 (DA 3)	DA 3 is a surface depression that may be an excavation or possibly a detonation crater. The location is about 2000 feet upstream of the base boundary in Lacamas Creek Valley. The crater is approximately 20 feet in diameter and 10 feet deep. DA 3 is located west of the gas pipeline right-of-way that crosses Camp Bonneville. DA 3 may have been used for detonation of unwanted ordnance. The crater is situated several hundred feet south of Lacamas Creek in an area where the valley is wide and relatively flat. The ground surface at DA 3 is hummocky with seasonal wetland vegetation.	Unknown	Soil samples were collected from borings advanced immediately around the depression and from a nearby location where metallic debris (one drum and shell fragments) was found and later removed and disposed of. All soil samples were tested for explosives, perchlorate, and total metals. Test results of soil boring samples indicate no explosives or perchlorate concentrations above the testing instrument's reporting limit. Test results of soil samples collected from the former debris piles indicate no explosives, perchlorate, or picric acid. Metals were detected in samples collected from the borings and the debris pile but at concentrations at background levels and/or below screening or cleanup levels. Arsenic, barium, copper, and mercury were detected at concentrations that required a terrestrial ecological evaluation. The evaluation determined that these metals are not a potential threat to ecological receptors. No ordnance and explosives sampling and removal activities were conducted at this site, but a 37mm practice round was recovered from an old crushed burn barrel found at the site.
Small-arms Ranges – not considered/included as MEC	There are 21 small-arms ranges on the Property. For a description of the small-arms ranges see Table 1- Description of Property.	Unknown	The following is a general description of the investigations and remediations conducted at the 21 small-arms ranges.  The U.S. Army Corps of Engineers (1997) prepared an archive search report (ASR) to collect information pertinent to the small - arms ranges at Camp Bonneville. The small arms ranges were investigated as part of the base-wide reconnaissance effort. As a result of this reconnaissance, a site investigation was conducted that consist of gridding the small-arms ranges and collecting soil samples. The soil samples were tested for total metals, perchlorate, explosives, and lead. Arsenic and barium were the only metals detected above background levels. Perchlorate was not detected in the soil samples. The compound 2, 4-dinitrotoluene (DNT) was the only explosive compound detected in the soil (small-arms range: 25M Machine Gun Range), and at concentrations that range from 4.9 to 20 mg/kg. The U.S. EPA Region 9 residential and industrial



**Table 8**  
**NOTIFICATION OF MUNITIONS AND EXPLOSIVES OF CONCERN**

Site	Site Description	Date of MEC Activity	Munitions Response Actions
			use criteria for DNT in soil are 120 and 1,800 mg/kg, respectively. Some OE sampling and removal activities were conducted in the area of the small-arms ranges as part of a site-wide effort performed by UXB (1998).
Site-wide Actions	<p>This site/area is RAU 3, which consists of all artillery and mortar firing points and safety fans. Collectively these sites cover most of the Property.</p> <p>OE removal actions were conducted at Training Areas 8 (TA 8) and Training Area 9 (TA 9). These areas are located southeast of the cantonment areas and include portions of Sub-caliber Range 1 and Machine Gun Range-North. See Figures 6 Remedial Action Unit 2A and Figure 11 Training Ranges 8 and 9 for the location of the aforementioned ranges.</p>	Unknown	<p>MEC characterization and removal activities have been conducted at Camp Bonneville. UXB International, Inc. (1998) conducted a site-wide OE sampling and removal action; UXB (2000) also conducted an OE sampling and removal action at Training Area 8 (TA 8) and at TA 9, and Parsons Engineering Science, Inc. (2004) completed a remedial investigation/feasibility study (RI/FS) of RAU 3. Two hundred and seven grids were established throughout the site. Each grid measured 100 x 100 feet (a total area of approximately 50 acres). UXO technicians investigated 2,468 anomalies finding 25 live UXO; 212.7 pounds of OE-related scrap, and 185 pounds of non-OE related scrap. As a result of this effort, UXB returned and conducted a sampling and removal action in an 18.9-acre area encompassing TA 8 and TA 9. In addition, UXB conducted a preliminary survey of 1.5 acres at Demolition Area 1. During this action, 106, 341 areas were excavated. Nine UXO items were removed and disposed of. In addition, 3,888 pounds of OE scrap and 683 pounds of non-OE scrap were removed. A total of 16,004 discrete reconnaissance data waypoints have been collected, analyzed, and mapped using digital technology and GIS geo-spatial analysis during the 2001/2002 site reconnaissance efforts. Over 2,400 acres of the 3,980 total acres were characterized for munitions and explosives of concern (MEC) and related activities. A solitary UXO item (105 mm artillery shell) was located in the Central Impact Target Area. A total of 58 inert munitions debris (MD) were located and recovered during the reconnaissance field efforts. The MD items included a total of 27 expended pyrotechnic devices, 7 expended smoke grenades, 9 expended practice 40mm projectiles, and 15 expended practice rockets and rocket motors.</p> <p>Depending upon the location of a training area, the training area may include undeveloped land, firing points and ranges. Ordnance and explosives removal actions were conducted in Training areas 8 and 9, which are located southeast of the cantonment areas, Figure 12. The August 2000 <i>Final Removal Report Ordnance and Explosives Removal Actions Camp Bonneville, Vancouver, Washington</i> indicates that TA 8 and TA 9 were impact areas 60mm and 81mm full-size practice rounds, 35mm light anti-tank weapon rounds, and 40mm practice grenades.</p>
<b>Discarded Military Munitions</b>			
Demolition Area 1 and Landfill 4	This area, located in the north-central part of the Property, was a former	Unknown	A site investigation (SI) was conducted in 1998-1999 to evaluate the potential for contamination resulting from past uses of the

**Table 8**  
**NOTIFICATION OF MUNITIONS AND EXPLOSIVES OF CONCERN**

Site	Site Description	Date of MEC Activity	Munitions Response Actions
	<p>ordnance burn and ordnance detonation site and a landfill. The site slopes downward to the west, toward the north fork of Lacamas Cree which flows southward into the main branch of Lacamas Creek. Several patches of soil on the site surface were reported to have a pinkish-red hue and were generally devoid of vegetation. The cause of this discoloration was not known; however, similarly discolored soil had been reported at other sites where explosives contamination had been detected in shallow soil. A firebreak surrounds the area just outside of a barbed-wire fence line. Surface debris consisted primarily of metal scraps such as wiring, metal shards, and automobile parts. Vancouver Barracks reportedly used the site for the disposal of building demolition debris during the mid-1960s. In addition, the site has been used by a number of groups and agencies, including the Army, Portland Air National Guard (PANG), local fire departments and law-enforcement for training and disposal operations. Reportedly, the site has been used for the disposal of firearms, destruction of AIM 7E Sparrow Missiles and Mark 38 rocket motors, and for demolition training.</p>		<p>landfill. The SI included a UXO avoidance survey, geophysical survey, surface and subsurface sampling, and groundwater sampling. Test results of soil samples indicate concentrations of various metals. Only barium, copper, and chromium were detected at concentrations exceeding the regulatory/risk-based criteria. One or more SVOCs, insecticides, herbicides and VOCs were detected, but at concentrations below screening criteria. The only groundwater constituent detected at a concentration exceeding a screening level was RDX (44 ug/l). This compound was detected in the down-gradient well only.</p> <p>In 2001, an expanded site investigation (ESI) of the landfill was conducted based on the previous detection of RDX. The ESI focused primarily on groundwater and included the installation of eight monitoring wells (one well could not be used because it was dry). Four quarterly rounds (July 2001, October 2001, January 2002, and April 2002) of groundwater sampling were conducted. Well samples were also collected in January 2003. Samples collected from the wells were tested for explosives residues, nitroguanidine, perchlorate ion, VOCs, SVOCs, organochlorine herbicides PPL metals (total and dissolved), total cyanide TPH and water quality parameters. Tests results indicate that explosives and propellants (2, 4-DNT, RDX, and perchlorate) were detected in all but one monitoring well, and were also detected in the up-gradient well. These constituents were detected in concentrations exceeding screening criteria in the initial groundwater sampling rounds and the final sampling round. Dichlorofluoromethane, 1,1,1-TCA, 1,1-DCE, and PCE were also detected above screening levels.</p> <p>In 2004, approximately 5,000 cys of contaminated soil (metals and commercially available fireworks) was removed (interim action) and disposed of at an off-site facility. The excavation was backfilled to grade. The monitoring wells at the site will be sampled on a quarterly basis.</p>

**Munitions Constituents**

<p>Ammunitions Storage Bunkers (Facility Nos. 2950, 2951, and 2953)</p>	<p>These bunkers were constructed in 1976 to store various munitions. They range in size from 4 sq. ft. to 100 sq. ft. The magazines are fenced.</p>	<p>Unknown</p>	<p>In 1998, fifteen sampling locations (nine at the largest bunker and three each at the two smaller bunkers) were selected for the collection of surface and subsurface soil samples. A soil boring was also advanced at each bunker based on the results of the surface soil tests from soil samples collected from inside the bunkers. Wipe samples were collected from the floors in each magazine. The soil samples collected from inside the bunker and the wipe sample tests results show RDX (below reporting levels) and all the PPL metals except selenium and thallium in Facility 2950. Arsenic, beryllium, cadmium, chromium, lead, and mercury were detected in the soil samples collected from inside the bunker at concentrations that</p>
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**Table 8**  
**NOTIFICATION OF MUNITIONS AND EXPLOSIVES OF CONCERN**

Site	Site Description	Date of MEC Activity	Munitions Response Actions
			<p>exceed the MTCA cleanup criteria. Arsenic, beryllium, and cadmium concentrations were also above background levels. PETN was detected in one bunker; however, there is no established cleanup concentration for PETN. No organic compounds were detected above reporting limits in the surface soil samples collected outside the bunker. Arsenic, cadmium, chromium, and lead were detected at concentrations above MTCA cleanup criteria and background levels in the surface soil samples collected outside the bunker. In 2001, surface and subsurface soil samples were collected from Facility 2953. PETN, picric acid, and 2,4-dinitrotoulene were detected in the surface soil samples at concentrations below MTCA cleanup criteria. No ordnance compounds or propellants were detected in the subsurface soil samples. Metals were detected in the surface soil samples. Arsenic and chromium were detected above MTCA cleanup criteria. Lead was detected above the MTCA cleanup criteria and background levels.</p> <p>In May 2001, contaminated soils at the three bunkers were excavated to 1-foot below grade. Confirmatory samples were collected and the test results indicated no residual contaminants above regulatory criteria or background levels. The excavations were backfilled and the contaminated soil and wood from pallets inside the bunker were disposed of at an off-site facility. The interior surfaces of the bunker were cleaned.</p>
Demolition Area 1 and Landfill 4	See Discarded Military Munitions	Unknown	See Discarded Military Munitions
Airstrip	The 4.5- acre airstrip is located along an open area near the main entrance.	Unknown.	No MEC was found during an investigation of this area.
Camp Bonneville Cantonment	This 5.1-acre area is comprised of buildings and open grassy areas.	Unknown	No MEC was found during an investigation of this area.
Camp Killpack	This 5-acre area was previously used for troop barracks.	Unknown.	No MEC was found during an investigation of this area.
Bonneville Parade Ground	This is an open grassy area.	Unknown.	No MEC was found during an investigation of this area.

**Table 8**  
**NOTIFICATION OF MUNITIONS AND EXPLOSIVES OF CONCERN**

Site	Site Description	Date of MEC Activity	Munitions Response Actions
OB/OD Areas	This 6.5-acre area consists of 3 demolition areas.	Unknown.	Subsurface removal action is completed at demolition area 1.
Target Area	These areas combine to be approximately 12 acres.	Unknown.	A potential MEC-risk was identified during investigation.
Central Impact Target Area	This 465-acre area was previously used as an artillery target area.	Unknown.	A MEC-risk was identified during investigation.
Firing Points	The 19-acre Firing Points area consists of 6 mortar firing points, 7 artillery firing points, 1 rifle grenade firing point and 1 3.5-inch rocket firing point.	Unknown.	No MEC was found during an investigation of this area.
West Side of Proposed Park	This 600-acre area was historically used as a maneuver area.	Unknown.	No MEC was found during an investigation of this area.
Roads and Trails	The roads and trails have been in use for approximately 35 years. No MEC risk has been identified.	Unknown.	No MEC was found during an investigation of this area.
Wildlife Management Area	This 2050-acre area was used as a former range fans and maneuver areas.	Unknown.	A potential MEC-risk was identified during investigation.
Current FBI Training Area	The parcel will continue to be used for FBI training until October 2006.	Unknown.	A potential MEC-risk was identified during investigation.
Designated Reuse Areas Located Outside the Park	This area includes a former combat pistol range.	Unknown.	A potential MEC-risk was identified during investigation.
Southwest Lacamas Valley	This 98-acre area was historically used for small arms training.	Unknown.	A potential MEC-risk was identified during investigation.

**Notes:**

- 1) Munitions and Explosives of Concern (MECs) distinguishes specific categories of military munitions that may pose unique explosives safety risks, means: (A) Unexploded Ordnance (UXO), as defined in 10 §101(e)(5); (B) Discarded military munitions (DMM), as defined in 10 U.S.C. §2710(e)(2); or (C) Munitions constituents (e.g., TNT, RDX), as defined in 10 U.S.C. §2710(e)(3), present in high enough concentrations to pose an explosive hazard.
- 2) See, Attachment 1-Document List for documents that pertain to MECs.

**Table 9 - Remediation Schedule**

<b>Document Deliverable</b>	<b>Submittal Date</b>
<b>Remedial Action Unit 1 (Hazardous Substance Areas)</b>	
Final Actions	
• Draft Restrictive Covenants	Within 30 days of the effective date of the Decree
<b>Remedial Action Unit 2A (Small Arms Ranges)</b>	
Interim Actions (Clearance)	
• Draft Final Interim Action Work Plan (after public comment)	Within 90 days of the effective date of the Decree
• Draft Interim Action Report	Within 30 days completion of work required under the final Work Plan
Final Actions	
• Draft Final RI/FS Report (after public comment)	Within 6 months of the effective date of the Decree
• Draft CAP	Within 60 days of issuance of the final RI/FS Report
• Draft Compliance Monitoring Plan	Within 30 days of the issue date of the final CAP
• Draft Cleanup Action Report	Within 30 days of completion of work required under the final CAP
• Draft Long-Term Operation and Maintenance Plan	Within 60 days of completion of work required under the final CAP
<b>Remedial Action Unit 2B (Demolition Areas 2 &amp; 3)</b>	
Final Actions	
• Draft Final RI Report (after public comment)	Within 9 months of the effective date of this Decree
<b>Remedial Action Unit 2C (Landfill Area 4 / Demolition Area 1)</b>	
Final Actions	
• Draft RI/FS Report	Within 30 days of the completion of work required under Supplemental Ground Water RI Work Plan for RAU 2C and RAU 3
• Draft CAP	Within 60 days of issuance of the final RI/FS Report
• Draft Compliance Monitoring Plan	Within 30 days of issuance of the final CAP
• Draft Cleanup Action Report	Within 30 days of completion of work required under the final CAP
• Draft Long-Term Operation and Maintenance Plan	Within 60 days of completion of work required under the final CAP
<b>Remedial Action Unit 3 (Military Munitions)</b>	
Emergency Actions (Fence Lines)	
• Draft Emergency Action Work Plan	Within 15 days of the effective date of the Decree
• Draft Emergency Action Report	Within 30 days of completion of work required under the Work Plan
• Record Interim Restrictive Covenants (Property)	Within 30 days of the Early Transfer
Interim Actions (Roads and Trails)	
• Draft Interim Action Work Plan	Within 60 days of the effective date of the Decree

• Begin Interim Action	Within 60 days of issuance of the final Interim Action Work Plan
• Draft Interim Action Report	Within 30 days of completion of the work required under the Work Plan
<b>Final Actions</b>	
• Draft Final RI/FS Report	Within 4 months of the effective date of the Decree
• Draft CAP	Within 4 months of issuance of the final RI/FS Report
• Draft Compliance Monitoring Plan	Within 30 days of issuance of the final CAP
• Draft Cleanup Action Report	Within 30 days of completion of work required under the final CAP
• Draft Long-Term Operation and Maintenance Plan	Within 60 days of completion of work required under the final CAP
<b>Supplemental Remedial Investigations in Support of RAU 2C and RAU 3 (Chemical Contamination)</b>	
• Draft Supplemental GW RI Work Plan for RAU 2C/3	Within 30 days of the effective date of the Decree
• Draft Supplemental Soil RI Work Plan for RAU 3	Within 90 days of the effective date of the Decree
• Draft Supplemental Soil RI Report for RAU 3	Within 30 days of the completion of work required under Supplemental Soil RI Work Plan for RAU 3
<b>Final Report and Plan for the Property</b>	
• Draft MEC Findings Report	Within 60 days of completion of the cleanup required under Section XII.C of the Decree.
• Draft Long-Term Operation and Maintenance Plan	Within 90 days of completion of the cleanup required under Section XII.C of the Decree.

## ATTACHMENTS

## ATTACHMENT 1

# **CERCLA Notice, Covenant, and Access Provisions And Other Deed Provisions Early Transfer Property at Camp Bonneville**

The following CERCLA Notice, Covenant, and Access Provisions, along with the Other Deed Provisions, will be placed in the deed in a substantially similar form to ensure protection of human health and the environment and to preclude any interference with ongoing or completed remediation activities.

### **1. CERCLA NOTICE**

For the Property, the Grantor provides the following notice, description, and covenant:

A. Pursuant to CERCLA section 120(h)(3)(A)(i)(I) and (II), available information regarding the type, quantity, and location of hazardous substances and the time at which such substances were stored, released, or disposed of, as defined in section 120(h), is provided in Table 3, attached hereto and made a part hereof. Additional information regarding the storage, release, and disposal of hazardous substances on the property has been provided to the Grantee, receipt of which the Grantee hereby acknowledges. Such additional information includes, but is not limited to, the following documents: Final Environmental Baseline Survey Report, Final Multi-Sites Investigation Report, Final Environmental Assessment and other documents as listed in Attachment 3.

B. Pursuant to CERCLA section 120(h)(3)(A)(i)(III), a description of the remedial action taken, if any, on the Property is provided in Table 3, attached hereto and made a part hereof. Additional information regarding the remedial action taken, if any, has been provided to the Grantee, receipt of which the Grantee hereby acknowledges. Such additional information includes, but is not limited to, the following documents: Final Closure Report – Environmental Restoration, Multi-Sites; Final Closure Report, Environmental Restoration, Pesticide Building #4126 and Ammunition Bunkers #2953, #2951 and #2950; Final Landfill 4 Investigation Report; BRAC HTRW Site Closure Report for Landfills 1, 2 and 3, Former Burn Area, Buildings 1962 and 1963, Grease Pits at the Camp Bonneville and Camp Killpack Cantonments, Former Sewage Pond and Hazardous Materials Accumulation Point and other documents.

### **2. CERCLA COVENANTS**



Pursuant to section 120(h)(3)(A)(ii)(II) of CERCLA, the Grantor warrants that any additional remedial action found to be necessary after the date of this Deed with regard to any hazardous substances remaining on the Property as of the date of this Deed shall be conducted by the Grantor. This covenant shall not apply in any case in which the person or entity to whom the Property or any portion thereof, is transferred is a potentially responsible party with respect to the Property or any such portion thereof. For purposes of this covenant, the Grantee shall not be considered a potentially responsible party solely due to the presence of a hazardous substance remaining on the Property on the date of this Deed, provided that the Grantee has not caused or contributed to a release of such hazardous substance.

### **3. RIGHT OF ACCESS**

A. Pursuant to CERCLA section 120(h)(3)(A)(iii), the Grantor retains and reserves a perpetual and assignable easement and right of access on, over, and through the property, to enter upon the property in any case in which an environmental response action or corrective action is found to be necessary on the part of the Grantor, without regard to whether such environmental response action or corrective action is on the Property or on adjoining or nearby lands. Such easement and right of access includes, without limitation, the right to perform any environmental investigation, survey, monitoring, sampling, testing, drilling, boring, coring, test-pitting, installing monitoring or pumping wells or other treatment facilities, response action, corrective action, or any other action necessary for the Grantor to meet its responsibilities under applicable laws and as provided for in deed. Such easement and right of access shall be binding on the Grantee, its successors and assigns, and shall run with the land.

B. In exercising such easement and right of access, the Grantor shall provide the Grantee or its successors or assigns, as the case may be, with reasonable notice of its intent to enter upon the Property and exercise its rights under this easement and right of access, which notice may be severely curtailed or even eliminated in emergency situations. The Grantor shall use reasonable means, but without significant additional costs to the Grantor, to avoid and to minimize interference with the Grantee's and the Grantee's successors' and assigns' quiet enjoyment of the property. Such easement and right of access includes the right to obtain and use utility services, including water, gas, electricity, sewer, and communications services available on the Property at a reasonable charge to the United States. Excluding the reasonable charges for such utility services, no fee, charge, or compensation will be due the Grantee nor its successors and assigns, for the exercise of the easement and right of access hereby retained and reserved by the Grantor.

C. In exercising such easement and right of access, neither the Grantee nor its successors and assigns, as the case may be, shall have any claim at law or equity against the Grantor or any officer, employee, agent, contractor of any tier, or servant of the Grantor based on actions taken by the Grantor or its officers, employees, agents, contractors of any tier, or servants pursuant to and in accordance with this easement and right of access. In addition, the Grantee, its successors and assigns, shall not interfere with any response action or corrective action conducted by the Grantor on the Property.

#### **4. “AS IS”**

A. The Grantee acknowledges that it has inspected or has had the opportunity to inspect the Property and accepts the condition and state of repair of the subject Property. The Grantee understands and agrees that the Property is conveyed “AS IS” without any representation, warranty, or guaranty by the Grantor as to quantity, quality, title, character, condition, size, or kind, or that the same is in a condition or fit to be used for the purpose(s) intended by the Grantee, and no claim for allowance or deduction upon such grounds will be considered.

B. No warranties, either express or implied, are given with regard to the condition of the Property, including, without limitation, whether the Property does or does not contain asbestos or lead-based paint. The Grantee shall be deemed to have relied solely on its own judgment in assessing the overall condition of the Property, including, without limitation, any asbestos, lead-based paint, or other conditions on the Property. The failure of the Grantee to inspect or to exercise due diligence to be fully informed as to the condition of all or any portion of the Property, will not constitute grounds for any claim or demand against the Grantor.

C. Nothing in this “AS IS” provision will be construed to modify or negate the Grantor’s obligation under the CERCLA Covenant or any other statutory obligations.

#### **5. HOLD HARMLESS**

A. To the extent authorized by law, the Grantee, its successors and assigns, covenant and agree to indemnify and hold harmless the Grantor, its officers, agents, and employees from (1) any and all claims, damages, judgments, losses, and costs, including fines and penalties, arising out of the violation of the NOTICES, USE RESTRICTIONS, AND RESTRICTIVE COVENANTS in this Deed by the Grantee, its successors and assigns, and (2) any and all claims, damages, and judgments arising out of, or in any manner predicated upon, exposure to

asbestos, lead-based paint, or other condition on any portion of the Property after the date of conveyance.

B. The Grantee, its successors and assigns, covenant and agree that the Grantor shall not be responsible for any costs associated with modifications or termination of the NOTICES, USE RESTRICTIONS, AND RESTRICTIVE COVENANTS in this Deed, including, but not limited to, any costs associated with additional investigation or remediation of asbestos or lead-based paint.

C. Nothing in this Hold Harmless provision will be construed to modify or negate the Grantor's obligation under the CERCLA Covenant or any other statutory obligations.

## **6. ENVIRONMENTAL COVENANTS, CONDITIONS, AND RESTRICTIONS**

The Environmental Covenants, Conditions, and Restrictions (ECCR) are at Attachment 2, which is attached hereto and made a part hereof. The Grantee shall neither transfer the property, lease the property, nor grant any interest, privilege, or license whatsoever in connection with the property without the inclusion of the CERCLA Notice, Covenant, and Access Provisions and Other Deed Provisions contained herein and the ECCR at Attachment 2, and shall require the inclusion of the CERCLA Notice, Covenant, and Access Provisions and Other Deed Provisions and the ECCR in all further deeds, easements, transfers, leases, or grant of any interest, privilege, or license.

## **7. POST-TRANSFER DISCOVERY OF CONTAMINATION**

A. If an actual or threatened release of a hazardous substance or petroleum product is discovered on the Property after the date of conveyance, the Grantee, its successors or assigns, shall be responsible for such release or newly discovered substance unless the Grantee, its successors or assigns is able to demonstrate that such release or such newly discovered substance was due to the Grantor's activities, use, or ownership of the Property. If the Grantee, its successors or assigns believe the discovered hazardous substance is due to the Grantor's activities, use or ownership of the Property, the Grantee, its successors or assigns will immediately secure the site and notify the Grantor of the existence of the hazardous substance, and the Grantee, its successors or assigns will not further disturb or allow the disturbance of such hazardous substance without the written permission of the Grantor.

B. The Grantee, its successors and assigns, as consideration for the conveyance of the Property, agree to release Grantor from any liability or responsibility for any claims arising solely out of the release of any hazardous substance or petroleum product on the Property occurring after the date of the delivery and acceptance of this Deed, where such substance or product was placed on the Property by the Grantee, or its successors, assigns, employees, invitees, agents, contractors, or any other person after the conveyance herein. This paragraph shall not affect the Grantor's responsibilities to conduct response actions or corrective actions that are required by applicable laws, rules and regulations, or the Grantor's indemnification obligations under applicable laws.

## ATTACHMENT 2

### **Environmental Covenants, Conditions, and Restrictions**

#### **Early Transfer Property at Camp Bonneville**

The following conditions, restrictions, and notifications will be attached, in a substantially similar form, as an exhibit to the deed and be incorporated therein by reference in order to ensure protection of human health and the environment.

This Property is conveyed to Clark County by a conservation conveyance. Pursuant to 10 U.S.C. 2694a(c)(1) the Property must be used and maintained for the conservation of natural resources in perpetuity.

#### **1. LAND USE RESTRICTIONS**

**A.** The United States Department of the Army has undertaken careful environmental study of the Property and concluded that the land use restrictions set forth below are required to ensure protection of human health and the environment. The Grantee, its successors or assigns, shall not undertake nor allow any activity on or use of the property that would violate the land use restrictions contained herein.

**(1) Residential Use Restriction.** The Grantee, its successors and assigns, shall use the Property solely for conservation of natural resources and not for residential purposes. For purposes of this provision, residential use includes, but is not limited to, single family or multi-family residences; child care facilities; and nursing home or assisted living facilities; provided, however that residential purposes do not include multiple overnight stays associated with the Rustic Retreat Center and Outdoor School, day camping or overnight camping within existing or new buildings on the Property. Provided, further, however, that prior to the use of any buildings on the property for such purposes, the responsible state and/or local governmental agency or agencies of the State of Washington shall have made a written determination that the buildings are habitable and safe for such use under applicable laws of the State of Washington.

Caretaker(s), Security, and/or Park Department personnel wishing to live in existing buildings or newly-constructed buildings at the Property during remediation and post-remediation of the Property may not reside in such buildings until the responsible agency or agencies of the State of

Washington, has made a written determination that such buildings are habitable and safe for such use under the applicable laws of the State of Washington.

**(2) Groundwater Restriction.** Grantee is hereby informed and acknowledges that there is limited contamination of the groundwater under the Demolition Area 1/Landfill 4 area. The Grantee, its successors and assigns, shall not access or use ground water underlying this area for any purpose without the prior written approval of United States Department of the Army and the WDOE. For the purpose of this restriction, "ground water" shall have the same meaning as in section 101(12) of the Comprehensive Environmental Response, Compensation and Liability Act (CERCLA). Grantee may, however, use the existing water systems at Camp Killpack and Camp Bonneville and the Caretaker's building for purposes of continuing to provide non-potable water to said facilities or potable water provided that prior to use of said water systems for such purposes, the responsible agency or agencies of the State of Washington must make a determination that the water is suitable and safe for such use under applicable law of the State of Washington. Grantee may also develop other water systems, including those using groundwater underlying other areas of Camp Bonneville, excluding the area underlying Demolition Area 1/Landfill 4 and the associated contaminant plume, provided, that Grantee shall seek approval of WDOE and the Army.

**(3) Excavation/Land Disturbance Restriction.** The GRANTEE, its successors and assigns shall not conduct any intrusive activity on the Property [subject to the availability of appropriate legal description(s), insert: “, except those parcels described in Exhibit ‘     ’, attached hereto and made a part hereof, and depicted on Exhibit ‘     ’,”] without qualified UXO personnel on staff or available and a DoD approved Explosives Safety Submission and/or explosives site plan.

**(4) No Public Access.** The Grantee, its successors and assigns shall not have the right to provide access to the Property to members of the general public until such time as all remedial action necessary to protect human health and the environment with respect to hazardous substances remaining on the Property as of the date of this Deed, including MEC, has been taken and this restriction is modified or released by the Grantor. The restriction imposed herein shall not restrict the right of the Grantee, its successors and assigns to provide access to the Property to officers, employees, agents, and contractors of any tier for the purpose of conducting environmental remediation and munitions and explosives of concern response actions. The Grantee shall construct and maintain a fence along the perimeter of the Property to control or restrict public access as needed. The Grantee shall provide and maintain appropriate signage to

inform the its officers, employees, agents, and contractors of any tier and the general public about potential hazards on the Property.

**(5) Preservation Covenant for Conveyance of Property that May Include**

**Archaeological Sites.** In consideration of the conveyance of the real property that includes site 45-CL-318 and may include other as yet undiscovered archaeological sites located on lands owned by the Department of Defense at the Camp Bonneville Military Reservation, Clark County, Washington, Clark County hereby covenants on behalf of itself, its heirs, successors, and assigns at all times to the Washington State Historic Preservation Office (SHPO) to maintain and preserve site 45-CL-318 and other as yet undiscovered archaeological sites in accordance with the provisions of the following paragraphs of this covenant.

- a. Clark County shall notify the SHPO and the Cowlitz Indian Tribe in writing prior to undertaking any disturbance of the ground surface or any other action within 300 feet of the center of site 45-CL-318 that would affect its physical integrity (center point is 134810 E, 1150207 N, NAD 1983 HARN State Plane Washington South FIPS 4602 Feet). Such notice shall describe in reasonable detail the proposed undertaking and its expected effect on the physical integrity of 45-CL-318.
- b. For ground-disturbing activities other than remediation of munitions and explosives of concern (MEC), Clark County shall prepare and submit to the SHPO and the Cowlitz Indian Tribe a written assessment of project effects in advance of any ground-disturbing activity having moderate to high potential impacts within areas mapped as “20-100% probability” in the Clark County Archaeological Predictive Model Map and having slopes less than 5%. The assessment of project effects will describe the proposed undertaking in reasonable detail, discuss its expected effects upon recorded or unrecorded archaeological resources, and will conclude with recommendations concerning the need for additional archaeological survey or other actions to avoid or mitigate adverse effects to archaeological resources, taking into account previous cultural resource surveys at Camp Bonneville and other recorded archaeological sites in close proximity to the proposed project.
- c. Clark County shall make every reasonable effort to prohibit any person from knowingly or inadvertently disturbing any archaeological object or archaeological site, as defined in RCW 27.53.030. In the event that any archaeological object or archaeological site is knowingly or inadvertently disturbed, Clark County shall immediately stop the activity causing the disturbance and make a reasonable effort to protect the archaeological object

or archaeological site from further disturbance. The Grantee, its successors or assigns shall provide written notification to the SHPO and the Cowlitz Indian Tribe within one (1) working day of the discovery. Within fifteen (15) calendar days of the discovery, the Clark County shall provide to the SHPO and the Cowlitz Indian Tribe a Draft Site Treatment and Restoration Plan to describe the actions the Grantee, its successors or assigns will take to mitigate the damage, restore the site of discovery, and provide for the treatment and disposition of any archaeological resources recovered.

- d. Within thirty (30) calendar days of the SHPO and Cowlitz Indian Tribe's receipt of notification provided by Clark County pursuant to paragraphs (a), (b), or (c) of this covenant, the SHPO will respond to Clark County in writing as follows:
  1. That Clark County may proceed with the proposed undertaking without further consultation; or
  2. That Clark County must initiate and complete consultation with the SHPO before it can proceed with the proposed undertaking.

If the SHPO and the Cowlitz Indian Tribe fail to respond to Clark County's written notice within thirty (30) calendar days of the SHPO's receipt of the same, then Clark County may proceed with the proposed undertaking without further consultation.

- e. If the response provided to Clark County by the SHPO pursuant to paragraph d.2. of this covenant requires consultation with the SHPO and the Cowlitz Indian Tribe, then all parties will so consult in good faith to arrive at mutually-agreeable and appropriate measures that Clark County will employ to mitigate any adverse effects associated with the proposed undertaking. Pursuant to this covenant, any mitigation measures to which Clark County and the SHPO mutually agree shall be carried out solely at the expense of Clark County.
- f. The SHPO and the Cowlitz Indian Tribe shall be permitted at all reasonable times to inspect the Camp Bonneville property in order to ascertain conditions and to fulfill its responsibilities hereunder.
- g. In the event that another Indian tribe should request consultation regarding activities described in paragraphs (a), (b), or (c) of this covenant, Clark County shall consult with such tribes consistent with Washington state law and Clark County ordinances.
- h. In the event of a knowing violation of this covenant, and in addition to any remedy now or hereafter provided by law, the SHPO may, following reasonable notice to Clark County,



institute suit to enjoin said violation or to require the restoration of any archaeological site affected by such violation. The successful party shall be entitled to recover all costs or expenses incurred in connection with any such suit, including all court costs and attorney's fees.

- i. This covenant is binding on Clark County, its heirs, successors, and assigns in perpetuity. Restrictions, stipulations, and covenants contained herein shall be inserted by Clark County verbatim or by express reference in any deed or other legal instrument by which it divests itself of either the fee simple title or any other lesser estate in site 45-CL-318 or other property that may contain unrecorded archaeological sites or any part thereof.
- j. The failure of the SHPO to exercise any right or remedy granted under this instrument shall not have the effect of waiving or limiting the exercise of any other right or remedy or the use of such right or remedy at any other time.
- k. The covenant shall be a binding servitude upon the real property that includes site 45-CL-318 and other potential archeological sites and shall be deemed to run with the land.

Execution of the transfer instrument shall constitute conclusive evidence that Clark County agrees to be bound by the foregoing conditions and restrictions and to perform the obligations herein set forth.

**B. Modifying Restrictions.** The Property must be used and maintained for conservation purposes in perpetuity; however, nothing contained herein shall preclude the Grantee, its successors or assigns, from undertaking, in accordance with applicable laws and regulations and without any cost to the Grantor, such additional action necessary to allow for other less restrictive land use, groundwater, no dig/land disturbance or public access uses of the Property. Prior to such use of the Property, Grantee shall consult with and obtain the approval of the Grantor, and, as appropriate, the State or Federal regulators, or the local authorities. Upon the Grantee's or its successors' or assigns' obtaining the approval of the Grantor and, as appropriate, state or federal regulators, or local authorities, the Grantor agrees to record an amendment hereto. This recordation shall be the responsibility of the Grantee and at no additional cost to the Grantor.

**C. Submissions.** The Grantee, its successors and assigns, shall submit any requests to modifications to the above restrictions to Grantor and WDOE, by first class mail, postage prepaid, addressed as follows:

- a. Grantor – U.S. Army Corps of Engineers, Seattle District, 3015 NW 54th Street, Seattle, WA 98107
- b. WDOE – Department of Ecology, Toxics Cleanup Program, P.O. Box 47600, Olympia, WA 98504-7600

## **2. ENVIRONMENTAL COVENANTS, CONDITIONS, AND RESTRICTIONS BINDING AND ENFORCEABLE**

These Covenants, Conditions, and Restrictions, are binding on the Grantee, its successors and assigns and shall be included in subsequent deeds, shall run with the land, are forever enforceable, and are forever enforceable by the United States and other appropriate regulatory agencies.

## **3. COVENANTS, CONDITIONS, AND RESTRICTIONS RELEASE**

The Property will ultimately be conveyed, prior to completion of environmental remedial, or response actions, in accordance with the provisions of CERCLA 120(h)(3)(C). In conjunction with the Early Transfer, restrictions as identified herein and in the CERCLA Notice, Covenant, and Access Provisions and Other Deed Provisions (Attachment 1) will be imposed on certain portions of the property being transferred, as necessary to protect human health and the environment.

## **4. DISRUPTION OF REMEDIES**

The Grantee its successors, assigns, transferees, sublessees, tenants, invitees or licensees are prohibited from engaging in activities that will disrupt any remedial activities.

## **5. NOTICE OF THE POTENTIAL PRESENCE OF MUNITIONS AND EXPLOSIVES OF CONCERN (MEC)**

A. The Grantee is hereby notified that due to the former use of the Property as a military installation, the Property may contain munitions and explosives of concern (MEC). The term MEC means specific categories of military munitions that may pose unique explosives safety risks and includes: (1) Unexploded Ordnance (UXO), as defined in 10 U.S.C. §101(e)(5); (2) Discarded military munitions (DMM), as defined in 10 U.S.C. §2710(e)(2); or (3) Munitions constituents (e.g., TNT, RDX), as defined in 10 U.S.C. §2710(e)(3), present in high enough concentrations to pose an explosive hazard.)

B. The Property was previously used as an operational range for live-fire training or testing, used for open burning, used for open detonation of munitions. A munitions response was conducted in 1998 and 2000. Munitions response activities have not been completed. A summary of MEC discovered on the property is provided in Table 8.

C. If the Grantee, its successors or assigns, any subsequent owner, or any other person should find any MEC on the Property after response activities are completed, they shall immediately stop any intrusive or ground-disturbing work in the area or in any adjacent areas and shall not attempt to disturb, remove or destroy it, but shall immediately notify Local Law Enforcement so that appropriate explosive ordnance disposal personnel can be dispatched to address such MEC as required under applicable law and regulations. This requirement does not apply while conducting munitions response. During such munitions responses, any MEC encountered will be addressed per the procedures outlined in the DDESB-approved explosives safety submission and/or the explosives site plan.

D. Easement and Access Rights.

(1) The Grantor reserves a perpetual and assignable easement and right of access on, over, and through the Property, to access and enter upon the Property in any case in which a munitions response action is found to be necessary, or such access and entrance is necessary to carry out a munitions response action on adjoining property. Such easement and right of access includes, without limitation, the right to perform any additional investigation, sampling, testing, test-pitting, surface and subsurface clearance operations, or any other munitions response action necessary for the Grantor to meet its responsibilities under applicable laws and as provided for in this Deed. This easement and right of access shall be binding on the Grantee, its successors and assigns, and shall run with the land.

(2) In exercising this easement and right of access, the Grantor shall give the Grantee or the then record owner, reasonable notice of the intent to enter on the Property, except in emergency situations. The Grantor shall use reasonable means, without significant additional cost to the Grantor, to avoid and/or minimize interference with the Grantee's and the Grantee's successors' and assigns' quiet enjoyment of the Property. Such easement and right of access includes the right to obtain and use utility services, including water, gas, electricity, sewer, and communications services available on the property at a reasonable charge to the Grantor. Excluding the reasonable charges for such utility services, no fee, charge, or compensation will be due the Grantee or its successors or assigns, for the exercise of the easement and right of access hereby retained and reserved by the Grantor.

(3) In reasonably exercising this easement and right of access, neither the Grantee nor its successors and assigns, as the case maybe, shall have any claim at law or equity against the Grantor or any officer, employee, agent, contractor of any tier, or servant of the Grantor based on actions taken by the Grantor or its officers, employees, agents, contractors of any tier, or servants pursuant to and in accordance with this provision. The Grantee covenants and agrees for itself, its successors and assigns that it shall not cause or permit any interference with any munitions response action conducted by the Grantor on the Property

E. The Grantee acknowledges receipt of or access to the Administrative Record which contains MEC related documents.

## **6. NOTICE OF THE PRESENCE OF ASBESTOS AND COVENANT**

A. The Grantee is hereby informed and does acknowledge that friable and non-friable asbestos or asbestos containing material "ACM" has been found on the Property. The Property may also contain improvements, such as buildings, facilities, equipment, and pipelines, above and below the ground, that contain friable and non-friable asbestos or ACM. The Occupational Safety and Health Administration (OSHA) and the Environmental Protection Agency have determined that unprotected or unregulated exposure to airborne asbestos fibers increases the risk of asbestos-related diseases, including certain cancers that can result in disability or death.

B. The following building(s) on the Property has (have) been determined to contain friable asbestos: 1828, 1864, 1930, 1934, 1980, and 4155. The Grantee agrees to undertake any and all asbestos abatement or remediation in the aforementioned buildings that may be required under applicable law or regulation at no expense to the Grantor. The Grantor has agreed to transfer said buildings to the Grantee, prior to remediation or abatement of asbestos hazards, in reliance upon the Grantee's express representation and covenant to perform the required asbestos abatement or remediation of these buildings.

C. The Grantee covenants and agrees that its use and occupancy of the Property will be in compliance with all applicable laws relating to asbestos. The Grantee agrees to be responsible for any future remediation or abatement of asbestos found to be necessary on the Property to include ACM in or on buried pipelines that may be required under applicable law or regulation.

D. The Grantee acknowledges that it has inspected or has had the opportunity to inspect the Property as to its asbestos and ACM condition and any hazardous or environmental

conditions relating thereto. The Grantee shall be deemed to have relied solely on its own judgment in assessing the overall condition of all or any portion of the Property, including, without limitation, any asbestos or ACM hazards or concerns.

## **7. NOTICE OF THE PRESENCE OF LEAD-BASED PAINT (LBP) AND COVENANT AGAINST THE USE OF THE PROPERTY FOR RESIDENTIAL PURPOSE**

A. The Grantee is hereby informed and does acknowledge that all buildings on the Property, which were constructed or rehabilitated prior to 1978, are presumed to contain lead-based paint. Lead from paint, paint chips, and dust can pose health hazards if not managed properly. Every purchaser of any interest in Residential Real Property on which a residential dwelling was built prior to 1978 is notified that there is a risk of exposure to lead from lead-based paint that may place young children at risk of developing lead poisoning.

B. The Grantee covenants and agrees that it shall not permit the occupancy or use of any buildings or structures on the Property as Residential Property, as defined under 24 Code of Federal Regulations Part 35, without complying with this section and all applicable federal, state, and local laws and regulations pertaining to lead-based paint and/or lead-based paint hazards. Prior to permitting the occupancy of the Property where its use subsequent to sale is intended for residential habitation, the Grantee specifically agrees to perform, at its sole expense, the Army's abatement requirements under Title X of the Housing and Community Development Act of 1992 (Residential Lead-Based Paint Hazard Reduction Act of 1992).

C. The Grantee acknowledges that it has inspected or has had the opportunity to inspect the Property as to its lead-based paint content and condition and any hazardous or environmental conditions relating thereto. The Grantee shall be deemed to have relied solely on its own judgment in assessing the overall condition of all or any portion of the Property, including, without limitation, any lead-based paint hazards or concerns.

### ATTACHMENT 3

#### Document List

<u>DOCUMENT TITLE</u>	<u>DATE</u>	<u>DISK NUMBER</u>	<u>FILE REFERENCE</u>
Finding of No Significant Impact and Environmental Assessment - Modifications to Training Facilities	Jan-87	1	Fonsi
Final Report and Field Guide - Camp Bonneville Endangered Species Survey	Feb-95	1	Endangered_Species_Survey_Final_Report
BRAC Cleanup Plan for Camp Bonneville	Oct-96	1	Bcprpt
Environmental Baseline Survey Report	Jan-97	1	Ebs_Final
Management Plan for Asbestos Surveys	Jun-97	2B	Mgmtplan
Asbestos Surveys - Volume II	Nov-97	1	Asbestos_Survey_Volume_2
Draft Programmatic Agreement among United States Army, Washington State Historic Preservation Officer, and Advisory Council on Historic Preservation	Jan-98	5	Programmatic_AgreementDraft
Community Relations Plan	Apr-99	5	CommunityRelationsPlan4_1999
Supplemental Archive Search Report – Final	Aug-99	1	CAMP BONNEVILLE
Addendum to the By-Laws of the Camp Bonneville Restoration Advisory Board (RAB)	Aug-01	4	RABbylawsAddendum8_8_2001
Environmental Assessment for Disposal and Reuse of Camp Bonneville	Oct-01	1	Environmental_Assessment_for_Disposal_and_Reuse_of_Camp_Bonneville
Final Reconnaissance Work Plan Addendum - Site Characterization	Oct-02	4	Site_Characterization_Reconnaissance_Work_Plan_Final
Environmental Assessment for Disposal and Reuse of Camp Bonneville - Responses to Comments	Nov-02	1	Camp Bonneville Responses
Final Reuse Plan Prepared for the Local Redevelopment Authority	Feb-03	6	FinalReusePlan
Enforcement Order - State of Washington-Department of Ecology – Final	Feb-03	1	CB Enforcement Order (Final)
Cultural Resource Survey of Selected Area	Apr-03	1	CulturalResourceSurvey
Cultural Resource Survey of Selected Area	May-03	1	Cultural Resource Survey Final

State of Washington Department of Ecology Enforcement Order No.03TCPHQ-5286 First Amendment [signed and dated]	Jun-04	5	EnforcementOrW_1stAmendment
Project Plan for DACA67-96-M-0890 Drain Line and Petroleum Contaminated Soil Removal	Oct-95	3	Project Plan DACA67-96-M-0890 Remove Drain Line and PCS Cam
Revised Management Plan - Pre-Demolition Survey and Decontamination Plan of CS Gas Chamber	Jun-96	1	Deconmp
Revised Management Plan for Lead-Based Paint and Soil-Metals Survey	Jun-96	2A	Lbpmp
Petroleum Contaminated Soil Investigation - Former Tank NO. 7- CMPBN [Subsurface Investigation Sampling Report after removal of this UST]	Sep-96	4	tank7rpt
Lead-Based Paint and Soil-Metals Survey	Feb-97	2A	Lbpsurv
Pre-Demolition Survey - CS Gas Chamber Building (letter report)	Feb-97	3	Predemo
Management Plan - Transportation and Disposal of Household Waste Debris Pile	Jun-97	2B	Mgtpln
Final Report - Transportation and Disposal of Household Waste Debris Pile	Aug-97	1	FIN_REPORT_JUL_97
Management Plan [Work Plan] Multi-Sites I - Investigation of Landfills, Burn Areas, and Drum Burial Sites	Aug-97	2B	Multi-sites_1_management_plan_investigation_landfills_burna
Draft Work Plan - Investigation of Landfills, Burn Areas, and Drum Burial Sites [Investigation of 3 landfills; burn area; 2 burned bldgs; and 2 suspected drum disposal sites]	Aug-97	4	Work_plan
Field Report for Drain Line and Petroleum Contaminated Soil Removal [Leaking Underground Oil Storage Tank]	Dec-97	1	Field Report DACA67-96-M-0890
Management Plan (Work Plan) - Multi-Sites II Investigation [Maintenance Pit; Wash Rack; Grease Pits; Pesticide Bldg; ASTs; Sewage Pond; Ammo Storage Magazines; Hazmat Accum. Point; Landfill 4]	Feb-98	6	management_plan_multi-sites_2_investigation_cp_bonneville_wa
Management Plan [Work Plan] Addendum - Multi-Sites Investigation II [Former CS Training Building and Wash Rack No. 2]	Apr-98	2B	Multisite_Investigation_Work_Plan_Addendum
Management Plan [Work Plan] Multi-Sites III Investigation [Former CS Training Building and Wash Rack No.	Jun-98	2B	management_plan_multi-site3_investigation_cp_bonneville_wa

2]			
Multi-Sites Investigation Report - Volume 1 [Investigation of 3 landfills; 2 suspected disposal areas; burn area; 3 burned buildings; 2 grease pits; vehicle maint. area; 2 wash racks; sewage pond; 3 ammo. stor. areas; 2 hazmat stor. bldgs.; and 26 ASTs]	Jul-99	4	V1_FNL
Multi-Sites Investigation Report - Volume 2 - Appendix H - Data Summary Tables (many RAU 1 sub-units)	Jul-99	2B	Multi-Sites_Volume_2_ Investigation_Report
Management Plan - Environmental Restoration Multiple Sites [remediation work plan for drum disposal area; paint & solvent disposal area; Wash Rack 1; pesticide building; ASTs; CS training bldg; and maintenance pit]	Nov-99	6	Environmental_Restoration_Multiple_Sites_Management_Plan
Management Plan - Environmental Restoration Multi-Sites - Camp Bonneville [Drum Disposal Area; Paint and Solvent Disposal Area; Wash Rack; Maintenance Pit; Former CS Training Building; Pesticide Mixing Building; and Selected AST Sites]	May-00	2B	managemnt_plan_environmental_restoration_cp_Bonneville
Management Plan for Ammunition Storage Magazines and Pesticide Storage Area Site Investigation	Jun-00	1	Camp Bonn
BRAC Site Closure Report for Landfills 1, 2, and 3; Former Burn Area; Buildings 1962 and 1963; Grease Pits; Former Sewage Pond; and Hazardous Materials Accumulation Point	Sep-00	1	Camp Bonneville BRAC rpt
Supplemental Site Investigation Report - Ammunition Storage Magazines and Pesticide Storage Area	Dec-00	1	Bonneville Ammo Report
Final Closure Report - Environmental Restoration Multi-Sites - Camp Bonneville [Drum Disposal Area; Paint and Solvent Disposal Area; Wash Rack; Maintenance Pit; Former CS Training Building; Pesticide Mixing Building; and Selected AST Sites]	Feb-01	1	Final_Closure_Report_Environmental_Restoration_multi-sites
Supplemental Management Plan - Ammunition Storage Bunkers #2953,#2950, and #2951 and Pesticide Building #4126	Apr-01	4	SupplementalManagementPlan-Ammunition
Final Summary Report - Geophysical Investigation of the Suspected Drum Burial Area	Aug-01	1	Final Summary Report-Geophysical Investigation



Management Plan - Drum Burial Area	Sep-01	2B	Management Plan Drum Burial Area
Transmittal Review Comments - Final Closure Report - Ammunition Bunkers #2953, #2950, and #2951 and Pesticides Building #4126	Dec-01	1	ammo-pest final report comments
Final Closure Report - Environmental Restoration Pesticide Building 4126 and Ammunition Bunkers #2953, #2951, and #2950	Dec-01	3	Pesticide_Building_4126_and_Ammunition_Bunkers_2953_2951_an
Final Cleanup Action Plan - Remedial Action Unit 1	Jul-04	7	Final Cleanup Action Plan_Remedial Action Unit 1
Final Cleanup Action Plan - Remedial Action Unit 1 [Docs. 1.028a and 1.028b appear to be duplicates.]	Jul-04	5	Final Cleanup Action Plan_Remedial Action Unit 1
Draft Reconnaissance Results - Small Arms Ranges	Jan-02	6	SARDOC
Draft Work Plan for Sampling Firing Ranges, Demolition Areas 2 & 3, and Downgradient Groundwater	Aug-02	7	SamplingFiringRanges Demo2_3_grdwtrWorkPlan
Draft Final Sampling and Analysis Plan - Soil [Firing Ranges and Demolition Areas 2 and 3]	Jan-03	6	SAP_JK_v02
Final Work Plan for Soil Sampling in Firing Ranges and Demolition Areas 2 and 3	Feb-03	4	SoilSamplingFiringRgsDemo2_3WorkPlan
Final Sampling and Analysis Plan - Soil [SAP for Soil Sampling in Firing Ranges and Demolition Areas 2 and 3]	Feb-03	4	Sampling_and_Analysis_Plan_Soil
Final Quality Assurance Management Plan [QAPP or Part II of the SAP for Soil Sampling in Firing Ranges and Demolition Areas 2 and 3]	Feb-03	4	Quality_Assurance_Project_Plan
Final Site Safety and Health Plan [SSHP for Soil Sampling in Firing Ranges and Demolition Areas 2 and 3]	Feb-03	4	SSHP
Final Waste Management and Minimization Plan [IDW from investigation of the firing ranges and demolition areas]	Feb-03	4	WMMP_DataMgePlan
Draft Final Site Investigation Report - Small Arms Ranges and Demolition Areas 2 & 3	Sep-03	7	Small Arms & DA 2&3 SI DF Report
Draft Final Site Investigation Report - Small Arms Ranges and Demolition Areas 2 & 3 [Note: Docs. 2A.005a and 2A.005b appear to be duplicates.]	Sep-03	8	Draft Final Report

Appendix A - Quality Assurance Project Plan - an attachment to the Draft Final Work Plan for Interim Actions at Small Arms Range Berms and Fire Support Areas (Read Only File) [in file labeled "Berm Removal Work Plan"] [Note: By content and file placement, this document appears to be part of 2A.009a&b, but it is clearly dated as listed here.]	Mar-04	7	Appendix A
Cover Letter for Draft Final Remedial Investigation/Feasibility Study (RI/FS) for Small Arms Ranges Cover Letter from John Freich (Calibre) to Eric Waehling (Army - Fort Lewis) [in file labeled "Final Small Arms Range RIFS"]	Mar-05	7	Draft Final Cover ltr
Draft Final Remedial Investigation/Feasibility Study (RI/FS) for Small Arms Ranges [in file labeled "Final Small Arms Range RIFS"]	Mar-05	7	DRAFT Final SMALL ARMS RANGES RI-FS_rpt 3-14-05
Draft Final Remedial Investigation/Feasibility Study (RI/FS) for Small Arms Ranges - Figures 1 - 20 [in file labeled "Final Small Arms Range RIFS"]	Mar-05	7	SAR_RIFS_FIGURES 1-20
Draft Final Remedial Investigation/Feasibility Study (RI/FS) for Small Arms Ranges - Figures 21 - 28 [in file labeled "Final Small Arms Range RIFS"]	Mar-05	7	SAR_RIFS_FIGURES 21-28
Draft Final Remedial Investigation/Feasibility Study (RI/FS) for Small Arms Ranges Appendix B - Table/Worksheet 25m & Machine Gun Range > 250 Lead Removed [in file labeled "Final Small Arms Range RIFS" in subfile labeled "Appendix B Stat 250 Level"]	Mar-05	7	25m & machine gun range 250 removed
Draft Final Remedial Investigation/Feasibility Study (RI/FS) for Small Arms Ranges Appendix B - Table/Worksheet 25m Record Fire Field Range > 250 Lead Removed [in file labeled "Final Small Arms Range RIFS" in subfile labeled "Appendix B Stat 250 Level"]	Mar-05	7	25m Record Fire Field Range 250 Removed
Draft Final Remedial Investigation/Feasibility Study (RI/FS) for Small Arms Ranges Appendix B - Table/Worksheet 1,000', 1,000' Machine Gun Range - 250 Lead Removed [in file labeled "Final Small Arms Range RIFS" in subfile labeled "Appendix B Stat 250 Level"]	Mar-05	7	1000 Range 250 Removed

