

NPDES 2013-2018 Education and Outreach Program

This report is a summary of the review of fueling stations in urban unincorporated and rural Clark County related to their preparedness for spills. The report includes pre- and post- educational surveys, analysis of spill response status and recommendations for future outreach to businesses with potential to impact the Municipal Separated Stormwater Sewer System (MS4).

January 2016

Department of Environmental Services, Clean Water Division
1300 Franklin St., Vancouver, WA 98666-9810 (360) 397-2121 www.clark.wa.gov/stormwater



Spill Management at Fueling Stations



Clark County
NPDES 2013-2018 Education and Outreach Program
Spill Management at Fueling Stations

13 January 2016

Executive Summary

The Municipal Separated Stormwater Sewer System (MS4) and waters of the state are at risk from pollutants spilled at fueling stations in unincorporated urban and rural Clark County. These risks can come from accidental spills at the pump, equipment malfunction, or spills during underground storage tank (UST) refilling. Adding to the risk is that many businesses do not have the adequate procedures and materials available to minimize the risk of the spill reaching the MS4. There are few fueling stations that have spill control procedures in place, creating a need for consistency in access to spill kits, labeling of kits, and training of staff. On-site business visits provide the greatest value for education of business owners on spill prevention, while identifying other pollution prevention needs, such as inspection, maintenance and repair of stormwater facilities.

Introduction

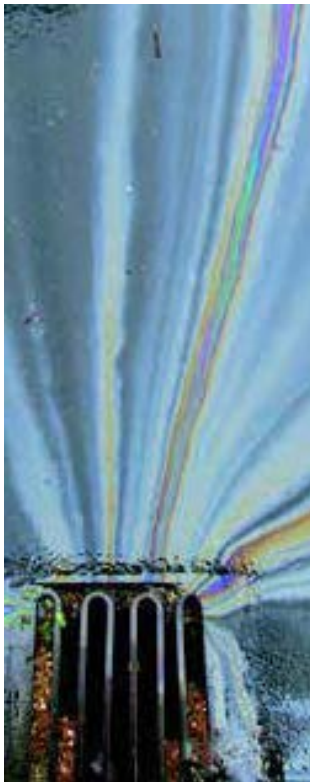
Per the [2013-2018 National Pollution Discharge Elimination System](#) (NPDES) permit from the Washington Department of Ecology, Clark County is required to perform education and outreach to various audiences to minimize impact to stormwater. The Education and Outreach requirements in **S.5.C.10.c** include a list of targeted audiences and messages to be completed in a 5-year period. Included in the requirements is Section C:

“Each Permittee shall measure the understanding and adoption of the targeted behaviors for at least one targeted audience in at least one subject area. No later than February 2, 2016, Permittees shall use the resulting measurements to direct education and outreach resources most effectively as well as to evaluate changes in adoption of the targeted behaviors. Permittees may meet this requirement individually or as a member of a regional group.”

To meet this requirement, Clark County chose to inspect fueling stations throughout the unincorporated urban and rural areas of Clark County to determine best management practices for spill prevention, including the use of spill kits. These businesses fit in the educational requirement of *S.5.C.10.a.ii(1) - Businesses– Use and Storage of Automotive Chemicals* (i.e. fuel). This report will document the steps taken to meet the permit requirement, lessons learned and next steps to be taken effectively educate fueling station operators about minimizing spill impacts to the MS4. Here is an overview of the project tasks:

- Preparation of spill prevention plan form, spill kit brochure and spill kit use poster
- Identification of target businesses (fueling operators and owners)
- Preparation of pre-education survey, post-card mailing for on-line survey
- Business site visits to 54 fueling operators
- Analysis of business site visits
- Update educational materials and target messages based on analysis
- Post-educational site visit and survey to assess behavior change
- Prepare final report and educational materials


Per the 2013-2018 NPDES Permit – S.5.C.7.b.iii(2) states that Clark County is required to inspect 20% of pollution generating businesses every year.



Implementation

Preparation of educational materials – Outreach and operations specialists met to determine the type of materials that may be useful to local businesses. Staff determined that materials need to be simple to use and understand by owners and their staff on how to prevent spills from entering the storm drain system. Materials should use lots of images, pictures and graphics to convey the message. Staff looked at materials from other jurisdictions for ideas on successful tools. Pre-survey materials included three pieces (Figures 1, 2 and 3) that were to be handed out to businesses during site visits. Materials were also made available on the County’s stormwater webpage: www.clark.wa.gov/stormwater (What you can do – Businesses Spill Kit Program).

Figure 1. Spill Prevention Checklist

STORMWATER PROTECTION FOR BUSINESSES			
Spill Prevention and Clean-up Plan			
Business Name:	<input type="text"/>	Phone:	<input type="text"/>
Address:	<input type="text"/>	E-mail:	<input type="text"/>
Site drains to:	<input type="checkbox"/> Sanitary sewer <input type="checkbox"/> Storm drain	Date:	<input type="text"/>
SPILL PLANNING AND PREVENTION			
<input type="checkbox"/>	Take inventory of chemicals and liquids on site - Note location and quantity on layout map of your business.		
<input type="checkbox"/>	Collect spill clean-up materials for kits, including personal protection equipment - Identify locations for kits.		
<input type="checkbox"/>	Designate and train a spill clean-up coordinator for your business.		
<input type="checkbox"/>	Train staff on spill plan and how to use spill clean-up kits annually. Document your trainings.		
Facility activities with potential to spill:			
<input type="checkbox"/>	Fueling and fuel transfer	<input type="checkbox"/>	Loading / unloading of products
<input type="checkbox"/>	Outside manufacturing	<input type="checkbox"/>	Landscape construction / maintenance
<input type="checkbox"/>	Outside equipment / vehicle maintenance / repair	<input type="checkbox"/>	Outside storage of materials / stockpiles
<input type="checkbox"/>	Outside drum or container storage	<input type="checkbox"/>	Customer and employee vehicles
<input type="checkbox"/>	Vehicle, equipment and building washing	<input type="checkbox"/>	Other:
Materials and equipment stored on site with potential to cause pollution if spilled / leaked:			
<input type="checkbox"/>	Equipment: trucks, lifts, etc.	<input type="checkbox"/>	Vehicle Fluids:
<input type="checkbox"/>	Cleaning products:	<input type="checkbox"/>	Solvents, Paints & Lubricants:
<input type="checkbox"/>	Liquids	<input type="checkbox"/>	Antifreeze
<input type="checkbox"/>	Solids	<input type="checkbox"/>	Gasoline / Diesel fuel
<input type="checkbox"/>	Food preparation / waste:	<input type="checkbox"/>	Brake / Transmission fluid
<input type="checkbox"/>	Cooking oil / Grease	<input type="checkbox"/>	Oil
<input type="checkbox"/>	Dumpster	<input type="checkbox"/>	Miscellaneous Chemicals:
<input type="checkbox"/>	Trash Compactor	<input type="checkbox"/>	Acid / Ammonia / Lye
<input type="checkbox"/>	Other:	<input type="checkbox"/>	Pesticides / Herbicides
		<input type="checkbox"/>	Machine oil / Coolant
		<input type="checkbox"/>	Hydraulic fluid
		<input type="checkbox"/>	Other:
		<input type="checkbox"/>	Other:
SPILL CLEAN-UP PROCEDURES			
<input type="checkbox"/>	Evaluate situation, including safety issues - Notify owner, spill coordinator, other necessary people.		
<input type="checkbox"/>	Put on Personal Protection Equipment (PPE).		
<input type="checkbox"/>	Stop the source of the spill if it can be done safely. If unable, call for assistance.		
<input type="checkbox"/>	Protect the drain by installing the drain cover and placing protective socks / booms.		
<input type="checkbox"/>	Clean up the spill with appropriate materials (mats, pads, absorbent clay, etc.). Properly dispose of materials.		
<input type="checkbox"/>	Restock the clean up kit with all required materials. Document the spill with the spill coordinator.		
IN CASE OF A SPILL, CONTACT THE FOLLOWING:			
<input type="checkbox"/>	Business owner / Site manager	Name:	Phone:
<input type="checkbox"/>	On site clean-up coordinator	Name:	Phone:
<input type="checkbox"/>	REQUIRED to call if a spill is too large to contain or reaches a water body or storm facility:	If immediate safety threat call 911 WA Department of Ecology: (360) 407-6300	

Clark County Environmental Services - Clean Water Program
 Don Benton, Director
 1300 Franklin St., Vancouver, WA
(360) 397-2121 www.clark.wa.gov/stormwater

For other formats, contact the Clark County ADA Office: Voice (360) 397-2322; Relay 711 or (800) 833-6388; Fax (360) 397-6165; E-mail ADA@clark.wa.gov

Este informe contiene información importante. Pídale a alguien que se lo traduzca o llame (360) 397-2121

В данном отчете содержится важная информация. Попросите кого-нибудь перевести ее для вас или звоните (360) 397-2121

Figure 2. Spill Kit Program Brochure (exterior and interior)

Did you know?

Contaminated runoff from city streets, neighborhoods, constructions sites and parking lots FROM an assortment of business and residential activities is the largest source of water pollution in urban areas. In fact, anything other than rain entering a storm drain can pollute streams and groundwater.

Stormwater runoff results from rainfall. Rainstorms can cause large volumes of water to rinse the urban landscape, picking up pollutants along the way.

Urban runoff occurs any time of the year when excessive water from vehicle washing, and other sources carries detergents, chemicals, trash, lawn debris, and other urban pollutants into storm drains.

For additional information:
Contact Clark County for technical assistance and the regulations that apply to your business or visit www.clark.wa.gov/stormwater for more tips.

To report a spill, contact:
Contact Washington Department of Ecology 24-Hour Spill SW Region Response Hotline at (360) 407-6300.

Your business can reduce stormwater pollution and protect rivers!

Your business is integral to our community and, like other community partners, you need to properly protect against spills that may enter your storm drain or storm water facility.

Preventing and properly cleaning up spills can save your business time and money, protect your employees and customers, as well as protect our local waterways. Following the simple steps in this flier can help you develop a plan to prevent spills as well as know what to do if a spill happens. Assistance is available to help you successfully prevent and manage spills.

Fact Check

Having spill kit(s) at your business can save some big dollars by avoiding clean-up costs. Even a 5-gallon oil spill that gets into a storm water drain could cost thousands of dollars to clean up. Read more about how to prevent and clean up spills to save your business money.

CLARK COUNTY, WASHINGTON
Clark County Environmental Services
Clean Water Program
1300 Franklin St., Vancouver, WA
Don Benton, Director
360) 397-2121

Este informe contiene información importante. Pídale a alguien que se lo traduzca o llame (360) 397-2121.
В данном отчете содержится важная информация. Попросите кого-нибудь перевести ее для вас или звоните (360) 397-2121

For other formats, contact the Clark County ADA Office: Voice (360) 397-2322; Relay 711 or (800) 833-6388; Fax (360) 397-6165; E-mail ADA@clark.wa.gov.

STORMWATER PROTECTION FOR BUSINESSES

Spill Kit Program

Simple steps you can take to prevent stormwater pollution

ALWAYS ALWAYS NEVER

Have a spill prevention plan for your business

It is only natural that spills can happen when handling liquids. Preventing spills is the first step to minimizing the risks associated with spills. There are some simple steps to prepare your business and your employees to prevent spills.

- **Inventory your business** to know where liquids are stored, handled, delivered and disposed of at your site. Locate all drains and determine if they lead to sanitary sewer or storm water drain.
- **Identify opportunities to secure liquids** at each of these locations to prevent accidental spills (such as knocking containers over, ruptures, leaks, spills, etc.)
- **Develop a plan** to know how to clean up spills safely, train employees on spill kit use and, if needed, notify regulatory authorities to report the spill.
- **Visit Clark County's "What you can do" website** for links to example spill prevention plans (www.clark.wa.gov/stormwater)



Have a spill kit accessible where your business uses liquids

A spill kit is the quickest way to stop a spill from becoming a bigger problem, such as creating a safety hazard for your employees or entering a storm drain. Here are some tips for your kit:

- **Spill kits should be located near liquids** for easy access. Avoid storing in a locked feature so that the kit can be accessed quickly.
- **Spill kits should be clearly labeled** for easy identification by employees and customers.
- **Spill kits should always be fully stocked** and ready for use in the event of a spill.

Know how to use your spill kit

Once you have your kit, learn how to properly use and dispose of the materials. Important tips to remember include:

- **Download our poster** on how to properly use a spill kit and post it at a visible location in your business.
- **Keep your employees safe by offering training** to new and existing employees regularly on your prevention plan as well as how to use a spill kit.
- **Know where your drains** are located so that they can be blocked to prevent pollution.
- **Properly dispose of materials and restock** after you have thoroughly cleaned up a spill.

Visit www.clark.wa.gov/stormwater "What you can do" for more ideas

Never rinse or clean tools and equipment where runoff could enter a stormwater drain.

Never use stormwater drains as waste receptacles, even for organic materials.

Never over spray products onto hard surfaces such as driveways, sidewalks or patios. Sweep up excess materials and dispose of properly.

Why? Stormwater drains lead directly to creeks, streams, and rivers with no filtration or treatment.

What is typically in a spill kit?

Portable container	Drain cover
Absorbent pads	Container for disposal
Absorbent boom / sock	Bag closure / labels
Absorbent clay / litter	Broom / pan
Protective gear (eyes, nose, hands)	Kit label




Figure 3. How to use your Spill Kit poster

STORMWATER PROTECTION FOR BUSINESSES

How to use your Spill Kit

Protecting your business, employees and customers from accidental spills






PROTECTING WATERWAYS MATTERS TO EVERYONE
Spills contribute to the contamination of storm water runoff. Runoff from urban surfaces, such as parking lots or driveways, is the largest source of pollution to our local creeks, streams and rivers.

By cleaning up spills before they reach a storm water drain or storm water facility, you can:

- Avoid expensive clean-up costs
- Keep your employees and customers safe
- Protect local waterways
- Avoid fines

To report a spill, contact:
Contact Washington Department of Ecology 24-Hour Spill SW Region Response Hotline at **(360) 407-6300**.



1 Evaluate the situation, including safety issues. Notify owner, spill coordinator and other necessary people. Put on protective equipment. Follow your spill plan.



2 Stop the source of the spill, if it can be done safely. If unable to stop the spill, call for assistance.




3 Protect the drain, by installing the drain cover and placing protective socks / booms in between the drain and the spill.




4 Clean up the spill with appropriate materials, including mats, pads, absorbent clay, etc. Use a broom and pan to clean up materials. *Never use a hose.*



5 Dispose of all used materials properly, including securely tying the bag. If the materials are hazardous, follow local regulations for proper disposal.



6 Restock the spill kit and put back at the spill kit station. Document the clean up effort and notify the owner and/or spill coordinator that work is complete.



Clark County Environmental Services
Clean Water Program
1300 Franklin St., Vancouver, WA
Don Benton, Director
360) 397-2121

For additional information:
Contact Clark County for technical assistance and the regulations that apply to your business or visit www.clark.wa.gov/stormwater for more tips and information on preventing pollution

Aviso importante:
Este informe contiene información importante. Pídale a alguien que se lo traduzca o llame (360) 397-2121

Важное объявление:
В данном отчете содержится важная информация. Попросите кого-нибудь перевести ее для вас или звоните (360) 397-2121

For other formats, contact the Clark County ADA Office: Voice (360) 397-2322; Relay 711 or (800) 833-8380; Fax (360) 397-6165; E-mail ADA@clark.wa.gov

Identification of target businesses (fueling operators and owners) – Clark County staff contacted [Department of Ecology Underground Storage Tank \(UST\) program](#) to generate a list of fuel station owners in Clark County’s jurisdiction. Staff reviewed the list and updated the information to include additional sites known to staff or eliminate sites that are no longer in service. Fifty-four (54) sites were identified for survey (refer to Figure 5 for location distribution). Sites include the following types of businesses (Figure 4; full list of businesses in *Appendix A*):

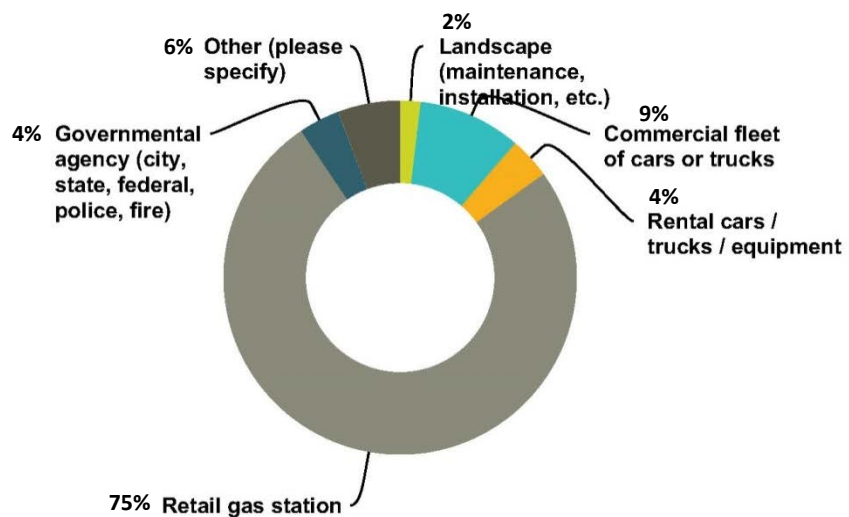


Figure 4. Types of fueling station operators (per Survey Monkey)

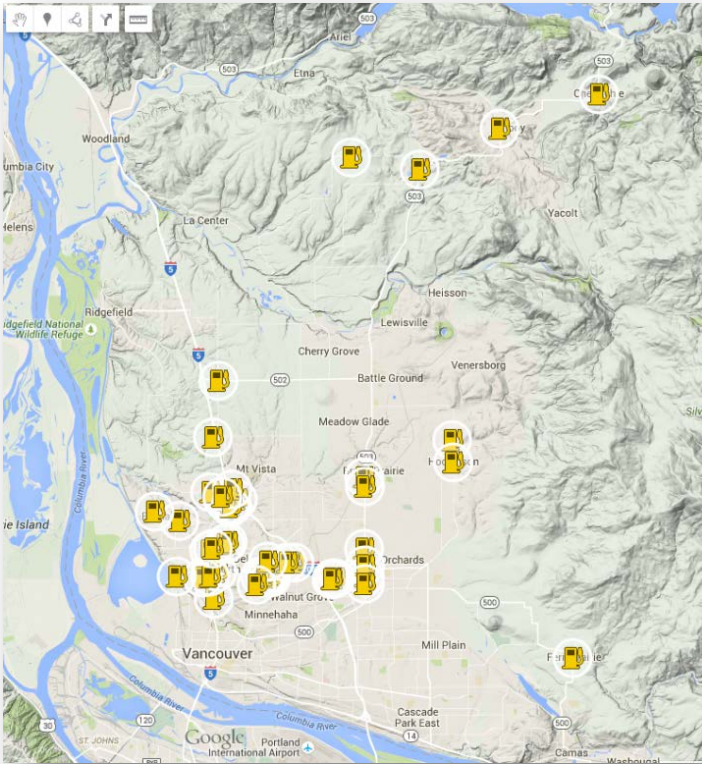


Figure 5. Map of surveyed fuel stations
(Source: Google Map with address icons)

Pre-education survey – Clark County staff prepared a short survey to assess knowledge of fuel station operators on spill prevention and clean-up procedures. An on-line survey was created at https://www.surveymonkey.com/s/CC_Fuel. (Refer to *Appendix B* for survey questions). The survey was designed to assess basic knowledge on the follow topics, as well as collect their contact information:

- Type of business and how many fuel stations / nozzles are available
- Use of a spill prevention plan
- Knowledge of who to contact in the event of a spill
- Signage to direct users of what to do in the event of a spill
- Use and location of spill kit on site
- Training used for owners and staff
- What language is used by staff and customers
- Information about how the County can assist with spill prevention preparation
- Knowledge of drainage patterns on site, location of storm sewer and name of watershed

The on-line survey was available to participants during June 2015. A post-card was mailed to the address based on the state UST list. Some addresses were verified for mailing. Additional locations were identified but did not receive mailings. Of the 57 postcard mailers referencing the on-line survey, only 2 businesses took the on-line survey (even with the offer for a chance to win a free spill kit).

