

Summary of Phase 1 Report

Regional Solid Waste System Study

October 15, 2021



**DRAFT
FINAL**

Prepared for

Environmental Health Department



In Association with:

AKS Engineering & Forestry Inc. | Bell & Associates | Swordfish Consulting Services

Clark County

Department of Solid Waste

Regional Solid Waste System Study

Prepared by:

JRMA Architects Engineers

In Association with:

AKS Engineering & Forestry Inc.

Bell & Associates

Swordfish Consulting Services

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Summary Report

Phase 1 - Regional Solid Waste System Study

Chapter 1 – Introduction

The JRMA Consultant Team completed the first phase of the Regional Solid Waste System Study (RSWSS) for Clark County (County). This document provides a summary of the findings and recommendations to be discussed with stakeholders to provide a direction for moving forward with Phase 2. It also outlines the critical decisions that are needed for making the necessary investments in the solid waste system to efficiently manage waste and recyclables for the next 20 years.

Background

The current solid waste system evolved from a set of events in the early 1990s that resulted in the closing of local landfills and reliance on large regional landfills in eastern Oregon and Washington to dispose of waste. This led the County to contract with Columbia Resources Company, a wholly-owned subsidiary of Waste Connections of Washington (WCW), to build two transfer stations, West Vancouver Material Recovery Facility and Transfer Station (West Van) and Central Transfer and Recycling Center (CTR), to receive waste and re-load into larger trailers/containers for transportation to Finley Buttes Landfill located in Boardman, Oregon. Most of the County's waste is transported by barge, which is a separate contract, with Tidewater Barge Company. A third transfer station was constructed in 2009 in Washougal to manage waste in the eastern part of the County. Waste from the Washougal Transfer Station (WTS) is transported via semi-tractor-trailer to the Wasco County Landfill near The Dalles, Oregon. Waste Connections owns both Finley Buttes and Wasco County landfills. Over the past 30 years, no significant improvements or expansions have been completed on the transfer system.

The agreement with WCW has been in place since 1991 and is a contractual relationship with the County and cities for operating transfer stations, material recovery facility (MRF) at West Van, and transporting and disposing of waste. The contract timeframe has been extended until December 31, 2021. It provides for another five-year extension until December 31, 2026.

A crucial provision in the contract allows the County to take ownership of the transfer station system by January 1, 2026, provided WCW is notified by December 31, 2025. The intent for providing this option was the fact that the existing transfer station has been paid for by ratepayers; therefore, these facilities should become public property. This contract provision assumes the County intends to exercise this option. The regional study considers options available for the County to exercise the ownership provision.

The purpose of the RSWSS is as follows:

1. Provide a comprehensive financial review of the cost of services and operation of the facilities.
2. Complete a comprehensive assessment of the physical condition of the existing facilities to identify repairs, equipment, and infrastructure replacement, and estimate the respective costs.
3. Assess operational conditions of each facility and necessary capital investments needed to enhance existing operations and meet the demands of future waste volumes.
4. Consider changes to waste and recycling collection services that could reduce self-haul traffic at the transfer stations.

5. Prepare a 20-year Capital Improvement Plan (CIP).
6. Engage the regional partners and stakeholders to review the study findings and develop a strategy for the system's future development.

A summary of key issues and findings by Chapter from the RSWSS, as well as recommendations, if applicable, follow below.

Chapter 2 – Waste Generation Projections

Key Issues

1. With the expected growth in the County, how much waste will be generated over the next 15 years?
2. Where will the waste be generated, and what are the impacts on the transfer station system?
3. How does this increase in waste volume impact each transfer station?
4. As the County evaluates ownership options, what is the existing condition of the transfer station structures and site features?
5. What is the cost of making improvements to address minor repairs or deficiencies at each station?

Findings

The project team completed estimates of the amount of waste to be managed by the solid waste system using population projections provided by the Office of Financial Management (OFM).