Draft Final Remedial Investigation/Feasibility Study (RI/FS) for Small Arms Ranges Appendix B - Table/Worksheet Combat Pistol Range - > 250 Lead Removed [in file labeled "Final Small Arms Range RIFS" in subfile labeled "Appendix B Stat 250 Level"]	Mar-05	7	Combat Pistol Range 250 Removed
Draft Final Remedial Investigation/Feasibility Study (RI/FS) for Small Arms Ranges Appendix B - Table/Worksheet Field Fire Ranges 1 & 2 & Pistol - 250 Lead Removed [in file labeled "Final Small Arms Range RIFS" in subfile labeled "Appendix B Stat 250 Level"]	Mar-05	7	Fire Field Rifle Range 1 & 2 & Pistol
Draft Final Remedial Investigation/Feasibility Study (RI/FS) for Small Arms Ranges Appendix B - Table/Worksheet Field Fire Rifle Range 1 & 2 - > 250 Lead Removed [in file labeled "Final Small Arms Range RIFS" in subfile labeled "Appendix B Stat 250 Level"]	Mar-05	7	Fire Field Rifle Range 1 & 2
Draft Final Remedial Investigation/Feasibility Study (RI/FS) for Small Arms Ranges Appendix B - Table/Worksheet Group 1 > 250 Lead Removed [in file labeled "Final Small Arms Range RIFS"]	Mar-05	7	Group 1 250 Lead Removed
Draft Final Remedial Investigation/Feasibility Study (RI/FS) for Small Arms Ranges Appendix B - Table/Worksheet Group 2 > 250 Lead Removed [in file labeled "Final Small Arms Range RIFS" in subfile labeled "Appendix B Stat 250 Level"]	Mar-05	7	Group 2 250 Lead Removed
Draft Final Remedial Investigation/Feasibility Study (RI/FS) for Small Arms Ranges Appendix B - Table/Worksheet Group 3 > 250 Lead Removed [in file labeled "Final Small Arms Range RIFS" in subfile labeled "Appendix B Stat 250 Level"]	Mar-05	7	Group 3 250 Lead Removed
Draft Final Remedial Investigation/Feasibility Study (RI/FS) for Small Arms Ranges Appendix B - Table/Worksheet Group 4 > 250 Lead Removed [in file labeled "Final Small Arms Range RIFS" in subfile labeled "Appendix B Stat 250 Level"]	Mar-05	7	Group 4 250 Lead Removed

Draft Final Remedial Investigation/Feasibility Study (RI/FS) for Small Arms Ranges Appendix B - Table/Worksheet Machine Gun Range South - > 250 Lead Removed [in file labeled "Final Small Arms Range RIFS" in subfile labeled "Appendix B Stat 250 Level"]	Mar-05	7	Machine Gun Range South 250 Removed
Draft Final Remedial Investigation/Feasibility Study (RI/FS) for Small Arms Ranges Appendix B - Table/Worksheet Rifle Ranges 1 & 2 - > 250 Lead Removed [in file labeled "Final Small Arms Range RIFS" in subfile labeled "Appendix B Stat 250 Level"]	Mar-05	7	Rifle Ranges 1 & 2 250 Removed
Draft Final Work Plan for Interim Actions at Small Arms Range Berms and Fire Support Areas [in file labeled "Berm Removal Work Plan"]	Mar-05	7	Draft FINAL BERM REMOVAL Workplan sub 3-15-05
Figures for Draft Final Work Plan for Interim Actions at Small Arms Range Berms and Fire Support Areas (Read Only File) [in file labeled "Berm Removal Work Plan"]	Mar-05	7	FINAL BERM WP figs
Draft Management Plan for Ammunition Storage Magazines and Demolition Areas 2 and 3 Site Investigation	Oct-99	6	Ammunition_Storage_Magazines_&_Demolition_Areas_2_&_3
Cover Letter for Final Site Investigation Report for Demolition Areas 2 and 3 from John Frerich (Calibre) to Eric Waehling (Army - Fort Lewis) [in file labeled "Final SI"]	Mar-05	7	Final Cover Letter
Final Site Investigation Report for Demolition Areas 2 and 3 End Tab [in file labeled "Final SI" - insert for spine of report binder]	Mar-05	7	end tab draft report
Final Site Investigation Report for Demolition Areas 2 and 3 [in file labeled "Final SI"]	Mar-05	7	FINAL DEMOLITION SI 3-14-05
Figures for Final Site Investigation Report for Demolition Areas 2 and 3 [in file labeled "Final SI"]	Mar-05	7	FINAL DEMO RIFS FIGURES
Landfill 4 Investigation Report - Volume 1 [addendum to Multi-Sites Report of July, 1999- see above]	Aug-99	4	vol1_landfill_4_investigation_report_Cp_Bonneville_wa
Management Plan for Landfill 4 - Demolition Area 1 - Expanded Site Inspection with Sampling and Analysis Plan - Part I Field Sampling Plan; Part II Quality Assurance Project Plan; and Accident Prevention Plan	May-01	1	Camp Bonneville Mgmt Plan Rpt

Management Plan Addendum for Modification Number 7 to Landfill 4/Demolition Area 1 Expanded Site Inspection	Aug-02	2A	Landfill_4_Demolition_Area_1_Modification_7_To_Do
Draft Final Report - Landfill 4/Demolition Area No. 1 Expanded Site Inspection Volume 1	Feb-03	6	ExSiteInspVol_1 dr
Draft Final Report - Landfill 4/Demolition Area No. 1 Expanded Site Inspection Volume 2	Feb-03	6	ExSiteInspVol_2 dr
Final - Project Management Plan - Landfill 4 / Demolition Area 1 [Remediation of Landfill4/Demolition Area 1]	Oct-03	5	PMP Landfill4_demo1Final
Explosives Safety Submission - MEC Support Services for Interim Action Soil Removal - Landfill 4/Demolition Area 1	Apr-04	1	ESSMECSupportService
Final Corrective Action Work Plan [CAWP] for Landfill 4/Demolition Area 1 Interim Cleanup Action	May-04	5	CorrectiveActionLandfill4Demo1Final
Ordnance, Ammunition, and Explosives Final Archives Search Report - Conclusions and Recommendations	Jul-97	1	72asr-conclusions_recommendations
Ordnance, Ammunition, and Explosives Final Archives Search Report – Findings	Jul-97	1	asr-findings
Ordnance, Ammunition, and Explosives Final Archive Search Report – Plates	Jul-97	3	Ordnance_Ammunition_and_Explosive_Archive_Search_Reports_Pl
Final Work Plan for Ordnance and Explosive Sampling	Feb-98	3	Ordnance_and_Explosive_Sampling_Final_Work_Plan
Removal Report - Ordnance and Explosive (OE) Sampling	Aug-98	5	OrdnanceAndExplosiveSampling RemovalReport
Final Work Plan for Ordnance and Explosive Removal Action	Nov-98	3	Ordnance_and_Explosive_Removal_Action_Final_Work_Plan
Interim Report for Ordnance and Explosive Removal Action	Dec-98	3	Ordnance_and_Explosive_Removal_Action_Interim_Report
Final Work Plan for the Geophysical Equipment Test Prove-Out - Engineering Evaluation/Cost Analysis	Aug-00	2A	Geophysical_Equip_Test_Prove-Out_Eng_Eval_Cost_Analysis
Final Removal Report - Ordnance and Explosive Removal Action	Oct-00	5	OrdnanceAndExplosiveRemoval ActionReportFinal
Technical Review and Comments - Geophysical Prove-Out Report	Feb-01	2A	GPO TRC EPA Feb 01

Final Geophysical System Prove-Out Report - Engineering Evaluation/Cost Analysis	Aug-01	2A	Geophysical_System_Prove-Out_Report
Final Reconnaissance Work Plan for Additional Site Characterization [OE Reconnaissance Survey - Target Impact Areas; Ordnance Disposal Areas; Troop Training Areas; and Firing Points]	Oct-01	1	Finalwp
Draft Sampling and Analysis Plan - Preliminary Assessment of Artillery Range Firing Points, Impact Areas and "Pop-Up Pond" Sediments	Jul-04	7	SamplingAnalysisPlanRgsImpact UpDft      Pop-
Figure 1.1 - Site Review Area: Air Strip	Jun-05	8	fig1_1_airstrip
Figure 1.2 - Site Review Area: Camp Bonneville Cantonment	Jun-05	8	fig1_2_airstrip
Figure 1.3 - Site Review Area: Camp Kilpack Cantonment	Jun-05	8	fig1_3_kilpack
Figure 1.4 - Site Review Area: Demo 1	Jun-05	8	fig1_4_demo_1
Figure 1.5 - Site Review Area: Demo 2	Jun-05	8	fig1_5_demo_2
Figure 1.6 - Site Review Area: Demo 3	Jun-05	8	fig1_6_demo_3
Figure 1.7 - Site Review Area: Parade Ground	Jun-05	8	fig1_7_parade_ground
Figure 1.8 - Site Review Area: Roads/Trails	Jun-05	8	fig1_8_Road_Trails
Figure 1.9 - Site Review Area: Targets	Jun-05	8	fig1_9_targets
Figure 1.10 - Site Review Area: Central Impact Target Area (CITA)	Jun-05	8	fig1_10_cita
Figure 1.11 - Site Review Area: Firing Point Locations	Jun-05	8	fig1_11_fire_points
Figure 1.13 - Site Review Area: Proposed Park Dense Vegetation/Moderate to Steep Slope	Jun-05	8	fig1_13_rmir
Figure 1.14 - Site Review Area: South West Lacamas Valley	Jun-05	8	fig1_14_sw_valley
Figure 1.15 - Site Review Area: South Central Lacamas Valley	Jun-05	8	fig1_15_central_valley
Figure 1.16 - Site Review Area: North Central Lacamas Valley	Jun-05	8	fig1_16_nc_valley
Figure 1.17 - Site Review Area: North East Lacamas Valley	Jun-05	8	fig1_17_ne_valley
Location of Discussion Areas	Jun-05	8	Location Map
Large Scale Aerial Photograph/Map (44 inches by 34 inches)	Jun-05	8	Meeting

Figure 1.18 - Site Review Area: North Central Lacamas Valley	Jun-05	8	NC_Lacamas
Composite aerial photographs and drawing showing South Central Lacamas Valley	Jun-05	8	SC_Lacamas
Aerial photograph showing South West Lacamas Valley	Jun-05	8	SW_Lacamas
Aerial photograph showing outline of proposed wildlife management area	Jun-05	8	Wma
Draft Site Specific Fact Sheets - Remedial Action Unit 3	Aug-05	7	Draft CB Site Specific Fact Sheets
Well Logs for Landfill 4/Demolition Area 1 Attached to Groundwater Monitoring Data Evaluation Report Issued April 19, 2005 [in file labeled "GW Evaluation"]	Dec-98	7	Landfill 4 Well Logs 4-15-05
Draft Report – Expanded Site Inspection - Landfill 4/Demolition Area 1 [groundwater investigation in response to finding RDX in wells]	Nov-01	6	Landfill4Demo1_ExpSiteInspDraft
Boring Logs Attached to Groundwater Monitoring Data Evaluation Report Issued April 19, 2005 [in file labeled "GW Evaluation"]	Nov-02	7	CHPPM well logs 4-15-05
Final Groundwater Sampling and Analysis Plan	Dec-03	2A	GrdwtrSAPfinal
Groundwater Sampling and Analysis Report - 4th Quarter 2003	May-04	1	Camp Bonneville GW report final 5-24-04
Monitoring Well Installation Report - Landfill 4 / Lacamas Creek	Aug-04	2B	MonitoringWellInstall @ Landfill4
Groundwater Sampling and Analysis Report 2nd Quarter 2004 – Final	Jan-05	5	final GW report 2nd qtr 2004
Groundwater Sampling and Analysis Report 3rd Quarter 2004 – Final	Jan-05	5	Final GW report 3rd qtr 2004
Final Groundwater Monitoring Project Management Plan	Mar-05	5	GroundwaterMonitoringPMPfinal
Draft Groundwater Data Report - Landfill 4/Demolition Area 1	Apr-05	6	GW_report_Landfill4_040605
Groundwater Interpretation Figures 1 - 7, dated 4-15-05 (read only file) [in file labeled "GW Evaluation"]	Apr-05	7	GW Interpretation Figures 1-7, 4-15-05
Groundwater Data Summary Tables and Figures 8 - 13, 4-19-05 (read only file) [in file labeled "GW Evaluation"]	Apr-05	7	GW Data Summary Tables & Figs 8-13, 4-19-05
Groundwater Monitoring Data Evaluation Report - Landfill 4/Demolition Area 1; Demolition Area 2; Demolition Area 3; and Site Perimeter Near Lacamas Creek [in file labeled "GW Evaluation"]	Apr-05	7	DRAFT GW Data Interpret 4-19-05

Final Management Plan - Surface Water Investigation of Lacamas Creek and Tributaries	Oct-98	1	FIN_MGMT_PLAN_OCT_98
Final Project Evaluation Report Surface Water Investigation of Lacamas Creek and Tributaries	Jun-99	1	FIN_PROJ_EVAL_JUN_99
Final Management Plan - Surface Water Investigation of Lacamas Creek	Nov-99	1	FINAL_MGMT_PLAN_NOV_99
Final Project Completion Report Surface Water Investigation of Lacamas Creek and Tributaries	Mar-00	1	FIN_PROJ_COM_MAR_00
Correspondence Files	various	6	
[approximately 176 entries, some of which include multiple items (e.g. letter and reply), from various authors to various recipients]			
Memoranda for the Record	various	6	
[approximately 39 entries from various authors and to various recipients including internal memoranda and meeting notes]			
RAB Meeting Minutes [Transcripts]		6	
April 25, 1996			04251996RABmtgMin
September 16, 1996			09161996RABmtgMin
November 13, 1996			11131996RABmtgMin
December 11, 1996			12111996RABmtgMin
January 8, 1997			01081997RABmtgMin
February 12, 1997			02121997RABmtgMin
March 12, 1997			03121997RABmtgMin
April 9, 1997			04091997RABmtgMin
June 11, 1997			06111997RABmtgMin
September 10, 1997			09101997RABmtgMin
November 12, 1997			11121997RABmtgMin
May 13, 1998			05131998RABmtgMin
July 8, 1998			07081998RABmtgMin
October 14, 1998			10141998PublicMtgMin
January 13, 1999			01131999PublicMtgMin
January 8, 2003			010803RABmtgMin
February 12, 2003			021203rab
June 11, 2003			061103RABmtgMin
October 15, 2003			101503RABmtgMin
November 12, 2003			11122003RABMin



February 11, 2004			RABmtgMin02112004
May 12, 2004			RABmtgMin05122004
September 8, 2004			090804RABmeeting
October 13, 2004			10132004RABmtgMin
November 2, 2004			RABmtgMin11022004
January 12, 2005			RABmeeting011205
February 9, 2005			02092005RABmin
March 9, 2005			030905rabmin1 and 030905rabmin
May 11, 2005			RABmtgMin051105.pdf
June, 8, 2005			060805RABmtgMin.pdf
July 13, 2005			071305rabmin.pdf
March 9, 2005			030905rabmin.pdf
September 14, 2005			09142005RABmeetingMin.pdf
October 12,2005			10122005RABmin.pdf
November 11, 2005			11092005RABmin.pdf
February 8, 2006			02082006RABmtgmin.pdf
March 8, 2006			030806RABmtgMin.pdf
April 12, 2006			04122006RABmtgmin.pdf
May 10, 2006			RABmtgmin05102006.pdf
June 14, 2006			06142006RABmtgMin.pdf

**Attachment 4  
Responsiveness Summary**

**Public Comment: Lynelle Hatton - Comments on FOSET for Camp Bonneville - May 2, 2006**

**NOTE: I object to the 30-day comment period for the FOSET, as it places an undue burden on the RAB for comprehending and interpreting a complex legal document for the public at the same time Ecology's comment period is running on the PPCD. As a result, my comments are sketchy and are not comprehensive. Should the comment period be extended, I will be submitting additional comments.**

**The request to extend the FOSET comment period follows comments on the FOSET. Please include this request in the administrative record for Camp Bonneville.**

**Lynelle Hatton  
Member, Camp Bonneville Restoration Advisory Board**

Number	Page	Comment
1.	1	A free-range regional park is <b>not</b> and never will be consistent with protection of human health and the environment, since it will expose the public to UXO over 70% of the site.
2.	2	Necessary response actions have been unnecessarily delayed for years because the DoD has ignored Ecology's Enforcement Orders. Likewise, Ecology has chosen not to enforce them.
3.	2	The proposed use restrictions for the purpose of protecting human health are ineffective because they will not prevent people from coming into contact with UXO.
4.	6	The ESS cannot possibly define measures that will protect the public on sites containing UXO.
5.	6	It is unrealistic to make provisions for on-site construction support for all construction activities in perpetuity. This would be cost-prohibitive and logistically impossible.
6.	7	Clark County's land use control plan should not be approved by the DoD. It does nothing to prevent people from coming into contact with

		UXO.
7.	7	Over time, the public will develop a false sense of security. People will not distinguish between areas cleared of UXO and areas that contain UXO, despite fences and signs.
8.	7	The ASR was incomplete in 1997 and remains incomplete even after updates in 1999. Additional, critical information and materials have been identified at RAB meetings that are not included in the ASR.
9.	9	The methodology for a significant site characterization study was discredited by Ecology.
10.	12	There are no provisions for groundwater remediation – only provisions for groundwater monitoring. Cleanup costs should include remediation.
11.	16	The statement that monitoring wells have been installed in strategic locations is false. No technical studies were performed for determining the best locations of these wells. Further, wells at the property line are ineffective in protecting contamination from moving off-site. Once contamination has reached the wells at the property line, it has virtually moved off-site.
12.	17	There is no remediation planned for groundwater contamination, and there are no funds designated for remediation once it becomes necessary.
13.	17	The statement that Lacamas Creek has not been contaminated is not based on scientific studies, but on random sampling. This method is useless. Much of the contamination would be carried away rapidly by even the smallest current and would end up in the aquifer.
14.	17	In areas of standing surface water, contamination such as perchlorate are heavy enough to sink and would not be detected on the surface.
15.	18	The cultural assessment was conducted by people who never visited the site. This assessment could not have been definitive in its conclusions.
16.	20	There has been no opportunity to review restrictive covenants in the PPCD and ESCA because of the concurrent comment periods.
18.	20	The LRA is represented by essentially 5 people: Commissioner Boldt, Bill Barron, Pete Capell, Brian Vincent and Jeroen Kok. This is an inadequate representation.
19.	21	Restrictive covenants are not identified in the FOSET; however, the assumption is that the DoD has reviewed the covenants and is

		confident they will keep people out of areas that have not been cleared of UXO. This fails to recognize: (a) that not all people are of the same behavioral, developmental and physical conditions; (b) youth will be attracted to the danger signs and will be likely to breach fences for the sake of finding UXO.
20.	22	The FOSET states the new property owners will be responsible for any future lead-based pain and asbestos remediation found to be necessary. This remediation should be the responsibility of the Pollutant.
21.	23	The covenants/restrictions can't possibly protect people from coming into contact with UXO; these covenants issue the property "As Is."
22.	23	Land Use Controls may be required for properties with UXO, but they do not protect public health and safety.
<b>23</b>	<b>24</b>	<b>The FOSET does not meet the standards for early transfer because the use is not consistent with public health and safety.</b>
24	86	Hold Harmless Covenant – Grantee will hold Grantor harmless for any claims associated with the property. This is a huge risk for the County given the probability of people encountering deadly UXO.

**This site will never be cleaned adequately for reuse as a free-range regional park.**

**URGENT: TIME-SENSITIVE**

**Glynn Ryan, Chief  
BRAC - Atlanta Division**

**RE: Camp Bonneville FOSET – Request for Extension to 30-day Public Comment Period  
Ending May 2, 2006**

**Mr. Ryan:**

**Today—one day before the comment period on the FOSET ends—the Camp Bonneville Restoration Advisory Board was advised that you denied its unanimous request for an extension to the public comment period.**

**Until today, there was no indication from BRAC that it would be necessary to provide justification for the request. The RAB is a Congressionally-mandated Board issuing an Advisory to the DoD; that alone should be reason enough to extend the comment period.**

**As an individual and member of the community as well as a member of the Camp Bonneville RAB, I am writing to extend an additional request for an extension of the public comment period, and to provide the rationale you require.**

**PLEASE SUBMIT THIS REQUEST TO YOUR LEGAL DEPT FOR REVIEW PRIOR TO ISSUING A FINAL DETERMINATION ON THE EXTENSION.**

#### **ROLE OF THE RAB**

**(1) The RAB is the DoD's Advisory Board, mandated by Congress.**

**(2) As stated in the 2005 RAB Guidelines, the RAB is the DoD's conduit for information from the DoD to the community, and from the community to the DoD.**

**(3) Through a vote taken at the last RAB meeting, the RAB as an entity advised BRAC that an extension to the FOSET comment period was necessary.**

**(4) By denying the extension, BRAC has expressly ignored the RAB's Advisory to the DoD on the extension request.**

**(5) This is compounded by BRAC ignoring a previous RAB Advisory stating that no amount of cleanup—either on the part of the DoD or the County—will ever be sufficient for development of this property into a regional public park.**

**(6) RAB members expressed concern on public record that the FOSET is a lengthy legal document that must be read and understood before information contained in the FOSET can be communicated by the RAB to the public.**

**(7) Reading, comprehending and communicating to the public will itself take more than 30 days.**

**(8) This is to be followed by public feedback, which the RAB must convey back to the DoD.**

**(9) The 30-day comment period is grossly inadequate for the accomplishment of these tasks.**

**(10) In denying the RAB's request for an extension, BRAC denies the RAB its role of facilitating communication between the DoD and the public.**

**(11) In denying the extension, BRAC is denying the RAB its Congressionally-mandated advisory role.**

#### **TAPP FUNDS WITHHELD**

**(1) Each RAB is entitled annually to \$25,000 of funds allocated by the DoD to hire a contractor for the purpose of translating studies and legal documents into lay terms.**

**(2) The RAB's TRC (Technical Review Committee) applied for TAPP funding on April 12.**

**(3) TAPP funds would enable the RAB to gain information from experts as to the legal aspects of the transfer documents, and the studies that have led to early transfer.**

**(4) BRAC has the ability to expedite the application process in light of early transfer.**

**(5) BRAC has stated TAPP funds are not currently available.**

**(6) BRAC has stated that funds can only be allocated if designated in the previous fiscal year.**

**(7) The RAB could not have anticipated the need for TAPP funds as early as summer 2005.**

**(8) Since the site will transfer prior to the next fiscal year, BRAC has virtually denied the RAB its right to funds.**

**(9) Denial of this right constitutes a breach of the DoD's own policy to provide RABs with the opportunity to hire consultants to assist in interpretation of legal documents such as the FOSET.**

**(10) Understanding that the contracting process takes time, members of the RAB have attempted to interpret the FOSET on their own.**

(11) This has placed an undue burden on members of the RAB to comprehend and convey information to the community and solicit responses back.

(12) Lack of substantive comments on the FOSET attest to this impossibility.

#### FOSET PUBLIC PROCESS

(1) The intent of the FOSET is to provide guidance to the State Dept of Ecology in preparation of its PPCD.

(2) In closing its comment period 3 days prior to the closing of Ecology's comment period on the PPCD, there is no opportunity for BRAC to:

- (a) Review comments from the public on the FOSET;
- (b) Respond to comments from the public; and
- (c) Revise its FOSET based on public comments before submitting it to Ecology.

(3) BRAC effectively denies Ecology the opportunity to incorporate FOSET revisions into its PPCD, since the PPCD comment period is expected to end only 3 days after the close of the comment period on the FOSET.

(4) Extending the FOSET comment period would force extension of Ecology's comment period on the PPCD and afford the public an opportunity to make substantive comments on both transfer documents.

#### NEW INFORMATION

(1) Within the past week, RAB members have become aware of new information concerning the historical use of Camp Bonneville and activities that took place on the property.

(2) The RAB has the right to notify BRAC, Ecology and the County of this new information publicly and on record at the next RAB meeting, prior to the closing of the respective comment periods.

#### FEDERAL FISCAL YEAR

(1) The federal fiscal year ends Sept 30.

(2) There is time for BRAC to issue an extension without impacting funds allocated for the current fiscal year.

(3) BRAC should not expedite legal documents that will transfer to the public a site worth more than \$25 million in cleanup along with catastrophic personal injury and liability implications without sufficient public review.

**PLEASE FORWARD THIS REQUEST TO BRAC AND DoD LEGAL DEPT'S FOR IMMEDIATE REVIEW. FAILURE TO ADDRESS THIS REQUEST IN A TIMELY MANNER AND IN CONSULTATION WITH LEGAL ADVISORS MAY CONSTITUTE GROUNDS FOR A LEGAL CHALLENGE.**

Sincerely,

*[s]*

**Lynelle West Hatton  
As An Individual And Community Member**

**Member, Camp Bonneville Restoration Advisory Board  
Chair, TAPP Committee (Technical Review Committee)  
lynellehatton@comcast.net**



## Army Response to Lynelle Hatton's May 2, 2006 FOSET Comments

Number	Page	Comment
1.	1	<p>A free-range regional park is <b>not</b> and never will be consistent with protection of human health and the environment, since it will expose the public to UXO over 70% of the site.</p> <p><b>Army response:</b> The Army is transferring Camp Bonneville to Clark County under a conservation conveyance. The reuse for conservation purposes was outlined in the Clark County Reuse Plan, was made available for public review and was evaluated by the Army. Conservation uses described in the Reuse Plan include a regional park, a rustic retreat center/outdoor school, trails and nature areas, timber resource management areas and habitat restoration. The County does not intend that the entire Camp Bonneville area will be a regional park. Approximately 800 acres of the 3,020 acres at Camp Bonneville (or little more than 25%) will be dedicated as a regional park area. The park area available to the public will be limited to clearly marked trails and nature areas and will be cleared of UXO to a level that is protective of human health and the environment. The remaining acreage will have no public access but will be maintained as habitat restoration and conservation areas. The presence of ordnance and explosives on the property and the adequacy of land use restrictions and notifications have been assessed based on the County's various proposed uses for the property. The Army will also enter into an Environmental Services Cooperative Agreement with Clark County to ensure that cleanup is conducted. While cleanup activities are ongoing, there will be no public access to Camp Bonneville at all. When the cleanup is completed, permanent land use controls will be imposed.</p>
2.	2	<p>Necessary response actions have been unnecessarily delayed for years because the DoD has ignored Ecology's Enforcement Orders. Likewise, Ecology has chosen not to enforce them.</p> <p><b>Army response:</b> The Army and WDOE have worked to resolve environmental issues and concerns. The County will conduct the necessary response actions funded by the ESCA and pursuant to the</p>

		Prospective Purchaser Consent Decree (PPCD) issued by WDOE. The PPCD is an enforceable agreement between Clark County and WDOE and outlines a process for response actions with oversight from WDOE.
3.	2	<p>The proposed use restrictions for the purpose of protecting human health are ineffective because they will not prevent people from coming into contact with UXO.</p> <p><b>Army response:</b> Public access to the property will be restricted until response actions are complete. Appropriate land use controls, including restrictions, training information, signage and fencing, will be in place during and upon completion of response actions to protect the public. Also see comment 1 above.</p>
4.	6	<p>The ESS cannot possibly define measures that will protect the public on sites containing UXO.</p> <p><b>Army response:</b> The purpose of the Explosives Safety Submission (ESS) is to ensure that all applicable Department of Defense and Army explosive safety standards are applied during munitions response action. Clark County will be required to submit an ESS before trained professions can begin munitions response activities on the property. In addition, the PPCD will provide specific specifications of how cleanup will be conducted for the protection of human health and the environment.</p>
5.	6	<p>It is unrealistic to make provisions for on-site construction support for all construction activities in perpetuity. This would be cost-prohibitive and logistically impossible.</p> <p><b>Army response:</b> The construction support noted on Page 6 refers to the support required during response actions and does not refer to any construction that might occur on the property when cleanup is complete. Qualified UXO personnel will be required to provide construction support during certain response actions where there is a likelihood of encountering MEC. Any construction that might occur subsequent to cleanup involving ground intrusive activities would be subject to land use restrictions.</p>
6.	7	Clark County's land use control plan should not be approved by the

		<p>DoD. It does nothing to prevent people from coming into contact with UXO.</p> <p><b>Army response:</b> Clark County has not received the Camp Bonneville property yet and therefore has not submitted a detailed land use control plan to WDOE for approval. It will include warnings, information, training and fencing as required and may be tailored to address specific areas of Camp Bonneville, the presence of MEC and the level of public access to those areas.</p>
7.	7	<p>Over time, the public will develop a false sense of security. People will not distinguish between areas cleared of UXO and areas that contain UXO, despite fences and signs.</p> <p><b>Army response:</b> After the transfer, Clark County will be required to maintain land use controls under the ESCA and the deed. In addition, WDOE will review the land use control plan to ensure that it is sufficiently protective.</p>
8.	7	<p>The ASR was incomplete in 1997 and remains incomplete even after updates in 1999. Additional, critical information and materials have been identified at RAB meetings that are not included in the ASR.</p> <p><b>Army response:</b> The ASR does not require updating. Additional information collected after the Archive Survey is placed in the Administrative Record and is available for review by the public.</p>
9.	9	<p>The methodology for a significant site characterization study was discredited by Ecology.</p> <p><b>Army response:</b> Additional site characterization will be performed by Clark County and must be approved by WDOE. WDOE has required additional site characterization as part of the early transfer process.</p>
10.	12	<p>There are no provisions for groundwater remediation – only provisions for groundwater monitoring. Cleanup costs should include remediation.</p> <p><b>Army response:</b> An evaluation for the necessity of groundwater remediation at the Demolition Area 1/Landfill 4 has not been</p>

		<p>conducted. Additional groundwater monitoring will be addressed by Clark County once agreement with WDOE is reached. This will be funded by the Army as part of the ESCA. The need for groundwater remediation will be evaluated by Clark County and WDOE.</p>
11.	16	<p>The statement that monitoring wells have been installed in strategic locations is false. No technical studies were performed for determining the best locations of these wells. Further, wells at the property line are ineffective in protecting contamination from moving off-site. Once contamination has reached the wells at the property line, it has virtually moved off-site.</p> <p><b>Army response:</b> Groundwater contamination has been documented in the monitoring wells near Landfill 4/Demo Area 1. Monitoring wells have been installed down-gradient of this site to monitor for potential migration, which has not been indicated. Groundwater monitoring wells at the Camp Bonneville property boundaries are designed to monitor the groundwater going off-site and are not intended to prevent contamination from migrating. At this time, there is no evidence of off-site groundwater contamination from activities at Camp Bonneville.</p>
12.	17	<p>There is no remediation planned for groundwater contamination, and there are no funds designated for remediation once it becomes necessary.</p> <p><b>Army response:</b> An evaluation for the necessity of groundwater remediation at the Demolition Area 1/Landfill 4 has not been conducted. Groundwater monitoring will be addressed by Clark County once agreement with WDOE is reached. This will be funded by the Army as part of the Environmental Services Cooperative Agreement (ESCA).</p>
13.	17	<p>The statement that Lacamas Creek has not been contaminated is not based on scientific studies, but on random sampling. This method is useless. Much of the contamination would be carried away rapidly by even the smallest current and would end up in the aquifer.</p> <p><b>Army response:</b> The most effective way to determine whether Lacamas Creek has been contaminated is to perform sampling.</p>

		Surface water and groundwater samples have been taken to assess the water quality. There are no locations on the Camp Bonneville property where site activities are known to have affected the quality of surface water.
14.	17	In areas of standing surface water, contamination such as perchlorate are heavy enough to sink and would not be detected on the surface.  <b>Army response:</b> Noted.
15.	18	The cultural assessment was conducted by people who never visited the site. This assessment could not have been definitive in its conclusions.  <b>Army response:</b> Cultural resource professionals from Ft Lewis visited Camp Bonneville and performed document research. Further, both Washington State and federal experts were involved in the assessment. The National Park Service (NPS) conducted an evaluation of Camp Bonneville and Camp Killpack to determine if there were historic properties located on the property. Based on this information, the Army determined there were no properties eligible for listing on the National Register of Historic Places. The Washington State Historic Officer (SHPO) concurred in this determination. Currently, the Army, SHPO, and several Indian tribes are reviewing the 1998 Programmatic Agreement to determine if any conditions have changed and are preparing an amendment that will address any changes.
16.	20	There has been no opportunity to review restrictive covenants in the PPCD and ESCA because of the concurrent comment periods.  <b>Army response:</b> The ESCA does not contain restrictive covenants. The PPCD requires that restrictive covenants limiting access to the property during remediation efforts must be recorded; however, the PPCD does not describe specific covenants. Restrictions for this property are included in Attachment 1 and 2 of the FOSET, which was available for public comment.
18.	20	The LRA is represented by essentially 5 people: Commissioner Boldt, Bill Barron, Pete Capell, Brian Vincent and Jeroen Kok. This is an inadequate representation.

		<p><b>Army response:</b> Clark County is the authorized LRA for the Camp Bonneville property.</p>
19.	21	<p>Restrictive covenants are not identified in the FOSET; however, the assumption is that the DoD has reviewed the covenants and is confident they will keep people out of areas that have not been cleared of UXO. This fails to recognize: (a) that not all people are of the same behavioral, developmental and physical conditions; (b) youth will be attracted to the danger signs and will be likely to breach fences for the sake of finding UXO.</p> <p><b>Army response:</b> Restrictive covenants are identified in the FOSET: Attachment 1, CERCLA Notice, Covenant, and Access Provisions and Other Deed Provisions, and Attachment 2, Environmental Covenants, Conditions, and Restrictions. Land use controls and training are designed to prevent and deter unauthorized use. Please see Army responses to comments number 3 and 7 above.</p>
20.	22	<p>The FOSET states the new property owners will be responsible for any future lead-based paint and asbestos remediation found to be necessary. This remediation should be the responsibility of the Pollutant.</p> <p><b>Army response:</b> Lead-based paint and asbestos are only a hazard if the buildings are not maintained and/or used properly. This will be the responsibility of the new owner, who is given notification of these contaminants in the FOSET and the deed.</p>
21.	23	<p>The covenants/restrictions can't possibly protect people from coming into contact with UXO; these covenants issue the property "As Is."</p> <p><b>Army response:</b> The "As Is" provision states that Clark County has inspected the property and agreed to accept it in its current condition; however, the Army remains responsible for its obligations under the CERCLA. The covenants/restrictions are designed to protect the public after transfer of the property from the Army to Clark County during and after required response actions. The land use controls, restrictions and covenants will remain in effect until terminated, removed or modified with WDOE concurrence.</p>

22.	23	<p>Land Use Controls may be required for properties with UXO, but they do not protect public health and safety.</p> <p><b>Army response:</b> The Implementation Plans for the park will be explicit about the land use controls, which are designed to protect human health and the environment. WDOE will review and accept/reject these plans.</p>
23	24	<p><b>The FOSET does not meet the standards for early transfer because the use is not consistent with public health and safety.</b></p> <p><b>Army response:</b> The Army disagrees with this statement. CERCLA provides that property may be transferred under early transfer procedures if the property is suitable for transfer for the use intended by the transferee and the intended use is consistent with the protection of human health and the environment. The intended use of the property is for conservation and park purposes. The Army made the finding of suitability for an early transfer based on the intended use of the property for conservation purposes, the environmental condition of the property, the response actions that will be completed through the ESCA, and the implementation of land use controls, as stated in the FOSET.</p>
24	86	<p>Hold Harmless Covenant – Grantee will hold Grantor harmless for any claims associated with the property. This is a huge risk for the County given the probability of people encountering deadly UXO.</p> <p><b>Army response:</b> Clark County and the Governor of the State of Washington will evaluate the FOSET, including the covenants and restrictions, to determine if they want to go forward with the property transfer.</p>

# Army Response to Request for Public Comment Extension:



DEPARTMENT OF THE ARMY  
BASE REALIGNMENT AND CLOSURE  
ATLANTA FIELD OFFICE  
1347 THORPE AVENUE, SW  
BUILDING 243  
FORT MCPHERSON, GEORGIA 30320-1862

DAIM-BD-A

MAY 03 2006

MEMORANDUM FOR Ms. Lynelle West Hatton, Camp Bonneville  
Restoration Advisory Board (RAB) member

SUBJECT: Response to 1 May 2006 letter

1. The Army will not formally extend the comment period for review of the Finding of Suitability to Early Transfer (FOSET) for the reasons set forth below; however, the Restoration Advisory Board (RAB) comments received during the period that the Army reviews and considers other public comments will be reviewed, considered and included in the final FOSET.

2. Camp Bonneville - RAB has been active throughout the decision making process at Camp Bonneville and the Army has consistently provided the RAB technical information pertaining to the cleanup activities. Over the years, the RAB has been diligent with the opportunity to comment on the environmental restoration issues and decisions as they were made. The (FOSET) contains no new technical information from the documents that have been issued and reviewed. The FOSET is a summary of the technical studies and remedial actions taken, including the decisions that have been made and documented. All of these documents have been provided to the RAB.

3. Your letter states that the 30-day comment period would not give the RAB members time to review the FOSET and facilitate communication between the Army and the public. During the public comment period, any and all members of the public are invited to review the FOSET and provide comments to the point of contact (POC) published in the notification. The public is not required to give their comments on the FOSET through the RAB and can provide them directly to the Army using the POC provided.

4. The FOSET and Prospective Purchaser's Consent Decree (PPCD) are two separate and distinct documents. The primary intent of the FOSET is not to provide guidance to Washington Department of Ecology (WDOE) in its preparation of the PPCD. The FOSET is an

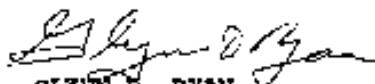




Army document whose purpose is to provide notice of the current status of the property and any remaining environmental issues at Camp Bonneville, to comply with CERCLA and DoD requirements and to discuss the suitability for transfer of the property for use as a conservation and park area. The PPCD is a Washington State document, which focuses on specific future cleanup requirements and scheduled cleanup processes required under Washington State laws and regulations. WDOE and the Army may comment on each other's document. All comments received by both the WDOE and the Army regarding their respective document are considered, attached to their respective document and become part of the final PPCD and the final FOSET.

5. The Army will review all comments it receives on the FOSET, consider those comments and make revisions based on those comments prior to finalizing the FOSET. The Army team will begin reviewing the comments received when the comment period ends. While the Army does not intend to extend the comment period, any comments received from the RAB during our review and comment consideration period will be reviewed and considered and will be attached to the final FOSET.

6. For Additional information please contact Jerry Proston at 404-464-4175.



GLYNN D. RYAN

Chief, Atlanta Field Office  
Department of the Army  
Base Realignment and Closure

CF:  
RAB Members

# Army Response to TAPP Request:



DEPARTMENT OF THE ARMY  
BASE REALIGNMENT AND CLOSURE  
ATLANTA FIELD OFFICE  
1347 THORNE AVENUE, SW  
SUITE 243  
FORT MCNERSON, GEORGIA 30304-1062

DAIM-ED-A

MAY 03 2006

MEMORANDUM FOR: Lynelle West Hatton, Camp Bonneville Restoration Advisory Board (RAB) member

SUBJECT: Camp Bonneville Technical Assistance for Public Participation (TAPP) application

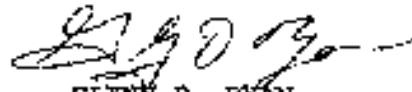
1. The Base Realignment and Closure Office has received and evaluated the Camp Bonneville TAPP request from the Restoration Advisory Board (RAB). We regret to inform you that the application is denied. The application did not meet the criteria as specified in section 203.5 of the TAPP rule. The TAPP rule states that the RAB must demonstrate that the technical expertise necessary for the proposed project is not available. Your application did not address this topic.
2. The Army and WDOE are responsible for conducting and overseeing the environmental restoration at Camp Bonneville and are available to address environmental restoration topics proposed by the RAB. The Army has provided and will continue to provide information to the RAB on technical issues relating to environmental restoration and munitions and explosives of concern.
3. Should the RAB decide to continue to pursue the formation of a TAPP, please resubmit your application and demonstrate that technical expertise is not currently available to support the RAB per section 203.5 of the TAPP rule.
4. We would like to be informed if the RAB has specific restoration topics that the Army should address at the next RAB meeting. We appreciate the service and interest of the RAB in the environmental restoration and future of Camp Bonneville.



DAIM-ED-A

5. For additional information please contact Jerry Preston at  
404-464-4175.

Encl



GLENN D. RYAN  
Chief, Atlanta Field Office  
Department of the Army  
Base Realignment and Closure

CF:  
RAB Members

## **Public Comments from Karen Kingston, RAB Co-Chair**

Subject: FOSET Comments/Camp Bonneville

May 2, 2006

Glynn Ryan

BRAC - FOSET Comments

Please include my comments for the FOSET and within the Administrative Record for Camp Bonneville Military Reservation.

1. As the Co-Chair of the Camp Bonneville RAB I am commenting on the timeline for public comment set by BRAC and the US Army for the FOSET. I have received 31 complaints from the RAB and the general public as to the 30 day comment period for the FOSET. The complaints are founded and mention the status of incomplete appendix documents that are mentioned within the body of the FOSET and extend to the complete derelict of duty to assist the public by disallowing access to the Explosives report mentioned. One RAB member requested this report on behalf of several people, and was left unanswered. The FOSET document is incomplete.

2. Glynn Ryan and his assistants were notified in writing by an unanimous vote at the April RAB meeting requesting the Army/BRAC to extend the public comment period to 60 days. There is discussion within the minutes and several conversations extended into break periods. The notice from BRAC/US Army stating the request was not granted did not mention the meeting discussions. Most RAB members assumed that Mr. Ryan would endeavor to convey the general RAB consensus regarding details as to why the request was established.

The BRAC notice of noncompliance registers specifically that a reason was not provided for the extension request. This is untrue.

3. After polling several bases nationally and talking with a well known cleanup contractor it is clear that a timeline of providing a comment period for a PPCD and a FOSET together is highly unusual and it was stated that no one had ever heard of this procedure whereby both of these transfer documents run concurrently, closing within mere days of one another. In fact, not one person or base I polled had ever heard of this.

4. The BRAC/US Army did not provide copies to the RAB in a timely manner and thus the public review period was relegated to only 15 days. The sheer fact that the community RAB is a

volunteer demographic, every attempt to facilitate this volunteer base should be given top priority. The BRAC office and its contractors did not facilitate the RAB or provide ample time to accept public questions as to how the FOSET should be commented upon. The public was denied a public meeting where they could offer their questions and be given advice as to commenting procedures.

The transfer of Camp Bonneville with its complex UXO/MEC and other contamination concerns will become a precedent setting transfer within BRAC. Every attempt to facilitate a concerned and questioning public should have been made. Keeping this process transparent and to apply public trust should be more than just a public relations project or a fact of attitude. The BRAC office and the US Army should endeavor to better manage document disclosure even if the only consideration is liability within the guise of its own transfer procedures for a contaminated base of this magnitude. I am unable to comment further on the FOSET without an extended period to do so.

Sincerely,

Karen Kingston  
22517 N E 88th Street  
Vancouver, WA  
Camp Bonneville Restoration Advisory Board co-chair

## **Army Response to Karen Kingston comments**

1. As the Co-Chair of the Camp Bonneville RAB I am commenting on the timeline for public comment set by BRAC and the US Army for the FOSET. I have received 31 complaints from the RAB and the general public as to the 30 day comment period for the FOSET. The complaints are founded and mention the status of incomplete appendix documents that are mentioned within the body of the FOSET and extend to the complete derelict of duty to assist the public by disallowing access to the Explosives report mentioned. One RAB member requested this report on behalf of several people, and was left unanswered. The FOSET document is incomplete.

**Army Response:** The Army formally responded to the RAB request for an extension to the FOSET public comment period in a letter dated 3 May 2006.

It is not exactly certain which document is being referred to here, however, the Explosive Safety Submission (ESS) mentioned in the body of the FOSET is a planning document for how to handle munitions and explosives of concern (MEC) if found during investigations. Since the document refers to a future requirement for the transferee, the approved ESS does not exist yet for future work at Camp Bonneville. The April 2004 ESS that accompanied the Work Plan for the cleanup activity already conducted at Landfill 4/Demo Area 1 is available to the public and is located at the Vancouver Library repository. An email request was made on 24 April and 1 May 06 for the ESS and an electronic copy of the ESS was provided on 2 May 06.

2. Glynn Ryan and his assistants were notified in writing by an unanimous vote at the April RAB meeting requesting the Army/BRAC to extend the public comment period to 60 days. There is discussion within the minutes and several conversations extended into break periods. The notice from BRAC/US Army stating the request was not granted did not mention the meeting discussions. Most RAB members assumed that Mr. Ryan would endeavor to convey the general RAB consensus regarding details as to why the request was established. The BRAC notice of noncompliance registers specifically that a reason was not provided for the extension request. This is untrue.

**Army Response:** The Army did consider the RAB request for an extension to the FOSET public comment period. An official response was provided on 3 May 06. Although an official extension to the public comment period was not provided, the Army did agree to consider any additional comments until June 15, 2006. Under CERCLA Section 120(h)(3)(C), a public comment period of 30 days is required for a FOSET.

3. After polling several bases nationally and talking with a well known cleanup contractor it is clear that a timeline of providing a comment period for a PPCD and a FOSET together is highly unusual and it was stated that no one had ever heard of this procedure whereby both of these transfer documents run concurrently, closing within mere days of one another. In fact, not one person or base I polled had ever heard of this.

**Army Response:** By allowing the public to review the FOSET during the time that WDOE had the PPCD document open for public comment, the Army had intended for the FOSET to provide the background information and current status of the property. With this knowledge at hand, the public reviewers would be able to see how the PPCD addressed the remaining environmental work to accomplish the cleanup needed for the property. Furthermore, each property transfer is different and uses different mechanisms for transfer.

4. The BRAC/US Army did not provide copies to the RAB in a timely manner and thus the public review period was relegated to only 15 days. The sheer fact that the community RAB is a volunteer demographic, every attempt to facilitate this volunteer base should be given top priority. The BRAC office and its contractors did not facilitate the RAB or provide ample time to accept public questions as to how the FOSET should be commented upon. The public was denied a public meeting where they could offer their questions and be given advice as to commenting procedures.

**Army Response:** A CD containing the FOSET was mailed to the RAB members on the day the public comment period began. The public notice contained a website where the FOSET could be viewed. A hard copy of the document was also available at the local library. When RAB members requested a hard copy of the FOSET, the Army had copies printed and mailed. RAB members did not get the paper copies of the FOSET until the public comment period was underway, however, the Army made sure the RAB and the general public had access to the document via the internet and the local public library. There is no requirement for a public

meeting.



## **Public Comment – Don Wastler:**

Public Works

Attn: IMNW-LEW-PWE

Box 339500 MS 17 (J. Walters)

After reviewing the draft Finding of Suitability for Early Transfer I can see that all measures for public safety are being taken. As I do not agree with Clark County's reuse plan I do agree this transfer is necessary for Camp Bonneville's restoration project to continue.

My major concern for Camp Bonneville is it's future. The forest in Camp Bonneville protects Lacamas Creek from flooding during and after heavy rains. Any timber harvest for revenue will bring additional flooding and damage to property down stream. There is also an enormous amount of wildlife in Camp Bonneville we are not even aware of. Many animals we never see that need that forest for they're survival.

If the Washington State Department of Ecology finds Camp Bonneville suitable for transfer then I extend my support.

Camp Bonneville Restoration Advisory Board Member

Don Wastler

PM Box 405

6700 NE 162nd Av. #611

Vancouver Washington 98682

**Army Response to Mr. Wastler, RAB Member:**

P.O. Box 405  
6700 NE 162<sup>nd</sup> Avenue #611  
Vancouver, WA 98682

Mr. Wastler,

Thank you for reviewing the draft Finding of Suitability for Early Transfer (FOSET). I appreciate your participation in the Camp Bonneville Restoration Advisory Board and your concern for the future of the Property.

Sincerely,

Mike G. Drumheller, BRAVO Team Chief  
Base Realignment and Closure Division

## Public Comments from Dvija Michael Bertish, RAB Member

Please add these public comments to the administrative record and to all DoD/Army BRAC/Washington State and Clark County files regarding Camp Bonneville. Please confirm via return email that these comments have been received and applied to the administrative record.

These comments are submitted by Dvija Michael Bertish, member of the Camp Bonneville Restoration Advisory Board. Mr. Bertish is also a member of Columbia Riverkeeper, and serves as the current chairman of the Rosemere Neighborhood Association, and these comments are also submitted on behalf of these two non-profit organizations.

Though these comments have been forwarded to the Army after the official expiration of the public comment period for this FOSET, the Army has stated in writing that it will accept public comments from RAB members while the Army's review process of the FOSET is still underway, and these comments are forwarded within this review process.

Please note that these comments reflect the well-voiced public perspective that the intended re-use for Camp Bonneville as a regional public park is unacceptable while MEC/UXO and their associated contaminants remain on site (even after the proposed clean-up plan is complete) which will create an unacceptable risk of harm to the public's health and safety and the environment. Thus, Camp Bonneville has become a significant trend-setting property that will be used to establish precedent by which the Army can lessen its liability for all future transfers of BRAC sites in the future, and this commenter fully believes that such a precedent is not only ill-advised, but is also truly dangerous to the public.

These comments are arranged as follows. Each comment is introduced with an exact quote from the draft comment, listing the section and page numbers from where the quote was taken. Immediately following each quote is a public comment that pertains to the preceding quote from the draft.

////////////////////////////////////

### **Section 1, page 1**

“Response actions will be performed in accordance with the regulatory requirements documented in the Prospective Purchaser Consent Decree (PPCD) as funded by the Army through an Environmental Services Cooperative Agreement (ESCA).”

### **Comment on Section 1, page 1**

At the time of this public comment, the public has requested access to and public review of the ESCA, but no copies of this document have been provided. An acceptable draft Engineering Evaluation and Cost Analysis report has yet to be produced and submitted to Ecology due to insufficient data collection. Without acceptable data, and without an acceptable Cost Analysis, the draft ESCA cannot be based on credible facts that can produce a realistic projected budget for the proposed clean-up plan. It is ill-advised to sign agreements for a dirty transfer of contaminated property when the receiving party cannot determine if proposed clean-up costs are sufficient to ensure the public's health and safety.

### **Section 3.1, page 2**

“Camp Bonneville’s mission was to provide a training camp for active, reserve, and guard units of the United States Army, Navy, Marine Corps, and Coast Guard. Training exercises generally included weapons training with small arms ammunition, assault weapons, and field and air defense artillery.”

### **Comments on Section 3.1, page 2**

There is no mention that the training camp was also used by foreign military forces, and there are no records available to determine the activities undertaken by these forces.

### **Section 3.1 page 3**

“Records indicate that military munitions were disposed of by open burning or open detonation (OB/OD).”

### **Comments on Section 3.1 page 3**

Records indicate that drums containing toxic chemical substances were buried at the Camp, but the location of these buried drums has yet to be disclosed. The FOSET states that some drums were previously removed, but there are additional drums that are thought to still be buried on site.

### **Section 3.3 page 5**

“Open burning (OB) or open detonation (OD) activities are known or suspected to have occurred at the demolition sites. “

### **Comments on Section 3.1 page 3**

Open burning was conducted in violation of a DoD no-burn order in the 1980's.

#### **Section 4. page 5**

“The information provided herein is a result of a complete search of agency files during the development of this FOSET. A complete list of documents that provide information on the environmental condition of the Property is included as Attachment 3 - Document List.”

#### **Comments on Section 4. page 5**

Attachment 3 lists archives of Restoration Advisory Board Minutes. However, the Restoration Advisory Board Minutes from May 2005 through May 2006 are missing from the attachment and need to be added.

The Army has repeatedly stated that it has conducted an exhaustive archive search of historical documents to determine the nature and the level of contamination of the site, and the locations of the explosives. The state seems to have accepted the Army’s presentation of documents in this search. However, members of the public are continuing the search and have readily identified documents that should have been part of the Army’s records, but for unknown reasons have been ignored. The community is also collecting witness testimonials to record additional historical information that is missing from the Army’s archives.

There is a parcel of land known as the Livingston Pit outside the current boundaries of the clean-up work plan. The County plans to use this pit for gravel mining in the future. Documents have surfaced that indicate the Livingston Pit was historically part of Camp Bonneville, but is not considered a part of the Camp at this time. These documents indicate that the pit was known to contain explosives from the Army, but this is not part of the current clean-up plan. These documents were internal to a state government agency, and thereby are credible sources of relevant and important information that should have been considered in the entire clean-up plan. How will the County react when a backhoe or bulldozer that is digging for gravel accidentally ignites a missile or a bomb that might explode in the immediate vicinity of residential neighborhoods? Should such an accident occur, the Army would remain free of liability in that the noted parcel is not represented within the transfer documents. Members of the public believe the archive search report has been marginalized to avoid the publication of such information.

#### **Section 4.1 page 5**

“Based on a review of existing records and available information, there is evidence MEC is present on certain areas of the Property.”

#### **Comments on Section 4.1 page 5**

MEC is present on 90% of the property, and MEC will remain on 70% of the property in perpetuity under the army's proposed clean-up plan. The community has often voiced its concern about this, particularly the concern that the re-use plan is not compatible with a hefty amount of MEC remaining on site in perpetuity.

#### **Section 4.1 page 7**

“Clark County shall develop a detailed land use control implementation plan (LUCIP) to help ensure the safety of people (on-site personnel, the general public) from any explosive hazards associated with MEC known or suspected to be present. The plan should include warning measures, information, training and physical barriers, if required. Because not all areas of Camp Bonneville have explosives safety concerns, the LUCIP can be tailored to fit the requirements of limited or restricted access in certain areas where MEC is known or suspected to be present.”

#### **Comments on Section 4.1 page 7**

Clark County's published public comments on the Draft RI/FS for RAU3, page 60, item #3, state:

“Clark County was not consulted in the development of the draft RI/FS and, specifically, was not consulted in the Army's development of the Institutional Controls element of the proposal. The County believes that, given the current proposal, the Army will place a substantial burden on the County by over reliance on institutional controls to protect public health and safety. Proposed institutional controls must be thoroughly evaluated to determine alternatives and whether or not the selected alternatives are practical, affordable are consistent with the Reuse Plan. This current proposal would result in a site with a significant public safety concern (large areas which are not searched or therefore cleared of UXO), and which could pose a significant public safety hazard which ultimately might not be adequately mitigated through the implementation of institutional controls. Additionally, in the County's estimation, the proposal inadequately addresses clean-up standards by leaving the potential for exposing people and the environment to long-term exposure risks associated with UXO. Furthermore, the over reliance of institutional controls will result in an inequitable savings to the Army, which will burden both existing and all future county taxpayers with the costs associated with institutional control requirements. The true cost of these institutional controls is incomplete since the details are not present and the time for which the controls must be in place will be significantly beyond the 10-years noted in the draft.”

This commenter agrees wholeheartedly with Clark County's assessment on the subject of institutional controls, and do not believe that Clark County is capable of creating a plan that will ensure the public's safety when a vast amount of the property will forever contain MEC/UXO. The proposed institutional controls are insufficient to ensure the public's safety, and the answer

to alleviating this conflict is for the army to fully remediate the MEC/UXO throughout the site, not just in areas that are intended for heavy re-use by the public under the plan for a regional park.

**Section 4.1 page 7**

“RAU 3 is the remedial action unit that addresses all MRS known or suspected to contain MEC throughout Camp Bonneville”

**Comments on Section 4.1 page 7**

It is possible that remedial activities could expose the presence of unknown or unsuspected MEC/UXO. There needs to be a contingency plan established to address this possibility.

Once the transfer agreements have been signed, the County will not be able to recall the Army into additional clean-up plans for contaminants or hazardous waste within areas that were not thoroughly assessed or characterized. In other words, all parties are aware that there is an unknown quantity of explosive/hazardous materials hidden within the Central Impact Target Area and associated Artillery Firing Ranges. If the County accepts the risk of the clean-up plan as currently defined, it cannot make the Army undertake additional clean-up costs in the future. Nothing found within the Artillery Firing Ranges or the Central Impact Area will be considered a new source, and therefore, if the cost cap is insufficient, the County will bear the burden of additional cleanup costs. This is an unacceptable risk to the County.