Business site visits – Two Clark County staff visited all of the identified fuel operator businesses during the month of July and early August. At each site visit, staff prepared an aerial photograph of the site with the known municipal storm sewer system locations identified. They also took the three educational handouts and a copy of the pre-education survey. Staff asked owners and/or operators the questions on the survey.

While at the business, staff was able to confirm the location of the storm drain features, as well as type of features. This information will be used to update the asset management database of stormwater facilities. Staff also informed businesses about their stormwater facilities and maintenance considerations such as reviewing the oil/water separators and frequency of inspection and cleaning.

Staff gave the educational materials to the businesses and reviewed the information to ensure basic knowledge presented in the materials.

The pre-education survey was completed to assess the knowledge of fuel spill management by owners and operators at 54 stations. Staff completed on-site interviews at all fueling stations.

Review and Analysis of Pre-education Survey Data

Survey data

The county utilized on-line Survey Monkey to track survey results. With the low response rate to the post-card mailer, staff completed the survey after interviewing customers on-site. Here is a brief summary of the pre-education survey (full survey results are in *Appendix B*):

- 1. How many fueling nozzles** – Half of the respondents have 7 or more nozzles, typical of retail gas stations. The other prominent size station has 2 nozzles, such as fleet service stations.
- 2. Type of business** – The majority (over 75%) of fueling stations in the surveyed area are retail gas (some are associated with other services such as grocery, snack shop, car wash, etc.).
- 3. Does the business have a spill kit** – While the majority of responses were “yes” (over 75%), there are a variety type of spill kits, including bags of absorbent materials or paper products that are readily available in the store.
- 4. Location of spill kit** – More than half said the kits are in the nearest building for security purposes or stocking of materials. Several had kits at the pump station.
- 5. Is spill kit in a locked facility near the pump** – Almost 80% said no or I don’t know.
- 6. Is spill kit labeled so that it is easy to find** – Half of the respondents said yes. There was no consistency of how the kits were labeled.
- 7. Does your business train employees on spill kit use** – The majority (81%) said yes they train their employees.
- 8. How often do you train employees on spill kit use** – More than half of the businesses (57%) said they only train at the time of hiring. Turnover rate is high in retail businesses so training can be difficult to keep current. Some businesses, such as large retailers or fire services, have annual or even monthly training.
- 9. Does your business have a spill plan** – Less than half of the businesses have a spill plan that outlines all of the key information about location of potential spills, location of spill kits and key contact information.
- 10. Does your business know who to contact when there is a spill** – More than 70% said yes, they have designated contacts.
- 11. Who are the primary contacts for spills** – There were several answers such as 911 / emergency services, boss/manager, corporate or business owner, business emergency coordinator, or the phone numbers of the signs at pump (i.e. Ecology hotline). The variety of business structures varies so there is little consistency.
- 12. Does your business know when to report a spill** – More than 60% of respondents said yes. Further query determines that the spills that reach the drain are a problem and require a call.
- 13. and 14.** – Languages spoken by employee and customers – English, therefore language is not anticipated to be a barrier to conveying information.
- 15. and 16. Technical assistance for use of a spill kit** – Given the variety of business types and corporate structure for fueling stations, there were a variety of ideas for creating better access to spill kits. The highest ranking suggestion is to have pre-packaged spill kits for purchase and knowing where to purchase and restock. Having access to spill kit labels was the next option that operators identified for use of spill kits.
- 17. Where does the stormwater drain to** – More than half of the respondents identified the nearest catch basins or inlets near their pumps. There were approximately 25% who did not know exactly where the runoff water goes.

18. Knowledge of watershed for the business – A general question was asked to gauge if operators knew which watershed they were located in and where the water ultimately drains. Over 85% of respondents did not know the name of their watershed. Of those who knew, they were primarily located in the Salmon Creek Watershed (which is also a geographic reference to the north Vancouver area).

Key Findings

General observations

- Language is not a barrier with businesses, English is the primary language spoken.
- Many businesses were unaware of the need to know this information.
- Several businesses had key signage located where customers and staff could see it from the service area.
- Most spills noted by operators are the result of a pump that won't turn off. There are instances where customers drive off with pump nozzle in the tank. Emergency shut-off buttons are key to minimizing these spills.
- Tankers that resupply the fuel tanks can be frequent at sites, especially high use retail such as Costco or Fred Meyer. There is some risk of spill during refilling operations by the tank truck operator. Most use pads to block drains in the event of a spill.

Areas for improvement

- Post-card mailer for the on-line survey was primarily useless. Mailers are not an effective way to communicate key messages.
- There appears to be a disconnect between business owners and staff who are operating the pumps. Staff main concern is payment operations in the store/booth (i.e. retail food/beverage/supplies sales).
- There was mixed responses about who to contact in the event of a spill: Retail may call the corporate office to respond; some may call 911; and, some may call their immediate supervisor.
- Most operations do not have a written *Spill Prevention Plan* that lists all of the critical information about the operation and what to do in the event of a spill (i.e. Figure 1).
- Most operations have limited training on what to do in the event of a spill, primarily at the time of hiring of staff. Several operations have a high turn-over rate of staff so consistency of practices may be a challenge.
- Many businesses were unaware of their storm water facilities, including location of inlets, required maintenance of features (i.e. oil/water separators), and key features.
- Many businesses did not have a spill kit. Several sell absorbent material that could be used off of the shelf in the event of a spill (e.g. kitty litter, paper towel, etc.). Therefore materials are inside the building and not near the service area where the spill is likely to occur. Several businesses stated that if materials are at pumps they are likely to be stolen.
- The messaging of the educational materials was not impactful to users (i.e. protect the stormwater system, protect fish, good for the community). Many businesses are concerned with costs associated with needing materials on-site and costs of maintenance/clean-up. The Spill Kit use poster was of most interest.

- Some businesses have pumps that are available 24-hours a day including times when there is no staff available in the event of a spill or emergency. The responsibility would fall on the customer to know what to do.

Positive observations

- Newer retail operations were well designed to prevent spills from impacting the MS4 and included key information such as signage in the service area.
- Most businesses have the required Ecology Underground Storage Tank (UST) signage.
- Staff were able to meet with all business owners/operators and complete providing key messages. On-site visits are anticipated to have positive results given the ability to address immediate concerns and answer questions.
- While at the site visits, staff could work with businesses on other source control issues besides spill prevention, such as leaking dumpsters, maintenance issues of their stormwater facilities, etc. Four (4) dumpsters were identified to be replaced as they leak to the storm drains.
- The site visits provide information to rank fueling operations at higher risk to pollute the MS4. Those businesses could be targeted for on-going education and assistance.

Post-education Survey and Follow-up Visits

Based on the review of pre-education survey results, Clark County staff updated the educational materials. Targets for updates and follow-up visits included:

- 1. Prioritize high risk businesses for annual site visits** – There are several businesses that have many of the procedures in place to minimize risk of a spill reaching the MS4 (either through design layout and/or procedures). These businesses are considered low risk, such retail stations. Other businesses may rank higher as they are lacking key components of minimizing risk, such as limited training, no spill kits, no labeling of spill kits, main drains go right to MS4, etc. As part of our **S.5.C.7.b.iii(2)** requirements, these businesses should be visited often to ensure on-going education and assistance of owners and staff.
- 2. Update poster with more targeted messaging** – While protecting stormwater can be conveyed using messages to gain the attention of an audience, it needs to be targeted to specifically engage fueling station owner’s interest. The image of a family fishing in a clean stream may interest family audiences, the space on the poster can be better utilized to provide key messages to fueling businesses. The messaging updates include: **Preventing spills will save your business money** – A spill kit and knowing how to use it properly can save expensive clean-up costs and lost revenues if your business has to close during the clean-up. Clean-up and repair of damaging stormwater facilities during a spill can be in the \$1,000’s of dollars. Not to mention, the risk of potential regulatory fines due to stormwater damage.
- 3. Post-education survey** – During on-site visits, staff conducted post-education to determine if we have raised awareness of spill prevention. Staff also reviewed the business site to determine if we have affected behavior such as identifying spill kit locations, labelling and signage as well as determining if training programs have been updated.

The post-education survey was completed in November 2015 to assess the knowledge of fuel operators of spill management. Staff identified if stations had spill kits, conducted training and knowledge of the stormwater catchment / treatment system.

Post-educational survey data

The county utilized on-line Survey Monkey to track survey results. With the low response rate to the post-card mailer, staff completed the survey after interviewing customers on-site. Here is a brief summary of the post-education survey (full survey results are in *Appendix B*):

- 1. Do you have a dedicated spill kit for your fueling pumps** – More than half of the respondents have a dedicated kit, while the other half either has no kit or a bag of kitty litter in storage. Several kits were missing key items.
- 2. Is your spill kit labelled** – Even though half of the stations stated that they have kits, half of those were not labelled.
- 3. Location of spill kit** – If stations have spill kits, most are located inside the building in a storage room. For retail sites, most business would suggest this location minimizes vandalism of the kits. On non-retail sites, such as fleet vehicle stations, kits are at the pumps where there is less chance of theft or vandalism.
- 4. Training for employees** – Almost half of the respondents stated that they have provided training for their employees on spill management protocols/procedures.
- 5. In the event of a spill who to call/contact** – Almost all respondents stated that their first call is to 911. Some instances a second call is made to the business owner or corporate contact (including a couple who call an environmental clean-up crew). Only a few stations did not know who to call.
- 6. Where does the fuel spill go** – A little more than half of the stations utilize an oil/water separator. Most of the other sites had no treatment or a private system that provided some treatment prior to connection to the MS4. A few of the non-retail businesses had drywells or did not drain to the MS4 (the materials would soak into the ground).
- 7. Is the oil/water separator mapped in the county asset management system** – Most fueling stations were mapped accurately in the Clark County Stormwater GIS.
- 8. How did your oil/water separator rate during your recent inspection** – There were a number of stations that did not know they had an oil/water separator. About 25% of facilities did receive a passing rating for maintenance.
- 9. Type of oil / water separator** – Of those sites that have an oil/water separator, half have coalescing plates while the other half would have API (American Petroleum Institute) facilities. No other type of facility was noted.
- 10. Where does the water come from that goes to the oil/water separator** – Newer fueling stations have good designs that separate canopy roof runoff from under the canopy/fueling island runoff (where the contamination exists). Older stations tend to capture all paved surfaces in the inlets that capture small spills.
- 11. Discharge location of oil/water separator** – There are a variety of discharge points for the facilities or sites that have no oil/water separator. More than a third of the facilities discharge either directly or indirectly to the MS4 (i.e. flows across the pavement to the roadway or connects to the system directly). Other sites may have some form of treatment prior to connecting to the MS4. Less than a quarter of the sites would stay on site and soak into the ground.
- 12. Education outreach technique** – Of the various tools to help with education, the only tool that was considered helpful to owners/users was a staff visit with technical assistance.

Analysis Results – Post-Education Survey

- The outreach to fueling stations was important and impactful as it provided targeted information.
- There were some noted adjustments to knowledge and materials, but only slightly between pre- and post- educational surveys.
- Only about half of the fueling stations had materials necessary to contain a fuel spill.
- Identifying the proper contacts at each station to implement change was difficult. Three levels of contacts are possible: 1) retail operators (sell merchandise and handle payments); 2) owners; and, 3) corporate management. All three levels have various controls over what happens in the event of a spill. Turnover rates tend to be high with the staff just selling gas, snacks and beverages, therefore spill management training is a challenge. Owners and corporate management tend not to be on site often but could set policies on how spills are managed. This disconnect tends to be problematic on effectively communicating what needs to be done if there is a spill.

Based on this project, numerous other benefits beyond outreach techniques were noted by staff:

- **Prioritize sites for inspections.** The site visits provided an opportunity to identify sites that can be considered a high risk for pollution to the MS4 (there is no treatment and/or drains connect to the MS4). These sites may warrant more frequent inspections.
- **Drains to drywells.** Staff identified several sites that drain to a drywell that may or may not have treatment. These sites can be referred to Ecology's Underground Injection Control (UIC) program for further efforts to minimize pollution to groundwater.
- **Confirmation of stormwater facilities.** Based on site visits, staff could confirm the presence of stormwater facilities (mainly oil/water separators), provide overall inspection and rank the need for maintenance. A few owners were unaware of the facilities on their site.
- **Opportunity for stormwater facility maintenance.** Staff have identified the need for better tools to educate owners about how to maintain their oil/water separators. Educational materials should have images (well maintained), what to look for, how often maintenance should occur, etc.
- **Opportunity for better stormwater management design of fuel islands.** This project visited fuel stations that have been in place for over 20 years as well as brand new facilities. It is clear that design of stations has improved to reduce risk of pollution to stormwater but better guidelines should be developed. One example is to separate canopy runoff (somewhat "clean" water) from the runoff under the canopy that will most likely carries oils, greases, fluids, etc. Updates to the Clark County Stormwater Manual 2015, Book 3 suggests conveying island canopy drains to outside the fueling area.
- **Opportunity for stormwater spill clean-up protocols for stations.** Operators need more information about what they should do to stop a spill and how to clean it up. In the instances of small spills, used materials need proper disposal (such as designated waste containers on site). For materials that are designated hazardous, protocols need to be clearly identified for use and transfer to the proper disposal facility.

Recommendations

Raise awareness - Per the permit requirements, Clark County is required to raise awareness and affect behavior of users of automotive supplies, such as fuel. After review of the educational materials and talking with all of the business owners/operators, staff has identified several key targets for this audience and messaging:

1. **Confirm that all pumps have required Ecology UST labelling** at the pump location, in view for customers and staff.

2. **Provide a spill kit at**

all pump locations, with labelling on the kit as well as signage at the pump to direct users to where the spill kit is stored. Create a consistent sign to be used at all locations.

3. **Signage at the pump should direct users who to call** in the event of a spill.

4. **Training should be provided to staff** at the time of hiring and on an annual basis for updates.

5. **Continue inspection of stormwater facilities that contribute pollution to the MS4.** Review treatment systems and identify maintenance needs with operators.

6. **Update message to key factors**, such as cost comparison of having spill prevention materials available versus the costs of clean-up of a spill. Costs analysis should include prevention (spill kit, stormwater facility regular maintenance versus spill clean-up of materials and the storm drain system). Spill costs should be hundred dollars annually versus several thousand, minimum, in the event of a spill. If a spill occurs, retail convenience business is closed which in turn causing a loss to revenue of in-store products as well as fuel. Fines may also be rendered if there is a spill.

7. **Update educational materials to key pieces for their use:** How to use a spill kit poster, spill kit location signage and label, and training guide information.

IN CASE OF FIRE, SPILL OR RELEASE

- Use Emergency Pump Shutoff located at [insert location]
- Call the Fire Department at 911 [of Local Fire Department Phone #]
- Call the Facility Operator at [insert 24-hour Telephone #]

[Name of Facility]

[Address of Facility]

Fire Extinguisher located at [insert location]

Affect behavior - Key targets have been identified to meet these requirements:

1. **Meet operators AND owners on-site regularly** to provide key messaging and review site for source control compliance. Visits meet S.5.C.7 Source Control requirements.

2. **Target visits to the fuel stations ranked** as the highest risk to the MS4.

3. **Messaging to businesses to save them costs** including prevention versus clean up and loss of revenue.

Management Recommendations

At the conclusion of surveys and analysis, Clark County has identified the following recommendations. There is no set timeline to complete all of the recommendations. Refer to Figure 6 on page 13 for a layout of proposed fueling station design.