1. Clark County's population is expected to grow from 490,000 to 643,000 people by 2040.
2. Waste generation is estimated to increase from 390,000 tons per year (TPY) to almost 520,000 TPY by 2040, an increase of 130,000 TPY, or 33% in the next 20 years.
3. Based on assumptions presented in the County's Growth Management Plan, a range of 58% to 70% of this growth will occur in the CTR service area. The Cities of Battleground, Ridgefield, and La Center are expected to more than double in population by 2040.

The population growth is estimated to generate 130,000 tons of additional waste per year that must be managed by the transfer station system.

Chapter 3 – Operational Efficiencies and Impacts from Traffic and Public Self-Haul

Self-haul traffic at the transfer stations has increased, particularly at CTR. Continuing to provide a safe level of service at the transfer stations will require additional improvements and expansion at all facilities. Almost 30% of the self-haul customers have less than 200 pounds (lbs.) per load; these are very small loads that accentuate the traffic challenges at CTR.

Several cities have instituted universal collection services for all households and businesses. However, in the unincorporated areas of the County and within the City of Battleground, subscribing to regular collection services is optional. The cost to handle the traffic and loads at the transfer stations exceeds the cost for households to subscribe to regular collection services. Chapter 3 presents options that may be adopted to possibly incentivize customers to consider subscribing to collection services, which could effectively reduce the number of self-haul trips to CTR.

Key Issues

1. Would self-haul traffic at the transfer stations decline if universal waste and recycling collection services were required throughout the County?
2. Based on the current rate structure, are self-haul customer rates covering the cost for service at the transfer stations?
3. Could changes in the collection services, such as the expansion of bulky waste collection, reduce traffic at the transfer stations?
4. Are there changes to the rate policies that would incentivize individuals to subscribe to collection services, and therefore, reduce traffic?

Findings

1. Specific data that suggests a correlation between enacting universal services and the reduction of traffic at the transfer stations are not available.
2. Adopting universal service and expanding the collection services for bulky items is a common practice that may reduce self-haul traffic at transfer stations.
3. Self-haul customers with loads less than 400 lbs. are not charged rates that cover the cost of services provided at transfer stations. To offset this cost customers with small loads at the transfer stations are being subsidized by the large volume collection route trucks. In other words, customers that subscribe to waste collection services are subsidizing the low-volume self-haulers that use the transfer station system.
4. A survey of transfer stations throughout the Pacific Northwest demonstrated it is common that a minimum rate is charged for the self-haul customers at these facilities. In most cases, the minimum fee is assessed to a minimum load weight between 300 to 460 lbs. The minimum fee charged for these loads ranges from \$18 to \$30 per vehicle (2020 Data).
5. Establishing a minimum fee of \$25 would be equivalent to the current charge for 400 lbs. at the County transfer stations.
6. The County should consider opening both West Van and Washougal transfer stations on Sundays to self-haul customers. The additional hours of operation may reduce traffic at CTR.

Chapter Recommendations

1. The Solid Waste Management Plan Update process should further evaluate expanding universal services and programs for the collection of bulky waste items for residences.
2. Adopt a minimum fee at transfer stations that covers the actual cost of services.
3. Expand the operating hours at both West Van and Washougal.

Chapter 4 – Regional Transfer Stations Operations and Conditions Assessment

The County is proceeding with negotiations with CRC to continue operations of the transfer station system. Phase 1 of the regional study focused on reviewing the current conditions of the three stations to determine what improvements are needed to maintain safe and efficient services to residences and businesses.

Key Issues

1. What is the physical condition of each station, and what repairs and/or replacements are required to maintain operations?
2. What improvements are needed to enhance operations and meet the future waste volumes of the areas served by each transfer station with the expected growth within the County?
3. What are the entrance improvements needed at CTR to mitigate off-site queueing onto Highway (Hwy.) 503, and how soon can they be completed?

Findings

The engineering team conducted a condition assessment of each transfer station to inspect physical assets and review operations.

