

SOURCE CONTROL AND MOBILE BUSINESSES

Pilot Program Report

Prepared for: King County and Washington State
Department of Ecology

Project No. AS200212A • January 2024 FINAL



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Aspect Consulting

A handwritten signature in blue ink, reading "James J. Packman".

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Acronyms

Aspect	Aspect Consulting
BLS	Business Licensing Service
BMP	Best Management Practice
DOR	Department of Revenue
Ecology	Washington State Department of Ecology
FOG	Fats Oils Grease
GIS	Geographic Information System
IDDE	Illicit Discharge Detection and Elimination
NAICS	North American Industry Classification System
NPDES	National Pollutant Discharge Elimination System
PCB	Polychlorinated biphenyl
PPA	Ecology Pollution Prevention Assistance
SAM	Stormwater Action Monitoring
Source ID	Source Identification
Study	This SAM study
TAC	Technical Advisory Committee

Executive Summary

This report provides a summary of a Pilot Program for municipal stormwater permittees in western Washington on mobile business identification, outreach, and inspection for pollution prevention and source control. The Pilot Program was conducted as part of a Stormwater Action Monitoring (SAM) study, and funding for the Study was provided by municipal stormwater permittees in western Washington via the SAM program.

The Pilot Program was focused in King County, Washington, and 18 out of 30 cities in the county with municipal stormwater permits participated. Participation in the Pilot Program was via city representatives' engagement with the Program, which included several elements as follows:

- Attendance at four group meetings during the Pilot Program
- Review and discussion of business lists that identified likely mobile businesses operating in each participating city
- Review of a Best Practices Guidance document, including three new outreach brochures for mobile businesses, developed during the Pilot Program
- Engagement with mobile businesses as possible as part of a city's permit-required source control efforts
- Preparation of case studies of interactions with mobile businesses
- Response to a survey at the end of the Pilot Program

The outcomes from the Pilot Program include the following key conclusions and recommendations.

Conclusions

- The findings, data sharing, and discussion among peers, and guidance developed during the Pilot Program was especially helpful to some cities who were still ramping up their source control programs, which began in January 2023.
- The resources assembled and created for the Pilot Program—including outreach materials and BMPs for mobile business activities—provided a useful source of information for most Pilot participants. Some participants used the materials in their interaction with mobile businesses during the Pilot Program, and others referenced the materials and added them to their own libraries for reference.
- Three new outreach brochures were developed during the Pilot Program on mobile automobile repair, commercial landscaping, and pressure/power washing. The engagement with the Pilot Program participants to select the topics and outreach brochure content helped create more relevant materials for permittee use across the region.

- The lists of likely mobile businesses that was provided to each participating city was found to be useful by most but not all participants. The keyword search process developed for the Study works well for identifying likely mobile businesses of interest to stormwater; however, some cities identify mobile businesses in other ways (not by business license records), and the number of businesses on the lists was sometimes large and daunting to sort through.
- Businesses that have “non-resident” status per their business license or are home-based conflicted with the source control approach by some participants who focused just on businesses located within their city commercial areas.
- Survey responses (from 15 out of 18 participating cities) at the end of the Pilot Program indicated the following key takeaways regarding mobile businesses and municipal stormwater source control efforts:
 - Three of the most common mobile business types are particularly of ongoing interest to the participants: food trucks, pressure washing/exterior surface cleaning, and building and construction contractors.
 - The top issues related to pollution prevention for mobile businesses among the participants were: knowledge about regulations, alternative products awareness, use of best management practices (BMPs), trying to “fly under the radar” and avoid inspections, knowledge about spills and emergency contacts, and waste disposal and/or recycling procedures.

Recommendations

- The keyword search procedure developed in the Study works for identifying likely mobile businesses or interest to stormwater source control and pollution prevention. We recommend that permittees try using the tool, which can be customized by the user to identify different types of businesses based on the keywords used in the search and for businesses with resident or non-resident licenses.
- We recommend that permittees continue to use a multi-pronged approach for identifying mobile businesses that promotes efficiency for city staff while prioritizing the relatively higher-risk mobile businesses. In addition to the business lists provided, some Pilot participants used other methods to identify mobile businesses, including GIS and web searches, local knowledge by inspectors or other staff, business presence on municipal properties (e.g., food trucks at farmer’s markets), and referrals from complaints.
- To help prioritize municipal efforts regarding mobile businesses, we recommend continuing to use a sorting and risk assignment procedure in business lists to identify the most high-risk mobile businesses. This study used risk associated with NAICS¹ code and perceived business activity. But other risk schemas could

¹ North American Industry Classification System

be used, too, such as based on land use, zoning, or focus areas from other basin planning efforts.

- For outreach to mobile businesses, we recommend using the approach outlined in the Best Practices Guidance document developed for the Pilot Program or something similar. This includes recommendations for how to communicate with mobile businesses, how to try to schedule an inspection with them, and what source control elements and BMPs to cover during an inspection.
- We recommend using the outreach materials and BMPs assembled in the Best Practices Guidance document, as they are specific to mobile businesses and associated activities, and some materials do not include jurisdiction-specific information that allows permittees to customize the materials with local contact information if desired.
- We recommend that permittees direct some attention to “non-resident” businesses licensed within their jurisdiction. While the mandate for municipal staff falls primarily within one’s own jurisdiction, the need for pollution prevention is still present for some mobile businesses that may operate within a city but not reside there. We likewise recommend that permittees continue to communicate with their peers in other jurisdictions if they find a mobile business of interest that appears to do work in both places.
- Regarding home-based businesses, we recommend that source control efforts be based on the business activity and perceived risk to the environment. This may include some home-based businesses, which could be screened first via phone, email, or drive-by reconnaissance to confirm what businesses activities are performed and where.

1. INTRODUCTION

This report provides a summary of a Pilot Program conducted as part of a Stormwater Action Monitoring (SAM) study on stormwater source control and mobile businesses. The SAM studies are administered by the Washington State Department of Ecology (Ecology) and support municipal stormwater permittees of the National Pollutant Discharge Elimination System (NPDES) in Washington State (Ecology, 2019). Funding for the Study was provided by the permittees themselves via the SAM program.

1.1. Mobile Businesses and Source Control SAM Study

As part of the Source Identification (Source ID) subset of SAM studies, this SAM study (Study) is focused on how municipal stormwater permittees are implementing or plan to implement stormwater source control activities with mobile businesses. As a subset of commercial enterprises, some mobile businesses have unique challenges related to stormwater and pollution prevention due to their mobile nature and working at dispersed sites in multiple jurisdictions.

The overall goal of the Study is to provide analysis, tools, and resources to help permittees identify, inspect, and coordinate mobile business engagement and municipal source control activities. The Study also directly addresses two priority topics (numbers 17 and 23) identified by permittees and other stakeholders during the proposal and planning stages of the current round of SAM studies.²

A working definition of mobile businesses in the context of stormwater source control was developed in the Study survey (Aspect, 2022). The definition was refined in discussion with the Study's technical advisory committee (TAC). The current working definition includes the following:

Mobile businesses are defined by travel to provide services at customer sites, which typically include sites outside of the businesses' home jurisdiction. Like any commercial enterprise, mobile businesses are of interest to stormwater management if there is potential to cause illicit discharges through the generation, storage, transfer, treatment, and/or discharge of hazardous material or waste that could enter the municipal storm drainage system or natural water bodies. Examples include mobile equipment repair services, mobile vehicle repair and detailing, commercial landscaping services, onsite carpet cleaning and pet grooming, and mobile exhaust hood cleaning, among others.

² Priority topic 17. What additional regional or statewide regulatory systems or approaches would likely support local government oversight of mobile businesses that discharge waste to the MS4?

17.1. How can the business licensure process and requirements support proper waste handling?

17.2. What are barriers to proper handling of waste?

Priority topic 23. Evaluate the IDDE data reported by permittees and gather additional information needed to identify mobile and other multi-jurisdictional business' violations, to support coordinated and effective multi-jurisdiction enforcement.

1.2. Task 6: Pilot Program

Task 6 of the Study was a Pilot Program for municipal stormwater permittees to develop and use pollution prevention and source control resources for mobile businesses. This includes the business listing process developed in Task 3 for identifying mobile businesses, and preparation of a “best practices” guidance document, a collection of BMPs relevant to common mobile business practices, and development of outreach materials for specific mobile business types. The outcomes from the Pilot Program are intended to capture information and case studies of how permittees identify and inspect mobile businesses, coordinate to offer technical assistance, and follow-up on environmental compliance issues across jurisdictional boundaries.

A Pilot Program Plan was prepared (Aspect, 2023) that provides the goals and objectives for the Pilot, along with a description of participation expectations, resources available, planned communication, and schedule. For this report, the goals and objectives from the Pilot Program Plan are summarized below.

Goals

1. Identify best practices for municipal source control programs related to identifying and inspecting mobile businesses.
2. Use and test a keyword search procedure to identify mobile businesses from business license data.
3. Develop and test outreach materials with best management practices (BMPs) for Pilot Program participants to use with mobile businesses and pollution prevention efforts.
4. Identify and communicate lessons learned from Pilot Program to permittees and Ecology.

Objectives

1. Prepare a Pilot Program Plan to identify the procedures, schedules, and planned outcomes.
2. Convene four meetings with participating cities to discuss progress, questions, and issues.
3. Obtain participant feedback on the outreach materials developed for the Study and revise the materials accordingly.
4. Refine and update the mobile business identification keyword search procedure based on participant feedback.
5. Identify and develop case studies from participants related to mobile businesses and source control.
6. Survey participants at the end of the Pilot to get feedback and identify lessons learned.
7. Write a report of the Pilot Program outcomes.

2. PLANNING AND RESOURCES

The planning and resources developed for the Pilot Program are summarized in this section. This summary is a combination of information in the Pilot Program Plan (Aspect, 2023), which was prepared before the Program commenced, and from information that was identified and developed during the Pilot Program.

2.1 Participating Cities

Candidate cities for the Pilot Program were identified among the 30 municipal stormwater permittees in King County. Emphasis was given to cities that participate in the Washington State Department of Revenue (DOR) Business Licensing Service (BLS). This was a helpful criterion since the study had already obtained business license data for the 26 BLS partner cities in King County through communications with DOR during work on Task 3 of the Study.

Cities were recruited to participate in the Pilot Program in multiple ways, including announcements in permittee list-servs and direct outreach to cities in King County. In the end, 16 BLS cities and 2 non-BLS cities (18 total) participated as shown in Figure 1 and as listed in Table 1.