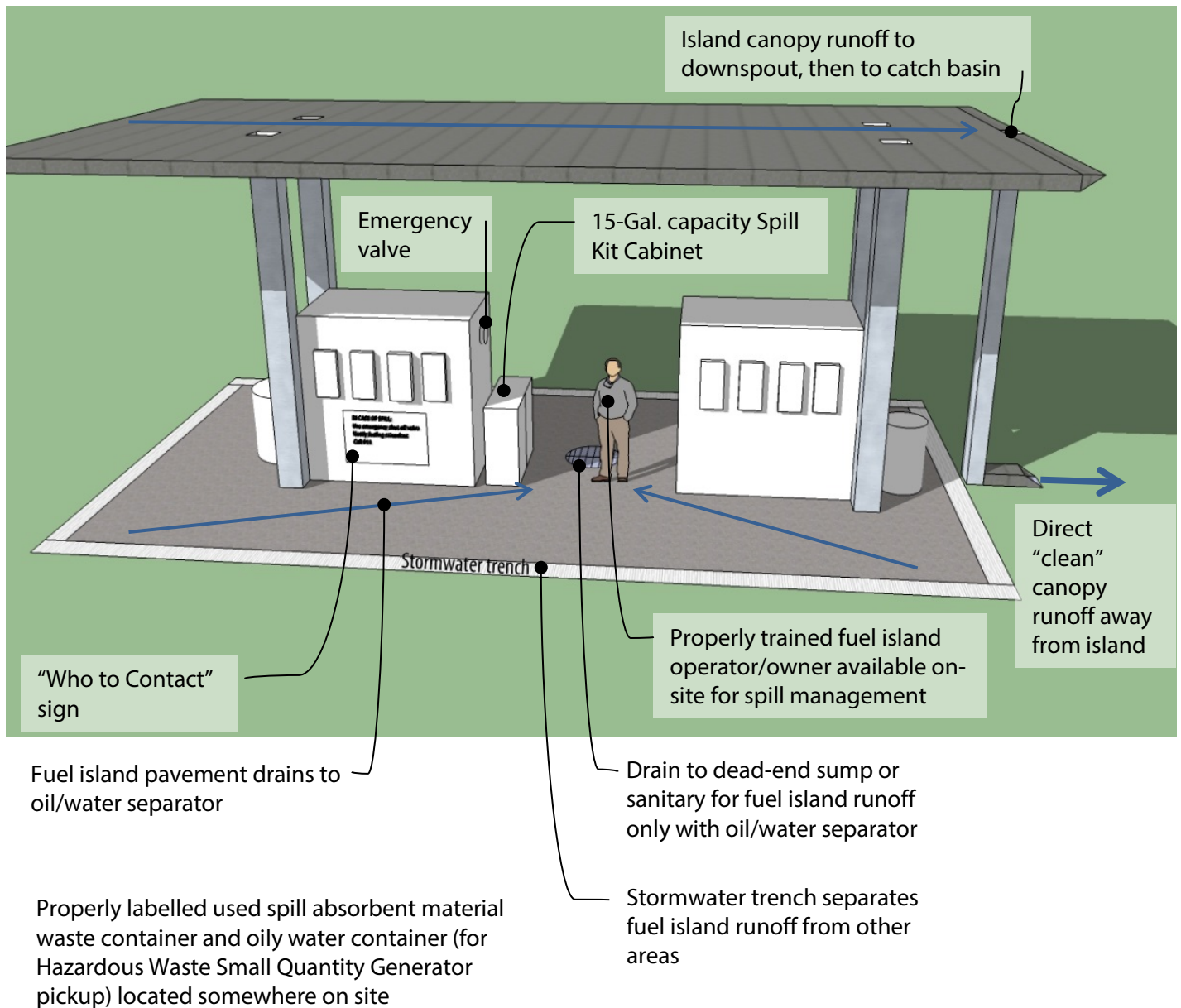
1. **Complete priority ranking of sites by potential to impact the MS4** – Sites will be broken into the following categories (refer to Appendix D for ranking):
 - High Priority - no controls - Spills and Discharges directly or indirectly to the MS4
 - Priority Site only an O/W separator protecting the MS4 from spills and discharges.
 - Better protections in place: O/W separator and facility features prior to discharges to the MS4
 - Refer to Ecology for Groundwater Protection: All Spills and Discharges to Groundwater
2. **Complete updates to educational materials** (e.g. spill management poster, flier, etc.) and print for distribution and posting on the web page for outreach reference.
3. **Communicate with Department of Ecology** regarding sites that require follow-up by Ecology (i.e. sites that do not have proper UST labelling or drain to a drywell).
4. **Ensure Clark County Stormwater GIS system is accurate** with locations and types of stormwater facilities at fueling stations.
5. **Follow-up with “High Priority” sites** to identify options for managing untreated discharges to the MS4.
6. **Target dates for follow-up with sites that have oil/water separators** for future inspection and maintenance recommendations.
7. **Continue to identify options for future policy updates** to reduce risks to the MS4 regarding fueling stations. Topics include: 1) Fuel station design (separate “clean” canopy runoff from contaminated island runoff to reduce the inundation of the treatment system); 2) review and update standards for oil/water separator sizing to ensure there is sufficient capacity to capture a spill event; 3) standardized spill response protocols (work on a regional basis to create standard system for spill response (including station operators, owners and corporate management); and, 4) clarify standard for spill response material disposal (work with state and regional stakeholders to clarify how clean up materials should be properly/legally disposed of fuel versus oil waste products, small hazardous waste generators) .
8. **Distribute information related to spill response to appropriate businesses with a potential to spill and discharge to the MS4** – As part of the Source Control program, continue to work with all types of local businesses and continue to raise awareness of spill management by distributing the newly created/updated spill materials.
9. **Collaborate with [Stormwater Partners of Southwest Washington](#)** to identify opportunities to distribute this messaging and information to fueling stations and businesses.

Conclusion

Clark County staff completed the requirements for S.5.C.10.c. as noted in this report. This project successfully identified a unique audience that has not been addressed previously. The staff identified not only gaps in outreach techniques for this audience but also opportunities to reduce pollutant discharges in stormwater through inventory, inspection and maintenance of oil/water separators. Successful stormwater protection at these sites needs to go beyond just spill kit use and training, but also to increased understand of how the stormwater facilities are operated on site.

The project successfully raised awareness of stormwater management at the fueling stations and are affecting behavior by on-going site visits and updated educational materials.

Figure 6. Key Fueling Station Items to Minimize Spill Risk



End of report

APPENDIX A

Businesses included in the survey:

ID No.	Field Visit Complete Pre-Education	UstSiteName	Address	City	ZipCode
1	BP 7-17	117TH AVENUE CHEVRON	9810 NE 117TH AVE	Vancouver	98662
2	BP 6-29	7-ELEVEN 23474	6212 NE HIGHWAY 99	Vancouver	98665
3	BP/CA 6-24	7-ELEVEN STORE 2352-22624C	7715 ST JOHNS BLVD	Vancouver	98665
4	BP 7-16	ALI'S CHEVRON	604 NE 179TH ST	Ridgefield	98642
5	BP 6-23	AM/PM 82746	609 NE 99TH ST	Vancouver	98665
6	BP 7-10	AROUND THE CLOCK FUEL	21604 NE 399TH ST	Amboy	98601
7	BP 6-29	B&B COUNTRY STORE	1804 NW 119TH ST	Vancouver	98665
8	BP 7-10	CHELATCHIE PRAIRIE GENERAL STORE	42411 NE YALE BRIDGE RD	Amboy	98601
9	BP 7-17	CIRCLE K/76 2705534	7701 NE 117TH AVE	Vancouver	98662
10	online	CLARK COUNTY	4700 NE 78TH ST	Vancouver	98665
11	BP 7-17	CLARK COUNTY PUBLIC WORKS	11608 NE 149TH ST	Brush Prairie	98660
12	BP 7-17	CLARK PUBLIC UTILITY DISTRICT	8600 NE 117TH AVE	Vancouver	98662
13	BP 6-30	COSTCO FUEL 772	6606 NE 84TH ST	Vancouver	98665
14	BP 7-22	E Z MART	9511 NE 76TH ST	Vancouver	98662
15	BP 6-29	EXPRESSWAY FOOD STORE NO 609	1309 A NE 134TH ST	Vancouver	98685
16	BP 7-8	FARGHER LAKE GROCERY	15518 NE FARGHER LAKE HWY	Yacolt	98675
17	CA 7-24	FERN PRAIRIE MARKET	1817 267TH AVE NE	Camas	98607
18	BP 7-16	FIRST CHOICE MKT HOCKINSON CHEVRON	16105 NE 182ND AVE	Brush Prairie	98606
19	BP 7-22	FIVE CORNERS GAS & GROCERY	9404 NE 76TH ST	Vancouver	98662
20	BP 7-06	FRED MEYER FUEL 236	7411 NE 117TH AVE	Vancouver	98662
21	BP 6-29	FRED MEYER FUEL 460	406 NE 139th St & 14001 NE 3rd Court	Vancouver	98606
22	BP 6-29	HAZEL DELL CAR WASH	8200 NE HWY 99	Vancouver	98665
23	BP 6-25	HAZEL DELL SHELL	205 NE 78TH ST	Vancouver	98665
24	BP 7-16	HOCKINSON MARKET	15814 182ND AVE NE	Brush Prairie	98606
25	BP 6-22	HOLLY PARK PROPERTIES LLC "the corner mar	10501 NE HWY 99	Vancouver	98686
26	BP 6-25	HOP-N-SHOP FOOD STORE	1800 78TH ST NE	Vancouver	98665
27	BP 6-25	JACKSONS 501	404 NE 78TH ST	Vancouver	98665
28	BP 6-25	KWIK GAS 2	4409 NE 78TH ST	Vancouver	98665
29	BP 7-22	LINDE LLC	4715 NE 78TH ST	Vancouver	98665
30	BP 6-22	LYLE'S VILLAGE PANTRY	10709 HWY 99 NE	Vancouver	98686
31	BP 6-29	MINIT MART ASTRO 725	12604 NW 36TH AVE	Vancouver	98685
32	BP/CA 6-24	PECK PROPERTIES LLC	7801 NE ST JOHNS RD	Vancouver	98665
33	BP 6-30	PRAIRIE ELECTRIC INC	6000 NE 88TH ST	Vancouver	98665
34	BP 7-17	PRAIRIE SHELL & MART	11817 NE 117TH AVE	Vancouver	98682
35	BP 6-25	QUICK SHOP MINI MART 27	8817 ST JOHNS BLVD	Vancouver	98663
36	BP 6-22	SAFEWAY FUEL 1842	13023 NE HWY 99 B	Vancouver	98686
37	BP 6-29	SALMON CREEK 76	13218 NE HWY 99	Vancouver	98686
38	BP 6-22	SALMON CREEK CHEVRON	2619 NE 134TH ST	Vancouver	98686
39	BP 6-25	TARR LLC	7208 NE ST JOHNS RD	Vancouver	98665
40	BP 6-23	THE SOUTHLAND CORP 2342-24279	12908 NE HWY 99	Vancouver	98686
41	BP 7-22	THE SOUTHLAND CORP 2352-22525A	9411 NE 76TH	Vancouver	98662
42	BP 6-26	USA GAS 62529	14300 NE 20TH AVE BLDG E	Vancouver	98686
43	CA 7-28	VANCOUVER OIL CO - WUBBEN IND PARK	11516 NE 66th STREET	Vancouver	98662
44	BP 7-16	VIEW MARKET	10713 NE 379TH ST	La Center	98629
45	BP 6-29	VILLAGE PANTRY	610 NE 99TH ST	Vancouver	98665
46	BP 7- 7	VOCI & PACIFIC FUEL TRANSPORT	1503 NE 136TH ST	Vancouver	98685
47	BP 7- 7	Z MART	1010 NE 219TH ST	Ridgefield	98642
48	CA 7-20	AMERICAN STONE	17603 NE UNION ROAD	Ridgefield	98642
49	BP 7-24	YARD N GARDEN LAND	1501 NE 102nd STREET	Vancouver	98686
50	CA 7-24	ROOF TOPPERS	5709 NE 88th STREET	Vancouver	98665
51	CA 8-19	FRONTIER LANDSCAPING	11402 NE ST. JOHNS ROAD	Vancouver	98686
52	online	VALERO GAS STATION	111 NE 164th AVENUE	Vancouver	98684
53	BP 7-7	GLENWOOD GROCERY	11811 NE 72nd Avenue	Vancouver	98686
54	BP 8-5	Jackson's 76	8515 NE Andersen Rd	Vancouver	98665

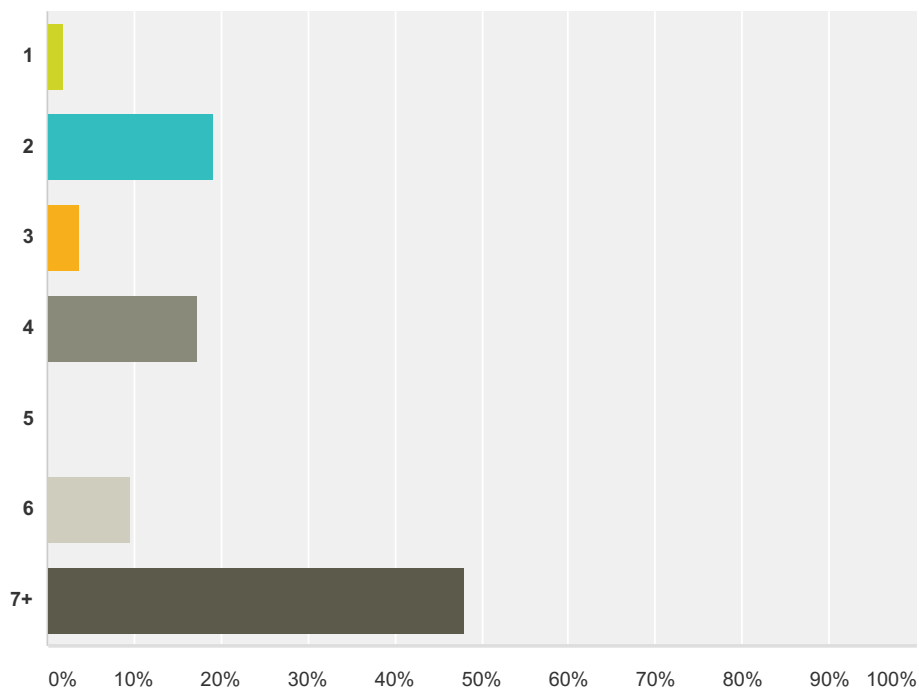
APPENDIX B

Pre-education survey results from SurveyMonkey.

Pre-education Survey

Q1 How many fueling nozzles does your site have? (fueling nozzles means a place to pump fuel from tanks into equipment or vehicles)

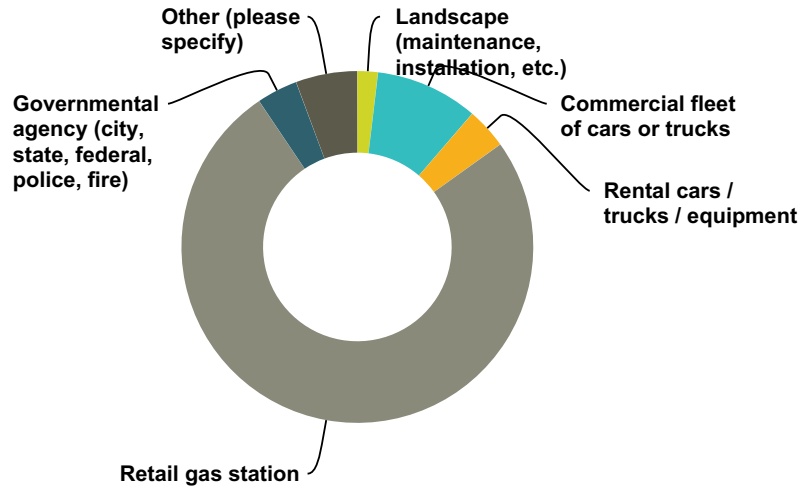
Answered: 52 Skipped: 1



Answer Choices	Responses
1	1.92% 1
2	19.23% 10
3	3.85% 2
4	17.31% 9
5	0.00% 0
6	9.62% 5
7+	48.08% 25
Total	52

Q2 What type of business do you operate that uses a fueling pump?

Answered: 53 Skipped: 0



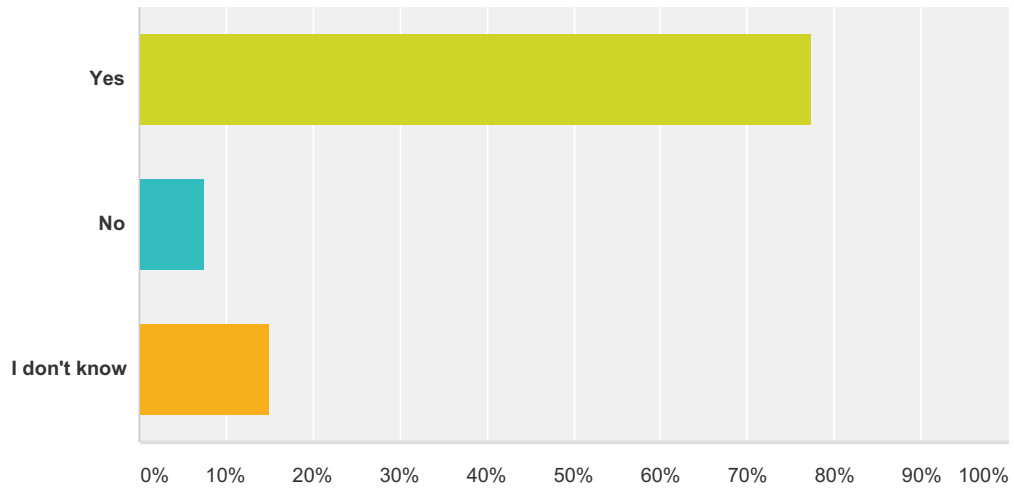
Answer Choices	Responses
Landscape (maintenance, installation, etc.)	1.89% 1
Commercial fleet of cars or trucks	9.43% 5
Rental cars / trucks / equipment	3.77% 2
Retail gas station	75.47% 40
Governmental agency (city, state, federal, police, fire)	3.77% 2
Heavy equipment operator (e.g. construction, industrial, etc.)	0.00% 0
Other (please specify)	5.66% 3
Total	53

#	Other (please specify)	Date
1	See Cary - I think this is a commercial fleet fueling island	7/31/2015 8:37 AM
2	Retail Gas Station and SERVICE station	7/30/2015 3:59 PM
3	Retail Gas Station and CAR WASH	7/30/2015 12:05 PM

Spill Kit Outreach

Q3 Do you have a spill kit at your business for use at your fueling station?

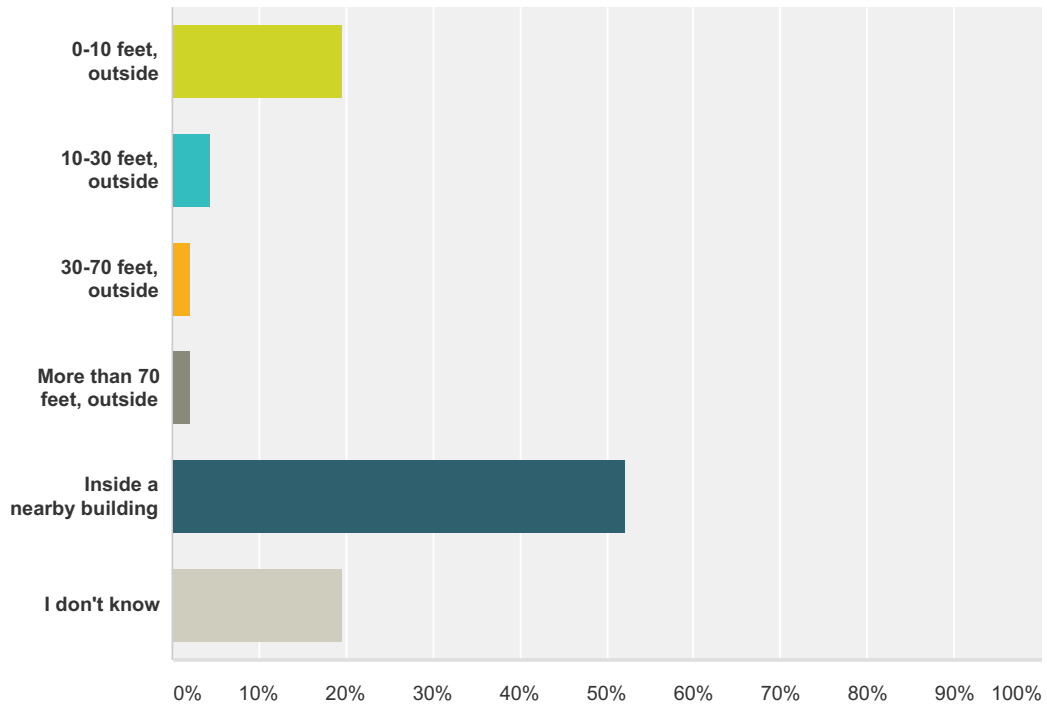
Answered: 53 Skipped: 0



Answer Choices	Responses
Yes	77.36% 41
No	7.55% 4
I don't know	15.09% 8
Total	53

Q4 If you have a spill kit, how far away is it from the fueling pump?