CTR Findings

1. Working with the County and Washington State Department of Transportation (WSDOT), CRC has proceeded with construction to modify the entrance off Hwy. 503 to provide two inbound lanes for vehicles to access the station. The new entrance would allow those vehicles traveling from the south to make a left turn into a dedicated lane. These vehicles would not need to compete with traffic making a right turn from the north. Construction is expected to be completed by the end of 2021.
2. The transfer station building has been maintained and is in good condition. Some minor repairs are recommended.
3. The current CTR facilities began receiving waste in 1992 when the entire County generated less than 200,000 TPY. In 2020 the entire transfer station system handled over 370,000 tons with CTR receiving 230,000 tons. There have been no major improvements or expansions to the facility since it was constructed.
4. Over the next 15 years, the north portion of the County is expected to grow and generate between 64,000 and 75,000 more tons of waste per year. CTR could receive an additional 300 tons per day (TPD) plus more traffic.
5. CTR receives over 60% of all waste generated in the County. At peak periods, CTR receives about 1,000 TPD and can have between 900 and 1,000 vehicles on a weekend day. As a result, there are several deficiencies and significant improvements are needed to handle the current waste quantities and customer traffic.
 - a. Even with the new entrance improvements, there is insufficient queue space to handle the current traffic. An additional inbound scale is needed onsite to provide onsite queueing for self-haul customers.
 - b. The existing transfer station building does not provide sufficient space for vehicles to unload and for managing waste quantities received.
 - c. With only one compactor, the loadout capacity is only 900 tons over 12 hours. Also, if the compactor is out of service for repairs, there is no backup. This can result in reduced payloads in transfer trailers and increased costs.
 - d. The current site circulation should be revised for safety purposes by mitigating the mixing of commercial trucks and transfer trucks with self-haul traffic.

- e. If the facility is upgraded, then such improvements should include mitigation measures to reduce potential impacts on the neighboring residential developments.
6. There are three options for addressing current conditions and for serving the north/central part of the County.
 - a. Make major improvements to CTR to address current and future needs.
 - b. Make minor improvements to CTR and build a new satellite transfer station to serve the growing population in the Ridgefield, Battleground, and La Center area.
 - c. Build a new transfer station to serve this area at a new location.

These options are discussed in Chapter 5 – North Area Serve Options.

West Van Findings

1. The transfer station is in fair condition with damage to some building columns. Repairs should be made in the future.
2. All other support structures are in good or satisfactory condition.
3. Bay 1 is dedicated to receiving and transloading organic materials with food waste. It is expected that programs for collecting food waste will be expanded, and Bay 1 will not have sufficient space to manage this material.
4. The MRF process line will need additional equipment to improve throughput and enhance the quality of recovered materials to meet market conditions. These improvements can be made; however, a new process line will need to be installed either at West Van or possibly at a new location. The MRF Feasibility Report is provided in Chapter 7 of this Phase 1 Report.

Washougal Transfer Station Findings

The condition of the transfer station is good; however, there are some improvements to the loadout area that should be made to protect the building panels and to enhance loadout operations. A concept plan for improvements and expansions was prepared. These improvements are as follows:

1. A short-term improvement to expand the access lane to the household hazardous waste (HHW) facility is needed. This is a minor investment to improve traffic flow and safety and could be completed in the near future.
2. A steel backsplash and chute along the east side of the building in the loadout tunnel should be added. This backsplash will protect the siding from damage caused by loading trailers. It should also reduce the possible spillage of waste from the top-load operation. Also, adding a short push wall on the tip floor side to increase surge capacity should be considered.
3. To increase capacity and provide long-term services the station should be expanded in the next five years. This would include expanding the transfer station building and paving to accommodate additional traffic. The new building can include a lean-to on the north side to provide storage of special waste.
4. In the Long-term, the entrance road can be widened to increase the capacity of the scale complex and reduce the potential of traffic backing onto Grant Street.

Chapter 5 – North Area Service Options

Three options were evaluated to address the current traffic deficiencies of the existing CTR facility as well as to manage the increased waste volume from the expected population growth.

