

# TECHNICAL MEMORANDUM

**Date:** November 16, 2021  
**To:** Laurie Larson-Pugh  
**Copy to:** Technical Advisory Committee (TAC)  
**From:** Rebecca Dugopolski, Mindy Fohn, and Katie Wingrove, Herrera Environmental Consultants, Inc.  
**Subject:** Subtask 1.1 – Summary of Supplemental Business Inspection Program Interviews

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## INTRODUCTION

In January 2020, members of the Business Inspection Group (BIG) published the Business Inspection Program Report (BIG Report). The BIG Report compiled information about current business inspection programs conducted by eight jurisdictions within the Puget Sound region. The complete BIG Report can be found on the Washington Stormwater Center website: <[www.wastormwatercenter.org/wp-content/uploads/FINAL-Business-Inspection-Report-2-16-1.pdf](http://www.wastormwatercenter.org/wp-content/uploads/FINAL-Business-Inspection-Report-2-16-1.pdf)>.

The Washington Stormwater Center was awarded funding from the Stormwater Action Monitoring (SAM) to conduct an additional round of four interviews and develop a guidance manual and trainings to assist Phase II stormwater permittees with meeting the business source control requirements described in S5.C.8 of the Western Washington National Pollutant Discharge Elimination System Phase II Municipal Stormwater Permit (NPDES Phase II Permit).

The original BIG Report summarized interviews of six Phase I jurisdictions with established permit-required business source control programs and two Phase II jurisdictions with ongoing non-permit required programs (respondents #1-8). The original interviews were not focused on Pollution Prevention Assistance (PPA) programs.

It is recognized that a few Phase II jurisdictions implement a business inspection program that is similar to the business source control requirement S5.C8. The PPA program, managed by the Washington State Department of Ecology (Ecology) since 2008, contracts with local health districts, counties, or cities for 2-year cycles to implement a source control inspection program focusing on businesses that generate small quantities of hazardous waste (small quantity generators or SQGs), or other potential harmful pollutants. The PPA program offers training, outreach, and technical materials through its members only web-based portal.

This technical memorandum supplements the January 2020 BIG Report with four additional interviews (respondents #9-12). Organizations for supplemental interviews were identified and selected by the Technical Advisory Committee (TAC) for this project. The TAC selected three Phase II jurisdictions and one health district for the supplemental interviews. The three Phase II jurisdictions either currently implement or are in the initial stages of implementing a PPA program. The health district implements a PPA program and coordinates with the Phase II cities and the Phase II county within its district. The four organizations were interviewed using the same questions as the original BIG Report interviews. Interviews were conducted via telephone/online meetings rather than in-person due to COVID-19.

This technical memorandum follows the January 2020 BIG Program Report layout of six sections:

- Education and Outreach
- Code and Code Enforcement
- Data Collection and Management
- Inventory Development and Updates
- Inspection Protocol
- Program Management

Section topics correspond to the NPDES Phase II Permit's Business Source Control (BSC) Program for Existing Development (S5.C.8). Each section includes the survey question and the corresponding responses from the four jurisdictions organized in a tabular format. Each response table is followed by a summary of key themes from the original respondents #1-8, then a summary of key themes from the supplemental respondents #9-12 allowing the reader to comprehend and compare both reports in one document. Each section ends with an overall summary and recommendations related to that topic.

# 1.0 EDUCATION AND OUTREACH

The following subsections summarize responses to the education and outreach questions. An overall summary and recommendations section is included at the end.

## Question 1.1

### What type of outreach was done prior to implementing business inspections?

#### Responses

Respondent	Comments
Respondent 9	<ul style="list-style-type: none"> <li>• We joined the PPA in 2008.</li> <li>• We provide no outreach or notice to businesses prior to visit. We used to send letters prior to inspections for certain sectors, but that was ineffective.</li> </ul>
Respondent 10	<ul style="list-style-type: none"> <li>• PPA and the new permit-required BSC program will be different programs.</li> <li>• For PPA - outreach prior to inspections, such as mailers, is poorly received.</li> <li>• For the new permit-required program with the focus on specific BMPs, then we'll conduct workshops.</li> <li>• For PPA visits are scheduled ahead of time for certain sectors such as doctors' offices. We now do very little outreach. We experience few refusals when conducting non-notified door-to-door visits.</li> <li>• For the new permit-required BSC program, we plan on performing much more outreach to provide advance notice to businesses of new ordinances and sector-specific BMPs.</li> <li>• We are considering online tools that are sector specific. It will be brand new. This is more focused on the stormwater manual BMPs.</li> </ul>
Respondent 11	<ul style="list-style-type: none"> <li>• We hired a consultant to conduct focus groups of the target businesses prior to drafting ordinances, and how to reach out to the businesses. We will use that information to inform our outreach to businesses.</li> </ul>
Respondent 12	<ul style="list-style-type: none"> <li>• Currently no outreach prior to implementing the PPA program.</li> <li>• Conduct cold calls for PPA program.</li> </ul>

BMP = Best Management Practice

BSC = Business Source Control

PPA = Pollution Prevention Assistance

#### Summary

*Original BIG Report:* Before implementing business inspection programs, many of the jurisdictions mailed notification letters to businesses or conducted public advertising alerting them of the program. General stormwater pollution prevention, education, and outreach for business was not conducted in most of the interviewed jurisdictions before beginning their business inspection program.

*Supplemental Interviews:* Respondents are split between providing notification, education, and time to allow businesses to learn about the new requirements and come into compliance or to continue with the PPA program approach of not providing any notification prior to site visits.

## Question 1.2

**Do you conduct ongoing outreach? For example, for new businesses, do they get a heads-up regarding the purpose of the inspection?**

### Responses

Respondent	Comments
Respondent 9	<ul style="list-style-type: none"> <li>No, we don't conduct ongoing outreach. As for new businesses, we work with the City Economic Development team that works with new businesses to catch them early and provide information.</li> </ul>
Respondent 10	<ul style="list-style-type: none"> <li>For PPA in each contract cycle of 2 to 3 years, we develop the business list and that is when we catch new businesses. We don't give them a heads-up about the inspection.</li> <li>For the new permit-required program, businesses will receive a notification prior to the inspection, along with guidance and information on BMPs.</li> </ul>
Respondent 11	<ul style="list-style-type: none"> <li>Not currently. We would like to perform ongoing outreach.</li> </ul>
Respondent 12	<ul style="list-style-type: none"> <li>PPA visits are done without prior notice unless it is a doctor or dentist office. New businesses are added when the lists are updated every two years.</li> </ul>

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### Summary

*Original BIG Report:* Ongoing outreach for new businesses seems dependent on whether an extensive business license inventory is available. Ongoing inspections are usually focused on high-priority businesses, and ongoing outreach materials about the NPDES Phase II Permit are generally distributed throughout the regions.

*Supplemental Interviews:* Some jurisdictions would like to provide businesses with notification prior to the inspection and ongoing outreach. New businesses are added when the inventory is updated, and currently the PPA list is updated every 2 to 3 years.

## Question 1.3

Please provide examples of outreach and distribution timeline if available.

### Responses

Respondent	Comments
Respondent 9	<ul style="list-style-type: none"> <li>We visit all businesses every 2 years at a minimum and distribute materials at the visit.</li> </ul>
Respondent 10	<ul style="list-style-type: none"> <li>For the new permit-required program, we anticipate providing outreach and materials to the business maybe 2 to 3 weeks in advance.</li> </ul>
Respondent 11	<ul style="list-style-type: none"> <li>Ordinance has to be adopted by June 2022. We're closely aligning with the permit timeline.</li> </ul>
Respondent 12	<ul style="list-style-type: none"> <li>After a visit if corrections are needed, we provide outreach that is prescriptive and included in the follow up e-mail.</li> </ul>

### Summary

*Original BIG Report:* No specific summary for this question.

*Supplemental Interviews:* Outreach information and specific BMPs or corrections are provided at the time of the site visit and then a follow up visit to document correction. One jurisdiction will take an education approach ahead of program implementation allowing businesses time to comply with requirements.

## Question 1.4

Are you providing incentives or recognition to businesses that are regularly in compliance?

### Responses

Respondent	Comments
Respondent 9	<ul style="list-style-type: none"> <li>No, we are not.</li> </ul>
Respondent 10	<ul style="list-style-type: none"> <li>For PPA, we joined the EnviroStars program and recognized many businesses. We are ending the contract with them at the end of the year. We are exploring our own local program to replace it. We are considering a focus on spill kits and secondary containment, a sticker "Spill Ready" on their window.</li> <li>Haven't discussed doing this for the permit-required program. Not ready yet.</li> </ul>
Respondent 11	<ul style="list-style-type: none"> <li>Not at this time. This has been discussed for the facility maintenance program and possibly for this program.</li> </ul>
Respondent 12	<ul style="list-style-type: none"> <li>Yes. County health funds, through garbage tipping fees, vouchers to cover 50 percent of PPA corrective action costs, up to \$500. This is popular with businesses and a great incentive to get BMPs adopted.</li> </ul>

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PPA = Pollution Prevention Assistance

## Summary

*Original BIG Report:* Most respondents do not offer incentives or a recognition program for compliant businesses, but there is a stated interest for, and some initial planning of, future recognition programs. The EnviroStars program is an existing business compliance recognition program, but is broader than just stormwater.