Answered: 46 Skipped: 7

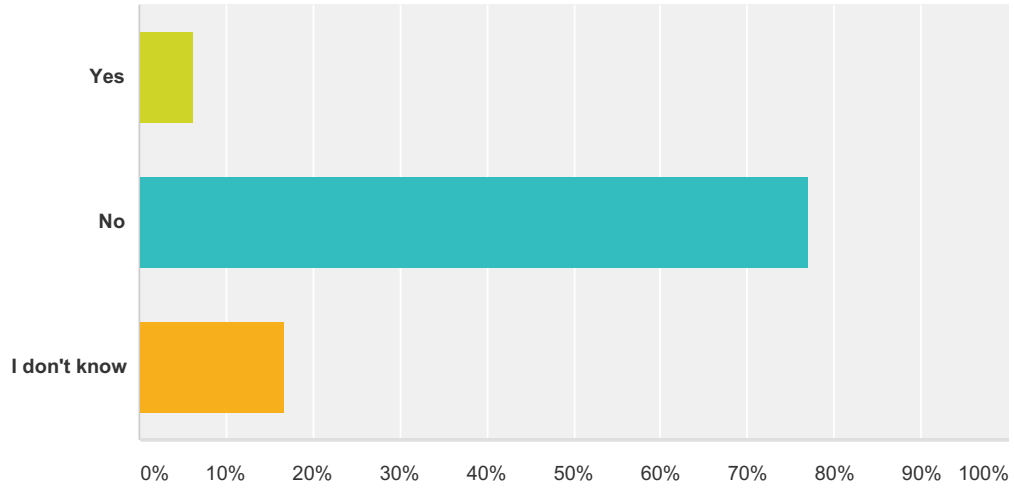


Answer Choices	Responses
0-10 feet, outside	19.57% 9
10-30 feet, outside	4.35% 2
30-70 feet, outside	2.17% 1
More than 70 feet, outside	2.17% 1
Inside a nearby building	52.17% 24
I don't know	19.57% 9
Total	46

Spill Kit Outreach

Q5 Is your spill kit in a locked storage area outside of your main business building?

Answered: 48 Skipped: 5

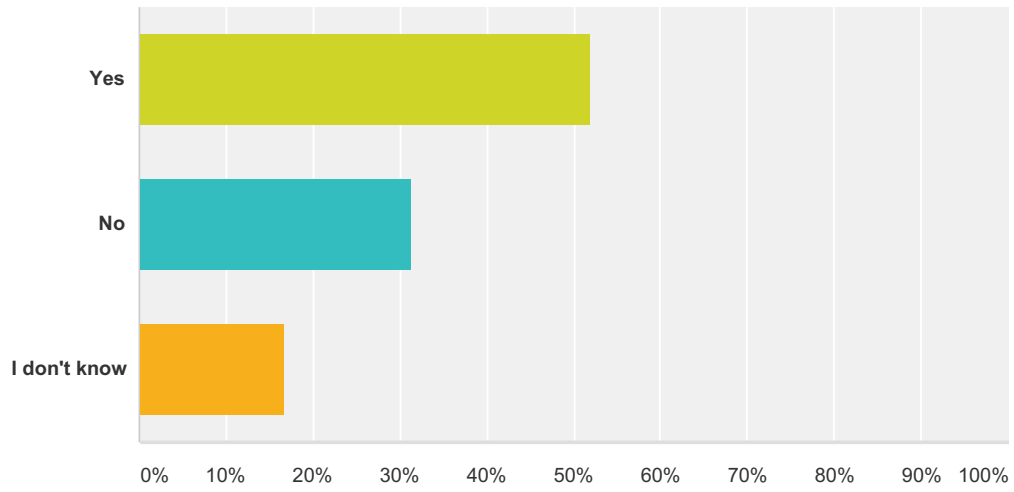


Answer Choices	Responses
Yes	6.25% 3
No	77.08% 37
I don't know	16.67% 8
Total	48

Spill Kit Outreach

Q6 Is your spill kit or storage area labeled so that it is easy to find by the employee?

Answered: 48 Skipped: 5

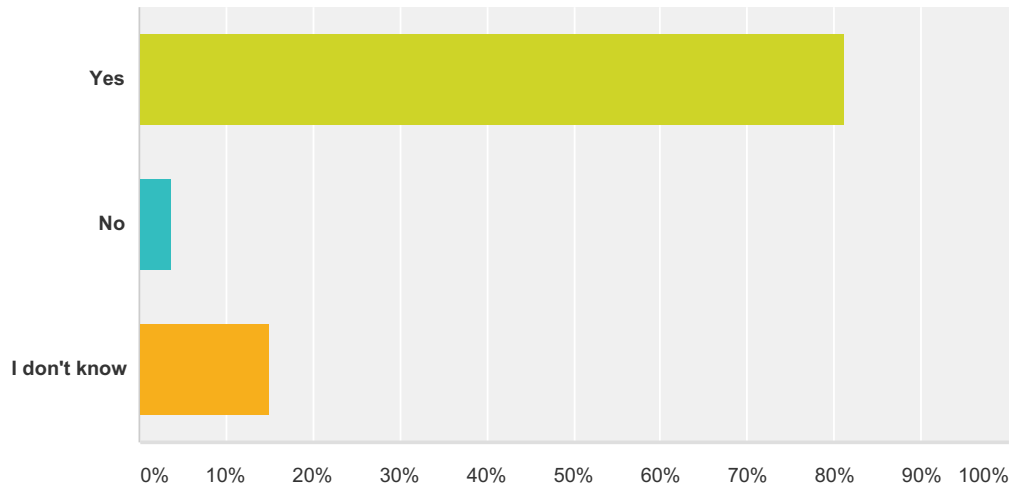


Answer Choices	Responses
Yes	52.08% 25
No	31.25% 15
I don't know	16.67% 8
Total	48

Spill Kit Outreach

Q7 Does your business train employees on the proper and safe use of a spill kit?

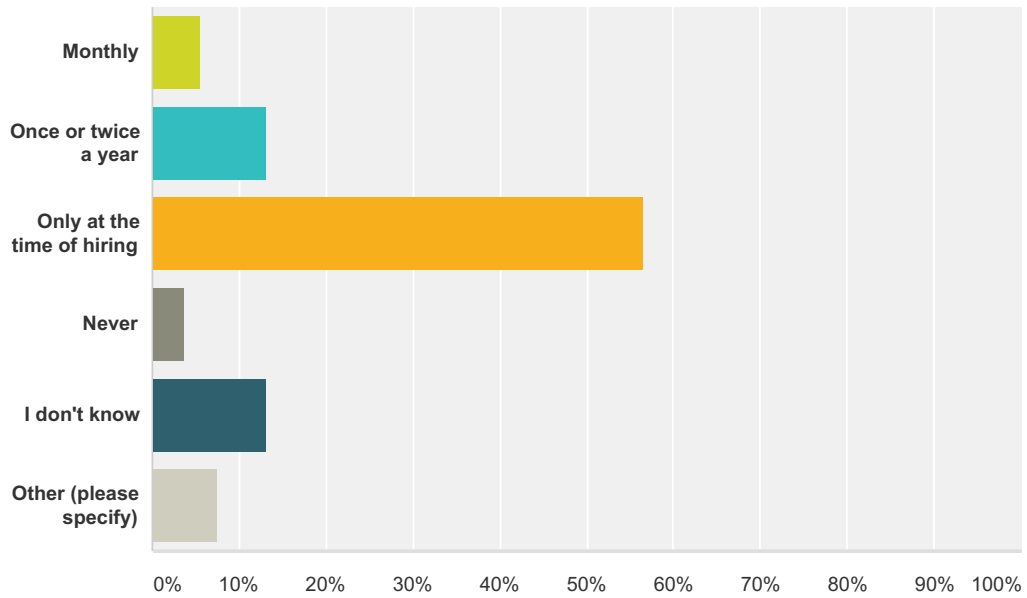
Answered: 53 Skipped: 0



Answer Choices	Responses
Yes	81.13% 43
No	3.77% 2
I don't know	15.09% 8
Total	53

Q8 How often do you train your employees on the proper and safe use of a spill kit?

Answered: 53 Skipped: 0



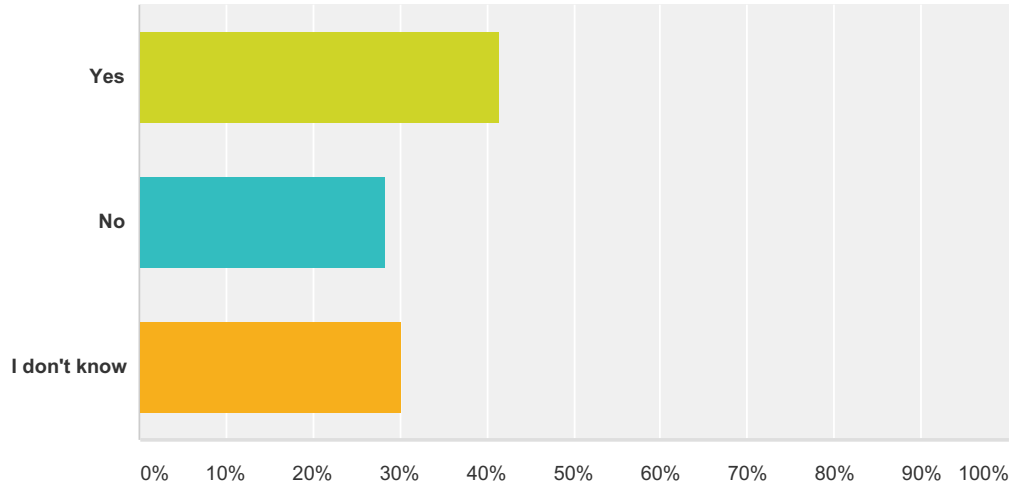
Answer Choices	Responses
Monthly	5.66% 3
Once or twice a year	13.21% 7
Only at the time of hiring	56.60% 30
Never	3.77% 2
I don't know	13.21% 7
Other (please specify)	7.55% 4
Total	53

#	Other (please specify)	Date
1	several times a year	8/19/2015 11:27 AM
2	After they have worked here for awhile	7/31/2015 4:48 PM
3	Open to the public - not staffed Fueling Island	7/31/2015 4:32 PM
4	We are a Fire Department and spill management training is provided to our personnel upon employment during the recruit academy and then as necessary to maintain the skills required for conducting safe and effective spill management.	5/29/2015 4:25 PM

Spill Kit Outreach

Q9 Does your business have a spill plan (details how to prevent spills and what to do in the event of a spill)?

Answered: 53 Skipped: 0

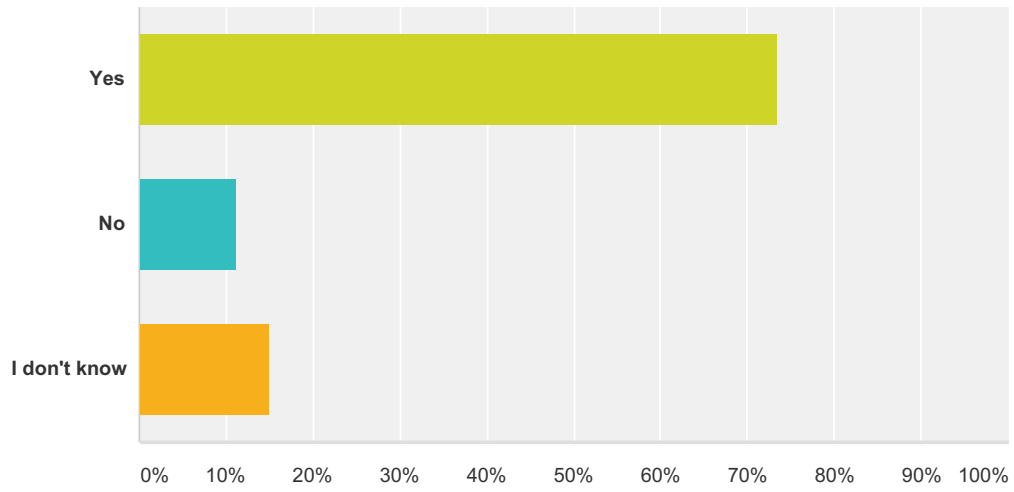


Answer Choices	Responses	
Yes	41.51%	22
No	28.30%	15
I don't know	30.19%	16
Total		53

Spill Kit Outreach

Q10 Does your business know who to contact to report a spill?

Answered: 53 Skipped: 0



Answer Choices	Responses
Yes	73.58% 39
No	11.32% 6
I don't know	15.09% 8
Total	53

Spill Kit Outreach

Q11 If yes, who do they contact?

Answered: 41 Skipped: 12

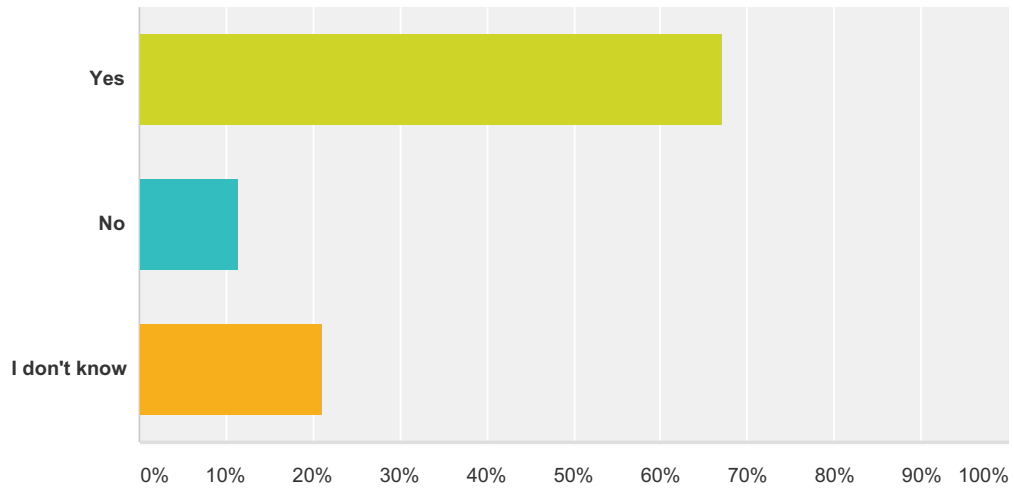
#	Responses	Date
1	Manager	8/6/2015 9:06 AM
2	911	8/4/2015 10:17 AM
3	911	8/4/2015 10:09 AM
4	It's Posted on the sign in the window	8/4/2015 10:05 AM
5	Our Vendor	7/31/2015 4:49 PM
6	911	7/31/2015 4:45 PM
7	911	7/31/2015 4:42 PM
8	"posted on that sign"	7/31/2015 4:39 PM
9	Not able to determine this from a site visit	7/31/2015 4:32 PM
10	Call Becky the boss then 911	7/31/2015 10:33 AM
11	The Manager	7/31/2015 10:27 AM
12	The Boss	7/31/2015 10:24 AM
13	Posted	7/31/2015 10:21 AM
14	phone at pump on auto dial	7/31/2015 10:15 AM
15	911	7/31/2015 10:10 AM
16	911	7/31/2015 9:00 AM
17	On Signage in the Window and at the Fueling Island	7/31/2015 8:42 AM
18	Clark County or 911	7/31/2015 8:38 AM
19	#1 Manager	7/30/2015 4:47 PM
20	911	7/30/2015 4:44 PM
21	911	7/30/2015 4:32 PM
22	Manager	7/30/2015 4:23 PM
23	The Boss and 911	7/30/2015 4:19 PM
24	The Manager	7/30/2015 4:15 PM
25	911 and Ecology	7/30/2015 4:09 PM
26	Area Representative	7/30/2015 4:06 PM
27	Posted in the window	7/30/2015 4:03 PM
28	Owner	7/30/2015 4:00 PM
29	911	7/30/2015 3:53 PM
30	Our Vender	7/30/2015 3:47 PM
31	911	7/30/2015 3:42 PM
32	Henry the Safety Guy	7/30/2015 3:37 PM
33	The boss and 911	7/30/2015 3:32 PM

Spill Kit Outreach

34	7-11 corporate office	7/30/2015 3:29 PM
35	911	7/30/2015 12:00 PM
36	911	7/30/2015 11:54 AM
37	Store Manager	7/30/2015 11:50 AM
38	District Manager	7/30/2015 11:35 AM
39	Contact is dependant upon quantity and escalates accordingly - Supervisor, Chief Officer, Hazmat Team Leader - local and State agencies	5/29/2015 4:38 PM
40	fire station	5/20/2015 10:42 AM
41	Brian Loos	3/31/2015 4:51 PM

Q12 Does your business know when to report a spill?