**Section 4.1 page 7**

“Several site characterization studies and munitions responses (removal actions) have been completed at RAU 3.”

**Comments on Section 4.1 page 7**

The statistical characterization model was declared to be insufficient by DOE, and that data was disregarded. DOE did not agree that the army’s statistical model accurately or reasonably reflected the amount of MEC/UXO still on site. Site characterization did not include sufficient sub-surface analyses.

**Section 4.1 page 8**

“Supplemental Archives Search Report 1999 – This search was performed to fill data gaps identified in the 1997 ASR. Primarily, data gaps associated with potential munitions located beyond the border of the installation. The Supplemental ASR included a review of background information and interviews with residents surrounding Camp Bonneville.”

### **Comments on Section 4.1 page 8**

The archive search report is incomplete. Community members are continuing to find important documents that are not included in the archives and have therefore escaped review. Community members are continuing to interview people with knowledge of historical facts. For example, one individual who used to run the outdoor school program at Camp Bonneville, has testified that Howitzers were repeatedly fired beyond the boundary of the camp, and it is even noted that these firings bombarded a neighbor's barn on at least three occasions. The army has formerly denied that Howitzers left the Camp boundaries. There have been no formal studies to determine the hazard of MEC beyond the perimeter of the Camp into properties that were later developed into residential neighborhoods.

Video footage from the 1950's shows Howitzer missile launchers employed on what was called the parade grounds of Camp Bonneville. The parade grounds were an open field at the base of the Camp, overlooking the "saddle," a forested mountain area directly to the northeast. Some of the missiles fired at Camp Bonneville have a range beyond six miles, and debris from test firings may exist beyond the confines of the camp and well into newly developed gated communities such as Summer Hills and Autumn Hills that were built at the Camp's borders since the early 1990's.

### **Section 4.1 page 8**

“Time-critical Removal Action (TCRA) 1999 - The purpose of this action was to remove all live and inert MEC and any MD in the two former M203 rifle grenade ranges (TA 8 and TA 9 - 12 acres combined) to a depth of two feet.”

### **Comments on Section 4.1 page 8**

A Chemosphere study entitled “Identity and distribution of residues of energetic compounds at army live-firing ranges (2006, pp 1280-1290)” studied 23 army firing ranges, including Camp Bonneville. This study was conducted by scientists including those from the US Army Engineer Research and Development Center. The report reads, “soil profiling has shown that major residue concentrations are in the top several centimeters (Jenkins et al., 2001; Pennington et al., 2003; Hewitt et al., 2005a).” Even though MEC has been remediated, the toxic residues still remain in the soil and need to be remediated in any area where MEC/UXO has been found or where it was deployed on site.

### **Section 4.1 page 9**

“**Landfill 4/ Demo 1 Removal Action** – The Interim Removal Action (IRA) report, which was



submitted as draft to WDOE in June 2005, details the soil cleanup performed at the site. This work included the removal and disposal of OB/OD ordnance, landfill materials and specified associated contaminated soil.”

#### **Comments on Section 4.1 page 9**

This removal action was undertaken in an attempt to remediate groundwater contamination, including a plume containing UXO, RDX and mercury. Groundwater monitoring for more than a year indicates that the concentration of contaminants has not been successfully remediated. There is a possibility that the contaminant source has not been entirely removed.

Residents in the surrounding area rely upon well water, and the moving underground plume could potentially render the drinking water unsafe for consumption in some places. Water quality test results have shown that sentry wells tested positive for ammonium perchlorate, though the test results have been dismissed as being “false positives.” One sentry well in question abuts a private residence.

#### **Section 4.1 page 9**

“The IRA report validates and documents that any UXO, UXO disposal/demilitarization, landfill excavation (i.e. removal of debris and impacted soil), and disposal of all excavated material were completed per approved work planning documents, and all associated regulations established by WDOE and local agencies.”

#### **Comments on Section 4.1 page 9**

DOE has stated in public meetings that it may take years to remediate the groundwater plume at Landfill 4. It is premature to state that the work plan for this issue is complete. A contingency plan may be required to deal with continued groundwater contamination, such as the injection of bacteria directly into the plume to attempt a more rapid decline of the contaminant load.

#### **Section 4.1 page 10**

“The above actions have addressed over 2,400 acres of the Property including MRS known and suspected to contain MEC, all existing trails and roads, and a 1,200-acre area proposed for a future regional parkland. The results of the actions led to site characterization and analysis of cleanup alternatives presented in the November 2004 *Draft Remedial Investigation/Feasibility Study, Remedial Action Unit 3, Camp Bonneville, Washington.*”

#### **Comments on Section 4.1 page 10**

Commenting on the Draft RI/FS, the community voiced that there was insufficient site

characterization performed by the army to qualify for adequate cleanup plans. In public meetings, the DOE also confirmed that additional study and site characterization would be needed (beyond what the army identified in the RI/FS) in order to produce an effective cleanup plan. According to the Prospective Purchaser Consent Decree, the DOE states repeatedly that the army has not provided the required documents, studies and plans for acceptable clean-up on various RAU sections. Thus, the characterization mentioned above is far from complete and does not adequately provide enough data for sufficient site characterization.

The Prospective Purchaser Consent Decree lists the following items (that were the responsibility of the Army) that were not completed as required:

- 1) Draft Cleanup Action Plan not finalized
- 2) Restrictive covenants required under the Cleanup Action Plan not recorded.
- 3) Draft Final Work Plan not submitted for public comment or finalized
- 4) Draft final Interim Action Work Plan for RAU 2A not submitted for public comment or finalized
- 5) Draft Final RI/FS Report not submitted to Ecology for RAU 2A, nor has it been submitted for public comment or finalized
- 6) The RI/FS Report for RAU 2B has not been submitted to Ecology
- 7) Scope of Work under Interim Work Plan for RAU 2C has not been completed
- 8) Draft RI/FS Report for RAU 2C has not been submitted to Ecology
- 9) An acceptable draft Engineering Evaluation and Cost Analysis report has yet to be produced and submitted to Ecology due to insufficient data collection
- 10) Final RI/FS Report for RAU 3 has not been submitted to Ecology
- 11) Long-Term Ground Water Monitoring and Contingency Plan has not been submitted to Ecology.

The BCRRT LLC, a new non-profit clean up team will take over the Army's responsibilities as part of the cost of clean-up, and this team will produce the required documentation as noted above. At anytime during this process, the Army can dispute the new team's findings, and refuse to fund any portion of the clean-up work plan devised by the new team. The clean-up team's managing director explains that, although this is also a concern to the County and the clean-up team, the contract allows for a "dispute resolution" process. However, the Army has consistently displayed its lack of interest in dispute resolution, has refused to acknowledge Washington State Law which resulted in the state filing an enforcement order against the Army for failure to abide by these state environmental laws. When the property transfer is complete, the state's enforcement order will be null and void. The Army's liability will have been reduced, and the

County's liability increased. This contract is terribly one-sided in the Army's favor. Dispute resolution is only effective when all parties are willing to negotiate. The Army is not a party to the Prospective Purchaser Consent Decree, and therefore, the Army cannot be enjoined by the dispute resolution process referred to within the Prospective Purchaser Consent Decree.

Given the fact that such a substantial amount of required study has not been completed by the Army in a timely fashion, this commenter firmly believes that the approval of a FOSET at this time is severely premature. This belief is not new to discussion of property transfer for Camp Bonneville. In July of 2003, Thomas Easton, associate director of the office of environmental cleanup for the EPA in Seattle stated clearly in the Oregonian that there were 1) a lot of unknowns at the site, 2) the recipient of the property is unsure about the risks involved at the site, 3) the Army was nonresponsive to EPA suggestions for clean-up, 4) the Army does not work in a collaborative manner, 5) additional data was necessary to characterize the site, especially to generate cost estimates, 6) the site is not ready for transfer of ownership, 7) that re-use of the property as a public park might not be a good decision, 8) there is only limited understanding about the nature and extent of contamination from munitions, UXO and chemical releases. [Oregonian, Jul 25, 2003, Camp Bonneville's Future Use Debated, by Foster Church.]

It is this commenter's opinion that the characterization of Camp Bonneville has not changed since associate director Eaton made this assessment in 2003, and that all of his observations are still true today. The early transfer of Camp Bonneville was attempted in 2003, but was cancelled due to the lack of credible data about the dangers present at the site. The property transfer should again be postponed until the vast data gaps can be addressed and a more comprehensive clean-up plan can be devised that will be safe enough for the intended re-use.

#### **Section 4.2 page 10-11**

“Remedial Action Unit 2B. Arsenic, barium, copper, and mercury were detected at concentrations that required a terrestrial ecological evaluation. The evaluation concluded that the metals are not a potential threat to ecological receptors.”

And

“Remedial Action Unit 2C. Metals (barium, copper, and chromium) were detected in the soil at concentrations that exceed regulatory criteria. Metal exceedances were addressed as part of the MRS soil remediation. (See Section 4.1 Munitions and Explosives of Concern for additional information.) The groundwater at this site has been affected by past site activities. Groundwater tests detected HMX at 3.5 micrograms per liter (ug/l), RDX at 97 ug/l, perchlorate at 270 ug/l,

1,1-dichloroethene at 27 ug/l, methylene chloride at 0.5 ug/l, 1,1-dichloroethane at 37 ug/l, 1,1,1-trichloroethane at 170 ug/l, dichlorodifluoromethane at 180 ug/l, and tetrachloroethene at 0.7 ug/l (all test results are shown as maximum analyte concentrations). Surface and ground water monitoring will continue in this area. The location of the RAU is shown on Figure 7- Remedial Action Unit 2C.”

#### **Comments on Section 4.2 page 10-11**

The Army’s Groundwater Monitoring Data Evaluation Report for Camp Bonneville (April 2006) identifies various quarterly results from December 2003 through September 2005 where contaminant loads exceeded MTCA levels (for unknown reasons, this report does not include the most recent data). Even after the removal of up to 27 feet of contaminated soil at Landfill 4, there is still groundwater contamination more than a year later, and the data does not indicate a downward trend toward complete remediation. This means that the contaminant load is still locked within the soil, and is carried by groundwater movement. Contaminants that have exceeded allowable MTCA levels at the study site include Arsenic, Chromium, Lead, Mercury; explosives: RDX, Perchlorate, 2,4-Dinitrotoluene, 2-Nitrotoluene; Volatile Organic Compounds: 1,1,1-Trichloroethane, and 1,1-Dichloroethene.

Mercury Fulminate shows up in the soil of old shooting ranges in the top centimeters. This contaminate stems from munitions used before 1960, and remains in the soil for a very long time.

TNT degradation produces nitrotoluenes. Both TNT and DNT are carcinogenic, TNT causing more harm to fish and DNT causing more harm to mammals. Please note that TNT byproducts exceed MTCA levels at Landfill 4, which abuts Lacamas Creek, a salmonid bearing stream . The possibility that salmonid species are being adversely effected by contaminants from military munitions should trigger compliance review under the Endangered Species Act. TNT and its byproducts can be detected in soil and water more than 50 years after the source of contamination ceased being added to the site. Unfortunately, easier decontamination processes such as composting cannot be used when MEC remains at the site in perpetuity. Thus, soil removal and replacement is the alternative required for remediation in the case of Camp Bonneville.

Soil and groundwater testing needs to be conducted for a wider variety of chemicals that were commonly used during older training methods, such as the use of picric acid in World War II. Soil and groundwater should be tested for many more kinds of High Military Explosives including Primary and Secondary Compounds, Energetic Compounds, Plastic Binders, and Propellants. The parameters being tested currently at Camp Bonneville are too limited for

adequate site characterization.

Even though Nitroglycerine (NG) is a prime explosive used in Howitzers and other munitions used at Camp Bonneville, this parameter is absent from groundwater study parameters, and it should be pursued. The army has not conducted soil and groundwater sampling within the Central Impact Target Area, and toxic residues will obviously be found there.

Hand grenades use RDX , HMX and TNT. Detectable analytes also include TNB, 2ADNT, and 4ADNT. Soils at hand grenade ranges should be tested for these parameters.

Anti-armor mortars use nitroglycerine, potassium perchlorate, ethyl centrallite, carbon black, HMX, TNT and RDX. The primary residue detected at impact areas is HMX in surface soils adjacent to the targets in excessive concentrations of hundreds of mg/kg. The noted groundwater plume at Landfill 4 also shows elevated levels of HMX.

Propellants can still be present after detonation or rupture upon impact. Pieces of propellant are often visible on the soil surface in the area surrounding the targets, and Nitroglycerine will be indicated in soil samples in these areas. Nitroglycerine is also found in the soils at firing points. This important parameter needs to be thoroughly tested in soil throughout all firing ranges.

#### **Section 4.8, page 16**

“disposal of radiological materials at Camp Bonneville is unlikely. These items are no longer stored at the Property. There is no evidence of any release of radiological materials at these buildings.”

#### **Comments on Section 4.8, page 16**

RAB minutes discuss testimony from a witness who claims that radiological materials from Hanford Nuclear Reservation may have been transported to Camp Bonneville for disposal in a landfill site circa the mid to late 1950's. Radiological surveying using high caliber gauges needs to be conducted throughout the site. Although high levels of radon gas are present in volcanic rock found at Camp Bonneville, background radiation levels can be measured by technicians using portable gamma detectors to identify the presence of radiological contaminants. This commenter disagrees with the army's assessment on this item.

Historic documentation shows that Howitzer missiles, like those launched at Camp Bonneville, could have contained depleted uranium. The missiles were launched from the parade grounds into the saddle area where tanks were placed as targets. The purpose of such tests was to

determine if the missiles could pierce armor plating commonly used in tanks, and such activities were historically performed at Camp Bonneville.

#### **Section 4.10 page 17**

“The groundwater at Demolition Area 1/Landfill 4 (RAU 2C) has been affected by past site activities. Explosives and propellants (DNT, RDX, and perchlorate) were detected in the soil and groundwater at concentrations that exceed screening criteria. The 2005 interim removal action (excavation and offsite disposal of approximately 5,000 cubic yards of contaminated soil) included the source area where the explosives and propellant compounds were affecting the groundwater...A continued sampling regime has not been established with WDOE, however the previously established quarterly sampling efforts will be continued until a new monitoring program is agreed upon by Clark County/BCRT and WDOE.”

#### **Comments on Section 4.10 page 17**

The Army’s Groundwater Monitoring Data Evaluation Report for Camp Bonneville (April 2006) recommends for the Landfill 4 site discontinued analyses for metals, reduction of sampling frequency, the discontinuation of sampling for Volatile Organic Compounds at certain wells. In light of the fact that the concentration of the contaminant load within the groundwater plume has not sufficiently decreased, and instead shows climbing levels, it is premature for the Army to recommend lesser groundwater monitoring at this site. Again, DOE has stated in public meetings that it will take years to determine if the plume is lessening, and a contingency plan for alternate remedial activities may need to be introduced to alleviate time delays.

#### **Section 4.11 page 17**

“According to the March 2000 *Final Project Completion Report, Surface Water Investigation of Lacamas Creek, Camp Bonneville, Vancouver, Washington*, the results of water samples collected from Lacamas Creek indicate that Demolition Area 1/Landfill 4 has not impacted the water quality of Lacamas Creek. There are no locations on the Property where site activities are known to have affected the quality of surface water. The water quality of Lacamas Creek is monitored at Demolition Area 1/Landfill 4 by collecting groundwater samples from monitoring wells located downgradient of Demolition Area 1/Landfill 4, and before reaching Lacamas Creek. “

#### **Comments on Section 4.11 page 17**

The statement that “there are no locations on the Property where site activities are known to have affected the quality of surface water” is an erroneous. According to the 208 Area-Wide Clark County Groundwater Management Plan (1978), leachate from the Camp Bonneville

sewage ponds contributed to failed water quality standards at Lacamas Lake, fed by Lacamas Creek, which runs through the camp. This problem was known in the late 1978 to be one of two leading sources of contamination in the Lacamas Basin . There are sewage ponds still extant on the site that are adjacent to the creek, and these facilities will need to be removed since they are located in proposed hi-intensity use parklands. The RI/FS makes no mention of abatement plans for the sewage lagoons. It is possible that the sewage lagoons could be receptacles for non-sewage contaminants (including MEC) and this needs to be studied. There has not been sufficient monitoring of the Lacamas Creek flow for the Army to declare that Camp Bonneville contaminants have not migrated into the surface waters of the area. Results from a 2006 DOE study of lakes in Washington State shows that of all the lakes studied, Lacamas Lake (fed by Lacamas Creek) had the highest concentration of mercury. Target analytes included mercury, PCBs, polychlorinated dibenzo-p-dioxins/furans (PCDD/Fs), chlorinated pesticides, flame retardants (polybrominated diphenyl ethers or PBDEs), and lipids. Fish tissue samples from Lacamas Lake exceeded National Toxics Rule (NTR) criteria for the protection of human health. The highest value of mercury in this DOE study was at 229 ppb ww, found in largemouth bass from Lacamas Lake, far exceeding the EPA's screening value for subsistence fishers at 49 ppb ww. For this reason, Lacamas Lake was placed on the 303(d) list of threatened and endangered waterbodies of Washington State and further studies will need to be done to address this elevated level of contamination. Several of the target analytes are known to originate from military explosives and other elements used at Camp Bonneville, and these items could contribute to the pollutant load of Lacamas Lake.

### **Section 8, page 20**

“Clark County is the authorized LRA for the Property and in September 1998 (updated February 2003 and finalized in November 2005) published the Camp Bonneville Draft Reuse Plan (Reuse Plan). “

### **Comments on Section 8, page 20**

The county's re-use plan was originally approved with the understanding that cleanup levels of MEC/UXO and their associated contaminants would be remediated at clean-up levels far above those currently proposed by the Army. The Army's plan to use institutional controls and to engage in public behavior modification is insufficient to ensure the public's health and safety and protection of the environment. When the re-use plan was originated, the county and the public were unaware that approximately 70% of the property would remain littered with MEC/UXO. The intended re-use is not compatible when this amount of explosive hazard will remain on site. The army has not employed the common practice of risk assessment using readily available analytical tools used by UXO removal specialists to determine the level of risk of exposure to

explosives by end users of a regional park. Thus, again, the property has not been sufficiently characterized.

Risk assessment analysis is commonly performed by munitions experts who use very specialized computer programs that will generate data to determine the chances of a park user coming in contact with explosives on site. This analysis is broken down into units of time, such as hours of operation at the park, and will include statistics that will identify the number of people that could be injured at Camp Bonneville subject to specific site conditions. There has been no such risk assessment performed at Camp Bonneville, despite the fact that site characteristics (munitions on site and a feeble barbed-wire fence as a preventative measure) dramatically increase the chances of personal injury to park users. Advanced statistical analysis should have been performed long before any transfer documents were attempted. How can a responsible local government enter into such an agreement without thoroughly understanding the risk in advance?

#### **Section 8, page 21**

“The proposal to transfer this property has been adequately assessed and evaluated for (a) the presence of hazardous substances and contamination on the property, (b) environmental impacts anticipated from the intended use of the property, (c) the presence of ordnance and explosives on the property, and (d) the adequacy of use restrictions and notifications to ensure that it is protective of human health and the environment.”

#### **Comments on Section 8, page 21**

This commenter wholeheartedly disagrees with this entire statement, and repeats that the property has not been adequately assessed and evaluated in order for the FOSET to be approved. All hazardous substances on the property have not been located. The army has not sufficiently characterized the presence of MEC/UXO on the property, which will inevitably cause elevated incidence of deed restrictions for the county in the future. This will place a disproportionate burden on the County while lessening the army’s burden of responsibility for clean-up. This arrangement is unacceptable for the County.

Even when the property transfers, the County will encounter a host of deed restrictions, and County officials will forever have to administer specific processes in order to abide by these restrictions. In other words, the County will never be free and clear of the Army’s oversight on any future use of the property. Under such deed restrictions, the County’s administrative costs will soar and the Governor’s office will remain embroiled in an administrative quagmire as the approving entity of this property transfer. If the County wanted to pave a parking lot or move a lamppost, the Army would enact the cumbersome deed restrictions. Moreover, as acknowledged



by the state, the public will have to be aware that they cannot stray from park trails or dig holes for tent pegs in certain areas of the park because of the dangers from explosives. Apparently, the deed restrictions that are part of the transfer contract will be the largest section of the agreement. Again, members of the public have declared that these characteristics are not appropriate for public space.

### **Section 9, page 21**

“The WDOE and the public were notified of the initiation of this FOSET. Regulatory/public comments received during the 30-day public comment period will be reviewed and incorporated, as appropriate. A copy of the regulatory/public comments and the Army Response will be included as Attachment 4 – Responsiveness Summary.”

### **Comments on Section 9, page 21**

RAB members did not receive their copies of the FOSET until half of the comment period had already expired. The army refused to expand the comment period to facilitate adequate public comment opportunities. The army coordinated the public comment period on the FOSET so that it would run concurrently with DOE’s public comment period on the PPCD document. This created a significant burden on the public, who were not able to respond in a timely manner. Thus, the comment period on the FOSET expired without the public’s ability to participate fully. In documents from 2003, the army noted that the FOSET comment period was intended to be 60 days, not 30 days, and the comment period for the PPCD was to begin only after the FOSET cycle was complete. Since the army was unwilling to expand the public comment period on the FOSET, it appears that the army’s intent is to restrict public participation, which is a show of bad faith. Furthermore, the army agreed to allow only RAB members to submit comments beyond the 30 day deadline, which violates the rules of NEPA public process for the rest of the general public. The notation that public comments will be reviewed and incorporated by the Army “as appropriate” makes this commenter wonder if public comments will be censored.

### **Section 10, page 22**

“Transfer or conveyance documents will notify the new owner(s) of the Property that they would be responsible for any future asbestos remediation found to be necessary.”

### **Comments on Section 9, page 21**

The army should remain responsible for all costs associated with asbestos abatement from all military buildings at Camp Bonneville. There is no reason for the county to assume responsibility for this problem. Asbestos abatement specialists must be employed by the army.

### **Section 10, page 22**

“Transfer or conveyance documents will notify the new property owner(s) of their responsibility for any future abatement of lead-based paint found to be necessary.”

### **Comments on Section 9, page 21**

The army should remain responsible for all costs associated with lead paint abatement from all military buildings at Camp Bonneville. There is no reason for the county to assume responsibility for this problem. Lead paint abatement specialists must be employed by the army.

### **Section 10, page 22**

“Change of reuse in any significant manner, may require the supplementation of the Environmental Assessment of the Property.”

### **Comments on Section 10, page 22**

A Supplemental Environmental Assessment of the Property is needed to reflect the currently proposed clean-up levels. The original Environmental Assessment is too old to be relied upon and fails to consider “significant new information” regarding: 1. the fact that the proposed funding to facilitate cleanup is insufficient to cover likely cleanup costs, 2. new information about the costs of cleanup that have occurred on the site to date and why these costs support that the budget is inadequate to ensure a comprehensive cleanup; 3. the fact that EPA has shared the same concerns about inadequate funding in light of the absence of a comprehensive site characterization; 4. the original re-use plan was devised with expectations of higher levels of clean-up and more thorough removal of all MEC/UXO from the property; 5) Contaminated groundwater and evidence that military mortars exited the property boundaries during firing exercises require additional study. The FOSET is not supported by the existing Environmental Assessment, and the Environmental Assessment fails to evaluate the direct, indirect and cumulative effects that a pre-cleanup transfer of Camp Bonneville would have on aquatic and terrestrial species, surface water quality, groundwater, neighborhood residents, the safety of future park users. In order to fully assess the impact of the proposed early transfer the Army should prepare an Environmental Impact Statement (EIS) as required by the National Environmental Policy Act. The EIS needs to specifically consider the project effects if planned cleanup funding is inadequate for a comprehensive cleanup. The EIS should also specifically evaluate the precedent that transferring the project site pre-cleanup would have and the effect that providing inadequate cleanup funding could have on other sites.

### **Section 13, page 23**

“Provide for any necessary covenants/restrictions on the use of the Property to ensure the

protection of human health and the environment;”

### **Comments on Section 13, page 23**

This section is too vague. Deed restrictions should be available for public comment. The county needs to be aware of the administrative process required by the army to approve or disapprove all of the county’s future use of the property, including construction, timber harvest and management, maintenance and operations, etc.

### **Section 13, page 23**

“Provide that all necessary response actions will be taken, and identify the schedules for investigation and completion of all necessary response actions, as approved by the appropriate regulatory agency;”

### **Comments on Section 13, page 23**

As of the date of this public comment, a competent response plan for firefighting has not been contracted nor designed, including coordination with DNR, City of Vancouver and Clark County. This commenter believes that there is insufficient funding allocated in the clean-up plan to provide for fire protection in perpetuity with the presence of MEC/UXO on a substantial portion of the property. Informal conversation with firefighters indicates that contractual costs for fire protection at Camp Bonneville post transfer could range from \$100,000 to \$150,000 annually due to the explosive hazard. Again, this cost places a disproportionate financial burden on the County.

The Department of Natural Resources has indicated that it will not send firefighters into an area that is known to contain MEC/UXO. This leaves the community to question the public safety, especially for the homeowners adjacent to the Camp and park users. What will happen if a power line goes down, or if a forest fire races out of control? A strong east wind could easily escalate a forest fire, and hikers at the proposed trail heads would easily be stranded without being able to exit the park. Add explosives to this scenario, and obviously, human casualties and extensive property damage are likely to occur.

### **Section 13.3, page 24**

“The conveyance deed will state that the Army has obligated funds and will continue to make requests for funding to the Director of the Office of Management and Budget that adequately address planned investigation and remedial actions.”

### **Comments on Section 13.3, page 24**

As of the date of this writing, the public is unaware of the approved budget for this clean-up project, the levels of insurance coverage including liability, or the costs of all remedial activities within their working units. The public has been told that the UXO experts to be contracted by the BCRRT LLC all think the clean-up work can be completed within a set budget, yet the budget amount is still under negotiation by individuals that have yet to establish a legitimate corporation under the laws of Washington State. This is an unacceptable lack of information to the public to determine sufficiency of this FOSET.

When the property transfers from the Army to the County, it will first be deeded to the clean-up team (BCRRT LLC). The clean-up team will be contracted to implement what members of the community feel to be an inadequate clean-up plan. Initial studies estimated the clean up cost at Camp Bonneville to be nearly \$100 million. A recent county newsletter indicated that figure had fallen to \$25 million, and in recent public meetings with the Army, that number fell even further to only \$19 million. Conversely, the current US Congressional Fiscal Budget projects a clean-up cost of \$47 million for Camp Bonneville with the property slated for transfer in another few years, not 2006. Why does Congress have different information than Clark County, and why are there lower figures being negotiated at the local level (and at a faster timeline) that are less than half of what federal officials have been told?

State officials indicate that the clean-up cost cap includes maintenance and operations fees that are intended to manage the public dangers at the Camp in perpetuity. Members of the public agree that cost of remedial activities and associated administrative costs will deplete the clean-up budget, and there will be no money left to manage the property (including fire response at an unidentified annual cost) for twenty-five years, let alone a hundred years or more. This means the local residents will have to pick up the slack in the long run. A county parks representative stated that the initial estimate of \$100 million should never have been published, and the director of the clean-up team promised that actual clean-up costs will not even come close to the cost cap agreed to by the Army. Despite these promises the public remains skeptical, especially in light of the fact that the extent of contamination is unknown. There is no reliable data available to determine how many Howitzer missiles lay hidden in the Artillery Firing Ranges and the Central Impact Target Area, and if those missiles exited the boundaries of the Camp and lay hidden beneath homes that were later built in neighborhoods immediately adjacent to the Camp. One thing is known for certain – 70% of the Camp will never been completely void of explosives, and all parties are aware that bombs will remain on site in perpetuity. Members of the public do not agree that such a property is appropriate for a public park.

#### **Section 14, page 24**

“Based on the above information, I conclude that all DoD requirements to reach a Finding of

Suitability for Early Transfer of the Property to the Clark County have been met.”

**Comments on Section 14, page 24**

This commenter disagrees wholeheartedly with this statement and offers a different conclusion that the FOSET requirements have not been met, and therefore, the Governor should refrain from approving this document.

**Section 14, page 24**

“With the covenants, conditions, and restrictions in the CERCLA Deed Provisions and the ECCR, the Property can be transferred in its present condition for its intended purpose(s) without unacceptable risk to human health and the environment”

**Comments on Section 14, page 24**

This commenter disagrees wholeheartedly with this statement and offers a different conclusion that the Property should not be transferred in its present condition due to the fact that there is an unacceptable elevated risk to human health and the environment associated with this transfer, all of which will excessively burden the residents of Clark County.

**Table 1, page 27 -- Landfill 2 -- (Sewage Lagoons and Historic Landfill)**

“Groundwater samples were collected from the two down-gradient wells and tested for TPH, VOCs, SVOCs, PCBs, pesticides, nitroaromatic and nitramine explosives, PETN, cyanide, TOC, and PPL metals (total and dissolved). Test results show no detectable levels of TPH, SVOCs, explosives compounds, PCBs, and pesticides.”

**Comments on Table 1, page 27 -- Landfill 2 -- (Sewage Lagoons and Historic Landfill)**

Groundwater samples should have been collected from boring samples within the sewage lagoons, not down-gradient from them.

**Table 1, page 50 – Site Wide Actions**

“A total of 16,004 discrete reconnaissance data waypoints have been collected, analyzed, and mapped using digital technology and GIS geo-spatial analysis during the 2001/2002 site reconnaissance efforts. Over 2,400 acres of the 3,980 total acres were characterized for munitions and explosives of concern (MEC) and related activities.”

**Comments on Table 1, page 50 – Site Wide Actions**

These data “waypoints” were simply GIS coordinates taken when survey crews walked about the camp. These “waypoints” did not indicate that crew members engaged in reconnaissance efforts as this statement suggests. This activity merely logged visual identification of surface anomalies but was not used to consistently search for and remove MEC/UXO. Sub-surface standard reconnaissance was not used. Instead, computer-generated statistical models were employed by

the Army using these data “waypoints,” data which was disregarded by DOE as inaccurate for MEC/UXO characterization. The army’s statement is misleading, in that it wrongly claims that reconnaissance has been completed throughout the property. Thus, site characterization is incomplete with vast data gaps.

**Table 1, page 50 – Site Wide Actions**

“A solitary UXO item (105 mm artillery shell) was located in the Central Impact Target Area”

**Comments on Table 1, page 50 – Site Wide Actions**

This is a misleading statement. Howitzers (including those of larger caliber) were fired at the Central Impact Target Area for decades. It is unlikely that only one solitary item of UXO exists in that area. The DOE firmly believes that additional site characterization must be performed in this area to better assess the hazard and contaminant load associated with this impact area. There needs to be sub-surface assessment using deep penetrating magnetometers.

**Table 1, page 51 – Central Impact Target Area**

“A potential MEC–risk was identified during investigation.”

**Comments on Table 1, page 51 – Central Impact Target Area**

The Central Impact Target Area has a high degree of probable, not potential risk.

**Table 1, page 51 -- Firing Points**

“No MEC was found during an investigation of this area.”

**Comments on Table 1, page 51 -- Firing Points**

Soil sampling needs to be conducted at this area for surface and subsurface residue from MEC related components such as nitroglycerine residue.

**Attachment 2, page 89 – Groundwater Restriction**

“Grantee is hereby informed and acknowledges that there is limited contamination of the groundwater under the Demolition Area 1/Landfill 4 area.”

**Comments on Attachment 2, page 89 – Groundwater Restriction**

This statement is premature. Since the contaminant levels have not been entirely remediated, despite the removal of up to 27 feet of soil, and groundwater monitoring results show that the contaminant load is not lessening, and since the DOE states that it will take years to determine if the plume will decrease, it is premature for the army to declare that the groundwater contamination is limited. There may be alternate sources of groundwater contamination elsewhere on the property. The noted groundwater plume may have rendered the groundwater

on site unusable for the public's potable water supply for the intended re-use of the property as a regional public park. Army buildings on site currently display warnings that the water is unsafe to drink. The FOSET fails to demonstrate that the transfer would be consistent with the requirements for groundwater, land and surface water protection under both Washington State law and CERCLA.

**Attachment 2, page 90 – No Public Access**

“Public access to the Property is not allowed during the Covenant Deferral Period.... The Grantee shall construct and maintain a fence along the perimeter of the Property to control or restrict access as needed.... After the Covenant Deferral Period, the Grantee shall notify the public that the Property was a former military installation and has the potential for MEC. The notification should explain how to recognize MEC and what to do if MEC is discovered.”

**Comments on Attachment 2, page 90 – No Public Access**

The property is not secured. The perimeter fence has been downed or missing for several years, and the property is easily accessible. There has been lengthy discussion about the fence issue at various RAB meetings, and the community has voiced the opinion repeatedly that a three-strand barbed-wire fence is insufficient to prevent public access to the property. Such a barbed wire fence can be easily breached by an individual of average height. Public comments reflect that a taller chain-link fence with barbed wire at top is a safer and preferred fence. The public has also voiced concern that any reinstallation of fencing must employ UXO specialists and allow for evacuation of adjacent residents during such installation as part of a public safety campaign. Detonation of UXO can include a “kill zone” of more than 80 feet, and adjacent residents to the camp are at risk. The reinstallation of this fence should have been accomplished by the Army, and this should not have been thrust upon the County and the clean-up team. It is an extra burden to the overall cost of cleanup. As the leading experts on military munitions, the army should provide the county with all signage, mailers, and other public education tools regarding exposure to MEC/UXO.

**Attachment 3, page 109 -- Document List**

“RAB Meeting Minutes [Transcripts]”

**Comments on Attachment 3, page 109 -- Document List**

The RAB Meeting transcripts from April 2005 through May 2006 are missing. There are important transcripts that exist for this time period that must be included in this document list. A great deal of new information has come forward over the past year as reflected in these missing meeting minutes.

## **Army Response to Mr. Bertish FOSET public comments**

### **Section 1, page 1**

“Response actions will be performed in accordance with the regulatory requirements documented in the Prospective Purchaser Consent Decree (PPCD) as funded by the Army through an Environmental Services Cooperative Agreement (ESCA).”

### **Comment on Section 1, page 1**

At the time of this public comment, the public has requested access to and public review of the ESCA, but no copies of this document have been provided. An acceptable draft Engineering Evaluation and Cost Analysis report has yet to be produced and submitted to Ecology due to insufficient data collection. Without acceptable data, and without an acceptable Cost Analysis, the draft ESCA cannot be based on credible facts that can produce a realistic projected budget for the proposed clean-up plan. It is ill-advised to sign agreements for a dirty transfer of contaminated property when the receiving party cannot determine if proposed clean-up costs are sufficient to ensure the public’s health and safety.

### **Army Response:**

The Army has prepared an Independent Government Cost Evaluation (IGCE) that is being used for the cost and technical data during negotiations of the ESCA. Since the ESCA has not been negotiated with Clark County at this time, it is not available for public comment.

### **Section 3.1, page 2**

“Camp Bonneville’s mission was to provide a training camp for active, reserve, and guard units of the United States Army, Navy, Marine Corps, and Coast Guard. Training exercises generally included weapons training with small arms ammunition, assault weapons, and field and air defense artillery.”

### **Comments on Section 3.1, page 2**

There is no mention that the training camp was also used by foreign military forces, and there are no records available to determine the activities undertaken by these forces.

**Army Response:** The mission of Camp Bonneville was primarily as a training camp for DoD units, however, British and Canadian units did conduct training exercises there. The presence of foreign troops at the Camp does not change the environmental condition of the property because those troops trained in the same manner as U.S. troops.



### **Section 3.1 page 3**

“Records indicate that military munitions were disposed of by open burning or open detonation (OB/OD).”

### **Comments on Section 3.1 page 3**

Records indicate that drums containing toxic chemical substances were buried at the Camp, but the location of these buried drums has yet to be disclosed. The FOSET states that some drums were previously removed, but there are additional drums that are thought to still be buried on site.

**Army Response:** Open burn/open detonation does not mean drum burial. The Army and its contract support have conducted several investigations, including records searches, photographic analyses, interviews and on site characterizations. Information about drum burials have been investigated and remediated where necessary. There are no additional known buried or stored drums, other than those being currently used to store the purge water from monitoring wells for the groundwater study.

### **Section 3.3 page 5**

“Open burning (OB) or open detonation (OD) activities are known or suspected to have occurred at the demolition sites. “

### **Comments on Section 3.1 page 3**

Open burning was conducted in violation of a DoD no-burn order in the 1980’s.

**Army Response:** The Army has no knowledge that open burning was conducted at Camp Bonneville in violation of any DoD open burn orders

### **Section 4. page 5**

“The information provided herein is a result of a complete search of agency files during the development of this FOSET. A complete list of documents that provide information on the environmental condition of the Property is included as Attachment 3 - Document List.”

### **Comments on Section 4. page 5**

Attachment 3 lists archives of Restoration Advisory Board Minutes. However, the Restoration Advisory Board Minutes from May 2005 through May 2006 are missing from the attachment and need to be added.

The Army has repeatedly stated that it has conducted an exhaustive archive search of historical documents to determine the nature and the level of contamination of the site, and the locations of the explosives. The state seems to have accepted the Army's presentation of documents in this search. However, members of the public are continuing the search and have readily identified documents that should have been part of the Army's records, but for unknown reasons have been ignored. The community is also collecting witness testimonials to record additional historical information that is missing from the Army's archives.

There is a parcel of land known as the Livingston Pit outside the current boundaries of the clean-up work plan. The County plans to use this pit for gravel mining in the future. Documents have surfaced that indicate the Livingston Pit was historically part of Camp Bonneville, but is not considered a part of the Camp at this time. These documents indicate that the pit was known to contain explosives from the Army, but this is not part of the current clean-up plan. These documents were internal to a state government agency, and thereby are credible sources of relevant and important information that should have been considered in the entire clean-up plan. How will the County react when a backhoe or bulldozer that is digging for gravel accidentally ignites a missile or a bomb that might explode in the immediate vicinity of residential neighborhoods? Should such an accident occur, the Army would remain free of liability in that the noted parcel is not represented within the transfer documents. Members of the public believe the archive search report has been marginalized to avoid the publication of such information.

**Army Response:** Attachment 3 will be updated to include the RAB meeting minutes from May 2005 until June 2006.

The Army leased Livingston pit from the Washington Department of Natural Resources until 1957. Investigations concluded that munitions clearance would not be required. This property is not included as a part of the FOSET.

#### **Section 4.1 page 5**

“Based on a review of existing records and available information, there is evidence MEC is present on certain areas of the Property.”

#### **Comments on Section 4.1 page 5**

MEC is present on 90% of the property, and MEC will remain on 70% of the property in perpetuity under the army's proposed clean-up plan. The community has often voiced its concern about this, particularly the concern that the re-use plan is not compatible with a hefty amount of MEC remaining on site in perpetuity.

**Army Response:** The reuse for conservation purposes was outlined in the Clark County Reuse Plan, was made available for public review and was evaluated by the Army. Conservation uses described in the Reuse Plan include a regional park, a rustic retreat center/outdoor school, trails and nature areas, timber resource management areas and habitat restoration. The County does not intend that the entire Camp Bonneville area will be a regional park. Approximately 800 acres of the 3,020 acres at Camp Bonneville (26.5%) will be dedicated as a regional park area. The park area available to the public will be limited to clearly marked trails and nature areas and will be cleared of UXO to a level that is protective of human health and the environment. The remaining acreage will have no public access but will be maintained as habitat restoration and conservation areas. The presence of ordnance and explosives on the property and the adequacy of land use restrictions and notifications have been assessed based on the County's various proposed uses for the property. The Army will also enter into an Environmental Services Cooperative Agreement with Clark County to ensure that cleanup is conducted. While cleanup activities are ongoing, there will be no public access to Camp Bonneville at all. When the cleanup is completed, permanent land use controls will be imposed. This plan is consistent with WDOE guidelines and the plan must be approved by the state prior to implementation.

#### **Section 4.1 page 7**

“Clark County shall develop a detailed land use control implementation plan (LUCIP) to help ensure the safety of people (on-site personnel, the general public) from any explosive hazards associated with MEC known or suspected to be present. The plan should include warning measures, information, training and physical barriers, if required. Because not all areas of Camp Bonneville have explosives safety concerns, the LUCIP can be tailored to fit the requirements of limited or restricted access in certain areas where MEC is known or suspected to be present.”

#### **Comments on Section 4.1 page 7**

Clark County's published public comments on the Draft RI/FS for RAU3, page 60, item #3, state:

“Clark County was not consulted in the development of the draft RI/FS and, specifically, was not consulted in the Army's development of the Institutional Controls element of the proposal. The County believes that, given the current proposal, the Army will place a substantial burden on the County by over reliance on institutional controls to protect public health and safety. Proposed institutional controls must be thoroughly evaluated to determine alternatives and whether or not the selected alternatives are practical, affordable are consistent with the Reuse Plan. This current proposal would result in a site with a significant public safety concern (large areas which are not searched or therefore cleared of UXO), and which could pose a significant public safety hazard

which ultimately might not be adequately mitigated through the implementation of institutional controls. Additionally, in the County's estimation, the proposal inadequately addresses clean-up standards by leaving the potential for exposing people and the environment to long-term exposure risks associated with UXO. Furthermore, the over reliance of institutional controls will result in an inequitable savings to the Army, which will burden both existing and all future county taxpayers with the costs associated with institutional control requirements. The true cost of these institutional controls is incomplete since the details are not present and the time for which the controls must be in place will be significantly beyond the 10-years noted in the draft."

This commenter agrees wholeheartedly with Clark County's assessment on the subject of institutional controls, and do not believe that Clark County is capable of creating a plan that will ensure the public's safety when a vast amount of the property will forever contain MEC/UXO. The proposed institutional controls are insufficient to ensure the public's safety, and the answer to alleviating this conflict is for the army to fully remediate the MEC/UXO throughout the site, not just in areas that are intended for heavy re-use by the public under the plan for a regional park.

**Army Response:** Clark County and the Army have been discussing the proposed early transfer, including the institutional controls mentioned in the FOSET, in recent months. After the transfer, Clark County will be required to maintain land use controls under the ESCA and the deed. The ESCA is an agreement which requires the consent of both the Federal Government and Clark County. The County will be funded under the terms of the ESCA to develop a Long-Term Operation and Maintenance Plan and maintain the land use controls. WDOE will review and approve this Plan, as required under the Prospective Purchaser Consent Decree (PPCD), to ensure that it is sufficiently protective. Public access to the property will be restricted until response actions are complete. Appropriate land use controls, including restrictions, training information, signage and fencing, will be in place during and upon completion of response actions to protect the public.

#### **Section 4.1 page 7**

"RAU 3 is the remedial action unit that addresses all MRS known or suspected to contain MEC throughout Camp Bonneville"

#### **Comments on Section 4.1 page 7**

It is possible that remedial activities could expose the presence of unknown or unsuspected MEC/UXO. There needs to be a contingency plan established to address this possibility.

Once the transfer agreements have been signed, the County will not be able to recall the Army

into additional clean-up plans for contaminants or hazardous waste within areas that were not thoroughly assessed or characterized. In other words, all parties are aware that there is an unknown quantity of explosive/hazardous materials hidden within the Central Impact Target Area and associated Artillery Firing Ranges. If the County accepts the risk of the clean-up plan as currently defined, it cannot make the Army undertake additional clean-up costs in the future. Nothing found within the Artillery Firing Ranges or the Central Impact Area will be considered a new source, and therefore, if the cost cap is insufficient, the County will bear the burden of additional cleanup costs. This is an unacceptable risk to the County.

**Army Response:** At this time, the ESCA and other vehicles for the approved response are in place to deal with the known contaminants in the area. If presently unknown contaminants are discovered subsequent to the transfer to Clark County, the covenants in the deed will establish responsibility for remediation.

#### **Section 4.1 page 7**

“Several site characterization studies and munitions responses (removal actions) have been completed at RAU 3.”

#### **Comments on Section 4.1 page 7**

The statistical characterization model was declared to be insufficient by DOE, and that data was disregarded. DOE did not agree that the army’s statistical model accurately or reasonably reflected the amount of MEC/UXO still on site. Site characterization did not include sufficient sub-surface analyses.

**Army Response:** In the response to comments received on the draft RI/FS, WDOE noted that the site characterization developed for RI/FS and Conceptual Site Model (CSM) for Camp Bonneville relied in part on statistical modeling, and that additional site characterization activities are required (WDOE “Response to Public Comment on the Draft RI/FS Study, Remedial Action Unit 3” dated February 2006.).

#### **Section 4.1 page 8**

“Supplemental Archives Search Report 1999 – This search was performed to fill data gaps identified in the 1997 ASR. Primarily, data gaps associated with potential munitions located beyond the border of the installation. The Supplemental ASR included a review of background information and interviews with residents surrounding Camp Bonneville.”

#### **Comments on Section 4.1 page 8**

The archive search report is incomplete. Community members are continuing to find important documents that are not included in the archives and have therefore escaped review. Community members are continuing to interview people with knowledge of historical facts. For example, one individual who used to run the outdoor school program at Camp Bonneville, has testified that Howitzers were repeatedly fired beyond the boundary of the camp, and it is even noted that these firings bombarded a neighbor's barn on at least three occasions. The army has formerly denied that Howitzers left the Camp boundaries. There have been no formal studies to determine the hazard of MEC beyond the perimeter of the Camp into properties that were later developed into residential neighborhoods.

Video footage from the 1950's shows Howitzer missile launchers employed on what was called the parade grounds of Camp Bonneville. The parade grounds were an open field at the base of the Camp, overlooking the "saddle," a forested mountain area directly to the northeast. Some of the missiles fired at Camp Bonneville have a range beyond six miles, and debris from test firings may exist beyond the confines of the camp and well into newly developed gated communities such as Summer Hills and Autumn Hills that were built at the Camp's borders since the early 1990's.

**Army Response:** The Army has not been able to locate any records indicating that artillery was fired or misfired to locations beyond the boundaries of Camp Bonneville.

#### **Section 4.1 page 8**

“Time-critical Removal Action (TCRA) 1999 - The purpose of this action was to remove all live and inert MEC and any MD in the two former M203 rifle grenade ranges (TA 8 and TA 9 - 12 acres combined) to a depth of two feet.”

#### **Comments on Section 4.1 page 8**

A Chemosphere study entitled “Identity and distribution of residues of energetic compounds at army live-firing ranges (2006, pp 1280-1290)” studied 23 army firing ranges, including Camp Bonneville. This study was conducted by scientists including those from the US Army Engineer Research and Development Center. The report reads, “soil profiling has shown that major residue concentrations are in the top several centimeters (Jenkins et al., 2001; Pennington et al., 2003; Hewitt et al., 2005a).” Even though MEC has been remediated, the toxic residues still remain in the soil and need to be remediated in any area where MEC/UXO has been found or where it was deployed on site.

**Army Response:** Additional evaluation of this site will be conducted by the Clark County as part of the investigative and remedial actions funded by the ESCA.

#### **Section 4.1 page 9**

**“Landfill 4/ Demo 1 Removal Action** – The Interim Removal Action (IRA) report, which was submitted as draft to WDOE in June 2005, details the soil cleanup performed at the site. This work included the removal and disposal of OB/OD ordnance, landfill materials and specified associated contaminated soil.”

#### **Comments on Section 4.1 page 9**

This removal action was undertaken in an attempt to remediate groundwater contamination, including a plume containing UXO, RDX and mercury. Groundwater monitoring for more than a year indicates that the concentration of contaminants has not been successfully remediated. There is a possibility that the contaminant source has not been entirely removed.

Residents in the surrounding area rely upon well water, and the moving underground plume could potentially render the drinking water unsafe for consumption in some places. Water quality test results have shown that sentry wells tested positive for ammonium perchlorate, though the test results have been dismissed as being “false positives.” One sentry well in question abuts a private residence.

**Army Response:** The purpose of the removal action was not an attempt to remediate groundwater. It was conducted to remediate the potential sources of contamination and contaminated soil above the groundwater. Groundwater studies have shown the groundwater in the vicinity of the landfill to be contaminated. Perchlorate concentrations in the groundwater samples taken from the monitoring wells down gradient from the landfill area (MW-17 and MW-18) and from the monitoring wells at the boundary of Camp Bonneville have not indicated any positive results above Washington State Model Toxic Control Act levels. When laboratory results are near the limit of detection using a complex matrix, such as an environmental groundwater sample, interferences can occur and the data is more fully scrutinized to ensure quality reporting. UXO is not a groundwater constituent. Positive results were found for HMX, RDX, perchlorate and chlorinated solvents at the landfill area. Mercury was positive in non-filtered groundwater samples but not in the filtered samples, normally indicating that this element originated from the naturally occurring soil particles in the turbid non-filtered sample.

#### **Section 4.1 page 9**

“The IRA report validates and documents that any UXO, UXO disposal/demilitarization, landfill excavation (i.e. removal of debris and impacted soil), and disposal of all excavated material were completed per approved work planning documents, and all associated regulations established by

WDOE and local agencies.”

#### **Comments on Section 4.1 page 9**

DOE has stated in public meetings that it may take years to remediate the groundwater plume at Landfill 4. It is premature to state that the work plan for this issue is complete. A contingency plan may be required to deal with continued groundwater contamination, such as the injection of bacteria directly into the plume to attempt a more rapid decline of the contaminant load.

**Army Response:** The IRA for Landfill 4 area was intended for a removal action of the potential contributing sources and contaminated soil. It did not include remedial activities for the groundwater, which are not appropriate for implementation pending completion of an RI/FS and the selection of a remedy, if necessary. If required, a remedy in accordance with a Cleanup Plan will be generated.

#### **Section 4.1 page 10**

“The above actions have addressed over 2,400 acres of the Property including MRS known and suspected to contain MEC, all existing trails and roads, and a 1,200-acre area proposed for a future regional parkland. The results of the actions led to site characterization and analysis of cleanup alternatives presented in the November 2004 *Draft Remedial Investigation/Feasibility Study, Remedial Action Unit 3, Camp Bonneville, Washington.*”

#### **Comments on Section 4.1 page 10**

Commenting on the Draft RI/FS, the community voiced that there was insufficient site characterization performed by the army to qualify for adequate cleanup plans. In public meetings, the DOE also confirmed that additional study and site characterization would be needed (beyond what the army identified in the RI/FS) in order to produce an effective cleanup plan. According to the Prospective Purchaser Consent Decree, the DOE states repeatedly that the army has not provided the required documents, studies and plans for acceptable clean-up on various RAU sections. Thus, the characterization mentioned above is far from complete and does not adequately provide enough data for sufficient site characterization.

The Prospective Purchaser Consent Decree lists the following items (that were the responsibility of the Army) that were not completed as required:

- 1) Draft Cleanup Action Plan not finalized
- 2) Restrictive covenants required under the Cleanup Action Plan not recorded.
- 3) Draft Final Work Plan not submitted for public comment or finalized



- 4) Draft final Interim Action Work Plan for RAU 2A not submitted for public comment or finalized
- 5) Draft Final RI/FS Report not submitted to Ecology for RAU 2A, nor has it been submitted for public comment or finalized
- 6) The RI/FS Report for RAU 2B has not been submitted to Ecology
- 7) Scope of Work under Interim Work Plan for RAU 2C has not been completed
- 8) Draft RI/FS Report for RAU 2C has not been submitted to Ecology
- 9) An acceptable draft Engineering Evaluation and Cost Analysis report has yet to be produced and submitted to Ecology due to insufficient data collection
- 10) Final RI/FS Report for RAU 3 has not been submitted to Ecology
- 11) Long-Term Ground Water Monitoring and Contingency Plan has not been submitted to Ecology.

The BCRRT LLC, a new non-profit clean up team will take over the Army's responsibilities as part of the cost of clean-up, and this team will produce the required documentation as noted above. At anytime during this process, the Army can dispute the new team's findings, and refuse to fund any portion of the clean-up work plan devised by the new team. The clean-up team's managing director explains that, although this is also a concern to the County and the clean-up team, the contract allows for a "dispute resolution" process. However, the Army has consistently displayed its lack of interest in dispute resolution, has refused to acknowledge Washington State Law which resulted in the state filing an enforcement order against the Army for failure to abide by these state environmental laws. When the property transfer is complete, the state's enforcement order will be null and void. The Army's liability will have been reduced, and the County's liability increased. This contract is terribly one-sided in the Army's favor. Dispute resolution is only effective when all parties are willing to negotiate. The Army is not a party to the Prospective Purchaser Consent Decree, and therefore, the Army cannot be enjoined by the dispute resolution process referred to within the Prospective Purchaser Consent Decree.

Given the fact that such a substantial amount of required study has not been completed by the Army in a timely fashion, this commenter firmly believes that the approval of a FOSET at this time is severely premature. This belief is not new to discussion of property transfer for Camp Bonneville. In July of 2003, Thomas Easton, associate director of the office of environmental cleanup for the EPA in Seattle stated clearly in the Oregonian that there were 1) a lot of unknowns at the site, 2) the recipient of the property is unsure about the risks involved at the site, 3) the Army was nonresponsive to EPA suggestions for clean-up, 4) the Army does not work in a collaborative manner, 5) additional data was necessary to characterize the site, especially to generate cost estimates, 6) the site is not ready for transfer of ownership, 7) that re-use of the

property as a public park might not be a good decision, 8) there is only limited understanding about the nature and extent of contamination from munitions, UXO and chemical releases. [Oregonian, Jul 25, 2003, Camp Bonneville's Future Use Debated, by Foster Church.]

It is this commenter's opinion that the characterization of Camp Bonneville has not changed since associate director Eaton made this assessment in 2003, and that all of his observations are still true today. The early transfer of Camp Bonneville was attempted in 2003, but was cancelled due to the lack of credible data about the dangers present at the site. The property transfer should again be postponed until the vast data gaps can be addressed and a more comprehensive clean-up plan can be devised that will be safe enough for the intended re-use.

**Army Response:** The property is contaminated and portions of the property will require further investigation and environmental remediation. Those items listed from the PPCD refer to future work that WDOE will require of Clark County should the property transfer. Those items will be funded by the Army under the ESCA, and will be performed by Clark County's cleanup contractor, the BCRRT.

#### **Section 4.2 page 10-11**

“Remedial Action Unit 2B. Arsenic, barium, copper, and mercury were detected at concentrations that required a terrestrial ecological evaluation. The evaluation concluded that the metals are not a potential threat to ecological receptors.”

And

“Remedial Action Unit 2C. Metals (barium, copper, and chromium) were detected in the soil at concentrations that exceed regulatory criteria. Metal exceedances were addressed as part of the MRS soil remediation. (See Section 4.1 Munitions and Explosives of Concern for additional information.) The groundwater at this site has been affected by past site activities. Groundwater tests detected HMX at 3.5 micrograms per liter (ug/l), RDX at 97 ug/l, perchlorate at 270 ug/l, 1,1-dichloroethene at 27 ug/l, methylene chloride at 0.5 ug/l, 1,1-dichloroethane at 37 ug/l, 1,1,1-trichloroethane at 170 ug/l, dichlorodifluoromethane at 180 ug/l, and tetrachloroethene at 0.7 ug/l (all test results are shown as maximum analyte concentrations). Surface and ground water monitoring will continue in this area. The location of the RAU is shown on Figure 7- Remedial Action Unit 2C.”