*Supplemental Interviews:* There appeared to be interest in an incentive or recognition program, but this type of program has not been developed by most jurisdictions yet. There was also some consideration of combining a business source control recognition program with the facility maintenance inspection program developed at the local level. One PPA program used vouchers to assist funding BMP corrective actions.

## Question 1.5

### Have you developed outreach materials and/or letters of non-compliance for ESL businesses?

#### Responses

Respondent	Comments
Respondent 9	<ul style="list-style-type: none"> <li>No.</li> </ul>
Respondent 10	<ul style="list-style-type: none"> <li>We have materials in several languages from the Ecology PPA program. We have access to a “fee for use” translator services, but we haven’t used it. Our organization has an Education/Outreach group for developing in-house materials. We plan to use them if needed.</li> <li>Smaller jurisdictions have access to our materials and the PPA materials.</li> </ul>
Respondent 11	<ul style="list-style-type: none"> <li>We plan to develop materials in other languages in-house. We find that materials with pictures and in-person instruction is the best way to convey the proper BMPs.</li> </ul>
Respondent 12	<ul style="list-style-type: none"> <li>We do not have materials developed in-house. However, King County has a robust resource compendium for certain topics such as FOG. Currently a member of the PPA resource consistency workgroup for education materials and we look at ESL and how do we decide what languages on which materials. Have produced materials for automotive, nail salons (Vietnamese), and grocers (Korean). Recently did a presentation to a local Korean grocers’ group and had a translator there.</li> <li>Another sector of concern is landscaping, but we have learned that most Spanish speakers are bilingual.</li> </ul>

BMP = Best Management Practice

Ecology = Washington State Department of Ecology

ESL = English as a Second Language

FOG = Fats, Oils, and Grease

PPA = Pollution Prevention Assistance



## Summary

*Original BIG Report:* No summary of approach to develop materials. Examples of outreach materials were submitted and compiled in Appendix C of the original BIG Report.

*Supplemental Interviews:* Organizations with a PPA program have access to outreach materials in other languages for sectors previously identified including nail salons, automotive, and restaurants. The King County Hazardous Waste program was mentioned as a resource. Another new sector identified is landscaping companies. None of the jurisdictions interviewed have developed non-compliance letters for English as a Second Language (ESL) businesses.

## Education and Outreach Summary and Recommendations

Some of the topics raised during the interviews that may be helpful to highlight in the guidance manual that will be developed for this project include the following:

- The PPA program prefers unannounced site visits because they are most productive, well received, and create opportunities for in-person education.
- One jurisdiction, although implementing a PPA program, plans to inform businesses prior to site visits with an emphasis on education of new ordinances and required BMP implementation.
- PPA has developed some standardized and branded outreach materials that could be useful for Business Source Control programs if available to be shared with a broader audience than just PPA members.

Recommendations for this project include the following:

- Review PPA materials and guidance. Sharing relevant materials and guidance with a broader audience through this project may involve referencing, updating, or obtaining permission from the PPA leads
- The King County Hazardous Waste program may be a source of ESL materials for the online resource library.
- Review the focus group report developed by Respondent #11 to assist with developing outreach methods and materials.
- Develop recommendations for incentive programs for Phase II jurisdictions.
- Develop non-compliance letter templates for ESL businesses.
- Identify additional ESL business outreach materials to be developed.

## 2.0 CODE AND CODE ENFORCEMENT

The following subsections summarize responses to code and code enforcement questions. An overall summary and recommendations section is included at the end.

### Question 2.1

**How do you handle complaint-based response for mobile businesses that provide services within your jurisdiction but are not based there? For example, if you receive a complaint about a discharge in your jurisdiction but they are based in another jurisdiction?**

#### Responses

Respondent	Comments
Respondent 9	<ul style="list-style-type: none"> <li>• We refer mobile business dumping to code enforcement and in some cases, they will pursue cost recovery against the violator.</li> <li>• We don't reach out to other jurisdictions if the company resides in a neighboring jurisdiction.</li> </ul>
Respondent 10	<ul style="list-style-type: none"> <li>• If they are conducting business in our jurisdiction, we deal with it. We don't respond outside the City. We work closely with the County PPA inspector.</li> </ul>
Respondent 11	<ul style="list-style-type: none"> <li>• Our code is broad, "ALL Operations (broad)" so can reach across jurisdiction boundaries. It is applied broadly.</li> </ul>
Respondent 12	<ul style="list-style-type: none"> <li>• We perform outreach to that business group about the proper BMPs. We will reach out to the stormwater utility in the jurisdiction when there's a complaint. However, PPA will conduct the follow-up.</li> <li>• In the case of a violation, we collaborate with County IDDE staff. They will then in turn require the violator to work with PPA for technical assistance to avoid enforcement. If FOG issue at restaurants, then the food inspectors refers to PPA for assistance.</li> </ul>

BMP = Best Management Practice

IDDE = Illicit Discharge Detection and Elimination

FOG = Fats, Oils, and Grease

PPA = Pollution Prevention Assistance

#### Summary

*Original BIG Report:* Most jurisdictions attempt to contact the mobile business owner to provide education on stormwater protection and code compliance. Most do not contact the jurisdiction where the business is based. If unable to contact the mobile business owner, some jurisdictions will contact the property owner that hired the services.

*Supplemental Interviews:* Complaint-based response to mobile businesses is often referred to code enforcement, or the company contacted and educated on the proper BMPs. For companies residing outside the jurisdiction, some will reach out to the company directly, others will coordinate with the businesses home jurisdiction or County PPA inspector. One County PPA program conducting work within the cities coordinates with the city's stormwater utility for enforcement, with the county PPA inspector providing education for compliance and follow-up.

## Question 2.2

**What percent of business inspections require follow-up? Is there a threshold that triggers a follow-up?**

### Responses

Respondent	Comments
Respondent 9	<ul style="list-style-type: none"> <li>50 percent require a follow-up. It's high due to the combined inspection approach. Inspecting many more items inside and outside the building including hazardous materials (including Critical Aquifer Recharge Areas chemical list requirement), FOG, stormwater. (See response regarding combining inspections)</li> </ul>
Respondent 10	<ul style="list-style-type: none"> <li>For PPA, not more than 10 percent; probably single digits.</li> <li>Some issues are very simple and all they need is resources. Ecology has "high priority" issues such as dangerous waste management. Sometimes the follow-up is a phone call, or a short site visit.</li> </ul>
Respondent 11	<ul style="list-style-type: none"> <li>Most require a follow-up; most are not a big issue. Don't know what the threshold is for follow-up.</li> </ul>
Respondent 12	<ul style="list-style-type: none"> <li>20 percent follow-up.</li> <li>The threshold for follow-up is any issue.</li> <li>A majority of the time the issue is backed up by a regulation. Minority issues may be an improvement and is usually housekeeping.</li> </ul>

Ecology = Washington State Department of Ecology

FOG = Fats, Oils, and Grease

PPA = Pollution Prevention Assistance

### Summary

*Original BIG Report:* The percent of businesses that require follow-up range widely from 3 percent to 90 percent across the surveyed jurisdictions. This suggests that follow-up rates are dependent on jurisdiction program design. Two of the eight respondents reported a reduction in the percentage of follow-up actions required over time. Follow-up actions tend to be triggered by high-priority violations found during inspections. The methods of follow-up include phone calls, additional site visits, and notification letters.

*Supplemental Interviews:* The follow-up range is 10 percent to 90 percent. Similar to the original BIG Report, the range is dependent upon the program design. If the inspection is combined with other inspection types, the follow-up is high due to a broader range of inspection items.

## Question 2.3

**What percent of businesses require enforcement protocol? How much time do you give a business to comply before implementing enforcement protocol?**

### Responses

Respondent	Comments
Respondent 9	<ul style="list-style-type: none"> <li>• 5 to 10 percent. Depends on the nature of the issue. If it is an imminent threat, then same day. Otherwise, 30 to 60 days.</li> </ul>
Respondent 10	<ul style="list-style-type: none"> <li>• For PPA, less than 1 percent. If there is an immediate threat, we report to Ecology.</li> <li>• Usually, a couple of days to a week. Most business owners don't want to deal with non-compliance and are quick to come to compliance if the cost is low. There is no enforcement in the PPA program.</li> <li>• For BSC, we're unsure how far we'll take enforcement.</li> </ul>
Respondent 11	<ul style="list-style-type: none"> <li>• Very few. Time to comply is negotiated, dependent on the cost/time to implement, with the business, usually 30 to 60 days.</li> </ul>
Respondent 12	<ul style="list-style-type: none"> <li>• Less than 1 percent per year.</li> <li>• Usually, it's a stormwater issue such as system maintenance or discharge. Those issues are referred to the local stormwater municipality and their Illicit discharge code.</li> <li>• Time to comply is decided by the stormwater municipality.</li> <li>• PPA does not perform enforcement.</li> <li>• PPA has a great working relationship with all the Phase II city and county public works departments.</li> </ul>

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Ecology = Washington State Department of Ecology

PPA = Pollution Prevention Assistance

### Summary

*Original BIG Report:* Enforcement actions for permit compliance is rare for all surveyed jurisdictions, averaging at an estimated 1 percent of businesses. Enforcement protocol for all jurisdictions include an admonishment/notification letter of water quality violation(s) with a 30-day timeline for business compliance, followed by a notification letter of violation(s) which requests that corrective actions be taken with a timeline ranging from 14 to 30 days. The final stage of enforcement is a penalty, though all jurisdictions report that very few businesses require more than a notice of violation to enforce compliance.