Option 1 – Upgrade and expand CTR to accommodate volume capacity to 2040. The estimated cost is \$14M to \$17M.

Option 2 – Minimal improvements to CTR and construct a new satellite transfer station to serve the northern part of Clark County. The estimated cost is \$14M to \$16M.

Option 3 – Replace CTR with a new transfer station at a different location for an estimated cost of \$25M to \$30M.

Findings

1. Construction costs needed to build the infrastructure for serving the north region of the County is estimated to range from \$14M to \$17M for Options 1 and 2 to as much as \$30M for Option 3, assuming a new transfer station is sited.
2. Making major improvements at CTR (Option 1) is estimated to be the lowest overall operating cost for managing the waste generated over the next 15 years. The cost to make these improvements is estimated to be about \$17M. This does account for the cost of purchasing the adjacent parcel needed for this expansion. The adjacent parcel located on the west side is owned by WCW. The parcel is part of a former closed landfill, and this option assumes the underlying soil conditions are suitable for building structures. Further analysis is needed to verify these conditions. Also, the adjacent properties on the north and west sides of CTR include new residential developments. It is assumed land use permits will need to be obtained for this expansion. The major improvements prepared as part of this study have demonstrated that CTR can be constructed in phases to keep the facility operating during the construction period.
3. Both Option 2 and 3 are reasonable solutions for meeting the long-term service needs but both will require siting a new facility. County zoning does allow transfer stations to be approved on most zones through a conditional use process.
4. In addition to cost, other considerations may impact the decision for serving this area, including the expansion of residential development adjacent to CTR, ingress and egress limitations for customers off Hwy. 503, and potential issues related to underlying soil conditions on the adjacent west property that could impact the expansion of CTR.

Chapter 6 – Capital Needs Assessment and Financial Analysis

The conditions assessment presented in Chapter 4 and the North Area Service Options in Chapter 5 resulted in defining the needs for making capital improvements to the three transfer stations. Conceptual plans were prepared for both CTR and Washougal. For West Van, the improvements for new equipment for the MRF are listed, but no concept plans were developed. Instead, it is recommended that a master site plan be prepared for the complex once a decision for a new MRF processing system is made.

Findings - Capital Improvements Needs

1. The County will need to decide on the long-term solution for serving the north-central part of the County

either by planning further expansion of CTR or by siting a new transfer station.

2. Over the next 10 years, the County and its partners will need to invest an estimated \$25M to \$50M to upgrade and expand the existing transfer stations and MRF. The broad cost range reflects the fact the County could decide to replace CTR and build a new transfer station.
3. Phase 1 of the CTR improvements includes extending the inbound traffic lane and adding a new scale on the west side property. The improvements will eliminate inbound customer traffic from queuing onto Hwy. 503. This could also include building an access ramp to the south end of the existing transfer station. This improvement is estimated to cost about \$3M assuming the underlying soil conditions of the adjacent west property are acceptable.
4. Improvements to upgrade and expand the Washougal Transfer Station at an estimated cost of between \$1M and \$2M will need to be made over the next five years.
5. CRC has made some initial improvements to the West Van MRF processing system that will enhance system performance. In the long term, a new processing system will be needed.

Findings - Financial Analysis to Address Capital Improvements Needs

The JRMA project team completed a review of the total cost of operating the regional system. Working in cooperation with WCW, the financial analysis examined the current cost of operating the system for 2019. The purpose was to determine the actual cost of just operating the transfer station and recycling facilities. The financial review was conducted within the guidelines provided for in the contract between the County and WCW. The analysis provides information that will enable the County to evaluate impacts on rates for making capital improvements.