#### **Comments on Section 4.2 page 10-11**

The Army's Groundwater Monitoring Data Evaluation Report for Camp Bonneville (April 2006)

identifies various quarterly results from December 2003 through September 2005 where contaminant loads exceeded MTCA levels (for unknown reasons, this report does not include the most recent data). Even after the removal of up to 27 feet of contaminated soil at Landfill 4, there is still groundwater contamination more than a year later, and the data does not indicate a downward trend toward complete remediation. This means that the contaminant load is still locked within the soil, and is carried by groundwater movement. Contaminants that have exceeded allowable MTCA levels at the study site include Arsenic, Chromium, Lead, Mercury; explosives: RDX, Perchlorate, 2,4-Dinitrotoluene, 2-Nitrotoluene; Volatile Organic Compounds: 1,1,1-Trichloroethane, and 1,1-Dichloroethene.

Mercury Fulminate shows up in the soil of old shooting ranges in the top centimeters. This contaminate stems from munitions used before 1960, and remains in the soil for a very long time.

TNT degradation produces nitrotoluenes. Both TNT and DNT are carcinogenic, TNT causing more harm to fish and DNT causing more harm to mammals. Please note that TNT byproducts exceed MTCA levels at Landfill 4, which abuts Lacamas Creek, a salmonid bearing stream. The possibility that salmonid species are being adversely effected by contaminants from military munitions should trigger compliance review under the Endangered Species Act. TNT and its byproducts can be detected in soil and water more than 50 years after the source of contamination ceased being added to the site. Unfortunately, easier decontamination processes such as composting cannot be used when MEC remains at the site in perpetuity. Thus, soil removal and replacement is the alternative required for remediation in the case of Camp Bonneville.

Soil and groundwater testing needs to be conducted for a wider variety of chemicals that were commonly used during older training methods, such as the use of picric acid in World War II. Soil and groundwater should be tested for many more kinds of High Military Explosives including Primary and Secondary Compounds, Energetic Compounds, Plastic Binders, and Propellants. The parameters being tested currently at Camp Bonneville are too limited for adequate site characterization.

Even though Nitroglycerine (NG) is a prime explosive used in Howitzers and other munitions used at Camp Bonneville, this parameter is absent from groundwater study parameters, and it should be pursued. The army has not conducted soil and groundwater sampling within the Central Impact Target Area, and toxic residues will obviously be found there.

Hand grenades use RDX , HMX and TNT. Detectable analytes also include TNB, 2ADNT, and

4ADNT. Soils at hand grenade ranges should be tested for these parameters.

Anti-armor mortars use nitroglycerine, potassium perchlorate, ethyl centrallite, carbon black, HMX, TNT and RDX. The primary residue detected at impact areas is HMX in surface soils adjacent to the targets in excessive concentrations of hundreds of mg/kg. The noted groundwater plume at Landfill 4 also shows elevated levels of HMX.

Propellants can still be present after detonation or rupture upon impact. Pieces of propellant are often visible on the soil surface in the area surrounding the targets, and Nitroglycerine will be indicated in soil samples in these areas. Nitroglycerine is also found in the soils at firing points. This important parameter needs to be thoroughly tested in soil throughout all firing ranges.

**Army Response:** The FOSET will be updated to reflect the most recent groundwater report. Additional evaluation of the contaminated groundwater plume at landfill 4/demolition area 1 will be conducted by Clark County. This will be funded by the Army under the ESCA. The soil removal action was successful in removing the contaminated soil which contributed to the contaminated groundwater. A supplemental groundwater remedial investigation work plan for this area is required per the PPCD. This investigation will be funded by the Army under the ESCA.

#### **Section 4.8, page 16**

“disposal of radiological materials at Camp Bonneville is unlikely. These items are no longer stored at the Property. There is no evidence of any release of radiological materials at these buildings.”

#### **Comments on Section 4.8, page 16**

RAB minutes discuss testimony from a witness who claims that radiological materials from Hanford Nuclear Reservation may have been transported to Camp Bonneville for disposal in a landfill site circa the mid to late 1950's. Radiological surveying using high caliber gauges needs to be conducted throughout the site. Although high levels of radon gas are present in volcanic rock found at Camp Bonneville, background radiation levels can be measured by technicians using portable gamma detectors to identify the presence of radiological contaminants. This commenter disagrees with the army's assessment on this item.

Historic documentation shows that Howitzer missiles, like those launched at Camp Bonneville, could have contained depleted uranium. The missiles were launched from the parade grounds into the saddle area where tanks were placed as targets. The purpose of such tests was to

determine if the missiles could pierce armor plating commonly used in tanks, and such activities were historically performed at Camp Bonneville.

**Army Response:** Records do not substantiate any depleted uranium use at Camp Bonneville. The EBS revealed that any equipment that contained radiological material that came onto Camp Bonneville was removed after its use.

#### **Section 4.10 page 17**

“The groundwater at Demolition Area 1/Landfill 4 (RAU 2C) has been affected by past site activities. Explosives and propellants (DNT, RDX, and perchlorate) were detected in the soil and groundwater at concentrations that exceed screening criteria. The 2005 interim removal action (excavation and offsite disposal of approximately 5,000 cubic yards of contaminated soil) included the source area where the explosives and propellant compounds were affecting the groundwater...A continued sampling regime has not been established with WDOE, however the previously established quarterly sampling efforts will be continued until a new monitoring program is agreed upon by Clark County/BCRT and WDOE.”

#### **Comments on Section 4.10 page 17**

The Army’s Groundwater Monitoring Data Evaluation Report for Camp Bonneville (April 2006) recommends for the Landfill 4 site discontinued analyses for metals, reduction of sampling frequency, the discontinuation of sampling for Volatile Organic Compounds at certain wells. In light of the fact that the concentration of the contaminant load within the groundwater plume has not sufficiently decreased, and instead shows climbing levels, it is premature for the Army to recommend lesser groundwater monitoring at this site. Again, DOE has stated in public meetings that it will take years to determine if the plume is lessening, and a contingency plan for alternate remedial activities may need to be introduced to alleviate time delays.

**Army Response:** The Groundwater Monitoring Data Evaluation Report given to WDOE and the RAB members to review was a courtesy draft for comments. It does not recommend reduced frequency for the Landfill 4 area unless there is a decreasing trend for the concentrations of constituents with positive results. Metals and VOC analyses are recommended to be terminated at particular wells since over 8 quarters of sample analysis have not indicated a positive result in the selective wells. The use of the term “climbing levels” is ambiguous when applied to all the results, rates of increase, stability of concentration change, disturbance of soil from the removal action and implies generalization to the concentration trends. In fact, while some concentrations may be increasing, others are decreasing while some are remaining constant. Additional characterization work and feasibility studies are planned for this location to address the

groundwater contamination issue. Elimination of sampling at Demolition Areas 2 and 3 have been suggested by the Army and agreed to by WDOE.

#### **Section 4.11 page 17**

“According to the March 2000 *Final Project Completion Report, Surface Water Investigation of Lacamas Creek, Camp Bonneville, Vancouver, Washington*, the results of water samples collected from Lacamas Creek indicate that Demolition Area 1/Landfill 4 has not impacted the water quality of Lacamas Creek. There are no locations on the Property where site activities are known to have affected the quality of surface water. The water quality of Lacamas Creek is monitored at Demolition Area 1/Landfill 4 by collecting groundwater samples from monitoring wells located downgradient of Demolition Area 1/Landfill 4, and before reaching Lacamas Creek. “

#### **Comments on Section 4.11 page 17**

The statement that “there are no locations on the Property where site activities are known to have affected the quality of surface water” is an erroneous. According to the 208 Area-Wide Clark County Groundwater Management Plan (1978), leachate from the Camp Bonneville sewage ponds contributed to failed water quality standards at Lacamas Lake, fed by Lacamas Creek, which runs through the camp. This problem was known in the late 1978 to be one of two leading sources of contamination in the Lacamas Basin . There are sewage ponds still extant on the site that are adjacent to the creek, and these facilities will need to be removed since they are located in proposed hi-intensity use parklands. The RI/FS makes no mention of abatement plans for the sewage lagoons. It is possible that the sewage lagoons could be receptacles for non-sewage contaminants (including MEC) and this needs to be studied. There has not been sufficient monitoring of the Lacamas Creek flow for the Army to declare that Camp Bonneville contaminants have not migrated into the surface waters of the area. Results from a 2006 DOE study of lakes in Washington State shows that of all the lakes studied, Lacamas Lake (fed by Lacamas Creek) had the highest concentration of mercury. Target analytes included mercury, PCBs, polychlorinated dibenzo-p-dioxins/furans (PCDD/Fs), chlorinated pesticides, flame retardants (polybrominated diphenyl ethers or PBDEs), and lipids. Fish tissue samples from Lacamas Lake exceeded National Toxics Rule (NTR) criteria for the protection of human health. The highest value of mercury in this DOE study was at 229 ppb ww, found in largemouth bass from Lacamas Lake, far exceeding the EPA’s screening value for subsistence fishers at 49 ppb ww. For this reason, Lacamas Lake was placed on the 303(d) list of threatened and endangered waterbodies of Washington State and further studies will need to be done to address this elevated level of contamination. Several of the target analytes are known to originate from military explosives and other elements used at Camp Bonneville, and these items could contribute to the

pollutant load of Lacamas Lake.

**Army Response:** No surface water quality issues can be attributed to the RAU sites at this time.

**Section 8, page 20**

“Clark County is the authorized LRA for the Property and in September 1998 (updated February 2003 and finalized in November 2005) published the Camp Bonneville Draft Reuse Plan (Reuse Plan). “

**Comments on Section 8, page 20**

The county’s re-use plan was originally approved with the understanding that cleanup levels of MEC/UXO and their associated contaminants would be remediated at clean-up levels far above those currently proposed by the Army. The Army’s plan to use institutional controls and to engage in public behavior modification is insufficient to ensure the public’s health and safety and protection of the environment. When the re-use plan was originated, the county and the public were unaware that approximately 70% of the property would remain littered with MEC/UXO. The intended re-use is not compatible when this amount of explosive hazard will remain on site. The army has not employed the common practice of risk assessment using readily available analytical tools used by UXO removal specialists to determine the level of risk of exposure to explosives by end users of a regional park. Thus, again, the property has not been sufficiently characterized.

Risk assessment analysis is commonly performed by munitions experts who use very specialized computer programs that will generate data to determine the chances of a park user coming in contact with explosives on site. This analysis is broken down into units of time, such as hours of operation at the park, and will include statistics that will identify the number of people that could be injured at Camp Bonneville subject to specific site conditions. There has been no such risk assessment performed at Camp Bonneville, despite the fact that site characteristics (munitions on site and a feeble barbed-wire fence as a preventative measure) dramatically increase the chances of personal injury to park users. Advanced statistical analysis should have been performed long before any transfer documents were attempted. How can a responsible local government enter into such an agreement without thoroughly understanding the risk in advance?

**Army Response:** Noted. As stated in the FOSET, Clark County is the authorized LRA for Camp Bonneville. The Camp Bonneville Draft Reuse Plan developed by Clark County is acceptable to the Army. Transfer of Camp Bonneville in accordance with the FOSET also

requires the consent of the State of Washington.

### **Section 8, page 21**

“The proposal to transfer this property has been adequately assessed and evaluated for (a) the presence of hazardous substances and contamination on the property, (b) environmental impacts anticipated from the intended use of the property, (c) the presence of ordnance and explosives on the property, and (d) the adequacy of use restrictions and notifications to ensure that it is protective of human health and the environment.”

### **Comments on Section 8, page 21**

This commenter wholeheartedly disagrees with this entire statement, and repeats that the property has not been adequately assessed and evaluated in order for the FOSET to be approved. All hazardous substances on the property have not been located. The army has not sufficiently characterized the presence of MEC/UXO on the property, which will inevitably cause elevated incidence of deed restrictions for the county in the future. This will place a disproportionate burden on the County while lessening the army’s burden of responsibility for clean-up. This arrangement is unacceptable for the County.

Even when the property transfers, the County will encounter a host of deed restrictions, and County officials will forever have to administer specific processes in order to abide by these restrictions. In other words, the County will never be free and clear of the Army’s oversight on any future use of the property. Under such deed restrictions, the County’s administrative costs will soar and the Governor’s office will remain embroiled in an administrative quagmire as the approving entity of this property transfer. If the County wanted to pave a parking lot or move a lamppost, the Army would enact the cumbersome deed restrictions. Moreover, as acknowledged by the state, the public will have to be aware that they cannot stray from park trails or dig holes for tent pegs in certain areas of the park because of the dangers from explosives. Apparently, the deed restrictions that are part of the transfer contract will be the largest section of the agreement. Again, members of the public have declared that these characteristics are not appropriate for public space.

**Army Response:** Comment noted. The Camp Bonneville property has been assessed for early transfer for use by Clark County as a conservation area, including a portion to be a regional park. Under the terms of the conservation conveyance the property must be maintained for conservation purposes in perpetuity. The presence of ordnance and explosives on the property and the adequacy of land use restrictions and notifications have been assessed based on the County’s various proposed conservation uses for the property. After the transfer, Clark County



will be required to maintain land use controls under the ESCA and the deed. In addition, WDOE will review the Long-Term Operation and Maintenance Plans to ensure that it is sufficiently protective.

### **Section 9, page 21**

“The WDOE and the public were notified of the initiation of this FOSET. Regulatory/public comments received during the 30-day public comment period will be reviewed and incorporated, as appropriate. A copy of the regulatory/public comments and the Army Response will be included as Attachment 4 – Responsiveness Summary.”

### **Comments on Section 9, page 21**

RAB members did not receive their copies of the FOSET until half of the comment period had already expired. The army refused to expand the comment period to facilitate adequate public comment opportunities. The army coordinated the public comment period on the FOSET so that it would run concurrently with DOE’s public comment period on the PPCD document. This created a significant burden on the public, who were not able to respond in a timely manner. Thus, the comment period on the FOSET expired without the public’s ability to participate fully. In documents from 2003, the army noted that the FOSET comment period was intended to be 60 days, not 30 days, and the comment period for the PPCD was to begin only after the FOSET cycle was complete. Since the army was unwilling to expand the public comment period on the FOSET, it appears that the army’s intent is to restrict public participation, which is a show of bad faith. Furthermore, the army agreed to allow only RAB members to submit comments beyond the 30 day deadline, which violates the rules of NEPA public process for the rest of the general public. The notation that public comments will be reviewed and incorporated by the Army “as appropriate” makes this commenter wonder if public comments will be censored.

**Army Response:** A CD containing the FOSET was mailed to the RAB members on the day the public comment period began. The public notice contained a website where the FOSET could be viewed. A hard copy of the document was also available at the local library. When RAB members requested a hard copy of the FOSET, the Army had copies printed and mailed. RAB members did not get the paper copies of the FOSET until the public comment period was underway, however, the Army made sure the RAB and the general public had access to the document via the internet and the local public library.

Since the FOSET references the PPCD, the Army felt it was appropriate to have a concurrent review period for both documents. Under CERCLA Section 120(h)(3)(C), a public comment

period of 30 days is required for a FOSET, not 60 days.

This property transfer is authorized under CERCLA, not NEPA. Any additional comments received from the public have been incorporated.

The Army has made significant efforts to ensure the public has had access to the FOSET and encourages public comments. All public comments received will be included as Attachment 4 to the FOSET, and thus are part of the FOSET. Public comments are not censored, but are included within the FOSET in their entirety.

### **Section 10, page 22**

“Transfer or conveyance documents will notify the new owner(s) of the Property that they would be responsible for any future asbestos remediation found to be necessary.”

### **Comments on Section 9, page 21**

The army should remain responsible for all costs associated with asbestos abatement from all military buildings at Camp Bonneville. There is no reason for the county to assume responsibility for this problem. Asbestos abatement specialists must be employed by the army.

**Army Response:** Asbestos is located inside the buildings and is only a hazard if the buildings are not maintained and/or used properly. This will be the responsibility of the new owner, who is given notification of these contaminants in the FOSET and the deed.

### **Section 10, page 22**

“Transfer or conveyance documents will notify the new property owner(s) of their responsibility for any future abatement of lead-based paint found to be necessary.”

### **Comments on Section 9, page 21**

The army should remain responsible for all costs associated with lead paint abatement from all military buildings at Camp Bonneville. There is no reason for the county to assume responsibility for this problem. Lead paint abatement specialists must be employed by the army.

**Army Response:** Lead-based paint is only a hazard if the buildings are not maintained and/or used properly. This will be the responsibility of the new owner, who is given notification of these contaminants in the FOSET and the deed.

### **Section 10, page 22**

“Change of reuse in any significant manner, may require the supplementation of the Environmental Assessment of the Property.”

### **Comments on Section 10, page 22**

A Supplemental Environmental Assessment of the Property is needed to reflect the currently proposed clean-up levels. The original Environmental Assessment is too old to be relied upon and fails to consider “significant new information” regarding: 1. the fact that the proposed funding to facilitate cleanup is insufficient to cover likely cleanup costs, 2. new information about the costs of cleanup that have occurred on the site to date and why these costs support that the budget is inadequate to ensure a comprehensive cleanup; 3. the fact that EPA has shared the same concerns about inadequate funding in light of the absence of a comprehensive site characterization; 4. the original re-use plan was devised with expectations of higher levels of clean-up and more thorough removal of all MEC/UXO from the property; 5) Contaminated groundwater and evidence that military mortars exited the property boundaries during firing exercises require additional study. The FOSET is not supported by the existing Environmental Assessment, and the Environmental Assessment fails to evaluate the direct, indirect and cumulative effects that a pre-cleanup transfer of Camp Bonneville would have on aquatic and terrestrial species, surface water quality, groundwater, neighborhood residents, the safety of future park users. In order to fully assess the impact of the proposed early transfer the Army should prepare an Environmental Impact Statement (EIS) as required by the National Environmental Policy Act. The EIS needs to specifically consider the project effects if planned cleanup funding is inadequate for a comprehensive cleanup. The EIS should also specifically evaluate the precedent that transferring the project site pre-cleanup would have and the effect that providing inadequate cleanup funding could have on other sites.

**Army Response:** Noted. The Army concluded that the EA prepared in October 2001 was adequate and did not require supplementation because there was no significant new information, no significant change in the environmental condition of the property and no significant change in the proposed use of the property to warrant additional NEPA analysis. See 40 C.F.R § 1502.9.

### **Section 13, page 23**

“Provide for any necessary covenants/restrictions on the use of the Property to ensure the protection of human health and the environment;”

### **Comments on Section 13, page 23**

This section is too vague. Deed restrictions should be available for public comment. The county

needs to be aware of the administrative process required by the army to approve or disapprove all of the county's future use of the property, including construction, timber harvest and management, maintenance and operations, etc.

**Army Response:** The provision from the FOSET quoted above is required under CERCLA 120(h)(3)(C). Details of these deed restrictions were made available for public comment as attachments 1 and 2 of the FOSET.

Clark County representatives are aware of the administrative process required by the Army. Legal counsel for all parties have been involved in the transfer discussions, and the documents necessary to implement the transfer are of sufficient detail to insure that the Army and Clark County are aware of their respective obligations after the property is transferred to the County.

### **Section 13, page 23**

“Provide that all necessary response actions will be taken, and identify the schedules for investigation and completion of all necessary response actions, as approved by the appropriate regulatory agency;”

### **Comments on Section 13, page 23**

As of the date of this public comment, a competent response plan for firefighting has not been contracted nor designed, including coordination with DNR, City of Vancouver and Clark County. This commenter believes that there is insufficient funding allocated in the clean-up plan to provide for fire protection in perpetuity with the presence of MEC/UXO on a substantial portion of the property. Informal conversation with firefighters indicates that contractual costs for fire protection at Camp Bonneville post transfer could range from \$100,000 to \$150,000 annually due to the explosive hazard. Again, this cost places a disproportionate financial burden on the County.

The Department of Natural Resources has indicated that it will not send firefighters into an area that is known to contain MEC/UXO. This leaves the community to question the public safety, especially for the homeowners adjacent to the Camp and park users. What will happen if a power line goes down, or if a forest fire races out of control? A strong east wind could easily escalate a forest fire, and hikers at the proposed trail heads would easily be stranded without being able to exit the park. Add explosives to this scenario, and obviously, human casualties and extensive property damage are likely to occur.

**Army Response:** The provision from the FOSET quoted above is required under CERCLA

120(h)(3)(C). “Response actions” in the CERCLA context refer to environmental response actions. The firefighting activities are being worked between the Army and Clark County and are outside the scope of this FOSET.

### **Section 13.3, page 24**

“The conveyance deed will state that the Army has obligated funds and will continue to make requests for funding to the Director of the Office of Management and Budget that adequately address planned investigation and remedial actions.”

### **Comments on Section 13.3, page 24**

As of the date of this writing, the public is unaware of the approved budget for this clean-up project, the levels of insurance coverage including liability, or the costs of all remedial activities within their working units. The public has been told that the UXO experts to be contracted by the BCRRT LLC all think the clean-up work can be completed within a set budget, yet the budget amount is still under negotiation by individuals that have yet to establish a legitimate corporation under the laws of Washington State. This is an unacceptable lack of information to the public to determine sufficiency of this FOSET. When the property transfers from the Army to the County, it will first be deeded to the clean-up team (BCRRT LLC). The clean-up team will be contracted to implement what members of the community feel to be an inadequate clean-up plan. Initial studies estimated the clean up cost at Camp Bonneville to be nearly \$100 million. A recent county newsletter indicated that figure had fallen to \$25 million, and in recent public meetings with the Army, that number fell even further to only \$19 million. Conversely, the current US Congressional Fiscal Budget projects a clean-up cost of \$47 million for Camp Bonneville with the property slated for transfer in another few years, not 2006. Why does Congress have different information than Clark County, and why are there lower figures being negotiated at the local level (and at a faster timeline) that are less than half of what federal officials have been told?

State officials indicate that the clean-up cost cap includes maintenance and operations fees that are intended to manage the public dangers at the Camp in perpetuity. Members of the public agree that cost of remedial activities and associated administrative costs will deplete the clean-up budget, and there will be no money left to manage the property (including fire response at an unidentified annual cost) for twenty-five years, let alone a hundred years or more. This means the local residents will have to pick up the slack in the long run. A county parks representative stated that the initial estimate of \$100 million should never have been published, and the director of the clean-up team promised that actual clean-up costs will not even come close to the cost cap agreed to by the Army. Despite these promises the public remains skeptical, especially in light of

the fact that the extent of contamination is unknown. There is no reliable data available to determine how many Howitzer missiles lay hidden in the Artillery Firing Ranges and the Central Impact Target Area, and if those missiles exited the boundaries of the Camp and lay hidden beneath homes that were later built in neighborhoods immediately adjacent to the Camp. One thing is known for certain – 70% of the Camp will never been completely void of explosives, and all parties are aware that bombs will remain on site in perpetuity. Members of the public do not agree that such a property is appropriate for a public park.

**Army Response:** Noted. The Army and Clark County have not entered into the ESCA yet. Therefore, specific cost and insurance information on the property transfer is not available yet.

**Section 14, page 24**

“Based on the above information, I conclude that all DoD requirements to reach a Finding of Suitability for Early Transfer of the Property to the Clark County have been met.”

**Comments on Section 14, page 24**

This commenter disagrees wholeheartedly with this statement and offers a different conclusion that the FOSET requirements have not been met, and therefore, the Governor should refrain from approving this document.

**Army Response:** Comment noted.

**Section 14, page 24**

“With the covenants, conditions, and restrictions in the CERCLA Deed Provisions and the ECCR, the Property can be transferred in its present condition for its intended purpose(s) without unacceptable risk to human health and the environment”

**Comments on Section 14, page 24**

This commenter disagrees wholeheartedly with this statement and offers a different conclusion that the Property should not be transferred in its present condition due to the fact that there is an unacceptable elevated risk to human health and the environment associated with this transfer, all of which will excessively burden the residents of Clark County.

**Army Response:** Comment noted.

**Table 1, page 27 -- Landfill 2 -- (Sewage Lagoons and Historic Landfill)**

“Groundwater samples were collected from the two down-gradient wells and tested for TPH,

VOCs, SVOCs, PCBs, pesticides, nitroaromatic and nitramine explosives, PETN, cyanide, TOC, and PPL metals (total and dissolved). Test results show no detectable levels of TPH, SVOCs, explosives compounds, PCBs, and pesticides.”

**Comments on Table 1, page 27 -- Landfill 2 -- (Sewage Lagoons and Historic Landfill)**

Groundwater samples should have been collected from boring samples within the sewage lagoons, not down-gradient from them.

**Army Response:** Noted. Samples were collected with consultation with WDOE environmental representatives.

**Table 1, page 50 – Site Wide Actions**

“A total of 16,004 discrete reconnaissance data waypoints have been collected, analyzed, and mapped using digital technology and GIS geo-spatial analysis during the 2001/2002 site reconnaissance efforts. Over 2,400 acres of the 3,980 total acres were characterized for munitions and explosives of concern (MEC) and related activities.”

**Comments on Table 1, page 50 – Site Wide Actions**

These data “waypoints” were simply GIS coordinates taken when survey crews walked about the camp. These “waypoints” did not indicate that crew members engaged in reconnaissance efforts as this statement suggests. This activity merely logged visual identification of surface anomalies but was not used to consistently search for and remove MEC/UXO. Sub-surface standard reconnaissance was not used. Instead, computer-generated statistical models were employed by the Army using these data “waypoints,” data which was disregarded by DOE as inaccurate for MEC/UXO characterization. The army’s statement is misleading, in that it wrongly claims that reconnaissance has been completed throughout the property. Thus, site characterization is incomplete with vast data gaps.

**Army Response:** There are different levels of data recorded across the entire site of Camp Bonneville. These statements are not made to be misleading, but to include information about the areas covered by the site inspections or data collected. The language in this statement will be changed to reflect “Over 2,400 acres of the 3,980 total acres were **brought into review using techniques** for munitions and explosives of concern (MEC) and related activities.”

**Table 1, page 50 – Site Wide Actions**

“A solitary UXO item (105 mm artillery shell) was located in the Central Impact Target Area”

**Comments on Table 1, page 50 – Site Wide Actions**

This is a misleading statement. Howitzers (including those of larger caliber) were fired at the Central Impact Target Area for decades. It is unlikely that only one solitary item of UXO exists in that area. The DOE firmly believes that additional site characterization must be performed in this area to better assess the hazard and contaminant load associated with this impact area. There

needs to be sub-surface assessment using deep penetrating magnetometers.

**Army Response:** It is a statement of fact that only one item was found. Other items may potentially be found during the additional studies to be conducted in the CITA.

**Table 1, page 51 – Central Impact Target Area**

“A potential MEC–risk was identified during investigation.”

**Comments on Table 1, page 51 – Central Impact Target Area**

The Central Impact Target Area has a high degree of probable, not potential risk.

**Army Response:** The statement will be revised to “A solitary UXO item (105 mm artillery shell) was located in the Central Impact Target Area. A MEC-risk was identified during investigation.”

**Table 1, page 51 -- Firing Points**

“No MEC was found during an investigation of this area.”

**Comments on Table 1, page 51 -- Firing Points**

Soil sampling needs to be conducted at this area for surface and subsurface residue from MEC related components such as nitroglycerine residue.

**Army Response:** Noted.

**Attachment 2, page 89 – Groundwater Restriction**

“Grantee is hereby informed and acknowledges that there is limited contamination of the groundwater under the Demolition Area 1/Landfill 4 area.”

**Comments on Attachment 2, page 89 – Groundwater Restriction**

This statement is premature. Since the contaminant levels have not been entirely remediated, despite the removal of up to 27 feet of soil, and groundwater monitoring results show that the contaminant load is not lessening, and since the DOE states that it will take years to determine if the plume will decrease, it is premature for the army to declare that the groundwater contamination is limited. There may be alternate sources of groundwater contamination elsewhere on the property. The noted groundwater plume may have rendered the groundwater on site unusable for the public’s potable water supply for the intended re-use of the property as a regional public park. Army buildings on site currently display warnings that the water is unsafe to drink. The FOSET fails to demonstrate that the transfer would be consistent with the



requirements for groundwater, land and surface water protection under both Washington State law and CERCLA.

**Army Response:** The groundwater restriction is meant to convey that there is known groundwater contamination in a limited area underlying the Demolition Area 1/Landfill 4 area and is not related to the level of contaminants present.

**Attachment 2, page 90 – No Public Access**

“Public access to the Property is not allowed during the Covenant Deferral Period.... The Grantee shall construct and maintain a fence along the perimeter of the Property to control or restrict access as needed.... After the Covenant Deferral Period, the Grantee shall notify the public that the Property was a former military installation and has the potential for MEC. The notification should explain how to recognize MEC and what to do if MEC is discovered.”

**Comments on Attachment 2, page 90 – No Public Access**

The property is not secured. The perimeter fence has been downed or missing for several years, and the property is easily accessible. There has been lengthy discussion about the fence issue at various RAB meetings, and the community has voiced the opinion repeatedly that a three-strand barbed-wire fence is insufficient to prevent public access to the property. Such a barbed wire fence can be easily breached by an individual of average height. Public comments reflect that a taller chain-link fence with barbed wire at top is a safer and preferred fence. The public has also voiced concern that any reinstallation of fencing must employ UXO specialists and allow for evacuation of adjacent residents during such installation as part of a public safety campaign. Detonation of UXO can include a “kill zone” of more than 80 feet, and adjacent residents to the camp are at risk. The reinstallation of this fence should have been accomplished by the Army, and this should not have been thrust upon the County and the clean-up team. It is an extra burden to the overall cost of cleanup. As the leading experts on military munitions, the army should provide the county with all signage, mailers, and other public education tools regarding exposure to MEC/UXO.

**Army Response:** Attachment 2 describes the restriction or requirements that the Army will issue to the recipient of the property, which includes notice at appropriate locations to members of the public of potential hazards and areas that should be avoided. The Army will fund the construction of the fence through the ESCA.

**Attachment 3, page 109 -- Document List**

“RAB Meeting Minutes [Transcripts]”

**Comments on Attachment 3, page 109 -- Document List**

The RAB Meeting transcripts from April 2005 through May 2006 are missing. There are important transcripts that exist for this time period that must be included in this document list. A great deal of new information has come forward over the past year as reflected in these missing meeting minutes.

**Army Response:** Noted. Attachment 3 will be updated to include all RAB meeting transcripts.

## **Public Comment, Lynelle Hatton, 14 June 06 Comments:**

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### **Continuation of Comments on the Camp Bonneville FOSET**

submitted by Lynelle West Hatton

Member, Camp Bonneville Restoration Advisory Board

Director, Toxic and Explosive Substance Accountability (TESA)

**All comments below are intended for inclusion in the Responsiveness Summary for the FOSET and the official Camp Bonneville administrative record.**

### **Continuation of Comment Period for RAB Members**

The comments below are a continuation of the comments I submitted on May 3, 2006. On that date, Glynn Ryan, BRAC Chief, Atlanta Field Office, formally denied the request for an extension to the public comment period, which also ended May 3. In his letter denying the extension, Mr. Ryan stated that "any comments received from the RAB during our review and comment consideration period will be reviewed and considered and will be attached to the final FOSET." The review period has not been completed. Therefore, as a RAB member, I am submitting the following as a continuation of my comments on the FOSET and for inclusion in the FOSET Responsiveness Summary.

### **Objection to 30-day Public Comment Period**

There has been a great deal of objection to the 30-day comment period on the FOSET, both by RAB members and the community. These objections have been stated on record at RAB meetings and in writing to the Army / BRAC. The requests were based on the fact that the Army and WA DOE released their transfer documents simultaneously, each for a 30-day public comment period. Each legal document is lengthy, complicated, and not easily understood by the general public. Though legitimate, the requests for an extension were denied three times by Glynn Ryan.

(1) The first request was categorically denied by Mr. Ryan in collaboration with WA DOE, as noted at a RAB meeting. (2) The second denial stated in an email to community co-chair Karen Kingston that insufficient reason for an extension had been given. (3) The third extension request was denied formally in an Army / BRAC letter. This letter stated that the community had been given the same notice as the RAB, that the RAB had been active, and that the FOSET contained

no new information. There was no acknowledgement that the legal nature of the FOSET made it very difficult to comprehend even for those actively involved in Camp Bonneville proceedings (it has taken me nearly two hours to draft comments through p. 6), nor that release of the PPCD placed an additional burden on the RAB and public to comment effectively on the FOSET.

My personal activities involving transfer do not begin and end with the FOSET. As time allows and in my capacity as a volunteer RAB member, I will submit comments on the remainder of the FOSET.

### **Page 1, Introduction**

The property is not suitable for transfer as stated in items (a) through (d). (a) The FOSET does not protect human health because it does not prevent people from coming into contact with UXO; it does not protect the environment because it does not remediate environmental contamination such as contaminated groundwater plumes that have reached sentry wells at the property line. (b) It does not disrupt ongoing response actions because the Army has been negligent in performing response actions ordered by DOE, and DOE has been negligent in enforcing its EOs legally. (d) Other than installation and maintenance of ICs, the ECCR does not identify Long-term Obligations that must be attached to the property.

### **Page 2, Introduction**

Transfer of the property has already delayed the necessary response actions on the property because the transfer process has aborted all remediation that was to have been performed by the Army since remediation of Landfill 4.

### **Page 3, Section 3.1**

The contamination caused by the munitions training activities will never be remediated to a level safe enough for a free-range regional camping park. Only 100% surface clearance and additional subsurface clearance to a depth of 14 inches site-wide would reduce the hazard of human contact with UXO and provide the opportunity for fire suppression to aid public safety in the event of a wildfire.

### **Page 4, Section 3.3**

The property has only been characterized, not "extensively investigated." Investigation implies intrusive subsurface investigation for UXO, not just AOCs and AOPCs.

Response actions have not been conducted in all areas where appropriate. There are many response actions that remain to be done due to the Army's negligence in performing these actions as ordered by WA DOE. Further, investigation has not been completed. Therefore, many areas that will require response actions have not even been identified.

#### **Page 5, Section 4**

The information provided in the FOSET may represent a complete search of agency files, but it does not represent complete information. This statement should contain a disclaimer that the complete search does not constitute all the information on Bonneville. New information is constantly surfacing, due primarily to the diligence of the RAB and concerned community members.

#### **Page 5, Section 4.1**

"Evidence of MEC on certain areas of the property" is misleading. Artillery impact fans extend over 90% of the property.

#### **Page 6, Section 4.1**

The MRS-specific data is incomplete. The statement should indicate that the data includes information only on known activities, and that it does not include any information on activities performed by foreign militaries.

**"The ESS provides MRS-specific data... that provides the basis for..." These statements are very tedious and difficult to follow. It sometimes requires several attempts to follow the intent of a sentence through to the end. Additionally, the extensive use of acronyms requires constant reference to the List of Acronyms, which further complicates and confuses the intent of the statement.**

The design of the munitions response actions and protective measures to be taken does not protect workers and the general public. These actions may reduce the threat of injury to workers, but they do nothing to protect or even reduce the threat to the general public. The public will

remain at risk *in perpetuity* for contact with UXO, and the odds of contact will increase with time.

**Again, "transferee... DDESB-approved ESS..." The legal content and use of acronyms make sentences of this nature difficult to follow. They are not easily understood by the RAB and the general public. This speaks to the inadequacy of a 30-day comment period on the FOSET, especially since the FOSET and PPCD comment periods ran concurrently instead of consecutively.**

Additional comments to follow as time permits.

## **June 14, 2006 Continuation of Comments on FOSET**

### **Page 6, Section 4.1**

Stating that munitions response will *protect the public* is patently false. This type of misinformation will promote a false sense of security. If the ESS provides accurate MRS-specific data, the conclusion will be that no amount of cleanup will protect the general public, even after response has been completed. Since 1948, the first year civilian deaths from UXO encounters were recorded, people across the country have been maimed or killed following this type of cleanup. There is no reason to believe this installation will be any different.

The Army Corps of Engineers Final Archive Search Report Conclusions and Recommendations (July 1997, Page 2-4), states:

**The potential for ordnance exists throughout the majority of the installation.**

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**The types of unexploded ordnance which may be present range from small arms ammunition to 155mm artillery rounds, up to 4.2 inch mortars, 2.36" and 3.5" rockets, and grenades (hand and rifle). Training devices may also be found throughout the post.**

The vast range of items known to have been used on the site and found in debris—to say nothing of items unknown—precludes protection of public health and safety, ever. This MEC / UXO will always pose a threat to the public. The public will never be protected from UXO. By omitting a statement to this effect and stating means by which the public can be “protected”, the FOSET is misleading and will give a false impression that UXO can be cleaned up entirely.

#### **Page 6, Section 4.1**

A one-time DDESB-approved ESS is inadequate. Conditions on the site may change naturally, requiring the ESS to be updated prior to each new activity. Updating the ESS at pre-determined intervals and/or based on a reassessment of need (environmental changes, etc) should be required.

There should be a notation that all activities listed will require a DDESB-approved ESS *in perpetuity*. The ESS should be valid only for a limited period of time. Each new activity after the ESS “expiration date” must require a new approved ESS.

#### **Page 7, Section 4.1**

Page 6 states that the transferee’s ESS must be submitted to USATCES and DDESB for review and approval. It is not clear what entity will thoroughly review and comment on the AAR, since Page 7 states the DDESB “will normally only review the AAR for adequacy...”. (It took about 30 minutes to decipher the intent of this paragraph and draft this comment.)

Deferring to Clark County to develop an LUCIP is inappropriate. WA DOE is responsible for developing and enforcing the LUCIPD. Clark County is responsible for implementing it.

The statement that not all areas of Camp Bonneville have explosives safety concerns is misleading, as noted on the previous page of these comments. For example, there was an item of MEC found in an area that was not identified as containing MEC. This and the statement in the ASR Final Conclusions (quoted above) indicate there is potential for MEC to be found on virtually the entire site.

#### **Page 7, Section 4.1**

Again, RAU 3 should encompass the entire site based on the ASR Final Conclusions.

#### **Page 7, ASR 1997**

The ASR 1997 did not perform an exhaustive search for information on Camp Bonneville. The ASR 1997 is incomplete and has been known to be incomplete for years. It should be recognized as such.

### **Page 8, MEC Site Characterization 1998**

Implying that the presence and density of MEC on the property can be determined by the characterization is inaccurate. The characterization was reconnaissance only and not intended as a definitive study. It is reasonable to expect that there is much on the site that is unaccounted for, including UXO that is present in the many AOCs and AOPCs as yet unidentified.

### **Page 8, Time-critical Removal Action 1998**

It should be stated that surface clearance in this Removal Action in 2000 did not remove the source of contamination, and therefore an additional Removal Action was necessary.

### **Page 8, Supplemental ASR 1999**

This report intended to fill data gaps. In fact, it should have clearly stated the remaining data gaps, including foreign activities conducted on the site. For example, the type of munition training and types of munitions used cannot be verified. There is no reason to believe the 1997 ASR Conclusions (Page 2-4) are inaccurate.

**Based on interviews with people knowledgeable about Camp Bonneville, there have also been items found off post near the post's eastern boundary and north of the Camp Bonneville cantonment area. This indicates that ordnance was fired farther than the range safety fans depicted on maps.**

Interviews with neighboring property owners cannot be discredited.

These interviews indicate the presence of UXO beyond the property line. There is no reason to believe this has changed. As recently as 2005 WA DOE stated in emails to the County<sup>1</sup> that concerns of neighboring property owners regarding MEC on their property were valid.

### **Page 8, Time-critical Removal Action 1999**

Although clearance of UXO was conducted to a depth of 2 feet, the Army was out of place by recommending unrestricted use in its Statement of Munitions Response to MEC.

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<sup>1</sup> This can be verified by RAB members who received a copy of this communication via FOIA.



Unrestricted use should not be allowed at all, certainly not until clearance to a depth of 4 feet has been completed. This is true of all high-intensity uses and all intrusive uses on the site, whether high-intensity or not.

### **Page 8, TEC Analysis 2000**

Prior to conducting the TEC Analysis, the Army should have notified WA DOE and the RAB that more sophisticated technology existed. Instead, it was never even discussed by the Army at RAB meetings or in any other forum, and the volunteer community members were unaware for years after this TEC Analysis that more sophisticated technology existed.

At the time the TEC Analysis was done, the Army could have utilized LiDAR, which can provide 3D imaging to better define ground scars.

LiDAR is used by DoD on a regular basis. Through FOIA, a RAB member obtained the LiDAR that Clark County commissioned from a noted firm for \$699,000. This firm was gracious enough to review the data pertaining to Bonneville, but was unable to use it for the purposes of this study because the resolution was too low in that part of the County.

The firm volunteered the information that DoD is one of its biggest clients. Although the Army could have utilized this more sophisticated method of obtaining the information sought in this study, it opted not to. Other bases and installations benefit from LiDAR. Camp Bonneville did not. An explanation has never been provided.

### **Page 9, Range 8 and Range 9 2000**

Again, to be certain that all UXO posing a threat to the public has been removed, clearance must be to a depth of 4 ft.

### **Page 9, Instrument-aided Field Reconnaissance 2001**

The instruments used in this recon should be identified in the FOSET, just as the various munitions were identified.

It should be stated that confirming the location of MEC, AOCs and AOPCs does not in any way imply that these items and areas are the only ones existing on the property.

It is disheartening to learn that the purpose of this recon was to confirm AOCs and AOPCs that were identified through the use of inferior technology. Due to overgrowth of vegetation, understory and tree canopies, additional AOCs and AOPCs have undoubtedly been missed. Had more sophisticated technology been used, additional AOCs and AOPCs would certainly have been identified.

A study published by a leading university<sup>2</sup> discredited the methodology used at Bonneville to determine AOCs and AOPCs. Different methodology should have been used, as it would have provided more accurate information.

### **Page 9, Instrument-aided Field Reconnaissance 2002**

All comments on Instrument-aided Field Reconnaissance 2001 above are repeated here by reference.

This paragraph is seriously flawed, as the implication is that there is no UXO present in this large area. Recon was for the purpose of confirming AOCs and AOPCs, not for the purpose of finding UXO.

The fact that no UXO was found during this recon does not in any way indicate the lack of UXO on 1,200 heavily forested acres or the need to investigate thoroughly, including a surface sweep of the entire site.

There have been instances of UXO lodged in trees that photographically confirm the presence of UXO in densely forested areas. This UXO would not have left any ground scars or any other identifying markers.

The methodology for identifying AOCs and AOPCs would have made it much more difficult to conduct effective recon in the 1,200 heavily-forested acres due to overgrown vegetation, understory and tree canopies.

Again, a study published by a leading university (see footnote 2) discredited the methodology used at Bonneville to determine AOCs and AOPCs.

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<sup>2</sup> This study can be identified, but not in the timeframe allotted for comments on this FOSET.

### **Page 9, Landfill 4/Demo 1 Removal Action**

This Removal Action followed the surface clearance conducted in 2000. However, it was ineffective at removing the source of contamination, as exhibited by the April 2006 Groundwater Monitoring Results,<sup>3</sup> which is compiled from the Army's own data.

This groundwater report shows an increase in levels of contaminants dangerous for human consumption and should be mitigated immediately. By failing to acknowledge the need for remediation, the Army willfully ignores a critical element of contamination resulting from Army use of this site.

### **Page 10, Item 4.1 (conclusion)**

I cannot comment on the Tables included in this FOSET due to the time constraints of reviewing the FOSET and PPCD simultaneously.

### **Page 10, RAU 1**

As a latecomer to information about Camp Bonneville, I cannot speak to the thoroughness of the investigation of RAU 1. Given that WA DOE has not approved the remediation, and considering the inadequacy of other recon and characterizations, as well as the inaccurate statements in this FOSET, I can only assume that the thoroughness of the investigation is in question.

### **Page 10, RAU 2A and 2B**

See comment for RAU 1. I do not acknowledge that information regarding RAU 2A and 2B is complete.

### **Page 11, RAU 2C**

Groundwater contamination should not only be monitored, but remediated. Monitoring alone will not protect the public.

The groundwater data should be updated in the FOSET to include the April 2006 groundwater monitoring results. These results show spikes in contaminants detected at the sentry wells.

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<sup>3</sup> The exact title of the Groundwater Monitoring Results can be identified, but not in the timeframe allotted for comments on this FOSET.

Remediation is discussed in the FOSET pertaining to other contamination on the site. The Army should indicate how it proposes to investigate and remediate groundwater relative to the most recent data.

If groundwater is not remediated, even Clark County residents who do not frequent the park will be subject to increased levels of contaminants in the County's water supply – contaminants known to have negative long-term health implications.

With the elevated levels of contaminants in the groundwater, groundwater remediation is a necessity. Army funds for this remediation must be included in the ESCA.

Identification of the immediate necessity of remediation for RAU 2C and all groundwater contamination should be included in this FOSET.

An estimate for further remediation must be obtained, and Army funds for this remediation must be included in the ESCA.

### **Page 11, Section 4.3**

Remediation that occurred at the time of release addressed only known contamination.

It is not known whether remediation at the time of release was effective.

Further investigation must be conducted in order to determine what additional remediation is required.

An estimate for further remediation must be obtained, and Army funds for this remediation must be included in the ESCA.

### **Page 12, RAU 1**

Only known contamination was removed. I cannot speak to the thoroughness of this Response Action and whether it was conducted in a way that would prevent further contamination.

### **Page 12, RAU 2A**

There should be a notation that further investigation is required before RAU 2A can be thoroughly remediated.

**Page 12, RAU 2B**

An explanation as to why RAU 2B is not included in the context of Section 4.3 would be helpful.

**Page 12, RAU 2C**

Only monitoring of groundwater contamination has been discussed publicly. The need for remediation has not been addressed either by the Army or by WA DOE, so it is assumed that funds will not be allocated in the ESCA for groundwater remediation.

It is not enough to state that groundwater contamination will be addressed in the ESCA. The FOSET has been relatively specific as to what actions will be performed for specific types of contamination. The public needs to be aware at the FOSET level what it can expect in terms of groundwater remediation.

**Page 13, Section 4.4.1, Current UST/AST Sites**

Remediation of petroleum products at the time of release included only known contamination.

**Page 13, Former UST/AST Sites**

See paragraph above (Current UST/AST Sites).

**Page 15, Section 4.6**

The Grantee should not have to fund *any* remediation for contamination caused by the Army, including asbestos.

**Page 16, Section 4.10**

Topography was the only method used to determine placement of sentry wells. No technical studies were done to identify anomalies.

There are two basic methods for placement of sentry wells: (1) start close to the source of contamination and work out, or (2) start out and work in. The proactive approach is to start with wells close to the source of contamination and move them outward as the plume extends. This would give those monitoring contamination the ability to know where and how fast the plume is moving, the ability to stay ahead of the contamination, and the ability to plan for remediation before it travels off-site.

The method of placing sentry wells at the property line and waiting for contamination to reach them is ineffective in terms of planning for remediation. Once contaminants are detected by the monitoring wells, the contamination has already moved off-site.

The sentry wells in no way provide the ability to assess groundwater on an installation-wide level. Further investigation of groundwater site-wide is necessary before determining whether the sentry wells that have been installed are adequate to assess groundwater through the installation.

The only site-specific assessment that can be done using these monitoring wells pertains to Landfill 4.

Additional information on groundwater should include the April 2006 Groundwater Monitoring Report<sup>4</sup>

Spikes in levels of contaminants recorded in the April 2006 Groundwater Monitoring Report indicate the need to continue groundwater monitoring before stating “there are no chemicals of concern with concentrations that would trigger further investigation.”

A sampling regime should be included in the deed and ECCRs. Remediation should be conducted and funded by the Army.

### **Page 17, Section 4.11**

There has been no systematic approach to monitoring contamination in Lacamas Creek. For example, the creek may move fast enough to sweep contaminants into Lacamas Lake before they can be detected in the Creek.

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<sup>4</sup> The full title of this report can be provided, but not within the timeframe allotted for comments on this FOSET.

There are sewage lagoons on the site that likely affect surface water quality. It is possible these sewage lagoons were used for purposes other than sewage, such as dumping of materials containing or producing contaminants. To my knowledge, the lagoons have not been tested for contamination.

#### **Page 18, Section 5**

The range of a 105 Howitzer is up to 8 miles. The fact that these (and 155s) were used in training is enough to cause doubt as to whether these munitions stayed within the property lines.

#### **Page 19, Section 6**

The amendment to the Programmatic Agreement that is currently under development should be completed, finalized and published prior to finalization of this FOSET.

The Native American Tribes have a significant claim to this property that has not been recognized or acknowledged. It is my understanding that the Tribes were not officially recognized as nations by the federal government before Clark County laid claim to the site. Regardless of the findings of the archeological surveys, the Tribes have a right to portions of the property known to contain artifacts and other evidence of historic Tribal use. The Reuse Plan should have incorporated a Tribal use in its reuse plan.

#### **Page 20, Section 7**

In addition to ICs, the DoD should require additional restrictive covenants that would restrict uses in areas that will remain uncleared of UXO.

It is unclear why the Army discontinued its efforts to clean up the property, and why WA DOE did not enforce Army cleanup.

There should be a financial comparison between the cost of “in-house” Army cleanup and that of independent contractors. I believe a financial analysis would conclude that, without 3<sup>rd</sup> party costs, the Army would have been able to complete cleanup to the same degree as the County, at a fraction of the cost.

#### **Page 20, Section 8**

It should be noted that the current Clark County LRA is essentially Commissioner Marc Boldt.

The Conservation Conveyance is essentially a big loophole when it comes to reuses allowed on UXO properties. There are many uses such as those proposed for this site that are compatible with a Conservation Conveyance, but not with UXO.

Glynn Ryan, Chief, BRAC Atlanta once stated that it really is not the DoD's concern what local jurisdictions do with their UXO properties, as long as the reuse complies with the type of conveyance and all land use laws in effect.

The DoD needs to take a proactive approach to identifying uses appropriate for the types of contamination it has caused.

The DoD should educate local authorities as to appropriate uses for UXO properties. Even though a range-free Regional Park with camping meets local zoning laws and the criteria for a Conservation Conveyance, it is irresponsible of the DoD not to offer guidance in the selection of an appropriate reuse.

## **Page 21, Section 8**

The "proposal" has not been assessed. The property itself has undergone "characterization."

The characterization has not adequately assessed and evaluated items (a) through (d) of this paragraph.

- (a) Clarification: the "evaluation" is a recon evaluation for the purposes of characterization. Recon does not constitute a thorough evaluation. Contamination on this site exceeds the ability for thorough evaluation without complete investigation.
- (b) The environmental impacts from the reuse are not definitive, since certain uses will require investigation and removal that has not yet been determined.
- (c) The proposed ICs around the central impact area will prevent wildlife, both large and small, from migrating through the site, especially if they are trapped inside the ICs when they are installed.
- (d) There are no use restrictions to my knowledge. Are "notifications" referring to ICs? In any case, neither use restrictions nor ICs will be adequate to **protect** human health and the environment. Human health and safety has already been affected by activities on the site. Human health and safety will continue to be impacted by contact with contaminants that cannot be removed, including UXO.

Fire response teams will not fight fires in and around UXO. The 10-ft clearance proposed for roads and trails is too narrow to serve as a fire break, especially with



UXO on either side. ICs will not protect fire from spreading, nor will they protect people from fire hazards, especially on roads and trails adjacent to areas that have not been cleared of UXO. Not only are people at risk from UXO, they are at risk of being stranded should fire break out. This is far beyond the typical threat in a typical forested area.

**All comments in this document regarding ICs are repeated for Section 13.1 by reference.**

**Page 21, Section 9**

The public should have an opportunity to review the Responsiveness Summary prior to finalization of the FOSET. Comments may need clarification or may have been incorrectly interpreted, and responses may need to be revised. Although it may not be a DoD requirement, the public needs an opportunity to comment on the Final FOSET before it is submitted for signature as part of the transfer transaction.

**Page 21, Section 10**

My understanding is that NEPA was not required because the EA determined “no significance.”

Restrictive covenants will not be effective at limiting access to authorized personnel only. In a confined area such as a zoo, it might be effective. In a broad, expansive park with remote areas, it will be totally ineffective at keeping children and teens out. Many will find ICs an invitation to collect what’s on the other side.

**Page 22, Section 10**

The County should not have to remediate asbestos, lead-based paint, or any other contamination left behind by the Army.

A definition of “significant change” would be appropriate concerning a supplemental EA.

**Page 23, Section 12**

Environmental investigation and remediation will be conducted by BCRRT, LLC, not the County.

### **Page 23, Section 13**

Since cleanup funds are contingent upon Congressional authorizations and appropriations, it is possible that these Congressional authorizations and appropriations may change prior to completion of cleanup. A provision should be made for cleanup should DoD funds not be available.

### **Page 23, Section 13.1**

Will “land use controls” remain in effect *in perpetuity*?

### **Page 24, Section 13.2**

It is ironic that the Army would require necessary response actions to be completed on a schedule in coordination with WA DOE. These are the same response actions the Army refused to conduct while owner of the site.

### **Page 24, Section 14**

The Army “finding” that the property is suitable for early transfer is a given, otherwise there would be a FOSET. It is not a given for the RAB, which issued a unanimous advisory to the DoD that no amount of cleanup will ever be sufficient for the intended reuse: a free-range regional park.

I would appreciate an explanation from the Army/BRAC regarding the manner in which RAB advisories are reviewed and “taken under advisement.” There has been little point in issuing RAB advisories when the Army doesn’t acknowledge or respond to the advisories.

The statement that the property can be transferred dirty for its intended reuse “without unacceptable risk to human health and the environment” is deplorable for a federal agency that knows beyond doubt that innocent members of the public will be killed by contamination it left behind. This is not a presumption; it is historically verifiable. Children and UXO do not mix.

### **Conclusion**

This concludes my comments on the FOSET. However, I would like to reiterate that, as a volunteer RAB member, I am unable to comment thoroughly and effectively due to time

constraints of commenting on the PPCD; addressing new concerns to WA DOE, the Army and the County as they arise; the increased flow of information due to the transfer; reviewing the May 10, 2006 RAB minutes; communicating with all those I represent and others with whom I am in contact regarding Camp Bonneville and the transfer process; and the usual and customary responsibilities that accompany my role as a RAB member on a monthly basis.

Thank you for the opportunity to comment on the draft FOSET.

Lynelle West Hatton

Member, Camp Bonneville Restoration Advisory Board

Director, Toxic and Explosive Substance Accountability (TESA)

## **Army Response to Ms. Hatton's 14 June Comments**

### **Page 1, Introduction**

The property is not suitable for transfer as stated in items (a) through (d). (a) The FOSET does not protect human health because it does not prevent people from coming into contact with UXO; it does not protect the environment because it does not remediate environmental contamination such as contaminated groundwater plumes that have reached sentry wells at the property line. (b) It does not disrupt ongoing response actions because the Army has been negligent in performing response actions ordered by DOE, and DOE has been negligent in enforcing its EOs legally. (d) Other than installation and maintenance of ICs, the ECCR does not identify Long-term Obligations that must be attached to the property.

**Army response:** Transferring property via the early transfer mechanism under CERCLA allows property that is contaminated and requires further remediation to be transferred prior to completion of remediation. Pursuant to CERCLA, Section 120(h) (3)(C)(i), property is suitable for early transfer for the use intended by the transferee and the intended use is consistent with protection of human health and the environment. The Army has determined that Camp Bonneville is suitable for early transfer to Clark County for use as a conservation area, including a portion of the land to be used as a regional park, and that the use is protective of human health and the environment.

The FOSET is a summary of the environmental condition of the property and includes a statement that deed restrictions will be placed on the property to protect human health and the environment. The deed restrictions that will be recorded at the time of transfer are meant to protect human health during remediation, after further investigation and after remediation of the property is complete. Further investigation of the groundwater will be conducted by Clark County and funded by the Army through the ESCA.