*Supplemental Interviews:* Some PPA programs do not conduct enforcement while others conduct both site visits and enforcement based on the jurisdiction's preference. PPA programs report immediate threats to Ecology and lower-level threats are handled internally or referred to code enforcement. Enforcement actions are a very low percentage of visits, usually 1 percent or less, with the exception of the combined inspection program with a rate of 5 to 10 percent. The enforcement protocol is similar to what was included in the original BIG Report and most businesses comply.

## Question 2.4

Please provide example ordinances/policies.

### Responses

Respondent	Comments
Respondent 9	<ul style="list-style-type: none"> <li>We don't expect to do much updating of the ordinance for BSC, just minor clean up.</li> </ul>
Respondent 10	<ul style="list-style-type: none"> <li>We are in the process of revising the codes. We think that current ordinances will suffice but are in the process of reviewing them.</li> </ul>
Respondent 11	<ul style="list-style-type: none"> <li>Do have internal policies, in draft form, will send if requested.</li> </ul>
Respondent 12	<ul style="list-style-type: none"> <li>For PPA, local Solid Hazardous Waste Regulations and Municipal IDDE regulations are used.</li> <li>When prescribing corrective actions, the e-mail is as simple as possible, and the regulation is provided in a link. They used to be quoted and listed, so that the response appeared to be enforcement. We don't do that in order to emphasize the softer technical assistance approach.</li> <li>PPA presents itself as a "no charge" consultant to clarify regulations and BMPs.</li> </ul>

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BSC = Business Source Control

IDDE = Illicit Discharge Detection and Elimination

PPA = Pollution Prevention Assistance

### Summary

*Original BIG Report:* No summary.

*Supplemental Interviews:* Two jurisdictions did not expect to make major changes to their ordinances for the permit-required program. A draft policy was available from one respondent. A table with weblinks to relevant code/ordinance language provided by the respondents is included in Appendix A of this technical memorandum.

## Question 2.5

Please provide an example enforcement strategy.

### Responses

Respondent	Comments
Respondent 9	<ul style="list-style-type: none"> <li>Progressive enforcement. First, voluntary, then a final notice letter. If we don't hear back within specified time, then refer to code enforcement. Code enforcement implements their process with a letter, a second notification, and then a fine.</li> <li>It's critical that jurisdictions have authority to access.</li> </ul>
Respondent 10	<ul style="list-style-type: none"> <li>We use an escalating strategy. First a warning letter with the stormwater code. After two letters, we then refer to code enforcement. Once code enforcement is involved, issues are almost always resolved.</li> </ul>
Respondent 11	<ul style="list-style-type: none"> <li>The process is outlined in the code. For the new requirement, it is anticipated that our code won't need an overhaul.</li> <li>We use a citywide uniform enforcement strategy. First, a correction notice which cites the code and the corrective actions and has a due date. No penalty, no appeal at this stage. Large/corporate businesses like this notice so they can run it up the ladder as it does look a little intimidating. Not sure how it goes over with smaller business owners. If non-compliance, then give more time. The next step is a citation with a monetary penalty and an appeal process.</li> </ul>
Respondent 12	<ul style="list-style-type: none"> <li>See answer to Question 2.3 regarding referral for IDDE issues and storm maintenance.</li> <li>Enforcement is the last tool.</li> </ul>

IDDE = Illicit Discharge Detection and Elimination

### Summary

*Original BIG Report:* Responding jurisdictions incorporate a voluntary compliance strategy that is based on providing technical guidance to businesses to reach compliance. If businesses do not reach compliance through this method, most jurisdictions follow a prescribed enforcement policy based on Ecology's format.

*Supplemental Interviews:* Jurisdictions incorporate the same strategy as in the original report, with the exception of the County PPA inspector working within cities that have their own illicit discharge detection and elimination (IDDE) ordinances. Enforcement is referred to the City or County where the IDDE issue is located.

## Code and Code Enforcement Summary and Recommendations

Some of the topics raised during the interviews that may be helpful to highlight in the guidance manual that will be developed for this project include the following:

- Examples of code and code enforcement resources, see Appendix A for some resources gathered through the supplemental interviews.
- Example codes will be helpful for Phase II jurisdictions.

- Use escalating enforcement strategy and coordinate with code enforcement staff.
- Out of compliance businesses receive some form of notification, simple e-mail with links to the codes, verbal, or formal letter.
- Conduct follow-up when issues are identified to provide information/guidance or to confirm correction, improvement or establish compliance.
- Although a formal notice may appear serious, large businesses are in favor of such a notice informing management of the need for compliance.
- Understand that some PPA programs are highly educational with no enforcement and others are educational but move to enforcement in the same visit with the same inspectors.

### 3.0 DATA COLLECTION AND MANAGEMENT

The following subsections summarize responses to data collection and management questions. An overall summary and recommendations section is included at the end.

#### Question 3.1

**What type of data management/inspection tracking systems are you using? City Works, GIS, zoning, parcel, Cartograph, NPDES Pro, etc.? Has it the system changed? If so, why?**

#### Responses

Respondent	Comments
Respondent 9	<ul style="list-style-type: none"> <li>• Data is entered twice. 1) TRAKiT used for Citywide for permitting, documenting visits, and many other functions. 2) Ecology requires entry into the PPA database. For the new program, will use TRAKiT.</li> <li>• We are investigating changing to a GIS based program. If this works, we'd drop TRAKiT but will still have to use the PPA database.</li> </ul>
Respondent 10	<ul style="list-style-type: none"> <li>• We use Cityworks for all departments asset management. We began with the private facility inspections and now adding the other inspections. PPA inspections are entered into the Ecology database.</li> <li>• The private facility inspection program will be the testing ground and model for Cityworks.</li> </ul>
Respondent 11	<ul style="list-style-type: none"> <li>• We purchased MS4front for business inspections from a small company from Ohio. It's customized to our organization and linked into GIS. It will be a stand-alone program.</li> </ul>
Respondent 12	<ul style="list-style-type: none"> <li>• Ecology requires entry into the PPA database.</li> <li>• The old PPA database was challenging, so then went to Microsoft Excel spreadsheets internally.</li> <li>• Developed new GIS parcel-based color-coded system within the health district. The property is red if the 3 years since the last visit, and other colors for other situations. This can also be shared with stakeholders.</li> <li>• One drawback is mini malls which have multiple businesses for one parcel.</li> </ul>

Ecology = Washington State Department of Ecology

GIS = Geographic Information System

PPA = Pollution Prevention Assistance

#### Summary

*Original BIG Report:* Data management systems are often integrated with ArcGIS since there is an in-field spatial component of the inspection program. Two of the jurisdictions transitioned from Microsoft Access to other software programs. In-house programs were used by another three of the eight respondents. Four of the respondents are transitioning to software that better suits their needs. Each jurisdiction has unique circumstances that requires tailored data management systems.



*Supplemental Interviews:* For jurisdictions with a PPA program, inspection data will be entered both the PPA program and another system. GIS-based systems are developed in-house either as a stand-alone program or combined with other inspection programs.

### Question 3.2

**Are you using the same data management system for other inspection programs? If so, how well do they integrate with other data management systems?**

#### Responses

Respondent	Comments
Respondent 9	<ul style="list-style-type: none"> <li>All data is entered into TRAKiT.</li> </ul>
Respondent 10	<ul style="list-style-type: none"> <li>Everything will be entered into Cityworks, and PPA will remain in the Ecology Database.</li> </ul>
Respondent 11	<ul style="list-style-type: none"> <li>No. It is a stand-alone with business inspections, as a separate software is used for erosion inspections and private facility maintenance.</li> </ul>
Respondent 12	<ul style="list-style-type: none"> <li>After the initial database, our organization combined multiple databases for this parcel-based system. It has been problematic combining many uses in one database.</li> </ul>

Ecology = Washington State Department of Ecology

PPA = Pollution Prevention Assistance

#### Summary

*Original BIG Report:* Some jurisdictions use the same data management system in other stormwater programs or departments. In many of the jurisdictions, interfacing between department/programs is challenging and needs improvement. Some data management systems are asset-based, and others are inspection-based; there is no clear consensus on which is better. Older data management systems have trouble interfacing with ArcGIS and handling the amount of data required by the business inspection program. Cartegraph Operations Management Software (Cartegraph OMS) was working well for one respondent, and they intended to expand its use.

*Supplemental Interviews:* Using a universal jurisdiction-wide database system is predominant, with one jurisdiction developing a stand-alone system.

### Question 3.3

Please share what’s working and what’s not working (strengths and shortcomings) with your data management system.