Table 1. Pilot Program Cities

City	DOR BLS Partner?
Auburn	Y
Bellevue	N
Black Diamond	Y
Bothell	Y
Clyde Hill	Y
Covington	Y
Enumclaw	Y
Federal Way	Y
Issaquah	Y
Kirkland	Y
Maple Valley	Y
Mercer Island	Y
New Castle	Y
Normandy Park	Y
Redmond	Y
Renton	N
Tukwila	Y
Woodinville	Y

2.2 Mobile Business Lists

A list of likely mobile businesses with business licenses in participating cities was provided to the participants from those jurisdictions. The lists were intended to help

jurisdictions identify candidate mobile businesses that come into their cities to work. The lists were also intended to be used for source control outreach during the Pilot Program, the participants could optionally add businesses from the list to their own source control site inventories if desired. Cities were not obligated to use the list provided, and some cities identified mobile businesses in other ways (as described below).

The business lists were created using the keyword search procedure developed in Task 3 of the Study (Aspect, 2022). The procedure was designed to work with data formatted a specific way consistent with how data are obtained by BLS cities via the DOR business license web portal. For the cities of Bellevue and Renton (non-BLS cities), the study team formatted and prepared their business license lists to work with the keyword search tool. This approach can likewise be used by other non-BLS cities to search for mobile businesses; any business list data may be used that is formatted to work with the keyword search.

As part of the keyword search and analysis, data fields were added to the output to indicate if businesses are likely mobile and of interest to stormwater. Ranking attributes included a search score equivalent to the number of instances of keywords found, if a qualifying NAICS code is present³, and a risk attribute of high, medium, or low based on the NAICS codes represented. See Task 3 memorandum (Aspect, 2022) and the Pilot Program Plan (Aspect, 2023, Table 3) for more detail on the assignment of risk levels for the NAICS codes. During the Pilot Program, the keyword search procedure was updated to include more flexibility in the search terms and correct an issue in the output with the NAICS ranking.

In addition, instructions were provided to the participants for how to sort data in the lists provided to highlight businesses that have the greatest likelihood of being mobile and of interest to stormwater management. Thus, although some cities' business license lists had thousands of records, the businesses that came to the top in the sorting procedure represented a fraction of the total business license records. Among the participating cities, the numbers of likely mobile businesses with relatively high-risk NAICS ranged from 5 to 125 per city with a total of 1,145 in King County. See the Pilot Program Plan (Aspect 2023, Table 2) for the full breakout of the number of likely mobile businesses by city and by NAICS risk level.

2.3 Best Practices Guidance

A Best Practices Guidance document (Aspect, expected to be published in early 2024) was prepared to help cities implement the Pilot Program. The document provides resources to support municipal efforts with pollution prevention outreach and source control inspections at mobile businesses. Included in the document are guidance for outreach and inspections of mobile businesses, BMPs for common mobile business activities, and outreach resources for a range of mobile business types that are of interest to stormwater management.

The outreach resources in the Best Practices Guidance document include existing materials sourced from other municipal outreach publications and three new outreach brochures that were created for this Study. The existing publications are primarily from

³ Per Permit Appendix 8

Washington state resources, especially the Source Control Guidance Manual (Washington Stormwater Center, 2023). Additional existing resources were found from web searches of municipalities across the United States, and many publications from California jurisdictions are included in the Best Practices Guidance document to fill gaps in mobile business types.

The new outreach resources that were prepared include three trifold brochures addressing three mobile business types: mobile automobile repair, commercial landscaping, and exterior pressure/power washing. The process to decide the topics for the new outreach items included discussion with the Pilot participants and the Study Technical Advisory Committee (TAC) based on extensive review of available materials. The new outreach materials fill gaps in available information for western Washington and have a regional focus rather than city-specific like most materials. As of the writing of this report, the brochures are being finalized after receiving comments on the drafts from the Pilot participants, the TAC, King County, and Ecology. The final versions of the new outreach brochures will be available with the publication of the final Best Practices Guidance document, which is expected in early 2024.

3. PROGRAM IMPLEMENTATION

Implementation of the Pilot Program and participant engagement occurred in several ways during its 6-month period in 2023. These include group meetings, discussion of mobile business lists, development of outreach materials, and documentation of case studies, each of which is described below.

3.1 Group Meetings

Four group meetings were held with the participants during the Pilot Program. The meetings were identified in the Pilot Program Plan and used to discuss progress and questions from the participants. Discussion during the group meetings included, among other things, participants sharing their methods and approaches for identifying and engaging with mobile businesses, questions and instructions on using the mobile business lists, discussion about inspections at mobile businesses, and discussion about the new outreach materials developed during the Pilot Program. Table 2 provides a summary of the meeting dates and attendees, and the minutes from the Pilot Program group meetings are provided in Appendix A.

Table 2. Pilot Program Group Meetings

Meeting Date	Number of Attendees	Number of Cities Represented
March 23, 2023	26	18
May 8, 2023	17	15
June 27, 2023	19	12
August 31, 2023	13	11

3.2 Business List Support

The lists of mobile businesses provided to the Pilot Program participants were challenging for some to work with. Thus, the Study team provided support to many individual participants to help them use the lists. While the keyword search process successfully identified likely businesses of interest to stormwater, the size of some lists (thousands of records) presented hurdles.

In addition, the business lists were intentionally created from business licensees that had indicated “non-resident,” which captured businesses that traveled into a city for work. This was challenging for many participants since their work is prioritized for businesses and activities within their cities. This is a key issue for pollution prevention at mobile businesses as some permittees do not include businesses that are home-based or lack a brick-and-mortar location within city limits (which the municipal stormwater permit allows). This focus is understandable given the source of tax-payer dollars (within a city), and the support the Study team provided for the business lists focused on helping participants identify a small subset of mobile business that ranked high for NAICS risk level.

Also, many participants had already prepared or were in the process of preparing their source control site inventories (required by the stormwater permit by August, 2022). This was discussed during the meetings with a reminder that the mobile businesses on the Pilot Program lists were not required to be added to source control inventories unless a city desired to do so.

3.3 Outreach Material Development

Three new outreach items were developed during the Pilot Program. The items are formatted as trifold brochures with non-City specific information and room for local contacts to be added via an address label. The original intent was to have the brochures ready for use during the Pilot Program; however, it became clear in the leadup to the program that the topics for the brochures needed more input.

One brochure, on *mobile automobile repair*, had already been drafted prior to the start of the Pilot Program. That topic was identified by the Study team due to a lack of outreach materials available for that mobile business type. Topics for the other two brochures were discussed with the Pilot participants, and an ad-hoc survey was prepared for the participants to provide final input on the two additional outreach brochure topics. Results from that survey were discussed at the second Pilot Program group meeting (see minutes in Appendix A), and the topics of *commercial landscaping* and *power/pressure washing* were selected for brochures based on the ad-hoc survey results, discussion with the Pilot participants, and the Study team's judgment to complement existing materials. The power/pressure washing brochure will include information and BMPs on managing waste that may contain polychlorinated biphenyls (PCBs) from building cleaning activities. This will help mobile businesses comply with forthcoming regulations on PCBs and exterior building cleaning in the 2024 reissuance of the municipal stormwater permits.

The brochures are being finalized presently after receiving comments on the drafts from the Pilot participants, the Study TAC, and staff from King County and Ecology. They will be published with the final Best Practices Guidance document (see Appendix A of that document), which is expected in early 2024.

3.4 Case Studies

The Pilot Program participants were asked to prepare case studies highlighting the outreach and inspections they did with mobile businesses during the Program. A 2-page template document for case studies was provided in the Pilot Program Plan. The template included a page for narrative description of the interaction with the mobile business and any stormwater or pollution prevention issues found and how they were resolved. A second page in the template document also provided room for before and after photos as applicable.

In total, seven case studies were submitted by four cities and are provided in Appendix B. The case studies are summarized below in Table 3.

Table 3. Case Studies Provided

City	Mobile Business Type	Issue	Resolution
Enumclaw	Mobile Food Truck	Waste cooking oil	BMP education and information, use portable waste tank/container
Kirkland	Pressure Washing	Soapy discharge	BMP education and information, shop vac cleanup, enforcement due to repeat violation
Redmond	Pressure Washing of sidewalks	Sediment and debris in wash water, and unfiltered discharge	BMP education and information, catch basin filter insert
Tukwila	Pressure Washing of building exteriors	Soapy discharge	BMP education and information, cleanup with shop vac and absorbent pads
Tukwila	Mobile Food Truck	Waste cooking oil, and ground surface cleaning	BMP education and information, use tote to temporarily catch oily drips, switch to portable waste tank long-term
Tukwila	Mobile Food Trucks at production kitchen	Gray water discharge	BMP education and information, WA Stormwater Center online source control training
Tukwila	Mobile Vehicle Fleet Washing	Discharge to storm sewer	Regulatory education and information, outreach to national office, vector cleanout

While only a few types of mobile businesses are represented by the case studies, they include food trucks and pressure washing of buildings and ground surfaces, which are ubiquitously present in many areas. For food trucks, the issues were consistently related to managing waste food cooking oil and gray water. The solutions included emphasis on stormwater pollution prevention education and BMP information, along with implementation of structural BMPs to capture the waste liquids and properly dispose of them.

The case studies of pressure washing covered issues related to two topics:

- Pre-treatment (filtering) of wastewater from building and ground surface exterior pressure washing
- Discharge of soapy wastewater from building washing and mobile vehicle washing

The solutions for the pressure washing issues in the case studies included education and cleanup of the waste material that was discharged. Cleanup was done by the mobile business (or a service they hired) often with the help of municipal staff via shop vac, absorbent pads, or vactor truck. In addition, one case study noted the soapy water discharge was a repeat violation by the business and the incident was escalated to enforcement for an increase fine.

4. PROGRAM EVALUATION

The Pilot Program included a survey for evaluation and to help identify lessons learned. The survey was completed by 15 out of the 18 participating cities.

4.1 Participant Survey

At the end of the Pilot Program, a survey was sent to the participants to provide feedback. The feedback included answers to specific questions and room for comments. In total, 15 out of 18 Pilot Program participants responded to the survey.

The survey outcomes and comments provided are summarized in seven tables below, one for each survey question. Following each table is a summary of the key feedback from the aspect(s) of the Pilot Program covered by the question.

Question 1: Participation in Pilot

Question 1 asked to indicate in which ways your city was able to participate in the Pilot Program. Eleven answer options were provided, and multiple answers were allowed. The results are summarized in Table 4 from most to least selected.