### **Page 2, Introduction**

Transfer of the property has already delayed the necessary response actions on the property because the transfer process has aborted all remediation that was to have been performed by the Army since remediation of Landfill 4.

**Army response:** The Army and WDOE have worked to resolve issues and environmental concerns at Camp Bonneville.

### **Page 3, Section 3.1**

The contamination caused by the munitions training activities will never be remediated to a level safe enough for a free-range regional camping park. Only 100% surface clearance and additional subsurface clearance to a depth of 14 inches site-wide would reduce the hazard of human contact with UXO and provide the opportunity for fire suppression to aid public safety in the event of a wildfire.

**Army response:** The County does not intend that the entire Camp Bonneville area will be a regional park. Approximately 800 acres of the 3,020 acres at Camp Bonneville (26.5%) will be dedicated as a regional park area. The park area available to the public will be limited to clearly marked trails and nature areas and will be cleared of UXO to a level that is protective of human health and the environment.

### **Page 4, Section 3.3**

The property has only been characterized, not "extensively investigated." Investigation implies intrusive subsurface investigation for UXO, not just AOCs and AOPCs.

Response actions have not been conducted in all areas where appropriate. There are many response actions that remain to be done due to the Army's negligence in performing these actions as ordered by WA DOE. Further, investigation has not been completed. Therefore, many areas that will require response actions have not even been identified.

**Army response:** This section of the FOSET refers to the environmental investigation and remediation that has occurred on the entire Camp Bonneville property, not just the UXO investigations. The sentence will be revised to remove "extensively."

### **Page 5, Section 4**

The information provided in the FOSET may represent a complete search of agency files, but it does not represent complete information. This statement should contain a disclaimer that the complete search does not constitute all the information on Bonneville. New information is

constantly surfacing, due primarily to the diligence of the RAB and concerned community members.

**Army response:** Comment noted.

#### **Page 5, Section 4.1**

"Evidence of MEC on certain areas of the property" is misleading. Artillery impact fans extend over 90% of the property.

**Army response:** Comment noted. The evidence relied upon by the Army reflects where MEC is either known or likely to be located.

#### **Page 6, Section 4.1**

The MRS-specific data is incomplete. The statement should indicate that the data includes information only on known activities, and that it does not include any information on activities performed by foreign militaries.

**"The ESS provides MRS-specific data... that provides the basis for..." These statements are very tedious and difficult to follow. It sometimes requires several attempts to follow the intent of a sentence through to the end. Additionally, the extensive use of acronyms requires constant reference to the List of Acronyms, which further complicates and confuses the intent of the statement.**

The design of the munitions response actions and protective measures to be taken does not protect workers and the general public. These actions may reduce the threat of injury to workers, but they do nothing to protect or even reduce the threat to the general public. The public will remain at risk *in perpetuity* for contact with UXO, and the odds of contact will increase with time.

**Again, "transferee... DDESB-approved ESS..." The legal content and use of acronyms make sentences of this nature difficult to follow. They are not easily understood by the RAB and the general public. This speaks to the inadequacy of a 30-day comment period on the FOSET, especially since the FOSET and PPCD comment periods ran concurrently instead of consecutively.**

**Army response:** To clarify, an ESS is required in order to conduct munitions response activities. The ESS addresses safety issues for workers and the public during and after the response activity. There will be no public access to the property during investigation and remediation.

#### **Page 6, Section 4.1**

Stating that munitions response will *protect the public* is patently false. This type of misinformation will promote a false sense of security. If the ESS provides accurate MRS-specific data, the conclusion will be that no amount of cleanup will protect the general public, even after response has been completed. Since 1948, the first year civilian deaths from UXO encounters were recorded, people across the country have been maimed or killed following this type of cleanup. There is no reason to believe this installation will be any different.

The Army Corps of Engineers Final Archive Search Report Conclusions and Recommendations (July 1997, Page 2-4), states:

**The potential for ordnance exists throughout the majority of the installation.**

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**The types of unexploded ordnance which may be present range from small arms ammunition to 155mm artillery rounds, up to 4.2 inch mortars, 2.36" and 3.5" rockets, and grenades (hand and rifle). Training devices may also be found throughout the post.**

The vast range of items known to have been used on the site and found in debris—to say nothing of items unknown—precludes protection of public health and safety, ever. This MEC / UXO will always pose a threat to the public. The public will never be protected from UXO. By omitting a statement to this effect and stating means by which the public can be “protected”, the FOSET is misleading and will give a false impression that UXO can be cleaned up entirely.

**Army response:** This section refers to the actual munitions response activities. At the time of transfer to Clark County, certain deed restrictions will be placed on the Property that prohibit all public access to Camp Bonneville during the response activities. When the response activities are completed, other deed restrictions will be placed on the Property that limit public access to certain areas (the park area) and prohibits public access to all other areas. These deed restrictions are designed to protect the public.

#### **Page 6, Section 4.1**

A one-time DDESB-approved ESS is inadequate. Conditions on the site may change naturally, requiring the ESS to be updated prior to each new activity. Updating the ESS at pre-determined intervals and/or based on a reassessment of need (environmental changes, etc) should be required.

There should be a notation that all activities listed will require a DDESB-approved ESS *in perpetuity*. The ESS should be valid only for a limited period of time. Each new activity after the ESS “expiration date” must require a new approved ESS.

**Army response:** The purpose of the Explosives Safety Submission (ESS) is to ensure that all applicable Department of Defense and Army explosive safety standards are applied during munitions response action. It will provide all of the safety specifications for UXO and MEC removal actions. Clark County will be required to submit an ESS before trained professions can begin munitions response activities on the property. The ESS does not address safety standards that should be implemented when the munitions response actions have been completed. Further, the PPCD requires the BCRRT to conduct emergency actions for the purpose of restricting access to RAU3 during the investigation and cleanup of the RAU3 to reduce the threat to human health and safety association with the military munitions. The emergency actions include the construction of fencing in certain areas and clearance of brush within ten feet of the Property perimeter fence line.

Since the ESS relates to explosive safety standards and safety specifications do not change frequently, a single ESS will be sufficient.

#### **Page 7, Section 4.1**

Page 6 states that the transferee’s ESS must be submitted to USATCES and DDESB for review and approval. It is not clear what entity will thoroughly review and comment on the AAR, since Page 7 states the DDESB “will normally only review the AAR for adequacy...”. (It took about 30 minutes to decipher the intent of this paragraph and draft this comment.)

Deferring to Clark County to develop an LUCIP is inappropriate. WA DOE is responsible for developing and enforcing the LUCIPD. Clark County is responsible for implementing it.

The statement that not all areas of Camp Bonneville have explosives safety concerns is misleading, as noted on the previous page of these comments. For example, there was an item of



MEC found in an area that was not identified as containing MEC. This and the statement in the ASR Final Conclusions (quoted above) indicate there is potential for MEC to be found on virtually the entire site.

**Army response:** The DDESB will review the AAR to determine that the actions taken comply with the ESS.

Should the transfer occur, Clark County will be the owner of the property. They would have the responsibility of enforcing the deed restrictions and developing the LUCIP. The LUCIP will identify specific details on how they will implement, monitor and enforce LUCs.

#### **Page 7, Section 4.1**

Again, RAU 3 should encompass the entire site based on the ASR Final Conclusions.

**Army response:** RAU 3 includes all of the MRS known or suspected to contain MEC throughout Camp Bonneville.

#### **Page 7, ASR 1997**

The ASR 1997 did not perform an exhaustive search for information on Camp Bonneville. The ASR 1997 is incomplete and has been known to be incomplete for years. It should be recognized as such.

**Army response:** The archival search report (ASR) is a compilation of records located during a complete search of agency files. It contains existing, historical records created, received and maintained by the agency, or in this case, Camp Bonneville. The information in the ASR is the basis for determining the environmental condition of the property. The ASR is not updated; however, if the agency locates additional information, that information is added to the administrative record and is available for review by the public. In the case of Camp Bonneville, a Supplemental ASR was performed in 1999 when the Army realized the 1997 ASR did not contain all agency records. The Supplemental ASR contained interviews with residents surrounding Camp Bonneville.

#### **Page 8, MEC Site Characterization 1998**

Implying that the presence and density of MEC on the property can be determined by the characterization is inaccurate. The characterization was reconnaissance only and not intended as a definitive study. It is reasonable to expect that there is much on the site that is unaccounted for, including UXO that is present in the many AOCs and AOPCs as yet unidentified.

**Army response:** This purpose of this section in the FOSET is to describe what studies and munitions response activities have occurred within RAU 3.

#### **Page 8, Time-critical Removal Action 1998**

It should be stated that surface clearance in this Removal Action in 2000 did not remove the source of contamination, and therefore an additional Removal Action was necessary.

**Army response:** This purpose of this section in the FOSET is to describe what studies and munitions response activities have occurred within RAU 3.

#### **Page 8, Supplemental ASR 1999**

This report intended to fill data gaps. In fact, it should have clearly stated the remaining data gaps, including foreign activities conducted on the site. For example, the type of munition training and types of munitions used cannot be verified. There is no reason to believe the 1997 ASR Conclusions (Page 2-4) are inaccurate.

**Based on interviews with people knowledgeable about Camp Bonneville, there have also been items found off post near the post's eastern boundary and north of the Camp Bonneville cantonment area. This indicates that ordnance was fired farther than the range safety fans depicted on maps.**

Interviews with neighboring property owners cannot be discredited.

These interviews indicate the presence of UXO beyond the property line. There is no reason to believe this has changed. As recently as 2005 WA DOE stated in emails to the County<sup>5</sup> that concerns of neighboring property owners regarding MEC on their property were valid.

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<sup>5</sup> This can be verified by RAB members who received a copy of this communication via FOIA.

**Army response:** This purpose of this section in the FOSET is to summarize what studies and munitions response activities have occurred within RAU 3. The text states that this search was performed to fill data gaps.

#### **Page 8, Time-critical Removal Action 1999**

Although clearance of UXO was conducted to a depth of 2 feet, the Army was out of place by recommending unrestricted use in its Statement of Munitions Response to MEC.

Unrestricted use should not be allowed at all, certainly not until clearance to a depth of 4 feet has been completed. This is true of all high-intensity uses and all intrusive uses on the site, whether high-intensity or not.

**Army response:** Comment noted; however, the purpose of this section of the FOSET is to summarize what studies and munitions response actions have occurred within RAU 3.

#### **Page 8, TEC Analysis 2000**

Prior to conducting the TEC Analysis, the Army should have notified WA DOE and the RAB that more sophisticated technology existed. Instead, it was never even discussed by the Army at RAB meetings or in any other forum, and the volunteer community members were unaware for years after this TEC Analysis that more sophisticated technology existed.

At the time the TEC Analysis was done, the Army could have utilized LiDAR, which can provide 3D imaging to better define ground scars.

LiDAR is used by DoD on a regular basis. Through FOIA, a RAB member obtained the LiDAR that Clark County commissioned from a noted firm for \$699,000. This firm was gracious enough to review the data pertaining to Bonneville, but was unable to use it for the purposes of this study because the resolution was too low in that part of the County.

The firm volunteered the information that DoD is one of its biggest clients. Although the Army could have utilized this more sophisticated method of obtaining the information sought in this study, it opted not to. Other bases and installations benefit from LiDAR. Camp Bonneville did not. An explanation has never been provided.

**Army response:** Comment noted. The purpose of this section is to summarize the studies and munitions response activities that have occurred within RAU3.

### **Page 9, Range 8 and Range 9 2000**

Again, to be certain that all UXO posing a threat to the public has been removed, clearance must be to a depth of 4 ft.

**Army response:** Comment noted. This section is meant to summarize activities the studies and munitions response activities that have occurred within RAU3.

### **Page 9, Instrument-aided Field Reconnaissance 2001**

The instruments used in this recon should be identified in the FOSET, just as the various munitions were identified.

It should be stated that confirming the location of MEC, AOCs and AOPCs does not in any way imply that these items and areas are the only ones existing on the property.

It is disheartening to learn that the purpose of this recon was to confirm AOCs and AOPCs that were identified through the use of inferior technology. Due to overgrowth of vegetation, understory and tree canopies, additional AOCs and AOPCs have undoubtedly been missed. Had more sophisticated technology been used, additional AOCs and AOPCs would certainly have been identified.

A study published by a leading university<sup>6</sup> discredited the methodology used at Bonneville to determine AOCs and AOPCs. Different methodology should have been used, as it would have provided more accurate information.

**Army response:** This section is meant to summarize activities that have occurred. Additional details relating to the specific of the field reconnaissance can be located in the Camp Bonneville Administrative Record.

### **Page 9, Instrument-aided Field Reconnaissance 2002**

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<sup>6</sup> This study can be identified, but not in the timeframe allotted for comments on this FOSET.

All comments on Instrument-aided Field Reconnaissance 2001 above are repeated here by reference.

This paragraph is seriously flawed, as the implication is that there is no UXO present in this large area. Recon was for the purpose of confirming AOCs and AOPCs, not for the purpose of finding UXO.

The fact that no UXO was found during this recon does not in any way indicate the lack of UXO on 1,200 heavily forested acres or the need to investigate thoroughly, including a surface sweep of the entire site.

There have been instances of UXO lodged in trees that photographically confirm the presence of UXO in densely forested areas. This UXO would not have left any ground scars or any other identifying markers.

The methodology for identifying AOCs and AOPCs would have made it much more difficult to conduct effective recon in the 1,200 heavily-forested acres due to overgrown vegetation, understory and tree canopies.

Again, a study published by a leading university (see footnote 2) discredited the methodology used at Bonneville to determine AOCs and AOPCs.

**Army response:** This section is meant to summarize activities that have occurred.

### **Page 9, Landfill 4/Demo 1 Removal Action**

This Removal Action followed the surface clearance conducted in 2000. However, it was ineffective at removing the source of contamination, as exhibited by the April 2006 Groundwater Monitoring Results,<sup>7</sup> which is compiled from the Army's own data.

This groundwater report shows an increase in levels of contaminants dangerous for human consumption and should be mitigated immediately. By failing to acknowledge the need for remediation, the Army willfully ignores a critical element of contamination resulting from Army use of this site.

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<sup>7</sup> The exact title of the Groundwater Monitoring Results can be identified, but not in the timeframe allotted for comments on this FOSET.

**Army response:** This section of the FOSET details RAU3 characterization and removal activities. The excavation was conducted in accordance with WDOE requirements and effectively removed OB/OD ordnance, landfill materials and contaminated soil. With this removal action, the source of the groundwater contamination was removed. Additional evaluation of the contaminated groundwater plume at landfill 4/demolition area 1 will be conducted by Clark County. This will be funded by the Army under the ESCA. The soil removal action was successful in removing the contaminated soil which contributed to the contaminated groundwater.

**Page 10, Item 4.1 (conclusion)**

I cannot comment on the Tables included in this FOSET due to the time constraints of reviewing the FOSET and PPCD simultaneously.

**Army response:** Noted.

**Page 10, RAU 1**

As a latecomer to information about Camp Bonneville, I cannot speak to the thoroughness of the investigation of RAU 1. Given that WA DOE has not approved the remediation, and considering the inadequacy of other recon and characterizations, as well as the inaccurate statements in this FOSET, I can only assume that the thoroughness of the investigation is in question.

**Army response:** Noted. The text will be changed to reflect that all active remediation has been completed. Land use controls have not been implemented.

**Page 10, RAU 2A and 2B**

See comment for RAU 1. I do not acknowledge that information regarding RAU 2A and 2B is complete.

**Army response:** Noted. Again, the FOSET is a summary of the current environmental condition of property. Clark County will take additional actions at RAU 2A and 2B if required by WDOE and as provided in the PPCD.

**Page 11, RAU 2C**

Groundwater contamination should not only be monitored, but remediated. Monitoring alone will not protect the public.

The groundwater data should be updated in the FOSET to include the April 2006 groundwater monitoring results. These results show spikes in contaminants detected at the sentry wells.

Remediation is discussed in the FOSET pertaining to other contamination on the site. The Army should indicate how it proposes to investigate and remediate groundwater relative to the most recent data.

If groundwater is not remediated, even Clark County residents who do not frequent the park will be subject to increased levels of contaminants in the County's water supply – contaminants known to have negative long-term health implications.

With the elevated levels of contaminants in the groundwater, groundwater remediation is a necessity. Army funds for this remediation must be included in the ESCA.

Identification of the immediate necessity of remediation for RAU 2C and all groundwater contamination should be included in this FOSET.

An estimate for further remediation must be obtained, and Army funds for this remediation must be included in the ESCA.

**Army response:** After transfer Clark County will continue to monitor and evaluate the groundwater in this area. A supplemental groundwater remedial investigation work plan for this area is required per the PPCD. This investigation will be funded by the Army under the ESCA.

### **Page 11, Section 4.3**

Remediation that occurred at the time of release addressed only known contamination.

It is not known whether remediation at the time of release was effective.

Further investigation must be conducted in order to determine what additional remediation is required.

An estimate for further remediation must be obtained, and Army funds for this remediation must be included in the ESCA.

**Army response:** Agreed. Section 4.3 lists the known storage, release or disposal sites on Camps Bonneville and Killpack, states that releases were remediated at the time of the release and that additional remediation/investigation required by WDOE will be funded by the Army under the ESCA.

#### **Page 12, RAU 1**

Only known contamination was removed. I cannot speak to the thoroughness of this Response Action and whether it was conducted in a way that would prevent further contamination.

**Army response:** Remedial actions conducted within RAU 1 do not required further active remediation.

#### **Page 12, RAU 2A**

There should be a notation that further investigation is required before RAU 2A can be thoroughly remediated.

**Army response:** The text in the FOSET refers to remediation required at these sites. No changes to the text are required.

#### **Page 12, RAU 2B**

An explanation as to why RAU 2B is not included in the context of Section 4.3 would be helpful.

**Army response:** CERCLA Section 120(h)(3)(A) provides that when transferring property the Army must provide notice of any hazardous substances known to have been stored for more than one year or more, known to have been released or disposed of on that property. Section 4.3 provides the notice requirements under CERCLA. Soil, groundwater and surface water samples have not indicated that hazardous substances were stored, released or disposed of in excess of the reportable quantities specified in 40 Code of Federal Regulations Part 373 at RAU 2B. Additional information on investigations for RAU 2B (Demolition Area 2 and Demolition Area 3) are listed in Table 1 on page 47 of the FOSET.



## **Page 12, RAU 2C**

Only monitoring of groundwater contamination has been discussed publicly. The need for remediation has not been addressed either by the Army or by WA DOE, so it is assumed that funds will not be allocated in the ESCA for groundwater remediation.

It is not enough to state that groundwater contamination will be addressed in the ESCA. The FOSET has been relatively specific as to what actions will be performed for specific types of contamination. The public needs to be aware at the FOSET level what it can expect in terms of groundwater remediation.

**Army response:** An investigation of the groundwater in this area is necessary prior to determining whether remediation is needed or what type of groundwater remediation may be required. See response to comment, Page 11, RAU 2C.

## **Page 13, Section 4.4.1, Current UST/AST Sites**

Remediation of petroleum products at the time of release included only known contamination.

**Army response:** Comment noted. See response to comment, Page 12, RAU 2B above.

## **Page 13, Former UST/AST Sites**

See paragraph above (Current UST/AST Sites).

**Army response:** Comment noted. See response to comment, Page 12, RAU 2B above.

## **Page 15, Section 4.6**

The Grantee should not have to fund *any* remediation for contamination caused by the Army, including asbestos.

**Army response:** The asbestos is located within buildings and does not currently pose a threat to the environment. Asbestos is only a hazard if the buildings are not maintained and/or used properly. This will be the responsibility of the new owner, who is given notification of these contaminants in the FOSET and the deed.

**Page 16, Section 4.10**

Topography was the only method used to determine placement of sentry wells. No technical studies were done to identify anomalies.

There are two basic methods for placement of sentry wells: (1) start close to the source of contamination and work out, or (2) start out and work in. The proactive approach is to start with wells close to the source of contamination and move them outward as the plume extends. This would give those monitoring contamination the ability to know where and how fast the plume is moving, the ability to stay ahead of the contamination, and the ability to plan for remediation before it travels off-site.

The method of placing sentry wells at the property line and waiting for contamination to reach them is ineffective in terms of planning for remediation. Once contaminants are detected by the monitoring wells, the contamination has already moved off-site.

The sentry wells in no way provide the ability to assess groundwater on an installation-wide level. Further investigation of groundwater site-wide is necessary before determining whether the sentry wells that have been installed are adequate to assess groundwater through the installation.

The only site-specific assessment that can be done using these monitoring wells pertains to Landfill 4.

Additional information on groundwater should include the April 2006 Groundwater Monitoring Report<sup>8</sup>

Spikes in levels of contaminants recorded in the April 2006 Groundwater Monitoring Report indicate the need to continue groundwater monitoring before stating “there are no chemicals of concern with concentrations that would trigger further investigation.”

A sampling regime should be included in the deed and ECCRs. Remediation should be conducted and funded by the Army.

**Army response:** Groundwater contamination has been documented in the monitoring wells near Landfill 4/Demo Area 1. Monitoring wells have been installed down-gradient of this site to

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<sup>8</sup> The full title of this report can be provided, but not within the timeframe allotted for comments on this FOSET.

monitor for potential migration, which has not been indicated. Groundwater monitoring wells at the Camp Bonneville property boundaries are designed to monitor the groundwater going off-site and are not intended to prevent contamination from migrating. At this time, there is no evidence of off-site groundwater contamination from activities at Camp Bonneville. The text in the FOSET will not be changed.

#### **Page 17, Section 4.11**

There has been no systematic approach to monitoring contamination in Lacamas Creek. For example, the creek may move fast enough to sweep contaminants into Lacamas Lake before they can be detected in the Creek.

There are sewage lagoons on the site that likely affect surface water quality. It is possible these sewage lagoons were used for purposes other than sewage, such as dumping of materials containing or producing contaminants. To my knowledge, the lagoons have not been tested for contamination.

**Army response:** Surface water samples from Lacamas Creek and groundwater samples taken down gradient of Demolition Area 1/Landfill 4 have been taken to assess the water quality in the Creek. There are no locations on the Camp Bonneville property where site activities are known to have affected the quality of surface water.

#### **Page 18, Section 5**

The range of a 105 Howitzer is up to 8 miles. The fact that these (and 155s) were used in training is enough to cause doubt as to whether these munitions stayed within the property lines.

**Army response:** Comment noted. As stated in the FOSET, Clark County will notify the Army if a munitions response within Camp Bonneville indicates that MEC is most likely off-site. The Army will then reassess the situation and determine if a response is required.

#### **Page 19, Section 6**

The amendment to the Programmatic Agreement that is currently under development should be completed, finalized and published prior to finalization of this FOSET.

The Native American Tribes have a significant claim to this property that has not been recognized or acknowledged. It is my understanding that the Tribes were not officially recognized as nations by the federal government before Clark County laid claim to the site. Regardless of the findings of the archeological surveys, the Tribes have a right to portions of the property known to contain artifacts and other evidence of historic Tribal use. The Reuse Plan should have incorporated a Tribal use in its reuse plan.

**Army response:** The National Historic Preservation Act requires that the Army identify historic properties at Camp Bonneville, which include archaeological and cultural properties, that the federally recognized tribes might attach significant cultural attachment. These historical properties, if eligible for listing on the National Register of Historic Properties, must be protected prior to transfer. The Programmatic Agreement and Amendment No. 1 provide for protection of historic properties. The federally recognized tribes have been consulted in regard to the amendment to the Programmatic Agreement properties. The Amendment has been finalized and will be attached to the FOSET.

#### **Page 20, Section 7**

In addition to ICs, the DoD should require additional restrictive covenants that would restrict uses in areas that will remain uncleared of UXO.

It is unclear why the Army discontinued its efforts to clean up the property, and why WA DOE did not enforce Army cleanup.

There should be a financial comparison between the cost of “in-house” Army cleanup and that of independent contractors. I believe a financial analysis would conclude that, without 3<sup>rd</sup> party costs, the Army would have been able to complete cleanup to the same degree as the County, at a fraction of the cost.

**Army response:** The intent of Section 7, Environmental Remediation Agreements, is to discuss the status of remediation activities at each of the remedial action units (RAUs). Remediation actions include the imposition of restrictive covenants on Camp Bonneville. The deed transferring the property will include restrictive covenants that restrict all public access during remediation activities at Camp Bonneville and allow public access only to the regional park area after remediation activities are complete.

#### **Page 20, Section 8**

It should be noted that the current Clark County LRA is essentially Commissioner Marc Boldt.

The Conservation Conveyance is essentially a big loophole when it comes to reuses allowed on UXO properties. There are many uses such as those proposed for this site that are compatible with a Conservation Conveyance, but not with UXO.

Glynn Ryan, Chief, BRAC Atlanta once stated that it really is not the DoD's concern what local jurisdictions do with their UXO properties, as long as the reuse complies with the type of conveyance and all land use laws in effect.

The DoD needs to take a proactive approach to identifying uses appropriate for the types of contamination it has caused.

The DoD should educate local authorities as to appropriate uses for UXO properties. Even though a range-free Regional Park with camping meets local zoning laws and the criteria for a Conservation Conveyance, it is irresponsible of the DoD not to offer guidance in the selection of an appropriate reuse.

**Army response:** Clark County is the authorized LRA for the Camp Bonneville property. The intended use of the property is for conservation and park purposes. The Army made the finding of suitability for an early transfer based on the intended use of the property for conservation purposes, the environmental condition of the property, the response actions that will be complete through the ESCA, and the implementation of land use controls, as stated in the FOSET.

## **Page 21, Section 8**

The "proposal" has not been assessed. The property itself has undergone "characterization."

The characterization has not adequately assessed and evaluated items (a) through (d) of this paragraph.

- (e) Clarification: the "evaluation" is a recon evaluation for the purposes of characterization. Recon does not constitute a thorough evaluation. Contamination on this site exceeds the ability for thorough evaluation without complete investigation.
- (f) The environmental impacts from the reuse are not definitive, since certain uses will require investigation and removal that has not yet been determined.
- (g) The proposed ICs around the central impact area will prevent wildlife, both large and small, from migrating through the site, especially if they are trapped inside the ICs when they are installed.

- (h) There are no use restrictions to my knowledge. Are “notifications” referring to ICs? In any case, neither use restrictions nor ICs will be adequate to **protect** human health and the environment. Human health and safety has already been affected by activities on the site. Human health and safety will continue to be impacted by contact with contaminants that cannot be removed, including UXO.

Fire response teams will not fight fires in and around UXO. The 10-ft clearance proposed for roads and trails is too narrow to serve as a fire break, especially with UXO on either side. ICs will not protect fire from spreading, nor will they protect people from fire hazards, especially on roads and trails adjacent to areas that have not been cleared of UXO. Not only are people at risk from UXO, they are at risk of being stranded should fire break out. This is far beyond the typical threat in a typical forested area.

**Army response:** Comment noted.

**All comments in this document regarding ICs are repeated for Section 13.1 by reference.**

#### **Page 21, Section 9**

The public should have an opportunity to review the Responsiveness Summary prior to finalization of the FOSET. Comments may need clarification or may have been incorrectly interpreted, and responses may need to be revised. Although it may not be a DoD requirement, the public needs an opportunity to comment on the Final FOSET before it is submitted for signature as part of the transfer transaction.

**Army response:** DoD and Army procedures require that the public is given the opportunity to comment on matters requiring public review. The Army must review and act on the comments.

#### **Page 21, Section 10**

My understanding is that NEPA was not required because the EA determined “no significance.”

Restrictive covenants will not be effective at limiting access to authorized personnel only. In a confined area such as a zoo, it might be effective. In a broad, expansive park with remote areas, it will be totally ineffective at keeping children and teens out. Many will find ICs an invitation to collect what’s on the other side.

**Army response:** The Army completed the NEPA process in accordance with the National Environmental Policy Act (NEPA) and prepared an environmental assessment. The EA is available for review in the administrative record for Camp Bonneville.

**Page 22, Section 10**

The County should not have to remediate asbestos, lead-based paint, or any other contamination left behind by the Army.

A definition of “significant change” would be appropriate concerning a supplemental EA.

**Army response:** Asbestos and lead based paint are located within the buildings at Camp Bonneville and Camp Killpack. These may be hazardous if the buildings are not maintained and/or used properly. If the asbestos or lead based paint require attention after the transfer, it will be the responsibility of the County as the new owner, who is given notification of these contaminants in the FOSET and the deed.

A supplemental EA is required when new information about the affected environment or a change in the proposed use of the property such that the original conclusion in the EA (regarding the significance of the environmental impact) might change. In the case of Bonneville, the EA in 2001 does not require supplementation because there has been no change in the environment at Camp Bonneville and no change in the proposed use of Camp Bonneville since the 2001 EA.

**Page 23, Section 12**

Environmental investigation and remediation will be conducted by BCRRT, LLC, not the County.

**Army response:** The Army is transferring the property and providing funding for environmental investigation and remediation through the ESCA to Clark County. Clark County is ultimately responsible for achieving cleanup and regulatory closure of all sites at Camp Bonneville in accordance with all applicable local, state and federal regulations.

**Page 23, Section 13**

Since cleanup funds are contingent upon Congressional authorizations and appropriations, it is possible that these Congressional authorizations and appropriations may change prior to

completion of cleanup. A provision should be made for cleanup should DoD funds not be available.

**Army response:** Noted. In order for the Army to fund clean up, DoD funds are required.

### **Page 23, Section 13.1**

Will “land use controls” remain in effect *in perpetuity*?

**Army response:** The land use controls are in perpetuity and run with the land. All successor landowners must comply with the land use controls. In the event that environmental conditions change and less restrictive land uses are appropriate they may be modified only with the approval of WDOE.

### **Page 24, Section 13.2**

It is ironic that the Army would require necessary response actions to be completed on a schedule in coordination with WA DOE. These are the same response actions the Army refused to conduct while owner of the site.

**Army response:** Comment noted.

### **Page 24, Section 14**

The Army “finding” that the property is suitable for early transfer is a given, otherwise there would be a FOSET. It is not a given for the RAB, which issued a unanimous advisory to the DoD that no amount of cleanup will ever be sufficient for the intended reuse: a free-range regional park.

I would appreciate an explanation from the Army/BRAC regarding the manner in which RAB advisories are reviewed and “taken under advisement.” There has been little point in issuing RAB advisories when the Army doesn’t acknowledge or respond to the advisories.

The statement that the property can be transferred dirty for its intended reuse “without unacceptable risk to human health and the environment” is deplorable for a federal agency that knows beyond doubt that innocent members of the public **will** be killed by contamination it left behind. This is not a presumption; it is historically verifiable. Children and UXO do not mix.



**Army response:** The Army is transferring Camp Bonneville to Clark County under a conservation conveyance. The reuse for conservation purposes was outlined in the Clark County Reuse Plan, was made available for public review and was evaluated by the Army. Conservation uses described in the Reuse Plan include a regional park, a rustic retreat center/outdoor school, trails and nature areas, timber resource management areas and habitat restoration. The County does not intend that the entire Camp Bonneville area will be a regional park. Approximately 800 acres of the 3,020 acres at Camp Bonneville will be dedicated as a regional park area. The park area available to the public will be limited to clearly marked trails and nature areas and will be cleared of UXO to a level that is protective of human health and the environment. The remaining acreage will have no public access but will be maintained as habitat restoration and conservation areas. The presence of ordnance and explosives on the property and the adequacy of land use restrictions and notifications have been assessed based on the County's various proposed uses for the property. The Army will also enter into an Environmental Services Cooperative Agreement with Clark County to ensure that cleanup is conducted. While cleanup activities are ongoing, there will be no public access to Camp Bonneville at all. When the cleanup is completed, permanent land use controls will be imposed.

## ATTACHMENT 5

### **Archaeological Monitoring and Inadvertent Discovery Plan for Remedial Actions Associated with the Removal of Munitions and Explosives of Concern (MEC) at Camp Bonneville, Washington**

#### **1. INTRODUCTION**

The Camp Bonneville Military Reservation (Camp Bonneville) comprises approximately 3,020 acres of land in Clark County, Washington. Camp Bonneville currently leases 820 acres of adjoining land from the Washington Department of Natural Resources (WDNR). The Department of Defense used Camp Bonneville for troop training from 1910 to 1995. Training included the use of small arms, assault weapons, field artillery and air defense artillery. The United States Congress approved the closure of Camp Bonneville under the 1995 Base Realignment and Closure (BRAC) Commission.

The Camp Bonneville property is proposed for transfer to Clark County via a conservation conveyance under the authority provided in 10 U.S.C. § 2694a (Conveyance of surplus real property for natural resource conservation). The WDNR leased land will be returned to WDNR. WDNR may retain the 820 acres for its own use or may transfer it to Clark County. Clark County will manage the Camp Bonneville property as a regional park to provide recreational opportunities for the local community and to support natural resource conservation.

The Department of the Army will conduct or fund remedial actions associated with the removal of munitions and explosives of concern (MEC) from Camp Bonneville. These remedial actions may involve ground-disturbing activities and have the potential to result in the inadvertent discovery of archaeological resources or human remains. This plan describes procedures that will be followed in the event of the inadvertent discovery of archaeological resources or human remains resulting from these remedial actions at Camp Bonneville, Washington, and the leased WDNR land.

#### **2. DEFINITIONS**

Archaeological Site: “Archaeological site means a geographic locality in Washington, including but not limited to, submerged and submersible lands and the bed of the sea within the state’s jurisdiction, that contains archaeological objects” (RCW 72.53.030).

Archaeological Object: “Archaeological object means an object that comprises the physical evidence of an indigenous and subsequent culture including material remains of past human life including monuments, symbols, tools, facilities, and technological by-products” (RCW 27.53.030).

On-Site Environmental Compliance Officer (ECO): Clark County will ensure that an On-Site Environmental Compliance Officer is designated. The ECO is responsible to be on-site during all remediation activities. The ECO is responsible for communicating procedures for inadvertent discoveries and the treatment of human remains to all cleanup personnel, and implementing the notification procedures and site protection measures described herein in the event of an inadvertent discovery.

Remediation Team: The Remediation Team consists of all those workers engaged in the implementation of the MEC cleanup alternatives described herein.

Professional Archaeologist: Professional archaeologist means “a person who:

(a) Has designed and executed an archaeological study as evidenced by a thesis or dissertation and been awarded an advanced degree such as an M.A., M.S., or Ph.D. in archaeology, anthropology, history or other germane discipline with a specialization in archaeology from an accredited institution of higher education; and

(b) Has a minimum of one year of field experience with at least twenty-four weeks of field work under the supervision of a professional archaeologist, including no less than twelve weeks of survey or reconnaissance work and at least eight weeks of supervised laboratory experience. Twenty weeks of field work in a supervisory capacity must be documentable with a report on the field work produced by the individual” (WAC 25-48-020(4)).

SHPO: Washington State Historic Preservation Officer.

### **3. ARCHAEOLOGICAL MONITORING AND INADVERTENT DISCOVERY PLAN**

The following describes an archaeological monitoring and inadvertent discovery plan intended to ensure the protection of archaeological objects, archaeological sites, and human remains during ground-disturbing remediation activities<sup>9</sup>. The plan describes specific procedures to be followed in the event of the inadvertent discovery of archaeological objects, archaeological sites, or human remains. The plan has four components: Monitoring; Archaeological Awareness Training; Inadvertent Discovery Procedures; and Treatment of Human Remains.

---

This plan is founded on the assumption that the Camp Bonneville property will transfer out of federal ownership prior to the implementation of the subject remedial actions. Hence, Washington state law will apply, rather than the provisions of the Archaeological Resources Protection Act (ARPA) and the Native American Graves Protection and Repatriation Act (NAGPRA).

### **3.1 Monitoring**

The following monitoring protocol will be followed during all remediation actions that may result in ground-disturbing activity and the inadvertent discovery or disturbance of archaeological objects, archaeological sites, or human remains.

An Environmental Compliance Officer (ECO) will be on-site at Camp Bonneville during all remediation actions that may result in ground-disturbing activity and the inadvertent discovery or disturbance of archaeological objects, archaeological sites, or human remains, including but not limited to: sign and fence installation, land surveying, brush clearing, metal detection investigations, and excavation.

The procedures described in Section 3.3 “Inadvertent Discovery Procedures” will be followed in the event of an inadvertent discovery of any archaeological resource. The procedures described in Section 3.4 “Treatment of Human Remains” will be followed in the event of an inadvertent discovery of human remains.

### **3.2 Archaeological Awareness Training**

A Professional Archaeologist will conduct archaeological awareness training for the entire Remediation Team and the On-Site Environmental Compliance Officer prior to the commencement of any remediation action on Camp Bonneville. The training will familiarize cleanup personnel with the laws and regulations that protect archaeological objects, archaeological sites, and human remains; will aid cleanup personnel in the recognition of archaeological objects, archaeological sites, and human remains; will guide cleanup personnel in the procedures to be followed in the event of an inadvertent discovery; and will instruct cleanup personnel in the appropriate treatment of human remains.

The training will include:

- Relevant Federal and Washington State Law (Revised Code of Washington, RCW)
  - National Historic Preservation Act
  - Indian Graves and Records (RCW 27.44)  
<http://apps.leg.wa.gov/rcw/default.aspx?cite=27.44>
  - Archaeological Sites and Resources (RCW 27.53)  
<http://apps.leg.wa.gov/rcw/default.aspx?cite=27.53>
  - Human Remains (RCW 68.50)  
<http://apps.leg.wa.gov/rcw/default.aspx?cite=68.50>
  - Abandoned and Historic Cemeteries and Historic Graves (RCW 68.60)  
<http://apps.leg.wa.gov/rcw/default.aspx?cite=68.60>
- Recognition of archaeological objects, archaeological sites and human remains

- Previously recorded archaeological sites and isolated finds at Camp Bonneville
- Inadvertent discovery procedures
- Treatment of human remains

### **3.3 Inadvertent Discovery Procedures**

If any member of the Remediation Team believes that any archaeological object or archaeological site has been discovered, that person will stop work in the vicinity of the discovery and notify the ECO. The ECO will investigate, and if the discovery is confirmed, the ECO will immediately stop all ground-disturbing activity within 100 feet of the discovery. Until the procedures described in this plan have been fully implemented, the ECO and the Remediation Team, on behalf of the interests of Clark County, will: implement reasonable measures to protect the discovery site, including any appropriate stabilization or covering; take reasonable steps to ensure the confidentiality of the discovery site; and take reasonable steps to restrict access to the site of discovery.

The ECO will notify a Professional Archaeologist, the SHPO, and the Cowlitz Indian Tribe by telephone, followed by written confirmation (by email, fax or overnight mail). Notification will be made as soon as possible, but no later than one (1) working day after the discovery. A Professional Archaeologist will inspect the discovery site as soon as possible, but no later than three (3) working days after notification. If the Professional Archaeologist determines that the discovery is of no archaeological interest (e.g., artifacts or faunal remains less than 50 years of age), then the ECO may authorize ground-disturbing activity to recommence. The Professional Archaeologist will submit a letter report to Clark County, the SHPO, and the Cowlitz Indian Tribe within fifteen (15) calendar days to document the investigation, including photographs of the discovery site and items discovered, and his or her determination that the discovery is of no archeological interest.

In the event that the discovery is determined to be of archaeological interest, the Professional Archaeologist will notify Clark County, the SHPO, and the Cowlitz Indian Tribe by telephone, followed by written confirmation (by email, fax or overnight mail). Notification will be made as soon as possible, but no later than one (1) working day after the discovery is determined to be of archaeological interest. The notification will describe the nature of the archaeological objects or archaeological sites encountered and the circumstances of their inadvertent discovery. The notification will include the Professional Archaeologist's opinion, either:

- (1) Sufficient information is available to determine that the archaeological resources are not eligible for listing in the National Register of Historic Places, and recommending that ground-disturbing activity be permitted to recommence without further evaluation; or
- (2) Additional archaeological test investigations are necessary to determine if the archaeological resources are eligible for listing in the National Register of Historic Places, and recommending that ground-disturbing activity continue to be halted.

In the first instance, Clark County may authorize ground-disturbing activity to recommence after thirty (30) days, unless the SHPO and/or the Cowlitz Indian Tribe provide a written request for further consultation within that period. In the event of a written request for further consultation, the procedures applicable to the second instance will apply.

In the second instance, Clark County, the SHPO and the Cowlitz Indian Tribe will consult in good faith to arrive at mutually-agreeable and appropriate measures that Clark County will employ to avoid or mitigate any adverse effects associated with continued ground-disturbing activities in the affected area. Consultation must result in a written plan of action in accordance with Washington state law (RCW 27.44 or RCW 27.53) between the Cowlitz Indian Tribe, the SHPO, and Clark County. Clark County may elect to develop programmatic archaeological resource treatment plans in consultation with the SHPO and the Cowlitz Indian Tribe in advance of any remedial actions to minimize work stoppages in the event of an inadvertent discovery.

If the mitigation measures entail the excavation and removal of archaeological resources, the Professional Archaeologist will obtain a written permit for such activities in accordance with RCW 27.53 "Archaeological Sites and Resources." Any mitigation measures to which Clark County, the SHPO and the Cowlitz Indian Tribe mutually agree shall be carried out solely at the expense of Clark County. Clark County will provide written notification (by email, fax or overnight mail) to the SHPO and the Cowlitz Indian Tribe when all mitigation measures have been completed. If no verbal or written response is received within three (3) working days, Clark County may authorize ground-disturbing activity to recommence.

### **3.4 Treatment of Human Remains**

Human remains will be treated with dignity and respect at all times.

If any member of the Remediation Team believes that any remains may have been discovered (whether believed to be human or non-human), that person will stop work in the vicinity of the discovery and notify the ECO. The ECO will investigate, and if the discovery is confirmed (whether believed to be human or non-human), the ECO will immediately stop all

ground-disturbing activity within 100 feet of the discovery. Until the procedures described in this plan have been fully implemented, the ECO and the Remediation Team, on behalf of the interests of Clark County, will: implement reasonable measures to protect the discovery site, including any appropriate stabilization or covering; take reasonable steps to ensure the confidentiality of the discovery site; and take reasonable steps to restrict access to the site of discovery.

The ECO will notify the Clark County Sheriff's Office, a Professional Archaeologist, the SHPO, and the Cowlitz Indian Tribe by telephone, followed by written confirmation (by email, fax or overnight mail). Notification will be made as soon as possible, but no later than one (1) working day after the discovery. A Professional Archaeologist will inspect the discovery site as soon as possible, but no later than three (3) working days after notification. If the Professional Archaeologist determines that the remains are demonstrably non-human, and there are no archaeological resources in association, then the ECO may authorize ground-disturbing activity to recommence. The Professional Archaeologist will submit a letter report to Clark County, the SHPO, and the Cowlitz Indian Tribe within fifteen (15) days to document the investigation, including photographs of the discovery site and the remains discovered. If non-human remains are determined to be in association with archaeological resources, then the procedures described in Section 3.3 will be followed.

The Professional Archaeologist will notify Clark County immediately if archaeological excavations to expose the remains are necessary to aid in the determination. Clark County will notify the SHPO and the Cowlitz Indian Tribe by telephone, followed by written confirmation (by email, fax or overnight mail) in advance of any such excavations. The SHPO and the Cowlitz Indian Tribe will be invited to observe the excavations. In the event that the Professional Archaeologist cannot determine whether the remains are human or non-human, Clark County will retain the services of a physical anthropologist or other qualified individual to assist in an in-field determination. Remains will be exposed only to the extent necessary to determine whether the remains are human, their cultural affiliation, antiquity, the number of individuals represented, their age, sex, stature, and to identify any pathologies or trauma evident. Measurements, observations and photographs of human remains and associated artifacts may be recorded; however, under no circumstances will any destructive testing take place without the express written consent of the SHPO (in accordance with RCW 27.44.020).

If it is determined that the remains are demonstrably non-human, and there are no archaeological resources in association, then the ECO may authorize ground-disturbing activity to recommence. In this event, the Professional Archaeologist will submit a letter report to Clark

County, the SHPO, and the Cowlitz Indian Tribe within fifteen (15) days to document the investigation, including photographs of the discovery site and the remains discovered.

If it is determined that the remains are non-human, but are in association with archaeological materials, then the procedures described in Section 3.3 will be followed.

If it is determined that the remains are human, the Professional Archaeologist will notify the Clark County Sheriff's Office, a Professional Archaeologist, the SHPO, and the Cowlitz Indian Tribe. Notification will be made by telephone, followed by written confirmation (by email, fax or overnight mail). Notification will be made as soon as possible, but no later than one (1) working day after the remains are determined to be human. The notification will describe the nature of the human remains encountered and the circumstances of their inadvertent discovery. The notification will include the Professional Archaeologist's professional opinion concerning the likely cultural affiliation (whether Native American or non-Native American) based on the archaeological context, bioanthropological observations, and other relevant data. The notification will include the Professional Archaeologist's professional opinion, either:

- (1) Sufficient information is available to determine that the human remains are non-Native American and any associated archaeological resources are not eligible for listing in the National Register of Historic Places, and recommending that ground-disturbing activity be permitted to recommence without further evaluation; or
- (2) Additional consultations are necessary to determine the custody, treatment and disposition of the Native American human remains; archaeological test investigations are necessary to determine if the associated archaeological resources are eligible for listing in the National Register of Historic Places; and recommending that ground-disturbing activity continue to be halted.

In the first instance, Clark County will consult with the Clark County Sheriff to determine the custody, treatment and disposition of the non-Native American human remains. If otherwise lawful, Clark County may authorize ground-disturbing activity to recommence after thirty (30) days, unless the SHPO and/or the Cowlitz Indian Tribe provide a written request for further consultation within that period. In the event of a written request for further consultation, the procedures applicable to the second instance will apply.

In the second instance, Clark County, the SHPO and the Cowlitz Indian Tribe will consult in good faith to arrive at mutually-agreeable and appropriate measures that Clark County will employ to avoid or mitigate any adverse effects associated with continued ground-disturbing activities in the affected area, and to determine the custody, treatment and disposition of the



Native American human remains. Consultation must result in a written plan of action in accordance with Washington state law (RCW 27.44 or RCW 27.53) between the Cowlitz Indian Tribe, SHPO, and Clark County. Clark County may elect to develop programmatic plans for the treatment of archaeological resources and human remains in consultation with the SHPO and the Cowlitz Indian Tribe in advance of any remedial actions to minimize work stoppages in the event of an inadvertent discovery.

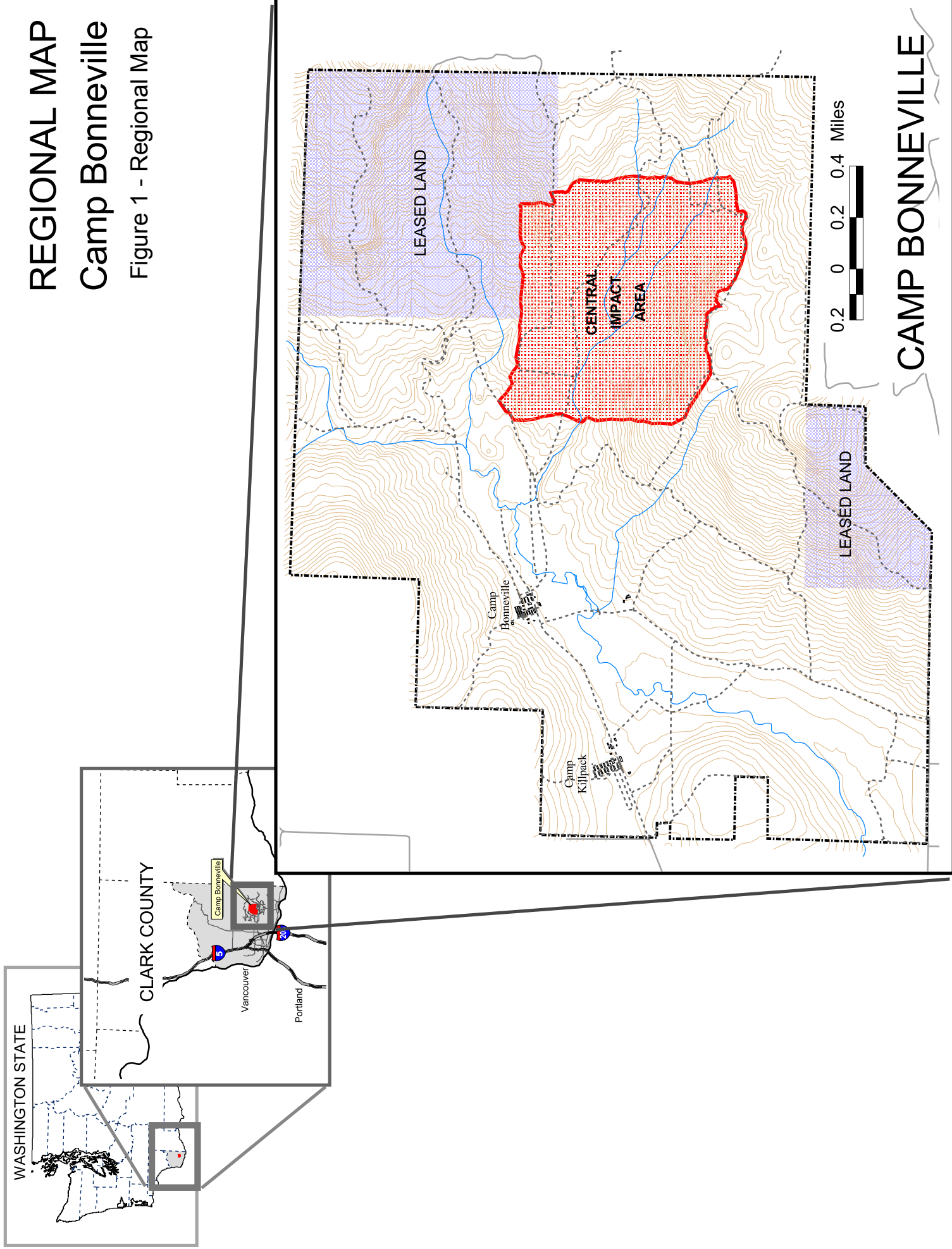
If the mitigation measures entail the excavation and removal of archaeological resources or human remains, the Professional Archaeologist will obtain a written permit for such activities in accordance with RCW 27.53 "Archaeological Sites and Resources." Any mitigation measures to which Clark County, the SHPO and the Cowlitz Indian Tribe mutually agree shall be carried out solely at the expense of Clark County. Clark County will provide written notification (by email, fax or overnight mail) to the SHPO and the Cowlitz Indian Tribe when all mitigation measures have been completed. If no verbal or written response is received within three (3) working days, Clark County may authorize ground-disturbing activity to recommence.