#### Responses

Respondent	Comments
Respondent 9	<ul style="list-style-type: none"> <li>• Inspections are recorded on paper and then transferred to TRAKiT.</li> <li>• Using the same system within the City allows continuity.</li> </ul>
Respondent 10	<ul style="list-style-type: none"> <li>• Just beginning to use Cityworks. Exports are challenging.</li> <li>• One shortcoming is that Cityworks is more complicated for incident response and integrating with the SeeClickFix mobile application.</li> <li>• We find the advantage of Cityworks is improved permit spending tracking.</li> </ul>
Respondent 11	<ul style="list-style-type: none"> <li>• Sometimes there are connection issues with the database when in the field.</li> <li>• One shortcoming is that’s it’s a separate database.</li> <li>• One advantage is that it is GIS based and customizable.</li> </ul>
Respondent 12	<ul style="list-style-type: none"> <li>• See answer to Question 3.2.</li> </ul>

#### Summary

##### Original BIG Report:

Successes: Both Dynamics and Cartegraph offer many features such as in-field data access, links to photos and emails, tracking and analyzing data that create operational efficiencies. In-field access to information helps provide better technical assistance to businesses. In many of the jurisdictions, ArcGIS components work well and are used in tandem with in-house or other data management systems.

Challenges: Both Cityworks and Cartegraph may have challenges with user adoption. Both software programs are complex and may not be intuitive unless the user has training or experience with ArcGIS. Field staff may require training for consistent use across program divisions. There are some limitations in querying information in Cartegraph. Interfacing challenges between departments and/or programs seem to be a trend across jurisdictions.

##### Supplemental Interviews:

Successes: GIS systems and parcel-based systems are location oriented and intuitive. It’s easy to visualize status of a location in the inspection cycle. One system for the entire jurisdiction allows continuity of information.

Challenges: Exports for Cityworks is challenging. Combining Cityworks with SeeClickFix is difficult. Maintaining separate databases can be cumbersome.

## Question 3.4

**Do you have any data management recommendations? If so, why?**

### Responses

Respondent	Comments
Respondent 9	<ul style="list-style-type: none"> <li>If the jurisdiction is starting from scratch, think about the efficiencies and be willing to spend the money for a good program.</li> </ul>
Respondent 10	<ul style="list-style-type: none"> <li>The fewer places you can have things the better. Keep it all in one place and back it up. The more streamlined, the better.</li> </ul>
Respondent 11	<ul style="list-style-type: none"> <li>No. It's not my area of expertise.</li> </ul>
Respondent 12	<ul style="list-style-type: none"> <li>Keep it simple. Communicate your needs early with staff that will be managing the database. Have the right stakeholders in the room.</li> </ul>

### Summary

*Original BIG Report:* A solid business inventory is an important foundation for the data management aspect of the business inspection program for all the surveyed jurisdictions. Parcel numbers in the database as an identifier can help to manage data throughout business ownership transitions. When developing the data management program, a close relationship with Information Technology (IT) staff and programmers should be established for clear communication and effective data development/management.

*Supplemental Interviews:* Data management should be kept simple and consider efficiencies early in the process.

## Question 3.5

**Are you collecting data electronically in the field using a collector app, Survey123, or similar tool? If so, why; if not, why not?**

### Responses

Respondent	Comments
Respondent 9	<ul style="list-style-type: none"> <li>No, but considering using tablets/electronic field data entry and then interface with TRAKiT. However, would like to hear how electronic field data entry works for others.</li> </ul>
Respondent 10	<ul style="list-style-type: none"> <li>We tried tablets and cell phones in the field. The result by many groups in Public Works was that it did not go well.</li> <li>Now we are starting to use the mobile application in Cityworks, and it seems user friendly. It works well for incident response. Attaching photos is easy. We plan to use the mobile application for the BSC. The private maintenance program is testing the system for us as a model.</li> </ul>
Respondent 11	<ul style="list-style-type: none"> <li>Yes. Both Collector and Survey123 on our iPad. Using them for the inventory development. Will likely use for our inspections.</li> </ul>
Respondent 12	<ul style="list-style-type: none"> <li>No, not now. It's an interest. For a casual site visit, an electronic system may be a hindrance. The same goes with clipboards. The goal is to keep it conversational and establish trust. My method works with the business and practical. It's off-putting to use an iPad, or checklist. We create a relationship with a business.</li> </ul>

BSC = Business Source Control

## Summary

*Original BIG Report:* Field data is collected electronically for most jurisdictions utilizing Collector, Survey123, Resco, and Cartegraph software. Two respondents found that handheld devices tend to make businesses uncomfortable, cause a distraction, or become a hazard in the field when both hands are needed. One respondent found limitations and workarounds for the Collector mobile application.

*Supplemental Interviews:* Respondents were split on collecting field data electronically. Similar to the original report, respondents feel that electronic collection during the site visit is too formal for their approach, they are interested in pursuing the approach, or are currently using electronic data collection methods with Collector, Cityworks, or Survey123.

## Data Management Summary and Recommendations

Some of the topics raised during the interviews that may be helpful to highlight in the guidance manual that will be developed for this project include the following:

- For programs implementing both the PPA and permit-required programs, data management will require entry into the Ecology database and a jurisdiction database.
- GIS-based systems are preferable.
- Consider testing a database system on a current inspection program such as the facility maintenance inspection program.
- Engage IT staff early in the database development process.
- Consider the pros (e.g., fewer mistakes) and cons (e.g., lack of connectivity and informal site visit approach) of electronic field data collection.

## 4.0 INVENTORY DEVELOPMENT AND UPDATES

The following subsections summarize responses to inventory development and update questions. An overall summary and recommendations section is included at the end.

### Question 4.1.1

**Please describe how you developed your inventory. What criteria did you use?**

#### Responses

Respondent	Comments
Respondent 9	<ul style="list-style-type: none"> <li>We're using the PPA list and will add to that.</li> </ul>
Respondent 10	<ul style="list-style-type: none"> <li>Strictly following the [NPDES Phase II] Permit language. NAICS codes from Appendix 8.</li> </ul>
Respondent 11	<ul style="list-style-type: none"> <li>Determined the state business license data was too broad and not very accurate. There are issues with catching businesses in the zip code that covers both City and county areas.</li> <li>Our solution is the purchase of a business list from a marketing company that was GIS based. Next, we used desktop analysis to eliminate non-applicable businesses. Now using windshield survey and Collector mobile application to refine the list.</li> <li>The initial list was over 10,000 businesses and is now at 7,000.</li> </ul>
Respondent 12	<ul style="list-style-type: none"> <li>For the PPA program, we use the PPA list and update every 2 to 3 years.</li> <li>For NAICS, there are areas where PPA is not a perfect fit for Phase II business inspections. PPA is visiting businesses that are not SQG and fewer businesses are producing dangerous waste or universal waste.</li> </ul>

NAICS = North American Industry Classification System

PPA = Pollution Prevention Assistance

SQG = Small Quantity Generator

#### Summary

*Original BIG Report:* Most jurisdictions began with broad inventory lists, collecting information from various internal and external sources. Inventories were refined based on the NPDES Permit Appendix 8 criteria, commercial activity, and the potential for illicit discharge. Windshield surveys and site visits for business data validation were a necessary step in editing/developing business inventories for most of the jurisdictions. Most jurisdictions reported that creating and maintaining the inventory is not easy.

County parcel information, business license information, complaint records, and inspection information was used by most jurisdictions as information sources for inventory development. Google Earth/Street View was used by four jurisdictions to help identify and validate businesses and was found to be very effective. The North American Industry Classification System (NAICS) codes on state business licenses do not necessarily indicate the pollutant-generating activity and may be self-selected by the business. Jurisdictions used the NPDES Permit Appendix 8

(NAICS codes) as a guideline for their inventory, but most conducted physical observations to verify business type and activity.

*Supplemental Interviews:* Jurisdictions are using NPDES Permit Appendix 8 (NAICS codes) from the NPDES Permit or adding businesses to their existing PPA inventory list. Following NPDES Permit Appendix 8 produces a large list from the Washington State Department of Revenue. Jurisdictions find if the zip codes within the jurisdiction overlap with neighboring jurisdictions, the list will include businesses not within their city. Windshield surveys are then conducted to verify businesses within the jurisdiction. One jurisdiction purchased a business list from a marketing company that was GIS-based and followed up with desktop and windshield survey steps to refine. The health district provides its PPA list to the local cities and the county as a resource.

## Question 4.1.2

### What sources were used to collect business information?

#### Responses

Respondent	Comments
Respondent 9	<ul style="list-style-type: none"> <li>No response.</li> </ul>
Respondent 10	<ul style="list-style-type: none"> <li>The Finance Department sent a list of business licenses including the associated NAICS code. The list is approximately 1,000 businesses.</li> <li>The plan is to focus on commercial sites. Home businesses will only be complaint response.</li> </ul>
Respondent 11	<ul style="list-style-type: none"> <li>See response to Question 4.1.1</li> </ul>
Respondent 12	<ul style="list-style-type: none"> <li>Washington State Department of Revenue and internal databases.</li> </ul>

NAICS = North American Industry Classification System

#### Summary

*Original BIG Report:* There is a lot of turnover in businesses, so it is recommended to have a process for adding new businesses. New water accounts, inspectors, and field staff can help identify new or closed businesses. Businesses may also be declassified based on history and site circumstances. Keeping track of new businesses can be difficult. At least two jurisdictions do not eliminate closed businesses from inventory, but flag them instead.