Table 4. Survey Question 1 Results

Count	Answer Option
15	Attended one or more of the four Pilot Program meetings.
13	Read through or referred to the Pilot Program Plan.
11	Read through or referred to the Best Practices Guidance document.
10	Used the mobile business list provided to identify mobile businesses of interest within your jurisdiction.
7	Provided BMP and outreach information to mobile businesses.
4	Contacted mobile businesses to get more information or arrange an inspection.
4	Contacted other cities regarding mobile businesses on your list.
2	Inspected one mobile business.
3	Inspected two or more mobile businesses.
1	Access issues with the study SharePoint site affected my ability to participate.

The answers to Question 1 indicate that most participation in the Pilot Program came through attendance at the group meetings, reading or referring to the Program plan and guidance document, and using the mobile list that was provided. Several cities also provided BMP and outreach information to mobile businesses and/or performed some inspections, and a few participants inspected multiple mobile businesses. One participant indicated issues with accessing information from the Study’s SharePoint site, and one of the added comments indicated the participant was not able to inspect any mobile businesses during the Pilot.

Question 2: Identification of Mobile Businesses

Question 2 asked the participant to indicate how they identified mobile businesses during the Pilot Program. Seven answer options were provided, and multiple answers were allowed. The results are summarized in Table 5 from most to least selected.

Table 5. Survey Question 2 Results

Count	Answer Option
7	I used the mobile business list provided by the Pilot Program study team.
5	Complaint/spill hotline.
4	Business was already known about or in our existing source control inventory.
3	I did not identify any mobile businesses during the Pilot Program.
1	GIS data, Google maps, or web searches.

The answers to Question 2 indicate that mobile businesses were identified mostly from the lists provided, but also from complaint/spill hotlines, existing knowledge or inventories, and from map or web searches. Comments added by two respondents indicated that mobile businesses are also identified via city inspector observation during routine inspection work and travel, and mobile businesses that are known to operate on city-owned property for municipal events.

In addition, two answer options were not selected by any respondent, including:

- Business was referred by another program, such as FOG or PPA.
- Business identified from referral by another agency/jurisdiction, such as a health department or Ecology.

Question 3: The List of Mobile Businesses Provided

Question 3 was a follow-up to Question 2. For participants who used the mobile business lists provided, open comments were requested about what they liked about the list and how it could be improved. Seven responses were provided, which are summarized as follows:

- Two comments were related to home-based businesses, which are common for mobile business in general. Home-based businesses are optional to be included in municipal source control efforts, and the comments received indicated the mobile business lists would be easier to use if home-based businesses were not included.
- Three comments indicated the list provided was helpful and nearly identical to the existing source control inventories of two respondents.
- One comment said the lists would be more helpful if they excluded businesses that operate outside of their jurisdiction.
- One comment indicated that the list could be improved by further weeding out mobile businesses that are not of particular interest to stormwater, such as Uber drivers.

Question 4: How Was the Pilot Helpful?

Question 4 asked to indicate in which ways the Pilot Program was helpful to the participant's city. Six answer options were provided, and multiple answers were allowed. The results are summarized in Table 6 from most to least selected.

Table 6. Survey Question 4 Results

Count	Answer Option
9	Informational resources about mobile business BMPs (to share with businesses).
7	Guidance on how to engage with neighboring jurisdictions about mobile business source control issues.
6	Assistance with identifying mobile businesses working within your city.
6	I'm not sure yet how or if it was helpful for our source control program.
3	Guidance on how to inspect a mobile business.
1	It was not helpful for our source control program.

Most responses (nine) to Question 4 indicated that information about BMPs for mobile businesses was useful, and nearly half of respondents indicated that some of the guidance in the Best Practices Guidance document was useful. Several respondents indicated that the mobile business lists were helpful in identifying mobile businesses, and a few indicated that guidance on mobile business inspection was helpful. In addition, several respondents said the Pilot Program was not especially helpful to the City or they don't yet know if was helpful.

Question 5: Mobile Business Types of Interest

Question 5 asked to indicate which types of mobile businesses are of ongoing interest or priorities regarding stormwater management and pollution prevention. Up to three answers were allowed and all 15 respondents completed this question. The results are summarized in Table 7 from most to least selected.

Table 7. Survey Question 5 Results

Count	Answer Option
10	Food trucks
10	Pressure washing and exterior surface
8	Builders and construction contractors
6	Auto repair or auto detail
3	Fats Oils Grease (FOG) vendors
2	Carpet cleaners
2	Pet grooming/animal care
2	Vent hood cleaners

The top four mobile business types of interest to or prioritized for the respondents are:

1. Food trucks
2. Pressure washing/exterior surface cleaning
3. Building and construction contractors
4. Mobile automobile repair or detailing

All answer options had responses, and several mobile business types had two or three responses each, including carpet cleaning, FOG vendors, pet grooming, and vent hood cleaners.

In addition, two comments were added with other types of mobile businesses of interest, which are landscaping and exterior building painters.

Question 6: Pollution Prevention Issues for Mobile Businesses

Question 6 asked to indicate the top issues for pollution prevention and source control with mobile businesses. Up to three answers were allowed, and all 15 respondents completed this question. The results are summarized in Table 8 from most to least selected.

Table 8. Survey Question 6 Results

Count	Answer Option
11	Knowledge about pollution prevention, such as environmental regulations, alternative products, or BMPs.
9	Trying to “fly under the radar” and avoid environmental inspections.
5	Knowledge about who to contact in case of spill.
5	Waste disposal and/or recycling.
4	Containment and/or treatment of waste.
4	Residential home base of operations.
3	Work location issues, such as near catch basins or water bodies.
1	Waste storage
1	Waste transfer and transportation (including waste designation and labeling).

The top three mobile business pollution prevention issues from the survey are:

1. Knowledge about regulations, alternative products, and BMPs
2. Trying to “fly under the radar” and avoid inspections
3. Two answer options were tied: knowledge about spill contacts, and waste disposal and/or recycling

All answer options had responses, and fourth most common were two answer options: containment and treatment of waste, and having a home base of operations. The remaining issues had three or fewer responses and included the location of mobile business work, storage of waste, and transfer of waste (including labeling and waste designation).

Question 7: Additional Feedback

Question 7 asked for any additional feedback the respondents wanted to provide to the Study team about the Pilot Program. The comments are grouped by topic below and provided verbatim or paraphrased for longer comments.

Capacity and Timing:

- “We do not have the capacity at this time...but did find it helpful to hear from other municipalities on strategies they are using.”
- “Fall would have been a better time to start a pilot program.”

Business lists and engagement:

- Clearer expectations about “how to use mobile business list.”
- “Our source control inspection program is still gaining momentum so mobile businesses are only being addressed on a complaint basis.”
- “Business should be informed about stormwater regulations by the state...when a license is issued or during Labor & Industries safety inspections.”

Upcoming permit requirements:

- Regarding exterior cleaning of buildings: “dig into how pressure washers hired to clean PCB contaminated surfaces will comply” with the expected updated requirements in the 2024 municipal stormwater permit reissuance.

5. CONCLUSIONS AND RECOMMENDATIONS

The conclusions from the Pilot Program outcomes are summarized below. We also provide recommendations from lessons learned about identifying and providing outreach to mobile businesses, along with comments on working across jurisdictional boundaries.

5.1 Conclusions

The outcomes from the Pilot Program include the following key conclusions. The conclusions relate to elements of the Pilot Program itself and also what mobile business types and associated issues related to source control are of ongoing interest to the participants.

- The resources assembled and created for the Pilot Program—including outreach materials and BMPs for mobile business activities—provided a useful source of information for the Pilot participants. Some participants used the materials in their interaction with mobile businesses during the Pilot Program, and others referenced and added the materials to their own libraries for reference.
- The new outreach brochures that were developed during the Pilot Program on the topics of mobile automobile repair, commercial landscaping, and pressure/power washing help fill gaps in outreach and education with mobile businesses. While these brochures were not finalized and useable during the Pilot Program as originally intended, the additional effort and engagement with the participants to decide the topics and content of the brochures helped create better and more useable materials for permittees across the region. One participant, however, indicated that they don't use trifold brochures and prefer larger format materials that can be put up in a workplace, and digital versions designed primarily for online viewing.
- The lists of likely mobile businesses that were provided to each participating city were found to be useful by most but not all participants. While the keyword search process developed for the Study worked well for identifying likely mobile businesses of interest to stormwater, the instructions and sheer number of businesses on the lists were found by some to be not user-friendly.
- The listing of mobile businesses who are “non-resident” in the city or home-based conflicted with the source control approach by some participants who focus solely on brick-and-mortar businesses or those that reside within their city.
- The information shared among the Pilot participants, the discussion at the group meetings, and the Best Practices Guidance document provided in the Pilot Program was especially helpful to some cities who were still ramping up their source control programs, which began in January 2023.
- Per the survey at the end of the Pilot Program, the top three mobile business types of interest were food trucks, pressure washing/exterior surface cleaning, and building and construction contractors.

- Per the survey at the end of the Pilot Program, the top issues for mobile businesses pollution prevention were: knowledge about regulations, alternative products, and BMPs; trying to “fly under the radar” and avoid inspections; knowledge about spills and emergency contacts; and waste disposal and/or recycling procedures.

5.2 Recommendations

Recommendations are provided as follows based on the Pilot Program outcomes and lessons learned.

Identification of Mobile Businesses

Mobile businesses of interest to stormwater and pollution prevention were successfully identified for the Pilot Program using a keyword search procedure developed for the Study. This procedure can also be used for identifying different types of businesses, mobile or otherwise. We recommend permittees use the tool, which can be customized with different keywords for use in the search and for businesses with resident or non-resident licenses.

The sorting procedure for the list of mobile businesses was based on an assumed risk of activities associated with the self-reported NAICS code. This approach worked to successfully prioritize a relatively small subset of likely mobile businesses from a larger business licensing dataset for the participating cities use during the Pilot Program. We recommend continuing to use a sorting procedure like the one used here to help permittees prioritize their efforts for the most high-risk mobile businesses operating in their city.

Multiple approaches were also used by some participants for identifying mobile businesses as noted in the Pilot Program survey. In addition to or instead of the lists provided, some Pilot participants used GIS and web searches, local knowledge by inspectors or other staff, and referrals from complaints to identify mobile businesses. Some mobile businesses with a consistent location of operation (such as food trucks) can be easier to find and inspect than a mobile business that routinely varies its operation location. We recommend that permittees continue to use a multi-pronged approach for identifying mobile businesses that promotes efficiency for city staff while prioritizing the relatively higher risk businesses.

Contacting and Providing Outreach to Mobile Businesses

Providing outreach to some mobile businesses can be challenging due to their portable nature and variable work locations. We recommend using the approach outlined in the Best Practices Guidance document, which includes:

- Explain why you’re writing or calling: because they have a business license in your city.
- Confirm what their business is and ask if they travel into your jurisdiction to provide services.