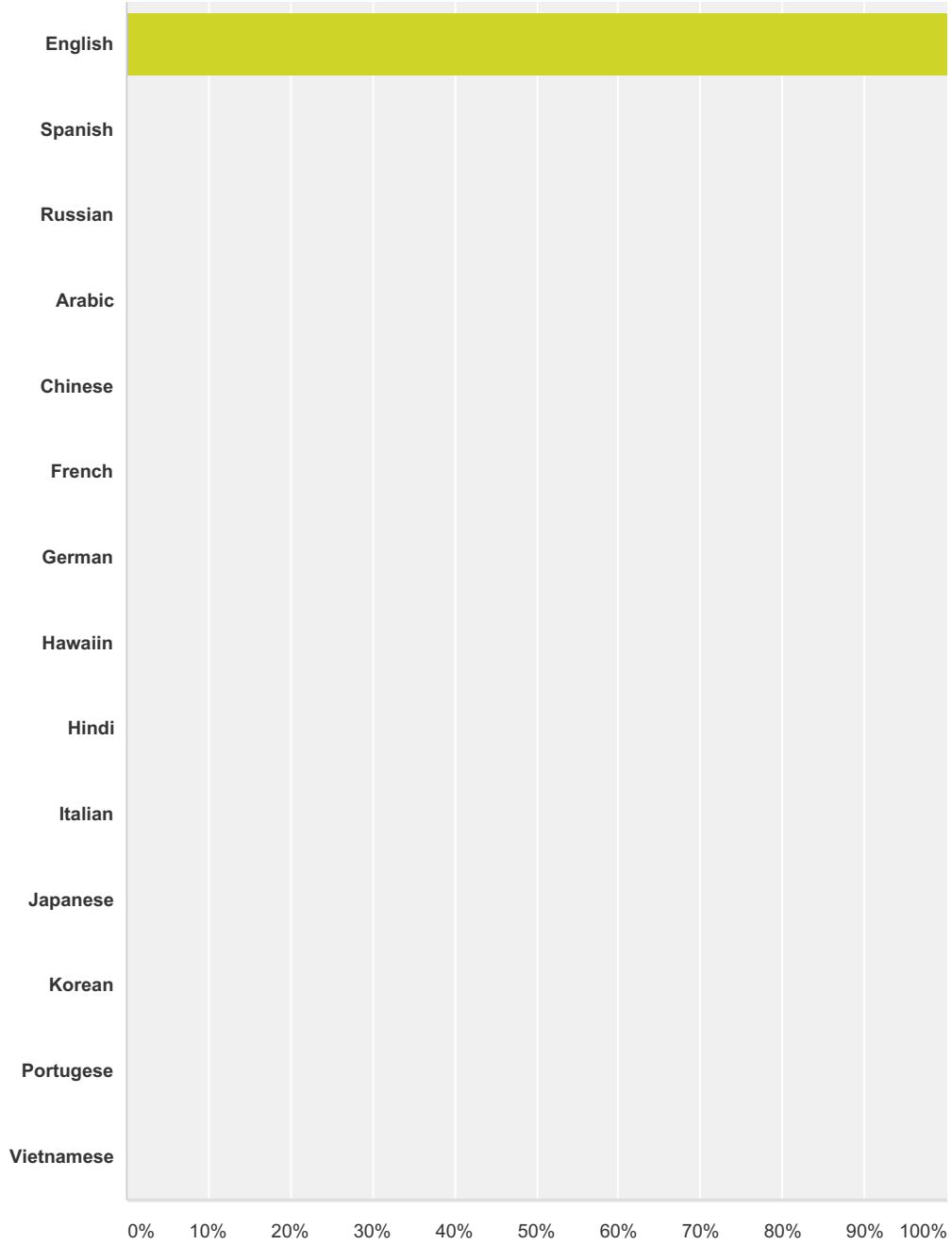
Answered: 52 Skipped: 1



Answer Choices	Responses
Yes	67.31% 35
No	11.54% 6
I don't know	21.15% 11
Total	52

Q13 What is the primary language spoken by employees at your business?

Answered: 52 Skipped: 1



Answer Choices	Responses
English	100.00% 52
Spanish	0.00% 0
Russian	0.00% 0

Spill Kit Outreach

Arabic	0.00%	0
Chinese	0.00%	0
French	0.00%	0
German	0.00%	0
Hawaiin	0.00%	0
Hindi	0.00%	0
Italian	0.00%	0
Japanese	0.00%	0
Korean	0.00%	0
Portugese	0.00%	0
Vietnamese	0.00%	0
Total		52

#	Other:	Date
1	No staff to ask this question.	7/30/2015 11:45 AM

Q14 What is the primary language spoken by customers at your business?

Answered: 51 Skipped: 2



Answer Choices	Responses
English	100.00% 51
Spanish	0.00% 0
Russian	0.00% 0

Spill Kit Outreach

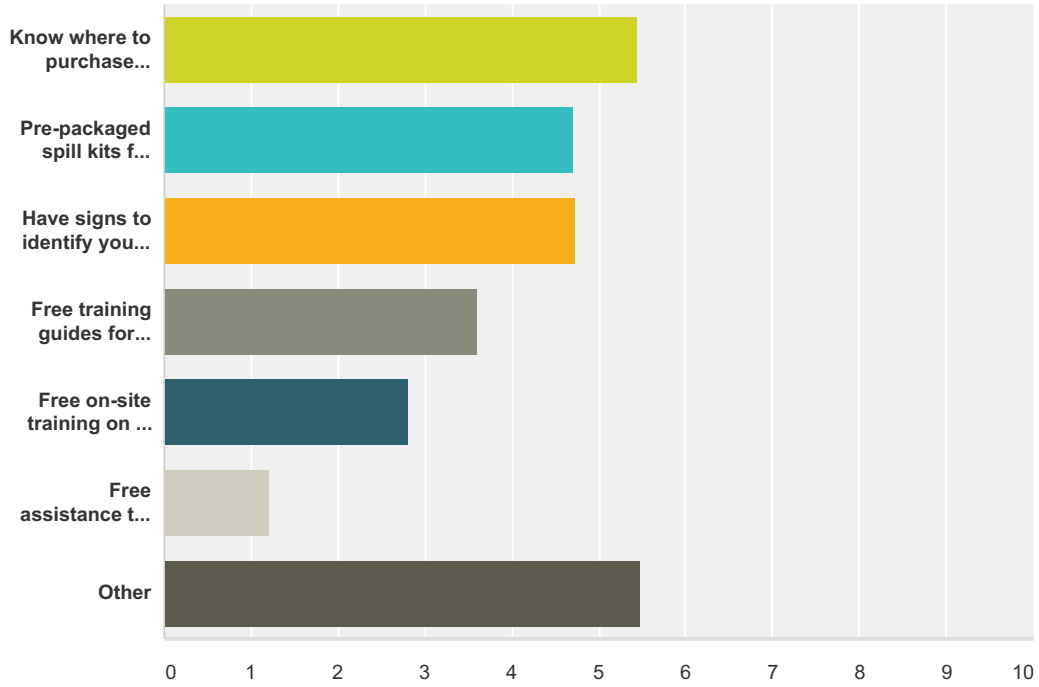
Arabic	0.00%	0
Chinese	0.00%	0
French	0.00%	0
German	0.00%	0
Hawaiin	0.00%	0
Hindi	0.00%	0
Italian	0.00%	0
Japanese	0.00%	0
Korean	0.00%	0
Portugese	0.00%	0
Vietnamese	0.00%	0
Total		51

#	Other:	Date
1	No staff to ask this question.	7/30/2015 11:45 AM
2	n/a	5/29/2015 4:40 PM

Spill Kit Outreach

Q15 What would help ensure access to a spill kit at your fueling station(s)? Rank in your preferred order with 1 being the highest

Answered: 53 Skipped: 0



	1	2	3	4	5	6	7	Total	Score
Know where to purchase materials to make your own spill kit	7.55% 4	50.94% 27	22.64% 12	16.98% 9	1.89% 1	0.00% 0	0.00% 0	53	5.45
Pre-packaged spill kits for purchase	7.55% 4	5.66% 3	52.83% 28	20.75% 11	11.32% 6	1.89% 1	0.00% 0	53	4.72
Have signs to identify your spill kit location	28.30% 15	3.77% 2	1.89% 1	50.94% 27	9.43% 5	5.66% 3	0.00% 0	53	4.74
Free training guides for employees (videos, posters, brochures)	7.55% 4	9.43% 5	0.00% 0	11.32% 6	64.15% 34	7.55% 4	0.00% 0	53	3.62
Free on-site training on how to use a spill kit, including ideal storage location	7.69% 4	5.77% 3	3.85% 2	0.00% 0	7.69% 4	75.00% 39	0.00% 0	52	2.81
Free assistance to develop a spill response plan	0.00% 0	0.00% 0	0.00% 0	0.00% 0	5.66% 3	9.43% 5	84.91% 45	53	1.21
Other	41.51% 22	24.53% 13	18.87% 10	0.00% 0	0.00% 0	1.89% 1	13.21% 7	53	5.49

Spill Kit Outreach

Q16 Other assistance idea from15:

Answered: 46 Skipped: 7

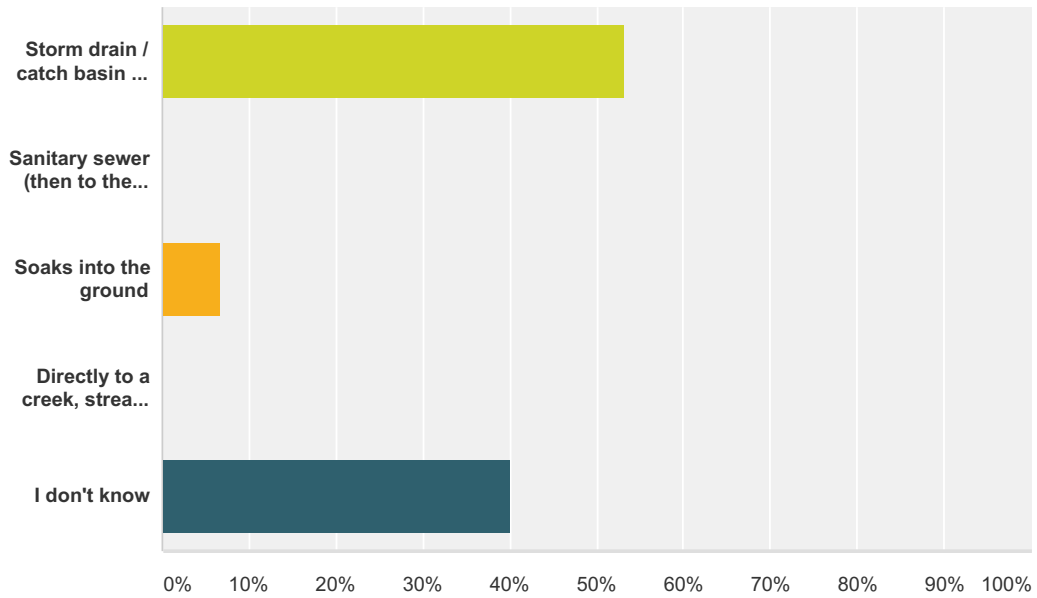
#	Responses	Date
1	already has a spill kit.	8/19/2015 11:28 AM
2	opted for option one as #1	8/6/2015 9:06 AM
3	got it covered... on line trainings and certs taken - examples given, best I've seen so far.	8/4/2015 10:18 AM
4	got it covered thanks.. taking on line trainings (he gave me examples) interested in or took some department of ecology training -Bob to follow up	8/4/2015 10:11 AM
5	Stopped at number one...	8/4/2015 10:06 AM
6	All of these would be nice	7/31/2015 4:50 PM
7	Stopped at number one	7/31/2015 4:46 PM
8	Stopped at number one	7/31/2015 4:43 PM
9	No comment on that...	7/31/2015 4:39 PM
10	Not able to determine... unstaffed fueling island	7/31/2015 4:33 PM
11	Stopped at one and two.	7/31/2015 10:34 AM
12	Not really interested	7/31/2015 10:31 AM
13	I don't know	7/31/2015 10:27 AM
14	I don't know	7/31/2015 10:24 AM
15	Stopped at one and two	7/31/2015 10:21 AM
16	Stopped after number one.	7/31/2015 10:16 AM
17	all of these would be fine	7/31/2015 9:00 AM
18	Stopped at 1 and 2.	7/31/2015 8:43 AM
19	N/A	7/31/2015 8:38 AM
20	You need to talk to the site manager.	7/31/2015 8:34 AM
21	stopped at option one...	7/31/2015 8:31 AM
22	selected options one and two.	7/31/2015 8:28 AM
23	stopped at option one	7/30/2015 4:48 PM
24	No thanks	7/30/2015 4:44 PM
25	Picked option one	7/30/2015 4:32 PM
26	we don't need any of this, we have it covered.	7/30/2015 4:23 PM
27	stopped at option one	7/30/2015 4:19 PM
28	Selected options one and two.	7/30/2015 4:16 PM
29	stopped at number one.	7/30/2015 4:12 PM
30	Selected only option one and two	7/30/2015 4:10 PM
31	Don't need any of these options.	7/30/2015 4:07 PM
32	Selected Option 1.	7/30/2015 4:04 PM

Spill Kit Outreach

33	Selected options one and two...	7/30/2015 4:00 PM
34	selected options one and two only.	7/30/2015 3:57 PM
35	Selected options one and two as priorities.	7/30/2015 3:54 PM
36	Picked Priority One and Two.. stopped there.	7/30/2015 3:51 PM
37	Selected a singular number one option.	7/30/2015 3:48 PM
38	we got this down - ready for just about anything. No needs	7/30/2015 3:43 PM
39	You should ask Henry our Safety guy about that.	7/30/2015 3:38 PM
40	Interested in All of these options	7/30/2015 3:33 PM
41	ask 7-11 not me - this is 7-11's responsibility	7/30/2015 3:29 PM
42	All of them would be good.	7/30/2015 12:06 PM
43	All of these sounded good to Lyle.	7/30/2015 12:02 PM
44	ranked number one only -	7/30/2015 11:55 AM
45	No Comment on 15	7/30/2015 11:51 AM
46	Un-Staffed Fueling station for commercial vehicles. Dirty Place	7/30/2015 11:45 AM

Q17 Do you know where the storm water runoff from your business drains to?

Answered: 45 Skipped: 8



Answer Choices	Responses
Storm drain / catch basin / inlet	53.33% 24
Sanitary sewer (then to the treatment plant)	0.00% 0
Soaks into the ground	6.67% 3
Directly to a creek, stream or river	0.00% 0
I don't know	40.00% 18
Total	45

#	Other (please specify)	Date
1	Surface: Sheet flows south and east, no catch basins	8/19/2015 11:29 AM
2	I built it.. so yes I know where it goes...	7/31/2015 4:50 PM
3	It goes down hill...	7/31/2015 4:46 PM
4	Storm Drain to OW sep	7/30/2015 4:49 PM
5	"away"	7/30/2015 4:16 PM
6	"It goes to that Thingy"	7/30/2015 4:13 PM
7	the street	7/30/2015 4:01 PM
8	Oil Water Separator to MS4	7/30/2015 11:45 AM
9	Runoff retention pond	5/29/2015 4:47 PM

Spill Kit Outreach

Q18 Do you know what watershed your business is in? (a watershed is an area that drains to a local creek, stream or river)

Answered: 51 Skipped: 2

#	Responses	Date
1	Yes - Curtain Creek	8/19/2015 11:29 AM
2	nope	8/6/2015 9:06 AM
3	Gee Creek was CLOSE!! Whipple Creek was the answers.. Points!	8/4/2015 10:19 AM
4	No	8/4/2015 10:06 AM
5	Lewis River?	7/31/2015 4:50 PM
6	Nope	7/31/2015 4:46 PM
7	Nope	7/31/2015 4:43 PM
8	No	7/31/2015 4:40 PM
9	Not able to determine	7/31/2015 4:33 PM
10	No	7/31/2015 10:34 AM
11	No	7/31/2015 10:31 AM
12	No	7/31/2015 10:28 AM
13	no	7/31/2015 10:24 AM
14	no	7/31/2015 10:21 AM
15	no	7/31/2015 10:16 AM
16	no	7/31/2015 10:11 AM
17	NO	7/31/2015 9:01 AM
18	No	7/31/2015 8:43 AM
19	No	7/31/2015 8:38 AM
20	No	7/31/2015 8:34 AM
21	No	7/31/2015 8:32 AM
22	No	7/31/2015 8:28 AM
23	no	7/30/2015 4:49 PM
24	No	7/30/2015 4:44 PM
25	Yes - Salmon Creek	7/30/2015 4:33 PM
26	Yes "salmon creek"	7/30/2015 4:25 PM
27	no	7/30/2015 4:19 PM
28	Nope	7/30/2015 4:16 PM
29	YES! Salmon Creek	7/30/2015 4:13 PM
30	No	7/30/2015 4:10 PM
31	No	7/30/2015 4:07 PM

Spill Kit Outreach

32	"clark county" = No	7/30/2015 4:04 PM
33	No	7/30/2015 4:01 PM
34	No	7/30/2015 3:57 PM
35	"clark county" = No	7/30/2015 3:54 PM
36	no	7/30/2015 3:51 PM
37	No	7/30/2015 3:48 PM
38	no	7/30/2015 3:43 PM
39	no	7/30/2015 3:38 PM
40	no	7/30/2015 3:33 PM
41	no	7/30/2015 3:30 PM
42	Yes - Salmon Creek	7/30/2015 12:06 PM
43	no	7/30/2015 12:02 PM
44	No	7/30/2015 11:56 AM
45	No	7/30/2015 11:51 AM
46	No staff to answer this question	7/30/2015 11:45 AM
47	No	7/30/2015 11:36 AM
48	no	7/30/2015 11:26 AM
49	Property sits on Burnt Bridge Creek watershed and the border of the Salmon Creek watershed is just North of the property.	5/29/2015 4:47 PM
50	no	5/20/2015 10:46 AM
51	no	3/31/2015 4:51 PM

Spill Kit Outreach

Q19 Contact information

Answered: 52 Skipped: 1

Answer Choices	Responses
Your Name	100.00% 52
Your Company Name	100.00% 52
Your Survey ID number (Red number on postcard)	100.00% 52
Address 2	0.00% 0
City/Town	0.00% 0
Washington	0.00% 0
ZIP/Postal Code	0.00% 0
Country	0.00% 0
Email Address	15.38% 8
Phone Number	100.00% 52

#	Your Name	Date
1	Steve Pash	8/19/2015 11:30 AM
2	Jennifer Hill	8/6/2015 9:07 AM
3	Ali Nafeie	8/4/2015 10:21 AM
4	Stephanie Shope - Big Boss is Mike	8/4/2015 10:08 AM
5	Bill and Roxanne Doty	7/31/2015 4:53 PM
6	Michelle Baldwin	7/31/2015 4:47 PM
7	Owner Jim - "He knows all this" (said two employees)	7/31/2015 4:44 PM
8	Alicia Woods	7/31/2015 4:41 PM
9	No Name - No staff or operator on site	7/31/2015 4:36 PM
10	Becky Graybill	7/31/2015 10:35 AM
11	Paul Singh	7/31/2015 10:32 AM
12	Matt Shannon	7/31/2015 10:28 AM
13	Justin Gordon	7/31/2015 10:25 AM
14	Cheryl Honkala	7/31/2015 10:22 AM
15	David McDonald	7/31/2015 10:17 AM
16	Mark Sonney	7/31/2015 10:14 AM
17	Jimmy Singh	7/31/2015 9:02 AM
18	Renee and Alli	7/31/2015 8:44 AM
19	Rob Amburgy	7/31/2015 8:39 AM
20	Wubben Industrial Park	7/31/2015 8:35 AM