*Supplemental Interviews:* Jurisdictions are unsure how to update their list, with one targeting updating annually. If using a GIS-based business list purchased from a marketing company, then it is unclear how the list will be updated in the future.

## Question 4.1.3

**Do you update your inventory when new businesses open and other businesses close?**

### *Responses*

Respondent	Comments
Respondent 9	<ul style="list-style-type: none"> <li>There's not a good mechanism for catching new businesses at this time. Our City doesn't require City business licenses.</li> </ul>
Respondent 10	<ul style="list-style-type: none"> <li>Plan on updating the inventory annually.</li> </ul>
Respondent 11	<ul style="list-style-type: none"> <li>Not sure how to update the list since not using the business license system. That system is just too large to handle efficiently. The City does not require business licenses, so the state system is the only option.</li> </ul>
Respondent 12	<ul style="list-style-type: none"> <li>Yes. When the new list is developed every 2 to 3 years through the PPA program.</li> <li>Matching the information with the parcel layer. When new construction is observed, then investigate if it is a business.</li> </ul>

PPA = Pollution Prevention Assistance

### *Summary*

*Original BIG Report:* Although helpful, the NPDES Permit Appendix 8 criteria is broad and may not encompass all potential sources of pollution (see Appendix B in the original report). Most jurisdictions use this as a guideline, using inspector insight and jurisdictional codes to refine criteria. NAICS and Standard Industrial Classification (SIC) codes from business and license databases are often self-reported and considered unreliable.

*Supplemental Interviews:* Updating the list when businesses open or close is not a priority or is challenging when the City does not have a business license system. If a PPA program is in place, that is done when the new list is developed every 2 to 3 years. One jurisdiction, when in the field, will look for new construction and investigate if it is a business.

## Question 4.1.4

**If inventory criteria is different than permit language, what is the reason?**

### Responses

Respondent	Comments
Respondent 9	<ul style="list-style-type: none"> <li>The list is obtained from the Washington State Department of Revenue. PPA database has the NAICS codes. But find the observed NAICS codes at the site doesn't match up in some cases so don't trust the NAICS code.</li> <li>The list for BSC will likely be expanded since the NPDES Permit requires additional NAICS codes compared to the PPA. Also, there are likely new businesses.</li> </ul>
Respondent 10	<ul style="list-style-type: none"> <li>Right now, it's not. The desire is to be 100 percent in compliance with the NPDES Permit.</li> </ul>
Respondent 11	<ul style="list-style-type: none"> <li>We're using the NPDES Permit language followed by the windshield survey for accuracy.</li> </ul>
Respondent 12	<ul style="list-style-type: none"> <li>In the beginning, used Washington State Department of Revenue, NAICS codes for the list.</li> <li>We now use a GIS-based system.</li> </ul>

BSC = Business Source Control

GIS = Geographic Information System

NAICS = North American Industry Classification System

NPDES = National Pollutant Discharge Elimination System

PPA = Pollution Prevention Assistance

### Summary

*Original BIG Report:* Although helpful, the NPDES Permit Appendix 8 criteria is broad and may not encompass all potential sources of pollution (see Appendix B in original report). Most jurisdictions use this as a guideline, using inspector insight and jurisdictional codes to refine criteria. NAICS and SIC codes from business and license data bases are often self-reported and considered unreliable.

*Supplemental Interviews:* Compliance with NPDES Permit Appendix 8 is the priority for two respondents. The remaining jurisdiction implementing a permit-required program along with the PPA acknowledges that the PPA list will be expanded with the additional businesses from the Washington State Department of Revenue list.



## Question 4.2

**How are businesses evaluated and eliminated from the original list of businesses identified in the Appendix 8 NAICS codes?**

### Responses

Respondent	Comments
Respondent 9	<ul style="list-style-type: none"> <li>This is done when the repeat visit is due (2 to 3-year cycle). If it has changed, then the business is removed from the list.</li> </ul>
Respondent 10	<ul style="list-style-type: none"> <li>We are considering a “no exposure” option to remove a business from the list with verification of “no exposure.”</li> </ul>
Respondent 11	<ul style="list-style-type: none"> <li>Windshield survey.</li> </ul>
Respondent 12	<ul style="list-style-type: none"> <li>Not applicable.</li> </ul>

### Summary

*Original BIG Report:* Most jurisdictions evaluate which businesses are added or eliminated from their inventory based on current land use, business activity and the potential to pollute to the municipal separate storm sewer system (MS4). On-site inspection, site or business history, vacancy, or water quality complaints help many jurisdictions refine their inventories.

*Supplemental Interviews:* Businesses are eliminated primarily based upon field observation. One jurisdiction is considering removing businesses that are considered to have no potential to pollute.

## Question 4.3

**What actions do you take with businesses that are on combined storm/sewer systems, are they included in your inventory?**

### Responses

Respondent	Comments
Respondent 9	<ul style="list-style-type: none"> <li>Not applicable.</li> </ul>
Respondent 10	<ul style="list-style-type: none"> <li>Not applicable.</li> </ul>
Respondent 11	<ul style="list-style-type: none"> <li>Not applicable.</li> </ul>
Respondent 12	<ul style="list-style-type: none"> <li>A limited area in one City is combined, but we do not differentiate.</li> </ul>

### Summary

*Original BIG Report:* Most jurisdictions do not have combined systems. Only two of the jurisdictions have businesses on combined systems. One jurisdiction includes these businesses in

their inspection inventory, the other inspects businesses that have received a complaint or where a discharge has occurred.

*Supplemental Interviews:* No respondents operate within combined sewer areas or do not differentiate.

## Inventory Development Summary and Recommendations

Some of the topics raised during the interviews that may be helpful to highlight in the guidance manual that will be developed for this project include the following:

- Using NAICS codes in NPDES Permit Appendix 8 ensures NPDES Permit compliance.
- The Washington State Department of Revenue list will result in a large list that requires narrowing, usually by windshield survey.
- Consider acquiring the list from a local PPA program inspector as a starting point for the inventory, and then adding businesses. Understanding the development of the PPA inventory and NAICS codes may save time when adding businesses that are NAICS codes not used in the initial PPA list development process.
- Recommend a business license system in the cities to catch businesses early and start a proactive process for notification and education.

Recommendations for this project include the following:

- Investigate how PPA inventory lists can be transferred or assist jurisdictions operating within a PPA program.

## 5.0 INSPECTION

The following tables summarize responses to inspection questions. An overall summary and recommendations section is included at the end.

### Question 5.1

**How do you prioritize businesses once the inventory list is developed?**

#### *Responses*

Respondent	Comments
Respondent 9	<ul style="list-style-type: none"> <li>• The prioritization is the frequency – every 2 to 3 years.</li> <li>• More emphasis if located in the groundwater protection area.</li> <li>• Complaints are priority and triggers a visit.</li> <li>• Our approach is that there is large potential to pollute in the building, not just outside the building. The inspector needs to understand the whole picture of processes at the site.</li> </ul>
Respondent 10	<ul style="list-style-type: none"> <li>• Highest potential to pollute and higher frequency.</li> </ul>
Respondent 11	<ul style="list-style-type: none"> <li>• Considering using subbasin TMDLs (e.g., bacteria, temperature, dissolved oxygen), wellhead protection, and risk in general those of higher contamination/spills.</li> </ul>
Respondent 12	<ul style="list-style-type: none"> <li>• Primarily by due date. However, geographical equity is important since the County is large and can reduce driving time by clustering in one area.</li> <li>• Prefer not focusing on one sector to keep the interest high by visiting a variety of businesses.</li> <li>• At times will focus on a sector when there is an emphasis, such as recently on replacement chemicals for dry cleaners and engine parts degreasing.</li> </ul>

TMDL = Total Maximum Daily Load

#### *Summary*

*Original BIG Report:* Prioritization is often based on proximity to aquatic resources, site history and business history, which include potential to pollute, complaints received, prior observations by staff, connection to a MS4, and business type. Inspection prioritization is an ongoing process that may include a risk ranking system or algorithm.

*Supplemental Interviews:* Some respondents take an approach of visiting solely based on due dates, others prioritize based upon potential to pollute or other priorities. Geographical location is a consideration when in a large County.

## Question 5.2

**What are your established inspection protocols/strategies? Please provide examples of any SOPs that you have created.**

### Responses

Respondent	Comments
Respondent 9	<ul style="list-style-type: none"> <li>• Don't have SOPs.</li> </ul>
Respondent 10	<ul style="list-style-type: none"> <li>• No SOPs yet.</li> </ul>
Respondent 11	<ul style="list-style-type: none"> <li>• We are reviewing our existing SOPs to see if adjustments are needed for the new requirements.</li> </ul>
Respondent 12	<ul style="list-style-type: none"> <li>• Have a rough SOP that can be shared.</li> </ul>

SOP = Standard Operating Procedure

### Summary

*Original BIG Report:* Most jurisdictions have inspection standard operating procedures (SOPs). Prior to site visits, conduct research to verify past compliance history, complaints, what types of activities have occurred onsite, review onsite drainage if available, Google Maps Street View, name and background, or new company search. Consider safety training and equipment that may be necessary for inspections in the field.

*Supplemental Interviews:* Some respondents have draft SOPs while others are in development.