1. The total cost of operating the three transfer stations is reported to be \$8.9M in 2019. This includes full services from operating the gatehouses, managing traffic and waste volumes, and loading into transfer trailers. It also includes CRC's internal transport operations to shuttle boxes and stage rolling stock and maintaining the physical infrastructure at each facility. It does not include long haul transportation to either the Wasco Landfill in The Dalles, Oregon by truck or Finley Butte Regional Landfill in Boardman, Oregon by barge.
2. Based on the financial information provided it appears that the transfer stations have been fully depreciated. However, there may be some equipment still being paid for by CRC.
3. The current rates generate revenue well above the current cost to operate the transfer station system and for transport and disposal of waste. Assuming facilities have been fully depreciated and paying the vendor an operating margin of 15%, the current rates generate about \$5M in surplus revenue that could be allocated to make capital improvements at facilities. Over a ten-year period, this would generate approximately \$50M.
4. Establishing a dedicated capital improvement fund with funds generated from current revenue would negate the need to borrow monies for the needed capital improvements.

Chapter 7 – MRF Feasibility Report

The County and each of the cities offer a range of recycling services to residences and businesses. The primary service is the collection of commingled recyclable materials from single-family and multi-family residences. The materials collected are taken to the West Van MRF to be processed for delivery to markets. The current equipment used to process recycled materials has been in operation since 2008.

Recognizing the importance of maintaining and potentially expanding recycling programs the project team completed a thorough review of the MRF operating system. This assessment evaluated both the physical condition and the operating performance of the equipment line. As part of this assessment, the team considered the impacts on markets for recycled materials resulting from China's decision to restrict imports of materials (aka. The China Sword).

Findings of MRF Feasibility Study

1. The current equipment line has been well maintained and relies largely on the use of outdated technologies. This, combined with demand by markets for higher quality materials, results in operating the system on average at 15 tons per hour (TPH) well below the design rate of 20-25 TPH.
2. Currently, the County generates about 60,000 TPY of recycled materials. The current diversion rate is about 67% with 33% of the materials received being transported to landfills. The rate of discards or contaminants is a result of two factors. One, the amount of non-recyclable material being collected from generators of recycled material must be reduced. Two, the MRF processing line will need to be upgraded to improve performance to produce higher quality materials at a reduced cost.
3. The assessment identified a list of potential equipment to be installed to improve performance and reduce cost. CRC has since installed several robotic units and added optical sorters that have contributed to reducing operating costs.
4. The County should begin planning to have a new equipment line installed. The retrofits to the existing process line will provide short-term benefits for processing current materials but will need to be replaced with a new system employing more advanced technologies to be more cost-effective and recover more materials.
5. The feasibility study considered several options for replacing the current process line. They included the following:
 - a. Install a new equipment line at West Van
 - b. Site and build a new MRF facility to be centrally located in relation to where recyclables are generated and collected.
 - c. Converting CTR to a MRF facility and siting a new transfer station to serve the north/central County area.
6. Installing an advanced processing system is estimated to cost between \$15M and \$18M and would result in reducing the unit operating cost from an average of \$127 per ton to an estimate of \$100 per ton assuming the current materials (i.e., 60,000 TPY).
7. A new MRF equipment line at a more central location would be the most cost-effective option, assuming the County and its operator could increase the number of materials being processed. The feasibility analysis considered the cost if the number of materials processed was to be increased to 100,000 TPY. This would mean importing materials from other jurisdictions or processing other materials such as high-grade commercial loads.

Chapter 8 – Summary: Key Findings and Recommended Actions

Completion of the Phase 1 of the RSWSS provides a list of key findings for the County and cities to review and decide what facility improvements are needed to manage the region's solid waste system and recyclables for

the next 20 years. Although the three transfer stations have been well maintained there have been no significant investments at either CTR or West Van in over 25 years. The Washougal Transfer Station was constructed in 2009.

Since the construction of these facilities, the population of the County has more than doubled. Over the past 10 years, the amount of waste being generated increased from 230,000 tons in 2010 to nearly 400,000 TPY in 2020, an increase of 75%. OFM projects Clark County's population may grow to as many as 612,000 people or a 22% increase by 2035.

The three transfer stations operating today were not designed to handle the current volume of traffic and waste quantities being received. Decisions to make improvements have been stalled by the current contractual arrangements with CRC. The County has notified CRC of its intent to extend the operating contract for five years as stipulated in the current agreement. No decision has been made regarding the question of ownership. The County has the right to purchase the transfer stations by notifying CRC prior to December 31, 2025.