- Try to schedule a time with the business for a source control inspection at a site in your jurisdiction where they provide services.

While a wide variety of outreach materials is available for use with mobile businesses, individual pieces may be more or less usable across the region depending on jurisdiction-specific information already on the item (or missing from it). Toward this end, we recommend using the outreach materials assembled in the Best Practices Guidance document as they are specific to mobile businesses and some do not include jurisdiction-specific information. This especially includes the three new outreach items created, which are not specific to any jurisdiction and designed for region-wide use.

Working Across Jurisdictional Boundaries

The locations where mobile businesses work versus where they reside was a challenge for most Pilot participants. Because of the funding sources and mandate for municipal staff, their work needs to focus within their own jurisdiction. This is a ubiquitous issue since mobile businesses can be identified via the “non-resident” status in their business license. The need for pollution prevention, however, remains for some mobile businesses regardless of where they operate.

If a mobile business knows that cities are not aware of them because they come from outside the city to work, then this has the potential to create an incentive for the business to try to “fly under the radar.” We recommend that permittees focus some interest on these “non-resident” businesses (with prioritization considerations as noted above) due to the potential environmental impact their activities can have.

Because mobile businesses are sometimes based out of a home office, this created another challenge for some cities who have chosen to not include home-based businesses in their source control efforts (as the municipal stormwater permits allow). We recommend, however, that source control efforts should ideally be based on the business activity and perceived risk to the environment. This may include some home-based businesses, which could be screened first via phone or email contact to confirm what businesses activities are performed and where.

Despite the challenges of working across jurisdictional boundaries, some Pilot participants made an effort to contact other jurisdictions and/or mobile businesses outside of their city but who have a business license within their city. In one instance discussed with the Study team, this resulted in identifying the home base of a business with relatively high-risk operations (vehicle and equipment repair and detailing) in an adjacent city that was not participating in the Pilot Program. The subsequent communication between the cities was beneficial and resulted in increased awareness of the business and strategizing for outreach to them about pollution prevention. Based on these limited interactions that had positive outcomes, we recommend permittees continue to communicate with their peers in other jurisdictions if they find a mobile business of interest that appears to work in both places.

References

Aspect Consulting (Aspect), 2022, Source Control and Mobile Businesses: Business Listing Generation Technical Memorandum, December 2022. Prepared for King County and Washington State Department of Ecology. [LINK](#) to document on SAM website.

Aspect Consulting (Aspect), 2023, Source Control and Mobile Businesses: Pilot Program Plan. Prepared for King County and Washington State Department of Ecology, March 2023. [LINK](#) to document on SAM website.

Aspect Consulting (Aspect), 2024 (in publication), Source Control and Mobile Businesses: Best Practices Guidance. Prepared for King County and Washington State Department of Ecology, early 2024

Washington State Department of Ecology (Ecology), 2019, Western Washington Phase I and Phase II Municipal Stormwater Permits, effective 2019-2024, Washington State Department of Ecology. [LINK](#)

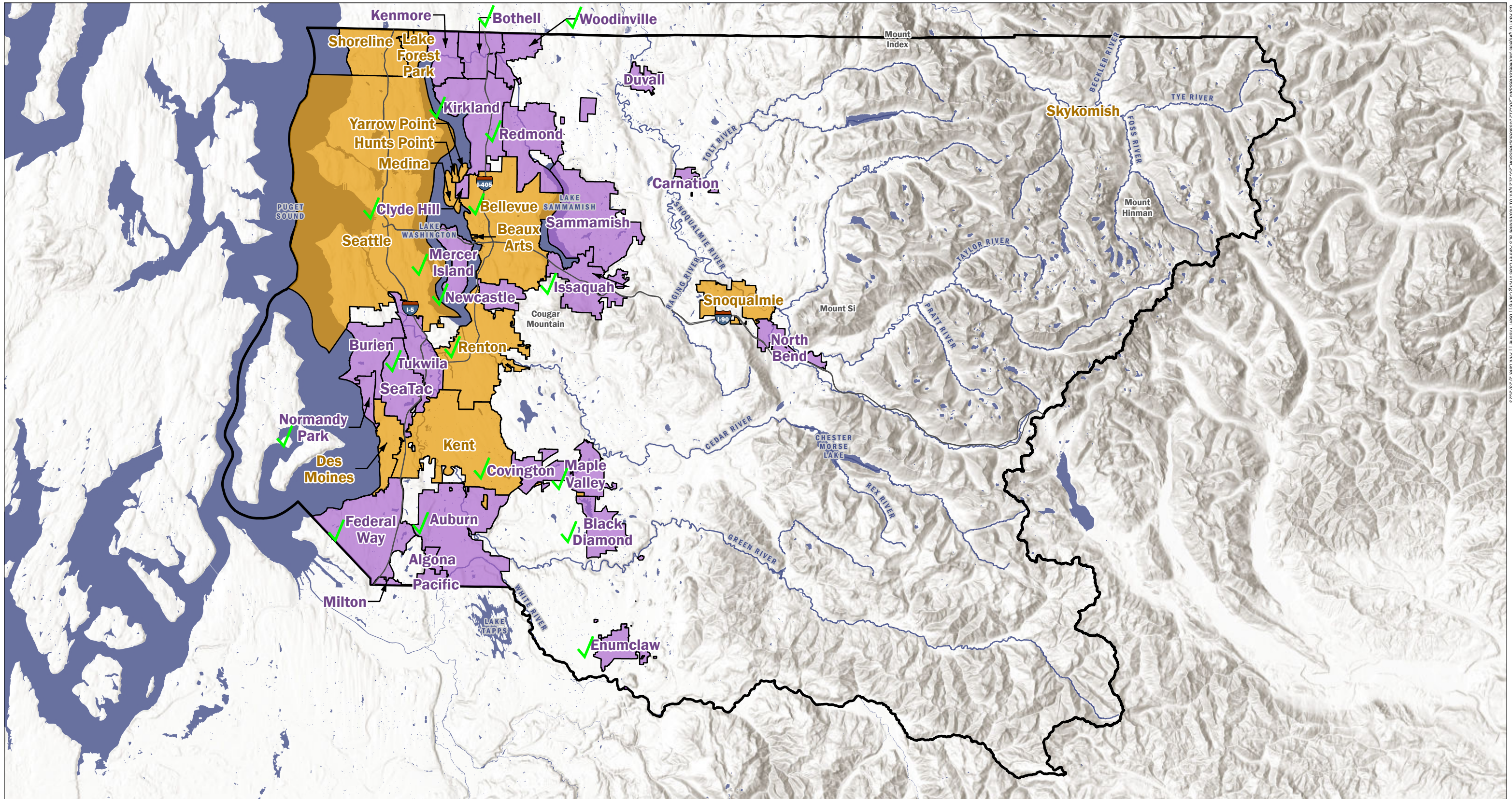
Washington Stormwater Center, 2023, Source Control Inspection Program Guidance Manual. [LINK](#)

Limitations

Work for this project was performed for King County and the Washington State Department of Ecology (Clients), and this report was prepared in accordance with generally accepted professional practices for the nature and conditions of work completed in the same or similar localities, at the time the work was performed. This report does not represent a legal opinion. No other warranty, expressed or implied, is made.

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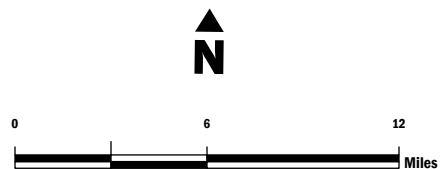
FIGURES



Incorporated Cities in King County, Washington

- Business Licensing Service (BLS) Partner Cities (26)
- Non-BLS Cities (13)
- King County
- Pilot Program Cities (18)

Data source credits: None | Basemap Service Layer Credits: Esri, NASA, USGS



Pilot Program Cities and BLS Partner Cities, King County

Pilot Program Report
Source Control and Mobile Businesses SAM Study
King County, Washington



AUG-2023
PROJECT NO.
AS200212A

BY:
JP / NLK
REVISED BY:
--- / ---

FIGURE NO.
1

OS Path: G:\projects\kws\business\2023\20231212\kws\business\20231212.apr_02 Incorporated BLS Partner Cities in King County 11 User: Ananda 1 | Print Date: 2/23/2023

APPENDIX A

Pilot Program Meetings Minutes

SAM Study: Mobile Businesses and Stormwater Source Control

PILOT PROGRAM MEETING #1

March 23, 11 AM – 12 PM

Join on your computer, mobile app or room device

[Click here to join the meeting](#)

Meeting ID: 240 578 735 931, Passcode: pQ5m5B

Or call in (audio only) +1 425-653-6586, Phone Conference ID: 846 020 458#

AGENDA

WELCOME AND INTRODUCTIONS, 10 min

- Names, jurisdiction, a mobile business type present in your jurisdiction.

STUDY OVERVIEW AND OUTCOMES SO FAR, 15 mins

- Overview of Study goals, [LINK](#) to scope and contract
- Task 2, Survey of permittees about mobile businesses and source control, [LINK](#) to report
- Task 3, Business listing process, [LINK](#) to report
- Task 4, Analysis of mobile business-related IDDE data (from permittees in 2020), [LINK](#) to report
- Task 5, Best Practices Guidance Document (draft almost ready, to be sent next week)

PILOT PROGRAM, Task 6, 30 mins

- Pilot Program Plan
 - Plan was sent to participants last week
 - Pilot Program goals:
 - Develop and test new outreach materials with BMPs to mobile businesses.
 - Develop and test a Mobile Business Identification Spreadsheet Tool to identify mobile businesses from business license data.
 - Identify best practices for municipal source control programs related to identifying and inspecting mobile businesses.
 - Identify and communicate case studies and lessons learned to permittees and Ecology.
- Program participation, meetings, and schedule
 - Three more group meetings planned, approximately every 6 weeks, to be scheduled.
 - Pilot program schedule is 6 months: March-August 2023.
- Mobile business lists
 - Study team has prepared lists by city based on keyword search procedure developed in Task 3, ranked by NAICS risk level.
 - Lists will be sent to participants as first order of business.
 - Non-BLS cities received instructions for preparing and sending their business license lists to the Study team.
- Mobile business outreach materials
 - Included in Best Practices Guidance document:
 - Existing outreach materials targeted to mobile businesses and

- BMPs for mobile business activities
- Best Practices Guidance and inspecting mobile businesses
 - Guidance for mobile businesses and for municipal source control programs
 - Guidance document will be revised and finalized based on review and input by Pilot Program participants
- Case studies
 - Template available in Pilot Program Plan: five questions and before/after photos
- Survey of participants at end of Pilot

WRAP-UP & NEXT STEPS, 5 mins

- Study team:
 - Provide mobile business lists to participating BLS cities
 - Send draft Best Practices Guidance to all participating cities
 - Survey of participants to decide on the two remaining outreach materials topics
 - Meeting polls to schedule 3 remaining group meetings during Pilot Program
- Participants:
 - Read Pilot Program Plan
 - Read Best Practices Guidance document
 - Respond to meeting poll to schedule 3 group meetings
 - Respond to survey to decide on 2 additional outreach topics
 - Review mobile business lists and incorporate into site inventory
 - Non-BLS cities (Bellevue, Kent, and Renton):
 - Send business license lists to Study team per instructions previously provided

SAM Study: Mobile Businesses and Stormwater Source Control

PILOT PROGRAM MEETING #2

May 8, 2023, 10-11 AM

Recorded on Teams

Meeting ID: 212 535 843 159, Passcode: 3rXnxC

[Click for folder with meeting video¹](#)

AGENDA

WELCOME and AGENDA OVERVIEW, 5 min

MOBILE BUSINESSES LISTS, 25 mins

- Emailed on April 20
- Overview of business lists and data fields
- Recommendations for getting started (**see ATTACHMENT 1**)
 1. Identify subset of mobile businesses of interest.
 2. Coordinate with your peers at other cities.
 3. Contact the business and try to schedule an inspection.