## Question 5.3

**Do you use a checklist? Is the checklist business type specific (e.g., auto vs. restaurant) or general for all business types?**

### Responses

Respondent	Comments
Respondent 9	<ul style="list-style-type: none"> <li>• Yes, PPA checklist.</li> <li>• Don't anticipate updating the PPA checklists for BSC.</li> <li>• One change with BSC is that we anticipate more preparation with research on the storm facilities prior to the visit (reviewing as-builts).</li> </ul>
Respondent 10	<ul style="list-style-type: none"> <li>• For PPA there are business sector specific checklists. We will develop sector specific checklists for BSC.</li> </ul>
Respondent 11	<ul style="list-style-type: none"> <li>• Yes. It's not business specific. Considering developing business specific checklists.</li> </ul>
Respondent 12	<ul style="list-style-type: none"> <li>• Don't use checklists to keep it casual. Carry a small checklist taped to the back of logbook for reference.</li> </ul>

BSC = Business Source Control

PPA = Pollution Prevention Assistance

## Summary

*Original BIG Report:* Most jurisdictions have some type of inspection checklist, but checklists are not business sector specific. Some inspectors use checklists during site visits, although most experienced inspectors do not use them. Checklists may be useful for training purposes and for new inspectors.

*Supplemental Interviews:* Most respondents use PPA checklists and plan on using or developing business sector specific checklists. One inspector interviewed doesn't use a checklist to maintain an informal atmosphere during the site visit.

## Question 5.4

**Please provide an example of a routine inspection, please include details such as whether or not inspectors lift grates on storm drains.**

### Responses

Respondent	Comments
Respondent 9	<ul style="list-style-type: none"> <li>• We lift grates, check the system.</li> <li>• Throughout the inspection we discuss the processes; walk the inside and outside; check dumpsters; and look at grease interceptor logs, grease hauler logs, waste disposal records, and spill response. The BSC will follow the same protocols.</li> </ul>
Respondent 10	<ul style="list-style-type: none"> <li>• PPA inspectors don't remove lids unless an issue. Inspectors use avalanche poles for sediment levels. Limit hands on interference with their facilities.</li> <li>• Not sure how we'll handle this for the BSC.</li> </ul>
Respondent 11	<ul style="list-style-type: none"> <li>• We don't lift grates, but do look for visual indicators. Don't check sediment levels with rods.</li> </ul>
Respondent 12	<ul style="list-style-type: none"> <li>• Used to measure catch basin sediment levels, but not anymore and don't lift grates.</li> <li>• Look for stains that may indicate wash water or dumping. Also look for plant growth.</li> </ul>

BSC = Business Source Control

PPA = Pollution Prevention Assistance

## Summary

*Original BIG Report:* SOPs are commonly followed. Site inspections typically include five important steps:

1. Pre-investigation research about the site and prepping of materials (e.g., tools, outreach materials, and personal protection equipment).
2. On-site introductions that are official, courteous, and explanatory.
3. Conduct the inspection with checklist, notebook, or electronic device.

4. Provide recommendations and give contact information, education and outreach materials, and documentation of visit.
5. Document the visit - including notes, photos, and findings into your data management system. Most jurisdictions do not look inside businesses unless there are signs of a potential for an illicit discharge.

*Supplemental Interviews:* Respondents follow a site inspection process similar to the original BIG Report. Some respondents implementing the PPA program conduct thorough interior and exterior business operations inspections, including lifting grates and measuring sediment levels. Others limit the storm system inspection portion, only looking for signs of dumping or discharge activities.

## Question 5.5

**What is the average length of time for an inspection? Does it vary between business types? What is the range of time experienced?**

### Responses

Respondent	Comments
Respondent 9	<ul style="list-style-type: none"> <li>● Average 10 to 15 minutes. Larger facilities such as big box stores take longer.</li> </ul>
Respondent 10	<ul style="list-style-type: none"> <li>● For PPA, it varies widely.</li> </ul>
Respondent 11	<ul style="list-style-type: none"> <li>● Unsure. Varies with business types and size.</li> </ul>
Respondent 12	<ul style="list-style-type: none"> <li>● It can take as little as 15 minutes or over an hour. Depends on how much discussion with the business owner or manager. However, if it's one person behind the counter, then it will be shorter. A new business doing light manufacturing will take much longer.</li> </ul>

PPA = Pollution Prevention Assistance

### Summary

*Original BIG Report:* Inspection times vary with type and size of business, conditions of the site, availability of person in charge, and whether it is a first inspection or a done by a newly trained inspector. Site inspection times range from an average of 25 minutes to two hours, across the responding jurisdictions. Follow-up time for documentation, correspondence, and data entry should be considered equal to or greater than the site visit. Inspection follow-up averages between 20 minutes and two hours depending on the complexity of the site visit. Sites requiring enforcement involve significantly more staff time.

*Supplemental Interviews:* Inspection times are similar to the original BIG Report, varies with business type, and ranges from 15 minutes to over an hour.

## Question 5.6

**Do you notify businesses prior to visits? If so, how much advance notice is provided. If not, please explain this decision.**

### Responses

Respondent	Comments
Respondent 9	<ul style="list-style-type: none"> <li>No, we do not notify unless it's a business sector requiring notification, such as a doctor or dental office.</li> </ul>
Respondent 10	<ul style="list-style-type: none"> <li>For PPA, it's rare to provide no advance notice.</li> <li>For BSC, we plan on lots of advance notice to allow businesses to implement BMPs ahead of time.</li> </ul>
Respondent 11	<ul style="list-style-type: none"> <li>Yes, we did notify in the past, one week advance. Don't know if we will notify.</li> </ul>
Respondent 12	<ul style="list-style-type: none"> <li>No.</li> </ul>

BMP = Best Management Practice

BSC = Business Source Control

PPA = Pollution Prevention Assistance

### Summary

*Original BIG Report:* Generally, pre-notification is not given for routine site inspections. Scheduled visits may be done for businesses for follow-up or if requested. These businesses are noted in databases. Unannounced visits allow inspectors to observe normal operating practices. Businesses that have not previously had an inspection, or special type businesses, may receive general information about the program prior to inspection.

*Supplemental Interviews:* Half of respondents do not plan to notify businesses. Unannounced visits are considered the optimum approach to ensure a site visit during normal business operations. One respondent was unsure, and one respondent plans on advance notification to allow businesses to implement BMPs ahead of the site visit.

## Question 5.7

**Are there opportunities for Phase II jurisdictions to shadow inspectors or do ride-alongs?**

### Responses

Respondent	Comments
Respondent 9	<ul style="list-style-type: none"> <li>• Yes.</li> </ul>
Respondent 10	<ul style="list-style-type: none"> <li>• We are a Phase II. For BSC, we can take people out once we do it. Private facility maintenance ride alongs will help for training for this program.</li> </ul>
Respondent 11	<ul style="list-style-type: none"> <li>• We could. Not now with COVID-19.</li> </ul>
Respondent 12	<ul style="list-style-type: none"> <li>• Yes. It would be important and prudent for Phase II jurisdictions to learn from PPA inspectors or anyone doing these. Recommend ride-alongs with multiple people.</li> </ul>

BSC = Business Source Control

### Summary

*Original BIG Report:* All respondents are open to scheduled ride-alongs. There may be a mechanism through BIG to coordinate ride-alongs.

*Supplemental Interviews:* All respondents are open to scheduled ride-alongs. However, COVID-19 policies will be taken into consideration.

## Inspection Summary and Recommendations

Some of the topics raised during the interviews that may be helpful to highlight in the guidance manual that will be developed for this project include the following:

- Prioritize site visits based on potential to pollute, risk, geographical location, or other priority factor.
- Not all PPA programs conduct storm system maintenance inspection, which is different from the business source control inspection.
- Expect longer site visits for larger more complicated sites.
- Learn from PPA programs how to conduct site visits, manage data, and perform follow-up site visits.
- In general, PPA programs conduct site visits with no notification so that normal business operations are observed. The Business Source Control program may consider advanced outreach prior to site visits to encourage adoption of BMPs.
- Recommendations for this project include the following:
  - Developing a basic SOP template for Phase II program development.
  - Developing business sector checklists if there is interest.



## 6.0 PROGRAM MANAGEMENT

The following subsections summarize responses to program management questions. An overall summary and recommendations section is included at the end.

### Question 6.1

**How many site visits (business inspections + follow-ups) do you complete in a year and how many FTEs complete the work? What is your total number of business inspection sites?**

#### Responses

Respondent	Comments
Respondent 9	<ul style="list-style-type: none"> <li>• Visit 92 sites per year which includes follow-up visits.</li> <li>• 0.35 FTE support the program.</li> <li>• The Washington State Department of Revenue initial list is 5,000 businesses. Pared down for PPA, it's 514 businesses. We know we'll be expanding that list for the new NPDES Permit requirement.</li> <li>• Due to COVID-19, we anticipate more home businesses in the future.</li> </ul>
Respondent 10	<ul style="list-style-type: none"> <li>• For PPA, during non-pandemic times, 1 FTE and 250 site visits over 2 years.</li> <li>• For BSC, anticipate a similar level of effort.</li> </ul>
Respondent 11	<ul style="list-style-type: none"> <li>• Not currently doing business inspections. Based on our inventory assessment, our organization plans to perform 1,300 inspections per year. The program will employ 2 FTEs to start the program.</li> </ul>
Respondent 12	<ul style="list-style-type: none"> <li>• 175 site visits per year per FTE.</li> <li>• 2 FTEs support the program.</li> <li>• Conduct 700 visits over 2 years.</li> </ul>

BSC = Business Source Control

FTE = Full Time Equivalent

PPA = Pollution Prevention Assistance

#### Summary

*Original BIG Report:* The NPDES Permit requires the equivalent of 20 percent of the inventory to be inspected annually, which includes re-inspections. On average, 400 inspections are conducted by the responding jurisdictions per year. Responses varied from one to four full-time equivalents (FTEs) to comply with the 20 percent permit requirement. Across the jurisdictions interviewed, the total annual inspections completed per FTE ranged from 100 to 400, but averaged approximately 200 inspections per FTE per year. The reported FTEs included inspectors and program managers.