Spill Kit Outreach

21	Dan Foley	7/31/2015 8:32 AM
22	Judah Thompson	7/31/2015 8:29 AM
23	Tiffany Thompson	7/30/2015 4:50 PM
24	Jeanne Perry	7/30/2015 4:45 PM
25	Sarah Clairmont	7/30/2015 4:42 PM
26	Kim Randoulph - the best interview yet	7/30/2015 4:25 PM
27	Jen Thomas	7/30/2015 4:20 PM
28	Pam (should talk to Linda the Manager)	7/30/2015 4:17 PM
29	Sarah Wilmot	7/30/2015 4:14 PM
30	Jasdeap Thin	7/30/2015 4:11 PM
31	Don Olander	7/30/2015 4:08 PM
32	Brian Peck	7/30/2015 4:05 PM
33	Shane Backstron	7/30/2015 4:02 PM
34	Tracy Jones (Manager)	7/30/2015 3:58 PM
35	Paul Singh	7/30/2015 3:55 PM
36	Thuy Le	7/30/2015 3:52 PM
37	Sarah Jackson	7/30/2015 3:49 PM
38	Benjamin Missner	7/30/2015 3:45 PM
39	Troy Kivari for Henery the Safety Guy	7/30/2015 3:39 PM
40	Beth and Gail	7/30/2015 3:34 PM
41	Sandeg Singh	7/30/2015 3:31 PM
42	She Dewin	7/30/2015 12:08 PM
43	Lyle Nelson	7/30/2015 12:03 PM
44	Kayla for Romi Kanal	7/30/2015 11:57 AM
45	Matt Thompson for Jim Hansen	7/30/2015 11:52 AM
46	Tarr - Self Serve Fuel Island	7/30/2015 11:46 AM
47	Robbie Hoffman	7/30/2015 11:37 AM
48	Kent Stradley	7/30/2015 11:27 AM
49	Lyle Nelson	6/23/2015 11:15 AM
50	Please don't enter us in the drawing	5/29/2015 4:50 PM
51	wansup choi	5/20/2015 10:47 AM
52	Mark Valentine	3/31/2015 4:53 PM
#	Your Company Name	Date
1	Frontier Landscaping	8/19/2015 11:30 AM
2	Jacksons food store #502	8/6/2015 9:07 AM
3	Ali's Chevron	8/4/2015 10:21 AM
4	Circle K - 76 Station	8/4/2015 10:08 AM
5	Fargher Lake Grocery	7/31/2015 4:53 PM

Spill Kit Outreach

6	View Market	7/31/2015 4:47 PM
7	The Hockinson Market	7/31/2015 4:44 PM
8	1st Choice Market	7/31/2015 4:41 PM
9	Around the Clock Fuel	7/31/2015 4:36 PM
10	Chelatchie Prairie General Store	7/31/2015 10:35 AM
11	z-Mart	7/31/2015 10:32 AM
12	Glenwood Grocery and Fuel	7/31/2015 10:28 AM
13	VOCI and Pacific Fuel	7/31/2015 10:25 AM
14	five corners gas and grocery	7/31/2015 10:22 AM
15	Linde LLC	7/31/2015 10:17 AM
16	Yard and Garden Land	7/31/2015 10:14 AM
17	Astro Gas and EZ Mart	7/31/2015 9:02 AM
18	7-11 Southland Corp #22525	7/31/2015 8:44 AM
19	American Stone	7/31/2015 8:39 AM
20	Unstaffed fueling island	7/31/2015 8:35 AM
21	Rooftoppers	7/31/2015 8:32 AM
22	Fern Prairie Market and Chevron	7/31/2015 8:29 AM
23	Fred Meyer Fuel #236	7/30/2015 4:50 PM
24	B and B Country Store	7/30/2015 4:45 PM
25	Shell/Astro/Felida Market	7/30/2015 4:42 PM
26	Fred Meyer Fuel 460	7/30/2015 4:25 PM
27	Expressway Food Store / Shell SC Wayside market	7/30/2015 4:20 PM
28	Arco	7/30/2015 4:17 PM
29	7-11 #24279	7/30/2015 4:14 PM
30	Arco 99th street market	7/30/2015 4:11 PM
31	7-11	7/30/2015 4:08 PM
32	Arco	7/30/2015 4:05 PM
33	Hazel Dell Shell	7/30/2015 4:02 PM
34	Shell - Jackson's 501	7/30/2015 3:58 PM
35	Hop and Shop	7/30/2015 3:55 PM
36	T and T Food Mart	7/30/2015 3:52 PM
37	Minit Mart - Astro Gas	7/30/2015 3:49 PM
38	CostCo Fuel #772	7/30/2015 3:45 PM
39	Prairie Electric Inc.	7/30/2015 3:39 PM
40	Chevron Village Pantry	7/30/2015 3:34 PM
41	7-11	7/30/2015 3:31 PM
42	hazel Dell Car Wash	7/30/2015 12:08 PM
43	Lyle's Village Pantry	7/30/2015 12:03 PM

Spill Kit Outreach

44	Salmon Creek Chevron	7/30/2015 11:57 AM
45	Safeway Salmon Creek	7/30/2015 11:52 AM
46	Tarr	7/30/2015 11:46 AM
47	Mobile #418	7/30/2015 11:37 AM
48	Corner Market	7/30/2015 11:27 AM
49	Lyle's Village Pantry	6/23/2015 11:15 AM
50	Vancouver Fire Department - Station 5	5/29/2015 4:50 PM
51	Jim's food mart and gas	5/20/2015 10:47 AM
52	Clark County Facilities	3/31/2015 4:53 PM
#	Your Survey ID number (Red number on postcard)	Date
1	11402 NE St. Johns Road	8/19/2015 11:30 AM
2	8515 NE Andreson Road 98662	8/6/2015 9:07 AM
3	604 NE 179th	8/4/2015 10:21 AM
4	7701 NE 117th Ave	8/4/2015 10:08 AM
5	15518 NE Fargher Lake Hwy	7/31/2015 4:53 PM
6	10713 NE 379th Street	7/31/2015 4:47 PM
7	15814 182nd Ave NE	7/31/2015 4:44 PM
8	6105 NE 182nd Ave	7/31/2015 4:41 PM
9	21604 NE 399th Street	7/31/2015 4:36 PM
10	42411 NE Yale Bridge Road	7/31/2015 10:35 AM
11	1010 NE 219th Street 98642	7/31/2015 10:32 AM
12	11811 NE 72nd	7/31/2015 10:28 AM
13	1503 NE 136th Street	7/31/2015 10:25 AM
14	9404 NE 76TH ST	7/31/2015 10:22 AM
15	4715 NE 78th Street	7/31/2015 10:17 AM
16	1501 NE 102nd Street	7/31/2015 10:14 AM
17	9511 NE 76th Street	7/31/2015 9:02 AM
18	9411 NE 76TH	7/31/2015 8:44 AM
19	17603 NE Union Road	7/31/2015 8:39 AM
20	11516 NE 66th Street	7/31/2015 8:35 AM
21	5709 NE 88th street	7/31/2015 8:32 AM
22	1817 NE 267the Ave	7/31/2015 8:29 AM
23	7411 NE 117th Ave 98662	7/30/2015 4:50 PM
24	1804 NW 19th Street	7/30/2015 4:45 PM
25	12604 NW 36TH AVE	7/30/2015 4:42 PM
26	7411 NE 139th Street	7/30/2015 4:25 PM
27	1309 134th Street	7/30/2015 4:20 PM
28	13218 NE HWY 99	7/30/2015 4:17 PM

Spill Kit Outreach

29	12908 NE Hwy 99	7/30/2015 4:14 PM
30	609 NE 99th Street	7/30/2015 4:11 PM
31	7715 St Johns Road	7/30/2015 4:08 PM
32	7801 NE st. John's Road	7/30/2015 4:05 PM
33	205 NE 78TH ST	7/30/2015 4:02 PM
34	404 NE 78th Street	7/30/2015 3:58 PM
35	1800 NE 78th Street 98665	7/30/2015 3:55 PM
36	4409 NE 78th Street 98665	7/30/2015 3:52 PM
37	8817 St. Johns Blvd	7/30/2015 3:49 PM
38	6606 NE 84TH ST	7/30/2015 3:45 PM
39	6000 NE 88th Street	7/30/2015 3:39 PM
40	610 NE 99th Street	7/30/2015 3:34 PM
41	6212 NE hwy 99 98665	7/30/2015 3:31 PM
42	8600 NE hwy 99 98665	7/30/2015 12:08 PM
43	10709 HWY 99 NE 98686	7/30/2015 12:03 PM
44	2619 NE 134th Street	7/30/2015 11:57 AM
45	12909 NE hwy 99	7/30/2015 11:52 AM
46	7208 NE St. John's Road	7/30/2015 11:46 AM
47	14300 NE 20th Ave	7/30/2015 11:37 AM
48	10501 NE Hwy 99	7/30/2015 11:27 AM
49	00000	6/23/2015 11:15 AM
50	43	5/29/2015 4:50 PM
51	54	5/20/2015 10:47 AM
52	not given number	3/31/2015 4:53 PM
#	Address 2	Date
	There are no responses.	
#	City/Town	Date
	There are no responses.	
#	Washington	Date
	There are no responses.	
#	ZIP/Postal Code	Date
	There are no responses.	
#	Country	Date
	There are no responses.	
#	Email Address	Date
1	nafeie_ra@yahoo.com	8/4/2015 10:21 AM
2	MGR. Tome Rake 360-254-1671	7/31/2015 4:41 PM
3	david.m.mcdonald@linde.com	7/31/2015 10:17 AM
4	jass91304@yahoo.com	7/30/2015 4:11 PM

Spill Kit Outreach

5	No contact info	7/30/2015 11:46 AM
6	ward.knable@cityofvancouver.us	5/29/2015 4:50 PM
7	wansupchoi@gmail.com	5/20/2015 10:47 AM
8	Mark.Valentine@clark.wa.gov	3/31/2015 4:53 PM
#	Phone Number	Date
1	360-574-8979	8/19/2015 11:30 AM
2	360-896-0968	8/6/2015 9:07 AM
3	360-573-9651	8/4/2015 10:21 AM
4	Mike's Number 360-944 5711	8/4/2015 10:08 AM
5	360-263-4464	7/31/2015 4:53 PM
6	360-263-4299	7/31/2015 4:47 PM
7	Jim: 604-2193	7/31/2015 4:44 PM
8	360-253-9149	7/31/2015 4:41 PM
9	Not posted on site	7/31/2015 4:36 PM
10	360-921-5856	7/31/2015 10:35 AM
11	887-8531	7/31/2015 10:32 AM
12	573-4665	7/31/2015 10:28 AM
13	360-574-5440	7/31/2015 10:25 AM
14	360-896-5656	7/31/2015 10:22 AM
15	360-608-3837	7/31/2015 10:17 AM
16	360) 573-7172	7/31/2015 10:14 AM
17	360-597-4490	7/31/2015 9:02 AM
18	360-254-6475	7/31/2015 8:44 AM
19	360-573-8055	7/31/2015 8:39 AM
20	800 523-0600 or 360-574-5440	7/31/2015 8:35 AM
21	360-574-7248	7/31/2015 8:32 AM
22	360-834-3504	7/31/2015 8:29 AM
23	Yikes, no number...	7/30/2015 4:50 PM
24	360-573-5181	7/30/2015 4:45 PM
25	360-573-5231	7/30/2015 4:42 PM
26	571-2968	7/30/2015 4:25 PM
27	360-521-0155	7/30/2015 4:20 PM
28	360-936-5839	7/30/2015 4:17 PM
29	360-573-6417	7/30/2015 4:14 PM
30	360-718-8710	7/30/2015 4:11 PM
31	573-3013	7/30/2015 4:08 PM
32	360-571-8647	7/30/2015 4:05 PM
33	360-574-1833	7/30/2015 4:02 PM

Spill Kit Outreach

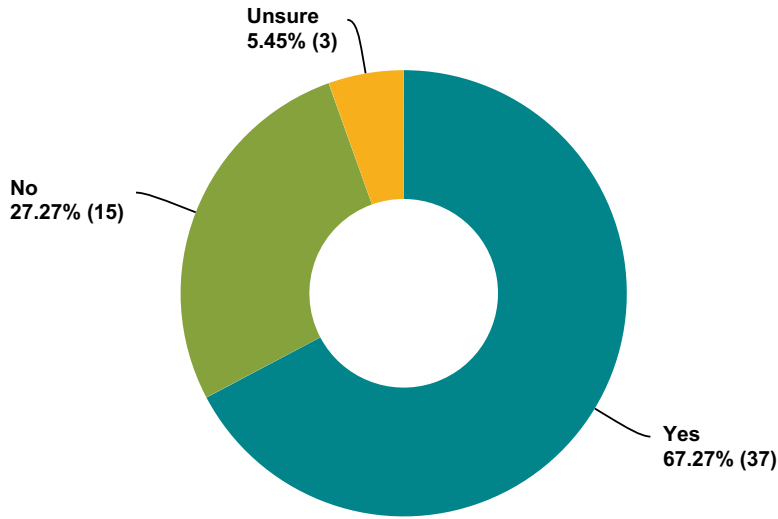
34	574-2209	7/30/2015 3:58 PM
35	360-574-3354	7/30/2015 3:55 PM
36	360-574-7066	7/30/2015 3:52 PM
37	360-574-3551	7/30/2015 3:49 PM
38	360-573-4011	7/30/2015 3:45 PM
39	816-7338 or Henery 573-2750	7/30/2015 3:39 PM
40	360-574-1372	7/30/2015 3:34 PM
41	360-696-9061	7/30/2015 3:31 PM
42	360-574-1636	7/30/2015 12:08 PM
43	360-607-4361	7/30/2015 12:03 PM
44	360-574-5245	7/30/2015 11:57 AM
45	360-566-7980	7/30/2015 11:52 AM
46	No contact info	7/30/2015 11:46 AM
47	360-576-3849	7/30/2015 11:37 AM
48	360-573-7527	7/30/2015 11:27 AM
49	360-607-4361	6/23/2015 11:15 AM
50	360-487-7207	5/29/2015 4:50 PM
51	3602533622	5/20/2015 10:47 AM
52	3972282	3/31/2015 4:53 PM

APPENDIX C

Post-education survey results from SurveyMonkey.

Q1 Do you have a dedicated spill kit for your fueling pumps?(Dedicated means it is labeled and set aside to manage spills as opposed to merchandise available for purchase like kitty litter and paper towels).

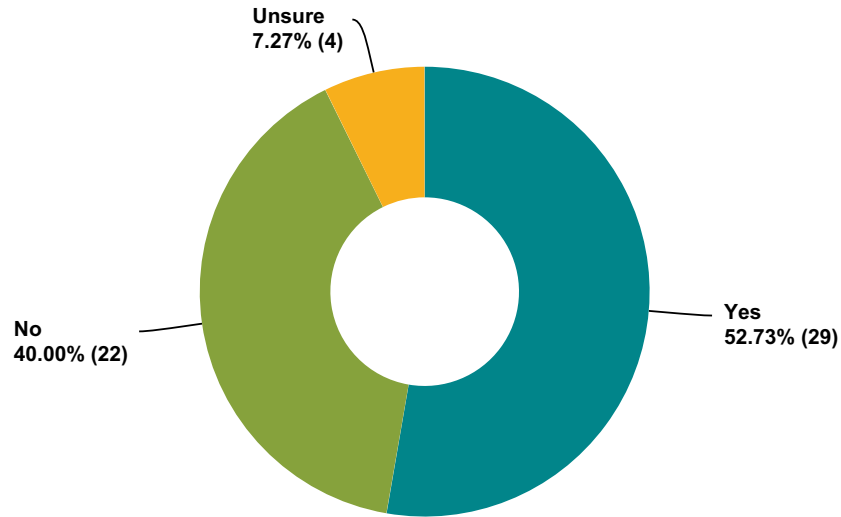
Answered: 55 Skipped: 0



Answer Choices	Responses	
Yes	67.27%	37
No	27.27%	15
Unsure	5.45%	3
Total		55

Q2 Is your spill kit labelled for use by employees / customers? (Should be easy to read)

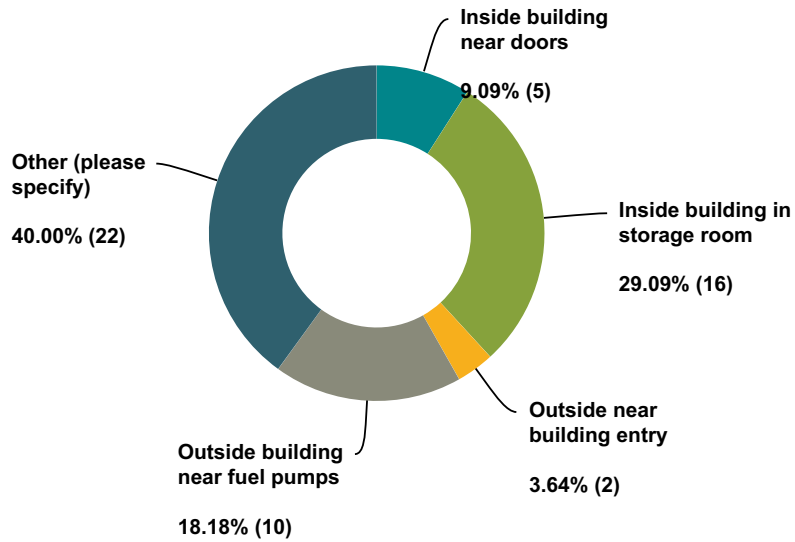
Answered: 55 Skipped: 0



Answer Choices	Responses	
Yes	52.73%	29
No	40.00%	22
Unsure	7.27%	4
Total		55

Q3 Where is your spill kit located?