Findings

1. The County and local jurisdictions will need to invest between \$25M to as much as \$50M in the solid waste system to efficiently manage the current and future waste projected from growth.
2. CTR has made improvements to help mitigate ingress and egress from Hwy. 503, but this will not eliminate customers from stacking into Hwy. 503. The Phase 1 Report includes concept plans to improve and eliminate this condition.
3. The revenue generated from the current rates can provide sufficient funds to pay for necessary capital improvements over the next ten years.

Description of Scenarios for System Improvements

The Phase 1 Report has identified three scenarios for developing the infrastructure needed to meet the needs of the solid waste system for the next 20 years. In addition to the capital improvements required for the system, it provides the background information necessary to understand the critical issues related to the current contract extension and system ownership.

Each scenario is described and accompanied by a preliminary cost estimate to construct the improvements. A list of advantages and disadvantages is also provided for decision-makers to consider when comparing one scenario vs. another.

Scenario 1 – Upgrade all Existing Facilities to Serve the County

This scenario is based on the decision to upgrade all existing transfer stations and retain the MRF operations at West Van. It reflects the assumption that the current facilities are located adequately to satisfy the long-term needs of the solid waste systems and makes no changes that would affect the collection services.

- 1. Limited expansion of the CTR to serve as the primary transfer and recycling facility for the next 20 years.**

This Report identified several options for making improvements to CTR, so it can operate more efficiently and handle the impacts from growth in this part of the County. The preferred option will require gaining approval to expand onto the adjacent property west of the existing site. The adjacent property is a closed construction and demolition landfill. Before any new structures are built, the environmental and subsurface conditions will need to be investigated further. Land use approval of an expansion will need

to be completed. New residential developments have been built on both the north and west sides of CTR potentially complicating efforts to permit expansion of the facility onto this property.

CTR – Improvements to expand the current structure; and improve circulation to eliminate off-site queue **\$14M to \$17M**

2. Expand Washougal Transfer Station

The Washougal Transfer Station is experiencing the impacts of growth in both Camas and Washougal and the eastern part of the County. The building will need to be expanded to manage the increase in customer traffic and the amount of waste received. The cost for making improvements is estimated to range from \$1.5M to \$2M.

Washougal TS Improvement **\$1.5M to \$2M**

3. West Van MRF Improvements

There are no immediate capital needs to expand the West Van Transfer Station. The facility can handle the customer traffic and waste received in the near future. However, space is limited for handling other waste streams in particular food waste that is collected from select generators as part of a pilot program. It is expected that the food/organics waste streams will expand as programs to separate food waste expand. The report has recommended that a master plan for the entire site be prepared to consider how this valuable resource can be developed to handle other waste streams such as food waste and construction/demolition debris.

In this scenario, the plan would be to replace the existing MRF processing equipment line at West Van. As the old system is removed and new equipment is installed, the County would be required to transport commingled recyclables out of the County to other MRFs operating in the region (Estimated 9 to 12 months). This cost is not included in this analysis.

West Van Improvements **\$4M to \$6M**

Scenario 1: Total Estimated Construction Cost Over Next 10 Years \$19.5M to \$25M

Scenario #1 System Impacts

Upgrading all existing facilities appears to be the most expedient approach for system improvements and initially requires less capital than the other scenarios. Collection services will not be impacted and will remain as is current. It does not improve collection services for commingled recycled materials that must travel to West Van to unload. As the north/central portion of the County continues to grow, more collection vehicles will need to make the trip to West Van to unload possibly twice a day.

Expanding CTR onto the adjacent property may encounter challenges from neighbors to develop this property given the changing nature of the area. Also, in the future, all customers leaving the site must turn right. The customers traveling from the north county will need to travel south on Hwy. 503 and find a new route for return to their origin.