OUTREACH MATERIALS & BMPs, 25 mins

- Existing outreach materials for mobile businesses
 - Available for your use on Sharepoint [LINK](#)
- BMPs for mobile businesses
 - Available for your use on Sharepoint [LINK](#)
- New outreach materials
 - Topic 1: *Mobile Auto Repair* tri-fold brochure, available on Sharepoint [LINK](#)
 - Different cities have different regulations around pressure washing. A better image may be available, and might need to clarify language for power washing in the Cleanup section of the brochure.
 - Topic 2 and Topic 3 discussion
Outreach topic survey results (**see ATTACHMENT 2**)
 - Preferred format for outreach item: trifold brochure
 - Q1: business types with a mobile sector
 - Top contenders: Power/Pressure Washing; Car Detail/Cleaning
 - Q2: business types that are mobile in nature
 - Top contenders: Asphalt and Concrete Paving/Grinding; Contractors at Small Construction Sites
 - Q3: non-business topics
 - Top contender: Common Source Control Issues for Mobile Businesses
 - Q4: other mobile businesses noted by respondents
 - Hazardous waste haulers

¹ https://aspectconsultingllc365.sharepoint.com/:f:/r/sites/NPDESSAMStudy2021-2023/Shared Documents/6_Pilot Program/Meetings?csf=1&web=1&e=Blgnsr

- Used oil and grease collection
- Deicing applicators (streets, parking lots, sidewalks)
- Stone/tile installers
- Janitorial services
- Sprinkler/fire system maintenance
- Ecology PPA program is going through a similar process to identify topics for outreach materials.
 - Study team will follow-up with Andy M, PPA program coordinator (he is also on the Study TAC).

NEXT STEPS & NEXT MEETING, 5 mins

- Next meetings
 - Meeting 3: June 27, 12-1 PM
 - Meeting 4: August 29, 12-1 PM
- Next steps: Study team
 - Finish preparing mobile business lists for three remaining cities' whose business license data was recently received (Auburn, Bellevue, Renton).
 - Readd selected participants to the Sharepoint for access.
 - Follow-up with PPA Program about outreach topics.
- Next steps: Participants
 - Skim Pilot Program Plan.
 - Read and review Best Practices Guidance document (comments welcome). [LINK](#)
 - Use the recommended steps in Attachment 1
 1. Identify starter subset of mobile businesses: let us know what approach you use!
 2. Contact your peers: any information to share about mobile businesses you're considering for inspection?
 3. Contact the businesses: try to schedule an inspection at a site in your city

PILOT PROGRAM MEETING #2

May 8, 2023, 10-11 AM

ATTACHMENT 1

Recommended steps to get started with the list of mobile businesses provided.

1. **First, identify a subset of potential mobile businesses of interest to you** and your city's source control program priorities.
 - a. **Our suggested approach:** start with the businesses that Higher risk NAICS and have a positive Keyword Search Score of 0.75 or greater.
 - i. If desired, narrow the subset list by Keyword search scores of only ≥ 1 .
 - ii. If desired, expand the subset list by including the Medium or Lower risk NAICS businesses with Keyword Search Scores of ≥ 0.75 or ≥ 1.0
 - iii. If desired, expand the subset list to any businesses with any positive Keyword Search Score (≥ 0.25).
 - b. **Other approaches to consider** for identifying a subset of mobile businesses.
 - i. Sort the list by NAICS code (e.g. 441xxx and 447xxx for auto shops and car dealers, or 722xxx for Food Services and Restaurants)
 - ii. Skim through the last column/data field of the keywords found and pick out businesses based on the keywords.
 - iii. Skim through the ProdDescription field to read the businesses' own description of its services and pick businesses that seem high risk.
 - iv. For a geographic focus, pick businesses that are in neighboring cities.
2. **Second, contact your peers** at the cities in which the businesses reside.
 - a. Ask your peer city:
 - i. Is this business on your list already?
 - ii. If yes, is there any inspection or code violation history for this business you can share?
3. **Third, look up and contact the business.**
 - a. Do a web search to see if the business has an online presence.
 - b. Contact the business by phone or email or via website:
 - i. You're contacting them because they have a business license in your city.
 - ii. Confirm if they provide mobile services, including to customers in your city.
 - iii. Try to schedule an inspection time when they are working at a site in your city.

Survey for Outreach Materials for Mobile Businesses and Stormwater Source Control

15

Responses

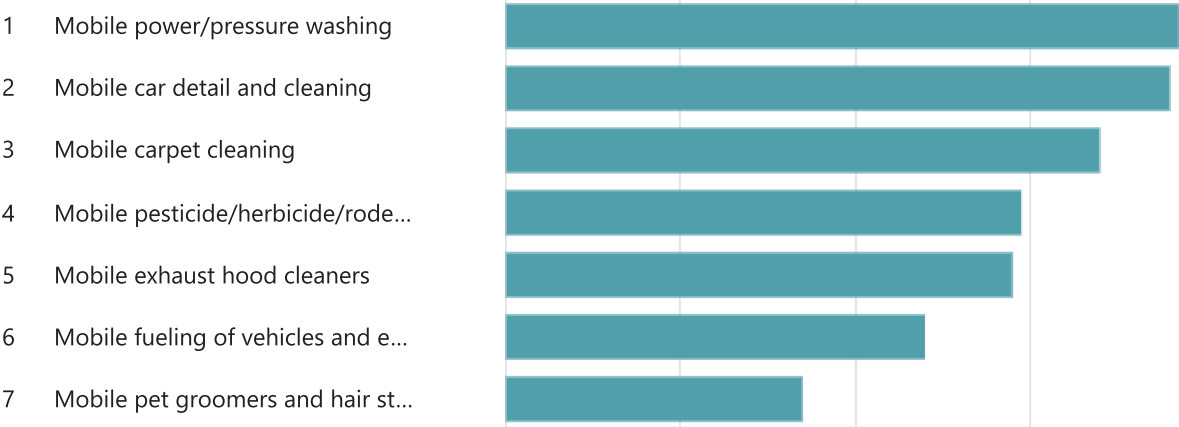
68:38

Average time to complete

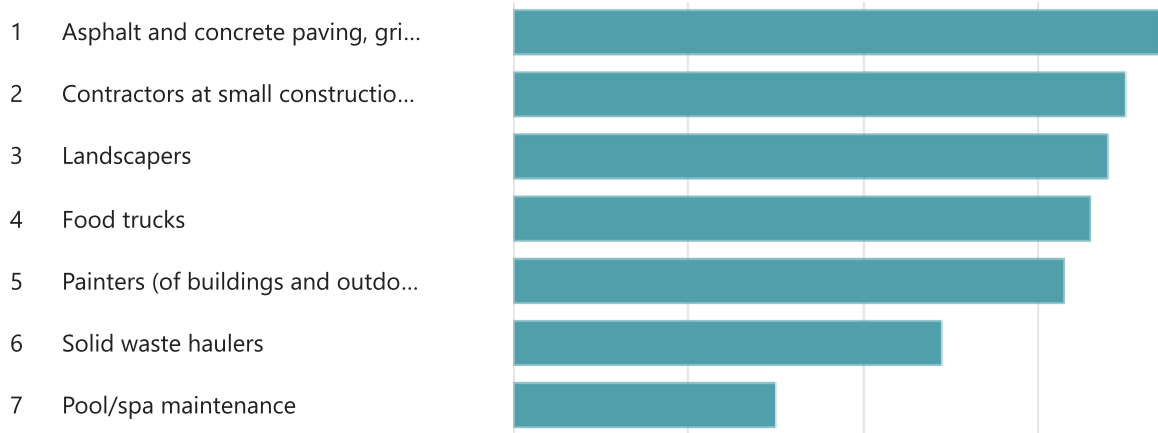
Active

Status

1. The following business types are ones with a mobile business sector. Please rank these mobile business types from most preferred to least preferred for creating new outreach materials (brochure, fact sheet, etc.) for stormwater source control and pollution prevention.



2. The following business types are typically mobile in nature. Please rank these mobile business types from most preferred to least preferred for creating new outreach materials (brochure, fact sheet, etc.) for stormwater source control and pollution prevention.



3. Please rank the following topics from most preferred to least preferred for creating new outreach materials (brochure, poster, etc.) targeted to municipal stormwater source control programs.