*Supplemental Interviews:* The number of site visits per FTE annually ranged from approximately 125 to 275. Respondents are unsure of their list at this time and the FTE support that is needed to meet the 20 percent requirement in the NPDES Permit.

## Question 6.2

**To what extent are inspections such as Private SW Facility Maintenance Inspections or Local Source Control (LSC) Fats, Oil & Grease (FOG-wastewater) Illicit Discharge Detection and Elimination (IDDE) combined with business inspections?**

### Responses

Respondent	Comments
Respondent 9	<ul style="list-style-type: none"> <li>90 percent of inspections are combined. Combined components are FOG, commercial property compost ordinances, stormwater facility maintenance, dangerous waste, industrial wastewater discharge to sewer, spills, sector specific. We have CARA special requirements (hazardous materials list). The CARA hazardous materials requirements are likely redundant to fire department requirements.</li> <li>City ordinances are stricter than state requirements; one example is material labeling.</li> </ul>
Respondent 10	<ul style="list-style-type: none"> <li>If we're annually inspecting post-construction every year – seems that private facility inspector could do both. Seems duplicative and would be more efficient.</li> <li>Our organization does not have FOG inspectors. FOG is called out in the code, but no inspection program. FOG is more of a reactive program to sewer plugging issues. When we have FOG issues, we do a PPA visit at the restaurant.</li> </ul>
Respondent 11	<ul style="list-style-type: none"> <li>We are looking at doing it that way. The private facility maintenance program would add source control inspections, with PPA (we just joined PPA), and sewer-FOG inspections would cover restaurants.</li> <li>The benefit is that businesses won't feel the brunt of too many different inspection visits. First round of PPA funds arrived mid-year 2020 (first time). Admit there will be some overlap with the County's PPA program.</li> </ul>
Respondent 12	<ul style="list-style-type: none"> <li>It's based on the referral process. PPA meets with the local stormwater managers group annually to remind them what PPA does. I also meet with staff internally to raise awareness of PPA. I try to educate the regulatory and governments that I'm here and can use PPA to their advantage.</li> <li>During visits now, I am now warning businesses that the storm utilities are coming, so work with me and get ahead of the process and compliance.</li> </ul>

CARA = Critical Aquifer Recharge Area

FOG = Fats, Oils, and Grease

PPA = Pollution Prevention Assistance

### Summary

*Original BIG Report:* Most jurisdictions are currently performing some form of overlapping inspections. Some respondents are working with the health department on FOG inspections and with Ecology on industrial inspections. Some jurisdictions combine stormwater inspections with LSC inspections. Many of the respondents are working on methods to combine inspection

protocols for efficiencies. One jurisdiction tries to combine several inspections, but finds it challenging.

*Supplemental Interviews:* Similar to the original BIG Report, most respondents plan on combining inspections. There is a strong desire to combine PPA inspections with the new NPDES Permit requirement, and possibly FOG and private facility maintenance.

### Question 6.3

**Have you had any issues combining business inspections with other inspections? What are the pros and cons of doing this?**

#### Responses

Respondent	Comments
Respondent 9	<ul style="list-style-type: none"> <li>This combination approach works well. The visit can address more issues.</li> </ul>
Respondent 10	<ul style="list-style-type: none"> <li>Once we have BSC in place, we will be open to leaving PPA. Seems like too much crossover. PPA lists now include non-SQG businesses.</li> </ul>
Respondent 11	<ul style="list-style-type: none"> <li>Not at this time.</li> <li>The cons to not combining is that businesses will experience too many visits. Another con is that the visit could be overwhelming because covering so many issues.</li> </ul>
Respondent 12	<ul style="list-style-type: none"> <li>Not applicable. PPA is brought in as the “good cop” on complaints. Violators are instructed to work with PPA to come into compliance or face enforcement.</li> </ul>

BSC = Business Source Control

SQG = Small Quantity Generator

PPA = Pollution Prevention Assistance

#### Summary

*Original BIG Report:* Most jurisdictions were in support of combining inspections, citing efficiencies in inspection and travel times as the main benefit. Other benefits include reducing the number of visits a business receives by multiple agencies, creating cross-training opportunities, and developing collaborative relationships between agencies and inspectors. The issues noted when combining business inspections with other inspections include the potential of overwhelming the business owner, scheduling, and timing of inspections between different programs.

*Supplemental Interviews:* Most Phase II jurisdictions plan to combine inspection visits and see the pros as more efficient and fewer different types of inspections, with a con that businesses may negatively view the visit when it covers many items.

## Question 6.4

**How do you coordinate scheduling business inspections with other inspections? Do you coordinate business inspection to coincide with other organization’s inspections, such as Health Dept. and Ecology?**

### Responses

Respondent	Comments
Respondent 9	<ul style="list-style-type: none"> <li>At times the City will coordinate with King County Hazardous Waste, County Health, and Industrial Permit. At times businesses are caught in the middle and mostly think we all work for the EPA.</li> <li>It is advantageous for medium and large quantity generators to combine inspections with these other entities. There’s room for improvement for coordination. A requirement should be in place for larger entities (e.g., programs, jurisdictions) to notify the cities they are inspecting in.</li> </ul>
Respondent 10	<ul style="list-style-type: none"> <li>We rarely go out with Ecology, but may go out to the same site.</li> <li>We have participated in joint inspections. With restaurants, thought about teaming up with Health, but that doesn’t work. Considered joint inspections with the Fire Marshal, but seems it would be overwhelming to the business.</li> <li>Industrial permitted sites will be on our list but are a low priority. It would be helpful to know when Ecology visits these sites.</li> </ul>
Respondent 11	<ul style="list-style-type: none"> <li>We have coordinated with other agencies, and it is complaint driven, not routine coordination.</li> </ul>
Respondent 12	<ul style="list-style-type: none"> <li>Local health will continue to perform PPA visits as the cities develop their NPDES Permit-required site visits.</li> <li>I’ve heard of jurisdictions that will maintain separation between the PPA visits and the new NPDES Permit-required visits.</li> </ul>

Ecology = Washington State Department of Ecology

EPA = Environmental Protection Agency

PPA = Pollution Prevention Assistance

### Summary

*Original BIG Report:* For most jurisdictions, joint inspections with other agencies are not common. However, jurisdictions will coordinate with the various agencies in some cases, to reduce duplicate inspections and increase efficiencies. This may include coordinating with Ecology for industrial permit inspections, spills, or complaint inspections. It may also include coordinating with the health department for septic inspections and non-compliant composting, and with the conservation district for non-compliant animal handling facilities.

*Supplemental Interviews:* Respondents voiced concerns about coordinating visits with Ecology for industrial sites covered under the Industrial Stormwater General Permit or an individual industrial stormwater permit and desire greater coordination. Teaming with local health districts for restaurants is problematic because food inspectors are not typically concerned with stormwater issues.

## Question 6.5

**Logistically, what is your strategy for selecting/ scheduling site visits? Is it geographically based or other considerations such as risk to the environment?**

### Responses

Respondent	Comments
Respondent 9	<ul style="list-style-type: none"> <li>• The site visit due date is the strategy for selecting/scheduling.</li> <li>• However, complaints are priority.</li> </ul>
Respondent 10	<ul style="list-style-type: none"> <li>• For both PPA and BSC, will consider pollution risk, and geography is secondary.</li> <li>• Another focus will be industrial commercial areas that are not in public view.</li> </ul>
Respondent 11	<ul style="list-style-type: none"> <li>• Unsure at this time, but will most likely use risk and geography. We use a lot of GIS tools for other inspections.</li> </ul>
Respondent 12	<ul style="list-style-type: none"> <li>• Priority is based on geography. There should be a consideration for risk. I see value for either method. Our base is mostly service based, and not a lot of manufacturing.</li> </ul>

BSC = Business Source Control

GIS = Geographic Information System

PPA = Pollution Prevention Assistance

### Summary

*Original BIG Report:* All jurisdictions use several criteria to prioritize and schedule site visits such as proximity to aquatic resources, compliance history, and business activity. A common scheduling strategy used in most of the jurisdictions is based on geographic clustering or designated areas. Prioritization is often determined by environmental risk and the inspector’s institutional knowledge of the sites.

*Supplemental Interviews:* The strategies for selecting/scheduling site visits are either geography or risk, or a combination of both. Complaints are a priority for site visits, and one respondent uses a rotating schedule once the program is in place.