Advantages

1. Requires the least capital cost
2. Does not require siting any new facilities in the near future
3. Makes use of existing facilities

Disadvantages

1. Access to CTR off Hwy. 503 is less than ideal
2. CTR will continue to operate adjacent to residential properties
3. Land use approval of CTR expansion may have challenges
4. MRF at West Van requires the longest travel times for commingled collection trucks
5. When a new recycling processing line is installed at West Van materials will need to be transported to an out-of-County MRF facility for 9-12 months
6. Provides no space for new facilities that may be needed to process organics or construction and demolition waste, or other infrastructure identified by CSWMP
7. West Van facilities may need to be expanded in the future

Scenario 2 – Upgrade CTR and Washougal – Build a New MRF

This approach is based on expanding CTR but recognizes the benefit of building a new MRF at a central location to be determined. It also allows the space vacated by removing the MRF processing equipment at West Van (approximately 45,000 sf of enclosed space) to be used for other purposes to meet the future needs of the solid waste system. Examples include processing organics and/or processing construction and demolition waste at West Van.

- | | |
|--|----------------|
| 1. Build a New MRF for Recycled Materials | \$25M to \$30M |
| 2. Make Improvements at CTR and Washougal per Scenario 1 | \$15M to \$19M |

Scenario 2: Total Estimated Construction Cost Over Next 10 Years	\$40M to \$49M
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Scenario #2 System Impacts

This approach continues the theme of upgrading and expanding CTR and Washougal Transfer Stations. It recognizes that locating a new MRF in a more central location may result in the least transportation cost to the system in the long term. It requires time to site and build a new facility and therefore will require additional capital investments. Assuming the County would contract this to a private vendor, the vendor would be responsible for siting and building the facility.

Advantages

1. Makes use of existing transfer stations
2. If centrally located the new MRF should reduce costs attributed to collecting comingled materials (Preliminary estimate is about \$1M per year based on current collection services)
3. Processing recyclables at West Van can operate while a new processing system is installed at the new MRF
4. Provides flexibility by creating space at West Van that can be re-purposed for future options

Disadvantages

1. Requires the largest capital investment of the three scenarios
2. Access to CTR off Hwy. 503 is less than ideal

3. CTR continues to operate in a residential environment
4. Land use approval of expansion may have challenges
5. Requires siting a new MRF facility

Scenario 3 – Build New Transfer Station to Serve North/Central County and Convert CTR to MRF

This approach is based on siting a new transfer station to replace CTR. It recognizes the current CTR site is not the best location given the disadvantages listed in the previous scenarios. Several factors weigh into such a decision. First, direct access off Hwy. 503 is less than desirable given high traffic volumes. Second, the surrounding neighborhood has been developed with more residential property adjacent to the station. Third, expansion of the facility will require building on the adjacent old landfill property on the west side. Rather than retrofit CTR with less-than-ideal conditions, the County would proceed with a siting study to identify a suitable property for developing a new transfer station. Once the new transfer station is operational (est. five years), CTR would be converted to a new MRF. After the new equipment line is installed at CTR the old system at West Van would be removed and the space at West Van can be re-purposed (approximately 45,000 sf).

1. Build a Transfer Station	\$26M to \$30M
2. CTR – Phase 1 Circulation and Traffic enhancements	\$3M
3. Retrofit CTR to MRF	\$7M to \$8M
4. Washougal TS Improvements	\$1M to \$2M

Scenario 3: Total Estimated Construction Cost Over Next 10 Years **\$37M to \$43M**

Scenario #3 System Impacts

This scenario requires the County to site a new transfer station. It also takes advantage of the current infrastructure by converting CTR to an MRF. This will result in CTR receiving only commingled collection trucks (less than 100 vehicles per day) versus the current customer traffic (800 to 1,000 vehicles per day). The facility will receive only recycled materials five days per week with, possibly, a few trips on Saturday. This will have a significant positive safety impact on traffic on Hwy. 503 over the current conditions. Also, the adjacent residences will not be impacted by the traffic at the gatehouse and operations into evenings and on weekends.