## FIGURES

# REGIONAL MAP

## Camp Bonneville

Figure 1 - Regional Map



CAMP BONNEVILLE

Figure 2

# Camp Bonneville - Bonneville Cantonment



### Legend

1847 Buildings ID's



100 50 0 100 200 Feet



U.S. ARMY CORPS  
OF ENGINEERS  
HUNTSVILLE CENTER

DESIGNED BY:  
Parsons

DRAWN BY:  
Parsons

CHECKED BY:  
Parsons

SUBMITTED BY:  
Parsons

Camp Bonneville  
Vancouver, Washington

SCALE: 1 inch equals 100 feet

DATE: February 2006

FILE: w:\bonneville\gis\mapfiles\  
2006\foset\_fig2.mxd

PROJECT NUMBER: 740973

PAGE NUMBER:

2-X



Figure 3

# Camp Bonneville - Killpack Cantonment

Legend	
4475	Building ID's



100 50 0 100 200 Feet



U.S. ARMY CORPS  
OF ENGINEERS  
HUNTSVILLE CENTER

DESIGNED BY: Parsons	Camp Bonneville Vancouver, Washington		
DRAWN BY: Parsons	SCALE: 1 inch equals 100 feet	PROJECT NUMBER: 740973	
CHECKED BY: Parsons	DATE: February 2006	PAGE NUMBER:	3-X
SUBMITTED BY: Parsons	FILE: w:\bonneville\gis\mapfiles\2006\foset_fig3.mxd		

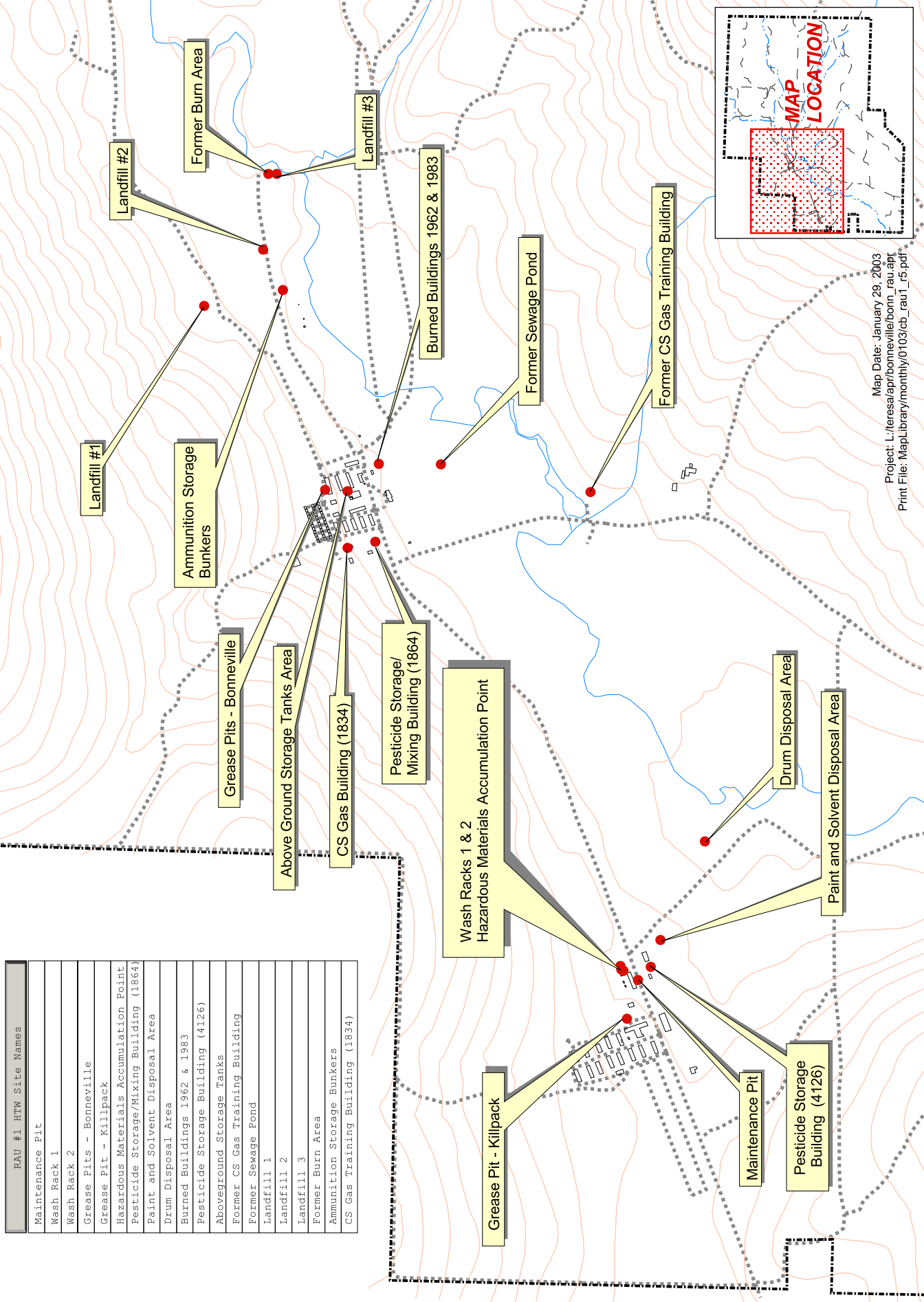


# REMEDIAL ACTION UNIT #1

Figure 4 - RAU 1

## Camp Bonneville

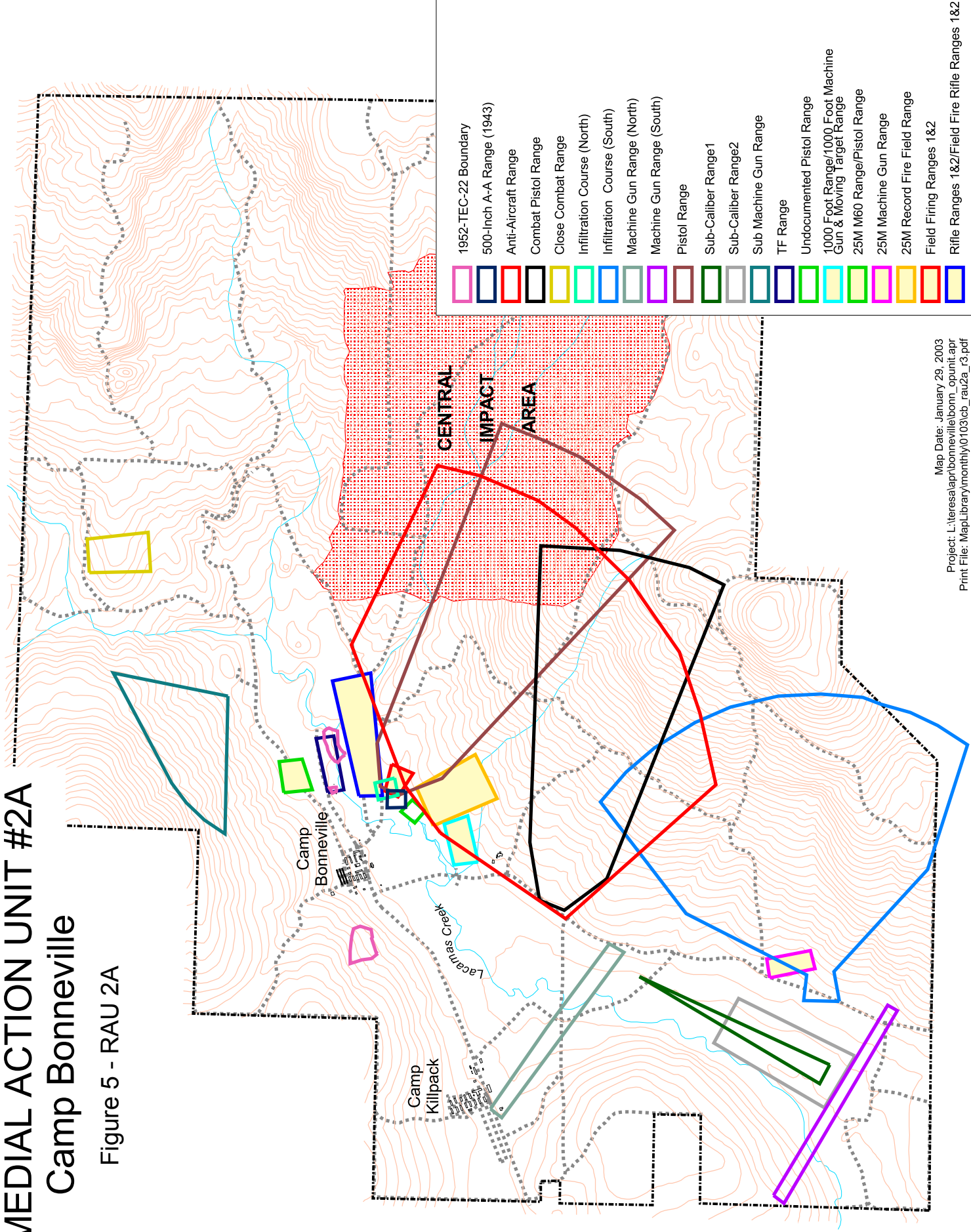
RAU #1 HTW Site Names
Maintenance Pit
Wash Rack 1
Wash Rack 2
Grease Pits - Bonneville
Grease Pit - Killpack
Hazardous Materials Accumulation Point
Pesticide Storage/Mixing Building (1864)
Paint and Solvent Disposal Area
Drum Disposal Area
Burned Buildings 1962 & 1983
Pesticide Storage Building (4126)
Aboveground Storage Tanks
Former CS Gas Training Building
Former Sewage Pond
Landfill #1
Landfill #2
Landfill #3
Former Burn Area
Ammunition Storage Bunkers
CS Gas Training Building (1834)



# REMEDIAL ACTION UNIT #2A

## Camp Bonneville

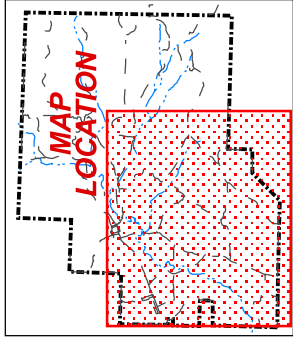
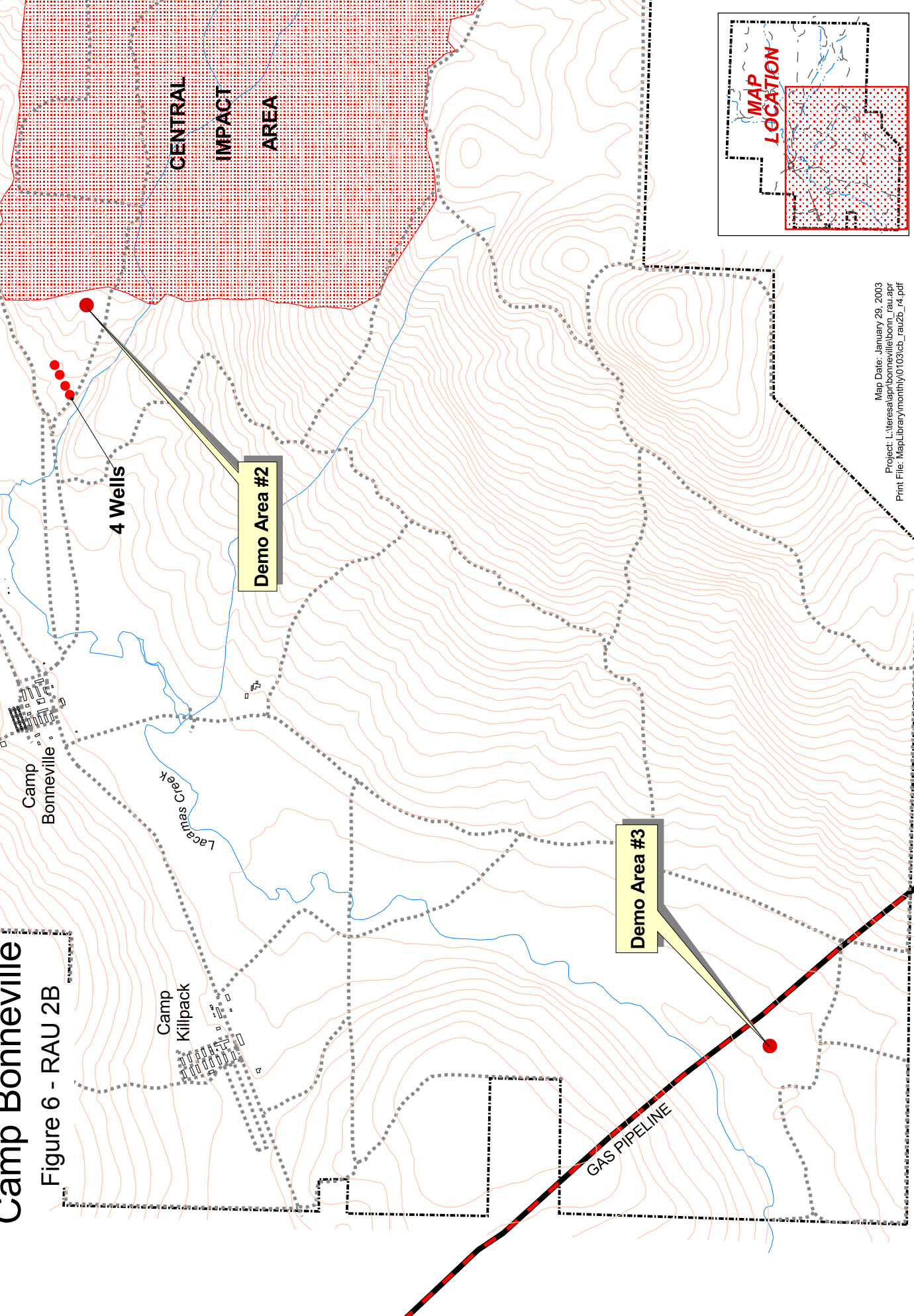
Figure 5 - RAU 2A



# REMEDIAL ACTION UNIT #2B

## Camp Bonneville

Figure 6 - RAU 2B

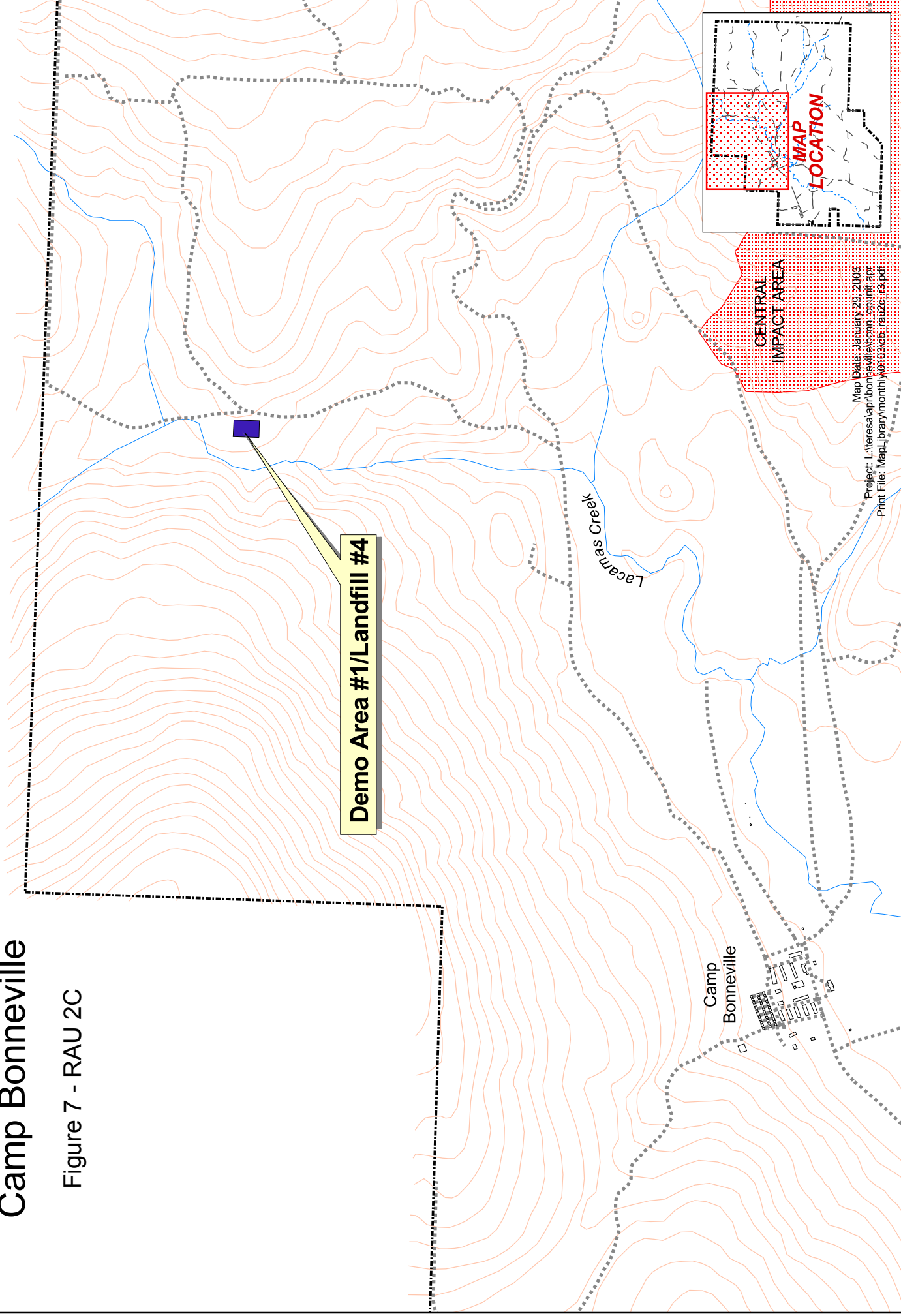




# REMEDIAL ACTION UNIT #2C

## Camp Bonneville

Figure 7 - RAU 2C

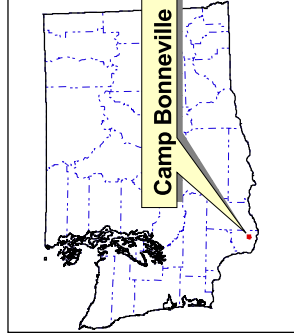
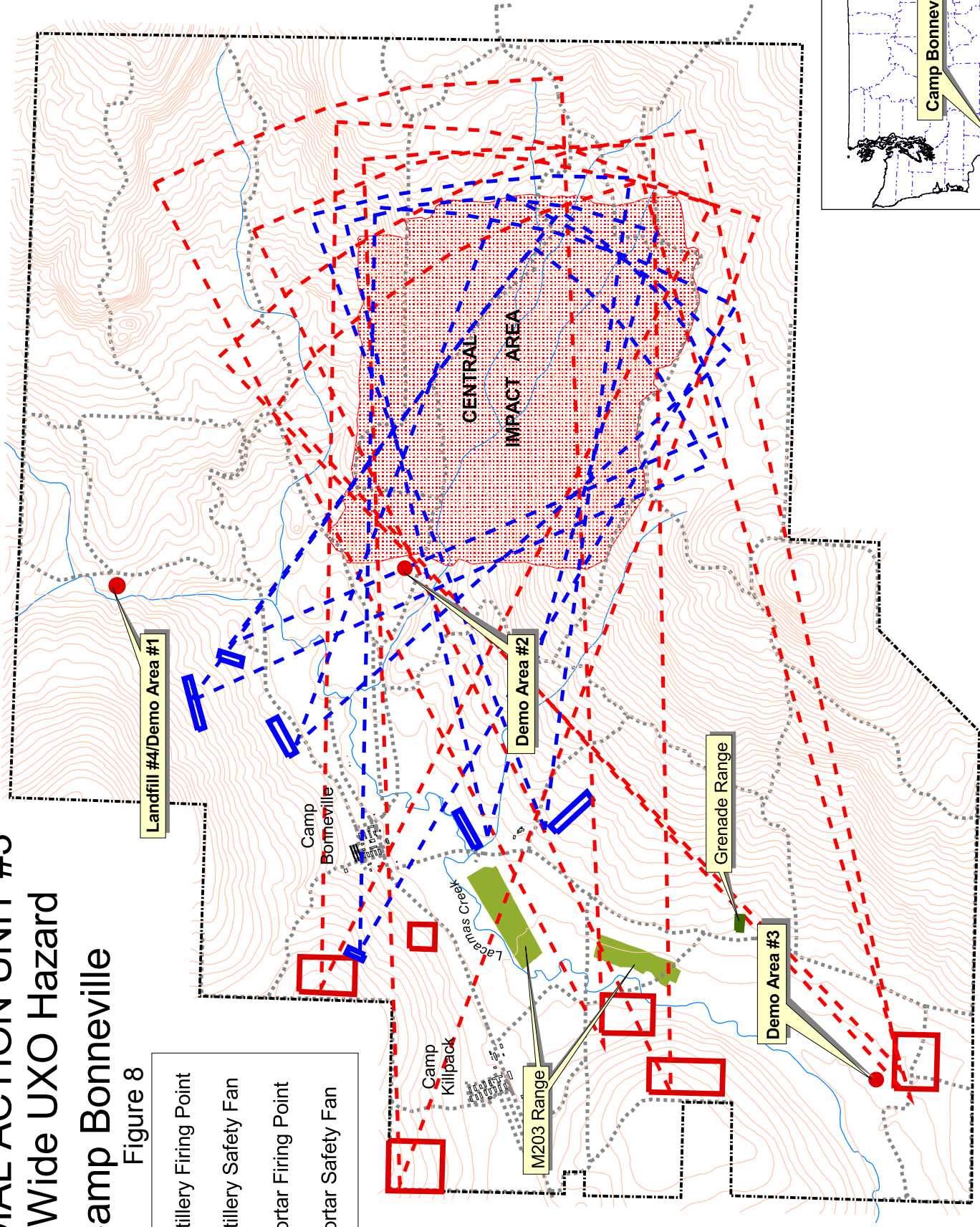


# REMEDIAL ACTION UNIT #3 Site-Wide UXO Hazard

## Camp Bonneville

Figure 8

- Artillery Firing Point
- Artillery Safety Fan
- Mortar Firing Point
- Mortar Safety Fan



# Camp Bonneville Reuse Plan

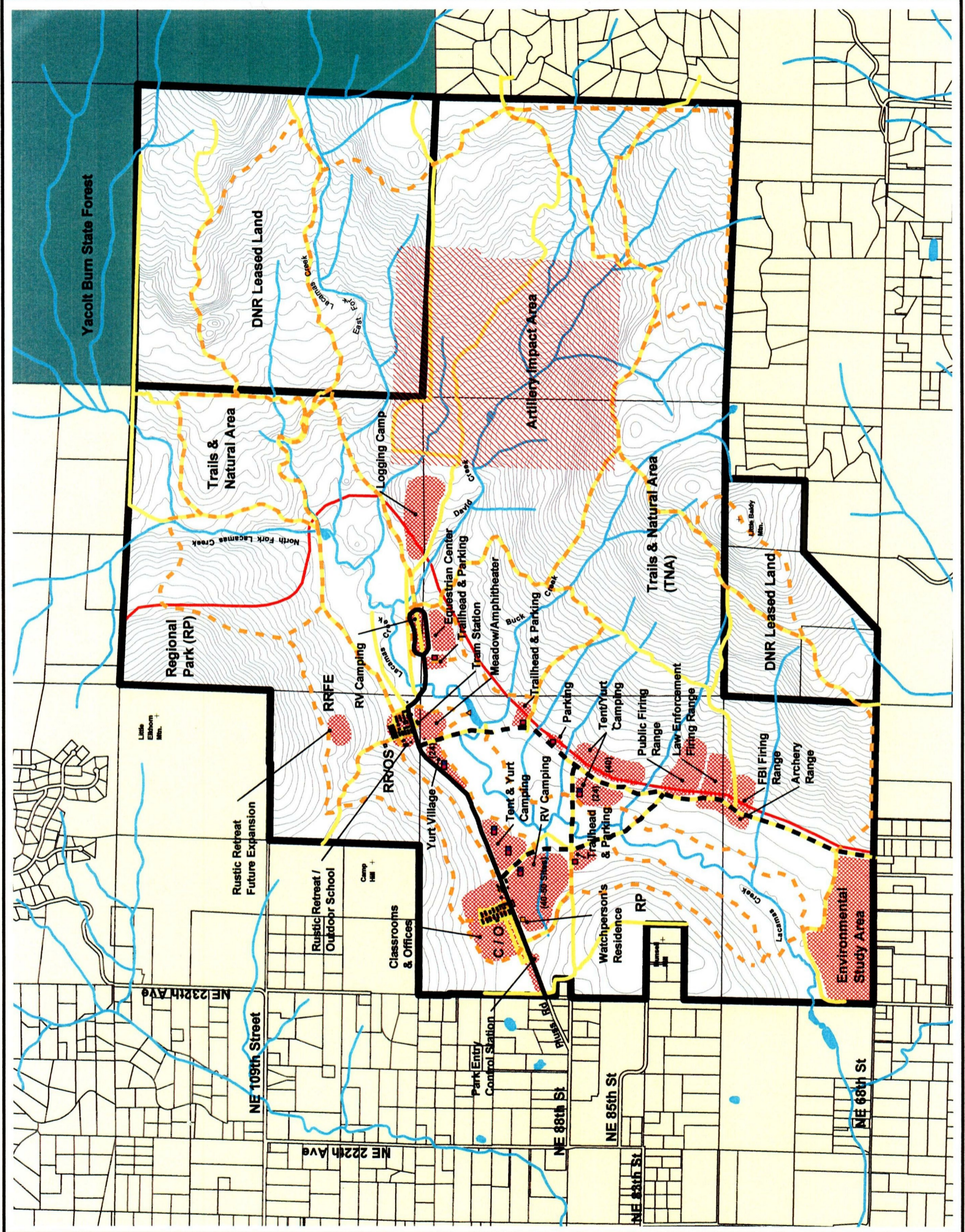
Preliminary Site Plan

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- Restrooms & Showers
  - Restrooms
  - Watchperson's Residence
  - Water Access
  - Site Facilities
  - 20 Foot Contour Intervals
  - Trails
  - Existing Unpaved Roads
  - Gravel Road
  - Paved Road
  - Artillery Impact Area
  - Regional Park Boundary
  - Site Boundary Line
  - Existing Buildings
  - Taxlots
  - Private Property
  - Yalcoit Burn State Forest



0 250 500 1,000 1,500 2,000 Feet

**LAND AREA SUMMARY:**  
 Camp Bonneville: 3,840 acres  
 DNR Land Area 'A': 620 acres  
 DNR Land Area 'B': 180 acres  
 TOTAL AREA: 4,640 acres



- Law Enforcement / Clark College / Rustic Retreat / Outdoor School Classrooms and Offices (C/O)**
  - Reuse / Renovate Existing Camp Killpack Buildings for Outdoor School, Retreat Center &/or Law Enforcement Training Center
  - 3 to 6 Classrooms - New Building
  - Administrative Offices
  - Future Expansion As Needed
  - Law Enforcement Training Areas
- Rustic Retreat / Outdoor School (RR / OS)**
  - Reuse / Renovate Existing Camp Bonneville Buildings
  - Classrooms
  - Lodging
  - Native American Cultural Center
  - New Multi-Purpose Building and Other Building Expansion As Needed
  - Park Administration Center
  - Park Maintenance Headquarters
- Rustic Retreat Future Expansion (RRFE)**
  - Future Building
- Regional Park (RP)**
  - Hiking Trails
  - Equestrian Trails
  - Mountain Bike Trails
  - Picnic Areas & Shelters
  - Amphitheater & Stage
  - Restrooms
  - Tent/Yurt Camping
  - RV Camping
  - Park Watchperson's Residence
  - Archery Range
  - Park Entry / Control Station (Fee Collection Booth, Information Board, Kiosk & Turn Around)
  - General Store
  - Equestrian Center
  - Trailhead & Parking
- Firing Ranges (FR)**
  - Local Law Enforcement Range
  - FBI Range
  - Public Range
  - Restrooms for Shooters
  - Mine Gravel for Range Site
- Environmental Study Area (ESA)**
  - Outdoor Studies
  - CPU Well Field
  - Water Resource Center (Wastewater Treatment Facility)
- Trail and Nature Areas (TNA)**
  - Hiking Trails
  - Equestrian Trails
  - Mountain Bike Trails
  - Wildlife Habitat Area

***Camp  
Bonneville  
Reuse  
Plan***

*Prepared for:*

***The Camp Bonneville  
Local Redevelopment Authority  
(LRA)***

*Prepared with the assistance of:*  
***Otak, Inc.***

*September 1998*

*(1<sup>st</sup> revision February 20, 2003)  
(2<sup>nd</sup> revision 15 November 2005)*

*This planning document was funded by a grant from the Office of Economic Adjustment, Office of the Secretary of Defense.*

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- 7.2 Safety
- 7.3 Fire
- 7.4 Site Maintenance

## **List of Acronyms**

<b>ADA</b>	Americans with Disabilities Act
<b>BOCC</b>	Board of County Commissioners, Clark County
<b>BRAC</b>	Base Realignment and Closure Commission
<b>CERCLA</b>	Comprehensive Environmental Response, Compensation, and Liability Act
<b>DNR</b>	Department of Natural Resources, State of Washington
<b>DOD</b>	Department of Defense
<b>DOE</b>	Department of Ecology, State of Washington
<b>EA</b>	Environmental Assessment
<b>EE/CA</b>	Engineering Evaluation/Cost Analysis
<b>EOD</b>	Explosive Ordnance Demolition
<b>FBI</b>	Federal Bureau of Investigation
<b>HUD</b>	Department of Housing and Urban Development
<b>LETC</b>	Law Enforcement Training Center
<b>LRA</b>	Local Redevelopment Authority
<b>NPS</b>	National Parks Service
<b>OEA</b>	Office of Economic Adjustment, Department of Defense
<b>RPC</b>	Reuse Planning Committee
<b>USFWS</b>	U.S. Fish & Wildlife Service
<b>UXO</b>	Unexploded Ordnance



## ***PROJECT PARTICIPANTS***

### **Camp Bonneville Local Redevelopment Authority**

#### **Board**

- Commissioner Betty Sue Morris, Chair
- Commissioner Mel Gordon
- Commissioner Judie Stanton

#### **Reuse Planning Committee**

- Commissioner Judie Stanton, Chair
- Darrell Badertscher, Parks Commission Chair
- Vaughn Lein, Planning Commission Chair
- Kim Peery, Appointed by Governor
- Pete Butkus, Department of Community, Trade, and Economic Development; Appointed by Governor

#### **Steering Committee**

- Bob Torrens, Chair (Environmental Subcommittee)
- Robert Frohs (Neighbors Subcommittee)
- Lores Barnes (Finance Subcommittee)
- Fred Elliott (Parks Subcommittee)
- Judy Noall (Education/Cultural/Facilities Subcommittee)
- Tim McVicker (Firing Range Subcommittee)

#### **Subcommittees:**

##### ***Parks Subcommittee***

- Fred Elliott (Model Airplanes)
- Terradan Landchild (Orienteering)
- Frank Funk (Equestrians)
- Bob Scullen (Chinook Trail Association)
- Doug Hagedorn (Vancouver/Clark Parks & Recreation)
- Roger Peterson (Fishing & Hunting)
- Pat Erwin (Paragliding)
- Paula Freimuth (Four Wheel Drive)
- Doug Bunch (Motor Bike)
- Bob & Debbie Johnson (Paintball)
- Alice Webber (Search & Rescue Dogs)

##### ***Firing Ranges Subcommittee***

- Tim McVicker (Sheriff's office)
- Sgt. Pete Boechel (National Guard)
- Paul Hudson & Bill Treseder (FBI)
- Gary Beard (Public Firing Ranges)

*Camp Bonneville Reuse Plan*

***Educational/Cultural/Facilities Subcommittee***

- Judy Noall (Camping)
- Noella Reasoner (Native Americans)
- Peggy McCarthy (Medical Retreat Center)
- Susan Gilson (ESD 112)
- Gary Wallace (County School Districts)
- Dave Halme (Clark College)
- Janet Renfro (Retreat Center, Amphitheatre, Arts)
- Diane Mortensen (Family/Church/Scout use of barracks)

***Neighbors Subcommittee***

- Robert Frohs
- Jim Skelton
- Valerie Lane
- Ernie Peto
- Janet Renfro

***Finance Subcommittee***

- Loes Barnes (Bank of Vancouver)
- Craig Pridemore (Finance Manager, Clark County Public Works)
- Jada Rupley (ESD 112)
- Tim Haldeman (Parks Maintenance)

***Environmental Subcommittee***

- Bob Torrens (Fire District 5)
- Steve Manlow (Washington State Fish & Wildlife)
- Travis Coley (US Fish & Wildlife Service)
- Rose Andrzejczak (SW Washington Health District)
- Brian Carlson (County Environmental Services)
- Joe Sunthimer (Sierra Club)
- Dean Sutherland (Clark Public Utilities)
- Marie Deschner (National Audubon Society)

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*Camp Bonneville Reuse Plan*

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**Pro Bono Assistance Provided by:**

Barry Steinberg, Kutak Rock, Inc.  
John Lynch, Plant Adjustments Associates

## ***NOVEMBER 2005 UPDATE Summary***

*Since the time of the February 2003 update to this plan, Congressional legislation (10 U.S.C 2694a) has been approved, this is more closely related to the reuse plan. That legislation now permits Conveyance of BRAC properties for Conservation of Natural Resources. As this reuse plan is predominately open space and wildlife preservation (2/3 of the site), it ideally meets the intent of that legislation. The remaining 1/3, the Regional Park area, is recreational and will also serve to preserve the natural resources of the area.*

*Note: The re-use plan has not been altered. The original plan (1998) and the defined uses remain intact. The 2003 update provided better delineation of the reuse areas. That 2003 plan discussed the desire for an Economic Development Conveyance. This 2005 update has replaced the desire of an EDC with a desire for a Conservation Conveyance.*

## ***FEBRUARY 2003 UPDATE SUMMARY***

This reuse plan has been updated to reflect adjustments to cost estimates due to inflation, to a minor extent to reflect a change in the desired conveyance vehicle (Economic Development Conveyance vs. Public Benefit Conveyance), and because more detail has been added to the reuse activities. It should be noted that No Change to the reuse activities has occurred, only more definition.

It has been at least five years since the estimates of costs were prepared. To more fully understand the cost involved with the reuse activities in present time and with the higher level of specificity, revised cost estimates were prepared for some of the development costs. These costs are reflected in Appendix F.

Due to the limited extent of this update, the majority of the text, facts and figures appear unaltered from the 1998 Draft Re-use plan. Accordingly, some references to actions and dates will be past tense. It was not the intent of this update to rewrite the document with respect to time.

## **Section 1.0**

### **INTRODUCTION**

#### **1.1 Purpose**

The purpose of this report is to present the Reuse Plan for Camp Bonneville, as well as document the public process, data, analysis, and alternatives that were generated during this reuse planning effort. The Local Redevelopment Authority (LRA) initially anticipated completion of the reuse plan by July 1997, which was modified to March 1998 due to a delay in approval of the Office of Economic Adjustment (OEA) reuse planning grant. This deadline was further extended primarily due to the unanticipated schedule delays in evaluating the site for unexploded ordnance (UXO). For a variety of reasons, a number of reports important to the LRA's planning process were also delayed. Some of these reports, such as the Historical Evaluation of the barracks, the draft Sewage Treatment Manual, and a preliminary report identifying some of the areas where UXO were found on the site, have become available in August 1998. Other reports, such as the Archive Search Report Addendum, and evaluations of lead in ground and surface water, have not been completed by the Army or are not yet available for LRA review.

At this writing, the final UXO report findings have not been completed. The LRA has been consistently in support of the Department of Defense (DOD) policy that recommends "that the LRA take the environmental condition of property into account in development of its reuse plan" ("A Guide to Establishing Institutional Controls at Closing Military Installations," February 1998). The revised Base Reuse Implementation Manual (BRIM), p. 2.9, also says, "It is important for the Military Department to communicate environmental issues to the LRA early in the process, to ensure reuse planning is compatible with the more significant environmental conditions that may limit certain types of land use. This way, environmental priorities can be reconciled with community reuse priorities, and appropriate cleanup levels can be established to reflect anticipated future land use." Because most of the property was identified in the Archive Search Report to have potential for UXO, information such as the UXO sampling report and subsequent Engineering Evaluation/Cost Analysis EE/CA will be critical reuse planning elements. Using information from sampling 1.1% of the property, the EE/CA will estimate the costs to "clean" the property, will identify technology available to clean the site, and will be used to prepare a timeline for cleanup and transfer. Before accepting any property transfer, the LRA will review the timeline for parcel transfer, cleanup levels proposed, and safety measures in place until all property is transferred.

Due to necessary safety precautions, evaluations have not yet been conducted to determine the presence of endangered/threatened species, or wetland and riparian areas. Nor have the areas of archaeological and cultural significance been delineated. A more detailed timber analysis also requires more extensive site access. Since the LRA has been unable to see all areas of the site (due to safety precautions), participation in Army helicopter flyovers of the site to be arranged by Fort Lewis, will be extremely valuable for the planning process.

## *Camp Bonneville Reuse Plan*

It is expected that this Reuse Plan will need to be modified to reflect such new information in the near future. The LRA is submitting a plan at this time to facilitate the Army's timeline for preparation of the EE/CA and the Environmental Assessment (EA). Throughout the property transfer process, as new environmental and other relevant information become available, the LRA is committed to work with the Army to modify reuse locations to better ensure public safety and minimize cleanup costs.

### **1.2 Scope of Study**

In July 1995, Camp Bonneville was included on the list of military bases proposed for closure by the Base Closure and Realignment Commission and was approved for closure by Congress in September 1995. The closure of Camp Bonneville presents a unique opportunity to transform surplus military property and facilities for public uses which will provide significant benefits to the Clark County community.

The Camp Bonneville Reuse Plan is the result of nearly three years of coordinated effort involving the community, the Board of County Commissioners, consultants, and County staff. This Plan reflects the recognition of the importance of this opportunity to meet a variety of needs: open space preservation, natural resource management, public recreation opportunities, law enforcement training, environmental education, and community cultural activities.

Because Camp Bonneville is located entirely within Clark County and is neither part of, nor immediately bordering, any other political jurisdiction, the Clark County Board of Commissioners (BOCC) established the Camp Bonneville Local Redevelopment Authority (LRA) in August, 1995, to prepare a reuse plan for Camp Bonneville. The LRA was recognized by the Department of Defense in February 1996.

### **1.3 Committee Structures and Participation**

To assist in the community-based reuse planning effort, the Board of County Commissioners (BOCC), as the Board for the LRA, appointed a five-member Reuse Planning Committee (RPC) to oversee the reuse planning process. The RPC included: the chairman of the Clark County Planning Commission, the chairman of the County Parks Commission, the Clark County Commissioner from the Camp Bonneville area, and two appointees by the Governor of Washington. The Governor appointed a representative from Washington State's Department of Community, Trade & Economic Development, and a former state legislator from the Camp Bonneville area.

Public hearings were held in 1995 to gather ideas from the community on reuses for Camp Bonneville. Based on these hearings, the RPC established six LRA subcommittees made up of approximately fifty community representatives to be assisted by county staff and consultants in preparing plan options. All uses proposed were objectively considered, with representatives appointed to participate in one of three "operational" subcommittees (Parks, Firing Ranges, and Educational/Cultural/Facilities). Individuals and groups expressing concerns about reuse plans

## *Camp Bonneville Reuse Plan*

were appointed to one of three “advisory” subcommittees (Neighbors, Finance, and Environmental). Subcommittee members proposed, researched and critiqued the range of potential reuses and evaluated reuse plan alternatives for the Community Preferred Reuse Plan. Representatives from each of the subcommittees were selected by their subcommittees to participate on the Steering Committee whose job was to balance interests and findings of the six subcommittees and make recommendations to the Reuse Planning Committee.

Representatives from the neighborhoods surrounding Camp Bonneville participated on the Neighbors Subcommittee. The Finance Subcommittee included representatives from the banking community, the County Public Works Department, Vancouver/Clark Parks and Recreation Department, and Education Service District 112. The Environmental Subcommittee included representatives from the Audubon Society, the Sierra Club, Fire District, State Fish & Wildlife Service, U.S. Fish & Wildlife Service, Southwest Washington Health Department, Clark Public Utilities, and County Environmental Services.

The Parks Subcommittee included representatives advocating equestrian and hiking trails, search & rescue dog training, orienteering, paragliding, model airplanes, paintball, fishing and hunting, four wheel drive, motor bikes, and parks. The Education/Cultural/Facilities Subcommittee participants included representatives from the county school districts, Clark College, Native Americans, camping, arts community, medical retreat center, and the Educational Service District. The Firing Range Subcommittee included representatives from the County Sheriff’s Office, the National Guard, public firing range interests, and the FBI.

LRA committees met regularly from February - June 1996 until their efforts required more technical study. The LRA received approval for a reuse planning grant from the Office of Economic Adjustment in April 1997 at which time Otak, Inc., was selected to conduct studies necessary to move forward with the reuse plan. LRA committee meetings were regularly held from April 1997 through January 1998, at which time the Steering Committee presented its preferred reuse scenario and recommendations to the RPC. Public hearings were held by the RPC in February and March 1998. Some revisions were made in the reuse scenario, which was then presented to the BOCC which held public hearings in May 1998. After additional modifications, a draft reuse plan was prepared. Approximately 80 LRA committee meetings were held from 1995-1998.

### **1.4 Homeless Outreach and Notices of Interest**

Camp Bonneville was listed in July, 1995, for closure by the Base Realignment and Closure Commission. Federal agencies were notified of the availability of property due to pending closure on September 26, 1995, and were given a deadline of November 28, 1995, to submit applications for all or portions of the property. Applications were received by the Army Corps of Engineers on November 28, 1996, from the Bureau of Prisons and on November 17, 1995, by the US Fish & Wildlife Service (USFWS). An application from the FBI was received by the Corps on December 4, 1995.

## *Camp Bonneville Reuse Plan*

The application from the Bureau of Prisons to construct a prison at the site was withdrawn on March 26, 1996, after the LRA notified the agency of the local community's strong opposition to the proposal due to the proximity of a state correctional facility in the area.

The USFWS requested the entire site (with the exception of the FBI firing range) for developing a wildlife refuge. Due to concerns about reliability of funding for the new program and a desire for local management of the site, the BOCC requested that the USFWS withdraw its application to allow the local community to evaluate the site to determine the reuses that would be most beneficial for the County (with the possibility that the local recommendation would be a wildlife refuge operated by the USFWS). The USFWS withdrew its application on February 2, 1996. USFWS representatives were invited to participate on the Environmental Subcommittee and have provided valuable advice to the County throughout the planning process.

The FBI received a five-year renewable permit from the Army in 1991 (renewed in 1998) to construct a 20-25 firing point handgun and shotgun firing range on a 450' by 600' area at Camp Bonneville. Since the FBI's application for this firing range was submitted after the deadline, the LRA was initially told by the Army Corps of Engineers headquarters officials that the FBI's application would not be considered unless approved by the LRA. While supportive of the FBI's request for a firing range at the site, the LRA has expressed major concerns about safety and compatibility of continuing to locate the FBI firing range at its present site, which is less than 1/10th mile from the meadow/primary park usage area. The Secretary of the Army surplused all of Camp Bonneville with a directive to the FBI and LRA to work together to ensure that an FBI firing range will be located at the site if it is compatible with the community's reuses. In the reuse plan, an area approximately one-half mile further down range road has been identified for the FBI range, with the requirement that the range be baffled for safety and that noise buffering be added as well (conditions the FBI is in agreement with). The FBI has also been requested to use the site to meet the needs of the FBI (and not that of all regional law enforcement agencies), limiting firing range usage to its historic usage of approximately 60-80 days per year and to concentrate this usage, when possible, to the six months of non-peak park usage (October through March), with prior notification of scheduling to the County. The County recognizes that, due to emergency situations that require unplanned firing range usage, the FBI may not always be able to provide as much advanced notice for all range usage.

The March 28th deadline for declaring property surplus was extended to June 5, 1996. The notice of surplus property at Camp Bonneville was then published in the Federal Register on June 26, 1996. As required by statute, the LRA must, within 30 days of publication of the surplus notice in the Federal Register, advertise in a newspaper of general circulation in the communities in the vicinity of the property, information on the reuse process and the time periods for submitting notices of interest in the site. Ads were placed by the LRA in four local newspapers, with a deadline for notices of interest of October 21, 1996. Two workshops were scheduled at Camp Bonneville within that 90 day period (July 30, 1996 and September 5, 1996) to provide tours and additional information on the reuse process.

Federal excess application deadline	November 23, 1995
Surplus declaration by the Army	June 5, 1996



## *Camp Bonneville Reuse Plan*

Federal Register notice of Surplus	June 26, 1996
LRA Advertising for Notices of Interest	July 24, 1996
Deadline for Notices of Interest	October 21, 1996
On-site workshops for interested agencies	July 30, 1996 & September 5, 1996

The LRA also requested from the Department of Housing and Urban Development (HUD) a mailing list of all agencies serving the homeless of Clark County, and mailed two notifications to each of these agencies. Native American tribes in Southwest Washington and Northwestern Oregon were also sent notifications.

When the initial workshop attracted only three agencies - Clark County Community Services, Father's House, and Open House Ministries, the LRA scheduled and advertised a second workshop which was attended only by Cowlitz and Grand Ronde representatives. The LRA, in its outreach to agencies serving the homeless in Clark County contacted various agencies by phone to ensure that notice was received and to determine interest in the site. Open House Ministries was initially interested in proposing a camping area to provide interim shelter for the homeless, but determined the idea to be impractical due to the remote location and lack of services in the area. Additional ideas suggested were construction of several houses at the site for transitional housing, but no agency expressed interest in Camp Bonneville for this type of investment.

The primary reasons given for the lack of interest in utilizing Camp Bonneville for homeless services were: its remote location, its lack of nearby services, the very poor quality of the barracks buildings and high remodeling costs, and the high costs to replace an ailing or non-existent infrastructure. There is no nearby bus service nor services such as grocery stores within many miles of the site. Transportation costs into downtown Vancouver, 15 miles from the site, where most of the homeless population and subsequent services are located would be too high.

Five notices of interest were received from Father's House, Clark College, Clark County, the Cowlitz Tribe, and the Confederated Tribes of the Grand Ronde. Presentations were scheduled for January 13, 1997 at a public meeting televised by a local cable station to provide an opportunity for each agency to present its reuse interests for the site. The only application received from an agency serving the homeless was from Father's House, whose application was withdrawn prior to this meeting after it was determined by HUD that the organization did not meet HUD's criteria to be classified as an agency serving the homeless.

The goal of Father's House, was to provide an alternative living situation for children. No children had yet been served by the newly-formed organization that planned to model its program on similar ranch programs in other areas of the country. Because it was anticipated that few, if any, of these children were "homeless", because of the religious education requirements for all children participating, and because of the organization's request to function independently from the community and other reuses at the site, HUD determined that Father's House did not qualify as an agency that serves the homeless.

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The goal of Clark College was to provide students with a 50-80 acre area in the southwestern corner of the property for environmental education. Clark College also proposed construction of a three to six classroom field station at the site.

The proposals from Clark County, the Cowlitz Tribe, and the Confederated Tribes of the Grand Ronde were very similar in their proposed reuses, with the exception that firing ranges were not proposed as a reuse by the Grand Ronde. The Native American tribe applications also proposed more aggressive timber programs than that proposed in the Clark County application.

When no interest was expressed in Camp Bonneville by agencies serving the homeless, LRA staff conferred with staff from the Portland HUD office, and later with Perry Vieta, Coordinator in 1995-96 of the HUD Base Redevelopment Team, who indicated that the LRA outreach had met the criteria, and that the remote location of the site did not make it a reasonable location for homeless services. All of Camp Bonneville will be transferred for natural resource conservation, recreation, education, law enforcement, parks, with important benefits to the County. Implementation of the reuse plan may be very prolonged due to unexploded ordnance cleanup and high costs for necessary infrastructure with minimal resources. Due to the lack of interest from agencies serving the homeless, and the non-profit public benefit uses planned for the site, no homeless services are proposed at the Camp Bonneville property.

## **Section 2.0**

### **CAMP BONNEVILLE REGION**

#### **2.1 Location**

Camp Bonneville is situated in the southeastern region of Clark County, Washington (Sections 34 & 35, Township 3 North, Range 3 East and Sections 1,2,3 & 10 Township 2 North, Range 3 East, W.M.). The camp is located along the western foothills of the Cascades Mountain Range between Camp Hill and Little Elkhorn Mountain to the northwest, Munsell Hill to the west, and Little Baldy Mountain to the south.

Vehicular access to the main (west) gate into Camp Bonneville is provided by Pluss Road and other two-lane paved County roads. These rural roads connect to State highway SR-500 which lies to the west and south of the camp.

#### **2.2 Surrounding Jurisdictions and Land Uses**

Camp Bonneville lies within rural and unincorporated Clark County, approximately twelve miles east of Vancouver. The smaller cities of Camas and Washougal are approximately 6 miles to the south of the camp. Clark County is the fastest growing county in Washington, with a 1998 estimated population of 328,000. The City of Vancouver has the largest population in the county with a 1998 population estimated at 132,000. The 1998 population estimate for Camas is 10,300 and 7,685 for Washougal. (Population statistics from the Washington State Office of Financial Management). The nearest town is the unincorporated community of Proebstel, about 2 miles west of the installation.

The land uses surrounding Camp Bonneville are predominantly agricultural farming, rural residential, and forestry. The existing zoning of neighboring properties are FR-40 (forest zoning with a 40-acre minimum lot size), RE-5 (rural estate zoning with a minimum 5-acre lot size), and RE-10 (rural estate zoning with a minimum 10 acre lots). As Clark County has grown, so has the expansion of residential development near Camp Bonneville. Although current zoning permits nothing smaller than a five-acre lot size, many residences on much smaller lots were approved prior to the adoption of the current standards. Clark County has committed to providing off-site roads necessary to support the development of Camp Bonneville.

The northeastern boundary of the camp borders with the Yacolt Burn State Forest, which is managed by the Washington State Department of Natural Resources. The Livingston Quarry is a gravel mining operation, which also exists as an adjacent land use activity along the south boundary. Livingston Cemetery (two acres) is just south of the camp's access road and outside of the main gate along the western property boundary.

## **Section 3.0**

### **SITE DESCRIPTION & INVENTORY**

#### **3.1 Site History**

Camp Bonneville was established in 1909 as a drill field and rifle range for Vancouver Barracks. In 1912, an appropriation was made to expand facilities at Camp Bonneville to include a target range and a road leading to the post. The 3,020 acres upon which Camp Bonneville was established were purchased by the federal government in 1919. In addition, the U.S. Army leased 840 acres of adjacent property, in two separate parcels, from the State of Washington in 1955. Of these 840 acres, 20 acres were returned to the State of Washington in 1957. The Bonneville and Killpack cantonments were established in the late 1920's and the early 1930's, respectively, a total of 54 buildings and 18 additional structures such as observation towers.

Historically, Camp Bonneville has been used as a training camp for active U.S. Army, U.S. Army Reserve, U.S. National Guard, U.S. Marine Corps Reserve, U.S. Navy Reserve, and U.S. Coast Guard Reserve units, as well as other Department of Defense (DOD) reserve personnel. In addition, the Federal Bureau of Investigation (FBI) has a five-year permit that will expire in October 14, 2001, for use of a handgun range the FBI constructed at the site. (This permit is subject to termination once final disposition of the site is determined).

Non-firing training at Camp Bonneville involved troop maneuvers, encampments, field tactical training, and vehicle support. Vehicles used at Camp Bonneville included light and heavy trucks, occasional construction equipment, and tactical vehicles, which were limited to existing roads. Helicopters occasionally used the emergency landing strip. United States Army Engineer units used the training areas for combat and construction training, including construction and removal of barriers and limited quarrying and roadwork. Smoke and riot control agents have been used in association with field training activities (McMaster 1983).

When not required for military training activities, Camp Bonneville was made available until the late 1980's to local equestrians and hunters, and overnight usage of the cantonment areas by 4H groups, and school districts for outdoor school activities.

#### **3.2 Site Description**

Most of Camp Bonneville is comprised of undeveloped forested hillsides and creek side drainages. Former military barracks and training facilities are concentrated at two locations, the Camp Killpack and Camp Bonneville cantonment areas, which cover approximately 30 acres. Other developed facilities include firing ranges, a paved two-lane road connecting the main gate with the two cantonment areas, and a network of unpaved roads.

##### **3.2.1 Barracks Uses**

Killpack and Bonneville cantonment areas cover a total of approximately 30 acres in area. The barracks buildings were constructed prior to 1935 as temporary structures. The majority of

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Camp Bonneville facilities are found at the Bonneville cantonment (30 facilities, of which two have been destroyed by fire) and the Killpack cantonment (26 facilities). A list of the facilities located at the Bonneville cantonment and Killpack cantonment are provided in **Table 1** and **Table 2**, respectively. Other structures include those associated with the firing ranges (e.g., lookout towers and shelters).

### **3.2.2 Firing Range Uses**

The firing ranges at Camp Bonneville have been used for a variety of weapons training. At least 25 firing ranges have been identified from maps dating back to 1958, including firing ranges for small arms, large-caliber machine guns, rifles, grenades, light anti-tank weapon rockets, and subcaliber weapons. Artillery and mortar training was conducted at the installation until 1968. A summary of the range numbers, their uses and types of weapons used are provided in **Table 3**.

The firing points, firing ranges, and associated range fans and impact areas are shown on **Figure 1**. The range fans delineated on Figure 1 are believed to encompass all the components of the surface danger zone (AR 385-63), including line of fire, limit of fire, dispersion area, ricochet area, target area, impact area, and secondary danger areas. According to Army information, the area at each range in which the majority of rounds fall is generally very small compared to the full fan.

The Artillery Impact Area shown on **Figure 1**, extracted from the Archive study, is a combination (i.e., maximum area) of all artillery impact areas from maps reviewed. This area was the intended target area of artillery and mortar practice. An Archive addendum has not yet been completed or made available to the LRA.

## **3.3 Site Influences**

### **3.3.1 Topography**

The terrain of Camp Bonneville is generally rolling, typical of foothills of the Cascade Mountains, covered with undergrowth and large stands of coniferous timber. The west quarter of the installation consists generally of low hills and the low plain of the Lacamas Creek valley, while the remainder of the post comprises the well-dissected hills of the westernmost Cascade Mountain foothills. Elevations range from 289 feet above mean sea level (msl) at Lacamas Creek at the southwest corner of the installation to 1,000 feet above msl at the northwest, 1,350 feet above msl at the southeast, and 1,452 feet above msl at the south-central boundary of the installation. The topography is erosional except for shallow deposition in the Lacamas Creek valley (Dalan and Wilke 1981). Refer to **Figure 2**.

### **3.3.2 Geology and Soils**

Camp Bonneville is situated on the margin of the western foothills of the southern Cascade Mountains in the transition zone between the Puget Trough and the Willamette Trough Provinces. The geology of this area generally consists of Eocene and Miocene volcanic and sedimentary rock types overlain by unconsolidated clays, silts, sands, and gravels of the Troutdale formation (U.S. Army 1995a).

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The geology at Camp Bonneville can be divided into three general areas that correspond approximately to topographic divisions. The area west of Lacamas Creek is composed of a series of predominantly gravel and semi-consolidated conglomerate with scattered lenses and stringers of sand (Upper Troutdale formation). Underlying the Troutdale formation, and comprising the area to the north and east of Lacamas Creek, are basalt flows and flow breccia, with some pyroclastic and andesitic rocks, which are folded and faulted. The bottom land along Lacamas Creek is comprised of unconsolidated silt, sand, and gravel valley fill, with some clay. Due to the thick soil and dense vegetation, no faults have been identified within Camp Bonneville (McMaster 1983).

Soils of Camp Bonneville are mainly clayey and nonporous, so there is considerable runoff after each storm and occasional flooding of Lacamas Creek. Upland soils have mainly developed from basalt and are generally gravelly or stony and fairly shallow. Bottom land soils along Lacamas Creek tend to be clayey (Dalan and Wilke 1981). Refer to **Figure 3**.

### **3.3.3 Water Resources and Hydrology**

Camp Bonneville lies within the Lacamas Creek watershed and drainage basin. The principal surface water feature is Lacamas Creek, which follows from the coalescence of three branch streams in the north-central part of Camp Bonneville southward, exiting the installation at its southwest corner. Numerous minor tributaries draining adjacent uplands flow into Lacamas Creek. Buck Creek and David Creek, the largest of these streams, drain the highlands to the south and east. Two artificial impoundments of Lacamas Creek, with a total surface area of less than 4,600 square feet, have been created to support a trout sports fishery (U.S. Army 1995a). One additional artificial water impoundment, an excavation area created as a result of providing berms for the adjacent 300 m firing range, has been observed on site in the vicinity of the convergence of Lacamas Creek and David Creek. However, this impoundment is not documented on existing maps.

Little information is available regarding the condition of Camp Bonneville groundwater. The groundwater flow generally follows local topography toward the south and west. A rising water table occurs in the early fall through spring during the rainy season, and a lowering of the water table occurs throughout the summer months. Two drinking water wells are located at Camp Bonneville, a 385-foot deep well at the Bonneville cantonment and a 193-foot deep well at the Killpack cantonment (McMaster 1983). Several groundwater monitoring wells associated with the sewage lagoon are located east of the Bonneville cantonment. No groundwater samples were collected from these monitoring wells as part of this work.

The LRA and the community members of the Restoration Advisory Board have been expressing concern since 1996 that the Army test ground and surface water in locations where waterways enter and leave the property. Those tests are expected to be conducted in the fall of 1998. Results of those tests must be evaluated to determine any risk of continuing firing range usage at the site.

### **3.3.4 Vegetation**

## *Camp Bonneville Reuse Plan*

The existing vegetation is primarily young conifer forest, although patches of mature conifer and a mix of conifer and deciduous forest is also found within the boundaries of the installation. The installation is located at the tip of a finger of prairie that reaches into the foothills of the south Cascade Mountains, although no undisturbed tracts of this habitat remain.

Coniferous forest is the predominant habitat type found over the majority of Camp Bonneville. Although most of the forests in this vicinity were once dominated by western hemlock, the regenerated stands currently consist almost exclusively of even-aged Douglas fir stands. Individual western red cedar and hemlock trees are found in scattered locations that are most often associated with drainages. Common under story species include vine maple, salmon berry, elderberry, hazelnut, salal, and sword fern. Most of the conifer stands appear to be less than 50 years old; however, patches of more mature trees are found in some areas (Pentec 1995).

Mixed coniferous and deciduous forest habitat communities are found mainly along Lacamas Creek and associated with other drainages and wetland depressions. In several areas, this habitat type is contiguous with remaining patches of Garry oak from the former woodland communities. Tree species found in this habitat type include red alder, Oregon ash, Douglas fir, big leaf maple, Garry oak, cottonwood, crabapple, and willow. Common under story species include vine maple, salmonberry, Indian plum, snowberry, and lady fern (Pentec 1995).

The U.S. Army has been managing forest land at Camp Bonneville since 1957. Forest management has consisted of scarification and replanting of lands burned during the fires of 1902, 1938, and 1951 and timber sales (Hunter 1991).

### ***3.3.5 Rare and Endangered Flora and Fauna***

In 1995, the Camp Bonneville Endangered Species Survey Final Report was completed under the direction of the U.S. Army Corps of Engineers, Seattle District. This survey was conducted by Pentec Environmental, Inc. to detect the presence of plant and animal species that are federally or State listed as endangered or threatened or are candidates for such listing and to estimate their relative abundance with the installation.

As part of this survey, information was requested from the Washington State Department of Fish and Wildlife concerning priority species. The results of the request indicate that listed resident fish are known to use Lacamas Creek in the reaches which fall within the installation boundaries, although no specific species information was provided. No other endangered, threatened or candidate species were reported to occur within or adjacent to Camp Bonneville. Information was also requested from the Washington Natural Heritage Program concerning rare plants in the vicinity of Camp Bonneville. No significant natural features or known rare plant populations were reported to occur within the installation, although two rare plants, hairy-stemmed checker-mallow (*Sidalcea hirtipes*) and small-flowered trillium (*Trillium parviflorum*), are reported to occur in the vicinity (Pentec 1995). Pentec qualifies in their report summary, however, that the survey does not verify the absences of endangered and threatened species, and “should not be viewed as a final determinant in management decisions.”