SAM Study: Mobile Businesses and Stormwater Source Control

PILOT PROGRAM MEETING #3

June 27, 2023, 12-1 PM

[Click here to join the meeting](#)

Meeting ID: 244 855 091 312 Passcode: R474uE

Or call in (audio only) [+1 425-653-6586](tel:+14256536586),790621742# , Phone Conference ID: 790 621 742#

AGENDA

with *Minutes in italics*

WELCOME and ARRIVAL, 5 min

	Chris Thorn	Auburn
X	Tanya MacFarlane	Bellevue
	Ryan Sweet	Black Diamond
	Robert Holbrook	Bothell
X	Oscar Lopez	Bothell
	Shaun Tozer	Clyde Hill
X	Dan Taylor	Covington
	Ben Parrish	Covington
	Darren Chromey	Enumclaw
	Eric Palmer	Enumclaw
X	Kevin Du	Federal Way
X	Andy Olson	Federal Way
X	Dan Sternkopf	Federal Way
X	Mike Vermeulen	Issaquah
	Julie Wartes	Issaquah
X	Ryeann-Marie Tuomisto	Kirkland
X	Halley Kimball	Maple Valley
	Deega Roble	Mercer Island
X	Marley Kirkham	Newcastle
X	Jessie Medrow	Normandy Park
X	Scott McQuary	Redmond
X	Kenneth R. Waldo	Redmond
X	Piero D'Amore	Renton
	Kristina Lowthian	Renton
	Russell Betteridge	Tukwila
X	Sammie Howe	Woodinville
X	Christopher Jerrett	Woodinville
X	Todd Hunsdorfer	King County
X	Alison Schweitzer	King County
X	James Packman	Aspect Consulting

MOBILE BUSINESSES LISTS, 15 mins

- Emailed to all participating cities.
- Using the lists to identify which mobile businesses to pursue.
 - Study team recommendation:
 - NAICS Risk (Higher, Medium, Lower, to be assigned)
 - Positive keyword search score
 - Read Product Description

- Discussion
 - How's it going?
 - Alternative approaches to identifying mobile businesses of interest?
 - *Renton looked at their fire authority website. They have a list of food trucks within Renton. Renton might partner with fire inspectors on inspections.*
 - *Renton worked with their solid waste team to find a list of sites that have a trash compactor.*
- *Could this group help identify which businesses appear on multiple jurisdiction's lists?*
 - *We can't share business lists to people outside of that jurisdiction due to confidentiality reasons*
 - *The study team will look into if we can compile and share business license mailing addresses in other jurisdictions- those might be ones to schedule with other jurisdictions.*
- [Food Truck and Mobile Vendor](#) on-line training
 - *Created by WA Stormwater Center, City of Puyallup, and City of Spokane*
 - *Kirkland is considering requiring mobile vendors to take this training prior to getting a business license.*

SOURCE CONTROL INSPECTIONS, 15 mins

- Recommendations - see [Attachment 1](#) from Meeting #2.
 1. Identify subset of mobile businesses of interest.
 2. Coordinate with your peers at other cities.
 3. Contact the business and try to schedule an inspection.
- Discussion
 - How's it going?
 - Challenges?
 - Successes?
 - Case studies
 - Before/after photos
 - Use [template](#) on Sharepoint
 - *Multiple cities communicating with the same business*
 - *Pros: reinforced message, awareness that cities are paying attention, identify businesses that may be flying under the radar*
 - *Cons: more overall effort by cities per business; communication/inspection burden on business*

OUTREACH MATERIALS & BMPs, 15 mins

- *Sharepoint troubleshooting*
 - *Try always starting by going to the [Pilot Program folder](#) first.*
 - *Alternatively, use (and bookmark) the link in the original email from Sharepoint sent on April 4. (The subject of the email is "James Packman shared the folder "6_Pilot Program" with you.")*
 - *If you haven't accessed the Sharepoint for a while, you may need to use a code to "refresh" your access, in which case the site will prompt you and email the code.*
- Existing outreach materials on Sharepoint. [LINK](#)

- BMPs for mobile businesses. [LINK](#)
- New outreach brochures:
 - *Mobile Auto Repair*, available on Sharepoint. [LINK](#)
 - To be revised per feedback received.
 - *Commercial Landscaping*, being prepared.
 - *Pressure Washing*, being prepared.
 - Drafts and review of new brochures: tentative for late July.

NEXT STEPS & NEXT MEETING, 5 mins

- Next meeting
 - Meeting 4 (final): August 29, 12-1 PM
- Next steps: Study team
 - Draft outreach brochures
 - Follow up on SharePoint access with individuals that cannot access the site
 - Share PDFs of resources in this document with pilot participants
- Next steps: Participants
 - Identify starter subset of mobile businesses of interest
 - Contact other jurisdictions for information-sharing
 - Schedule and perform source control inspections
 - Collect information for case studies
 - *Tell study team if you're having issues with Sharepoint access*

SAM Study: Mobile Businesses and Stormwater Source Control

PILOT PROGRAM MEETING #4

August 31, 2023, 1-2 PM

[Click here to join the meeting](#)

Meeting ID: 245 696 541 808, Passcode: WNuhBV

Or call in (audio only) [+1 425-653-6586,922422614#](tel:+14256536586) Phone Conference ID: 922 422 614#

MINUTES

WELCOME and ARRIVAL, 5 min

	Chris Thorn	Auburn
X	Tanya MacFarlane	Bellevue
X	Ryan Sweet	Black Diamond
	Robert Holbrook	Bothell
X	Oscar Lopez	Bothell
	Shaun Tozer	Clyde Hill
X	Dan Taylor	Covington
	Ben Parrish	Covington
X	Darren Chromey	Enumclaw
	Eric Palmer	Enumclaw
	Kevin Du	Federal Way
	Mike Vermeulen	Issaquah
X	Julie Wartes	Issaquah
	Ryeann-Marie Tuomisto	Kirkland

X	Halley Kimball	Maple Valley
X	Deega Roble	Mercer Island
	Marley Kirkham	Newcastle
X	Jessie Medrow	Normandy Park
	Scott McQuary	Redmond
	Kenneth R. Waldo	Redmond
	Piero D'Amore	Renton
	Kristina Lowthian	Renton
X	Russell Betteridge	Tukwila
X	Sammie Howe	Woodinville
	Christopher Jerrett	Woodinville
	Todd Hunsdorfer	King County
X	Alison Schweitzer	King County
X	James Packman	Aspect Consulting

PROGRAM DEBRIEF, 25 mins

Discussion, share your experience:

- Identifying mobile businesses.
 - Using the business list provided.
 - Identifying a subset of mobile businesses to target.
- Communicating with mobile businesses.
- Coordinating with other jurisdictions.
- Inspecting mobile businesses.
 - How many?
- Outreach materials and BMPs: which ones did/do you use with mobile businesses?

Pilot program participant feedback:

- **Enumclaw:** did one mobile business inspection, food truck. Got in touch with one of the cooks first, who shared Darren's information with the manager. Then set up meeting with the manager. Learned where their wastewater goes, how they get their potable water, where they dispose of other wastes, etc. Mostly in compliance. Brochures and pamphlets were provided. Did inspection about an hour before business opened up. Used Google Maps to find hours of operation. Starting with other known mobile businesses in city, including pet groomers.

- **Covington:** wasn't able to do an inspection yet. Did drive around and took notes of mobile businesses observed in the field. On the list provided, there were over 1,600 businesses. Only about 8 were in the city and appeared to be businesses. Appears to be a lot of people that got business licenses but aren't doing business in the city (maybe even not mobile businesses). Finding more time to do business inspections.
- **Bothell:** just starting to organize mobile business list. Had ~1,600 on list, about 20 in their jurisdiction.
- **Kirkland:** contacted a mobile business that had their base operations in Sammamish. Contacted Sammamish, who is considering adding them to their source control inventory. Unclear if Kirkland will continue to follow up with that business.
- **Maple Valley:** have not inspected any mobile businesses. Trying to lead with education. Sharing mobile business training from Washington Stormwater Center. Have used the mobile auto repair brochure. Exploring what materials to share with businesses when they apply for business licenses. Next target sector - working with HOAs, who work a lot with landscapers.
- **Tukwila:** have a few commercial kitchens in the jurisdiction that house 30-40 food trucks. Inspect commercial kitchens. Focus on fixed businesses, too, that support mobile food vendors, like commercial kitchens. Not doing large mailings with outreach materials. Worked with a carpet cleaner working outside a restaurant that was discharging wastewater in the parking lot.
- **Normandy Park:** going to do a mobile landscaper inspection. Does anyone have a source control inspection form for that business type? The Pollution Prevention Assistance program may have some materials that could be useful.
- **Woodinville:** uses Cartegraph for inspection. Haven't been able to update it yet for mobile business BMPs.

OUTREACH MATERIALS, 5 mins

Awaiting more funding to complete the brochures:

1. *Mobile Auto Repair*
 - To be revised per feedback received.
2. *Commercial Landscaping*
 - Began work on graphics and content
3. *Pressure Washing*
 - Began work on graphics and content

Are Pilot participants willing to review and comment on the drafts of brochures 2 and 3?

- Expected date for review: late October or early November.

SURVEY, 5 mins

- Identify the program outcomes and lessons learned.
- Up to 10 questions, online format.
- Survey findings to be incorporated into Pilot Program Report.

CASE STUDIES, 5 mins

Use template.

- Narrative:
 - What issues were identified?

- How were they addressed?
- What BMP information was provided to the businesses?
- What is special about this type of mobile business' pollution prevention needs?
- If enforcement for code violation was involved, provide brief explanation.
- Photos
 - Before or during inspection.
 - After inspection.
- Upload case study documents to [folder on Sharepoint](#).

BEST PRACTICES GUIDANCE DOCUMENT, 5 mins

- In draft stage currently.
- Please review, add comments to the [draft document on Sharepoint](#).
- Review by September 11.
- Study team will finalize document.

PILOT PROGRAM REPORT, 5 mins

- Draft to be reviewed by TAC and Pilot participants.
- Expected to be ready for review in early December; receive comments by early January.

NEXT STEPS, 10 mins

Next steps: Study team





- Develop survey and send to Pilot participants.
- Finalize Best Practices Guidance document.
- Complete preparation of mobile business outreach brochures (pending PRO-C funding approval).
- Prepare Pilot Program Report

Next steps: Participants

- Review draft Best Practices Guidance document **by September 11**
- Prepare Case Studies and upload to SharePoint **by September 15**.
- Complete survey. Will be shared in early September, feedback requested **by September 15**.
- Review draft outreach materials in **early November**.
- Review Pilot Program draft report in **early December**.