Locating and permitting a site to build a new transfer station will require time to gain approval and permits but may be best in the long run. First, it can be built to handle the customer traffic expected from population growth and manage the future waste volumes generated in the North County region. A new site can potentially be developed in a more commercial/industrial area that has good access to arterials and primary collector streets.

Advantages

1. Makes use of existing transfer stations
2. Requires less capital than scenario 2
3. When the new transfer station is operational CTR can be converted to a MRF only operation
4. Existing MRF can continue to operate while CTR is converted avoiding transportation of recyclable materials to an out-of-country facility
5. CTR MRF is centrally located and can reduce costs attributed to collecting commingled materials
6. Provides flexibility by creating space at West Van that can be re-purposed for future operations

7. Has the potential to provide the lowest system cost by building a new more efficient transfer station and reducing overall system collection and transportation costs
8. Eliminates safety risk of having high customer traffic access off Hwy. 503
9. Avoids development onto the adjacent property at CTR

Disadvantages

1. Requires more capital than scenario 1
2. Requires time to site and permit new transfer station

Phase 1 Recommendations

Each of the scenarios described will provide the necessary infrastructure for managing solid waste and recyclables for the next 20 years or longer. The decision of which scenario to implement will require input from stakeholders and a decision regarding future ownership. The following recommendations can be reviewed and considered while work is in progress on Phase 2. The Phase 2 work is designed to provide additional information to aid in making final decisions on the preferred scenario.

1. The County should establish a fair operating margin to compensate CRC for continuing with operations of solid waste facilities for the next five years or for a set period to be determined.
2. Revenues generated above the cost of services plus the established operating margin should be remitted to the County. The remitted revenues will be encumbered for future solid waste system facilities and improvements.
3. The County should establish a facility Renewal and Replacement (R&R) evaluation process and a dedicated fund that will maintain system assets.
4. The County should approve funds for implementing Phase 1 of the CTR site improvements to eliminate any potential for inbound customers from queueing onto the public right of way on State Hwy. 503. The improvements include extending the entrance road and new scale onto the adjacent property located west of the current transfer station. Details of these improvements should be negotiated as part of the contract extension.
5. The County should establish a minimum rate for all customers using the transfer stations. Under the current tip fee policies, customers that bring less than 300 pounds are not paying the cost of services. Implementing this policy may also provide an incentive to subscribe to regular collection services or cause customers to make fewer trips by consolidating their loads.
6. The County should extend the hours of operations at both the West Van and Washougal transfer stations.

Phase 2 Study

The results of the Phase 1 Report have detailed specific operational and master planning questions that need to be addressed as part of developing and implementing a 10-year CIP. The key questions to be answered are as follows:

- Should CTR continue to operate as the primary transfer station over the next 20 years or should a new transfer station facility be built?
- Should the MRF continue to operate at West Van or should the MRF be sited at a more central location

to where materials are generated thus reducing overall collection and transportation costs and using the vacated space for other system needs?

The County and the cities are currently negotiating to extend the contract with CRC until December 31, 2026. The negotiation is expected to clarify the direction the County will take regarding future ownership of the system. Negotiations should determine how the future capital improvements will be paid for under the current rate structure.

Phase 2 of the Regional Study includes the following tasks to provide additional information for decision-makers.

1. Complete the search to locate a new transfer station to serve the north/central parts of the County. The siting study should identify the preferred site for building a new station.
2. Complete subsurface investigations on the property west of CTR to determine the conditions or limitations for consideration of the option to expand CTR.
3. Complete the CSWMP. A priority of the CSWMP will be to identify needs for additional facilities for managing waste in the future. Two items that have been discussed while completing the Phase 1 Report are the need to manage food waste as part of a regional organics management strategy and providing facilities to handle construction and demolition waste.
4. Complete a detailed plan for expanding the Washougal transfer station.
5. Complete the Renewal and Replacement /CIP financial plan for the regional system.

Phase 2 of the Regional Study is expected to be completed within the next 24 months and will be coordinated with Phase 3 – Update of the CSWMP.