An on-site environmental study of the Camp Bonneville property was not a part of this reuse planning effort. Upon completion of the Army's UXO contamination clean-up program, an inventory and assessment of rare and endangered flora and fauna will need to be conducted of the Camp Bonneville site. The reuse plan may require modification in the future should endangered species be found in higher usage areas.

### **3.4 Infrastructure Systems**

#### **3.4.1 Roads**

Approximately a mile and a half of road within Camp Bonneville, has an asphaltic concrete pavement wearing course over an unknown depth of crushed gravel. This paved road is approximately twenty feet in width, graded to surface drain, and has been maintained in generally good condition.

Roads surfaced with crushed gravel are approximately ten to twelve feet in width with six to twelve inches of gravel surfacing. The Army estimates a total of 14 miles of graveled roads at the site, with a total of 56 miles of road and cart tracks (dirt trails) at the site. While these graveled roads and cart tracks have been well maintained by the Army in the past, they are currently in need of vegetation control and repair of culverts and areas of washout due to heavy rains over the past two years and the Army's great reduction in maintenance levels. With proper vegetation control and localized erosion damage repairs, these roads and cart tracks can be reused for light wheeled vehicles and recreation trails after UXO cleanup procedures are completed. Refer to *Figure 4*. Maintenance of these roads and cart tracks by the Army is viewed by the community as critical due to the high fire risk at Camp Bonneville, which was part of the Yacolt Burn and two other major burns within the recent past.

The estimated cost for on-site road improvements for the Reuse Plan is \$998,000. This includes costs for repairing existing paved roads between the main entry and Camp Bonneville cantonment, constructing a new asphaltic concrete road to the location of the rustic retreat center expansion, and repairing and widening existing gravel roads from Camp Bonneville cantonment to the firing ranges.

#### **3.4.2 Water Systems**

The current water systems provides service only to the two cantonment areas. No service is provided along Range Road past the meadow area or to other areas on the site.

There are two well sites, two reservoirs, and two independent water systems serving Camp Killpack and Camp Bonneville respectively. According to Army staff, the water quality from both of these systems has passed all of the local health department requirements. Army staff have stated that the existing water systems at both camps are in poor condition.

The Camp Killpack water system consists of a well site approximately 70 vertical feet above the camp and about 800 feet due north. This well was drilled in 1949 and is located about 50 feet from the reservoir. According to the Army maintenance staff and well reports, this well



### *Camp Bonneville Reuse Plan*

produces approximately 32 gallons per minute and fills an unlined in-ground concrete reservoir. The volume of the reservoir is approximately 1,350 cubic feet or about 10,000 gallons. According to the Army staff, this water system was inadequate to meet the needs of Army personnel during times of normal camp occupation.

The Camp Bonneville water system is pressurized by gravity flow from a reservoir located above the camp. The water pressure at the camp due to the hydrostatic head is approximately 35 psi. This system is reported by Army staff and well reports to have a capacity in excess of 100 gallons per minute. The reservoir is fed by two well sites. The original well was drilled in the late 1970's and a second well site was installed at the east end of the camp in 1978. These well sites feed into an in-ground, unlined concrete reservoir located approximately 80 vertical feet above the camp and about 800 feet due north. The reservoir was built in the late 1940's and has a capacity of about 6,900 cubic feet or around 51,700 gallons. Camp Bonneville has not experienced any water shortages according to Army personnel.

The Camp Bonneville site has valid water rights for its existing wells. These rights should be transferred to Clark County and may need to be expanded to allow facilities to meet current fire flow requirements if a local public utility water source is not utilized.

There are no fire hydrants or other fire suppression facilities existing on-site. The local county fire district is currently responsible to respond when a fire event occurs at Camp Bonneville. A fire engine of the fire district had been housed at Camp Bonneville until repeated vandalism (due to less activity at the site) caused it to be removed from the site.

The existing water systems at both camps (from the reservoirs to the buildings) have exceeded their design lives. There are two methods of correcting this deficiency. The first is to abandon the existing piping system in favor of a public utility service from Clark Public Utilities. The closest water main is more than two miles west of the site. The cost for connecting to this service has not been determined at this time. However, the construction of on-site utility corridors with 18,920 linear feet of water lines, as illustrated in Figure 10, is estimated to cost approximately \$950,000.

The second alternative is to replace the existing piping system and continue to rely on existing wells. The cost to make such improvements to the current system has been estimated at \$97,500. If existing wells are to be relied on for future uses, their flow may need to be enhanced to meet future fire flow requirements. An estimate for creation of additional well capacity has not been made because it is dependent on the depth and availability of ground water, neither of which can be determined without on-site investigation falling outside the scope of this report.

### **3.4.3 Sanitary Sewer Systems**

Camp Killpack and Camp Bonneville have a gravity sewer system which flows to a pump station just southwest of Camp Bonneville. Also flowing into the lift station is a two-inch force main. From the lift station, the effluent is pumped to two unlined, concrete aeration ponds located east

## *Camp Bonneville Reuse Plan*

of Camp Bonneville, with a total capacity of 3.2 million gallons. There appears to be significant inflow of ground water and storm water into these aeration ponds because they are not covered and receive surface run-off from the hill to the north. There is also concern that these concrete ponds may be cracked resulting in ground water infiltration and effluent leaching into the ground water and nearby Lacamas Creek. The Army will be conducting soil testing in the lagoon area, with results available by December 1998.

The effluent discharge system is a surface application spray system into the woods east of the ponds. This existing system does not meet current State health department requirements for year round use and will have to be either restricted to a limited time during the dry months of the summer, modified, or replaced with a new sanitary sewer system. According to the Army maintenance personnel, the existing sewer disposal system has not been operational for at least the past five years. The system has not been active because there has been little sewer inflow into the system due to the low occupancy of the camp facilities.'

The Army Corps of Engineers has been developing a reuse manual for the lagoon system. A draft of this manual was provided to the LRA in August, 1998 which will need to review the information before decisions can be made on future use of the current system. A lagoon site survey/remediation study was scheduled by the Army Corps of Engineers for Fall '97, then rescheduled for December 1998. Results of this study have been requested by the LRA and will be reviewed by the LRA prior to any final decisions by the LRA on future use of the system. The Washington State Department of Ecology (DOE) will also then be asked to further evaluate the system to determine future usability and the Army's compliance or non-compliance with any relevant environmental regulations related to continued usage or to closure. If the current system is determined (as is expected) to not be reusable, the County may not accept transfer of the sewage lagoon system, and restrooms will be constructed using septic systems. Use of composting and incinerating toilets throughout the site will also be further explored.

For planning purposes, the basic assumption is that the existing lagoon system is in severe disrepair and will require significant rehabilitation at considerable cost to meet environmental permit requirements. Construction cost allowances of \$291,250 have been made for various sanitary system upgrades. However, replacement of sanitary systems in the form of community septic facilities as a back up situation has not been evaluated at this time and is pending Army, DOE, and Southwest Washington Health District studies of the existing lagoon system. While not budgeted in the infrastructure costs for the reuse plan at this time, the construction of new on-site sanitary sewer distribution lines, in the utility corridors shown on Figure 9B, is estimated to cost approximately \$950,000.

### **3.4.4 Buildings**

Camp Bonneville is located north of Pluss Road, approximately one mile east of the camp's main gate. This camp consists of one-story wood structures including eleven barracks, men's and women's latrine, a recreation building, storage building, kitchen and dining hall, tear gas chamber (scheduled for demolition by the Army), wood storage, and a recreation & barracks building. The buildings at Camp Bonneville are not in compliance with current building codes. However, these buildings could be retrofitted to an acceptable level of code compliance. The

## *Camp Bonneville Reuse Plan*

general condition of the structures at Camp Bonneville is of a lower quality than that of Camp Killpack. This is primarily due to the fact that the Corps of Engineers did not conduct a retrofit to improve this camp's building systems in 1990 as they did at Camp Killpack.

The estimated cost to bring the buildings up to required code and functional levels for the proposed reuses is \$1.3 million plus an allowance for septic system upgrades. Construction of a new multi-purpose building is estimated at an additional \$625,000.

Camp Killpack is located north of Pluss Road, approximately one-half mile east of the camp's main gate. This camp consists of one-story wood structures built prior to 1935, including nine barracks, men's and women's latrine, laundry, classroom and weight room, two shops (converted barracks), kitchen and dining hall, offices, and a fire station. According to Army staff, the Corps of Engineers undertook a retrofit of these buildings in 1990, which involved a number of structural, mechanical and electrical improvements. Although the buildings at Camp Killpack are not totally in compliance with current building codes, the preliminary assessment is that these are generally safe structures and could be used for a variety of activities similar to their historic use after appropriate upgrading. Cost to bring the buildings up to minimum ADA, fire safety and minimum building code requirements is estimated to be approximately \$313,000 plus allowances for septic system upgrades.

The deterioration of the buildings due to reduced maintenance levels is also of great concern to the LRA.

### **3.4.5 *Electrical Systems***

Electrical service is only available at the two cantonment areas. No service is provided along Range Road past the current FBI range or to other areas on the site.

Electrical power for Camp Bonneville is provided by Clark Public Utilities with pole-mounted overhead electrical wires and transformers. The electrical systems existing within buildings at both camps are provided by grounded electrical distribution service. The barracks buildings are typically served by a 60 amp panel, and the kitchen and dining hall buildings are served by an 800 amp panel.

Lighting for the barracks buildings is by exposed incandescent bulbs mounted on four-inch junction boxes. The lighting for the mess hall and classroom buildings is by older-style fluorescent fixtures.

The cost to bring the two cantonment areas up to minimum current electrical standards is estimated to be approximately \$50,000.

TABLE 1  
 BONNEVILLE CANTONMENT FACILITIES

BUILDING NUMBER	CONSTRUCTION TYPE	YEAR BUILT	PAST USE	CURRENT USE
1815	Metal building with a concrete floor.	1976	Well Pump House	Well pump house
1826	Wood building with a wood floor. The forced air HVAC is powered by a 275-gallon diesel AST	1927	Barracks	Barracks
1828	The forced air HVAC is powered by a 275-gallon diesel AST	1933	Barracks	Barracks
1833	Wood building with a concrete floor. The HVAC is electric powered.	1927	Latrine	Latrine
1834	Wood building with a wood floor. This building has no HVAC.	1927	Training Chamber	This facility is not currently in use.
1837	Wood building with a wood floor. The forced air HVAC is powered by a 275-Gallon diesel AST.	1927	Barracks	Barracks
1847	Wood building with a wood floor. The forced air HVAC is powered by a 275-gallon diesel AST.	1927	Barracks	Barracks
1848	Wood building with a wood floor. The forced air HVAC is powered by two 275-gallon. diesel ASTs.	1933	Mess Hall	Mess Hall
1857	Wood building with a wood floor. The forced air HVAC is powered by a 275-gallon diesel AST.	1927	Barracks	Barracks
1864 <sup>a</sup>	Wood building with transite siding and a concrete floor. This building has no HVAC.	1955	Grounds Shop	Grounds Shop. Storage of miscellaneous grounds equipment including 3 all terrain vehicles, small gas containers, and car size batteries.

Camp Bonneville Reuse Plan, Section 3, Table 1

Camp Bonneville Reuse Plan

1867	Wood building with a wood floor. The forced air HVAC is powered by a 275-gallon diesel AST.	1927	Barracks.	Barracks
1911	Wood building with a wood floor. The forced air HVAC is powered by a 275-gallon diesel AST.	1933	Barracks	Barracks
1920	Wood building with a wood floor. The forced air HVAC is powered by a 275-gallon diesel AST.	1933	Barracks	Barracks
1922	Wood building with a wood floor. The forced air HVAC is powered by a 275-gallon diesel AST.	1933	Barracks	Barracks
1930	Wood building with a wood floor. This building has no HVAC	1933	Cold Storage	Storage
1932	Wood building with a wood floor. The forced air HVAC is powered by a 275-gallon diesel AST.	1933	Barracks	Barracks
1934	Wood building with a concrete floor. The HVAC is electric powered.	1933		Latrine
1940	Wood building with a wood floor. The forced air HVAC is powered by two 275-gallon diesel ASTs.	1933	Day Room/AAFES Branch	Day Room/Classroom
1942	Wood building with a wood floor. The forced air HVAC is powered by a 275-gallon diesel AST.	1933	Barracks	Barracks
1962	Unknown	1933	Unknown	Burned
1963	Wood building with a wood floor. This building has no HVAC.	1928	Storage	Storage. This building stores construction materials, such as paint, wood, sacks of concrete, and nails
1980	Wood building with a wood floor. The forced air HVAC is powered by a 275-gallon diesel AST.	1928	Command Post	Command Post

Camp Bonneville Reuse Plan, Section 3, Table 1

Camp Bonneville Reuse Plan

190	Unknown	Unknown	Outdoor Theater	Burned
1992	Metal building with a concrete floor. This building has no HVAC.	1978	Water Well Pump House	Water Well Pump House
1995	Metal building with a concrete floor. This building has no HVAC.	1978	Sewage Treatment Chemical Storage.	Sewage Treatment Chemical Storage. This building stores sodium hypochlorite, typically up to 10 gallons.
1997	Concrete	1978	Sewage Lift Station	Sewage Lift Station
2663	Concrete building with a concrete floor. This building has no HVAC.	1952	Water Treatment Chemical Storage	Water Treatment Chemical Storage. This building stores sodium hypochlorite, typically up to 10 gallons.
2950	Subsurface concrete building with a concrete floor. This building has no HVAC.	1976	Ammunition Bunker	Ammunition Bunker. This building stores the various types of ammunition brought on site by units using the facility.
2951	Subsurface concrete building with a concrete floor. This building has no HVAC.	1976	Ammunition Bunker	Ammunition Bunker. This building stores the various types of ammunition brought on site by units using the facility
2953	Subsurface concrete building with a concrete floor. This building has no HVAC.	1976	Ammunition Bunker	Ammunition Bunker. This building stores the various types of ammunition brought on site by units using the facility

Notes:

AST: Aboveground storage tank

HVAC: Heating, ventilation, air conditioning

(a): Information regarding hazardous materials/waste management associated with this facility is discussed in Section 3.4. 1.

Camp Bonneville Reuse Plan, Section 3, Table 1

Camp Bonneville Reuse Plan

TABLE 2  
KILLPACK CANTONMENT FACILITIES

Building Number	Construction Type	Year Built	Past Use	Current Use
4125	Wood frame structure with a dirt floor. This building has no HVAC.	1958	Storage	Storage This open structure is used as a carport to store vehicles.
4126	Wood building with a wood floor. This building has no HVAC.	1958	Storage	No longer in use.
4155	Wood building with a wood floor. The HVAC is electric powered.	1935	Barracks	Housing
4314	Wood building with a wood floor. The HVAC is electric powered.	1935	Barracks	Barracks
4316	Wood building with a wood floor. The HVAC is electric powered	1935	Barracks	Barracks
4325	Wood building with a wood floor. The HVAC is electric powered.	1935	Barracks	Barracks
4327	Wood building with a wood floor. The HVAC is electric powered.	1935	Barracks	Barracks
4337	Wood building with a concrete floor. The HVAC is electric powered.	1935	Latrine	Latrine
4345	Wood building with a wood floor. The HVAC is electric- powered.	1935	Barracks	Barracks
4348	Wood building with a wood floor. The HVAC is electric- powered.	1935	Barracks	Barracks
4356	Wood building with a wood floor. The HVAC is electric- powered.	1936	Barracks	Barracks
4364	Wood building with a concrete floor. The HVAC is electric powered.	1935	Latrine	Latrine
4366	Wood building with a wood floor. The HVAC is electric- powered.	1936	Barracks	Barracks
4368	Wood building with a wood floor. The HVAC is electric- powered.	1935	Barracks	Barracks

Camp Bonneville Reuse Plan, Section 3, Table 2

Camp Bonneville Reuse Plan

4377	Wood building with a wood floor. The HVAC is electric- powered.	1935	Barracks	Barracks
4378	Wood building with a concrete floor. This building has no HVAC.	1935	Storage	Storage. This building stores items associated with grounds maintenance, such as lawnmowers, small gasoline containers, 32-ounce containers of oil, and weed whackers.
4387	Wood building with a wood floor. The HVAC is electric- powered.	1935	Barracks	Barracks
4389	Wood building with a wood floor. The HVAC is electric- powered.	1935	Mess Hall	Mess Hall
4398	Wood building with a wood floor. The HVAC is electric- powered.	1935	Barracks	Range Control
4475	Wood building with a concrete floor. This building has no HVAC.	1937	Vehicle Maintenance	Vehicle Maintenance. This building is used to store vehicles and items associated with vehicle repair.
4475a <sup>a</sup>	Metal shed with a metal floor.	1992	Hazardous Materials Storage	Hazardous Materials Storage. This building was observed to store a 55-gallon drum of oil and several containers of antifreeze.
4475b <sup>a</sup>	Metal shed with a metal floor.	1992	Hazardous Materials Storage	Hazardous Materials Storage. This building was observed to store 4 55-gallon drums of oil, 4 55-gallon drums of antifreeze, and 8 55-

Camp Bonneville Reuse Plan, Section 3, Table 2



Camp Bonneville Reuse Plan

				gallon drums of transmission oil.
4476 <sup>a</sup>	Cinder block shed with a concrete floor.	1990	Covered Storage	Covered Vehicle Maintenance Storage. This building stores miscellaneous supplies for vehicle maintenance, including a 55-gallon drum used to collect waste oil.
4476a	Metal roof with concrete secondary containment.	1994	1,000-gallon AST	This building is covered storage for a 1,000-gallon AST with secondary containment.
4483	Wood building with a concrete floor.	1993	Fire Station.	Fire Station. Relocated fire station stores one fire truck.
4522	Metal building with a concrete floor.	1950	Water well pump building	Water Well Pump Building

Notes:

AST: Aboveground storage tank

HVAC: Heating, ventilation, air conditioning

(a): Information regarding hazardous materials/waste management associated with this facility is discussed in

Section 3.4. 1.

Camp Bonneville Reuse Plan, Section 3, Table 2

TABLE 3  
RANGE NUMBERS, USE, AND WEAPONS TYPE

Range Number	Use	Weapons
R-1	Small Machine Gun Range	.30 caliber
R-2	Pistol Range	22 through 45 Caliber
R-3a	K.D. Rifle Range	M1, M14
R-3b	Night Fire range	NA
R-4	Automated Record Fire and 25 Meter Zero	M16
R-5	Field Firing Range	M1, M14
R-6	Record Firing Range	50 caliber, shotgun, pistol
R-7	1,000 Inch Machine Gun and Moving Target	50 caliber
R-8	F.B.I. Range	45 caliber, 9 mm, 357, 38 caliber
R-9	Combat Pistol Range	22 through 45 caliber
R-10	Grenade Launcher Range	40 mm
R-11	Mortar Range	14.5 Artillery Subcaliber
R-12	Mortar Range,	14.5 Artillery Subcaliber
R-13	Mortar Training Shell Course	M203, LAW, and mortar
R-14	25 meter and Machine Gun Range	M-1, M-16, and 50 caliber machine gun
R-15	Live Grenade	Grenades, Claymore mine
R-16	Rifle Grenade/25 Meter Small Machine Gun	M1 and 30 caliber small machine gun

Camp Bonneville Reuse Plan, Section 3, Table 3

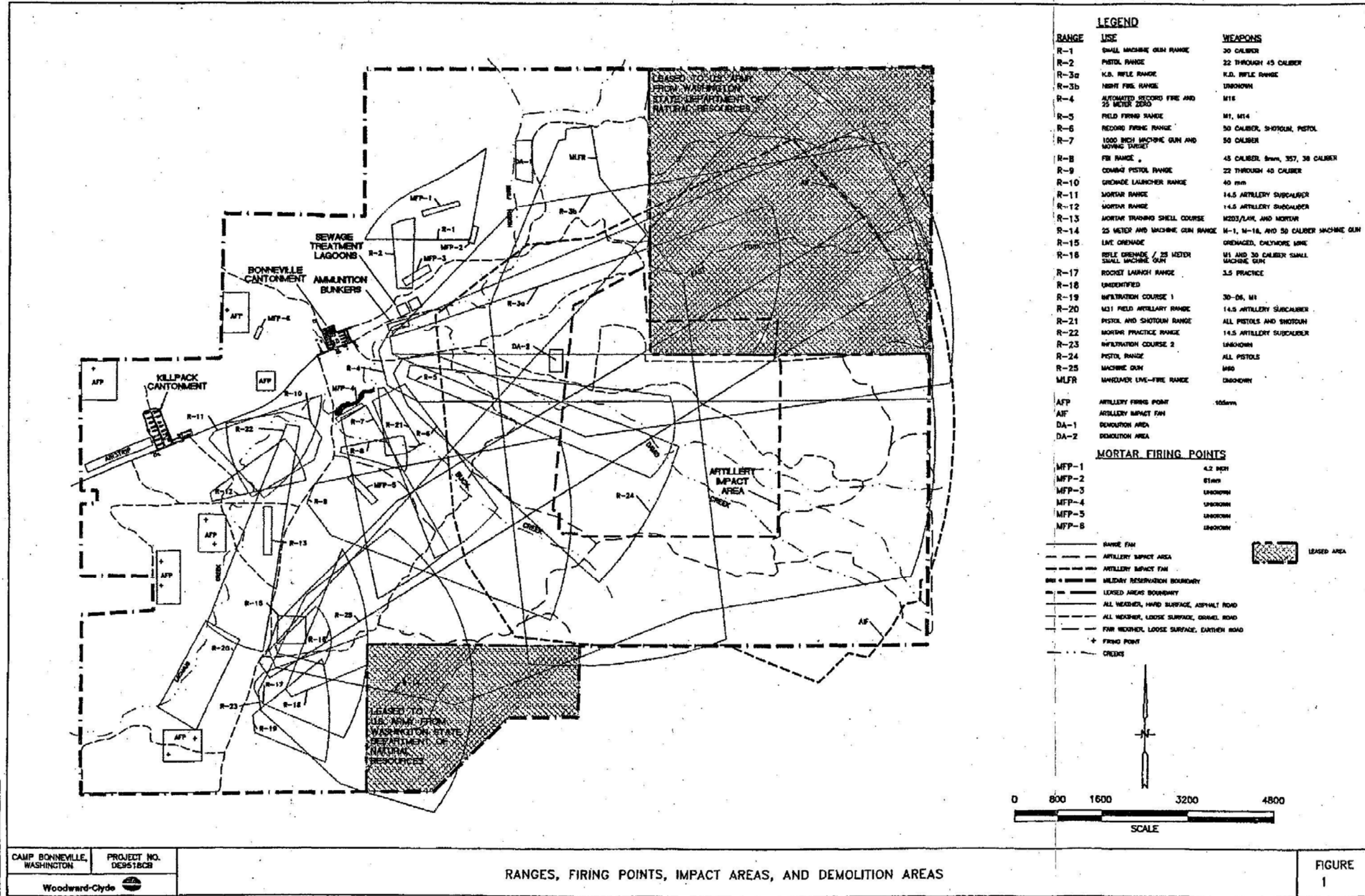
*Camp Bonneville Reuse Plan*

R-17	Rocket Launch Range	3.5 Practice
R-18	Unidentified	NA
R-19	Infiltration Course 1	30-06, M1
R-20	M31 Field Artillery Range	14.5 Artillery Subcaliber
R-21	Pistol and Shotgun Range	All pistols and shotgun
R-22	Mortar Practice Range	14.5 Artillery Subcaliber
R-23	Infiltration Course 2	Unknown
R-24	Pistol Range	All Pistols
R-25	Machine Gun	M60
MLFR	Maneuver Live-Fire Range	Unknown
AFP	Artillery Firing Point	105 mm

Note:

NA: Not available

Camp Bonneville Reuse Plan, Section 3, Table 3





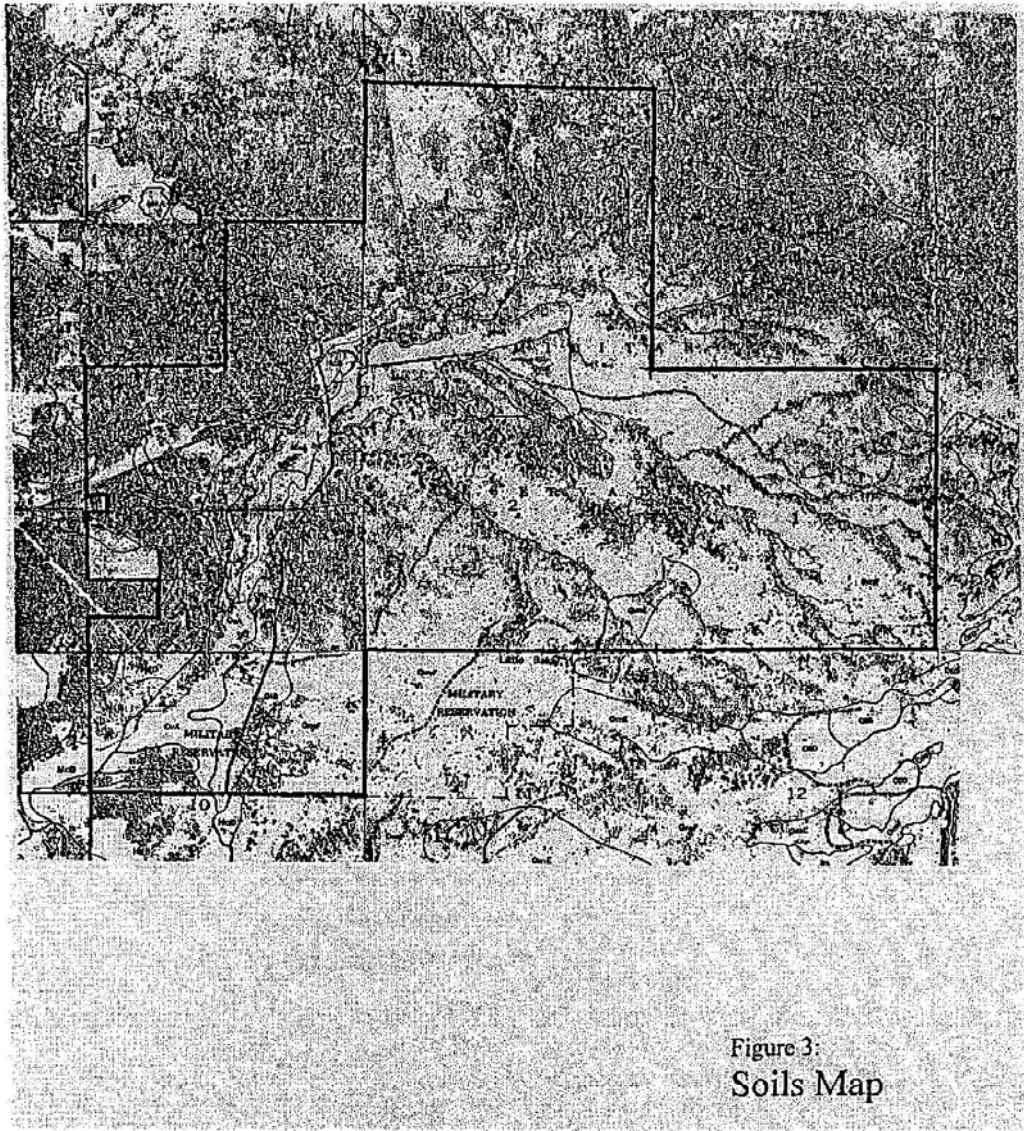


Figure 3:  
Soils Map

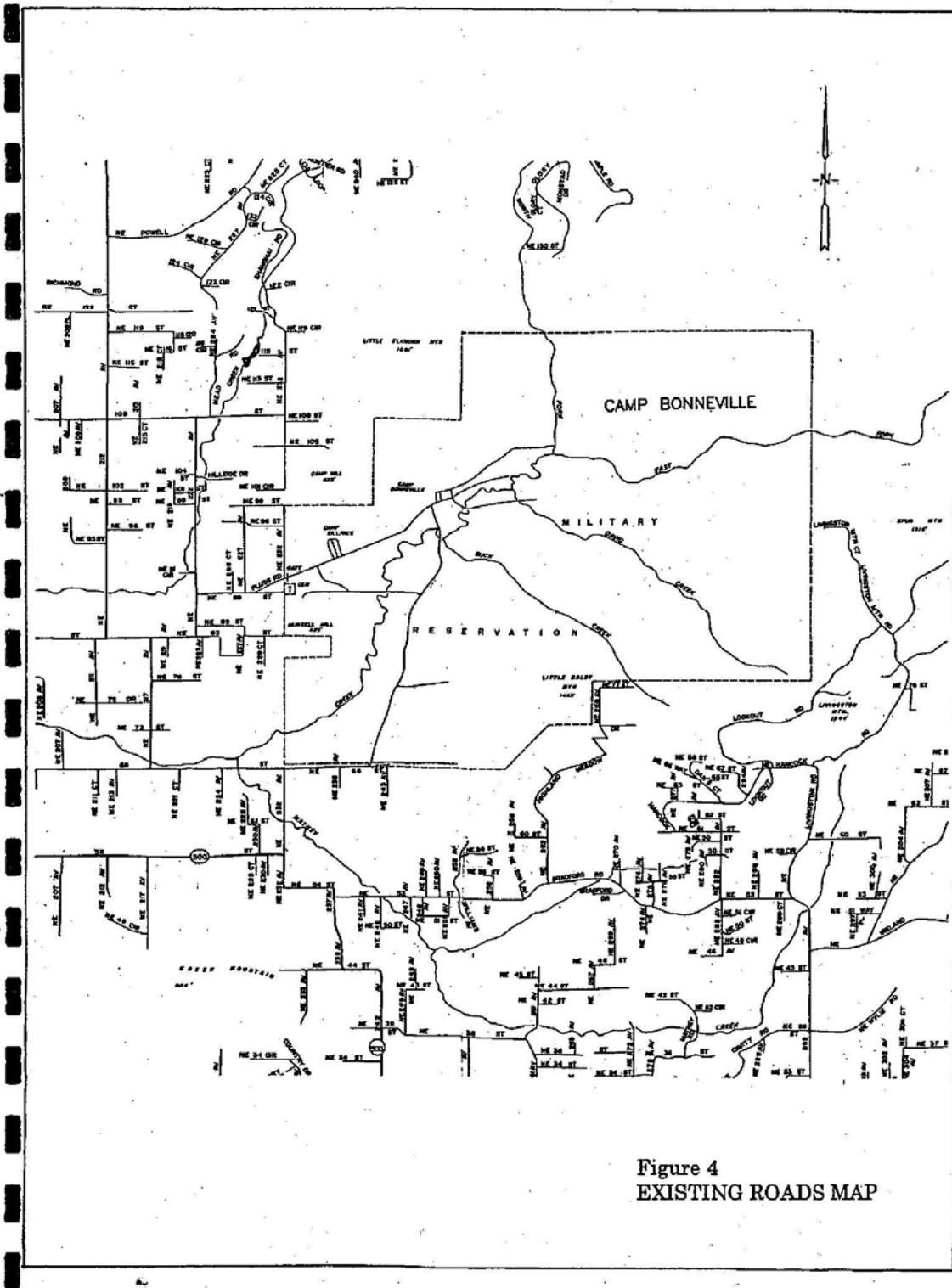


Figure 4  
EXISTING ROADS MAP

**LAND USE PLAN**

#### **4.1 Planning Framework**

The following Principles for Camp Bonneville Local Redevelopment Authority Planning were established and approved by the LRA Reuse Planning Committee on June 19, 1996 and by the Clark County Board of Commissioners on May 20, 1997:

- 
- ***Self-Sustaining*** - Any redevelopment proposed for Camp Bonneville must have funding sources which will over the long term cover all expenses for capital improvements and ongoing operations and maintenance. A financial plan will be developed which will ensure that the reuse activities will be self-sustaining in phases over a five year period.
- ***Locally Focused and Directed*** - Redevelopment will focus on meeting the needs of the local Clark County community. The planning process for redevelopment will, wherever possible, be directed by representatives of the local community.
- ***Open Process*** - A concerted effort will be made to ensure that ideas and concerns of individuals and groups affected by base closure and reuse will be heard and given adequate consideration and response. Active and open communications between all parties involved in the reuse planning process will be fostered to result in an atmosphere with no surprises. Community involvement and media relationships will be promoted to enhance the public's understanding of the reuse planning process.
- ***Consideration of Impact to the Surrounding Neighborhoods*** - Reuses proposed must be compatible with the infrastructure and rural nature of the area surrounding Camp Bonneville.

The Camp Bonneville site is not appropriate for housing of offenders, however, offender crews will be utilized for maintenance activities as in current county parks.

Timber management will be a revenue source at Camp Bonneville primarily through selective thinning. There will be no "clear cuts" except where required for site development and environmental management purposes.

- ***Overall Community Need*** - The Reuse Plan will reflect the needs of the community, but may not include all reuses which are proposed in public hearings, letters, calls, by the LRA Reuse Planning Committee, the Steering Committee, and/or the Steering Committee subcommittees.
- ***Cooperation and Consensus-Building*** - The local community will work with state and federal agencies, tribal interests, and agencies serving the homeless to reach consensus on what is best for the local Clark County community.
- ***Environmentally Conservative*** - Any development proposed must be compatible with the rural and natural state of the property. To the extent possible, the aesthetics and



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environmental qualities of the Camp Bonneville property will be maintained. The environment will be enhanced through redevelopment, with careful attention to wildlife corridors, wetlands, and endangered and/or threatened species.

### **4.2 Study Approach and Planning Process**

The reuse planning study approach for Camp Bonneville generally followed the recommended reuse planning process and guidelines described in the Community Guide to Base Reuse prepared by the Office of Economic Adjustment of the Office of the Secretary of Defense . The reuse planning process consisted of the following components:

Data Collection and Analysis by LRA subcommittee members and staff

- Technical Studies by Consultant
- Preparation of Preliminary Reuse Alternatives
- Evaluation of Reuse Alternatives
- Preparation of a Recommended Camp Bonneville Reuse Plan
- Recommended Management Structure for Plan Implementation

The following, in approximate chronological order, describes the reuse planning process which was undertaken by Clark County and resulted in development of the Reuse Plan for Camp Bonneville:

- Clark County established and was recognized by the Office of the Secretary of Defense as the Local Redevelopment Authority (LRA) for the Camp Bonneville Reuse Plan. The Board of County Commissioners is the LRA Board, with oversight of the planning process provided by a five member Reuse Planning Committee.
- The LRA, after public hearings, appointed six subcommittees to assist with reuse planning effort. LRA meetings were held from November 1996 through June 1996, and from April 1997 through May 1998.
- Three alternative development scenarios were prepared for Steering Committee review and comments from November 1997 through January 1998.
- RPC reviewed, and after holding public hearings, modified the Steering Committee's preferred reuse plan and forwarded the RPC's draft reuse plan to BOCC.
- BOCC public hearings were held on May 7 & 14, 1998.
- Draft reuse plan modified per BOCC decision in June 1998.
- BOCC approval of draft reuse plan.
- Reuse plan refinement and costs updated to current year dollar amounts, February 2003.
- Reuse plan update to reflect Conservation Conveyance, NOV 2005

### **4.3 Technical Studies**

## *Camp Bonneville Reuse Plan*

In addition to information provided by LRA subcommittee members, the consultant reviewed reports prepared by the U.S. Army, other federal agencies, and Clark County. Interviews were conducted with local government officials, key community representatives, Army base closure office staff, and the relevant state, regional, and local agency personnel. Data collection included the final BRAC Cleanup Plan Report for Camp Bonneville (dated October 1996), the draft final Environmental Baseline Survey Report for Camp Bonneville (dated November 27, 1996), base maps provided by the Army, as well as the Army's recent building inventories. On-site inventory of existing conditions supplemented the data collected from existing records and a building inventory was conducted to evaluate their reusability.

In addition to the infrastructure evaluation, market and financial feasibility analyses were conducted, as well as an evaluation of the noise impact of firing ranges on the other reuses and the surrounding neighborhood.

Regional law enforcement agencies contributed funding to expand the original scope of work to include an analysis of the feasibility of developing a regional law enforcement training center at Camp Bonneville. (See Appendix G).

### **4.4 Public Participation and Alternate Scenario Development**

Reuse advocates from the local community prepared detailed business plans including information on the reuse, space and facilities required for each proposed use. These plans were reviewed by other reuse advocates and the advisory committees to identify areas of incompatibility, neighborhood impact, financial cost and benefit, and overall community need. Subcommittees identified areas that needed more technical evaluation. These technical studies were funded through the OEA reuse planning grant. Throughout these studies, information obtained was shared with the Steering Committee, with information requests regularly made of subcommittee members in a cooperative process with consultant and staff.

As part of the public participation, approximately 27 public meetings were held, including:

- November 1995 to January 1996 - Public meetings for input on potential reuses.
- February to June 1996 - Subcommittee, Steering, and Reuse Planning Committee meetings
- April 1997-January 1998 - Subcommittee, Steering and Reuse Planning Committee meetings
- July 17, 1997 - Public meeting by the LRA Reuse Planning & Steering Committees
- January 28, 1998 - Public meeting by the Reuse Planning Committee.
- January 31, 1998 - Open House at Camp Bonneville.
- February 2 & 18, 1998 - Public hearings by the Reuse Planning Committee.
- May 7 & 14, 1998 - Public hearings by the Board of County Commissioners, acting as the Local Redevelopment Agency.

## *Camp Bonneville Reuse Plan*

Public meetings were advertised, and newsletters were also sent to Clark County residents to inform them of the past, present and future reuse planning efforts; solicit their comments; and notify them of upcoming public hearings, meetings, and open houses. Outreach efforts to solicit notices of interest in the property from agencies serving the homeless, as well as to state, local, and tribal governments, were also conducted in 1996, with two workshops held on-site at Camp Bonneville. Information such as reports and newsletters has also been made available on a website ([www.co.clark.wa.us](http://www.co.clark.wa.us)).

A series of planning graphics were prepared to identify the opportunities and constraints potentially affecting the reuse of Camp Bonneville's facilities, land areas, natural resources, and surrounding neighborhoods. The resulting mapping summarized the data collection effort and technical studies providing a planning framework from which reuse alternatives were generated in the subsequent phases of reuse planning.

Three alternative development scenarios (**Figures 5, 6, and 7**) were prepared by the planning consultant team, based on input received from the Steering Committee and its subcommittees. From these three scenarios, a preferred plan scenario (**Figure 6**) and an alternate plan scenario (**Figure 5**) were recommended by the Steering Committee and forwarded to the Reuse Planning Committee for their consideration. Reuses recommended by the Steering Committee included: regional park; equestrian and hiking trails; orienteering; outdoor school/rustic retreat center; Native American Cultural Center; Clark College classrooms and environmental study area; paragliding; model airplanes; paintball; search & rescue dog training; RV camping; and tent camping (in organized campground areas only).

After public hearings and meetings with the Steering Committee, the Reuse Planning Committee modified the Steering Committee's recommended plan as follows: The law enforcement firing ranges, law enforcement training center, and an area reserved for potential future public firing range usage were added to the reuse plan (**Figure 8**). The Reuse Planning Committee included the Emergency Vehicle Operations Course (EVOC) in the reuse plan, but recommended that the EVOC be located at Camp Bonneville only if there are no other feasible locations available elsewhere in the county. Paragliding, paintball, and model airplanes were removed from the Steering Committee's recommended plan. The RPC agreed with the Steering Committee's recommendation to not include hunting, four wheel drive vehicle trails, and a motor bike trailhead and access road in the reuse plan. The Reuse Planning Committee also recommended concentrating development in the two barracks area, and moving the proposed Clark College classrooms to the Camp Killpack barracks area from the location at the southwest corner of the property that had been requested by Clark College.

On May 7, 1998, the Clark County Board of Commissioners held its public hearing to consider testimony on the reuse plan proposed by the Reuse Planning Committee. The Board of Commissioners continued the hearing to May 14, 1998 for their deliberations and decision on the reuse plan. The Board of Commissioners requested the Reuse Planning Committee's reuse plan be modified as follows (**Figure 9**): the EVOC was eliminated, RV and tent camping to be located to protect the Lacamas Creek riparian zone, and consideration be given to designating an area for a potential military cemetery adjacent to the existing Livingston Cemetery. The

## *Camp Bonneville Reuse Plan*

Commissioners requested a draft reuse plan be submitted for their approval and submittal to the Army.

### **4.5 Preferred Reuse Plan**

The following components make up the final Reuse Plan for Camp Bonneville:

#### ***4.5.1 Regional Park***

A regional park approximately 1,000 acres in area is recommended along the western portion of the Camp Bonneville property. This public park will provide needed opportunities for the local community to enjoy both active and passive recreation activities. It is proposed that this regional park be managed and maintained by Clark County.

Proposed public park facilities include the following recreational opportunities:

- Recreation trails (for hiking, mountain bicycling, and equestrian use)
- Group picnic areas and picnic shelters
- Amphitheater and stage (for outdoor school and small local events)
- Meadow area for group picnicking and recreation sports activities
- Restroom facilities
- Tent camping facilities
- Recreational vehicle camping facilities
- Public firing range
- Archery practice range
- Park watch person's residences
- Vehicular access road
- Designated parking areas
- Ponds for recreational use and environmental education
- Native American cultural center at the Bonneville cantonment area
- Environmental study area
- Orienteering

Personal property at Camp Bonneville was inspected and evaluated by County staff in 1996. A second evaluation will be conducted by September 1998 to identify items which are needed for the reuse plan. It is anticipated that much of the kitchen equipment will be essential, as well as maintenance equipment such as the following: Ford tractor with front loader and backhoe, John Deere tractor with a side arm sickle bar mower and a 6' rotary mower attached, a post hole auger, chipper/shredder, new flail mower, lawn mowers, and weed eaters. A complete list will be prepared after the second evaluation is completed.

#### ***4.5.2 Law Enforcement Training Center***

## *Camp Bonneville Reuse Plan*

A law enforcement training center is proposed to serve the regional needs of the law enforcement agencies of southwest Washington. At this facility, police officers will receive basic training, learn new skills, and firearms techniques. This law enforcement training academy will be one of the user groups for classrooms and offices which will be constructed at the Killpack cantonment area. In addition, local law enforcement firing ranges are proposed east of Lacamas Creek in the southwest section of Camp Bonneville. An equestrian riding ring would be provided in the general vicinity of Camp Killpack, which will be open to the general public when not required for law enforcement training. A physical fitness course and canine training area would also be provided in this area. The canine training area would also be used for training of search and rescue dogs. Firing ranges will include one handgun range, one rifle range, and an area provided for future construction of an indoor firing range. Adjacent to the ranges will be a shooting house, a training building where law enforcement officers are provided realistic environments for training in making decisions about whether or not to fire their guns.

Firing ranges will be constructed as needed by both law enforcement and the public. At the present time, the County Sheriff's Office has a shooting range, and two public firing ranges are available as well. Some of the firing range areas identified on the reuse plan are ranges that will be constructed if and when the present off-site firing ranges are closed due to increased development in their areas, or if these firing ranges no longer meet the needs of law enforcement and the public. Some range facilities, however, such as the shooting house and law enforcement rifle range, may be constructed soon after property transfer.

Classroom facilities will be shared with Clark College in a new facility to be constructed. If this new construction is not financed or if rezoning is not approved, the existing Killpack cantonment structures will need to be upgraded to meet current building codes, ADA requirements, and local government regulations for reuse as classrooms, administrative offices and other support facilities. The remainder of the buildings will be used as a retreat center/outdoor school, with shared usage of the law enforcement buildings when not used for law enforcement purposes.

The law enforcement firing ranges will have safety baffling reinforced with earthen berms, noise baffling to control sound to acceptable levels (compatible with park users and neighbors), and a perimeter fencing surrounding the range compound. These ranges will be operated six months per year during off-peak park and outdoor school usage months (October to March) with no weekend shooting and with shooting scheduled from 8 a.m. to 5 p.m. Evening shooting will be limited to meet minimal law enforcement training requirements, with scheduling subject to further discussions with a local neighborhood advisory group. Prohibiting firing range use (eliminating gunfire noise) during six months each year and on weekends year-round, will facilitate greater usage of all park areas, especially trails that are within close proximity to the ranges

### ***4.5.3 Rustic Retreat Center/Outdoor School***

A Rustic Retreat Center/Outdoor School is proposed as the primary reuse of the barracks areas. The retreat center/outdoor school will reuse many of the existing structures after upgrades are

## *Camp Bonneville Reuse Plan*

completed for compliance with applicable building codes, structural and utility service improvements. New buildings such as a meeting hall will be located within the existing Camp Bonneville cantonment area.

An undeveloped area above and north of the Bonneville barracks area identified on the reuse plan (**Figure 9**) is proposed as a future expansion area for the retreat center.

### **4.5.4 Native American Cultural Center**

Rattling Thunder, a non-profit Native American cultural group representing the area tribes, provides training (drums, art, Native American culture) to Native American youth in the region and assists in coordinating tribal activities such as regional pow wow's. Rattling Thunder requested use of a barracks building and access to kitchen and meadow areas at Camp Bonneville. The Native American Cultural Center will also be open to the general public visiting the regional park and outdoor school. The Cowlitz Indian Tribe and the Confederated Tribes of Grand Ronde were also involved in the planning process and are supportive of the development of a Native American Cultural Center at Camp Bonneville.

### **4.5.5 Clark College Environmental Field Station**

Approximately fifty to sixty acres will be designated for environmental studies in the southwest corner of Camp Bonneville. This site was selected due to the various eco-systems in this creek watershed area and its suitability for water quality research, wildlife habitat studies and native plant community preservation and restoration programs. A new classroom building at the Killpack cantonment will also be constructed to provide three to six classrooms for use by Clark College and County law enforcement for environmental and law enforcement training. Construction of this new facility will require an amendment to the County's comprehensive plan.

### **4.5.6 Trails & Nature Area**

Approximately 2,000 acres will be maintained for trails and nature areas in the central and eastern portions of the Camp Bonneville property. The public will access this area through hiking trails, mountain bike trails, and equestrian riding trails. Environmental learning areas will also be identified for use by all age groups. The County will also work the State Fish & Wildlife Service and US Fish & Wildlife Service to explore opportunities on the site to enhance the fish population and re-introduce native species. The majority of these recreational trails will utilize gravel and unpaved roads and cart tracks which already exist throughout the Camp Bonneville property, however additional trails will be created as funding becomes available. Trails in these natural areas will also be utilized by trail maintenance staff, timber management crews, and emergency response personnel such as fire fighters.

### **4.5.7 FBI Firing Range**

An area immediately adjacent to the law enforcement firing ranges has been identified for lease by the FBI. The FBI's current range is located less than 1/10th mile from the meadow area, the primary area of public usage. Noise studies indicate that firing ranges must be located no closer than 2,000 feet from neighborhoods and public use areas. Because of this, the FBI has been asked (and has agreed) to move its range to the area which will meet this criteria. Due to safety issues, the FBI has been supportive of the LRA's requirement that the relocated FBI range be

## *Camp Bonneville Reuse Plan*

baffled. The FBI has estimated past usage to be 60-80 days per year, with usage (except for emergency training) usually able to be scheduled in advance. It is essential for the viability of the regional park that FBI usage be limited to solely meeting the FBI's needs, particularly during the peak months for park and outdoor school usage at the nearby meadow areas. The FBI has been willing to share range usage with law enforcement agencies when FBI agents are available to oversee the usage.

With the closure of Camp Whythicum and the critical shortage of firing ranges, it is expected that law enforcement agencies will request additional usage of the FBI's range. If the property were to be directly transferred to the FBI, the LRA would have no ability to ensure that the FBI range is not put to constant usage, with firing range noise levels during peak park usage months creating a great risk of subsequent closure of the regional park and related activities. Although baffling provides safety, and buffers reduce noise, it is expected that unless more effective noise buffers are invented in the near future, gunfire will still be audible in many areas of the park. Numbers of park users may decrease significantly due to a desire by park users for quiet, natural sounds, and/or an aversion to the sound of gunfire, and/or an involuntary response of fear. The National Parks Service has expressed similar concerns and is willing to assist in sponsoring property transfer with a long term (up to 50 year) renewable lease to the FBI for a firing range site, limiting charges to actual costs incurred from FBI range usage.

### ***4.5.8 Timber Resource Management Area***

The Camp Bonneville property has significant forested areas which provide valuable wildlife habitat, stream water quality and watershed protection, and open space. Timber thinning is recommended as part of the management plan to maintain the health of this forest environment, reduce potential fire hazards, and provide a revenue product from timber sales. Forest Management goals will include, but not be limited to the following areas. To simulate an old growth timber stand structure by generating an older age class of the seral species which is Douglas fir. To optimize growth, yield and forest health. The County forestry staff is planning to use several silvicultural techniques to accomplish this, which will be addressed in detail in a forest management plan which will span a 50 year period.

The Timber Resource Management Area of Camp Bonneville is divided into two phases. Phase 1 consists of the western portion of the Camp Bonneville property, most of which is proposed as a county regional park. Phase 2 includes the balance of the property, the majority of which will be designated as open space greenway.

A Timber Inventory Estimate and Valuation Report, dated November 12, 1997, was prepared as part of this reuse planning study and is included as Appendix B of this report.

To prioritize parcels for cleanup, Clark County's forester will be conducting a more detailed evaluation, assisted by Explosive Ordinance Demolition (EOD) escorts provided by Fort Lewis. The Army's EE/CA report originally planned for January 1999 will estimate cleanup costs and evaluate technological options for cleanup. The more detailed timber analysis will identify parcels which are essential for the viability of the reuse plan, and together with the EE/CA will

## *Camp Bonneville Reuse Plan*

allow the Army and the local community to identify a transfer timeline that will be in the interests of all.