APPENDIX B

Mobile Business Case Studies

 King County  Aspect <small>CONSULTING</small>	Pilot Program: Source Control and Mobile Businesses SAM Study	 <small>DEPARTMENT OF ECOLOGY State of Washington</small>
	Stacks Burgers Enumclaw, WA	 <small>SAM Stormwater Action Monitoring</small>
City:	Enumclaw	
Mobile Business Type:	Food	

Narrative





1. What issues were identified?
 - No real issues
 - General cleanliness
 - Education/Outreach
 - Wastewater disposal
 - Used oil gets recycled off site for bio diesel
 -

2. How were the issues addressed?
 - No real issues, just learning where their layout and how their wastewater and used oil gets disposed
 - Any issues were addressed by education and outreach

3. What BMP information was provided to the business?
 - Education & Outreach
 - Maintaining Dumpsters
 - Only rain down the drain
 - Cleanliness around the mobile business

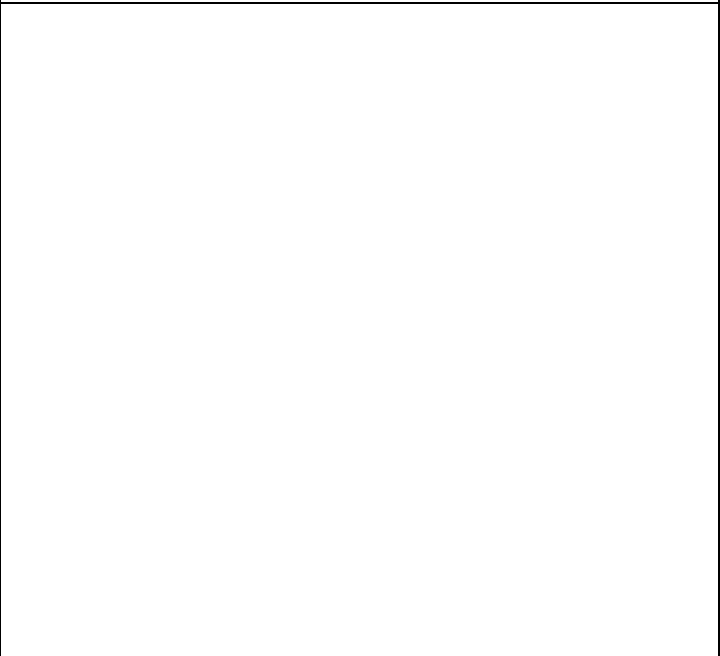
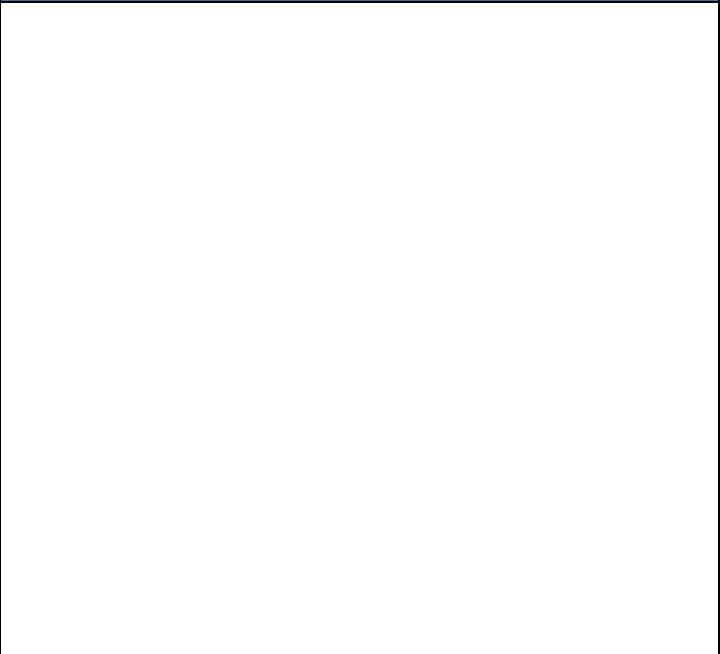
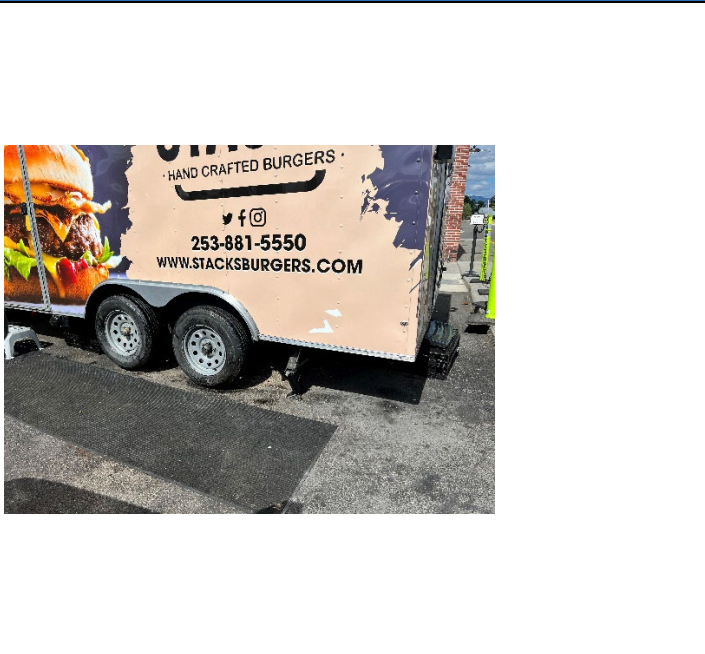
4. What is special about this type of mobile business's pollution prevention needs?
 - Being as a Mobile Business it is a tough read in Source Control, specifically waste disposal.
 - Burgers =grease/oil. Used waste oil needs to be disposed of properly. The mobile business is close to a catchbasin so education about "nothing except water down the drains".





5. If enforcement for code violation was involved, provide brief explanation:
 - No codes were violated
 - Education/Outreach

 King County  Aspect CONSULTING	Pilot Program: Source Control and Mobile Businesses SAM Study	 DEPARTMENT OF ECOLOGY State of Washington  SAM Stormwater Action Monitoring
	Stacks Burgers Enumclaw, WA	
City:	Enumclaw	
Mobile Business Type:	Food	

Case Study – Photos 1

Before or During Inspection Photo(s):	After Inspection Photo(s):
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 King County  Aspect <small>CONSULTING</small>	Pilot Program: Source Control and Mobile Businesses SAM Study	 <small>DEPARTMENT OF ECOLOGY State of Washington</small>
	Pressure Washing	 <small>SAM Stormwater Action Monitoring</small>
City	Kirkland	
Mobile Business Type	Pressure washing	

Narrative

1. What issues were identified?

Pressure washing driveway and sidewalk using a material called “Apple Wash” that had strong chemical smell. Soap suds and turbid water observed flowing off property, onto public roadway, and into public stormwater drainage system.

2. How were the issues addressed?

Upon arrival, staff asked workers to eliminate washing activity and provided stormwater education and municipal code information. Provided best management practices to minimize pollutants from continuing to discharge into stormwater system. City eductor truck was dispatched to clean pollutants out of stormwater system.

3. What BMP information was provided to the business?





Mobile business staff were educated about the basics of the stormwater system (flows to nearest lake, stream or wetland), municipal code (prohibited to discharge pollutants into stormwater system and potential fines and cost recovery) and provided with technical assistance on proper stormwater pollution prevention practices (discharge onto vegetated or gravel area or remove all waste material and water and dispose properly off site).

4. What is special about this type of mobile business’s pollution prevention needs?





The needs for this type of business are to have equipment and trained staff to collect processed wastewater and dispose of properly. Also, it needs to be understood that processed water, chemicals of any kind, heated water, eco-friendly/biodegradable soaps, etc... are not allowed to be discharged into the storm system.

5. If enforcement for code violation was involved, provide brief explanation:





This mobile vendor has been previously educated and is a repeat violator so the fine will be doubled.

 King County  Aspect <small>CONSULTING</small>	Pilot Program: Source Control and Mobile Businesses SAM Study	 <small>DEPARTMENT OF ECOLOGY State of Washington</small>
	Pressure Washing	 <small>SAM Stormwater Action Monitoring</small>
City	Kirkland	
Mobile Business Type	Pressure washing	

Case Study – Photos 1	
Before or During Inspection Photo(s):	After Inspection Photo(s):





 King County  Aspect <small>CONSULTING</small>	Pilot Program: Source Control and Mobile Businesses SAM Study	 <small>DEPARTMENT OF ECOLOGY State of Washington</small>
	Pressure Washing	 <small>SAM Stormwater Action Monitoring</small>
City	Kirkland	
Mobile Business Type	Pressure washing	

Case Study – Photos 2	
Before or During Inspection Photo(s):	After Inspection Photo(s):

 King County  Aspect <small>CONSULTING</small>	Pilot Program: Source Control and Mobile Businesses SAM Study	 <small>DEPARTMENT OF ECOLOGY State of Washington</small>  <small>SAM Stormwater Action Monitoring</small>
	Pressure Washing Issue 20230822	
City	City Of Redmond	
Mobile Business Type	Pressure Washing	

Narrative





- 1. What issues were identified?**
Pressure washing sidewalks without any BMPs to mitigate sediment and debris discharge to private and public storm drains.
- 2. How were the issues addressed?**
Responding IDDE staff directed the owner and his employees to cease washing operations until BMPs were in place. No hot water, detergents, or chemicals were being used so filtering the sidewalk washwater was necessary for compliance.
- 3. What BMP information was provided to the business?**
Redmond has a print guidance brochure and wastewater disposal matrix explaining issues with pressure washing and how to perform the activity in compliance with City code.
- 4. What is special about this type of mobile business’s pollution prevention needs?**
Pressure washing code compliance can be simple or complex depending on what is being washed, how it is being washed, where the washing is occurring. The answers to those questions help explain what needs to happen with the waste washwater generated by the activity.
- 5. If enforcement for code violation was involved, provide brief explanation:**
There was no escalation to code enforcement as the mobile business in question complied with direction given by the IDDE responder.

 King County 	Pilot Program: Source Control and Mobile Businesses SAM Study	 DEPARTMENT OF ECOLOGY State of Washington
	Pressure Washing Issue 20230822	 SAM Stormwater Action Monitoring
City	City Of Redmond	
Mobile Business Type	Pressure Washing	

Case Study – Photos 1





Before or During Inspection Photo(s):	Before or During Inspection Photo(s):
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 King County 	Pilot Program: Source Control and Mobile Businesses SAM Study	 DEPARTMENT OF ECOLOGY <small>State of Washington</small>  <small>Stormwater Action Monitoring</small>
	Pressure Washing Issue 20230822	
City	City Of Redmond	
Mobile Business Type	Pressure Washing	

Case Study – Photos 2

After Inspection Photo(s):	After Inspection Photo(s):
	

 King County  Aspect <small>CONSULTING</small>	Pilot Program: Source Control and Mobile Businesses SAM Study	 <small>DEPARTMENT OF ECOLOGY State of Washington</small>
	Multi Facility Deployment Staff	 <small>SAM Stormwater Action Monitoring</small>
City	Tukwila, Michele Riggs	
Mobile Business Type	Building Maintenance	

Narrative

1. What issues were identified?

Building washing was producing sudsy water in the parking lot of a local restaurant. The site washing of the outside patio/sidewalk area was being cleaned by the restaurant chains staff dispatched from their office. The staff member stated that he has been doing this same activity in the Pacific Northwest for five years and has never had anyone stop to discuss the impacts to stormwater. The wash water had not made it to the storm drain. The staff member cleaned up the sudsy water with a shop vac.