Answered: 55 Skipped: 0



Answer Choices	Responses
Inside building near doors	9.09% 5
Inside building in storage room	29.09% 16
Outside near building entry	3.64% 2
Outside building near fuel pumps	18.18% 10
Other (please specify)	40.00% 22
Total	55

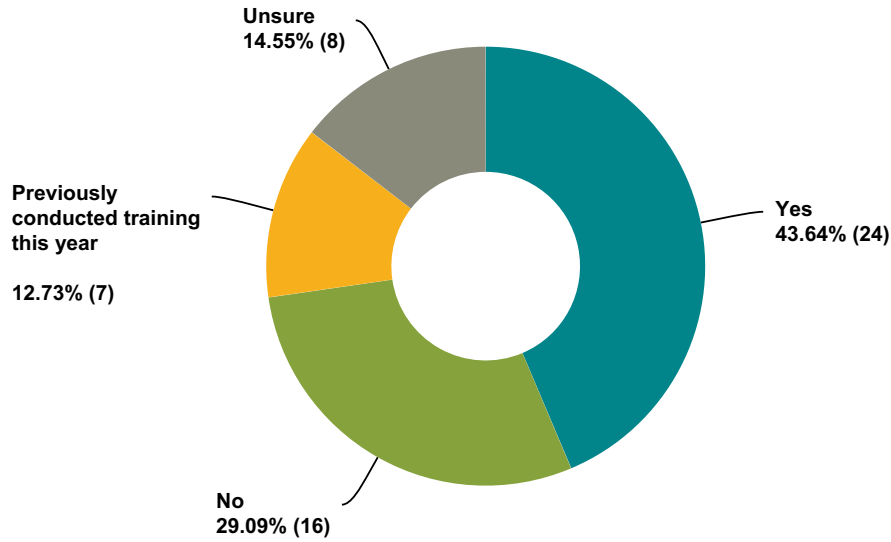
#	Other (please specify)	Date
1	Inside locked storage next to entrance	12/2/2015 11:32 AM
2	Unsure	12/2/2015 11:30 AM
3	I didn't feel like the manager here was being honest with me. I saw no spill kit - no labeling - nothing where he said it was	12/2/2015 11:27 AM
4	don't have one	12/2/2015 11:21 AM
5	unknown	12/2/2015 10:42 AM
6	Kitty litter off the shelf - that's our spill kit	12/2/2015 10:40 AM
7	any spill kit materials are locked up in a shed at this unstaffed fueling island	12/2/2015 10:17 AM
8	unsure	12/2/2015 10:09 AM
9	Doesn't have one	12/1/2015 4:36 PM
10	kitty litter inside building doors	12/1/2015 4:26 PM
11	kitty litter	12/1/2015 4:21 PM
12	kitty litter inside building	12/1/2015 4:05 PM
13	Both inside building near doors and at pumps	12/1/2015 3:59 PM

Spill Kit Use - Post Education

14	no spill kit	12/1/2015 3:14 PM
15	kitty litter in shed next to pumps	12/1/2015 3:06 PM
16	no spill kit	12/1/2015 3:00 PM
17	No spill kit	12/1/2015 2:49 PM
18	Kitty litter on shelves and in storage room	12/1/2015 2:44 PM
19	kitty litter in the storage room	12/1/2015 2:35 PM
20	kitty litter on the shelves, some in the storage room	12/1/2015 2:24 PM
21	Spill kit as a spray to devolotize the gas, nothing to stop from running into catch basins.	12/1/2015 2:09 PM
22	kitty litter in the storage room	12/1/2015 2:02 PM

Q4 Have you conducted any training for your employees since the previous Clark County staff visit on what to do in the event of a spill?

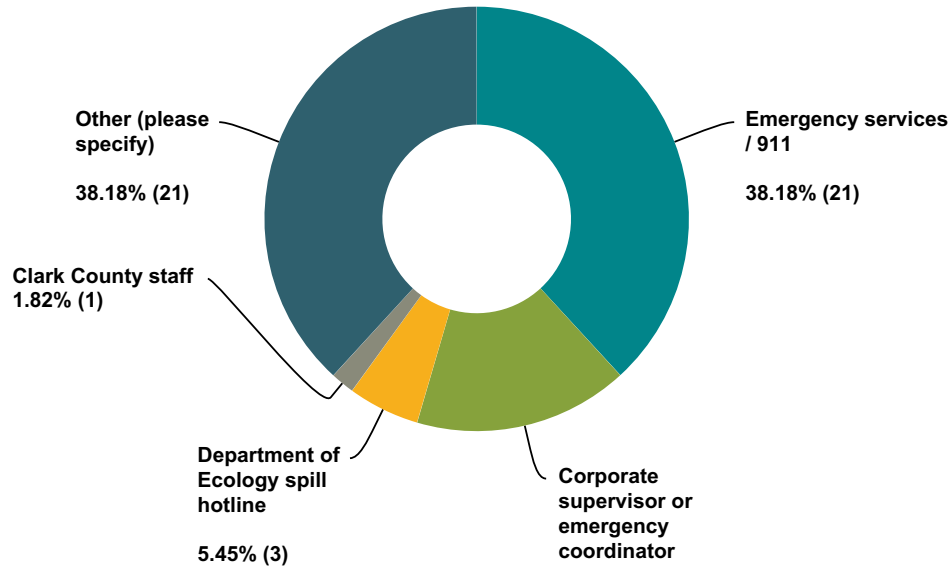
Answered: 55 Skipped: 0



Answer Choices	Responses	
Yes	43.64%	24
No	29.09%	16
Previously conducted training this year	12.73%	7
Unsure	14.55%	8
Total		55

Q5 In the event of a spill, who are you supposed to contact / call to report the spill?

Answered: 55 Skipped: 0



Answer Choices	Responses	
Emergency services / 911	38.18%	21
Corporate supervisor or emergency coordinator	16.36%	9
Department of Ecology spill hotline	5.45%	3
Clark County staff	1.82%	1
Other (please specify)	38.18%	21
Total		55

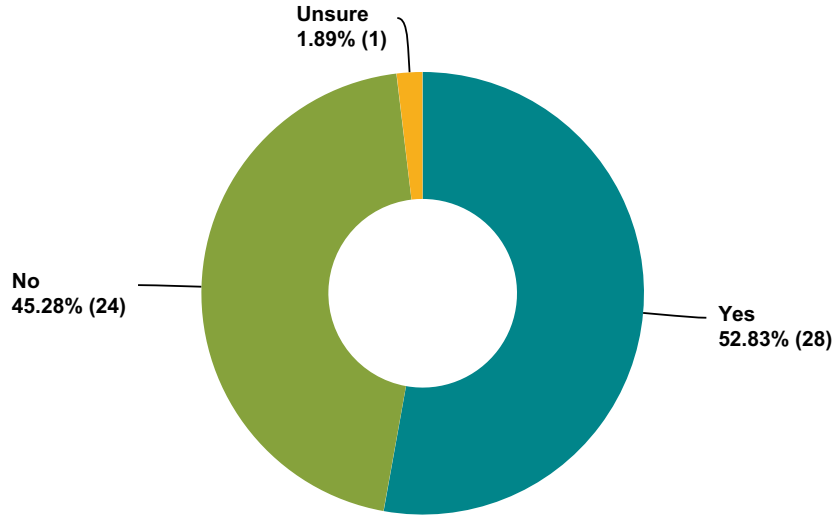
#	Other (please specify)	Date
1	Nanette Brookes at Clark County - I don't think we have one of them here - a Nanette Brookes that is	12/2/2015 10:37 AM
2	1-800-523-0600	12/2/2015 10:20 AM
3	"please report any problems to 360-608-6028"	12/2/2015 10:18 AM
4	#1 911 #2 My Main Manager	12/2/2015 10:13 AM
5	#39 Salmon Creek 76 #186745000	12/2/2015 10:09 AM
6	Manager - Victoria Johnson 503-929-7864	12/2/2015 10:01 AM
7	two numbers here on my sheet... 911 is one of them.. ecology is the other...	12/2/2015 9:55 AM
8	City	12/1/2015 4:42 PM
9	Sticker on window states call 911 and then the 1-800 - #####	12/1/2015 4:39 PM
10	Boss	12/1/2015 4:36 PM
11	First 911, then district manager	12/1/2015 4:27 PM
12	Owner	12/1/2015 4:18 PM

Spill Kit Use - Post Education

13	Manager	12/1/2015 4:13 PM
14	Manager	12/1/2015 3:47 PM
15	first 911, then county staff	12/1/2015 3:32 PM
16	first 911, then emergency coordinator	12/1/2015 3:24 PM
17	first 911, then facility operator Jubitz	12/1/2015 3:14 PM
18	First 911, then Patriot Environmental	12/1/2015 3:11 PM
19	first 911, then Patriot Environmental	12/1/2015 3:07 PM
20	guessed 911	12/1/2015 2:39 PM
21	call 911 first and then the facility operator	12/1/2015 2:24 PM

Q6 In the event of a fuel spill, does your business site utilize an Oil / Water Separator to collect the spill?

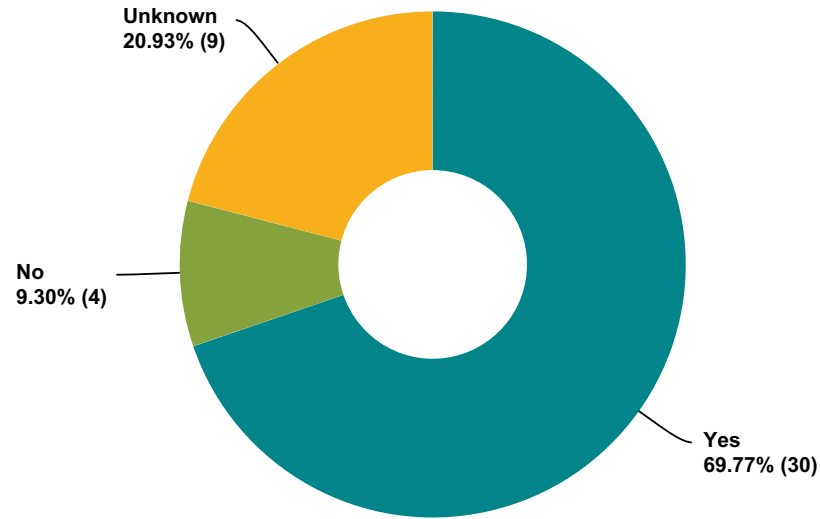
Answered: 53 Skipped: 2



Answer Choices	Responses	
Yes	52.83%	28
No	45.28%	24
Unsure	1.89%	1
Total		53

Q7 Is the oil / water separator mapper correctly for Clark County asset management system?

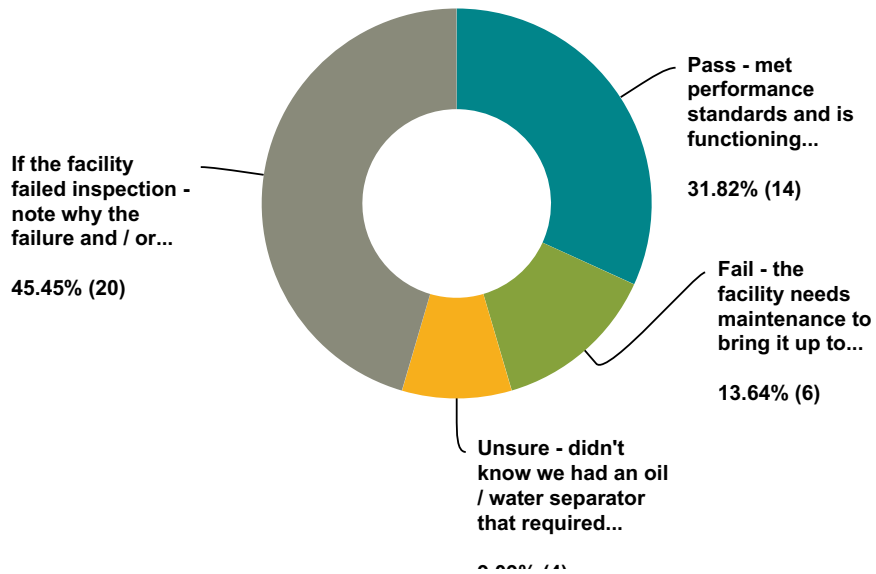
Answered: 43 Skipped: 12



Answer Choices	Responses	
Yes	69.77%	30
No	9.30%	4
Unknown	20.93%	9
Total		43

Q8 During your last inspection of your Oil / Water Separator, how did your facility rate?

Answered: 44 Skipped: 11



Answer Choices	Responses	
Pass - met performance standards and is functioning correctly	31.82%	14
Fail - the facility needs maintenance to bring it up to required performance standard (See comment field below)	13.64%	6
Unsure - didn't know we had an oil / water separator that required inspections and maintenance	9.09%	4
If the facility failed inspection - note why the failure and / or observations	45.45%	20
Total		44

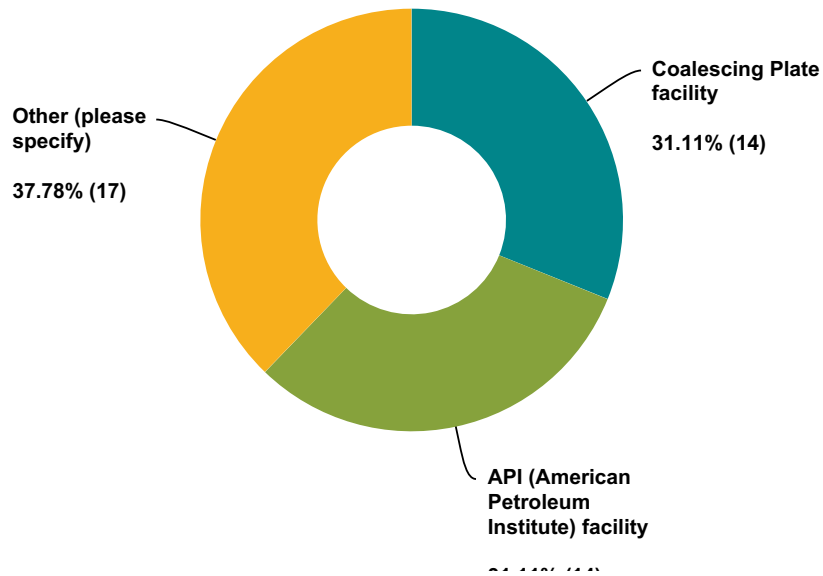
#	If the facility failed inspection - note why the failure and / or observations	Date
1	Pumped just prior to our visit	12/2/2015 11:22 AM
2	n/a	12/1/2015 4:42 PM
3	Oil greater than 1" on top	12/1/2015 4:40 PM
4	n/a	12/1/2015 4:36 PM
5	n/a	12/1/2015 4:21 PM
6	n/a	12/1/2015 4:18 PM
7	n/a	12/1/2015 4:10 PM
8	n/a	12/1/2015 4:02 PM
9	n/a	12/1/2015 3:48 PM
10	n/a	12/1/2015 3:33 PM
11	n/a	12/1/2015 3:27 PM
12	n/a	12/1/2015 3:25 PM
13	last maintained in Jan. 2015, plates needed cleaning which was not done in January	12/1/2015 3:15 PM
14	Coalescing plates full of oily gunk	12/1/2015 3:11 PM

Spill Kit Use - Post Education

15	n/a	12/1/2015 3:01 PM
16	n/a	12/1/2015 2:50 PM
17	n/a	12/1/2015 2:44 PM
18	n/a	12/1/2015 2:40 PM
19	opened up , sediment up to 4 inches at bottom, plate is a mess	12/1/2015 2:36 PM
20	n/a	12/1/2015 2:25 PM

Q9 What type of Oil / Water Separator does you site have?

Answered: 45 Skipped: 10



Answer Choices	Responses
Coalescing Plate facility	31.11% 14
API (American Petroleum Institute) facility	31.11% 14
Other (please specify)	37.78% 17
Total	45

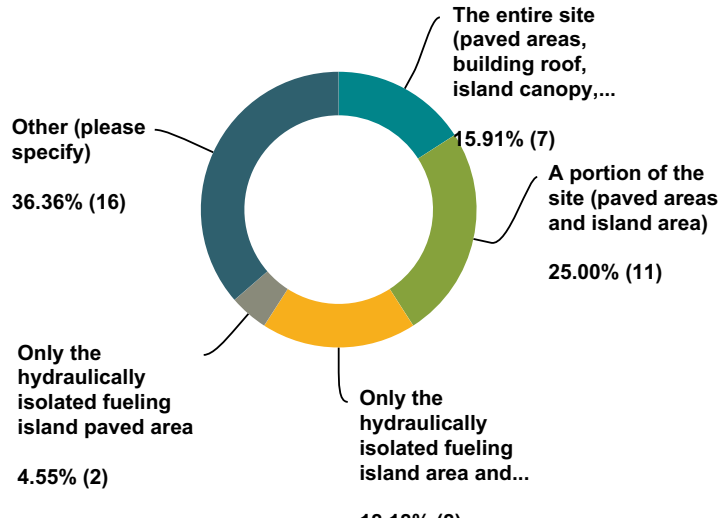
#	Other (please specify)	Date
1	unknown - Additional visit required	12/2/2015 10:45 AM
2	This site SHOULD have an Oil Water Separator	12/2/2015 10:34 AM
3	n/a	12/1/2015 4:42 PM
4	n/a	12/1/2015 4:37 PM
5	n/a	12/1/2015 4:21 PM
6	n/a	12/1/2015 4:19 PM
7	n/a	12/1/2015 4:10 PM
8	n/a	12/1/2015 4:02 PM
9	n/a	12/1/2015 3:48 PM
10	n/a	12/1/2015 3:33 PM
11	n/a	12/1/2015 3:27 PM
12	n/a	12/1/2015 3:25 PM
13	n/a	12/1/2015 3:01 PM
14	n/a	12/1/2015 2:50 PM
15	n/a	12/1/2015 2:45 PM

Spill Kit Use - Post Education

16	n/a	12/1/2015 2:40 PM
17	n/a	12/1/2015 2:25 PM

Q10 Where does the water come from that enters the Oil / Water Separator on your business site?