### ***4.5.9 Wetland/Riparian Area Restoration/Enhancement & Habitat Restoration***

Part of the plan for redevelopment of Camp Bonneville includes the restoration and enhancement of existing wetland and riparian areas. Additionally, it is intended that the reuse development process will enhance the entire site for wildlife, fish and native plant



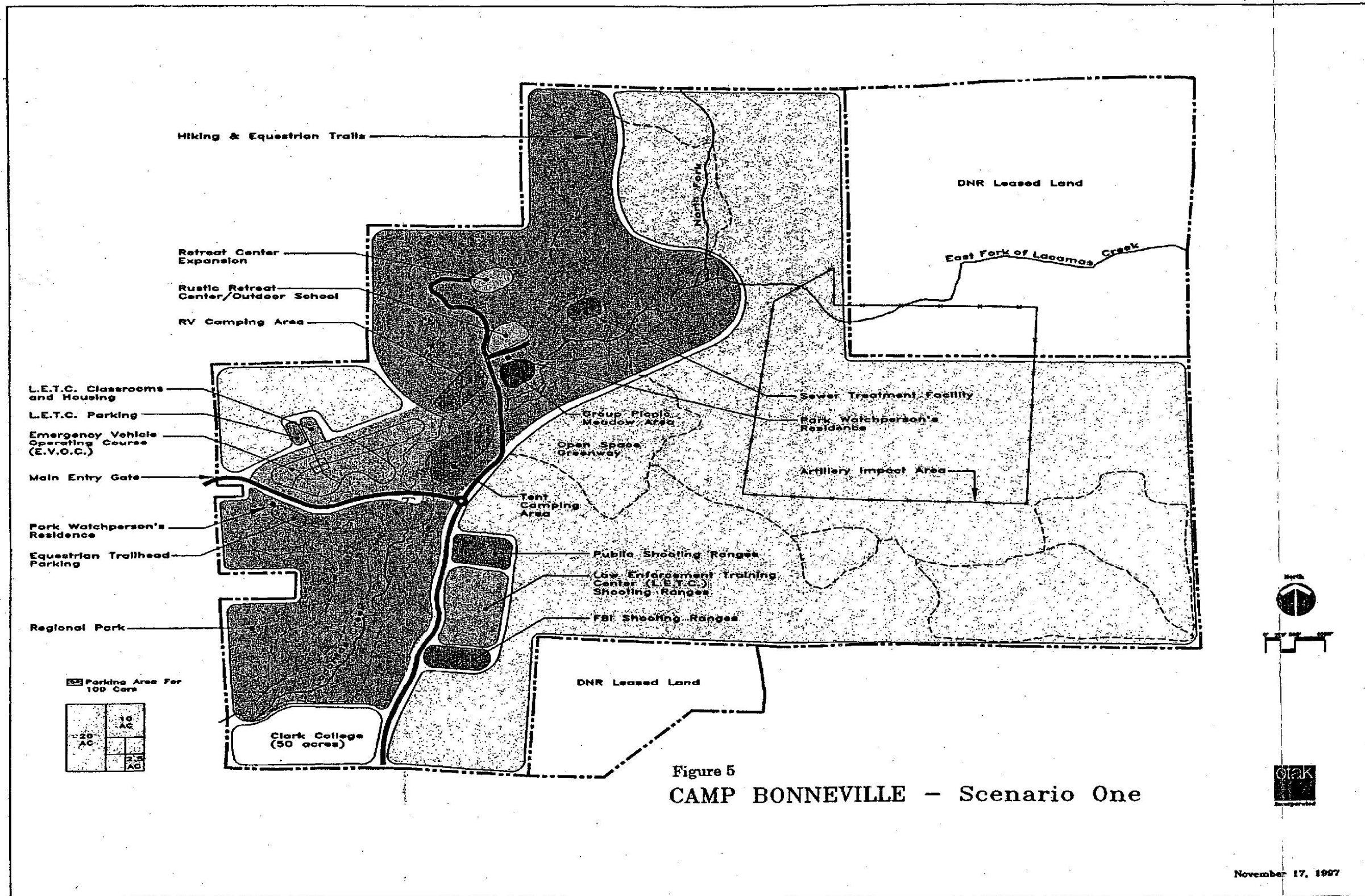


Figure 5  
CAMP BONNEVILLE - Scenario One

November 17, 1997

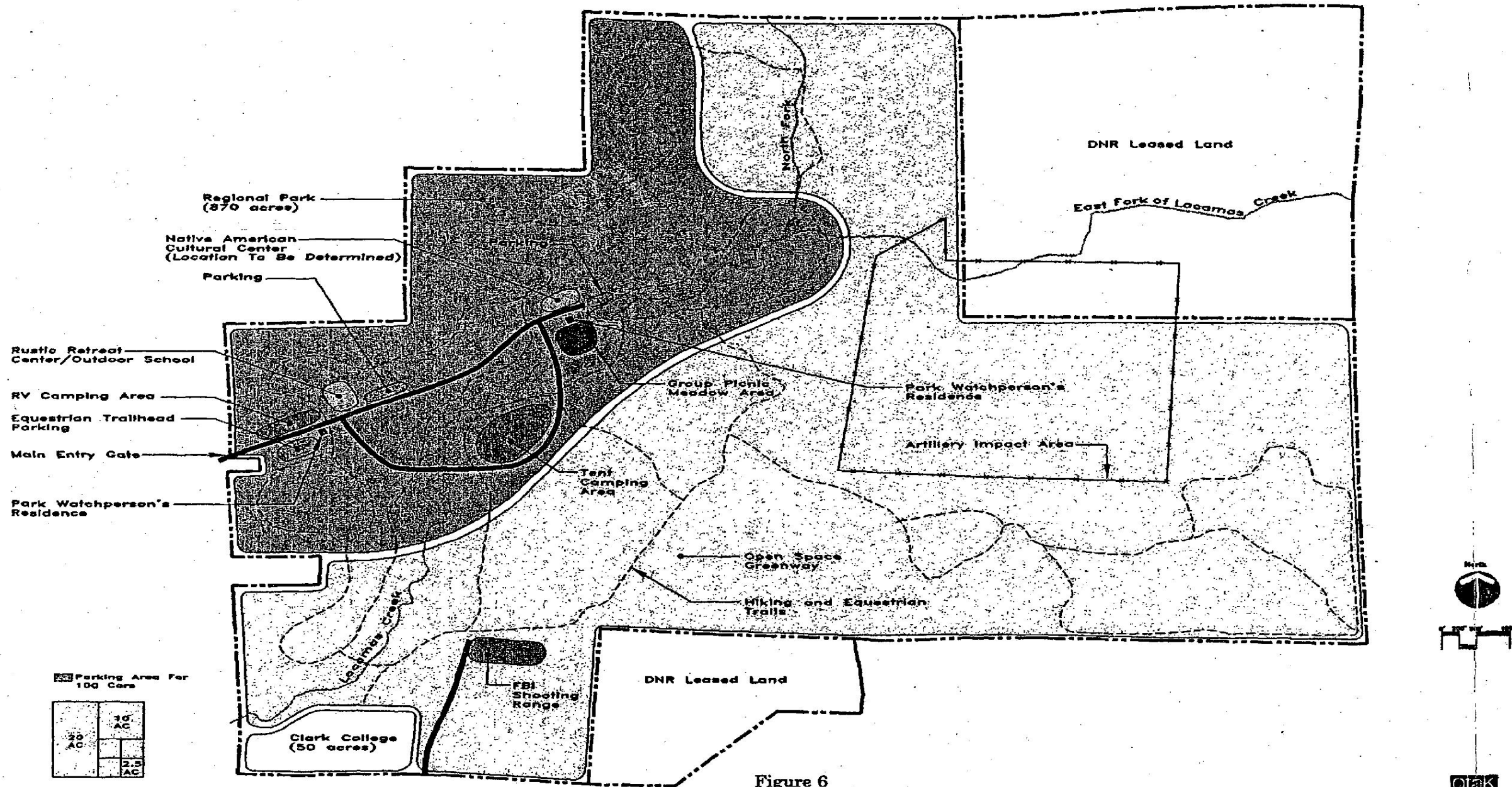
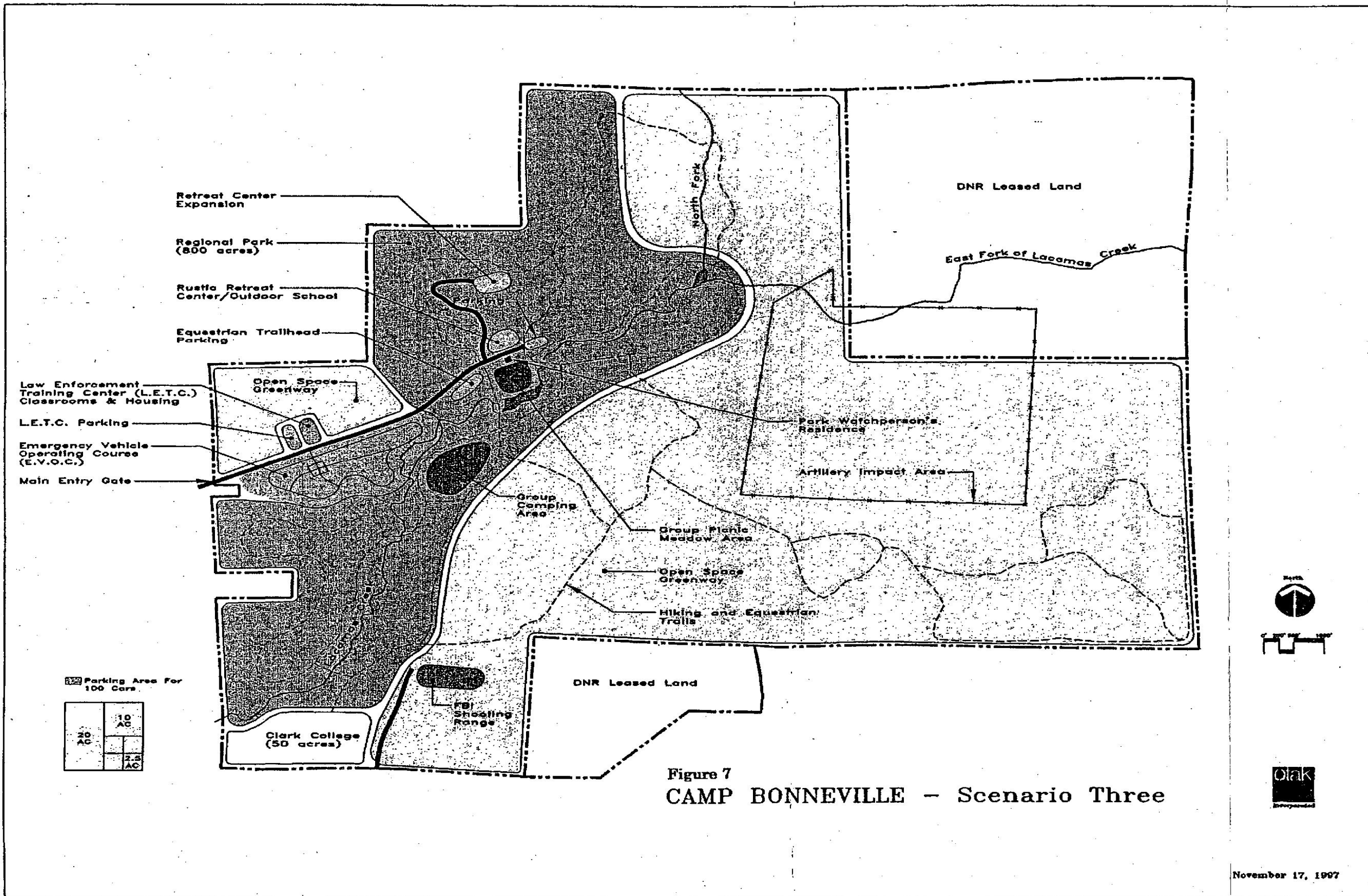


Figure 6  
CAMP BONNEVILLE - Scenario Two

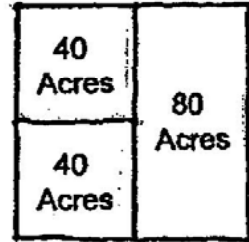
November 17, 1997





**Law Enforcement/Clark College/  
Rustic Retreat/Outdoor School  
Classrooms & Offices (C/O)**

- Reuse/Renovate Existing Camp Killpack Buildings
- Classrooms
- Administrative Offices
- Future Building Expansion As Needed



**Rustic Retreat/Outdoor School (RR/OS)**

- Reuse/Renovate Existing Camp Bonneville Buildings
- Classrooms
- Lodging
- Native American Cultural Center
- New Multi-Purpose Building & Other Building Expansion As Needed

**Open Space Greenway (OSG)**

- Hiking Trails
- Equestrian Trails
- Mountain Bike Trails
- Wildlife Habitat Area

**Regional Park (RP)**

- Hiking Trails
- Equestrian Trails
- Mountain Bike Trails
- Picnic Areas & Shelters
- Amphitheater & Stage
- Restrooms
- Tent Camping
- RV Camping
- Park Watchperson's Residences
- Archery Range

**Clark College/Environmental Study Area (CC/ESA)**

- Field Station for Outdoor Studies

**Firing Ranges/EVOC (FR/EVOC)**

- Local Law Enforcement Ranges
- FBI Range
- Public Range
- Emergency Vehicle Operating Course (EVOC)

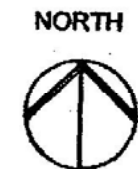
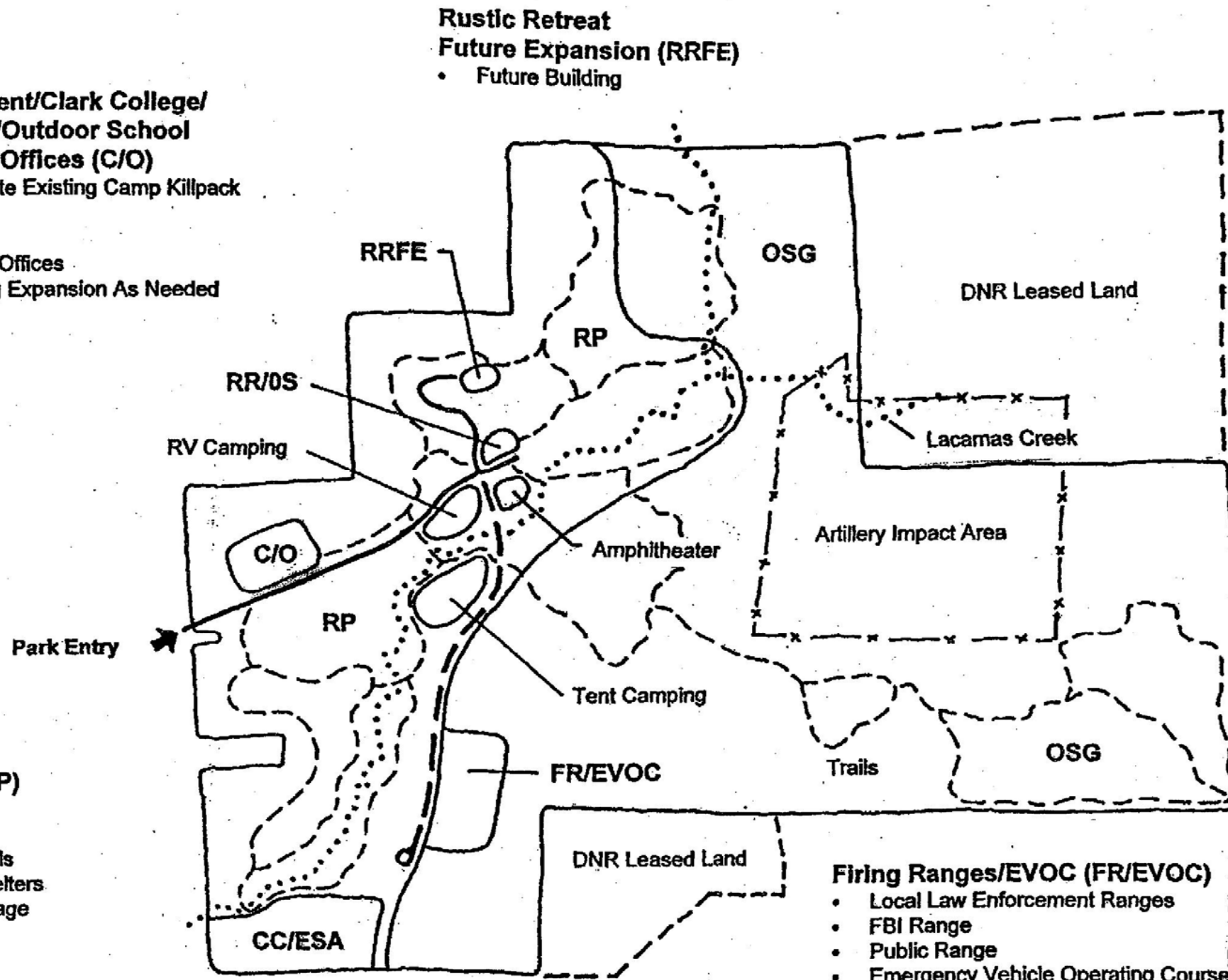
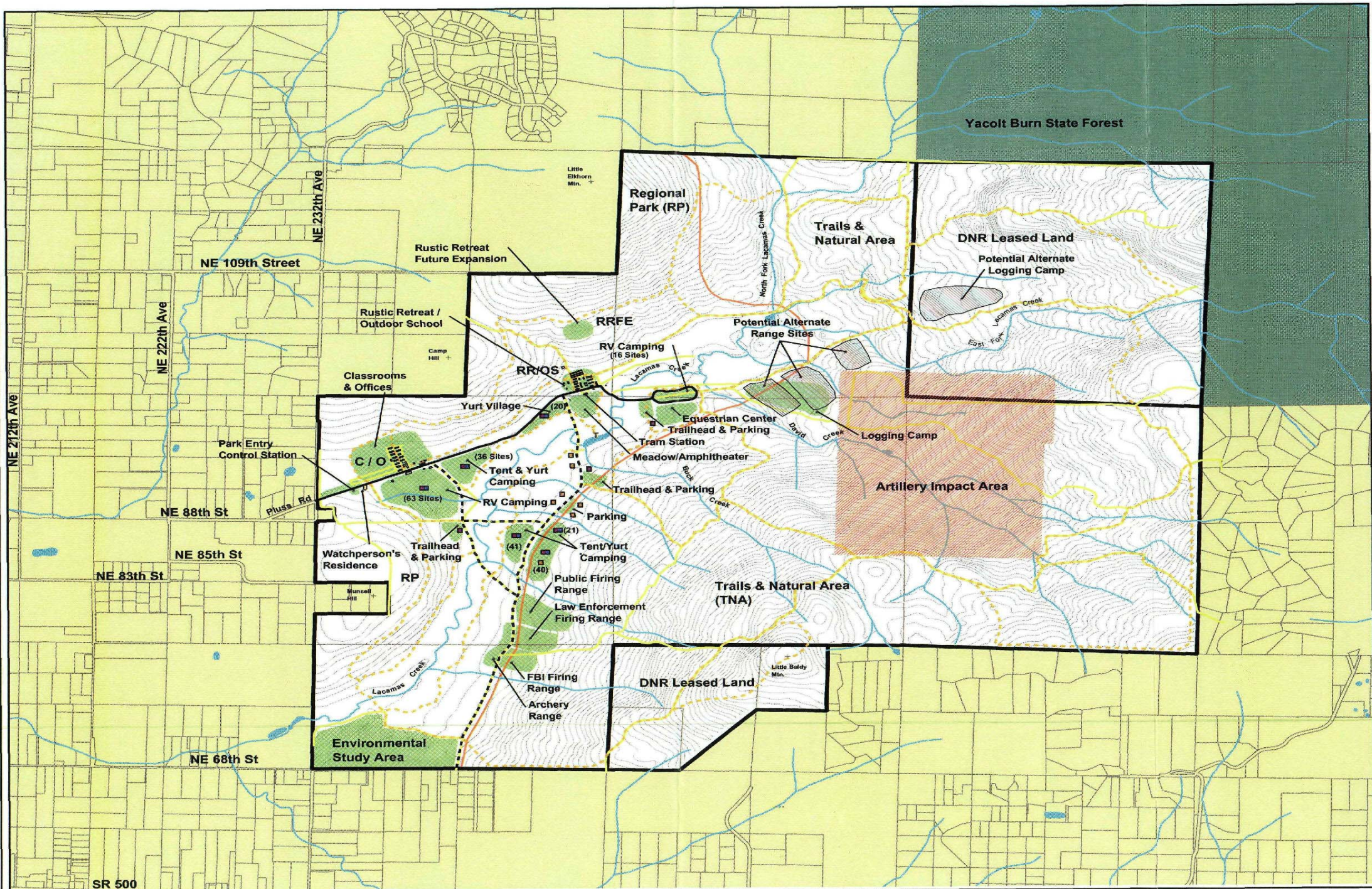


Figure 8

**Camp Bonneville  
Reuse Planning Committee's Preferred Plan**

May 1, 1998

- O:\Data\TWClients\Clark County\Van-Camp\GIS\Preliminary Site Plan 3-17-03 .JLR
- Law Enforcement / Clark College / Rustic Retreat / Outdoor School Classrooms and Offices (C / O)**
    - \* Reuse / Renovate Existing Camp Killpack Buildings for Outdoor School, Retreat Center &/or Law Enforcement Training Center
    - \* 3 to 6 Classrooms - New Building
    - \* Administrative Offices
    - \* Future Expansion As Needed
    - \* Law Enforcement Training Areas
  - Rustic Retreat / Outdoor School (RR / OS)**
    - \* Reuse / Renovate Existing Camp Bonneville Buildings
    - \* Classrooms
    - \* Lodging
    - \* Native American Cultural Center
    - \* New Multi-Purpose Building and Other Building Expansion As Needed
    - \* Park Administration Center
    - \* Park Maintenance Headquarters
  - Rustic Retreat Future Expansion (RRFE)**
    - \* Future Building
  - Regional Park (RP)**
    - \* Hiking Trails
    - \* Equestrian Trails
    - \* Mountain Bike Trails
    - \* Picnic Areas & Shelters
    - \* Amphitheater & Stage
    - \* Restrooms
    - \* Tent/Yurt Camping
    - \* RV Camping
    - \* Park Watchperson's Residence
    - \* Archery Range
    - \* Park Entry / Control Station (Fee Collection Booth, Information Board, Kiosk & Turn Around)
    - \* Park Transit Station & Route
    - \* General Store
    - \* Equestrian Center
    - \* Trailhead & Parking
  - Firing Ranges (FR)**
    - \* Local Law Enforcement Range
    - \* FBI Range
    - \* Public Range
    - \* Restrooms for Shooters
    - \* Mine Gravel for Range Site
  - Environmental Study Area (ESA)**
    - \* Outdoor Studies
    - \* CPU Well Field
    - \* Water Resource Center (Wastewater Treatment Facility)
  - Trail and Nature Areas (TNA)**
    - \* Hiking Trails
    - \* Equestrian Trails
    - \* Mountain Bike Trails
    - \* Wildlife Habitat Area





## Camp Bonneville Reuse Plan

Preliminary Site Plan

**LEGEND**

- Restrooms & Showers
- Restrooms
- Watchperson's Residence
- Water Access
- Site Facilities
- 20 Foot Contour Intervals
- Trails
- Existing Unpaved Roads
- Gravel Road
- Paved Road
- Artillery Impact Area
- Regional Park Boundary
- Site Boundary Line
- Existing Buildings
- Taxlots
- Private Property
- Yacolt Burn State Forest

0 285 570 1,140 1,710 2,280 Feet

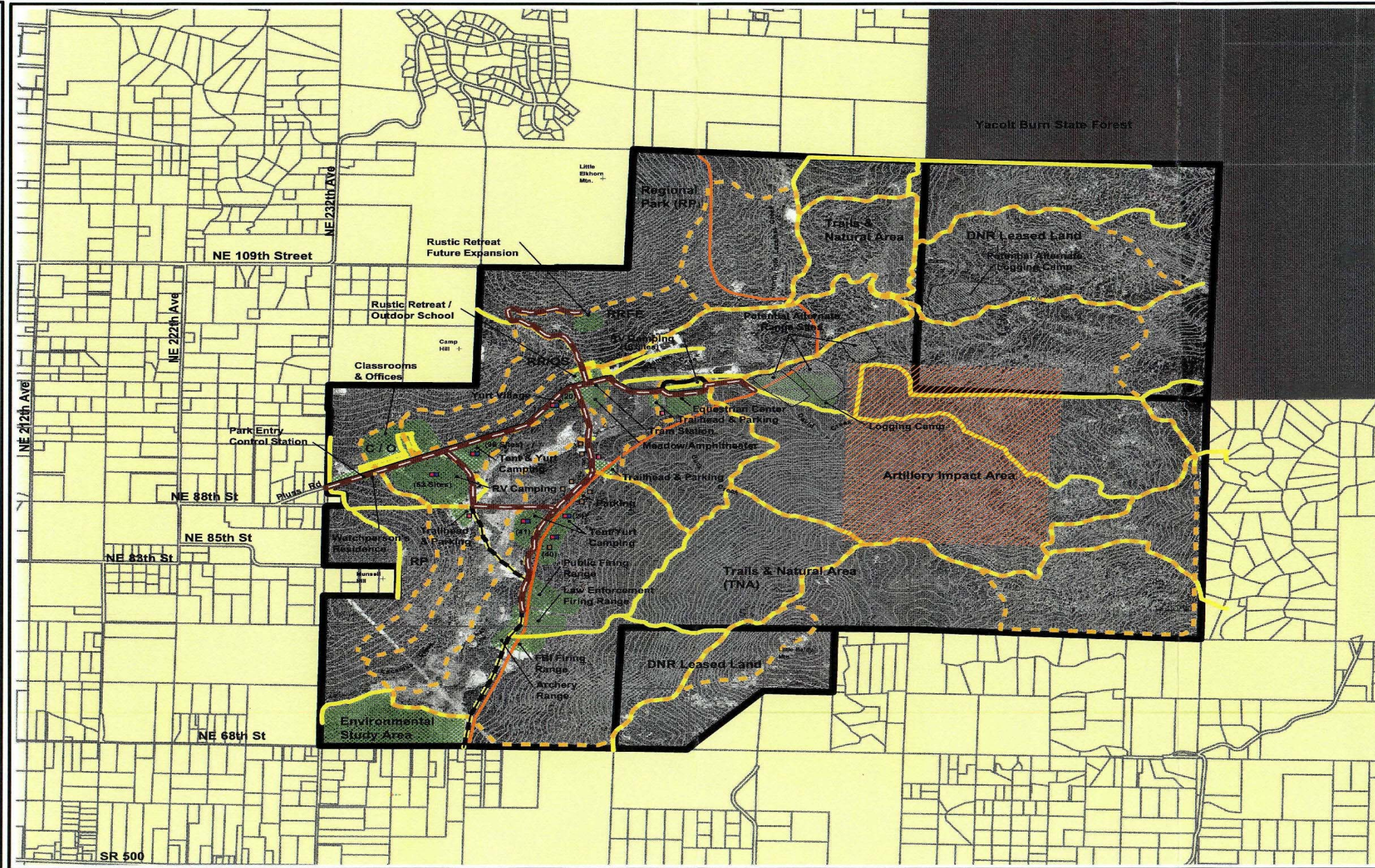
**LAND AREA SUMMARY:**

Camp Bonneville:	3,040 acres
DNR Land Area 'A':	620 acres
DNR Land Area 'B':	180 acres
<b>TOTAL AREA:</b>	<b>3,840 acres</b>

the jd white company, inc.  
  
 Plot Date: 3-17-03  
 Information Source: Clark County GIS Data Oct. 2002

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- Law Enforcement / Clark College / Rustic Retreat / Outdoor School Classrooms and Offices (C / O)**
- Reuse / Renovate Existing Camp Killpack Buildings for Outdoor School, Retreat Center &/or Law Enforcement Training Center
  - 3 to 6 Classrooms - New Building
  - Administrative Offices
  - Future Expansion As Needed
  - Law Enforcement Training Areas
- Rustic Retreat / Outdoor School (RR / OS)**
- Reuse / Renovate Existing Camp Bonneville Buildings
  - Classrooms
  - Lodging
  - Native American Cultural Center
  - New Multi-Purpose Building and Other Building Expansion As Needed
  - Park Administration Center
  - Park Maintenance Headquarters
- Rustic Retreat Future Expansion (RRFE)**
- Future Building
- Regional Park (RP)**
- Hiking Trails
  - Equestrian Trails
  - Mountain Bike Trails
  - Picnic Areas & Shelters
  - Amphitheater & Stage
  - Restrooms
  - Tent/Yurt Camping
  - RV Camping
  - Park Watchperson's Residence
  - Archery Range
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  - Park Transit Station & Route
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- Local Law Enforcement Range
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  - Public Range
  - Restrooms for Shooters
  - Mine Gravel for Range Site
- Environmental Study Area (ESA)**
- Outdoor Studies
  - CPU Well Field
  - Water Resource Center (Wastewater Treatment Facility)
- Trail and Nature Areas (TNA)**
- Hiking Trails
  - Equestrian Trails
  - Mountain Bike Trails
  - Wildlife Habitat Area



**FIGURE 10**

**Camp Bonneville Reuse Plan**

**Schematic Utilities Plan**

**LEGEND**

- Utility Corridor
- Restrooms & Showers
- Restrooms
- Watchperson's Residence
- Water Access
- Site Facilities
- 20 Foot Contour Intervals
- Trails
- Existing Unpaved Roads
- Gravel Road
- Paved Road
- Archery Range
- Artillery Impact Area
- Regional Park Boundary
- Site Boundary Line
- Existing Buildings
- Taxlots
- Private Property
- Yacolt Burn State Forest

**LAND AREA SUMMARY:**

Camp Bonneville:	3,040 acres
DNR Land Area 'A':	620 acres
DNR Land Area 'B':	180 acres
<b>TOTAL AREA:</b>	<b>3,840 acres</b>

Plot Date: 3-18-03  
Information Source: Clark County GIS Data Oct. 2002

## **Section 5.0**

### **ECONOMIC DEVELOPMENT OPPORTUNITIES ANALYSIS**

#### **5.1 Benefits to the Local Economy**

The Portland Metropolitan Statistical Area, including Clark, Clackamas, Multnomah and Washington Counties, has a population of 1,779,200 as of July 1, 1997, which is expected to grow to 2,364,000 within the next two decades. This makes the Portland Metropolitan Statistical Area one of the three fastest growing areas in the nation. Clark County is the fastest growing county in Washington and the Portland metropolitan area. The current population, 320,000, has doubled in the last 25 years. The City of Portland, with a growing population of 495,090, is within 15 miles of the base. Growth management plans for the area are focusing on a much higher density in urban areas.

Because of this increasing growth in population and density of development, there is a corresponding increasing need for parks, open space and recreational opportunities accessible to the urban areas. Camp Bonneville provides a unique opportunity to provide an area with dramatically increasing urban density with needed open space. With increased access to areas for physical exercise local residents and tourists will buy more goods and services such as hiking boots, bicycles, outdoor apparel, etc. Computer models have shown that increases in consumer expenditures on goods and services related to physical activity generated more jobs and higher overall labor income than an equivalent increase in expenditures on general goods and services (Conference Board of Canada, 1991). Also, studies have indicated that quality of life opportunities such as access to natural settings, recreational and cultural opportunities and open space, and rivers, greenways and trails are the main factor in business location (US National Park Service, 1990).

Since the 1970's, Clark County has been interested in the Camp Bonneville site as a future regional park. Growth projections indicate a need for the County to provide an additional 850 acres of regional park in the near future. But due to the many pressing needs and increasingly scarce availability of resources, it would have been difficult to acquire the funds to purchase and maintain park acreage. The closure and transfer of Camp Bonneville has provided a unique opportunity to provide this service to the community.

The population growth is also increasing the need for law enforcement services. The Washington State Criminal Justice Training Commission has requested that agencies coordinate and conduct more localized training due to cuts in the state's training budget. Training areas in Clark County are often substandard or non-existent. However purchase of property for increased law enforcement training competes with other pressing County needs. Through a transfer of property and by partnering with Clark College for use of classroom facilities proposed for construction at the site, a training center can be provided for local law enforcement training. Camp Whythicum, the primary firing range training area for the Portland Metropolitan area, has been recently closed due to its proximity to residences, which have grown around the range. Because of the shortage of open space easily accessible to the urban areas, law enforcement agencies are concerned about the feasibility of finding areas within reasonable proximity to

## *Camp Bonneville Reuse Plan*

develop firing ranges. Although the County Sheriff's Office currently has a firing range, it is located in an area that also is expected in the next ten years to become more highly developed, increasing the chances of future closure. Firing ranges are proposed at Camp Bonneville in areas that have been historically used for this purpose, and can be located at a distance that minimizes noise to neighbors and park users, with safety features such as baffling required to ensure compatibility.

### **5.2 Target Use Analysis**

The purpose of this section is to evaluate specific reuses, which possess revenue potential at Camp Bonneville. This analysis examines several reuses, which are most likely to provide significant community benefits and to generate revenues adequate to cover the costs of development and operation of the entire reuse development.

#### **5.2.1 Timber Management**

Planning principles for the Camp Bonneville reuse planning process delineate that "there will be no clear cuts except where required for site development and environmental management purposes." As Camp Bonneville timber has not been actively managed since 1981, timber throughout the property has become too dense for the health of the forest. Timber revenues will be used to leverage matching grants that together will provide the ongoing revenues needed for both capital and operational costs.

A Timber Inventory Estimate and Valuation Report, dated November 12, 1997, was prepared for Camp Bonneville (see Appendix B) as part of the data collection and economic analysis process. This report documents the conditions of existing timber stands and estimates the value and revenue potential of harvesting the marketable timber at Camp Bonneville through selective thinning.

This report estimates that timber thinning will yield only enough revenue to adequately support a basic level of park services in the foreseeable future.

A more detailed evaluation is planned to allow LRA prioritization of parcels for cleanup and transfer to ensure the financial viability of the reuse plan.

#### **5.2.2 Rustic Retreat Center/Outdoor School**

A rustic retreat center must be simple in nature and provide service primarily to the general public to meet park conveyance requirements.

##### Expected usage:

Based on an inventory of six conference/retreat centers in Washington and Oregon, a new conference/retreat center (with indoor plumbing in each building and a multi-purpose gathering space) at Camp Bonneville would be expected to attract from 83 to 102 person days per bed assuming a capacity of 80 beds. (A 'person day' is the conference industry's standard method of determining a center's usage and defined as three meals and one night accommodation for



## *Camp Bonneville Reuse Plan*

overnight guests or three meals for day users.) It is also expected that 50% to 70% of the center's total business would be overnight users.

An alternate for of conference/retreat center which utilizes the barracks at Camp Bonneville and Camp Killpack, i.e. bathroom facilities in a remote building and no flexible multi-purpose gathering center is thought to be viable by certain advocates. The existing retreat center/ outdoor schools most relevant to Camp Bonneville in terms of location and service to local school districts are Camp Wa-Ri-Ki and Camp Melacoma, located north of Washougal. These existing camps operate for approximately 8 to 10 months a year. They are nearly 100% utilized from April through August, but during the rest of the year are used mostly on weekends. Based on Camp Wa-Ri-Ki and Camp Melacoma, we expect 12,000 to 17,000 person visits annually to Camp Bonneville if similar facilities and amenities were provided.

Three outdoor schools in Washington and three in Oregon were surveyed and the amount of usage varied considerably. The superintendents from the Clark County school districts have expressed support for future use of Camp Bonneville barracks for outdoor school. It is anticipated that during outdoor school season (April, May, September, October), barracks that are brought up to safety code (buildings have lead based paint) would be utilized to capacity. Overnight use by children will need to be further evaluated to determine whether abatement will be required. The rate charged would be the rate comparable to that charged at the other outdoor school facilities, which are run by non-profit agencies and do not require the extensive capital improvements that are essential at Camp Bonneville. If local school districts use Camp Bonneville for outdoor school, their transportation costs would be reduced from current levels.

The estimated cost to improve Camp Bonneville to a minimal level required to meet code requirements for outdoor school usage is \$486,000 plus an allowance of \$190,000 for septic system upgrades). The estimated cost to do the same at Camp Killpack is approximately \$313,000 plus an allowance of \$190,000 for a septic system upgrades.

### Fee Revenue Potential:

The economic evaluation of the use of the barracks for outdoor school and rustic retreat center assumes that a concessionaire will be found to make extensive capital improvements and operate the retreat center facility.

Based on comparable facilities, day user fees for a conference/retreat center at Camp Bonneville are expected to range from \$29 to \$44 per person and overnight users fees from \$53 to \$74 per person.

An outdoor school at Camp Bonneville should be able to charge from \$6 to \$10 per person per day, similar to fees charged by Camp Wa-Ri-Ki and Camp Melacoma.

### Operating Costs/Net Operating Income:

Operating costs for a conference/retreat center at Camp Bonneville are expected to range from 85% to 95% of total revenue, based on a survey of 45 conference centers in 20 states. Operating

## *Camp Bonneville Reuse Plan*

costs do not include debt service for capital improvements. After operating expenses, a conference center at Camp Bonneville is expected to have a net operating income of 5% to 15% of total revenue.

According to the director of Camp Melacoma, operating costs usually exceed total revenues in outdoor schools. On this basis, it is expected that an outdoor school at Camp Bonneville would operate at a net deficit. The same net loss is expected for an outdoor school at Camp Killpack but to a smaller degree because it is in better physical condition than Camp Bonneville.

### Grants & Volunteer Assistance:

It may become necessary to explore grants, corporate sponsorships, and volunteer assistance, which may be necessary to reduce costs and attract interest by a concessionaire.

### **5.2.3 Law Enforcement Training Center (LETC)**

Expected usage: Classroom facilities shared with Clark College in a new facility to be built, firing ranges, and training areas. If Clark College is unable to attain funds for this construction, and/or if zoning changes are not approved to allow new facility construction, the Sheriff's Office may renovate up to six buildings in the Camp Killpack cantonment area. An equestrian riding ring would be provided in the general vicinity of Camp Killpack, which will be open to the general public when not required for law enforcement training. A physical fitness course and canine training area would also be provided in this area. The canine training area would also be used for training of search and rescue dogs. Firing ranges will include one handgun range, one rifle range, and an area provided for future construction of an indoor firing range (which may be shared with the public). Adjacent to the ranges will be a shooting house, a building which provides law enforcement officers with opportunities to practice making decisions whether or not to fire. Firing ranges will be constructed as needed. Some of the firing range areas identified on the reuse plan are ranges that will be constructed if and when the present off-site firing ranges are closed due to increased development in their areas, or if these firing ranges no longer meet the needs of law enforcement and the public. Some range facilities, however, such as the shooting house and law enforcement rifle range, may be constructed soon after property transfer.

Fee Revenue Potential: For purposes of this study, the LETC is assumed to be a concession which leases land and facilities from the LRA. As such, fee revenue for this use is assumed to go directly to the LETC concession entity. Estimates vary as to the amount of fee income which could be generated by this use. The financial modeling in this report takes the conservative position that the LRA receives no fee income.

Operating Costs/Net Operating Income: Financial modeling of this use assumes a nominal lease in the amount of \$25,000 per year from the LETC concession.

### **5.2.4 Public Firing Ranges**

Expected usage: Although the current shooting ranges in the area meet market demand for the area, it is expected that as the area continues to grow, there is a strong possibility that these

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ranges are at risk for closure in the future. To meet the future needs of the general public, an area has been identified at Camp Bonneville for public firing ranges.

Fee Revenue Potential: This use is assumed to be a concession to a non-profit entity who would be responsible for initial and operating costs and would collect all fees.

Operating Costs/Net Operating Income: A nominal lease amount of \$6,250 per year is assumed for this use.

### **5.2.5 Regional Park**

Expected usage: Due to the amount and cost of infrastructure that will be needed to develop a regional park, the financial analysis has focused on the costs for an initial “starter park.” As infrastructure is developed, certain areas of the park will be developed and made accessible to the public. As timber revenue is obtained and matching grants are received each year, additional development will take place until the area reaches the standards of the other regional parks in the County. Initially, it is expected that picnic areas and campsites will be provided in the Camp Bonneville cantonment area, with trails throughout areas that are identified as “clean” and as safety measures are in place to ensure that areas that are not clean will not be accessible to the public.

Fee Revenue Potential: It is anticipated the regional park will charge parking fees in line with other regional parks in the area.

Operating Costs/Net Operating Income: Current financial modeling indicates that annual operating and maintenance costs to be approximately \$367,000. Projected revenues from park user fees and timber management are anticipated to be cover park operations

### **5.2.6 Volunteer Labor**

Volunteer labor is most appropriate for non-construction activities because of liability concerns by most public agencies. Therefore, it is anticipated that volunteer efforts would be in the areas of fund raising and generating sponsors for capital improvements rather than in undertaking the improvements themselves.

### **5.2.7 Demolition**

Although it is anticipated that users/sponsors will be found for the Camp Killpack and Camp Bonneville cantonments it may, as a last resort, be necessary to demolish all or some of these facilities if meaningful reuses cannot be achieved. The cost to demolish the Camp Bonneville cantonment is estimated to be approximately \$181,000. The cost to demolish the Camp Killpack cantonment is estimated to be approximately \$189,000. The cost to relocate buildings at either camp is estimated to exceed the value of the buildings themselves.

## **5.3 Economic Development – Jobs Creation**

This reuse plan envisions many distinct but inter-related activities. As a direct result of these activities four categories of job creation will result:

I. Direct employment at the Camp Bonneville Regional Park site

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- II. Direct employment via the capital development of the site, predominately construction trades
- III. Immediate vicinity secondary development enabled through increase of parks land to developed property ratio
- IV. Indirect impact to community businesses resulting from visitors and tourists to the park.

Collectively, the anticipated job creation will be on the order of **28** Full time Equivalents (FTE's). Breakdown of that job creation is envisioned as follows:

### **I. Direct employment at the Camp Bonneville site**

	<u>FTE Creation</u>
1) Timber Management	
a) General Operations	3.0
2) Rustic Retreat Center/Outdoor School	2.0
3) Public Firing Ranges	
a) General Management	1.0
4) Regional Park	
a) Overall Site Management/ Security	
i) General Manager	1.0
ii) Watchpersons	3.0
iii) Utility Maintenance Manager	1.0
iv) Maintenance Workers	4.0
b) RV Campground	2.0
c) Tent Campground	2.0
d) Equestrian Center	4.0
e) Tram Operations	2.0
5) General Store/Cafeteria	
a) Misc. Operations	<u>3.0</u>
<b>Total</b>	<b>28.0</b>

### **II. Direct employment via the capital development of the site**

We have used a computer program (“MGM2 Operating Expense Impacts”, developed at Michigan State University) which models Park Revenue based on projected operations. Using the program for this proposed reuse of Camp Bonneville yields an overall snapshot of the impact of park development.

Full development of the site is planned to occur over an estimated 20 years, depending on financial resource availability. In general, annual Capital Development on the order of \$500,000 is practical. This annual construction expenditure will provide employment predominately in the high wage construction trades. Subtracting out the Park employment mentioned in item I above, the net result of “secondary” job creation is **24** FTE's

### **III. Immediate vicinity secondary development**

At present, Clark County Washington is partially constrained from development of the rural area due to an imbalance in the Parks land to Developed land ratio. Development of this site as the

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proposed Regional Park will have a significant impact on that ratio and subsequently allow further development of the rural Clark County area. While it is difficult to identify a number at this stage, Clark County is well known for its' quality of life, affordable housing and stable economy. Through development of the reuse activities at Camp Bonneville, the probability exists for generous job creation resulting from rural development in the surrounding area.

### **IV. Indirect impact to community businesses resulting from visitors and tourists.**

The planned reuse activities will have the potential as a regional magnet for tourism as well as visitors and students associated with the outdoor school and law enforcement training center. Detailed estimates of indirect economic impacts on the local community are beyond the scope of this report. However, based upon U.S. Department of Commerce, Bureau of Economic Analysis, regional economic multipliers for the Portland-Vancouver Metropolitan Region, indirect job creation for service sector employment is typically 1.4 to 1.7 times direct job creation. While difficult to quantify at this stage, it is reasonable to assume a positive community impact on the order of 57 to 65 direct and indirect jobs will be sustained as a result from this reuse plan.

## **Section 6.0**

### **IMPLEMENTATION**

#### **6.1 Preliminary Financial Analysis**

The consulting project team conducted a preliminary financial analysis of the preferred Camp Bonneville Reuse Plan. The financial analysis is based on market, financial and cost information that was compiled during the planning process, and is referenced in the plan Appendix document. A Camp Bonneville Reuse Plan Finance Subcommittee served as the technical advisor in formulating development program and cost assumptions.

The Reuse Plan for Camp Bonneville includes a balance of public recreational, educational and law enforcement activities. The key revenue generating element of the Reuse Plan is a program of moderate sustainable Timber Management. The revenue from Timber Management would fund up-front site infrastructure costs for roads and utilities, and could offset site carrying costs and future regional park operations.

The key development components of the site include:

- Regional Park;
- Rustic Retreat/Outdoor School;
- Clark Community College;
- Law Enforcement Training Center (with potential future seasonal public firing range).

Other future uses for the site may include expanded recreational trails and park facilities.

The preliminary financial analysis evaluated the capital and operating cost of the site reuse elements. Because construction of specific project elements (e.g., regional park, law enforcement training center, etc.) will depend on available funding agreements, a preliminary project sequencing strategy was defined. Each of six project sequences was evaluated for its independent ability to break-even. Once all site reuse components are built, Camp Bonneville must be able to break-even or produce a positive net cash flow to the County.

As indicted in **Table S-1 (Appendix F)**, based on the current revenue and cost assumptions, the combined site reuse components are anticipated to produce a modest positive net income stream at build-out prior to redemption of local bond issues.

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Managing county financial risk is critically important during the land conveyance negotiation process. It will be necessary to get assurance from the Army that timber parcels prioritized by the LRA as critical for the viability of the reuse plan will be transferred to the county with the cantonment areas. Potential funding shortfalls during any given year can be mitigated through proper planning of reuse elements and allocation of timber reserves to a special fund for Camp Bonneville management and improvements.

The Reuse Plan for Camp Bonneville not only minimizes county risk, but also is designed to appeal to a broad array of public interests, and a variety of recreational users. The plan, while designating areas for specific development concepts, provides flexibility in how the county can phase development in a manner that is consistent with available funding, and with final designs that are sensitive to environmental features and adjacent land uses.

Additional detailed information on the financial analysis for Camp Bonneville is included in the Appendix document.

### **6.2 Acquisition Alternatives for Camp Bonneville**

There are a number of ways for a community to acquire surplus base property. At Camp Bonneville, all transfer options will be through conveyances. Available methods considered for the Camp Bonneville property acquisition include the following:

#### **6.2.1 Parks Conveyance**

The Federal Lands-to-Parks Program assists public agencies to acquire surplus Federal land for public park and recreation use. The Federal Lands-to-Parks Program is authorized by the Federal Property and Administrative Services Act of 1949, as amended [40 U.S.C. 484, 203(k)(2)]. This land is transferred to a public agency at no cost with the condition that it be used for parks and recreation in perpetuity. The program has two goals:

1. Provide opportunities for the public to participate in a variety of recreation activities, such as hiking, biking, camping, picnicking, cross-country skiing, snowmobiling, horseback riding, swimming, boating, and playing organized sports
2. Protect and provide access to natural resource areas, including lakes, forests, rangeland, wetlands, open space, and beaches.

National Parks Service staff have visited Camp Bonneville and are aware of the various reuse at the site. Once Federal property has been conveyed, the National Parks Service is responsible for monitoring the use of the land to ensure it is managed according to the terms and conditions of the transfer. The monitoring component of the program ensures public access for recreational use and the continued protection of the natural and cultural resources located on the property. Because of serious concerns by the LRA and the National Parks Service, the FBI firing range area must be leased through the County rather than transferred to the FBI.

The LRA would also need to request sponsorship by the National Parks Service of public and law enforcement firing range areas. To promote park and trail usage, firing ranges will be open

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only six months each year during non-peak park usage months, with no usage on weekends year-round, resulting in firing ranges being open only 35% of the year. During times of firing range closure, a large area of trail and wetland education areas will be more inviting due to elimination of gunfire noise. Firing ranges will also only be constructed as they are needed by both law enforcement and the public. Some of the firing ranges are planned for Camp Bonneville because of expectations that the firing ranges currently operating off-site may be forced to close in the future due to continued development in the adjacent areas. Until (and if) those closures occur, some of the areas designated for firing range use will remain natural areas, with sponsorship by the National Parks Service necessary.

### **6.2.2 Educational Conveyance**

Public Benefit Transfers of surplus Federal real property are made pursuant to provisions of the Federal Property and Administrative Services Act of 1949 (P.L. 81-152), as amended, [40 U.S.C. 484(k)(1)]. The Act gives authority to the Secretary of Education to sell or lease such property at a price, which takes into account the public benefit, which will accrue, to the United States because of eligible educational use.

The sale price of a property is its fair market value at the time of transfer. The actual amount of cash payment required of a successful applicant is determined by applying a public benefit discount allowance against the sale price. Discounts for “on-site” educational transfers range from 40% to 100%, but typically made at a full 100 percent public benefit. The total public benefit allowance accorded a transfer will vary depending upon the educational use proposed and the degree of need.

All public benefit transfers for educational uses are subject to certain terms and conditions which remain in effect for a specified number of years. For on-site properties the usual Restriction Period is 30 years.

During the Restriction Period:

1. The property must be used continuously for the approved educational purpose(s), either as originally approved in the application to acquire the property, or as may be later approved in an amendment to the approved utilization plan.
2. The property cannot be sold, leased, rented, mortgaged, encumbered or disposed of, in any way, without the prior written consent of the Government. (The recipient can, however, “buy out” the remaining unused value of the conveyed property.)
3. The educational recipient (Transferee) must file a brief annual utilization report and certification of compliance with the Department of Education (usually 2 pages or less).
4. The Transferee must remain tax supported or nonprofit and tax exempt as was required at the time of transfer.
5. The Transferee must comply with the usual statutory requirements regarding



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nondiscrimination.

Although they have not visited Camp Bonneville, Department of Education staff have been regularly informed of the proposed reuse areas at Camp Bonneville that may be sponsored as an education public benefit conveyance. The Department of Education sponsorship may be requested for the Clark County law enforcement/Clark College environmental education classroom building.

### **6.2.3 Public Safety Conveyance**

The LRA will also explore the option of sponsorship of law enforcement training areas through a General Services Administration public safety public benefit conveyance approved by the Department of Justice. Rules regarding this transfer are now being drafted and will be reviewed by the LRA when they are made available. Property transfer authority for Justice Department transfer authority will terminate on December 31, 1999. Unless this authority is extended, the LRA will need to apply for sponsorship in the very near future if this sponsorship is needed.

### **6.2.4 Special Legislation**

Ideally Camp Bonneville would be conveyed as a single event.

There are three reuse options that may require special transfer consideration by the General Services Administration (GSA), with the alternative being special legislation a backup consideration should difficulties arise in their transfer.

The first is the law enforcement firing range area. The LRA will be requesting a sponsorship of these range areas through a PBC sponsored by the National Parks Service. The firing range usage has been limited to a maximum 35% of the year to open more areas for trail usage throughout the site and provide a quieter environment for park users. Firing ranges will also only be constructed as needed, remaining natural open space areas until (and if) firing ranges are constructed. An NPS sponsorship also provides the community with flexibility to close the ranges or further limit their usage days and hours due to any effects of noise on park usage and viability.

The second area of concern is the Camp Killpack barracks buildings. The plan for these buildings is for a rustic retreat center and outdoor school usage, with sponsorship by the NPS. If, however, the proposed new building for Clark College and law enforcement training fails to be rezoned for this usage, law enforcement has requested that up to six of the Camp Killpack barracks buildings be used for law enforcement training. This would require a change in sponsorship to an education or law enforcement sponsorship, which is not currently the usual practice in federal land conveyance.

A third area of concern is the zoning restrictions for the proposed Clark County law enforcement/Clark College classroom facility. While a zoning change may allow construction of the building, there is a risk that the zoning restricting parcel size to 40 acre minimums may not change. The 40 acres surrounding the classroom building are critical park usage areas.

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### **6.2.5 Conservation Conveyance**

Under 10 U.S.C. 2694a, the Secretary of the Army is authorized to transfer BRAC bases at no cost, provided that the property is used for natural resource conservation. As discussed in section 5, this reuse plan will contribute significantly to the open space conservation for the surrounding area of Camp Bonneville. A Conservation Conveyance would transfer the site under a single conveyance and does not require third party sponsorship.

### **6.2.6 Acquisition Strategy Summary**

As of November 2005, the LRA's preferred conveyance mechanism is the Conservation Conveyance. This type of conveyance is commensurate with the proposed reuse activities and resultant open space designation. The open space creation is consistent with the Rural setting of Camp Bonneville.

It is recommended that the entire property be transferred to Clark County to ensure a holistic management of the site. The LRA will seek a Conservation Conveyance for the acreage at Camp Bonneville. Acreage allows for extensive parks and open space, including an outdoor area used for law enforcement training (shared with the public) and an area to be possibly leased on a long term basis to the FBI for its firing range. This transfer will be in perpetuity. Leased areas can be approved for individual users, such as the FBI, but subject to the agreed upon terms and conditions between the County and its tenants.

The LRA will provide the Army with an update to the reuse plan which will refine the location of the reuse activities that are critical to ensure the viability of the reuse plan. Although there are some areas where reuses must be located for various reasons (such as firing ranges because of location for noise and safety), the LRA is willing to work with the Army to find comparable reuse locations for reuses that are found to be located in areas heavily contaminated with UXO, or in areas that are found to be wetlands, significant riparian areas, have cultural significance, or have endangered/threatened species. The LRA also will strive to identify timber parcels that are in need of thinning and whose revenues are essential for funding necessary infrastructure, operations, and for matching grants.

The LRA will also continue to evaluate liability issues to ensure that the County is indemnified for damages that are incurred in areas that have been transferred, have been identified as clean, and where the County/LRA has not violated any institutional controls agreed upon prior to transfer. (Example: If deed restrictions allow usage, but restrict digging to a three foot level, and an injury occurs from a surface UXO missed in the cleanup process, the County would need assurance of indemnification.) Before agreeing to accept transfer of property, the County will evaluate factors such as the risks associated with acceptance of the various parcels, the timeline for cleanup and transfer, the restrictions/institutional controls placed on property usage, and the Army's security measures for property awaiting cleanup. It is expected that the Army will at a minimum conduct a surface sweep and cleanup of all properties transferred, unless an Early Transfer is conducted\*. The County is not interested in accepting transfer of property known to be contaminated with UXO, and expects the Army to provide adequate security to prevent public access to these sites\*.

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*\* The early transfer process delineates the identification of contaminated property in the transfer documents*

### **6.3 Permanent Implementation/Management Organization**

At the conclusion of the base reuse planning phase, the local redevelopment authorities (such as the Camp Bonneville Local Redevelopment Authority) created for planning the base reuse inevitably transition into permanent property management and development “implementation LRA.” This organizational transition from a planning LRA to an implementation LRA is a normal step in the military base reuse process.

In the case of the Camp Bonneville property, the Board of Clark County Commissioners should become the implementation local redevelopment authority and should take permanent title to the base property. The Vancouver-Clark Parks & Recreation Advisory Committee will provide oversight to the site management of all planned reuses. A public advisory body, meeting quarterly, should be created among the several Camp Bonneville users and neighbors as well as the adjoining educational entities, to provide the Vancouver-Clark Parks & Recreation Advisory Committee input on the long-term management of the site.

## **Section 7.0**

### **OTHER ISSUES**

#### **7.1 Future Modifications of the Reuse Plan**

There are a number of factors, which could impact this Reuse Plan and create the need to modify this plan at a future time:

##### **7.1.1 UXO**

It was initially expected that UXO sampling information would be available to the LRA prior to reuse plan preparation. Completion of the UXO sampling report has been delayed until late August, 1998. The EE/CA report, due in January 1999, will also be an essential planning tool. Based on the archive search, the LRA has made assumptions on locations of reuse activities. The archive search addendum has also not yet been completed; the initial search was incomplete because it did not include interviews with neighbors and others familiar with the history of Camp Bonneville. The LRA has significantly limited development (which lowers cleanup costs) and will work with the Army to, wherever possible, relocate developments which have been planned in any areas that are found to be more contaminated than originally anticipated. UXO information will also be essential in determining which parcels will be accepted by the County for transfer.

##### **7.1.2 Endangered and Threatened Species**

Access to the site by U.S. Fish and Wildlife, State Fish and Wildlife, and the Clark County biologist has been limited by the incomplete UXO sampling process. When these agencies gain access to the site and present their findings with regard to endangered and/or threatened species, the Reuse Plan may need to respond.

##### **7.1.3 New Salmon and Trout Regulations**

It is possible that new federal regulations regarding protection of sensitive lands associated with salmon and trout habitat will impact the Camp Bonneville site. If and when this occurs, the Reuse Plan may need to be modified to respect these constraints.

##### **7.1.4 Wetlands and Riparian Areas**

When access is allowed to the site, delineation of wetland and riparian areas may require changes to the location of some uses in the Reuse Plan. This plan is currently based on locally available maps indicating, without detailed specificity, the location of wetland zones.

##### **7.1.5 Archaeological Findings**

Approximately 700 acres at Camp Bonneville have been identified in a March 1998 site map (**Figure 10**) for cultural/archaeological evaluation. These studies are tentatively planned for 2000-2001 (a timeline the Army has expressed support in accelerating), assuming these areas will be identified as "clean" for UXO. These areas coincidentally are areas identified as areas of relatively high public use and access. If these studies uncover significant archeological findings, it is likely that the Reuse Plan may need to be modified.

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### **7.1.6 *Transfer Restrictions***

It is possible that deed restrictions or other institutional controls may be attached to the transfer of property to the LRA. In that event, the LRA will need to evaluate the institutional controls to ensure that the proposed reuses and transfer of the property remain viable.

### **7.1.7 *Zoning***

At least two components of the Reuse Plan are expected to require a zone change prior to development: the Clark College facility and RV camping. If the rezoning process involves additional constraints, the plan may need to be updated in response. If rezoning is not approved, areas identified for a Clark College facility, as well as some of the Camp Killpack barracks buildings, may require a change in federal agency sponsorship.

### **7.1.8 *Timber Harvesting Restrictions***

Any restrictions disallowing timber harvesting will prompt reconsideration of the reuse plan. Revenue from timber thinning is critical to the success of the reuse plan. The cleanup time line and subsequent transfer of properties will also affect timber revenue (and infrastructure financing). An EECA is at this time is scheduled to be completed by January 1999.

### **7.1.9 *Sewage System***

Following review of the draft operations manual, site survey and remediation study (to be completed later this year), and discussions with DOE, the Reuse Plan may need to be modified.

### **7.1.10 *Lead Contamination***

Tests were requested two years ago on lead levels in water entering and leaving Camp Bonneville. Those results are expected the fall of '98. If lead levels are at an unacceptable level, the LRA will need to reconsider liability and environmental factors which could result in elimination of firing ranges in its reuse plan.

### **7.1.11 *Liability Issues***

At this time it is unclear whether the County will be liable (when abiding by the deed restrictions) for damages from UXO on the transferred property. The LRA hopes that UXO will be identified in CERCLA 330 (h)(c) as being covered in providing the County indemnification upon transfer. Availability and cost for insurance for UXO risk will be assessed after the UXO report is issued to determine the County's risk in accepting transferred property.

### **7.1.12 *Other Environmental Contamination***

The Army Corps of Engineers is continuing its evaluation of various areas at Camp Bonneville such as landfills, burn areas, maintenance sheds, etc. While no unremediable, serious contamination has yet been identified, there remains the possibility that contamination may be found which could warrant changes in locations of proposed reuses.

## **7.2 *Safety***

Due to concern for public safety, Senator Patty Murray sponsored legislation which required the Army to provide the community with information by November 1997 on the extent and risks of

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UXO at the site. Much of the border of Camp Bonneville is unfenced. Because of permission granted to the public for use of the site for hunting, outdoor school trails, picnics, and equestrian usage, many in the community are skeptical of UXO risk. Trespassers are frequent at the site. Since UXO sampling has begun, security at the site has been increased, however this security is tied directly with cleanup efforts and may not extend into the future. Based on the UXO found on the surface of the sample grids, the local community remains concerned and believes that the Army should continue to provide adequate security for all military-owned properties at Camp Bonneville.

### **7.3 Fire**

Fire inspection of all structures by the Army needs to be conducted on a regular basis. Roads have been deteriorating due to reduction of maintenance funding for vegetation spraying, increasing erosion and reducing accessibility throughout the site in the event of a fire. Since the Camp Bonneville area is part of the Yacolt Burn area (and two additional major burns), and due to the recent extensive residential development in the Camp Bonneville vicinity, access roads for fire suppression are critical for health and human safety.

### **7.4 Site Maintenance**

Buildings are deteriorating, and roads/trails are becoming overgrown or eroded due to reductions in Army maintenance levels.