2. How were the issues addressed?

Educational information was shared about the difference between storm and sewer drains and that stormwater is not treated prior to entering waterways. The inspector discussed BMPs for cleaning outside surfaces. If detergents must be used. The water must be collected and disposed of properly. If there are no chemicals in use a sediment filter should be placed in the catch basin(s).

3. What BMP information was provided to the business?





The inspector gave the staff member a felt filter catch basin insert for immediate use. The King County Stormwater Pollution Prevention Manual – Best Management Practices for Commercial, Multi Family and Residential Properties were sent via email.

4. What is special about this type of mobile business’s pollution prevention needs?



This activity was being conducted as directed by the restaurant chain’s offices. They may have other duties not noted here. Educational exposure seems to be lacking.


5. If enforcement for code violation was involved, provide brief explanation:





N/A

 King County 	Pilot Program: Source Control and Mobile Businesses SAM Study	 DEPARTMENT OF ECOLOGY State of Washington
	Multi Facility Deployment Staff	 SAM Stormwater Action Monitoring
City	Tukwila, Michele Riggs	
Mobile Business Type	Building Maintenance	

Case Study – Photos 1

Before or During Inspection Photo(s):	After Inspection Photo(s):
	

	
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 King County  Aspect <small>CONSULTING</small>	Pilot Program: Source Control and Mobile Businesses SAM Study	 <small>DEPARTMENT OF ECOLOGY State of Washington</small>
	Mobile Food Truck Education	 <small>SAM Stormwater Action Monitoring</small>
City	Tukwila, Michele Riggs	
Mobile Business Type	Food Truck	

Narrative

1. What issues were identified?

On March 3rd, 2023, El Shaddai Taqueria, truck was allowing wastewater from a designed tank and drain (L&I Food Truck Requirements) left open into the Storm Drain in the Parking lot at 101 Andover Park E, Tukwila, WA, 98188.

On July 28th, 2023, a staff member was observed washing the pavement with detergents in the same parking area. She was washing the Grease, which had become slippery in the area where the line for ordering and picking up food forms.

2. How were the issues addressed?

Staff placed a tote under the pipe to catch waste leaks and drips until a better tank could be purchased. City staff discussed the difference between sewer and storm drains for both incidents. Reminding the staff that only rain is allowed into the storm system. Discussions of solutions for their business needs, such as collecting and taking the wastewater into the Fixed Business’s wastewater collection area (ie. Mop Sink), collecting wash water.

3. What BMP information was provided to the business?





A referral to a selection of RV portable waste tanks for capturing the wastewater for proper disposal was provided.

4. What is special about this type of mobile business’s pollution prevention needs?

Food trucks and mobile food vendors will have these same needs. Human safety in greasy areas. Disposal of waste waters and other liquids.

5. If enforcement for code violation was involved, provide brief explanation:





Not Applicable

 King County  Aspect CONSULTING	Pilot Program: Source Control and Mobile Businesses SAM Study	 DEPARTMENT OF ECOLOGY State of Washington
	Mobile Food Truck Education	 SAM Stormwater Action Monitoring
City	Tukwila, Michele Riggs	
Mobile Business Type	Food Truck	

Case Study – Photos 1

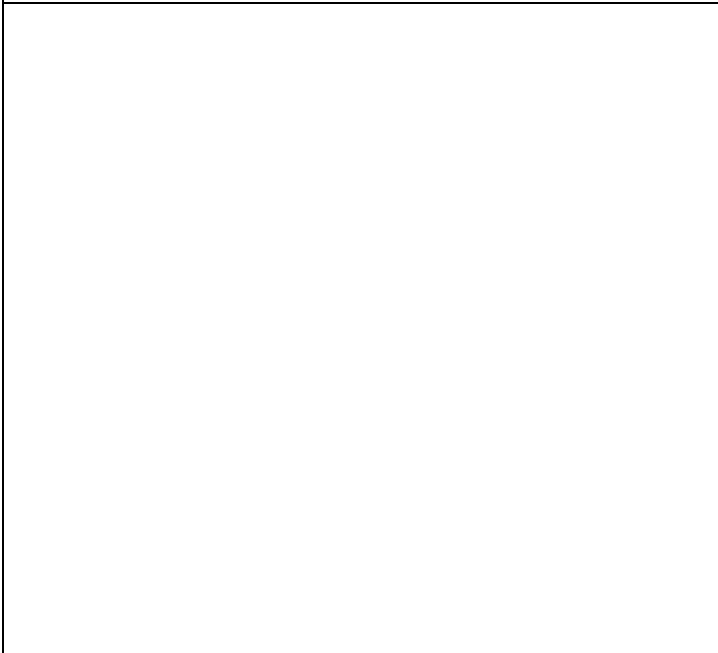
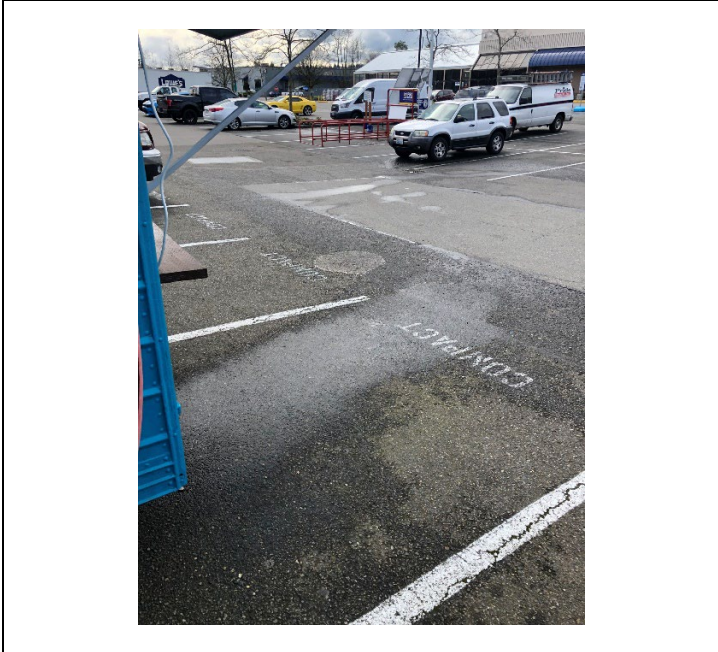
Before or During Inspection Photo(s):	After Inspection Photo(s):
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 King County  Aspect CONSULTING	Pilot Program: Source Control and Mobile Businesses SAM Study	 DEPARTMENT OF ECOLOGY State of Washington
	Mobile Food Truck Education	 SAM Stormwater Action Monitoring
City	Tukwila, Michele Riggs	
Mobile Business Type	Food Truck	

Case Study – Photos 2

Before or During Inspection Photo(s):	After Inspection Photo(s):
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 King County  Aspect <small>CONSULTING</small>	Pilot Program: Source Control and Mobile Businesses SAM Study	 <small>DEPARTMENT OF ECOLOGY State of Washington</small>  <small>SAM Stormwater Action Monitoring</small>
	Mobile Food Truck Education	
City	Tukwila Inspector Sean Hall	
Mobile Business Type	Food Truck	

Narrative

1. What issues were identified?
On Aug 28th, 2023, 9:30 AM During source control visit at a corporate mobile production kitchen noticed that a mobile vendor leaking from their gray water tank. No mobile vendor employees were present at the time. City staff contacted the corporate production kitchen management.





2. How were the issues addressed?
Production kitchen management resolved the discharge upon notification and will contact vender employee to replace gasket and or valve. Management was given technical assistance and resources for all forty-five mobile food vendors at location listed below.

3. What BMP information was provided to the business?
Washington Stormwater Training: Food Truck and Mobile Vendor [Online Course](#)
King County Surface Water Pollution Prevention Manual:
A-11 Cleaning or Washing of Tools and Equipment
A-12 Cleaning of Washing of Food Service Areas and Equipment
A-31: Parking Lots, Driveways and Outside Storage Areas


4. What is special about this type of mobile business’s pollution prevention needs?
Food trucks and mobile food vendors will have these same needs. Disposal of waste waters and other liquids is not covered in Food Truck licensure with Labor and Industries.





5. If enforcement for code violation was involved, provide brief explanation:

Not Applicable

 King County  Aspect <small>CONSULTING</small>	Pilot Program: Source Control and Mobile Businesses SAM Study	 <small>DEPARTMENT OF ECOLOGY State of Washington</small>
	Mobile Food Truck Education	 <small>SAM Stormwater Action Monitoring</small>
City	Tukwila Inspector Sean Hall	
Mobile Business Type	Food Truck	

Case Study – Photos 1

Before or During Inspection Photo(s):	After Inspection Photo(s):
 <p style="text-align: center; background-color: #cccccc; padding: 5px;"> 8/28/23, 9:30 AM 47° 27' 4.610" N, 122° 15' 24.698" W 360 Corporate Dr N King County Index number:793 </p>	

 King County  Aspect <small>CONSULTING</small>	Pilot Program: Source Control and Mobile Businesses SAM Study	 <small>DEPARTMENT OF ECOLOGY State of Washington</small>
	Vehicle Washing	 <small>SAM Stormwater Action Monitoring</small>
City	Tukwila, Russell Betteridge	
Mobile Business Type	Mobile Fleet Washing and Maintenance	

Narrative

1. What issues were identified?

Washing vehicles and equipment to stormwater. Property owners are exporting the cleaning of fleets to mobile contractors who are sometimes required to conduct the work off-site. When off-site, contractors are neglecting controls to protect stormwater.

2. How were the issues addressed?

The report came in after a few days, from a community Facebook page. Once the responsible party was determined and effort began to contact them. They were a national company with franchises in the region, but with no centralized staff making contact extremely difficult, but were finally reached through their customer complaint webpage. National and Regional staff were made aware of Surface Water rules and the need to eliminate their discharges immediately. They responded with vector cleaning of all affected storm catchment and conveyance.

3. What BMP information was provided to the business?





The RP had a program that, if employed on any site would have captured all wastes and properly disposed. Training of staff was emphasized and the originating party who barred the proper washing activity on their site were informed.

4. What is special about this type of mobile business’s pollution prevention needs?

National management with internet presence only made local rules less enforceable.

5. If enforcement for code violation was involved, provide brief explanation:

RP was informed of the Clean Water Act, the State Water Pollution Control Act and the response of all jurisdictions that will affect their National business model. They committed to additional training and documentation.

 King County  Aspect CONSULTING	Pilot Program: Source Control and Mobile Businesses SAM Study	 DEPARTMENT OF ECOLOGY State of Washington
	Vehicle Washing	 SAM Stormwater Action Monitoring
City	Tukwila, Russell Betteridge	
Mobile Business Type	Mobile Fleet Washing and Maintenance	

Case Study – Photos 1

Before or During Inspection Photo(s):	After Inspection Photo(s):
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