Answered: 44 Skipped: 11



Answer Choices	Responses
The entire site (paved areas, building roof, island canopy, etc.)	15.91% 7
A portion of the site (paved areas and island area)	25.00% 11
Only the hydraulically isolated fueling island area and canopy	18.18% 8
Only the hydraulically isolated fueling island paved area	4.55% 2
Other (please specify)	36.36% 16
Total	44

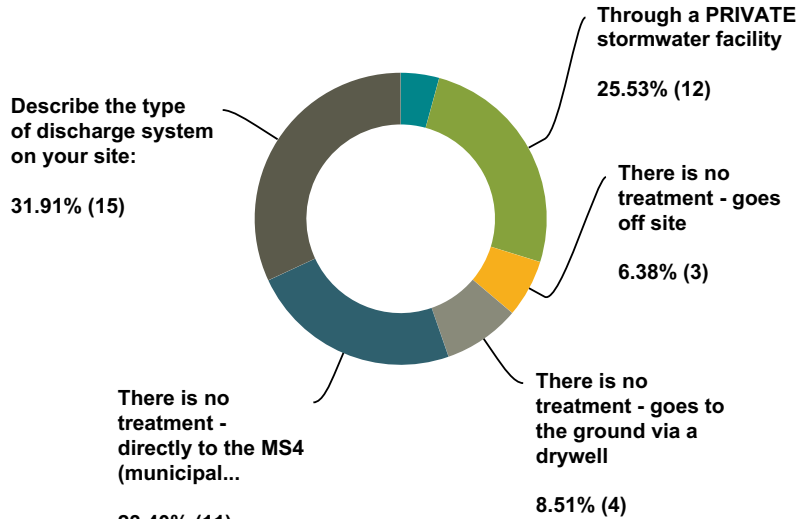
#	Other (please specify)	Date
1	Mystery fuel island catch basin goes to????	12/2/2015 10:46 AM
2	n/a	12/1/2015 4:42 PM
3	n/a	12/1/2015 4:37 PM
4	n/a	12/1/2015 4:21 PM
5	n/a	12/1/2015 4:19 PM
6	n/a	12/1/2015 4:10 PM
7	n/a	12/1/2015 4:02 PM
8	n/a	12/1/2015 3:48 PM
9	n/a	12/1/2015 3:33 PM
10	n/a	12/1/2015 3:28 PM
11	n/a	12/1/2015 3:25 PM
12	n/a	12/1/2015 3:01 PM

Spill Kit Use - Post Education

13	n/a	12/1/2015 2:50 PM
14	n/a	12/1/2015 2:45 PM
15	n/a	12/1/2015 2:40 PM
16	n/a	12/1/2015 2:25 PM

Q11 The Oil / Water Separator at this site discharges:

Answered: 47 Skipped: 8



Answer Choices	Responses
Through a COUNTY stormwater facility (i.e. detention pond, bioretention, etc.)	4.26% 2
Through a PRIVATE stormwater facility	25.53% 12
There is no treatment - goes off site	6.38% 3
There is no treatment - goes to the ground via a drywell	8.51% 4
There is no treatment - directly to the MS4 (municipal separated storm sewer system)	23.40% 11
There is no treatment - to a combination of facilities (see comment box below)	0.00% 0
Describe the type of discharge system on your site:	31.91% 15
Total	47

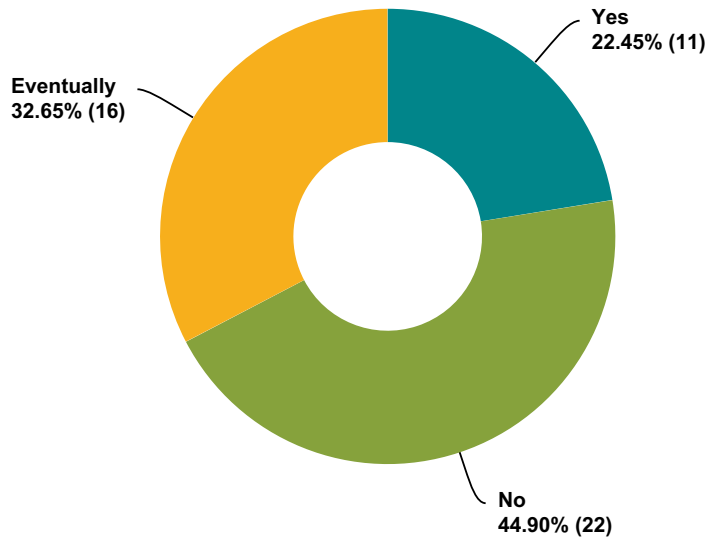
#	Describe the type of discharge system on your site:	Date
1	yet to be determined	12/2/2015 10:46 AM
2	Center Fuel Island drain appears to discharge directly to the MS4	12/2/2015 10:34 AM
3	No treatment, if large enough spill, could go into street with catch basin	12/1/2015 4:37 PM
4	on SW map, looks like there is some treatment and then to MS4	12/1/2015 4:22 PM
5	no treatment but big enough spill could go to catch basin near roadway	12/1/2015 4:19 PM
6	unknown.....catch basin leads to a treatment facility south of parking	12/1/2015 4:03 PM
7	no treatment , unsure of direction of surface flow, but right next to roadway	12/1/2015 3:49 PM
8	There are catch basins nearby so if a big enough spill, could enter system then to MS4	12/1/2015 3:34 PM
9	no treatment, probably soaks into the ground	12/1/2015 3:30 PM
10	probably soaks into the ground	12/1/2015 3:25 PM
11	goes to catch basin then to MS4 in the roadway	12/1/2015 3:02 PM

Spill Kit Use - Post Education

12	catch basins that tie into the MS4 in the roadway	12/1/2015 2:50 PM
13	goes to catch basin, through pipe directly to creek outfall	12/1/2015 2:46 PM
14	catch basins to roadway MS4	12/1/2015 2:41 PM
15	Runs off site to roadway	12/1/2015 2:34 PM

Q12 Is it discharging pollutants to the MS4

Answered: 49 Skipped: 6

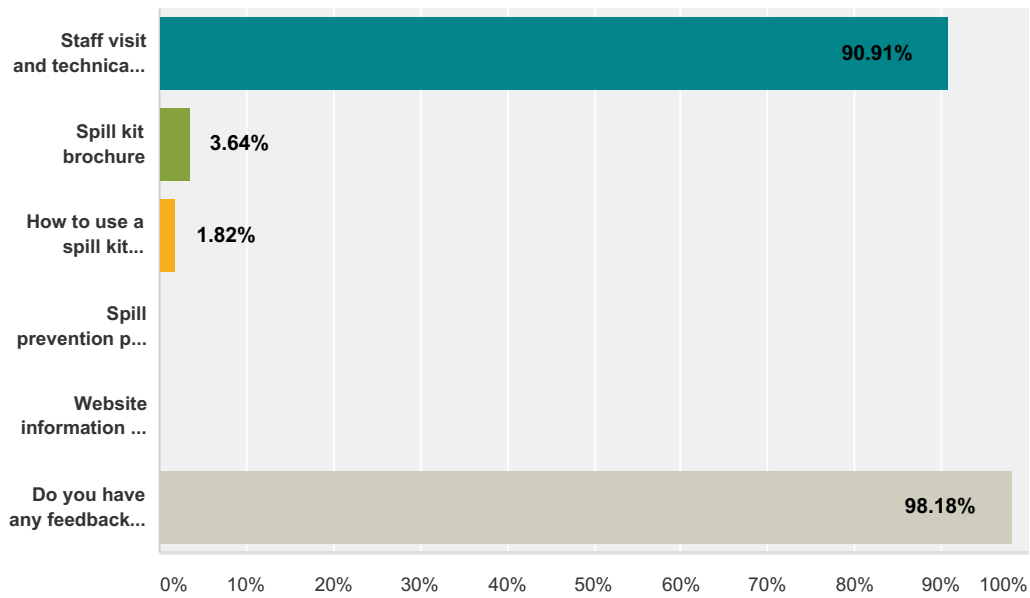


Answer Choices	Responses	
Yes	22.45%	11
No	44.90%	22
Eventually	32.65%	16
Total		49

Spill Kit Use - Post Education

Q13 Which of the outreach efforts did you find helpful for your business?

Answered: 55 Skipped: 0



Answer Choices	Responses
Staff visit and technical assistance	90.91% 50
Spill kit brochure	3.64% 2
How to use a spill kit poster	1.82% 1
Spill prevention plan checklist	0.00% 0
Website information - Clark County www.clark.wa.gov/stormwater	0.00% 0
Do you have any feedback for county staff related to spill prevention and management?	98.18% 54
Total Respondents: 55	

#	Do you have any feedback for county staff related to spill prevention and management?	Date
1	#7 B and B country store # 187350000	12/2/2015 11:35 AM
2	#4 Ali's Chevron #116480000	12/2/2015 11:33 AM
3	#43 7-11 Southland corp. #1044600001	12/2/2015 11:31 AM
4	#14 Astro Gas - #104479033 - This site has a drywell in the middle of the island - No O/W sep. spill control goes to the ground, everything on site washes to a drywell.	12/2/2015 11:29 AM
5	#19 Five Corners Gas and Grocery #105459020	12/2/2015 11:25 AM
6	#41 TARR #149264000	12/2/2015 11:23 AM
7	#30 LINDE LLC - #99600000	12/2/2015 10:47 AM
8	#53 Yard and Garden Land - #117986000 - Free standing fuel tank to be removed in 2016	12/2/2015 10:43 AM
9	#51 Z mart - #217135000	12/2/2015 10:41 AM
10	#57 Glenwood Grocery - #199463000	12/2/2015 10:39 AM

Spill Kit Use - Post Education

11	#36 Prairie Shell and Mart - #200097000	12/2/2015 10:35 AM
12	#1 Chevron 117th #154672000	12/2/2015 10:32 AM
13	#12 CPU #155118000	12/2/2015 10:30 AM
14	#9 Circle K 76 station - #154906005 O/W separator has not been inspected in 15 years that Manager is aware of.. Inspection scheduled before the end of the week	12/2/2015 10:27 AM
15	#20 Fred Meyer Fuel #236 - #154892000	12/2/2015 10:24 AM
16	#49 - VoCl and Pacific Fuel - #186584000	12/2/2015 10:22 AM
17	#6 - Around the Clock Fuel - 275263000	12/2/2015 10:19 AM
18	#21 Fred Meyer Fuel 460 #185402000	12/2/2015 10:15 AM
19	#39 Salmon Creek 76 #186745000	12/2/2015 10:10 AM
20	#44 Mobile Gas and Market # 185703015	12/2/2015 10:03 AM
21	#8 Chelatchie Prairie Market and Gas # 274365000	12/2/2015 10:00 AM
22	#47 Veiw Market #265477000	12/2/2015 9:56 AM
23	#16 - Fargher Lake Grocery #264794000 Bill and Roxanne Doty 360-263-4464 fargherlakegrocery@gmail.com	12/2/2015 9:52 AM
24	#33, Shell / Felida Market	12/1/2015 4:43 PM
25	Site #18, 1st choice market, 105459020	12/1/2015 4:41 PM
26	Site #24, Hockinson Market, 204699000	12/1/2015 4:38 PM
27	Site #27, Shell (new), 145349000	12/1/2015 4:28 PM
28	#26, Hop & Shop, 97839220	12/1/2015 4:23 PM
29	#23, Shell, 148068001	12/1/2015 4:20 PM
30	Site #22, Hazel Dell car wash , 145253000	12/1/2015 4:15 PM
31	Site #2 147613000	12/1/2015 4:11 PM
32	Site #37, talked to Cherri, Minit Mart, 106061000	12/1/2015 4:08 PM
33	#35, Prairie Electric, 10608400	12/1/2015 4:04 PM
34	Site #13, 106132000	12/1/2015 4:00 PM
35	#58, Jackson's 24 hour	12/1/2015 3:57 PM
36	Site #28, spoke to Don, 144510000	12/1/2015 3:49 PM
37	Site #10, Public Works 78th street	12/1/2015 3:46 PM
38	Site #56, 164533000	12/1/2015 3:37 PM
39	Site #55, Steve Pash, Frontier Landscape, 119887280	12/1/2015 3:35 PM
40	Site #54, Roof Topper, 106172000	12/1/2015 3:31 PM
41	Site #52, American Stone, 117790000	12/1/2015 3:26 PM
42	Unstaffed self-serve station, talked to Kirk with Jubitz, site #45, 107028070	12/1/2015 3:17 PM
43	Site #34, Talked to jenny, 144293000	12/1/2015 3:13 PM
44	Site #17, Tony Singh, Chevron at Fern Prairie market, 174791000	12/1/2015 3:09 PM
45	Site #11, CCPW, 196886000	12/1/2015 3:05 PM
46	Site #3, 7-11, 99620005	12/1/2015 3:02 PM
47	Site #42, 186777008, 7-11 24279	12/1/2015 2:52 PM
48	Site #38, talked to Jim Hansen, 18654000 Safeway 1842	12/1/2015 2:48 PM
49	site #25, corner market Hwy 99, 118007011 talked to Larry	12/1/2015 2:46 PM
50	Site #15, talked to Nicole, Expressway Food Store 186548001	12/1/2015 2:42 PM

Spill Kit Use - Post Education

51	site #40, salmon creek chevron, talked to Darcy 186512010	12/1/2015 2:38 PM
52	Site #31 talked to Kelli, 118023000 Lyle's Village Pantry	12/1/2015 2:34 PM
53	talked with Lauren, site #48 Village pantry 189250000	12/1/2015 2:11 PM
54	County staff were incredibly helpful with this.	10/29/2015 10:37 AM

APPENDIX D

Fueling station ranking based on priority risk to MS4

No.	UstSiteName	Address	City	Tax ID	Oil/H2O	API	C-plates
1	117TH AVENUE CHEVRON	9810 NE 117TH AVE	Van	154672000	Yes		X
2	7-ELEVEN 23474	6212 NE HIGHWAY 99	Van	147613000	No		
3	7-ELEVEN STORE 2352-22624C	7715 ST JOHNS BLVD	Van	99620005	No		
4	ALI'S CHEVRON	604 NE 179TH ST	Ridg	116480000	No		
5	AM/PM 82746	609 NE 99TH ST	Van	145810000	Yes		X
6	AROUND THE CLOCK FUEL	21604 NE 399TH ST	Am	275263000	Yes	X	
7	B&B COUNTRY STORE	1804 NW 119TH ST	Van	187350000	No		
8	CHELATCHIE PRAIRIE GENERAL STORE	42411 NE YALE BRIDGE RD	Am	274365000	No		
9	CIRCLE K/76 2705534	7701 NE 117TH AVE	Van	154906005	Yes	X	
10	CLARK COUNTY	4700 NE 78TH ST	Van	144274000	Yes		X
11	CLARK COUNTY PUBLIC WORKS	11608 NE 149TH ST	Brush	196886000	Yes	X	
12	CLARK PUBLIC UTILITY DISTRICT	8600 NE 117TH AVE	Van	155118000	Yes	X	
13	COSTCO FUEL 772	6606 NE 84TH ST	Van	106132000	Yes		X
14	E Z MART	9511 NE 76TH ST	Van	104479033	No		
15	EXPRESSWAY FOOD STORE NO 609	1309 A NE 134TH ST	Van	186548001	No		
16	FARGHER LAKE GROCERY	15518 NE FARGHER LAKE HWY	Yaco	264794000	Yes		X
17	FERN PRAIRIE MARKET	1817 267TH AVE NE	Cam	174791000	Yes	X	
18	FIRST CHOICE MKT HOCKINSON CHEV	16105 NE 182ND AVE	Brush	204934000	Yes	X	
19	FIVE CORNERS GAS & GROCERY	9404 NE 76TH ST	Van	105459020	No		
20	FRED MEYER FUEL 236	7411 NE 117TH AVE	Van	154892000	Yes		X
21	FRED MEYER FUEL 460	406 NE 139th St	Van	185402000	Yes	X	
22	HAZEL DELL CAR WASH	8200 NE HWY 99	Van	145253000	Yes		X
23	HAZEL DELL SHELL	205 NE 78TH ST	Van	148068001	No		
24	HOCKINSON MARKET	15814 182ND AVE NE	Brush	204699000	No		
25	HOLLY PARK PROPERTIES LLC "the cor	10501 NE HWY 99	Van	118007011	No		
26	HOP-N-SHOP FOOD STORE	1800 78TH ST NE	Van	97839220	No		
27	JACKSONS 501	404 NE 78TH ST	Van	145349000	Yes	X	
28	KWIK GAS 2 (t and t food mart)	4409 NE 78TH ST	Van	144510000	No		
30	LINDE LLC	4715 NE 78TH ST	Van	99600000	Yes		
31	LYLE'S VILLAGE PANTRY	10709 HWY 99 NE	Van	118023000	No		
33	MINIT MART ASTRO 725 (Felida Shell	12604 NW 36TH AVE	Van	187770000	No		
34	PECK PROPERTIES LLC - ARCO	7801 NE ST JOHNS RD	Van	144293000	Yes		X
35	PRAIRIE ELECTRIC INC	6000 NE 88TH ST	Van	106084000	No		
36	PRAIRIE SHELL & MART	11817 NE 117TH AVE	Van	200097000	Yes	X	
37	QUICK SHOP MINI MART 27	8817 ST JOHNS BLVD	Van	106061000	Yes		X
38	SAFeway FUEL 1842	13023 NE HWY 99 B	Van	186540000	yes	X	
39	SALMON CREEK 76	13218 NE HWY 99	Van	186745000	No		
40	SALMON CREEK CHEVRON	2619 NE 134TH ST	Van	186512010	Yes		X
41	TARR LLC	7208 NE ST JOHNS RD	Van	149264000	Yes	X	
42	THE SOUTHLAND CORP 2342-24279	12908 NE HWY 99	Van	186777008	No		
43	THE SOUTHLAND CORP 2352-22525A	9411 NE 76TH	Van	104460001	No		
44	USA GAS 62529	14300 NE 20TH AVE BLDG E	Van	185703015	Yes	X	
45	VANCOUVER OIL CO - WUBBEN IND P	11516 NE 66th STREET	Van	107028070	Yes		X
47	VIEW MARKET	10713 NE 379TH ST	LaCen	265477000	No		
48	VILLAGE PANTRY	610 NE 99TH ST	Van	189250000	Yes	X	
49	VOCI & PACIFIC FUEL TRANSPORT	BP	Van	186584000	Yes	X	
51	Z MART	1010 NE 219TH ST	Ridg	217135000	No		
52	AMERICAN STONE	17603 NE UNION ROAD	Ridg	117790000	no		
53	YARD N GARDEN LAND	1501 NE 102nd STREET	Van	117986000	no		
54	ROOF TOPPERS	5709 NE 88th STREET	Van	106172000	no		
55	FRONTIER LANDSCAPING	11402 NE ST. JOHNS ROAD	Van	119887280	No		
56	VALERO GAS STATION	111 NE 164th AVENUE	Van	164533000	Yes	X	
57	GLENWOOD GROCERY	11811 NE 72nd		199463000	Yes	X	
58	Jackson's 76	8515 NE Andersen Rd	Van	156306000	Yes		X

High Priority - no controls - Spills and Discharges to the MS4

Priority Site only an O/W separator between spills and Discharges to the MS4

Protections in Place: O/W sparator and some facility prior to MS4

Refer to Ecology for Groundwater Protection: All Spills and Discharges to Groundwater
Industrial Stormwater Permit: Managed through Ecology