## Question 6.6

**Do you coordinate with other jurisdictions on franchise businesses that have multiple locations across jurisdictions?**

### Responses

Respondent	Comments
Respondent 9	<ul style="list-style-type: none"> <li>No, because the requirements are different from other jurisdictions. Businesses do get confused when hearing conflicting requirements.</li> </ul>
Respondent 10	<ul style="list-style-type: none"> <li>Yes, currently coordinate with the County for PPA. County does some of the inspections in the City and complaints.</li> </ul>
Respondent 11	<ul style="list-style-type: none"> <li>We have not, but that's an interesting concept.</li> </ul>
Respondent 12	<ul style="list-style-type: none"> <li>Yes. When opportunity presents itself, and a business has issue. Mobile businesses are a classic example. Will reach out to other programs when that business has other offices outside the county where the PPA program operates.</li> </ul>

PPA = Pollution Prevention Assistance

### Summary

*Original BIG Report:* None of the respondents coordinate with other jurisdictions on franchise businesses with multiple locations across jurisdictions. One respondent thought it might be possible once Phase II jurisdictions have established source control programs.

*Supplemental Interviews:* Two respondents coordinate either the City program with the County PPA program, or the County PPA program with the cities. One respondent is open to the concept of coordination with neighboring jurisdictions. However, one jurisdiction explained their requirements are different than other jurisdictions (in order to protect groundwater resources) and that businesses would get confused.

## Question 6.7

**Do you currently contract-out business inspection services? If so, what are the pros and cons?**

### Responses

Respondent	Comments
Respondent 9	<ul style="list-style-type: none"> <li>No. It's an option. However, prefer the local and in-house coordination.</li> </ul>
Respondent 10	<ul style="list-style-type: none"> <li>No; all in-house.</li> </ul>
Respondent 11	<ul style="list-style-type: none"> <li>No; all in-house.</li> </ul>
Respondent 12	<ul style="list-style-type: none"> <li>No.</li> </ul>

## Summary

*Original BIG Report:* Most jurisdictions do not hire out business inspection services. Jurisdictions feel internal staff are well trained, provide better customer service, and can maintain higher compliance rates. One jurisdiction conducts joint inspections to support language services.

*Supplemental Interviews:* None of the respondents plan to contract out business inspection services. All implied that in-house staff are the best suited for the program so that coordination is efficient.

## Question 6.8

### How do you train business inspection staff? Who conducts training?

#### Responses

Respondent	Comments
Respondent 9	<ul style="list-style-type: none"> <li>• The PPA SharePoint site has recorded trainings.</li> <li>• PPA conducts annual new specialist training. The pre-recorded trainings will help much.</li> <li>• PPA conducts peer-to-peer training sessions.</li> <li>• Internal trainings are done by experienced staff with new staff.</li> </ul>
Respondent 10	<ul style="list-style-type: none"> <li>• All Public Works employees do IDDE training.</li> <li>• Private facility inspection training done by private facility inspectors.</li> <li>• PPA inspectors will train the BSC inspectors.</li> </ul>
Respondent 11	<ul style="list-style-type: none"> <li>• Training is in-house and is based on staff experience and expertise sharing.</li> <li>• On the job training.</li> <li>• Will look for training offered by Ecology and the Washington Stormwater Center.</li> </ul>
Respondent 12	<ul style="list-style-type: none"> <li>• Provide the SOP to new staff.</li> <li>• PPA has trainings and a module/training matrix that could be used for this project (check with PPA).</li> <li>• PPA conducts new specialist trainings twice a year (continually), has a mentorship program.</li> <li>• Ecology has loose oversight, so not all programs are implemented the same.</li> <li>• Some members take a more regulatory approach, while some take a collaborative approach. For those taking a regulatory approach, they don't bill to PPA when they do enforcement.</li> </ul>

BSC = Business Source Control

Ecology = Washington State Department of Ecology

IDDE = Illicit Discharge Detection and Elimination

PPA = Pollution Prevention Assistance

SOP = Standard Operating Procedure

## Summary

*Original BIG Report:* Most jurisdictions use in-house training by experienced staff which includes but is not limited to shadowing and peer mentoring. This includes training by other departments (e.g., mapping, asset management, and IDDE). Staff are also encouraged to attend related in-

person and online trainings and conferences. One jurisdiction recommended that program managers should understand their staff’s baseline knowledge of the inspection program and regulations.

*Supplemental Interviews:* Most jurisdictions indicated that the PPA program, Ecology, and the Washington Stormwater Center have online trainings, meetings, materials, and resources. Respondents perform in-house field staff training with experienced inspectors, IDDE training, and crossover training with facility maintenance inspectors.

## Question 6.9

**Do you coordinate development and implementation of the business pollution source control program with your economic development, planning, or code enforcement departments? What are the challenges? How did you resolve them?**

### Responses

Respondent	Comments
Respondent 9	<ul style="list-style-type: none"> <li>• Yes. Meet quarterly with economic development group (they foster businesses). Coordinate with the City permitting group when it’s construction issues and assist with construction inspections.</li> </ul>
Respondent 10	<ul style="list-style-type: none"> <li>• Coordinate with Code Enforcement for complaints.</li> </ul>
Respondent 11	<ul style="list-style-type: none"> <li>• On a limited scale. We have good relationships with planning and enforcement, but nothing is formalized. We hope to have a better connection with them as the program comes online.</li> </ul>
Respondent 12	<ul style="list-style-type: none"> <li>• We coordinate with the code enforcement for the cities or county that implement the PPA program. Our health district code enforcement is involved if the violation is of County solid waste or sewage regulations.</li> <li>• Code enforcement is the “black hat” (regulatory) and the PPA program is the “white hat” (non-regulatory).</li> </ul>

PPA = Pollution Prevention Assistance

### Summary

*Original BIG Report:* Most jurisdictions have limited coordination with economic development and planning departments. Several jurisdictions work with the code enforcement and code development departments on a case-by-case basis. Jurisdictions have noted difficulties coordinating with other internal departments due to differences in priorities, budgets, and authority.

*Supplemental Interviews:* Coordination with code enforcement is key for all respondents. One respondent coordinates with their economic development group to identify new businesses early.



## Program Management Summary and Recommendations

Some of the topics raised during the interviews that may be helpful to highlight in the guidance manual that will be developed for this project include the following:

- The total number of businesses in the inventory will determine the number of FTEs that are needed to support inspections. Jurisdictions will need to determine program management support and costs after the business inventory has been developed.
- Existing programs, from the original BIG Report, estimate approximately 200 inspections annually per FTE. More than 200 visits per FTE may be optimistic for new programs, but jurisdictions will need to estimate how many inspections can be performed annually to determine an appropriate level of staff support.
- Respondents are supportive of combining inspections to increase efficiency, but with reservations if the visits are too broad.
- Understanding how the PPA program and new NPDES Permit-required program will be combined or maintained separately would be valuable for jurisdictions who house both programs.
- When larger organizations are conducting inspections, notification to the local entity would be appreciated.
- Site prioritization can be geographic, or risk based.
- All respondents to the original BIG Report survey and the supplemental interviews plan to use in-house staff for inspections.
- External and internal training resources are utilized for new inspectors.
- Coordination is mainly with code enforcement, and with economic development or planning to a lesser degree.
- Recommendations for this project include the following:
  - Provide information on the process for coordinating with Ecology industrial permitted site inspections.
  - Provide information on coordination with franchise businesses.
  - Provide information on coordination with an ongoing PPA program.



# APPENDIX A

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## Example Codes and Policies



**Table A-1. Example Codes and Policies.**

<b>Jurisdiction</b>	<b>Code References and Weblinks</b>
City of Issaquah	<ul style="list-style-type: none"><li>● Section 13.28.025 – Authorized and prohibited discharges &lt;<a href="https://www.codepublishing.com/WA/Issaquah/html/Issaquah13/Issaquah1328.html#13.28.025">https://www.codepublishing.com/WA/Issaquah/html/Issaquah13/Issaquah1328.html#13.28.025</a>&gt;</li><li>● Section 13.28.115 – Source control best management practices &lt;<a href="https://www.codepublishing.com/WA/Issaquah/html/Issaquah13/Issaquah1328.html#13.28.115">https://www.codepublishing.com/WA/Issaquah/html/Issaquah13/Issaquah1328.html#13.28.115</a>&gt;</li><li>● Section 13.28.130 – Administration [authority for entry] &lt;<a href="https://www.codepublishing.com/WA/Issaquah/html/Issaquah13/Issaquah1328.html#13.28.130">https://www.codepublishing.com/WA/Issaquah/html/Issaquah13/Issaquah1328.html#13.28.130</a>&gt;</li><li>● Section 13.28.135 – Enforcement &lt;<a href="https://www.codepublishing.com/WA/Issaquah/html/Issaquah13/Issaquah1328.html#13.28.135">https://www.codepublishing.com/WA/Issaquah/html/Issaquah13/Issaquah1328.html#13.28.135</a>&gt;</li></ul>
City of Vancouver	<ul style="list-style-type: none"><li>● Title 22 – Broad Uniform Enforcement Code &lt;<a href="https://vancouver.municipal.codes/VMC/22.01">https://vancouver.municipal.codes/VMC/22.01</a>&gt;</li></ul>

