

1. Title of the proposed study:

**Source Control BMPs and Businesses Inspections Effectiveness Study**

2. Topic and question addressed (must be on the list provided in Attachment A):

Topic	Questions Addressed
<p><b>Source control: inspections of existing sites</b></p>	<ul style="list-style-type: none"> <li>• <b>What is the optimum frequency of inspections to maintain the functionality of stormwater treatment and control facilities and ensure the proper use of source control BMPs at businesses?</b> <ul style="list-style-type: none"> <li>○ Which is more effective for specific high value BMPs: focusing on the property owners or focusing on the business owners, or a combination of the two?                             <ul style="list-style-type: none"> <li>▪ Target both structural and operational BMP types, and situations where a business owner is and is not cooperative and willing.</li> </ul> </li> <li>○ Which required BMPs were implemented based upon follow up inspection? Which optional BMPs were installed based upon follow up inspection?</li> <li>○ What were the primary barriers to not adopting or installing BMPs?</li> <li>○ Address the connection between in-person visits and source control BMPs, and identify situations where technical assistance and/or follow-up inspections are needed to ensure required BMPs are implemented.                             <ul style="list-style-type: none"> <li>▪ Gather data about percent compliance. Partner with LSC to do this study.</li> </ul> </li> </ul> </li> <li>• <b>Are stormwater source control inspections more effective if combined with other types of inspections? How can coordination of inspections be improved or better organized regionally for referral of issues to the correct entity?</b></li> </ul>

3. Lead entity and partners expected to be involved:

**City of Lakewood, lead entity**

**Dept of Ecology, Local Source Control Program, partner**

**Cardno TEC, partner**

4. Abstract (200 words max):

**This effectiveness study will analyze existing data to address the first question noted above about the optimum frequency of inspections at businesses and will use existing and new data to assess the second question about combined inspections. Data sources to be used will come from Ecology’s Local Source Control program (LSCP), which has been in operation since 2008 and the City of Lakewood’s Business Assistance program, which has been in operation since 2005. Because Lakewood operates its program independently of Ecology’s LSCP, this study will seek to evaluate both of these programs’ information as well as data from other potential partners with independent business inspection programs. The combined dataset will allow for an effective analysis of the regional nuances associated with source control compliance by businesses. The ability to address the subquestions under the first question (about frequency of inspections) will be determined based on data available. Some of the information collected during business inspections is qualitative and subjective. Thus, it is anticipated that the data fields will be reviewed and a methodology will be developed to convert qualitative data to quantitative and to compare subjective responses across jurisdictions.**

**The second question about combined inspections will be addressed by existing data if available and by data collected from combined inspections during the study. The study would seek to perform combined inspections in Lakewood and in another jurisdiction that is part of Ecology's LSCP to capture the breadth of information collected by each program. Different inspection agencies have different motivations, interests, and data collected during business inspections; therefore, this study would seek to create a framework for how combined inspections could occur that would meet agency needs, increase coordination among inspection agencies, and reduce the burden on businesses that currently have to accommodate a plethora of inspection agencies. Potential entities that could be approached about establishing a framework and performing combined inspections include county health departments, local fire departments, hazardous waste inspectors, air quality, and Ecology's inspectors for water quality, underground storage tanks, and underground injection control.**

5. This question can be answered in:  less than 5 years;  5-10 years; or  >10 years

6. Monitoring sites and locations, or existing data sources to be evaluated:

**Data sources to be evaluated will include Ecology's LSCP database, the City of Lakewood Business Assistance program database, and inspection data from other jurisdictions and agencies to be determined.**

7. Intended outcome(s) of the study that would inform stormwater management programs and practices, including expected improvements to sediment or water quality, habitat or biota:

**The main intended outcomes from this study are: (1) provide information about the optimum frequencies of inspections at businesses based on the business type, the profile of source control concerns, and the BMPs in use; and, (2) how jurisdictions can coordinate business inspections with other inspection agencies to promote efficiency and decrease the burden to businesses.**

**Depending on data available, other intended outcomes could include providing information on whether site managers or business owners should be focused on, the role of follow-up inspections for implementing required and optional BMPs, and barriers for businesses to adopt BMPs.**

8. In less than 500 words, describe what is known about the effectiveness of this stormwater management practice from studies in Puget Sound and elsewhere? Make an explicit connection to the white papers at <http://www.awcnet.org/TrainingEducation/StormwaterProgram.aspx>, also linked under "Synthesis of findings of Effectiveness Study Literature Review" at <http://www.ecy.wa.gov/programs/wq/psmonitoring/swgreports.html>:

**Business inspections are practiced widely by many public agencies in western Washington. Inspections are used for a variety of purposes including pollution control, health and safety, and code enforcement. Since the mid-2000s, local inspection programs have grown that seek to assess business practices and BMPs for controlling non-point sources of potential pollutants to surface and ground waters. Information from Ecology's Local Source Control program and some Puget Sound cities shows that site visits to businesses and technical assistance for promoting source control can be beneficial for education, properly handling hazardous materials and wastes, and water-borne pollutants. However, some aspects of business inspection programs are performed in**

**different ways across jurisdictions and across agencies within jurisdictions with inconsistent information collected, different emphasis (assistance versus compliance oriented), varying frequencies, and motivated by differing laws and local interests.**

**The white paper on source control written for Ecology’s RSMP sought to address several prioritized questions related to pollution source control at businesses. Those questions included the optimum frequency of inspection, working with property owners versus onsite managers, barriers to BMP implementation, and if inspections combined with other agencies would be effective while reducing the inspection burden on businesses. The white paper noted that successful source control at private stormwater facilities depends on the type of stormwater facility, the source control issues of concern, understanding by the facility operators of which BMPs to use and how to operate and maintain them, and the knowledge level of the inspector. In addition a list of factors are at play in addressing the questions posed, including the type of business, the potential or actual hazardous materials in use, and the local environmental and water quality considerations (such as proximity to sensitive surface waters, elevated groundwater, or a highly urbanized setting).**

9. Expected duration of the project: **One to three years.**

10. Approximate cost: **To be determined**

11. How would the findings of this study best be shared with stormwater practitioners?

**The findings would best be shared by fact sheets, reports, and possibly workshops targeted to local governments for adding or improving business inspection programs to promote stormwater BMP usage and maintenance. Many jurisdictions already have business inspection programs either through the LSCP, as part of existing water quality inspection programs, or as an independent program. The findings can be shared directly with existing programs, promoted through ongoing workshops Ecology provides for the LSC participants, stand-alone workshops, or in publications.**

12. Other information:

13. Your name, email address, and phone number:

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*Submit your idea via email to Karen Dinicola at [karen.dinicola@ecy.wa.gov](mailto:karen.dinicola@ecy.wa.gov) before COB on February 1, 2014. In the subject line of your email, write “Idea for Effectiveness Study” and include only one proposal per email.*