September 23, 2020

OESAC CEU Committee
PO Box 577
Canby, Oregon 97013

Subject: Sanitary Sewer Overflow Response Training CEU Course Application

Dear OESAC CEU Committee:

Please accept the enclosed application and evaluation fee for consideration. This is a renewal for course number 2788, which expired June 11, 2017 and course number 3528 which expired September 14, 2020.

Every fall, Clean Water Services (District) provides initial and refresher training to District and City collection system operators that respond to sanitary sewer overflows (SSOs). The training is specifically geared toward field staff that respond to SSOs. The training includes regulatory background and requirements, actions in the field to control and clean up an overflow, a sampling demonstration, and reporting requirements. Many of the District and City's public works staff who attend the training are certified as Wastewater Collection Systems Operators.

The District believes this training is directly applicable to meeting a portion of the two-year CEU requirement to renew an Operators certification. In the past the training has been offered to District staff and City staff who operate under the District's NPDES permit; however, if other agencies are interested in attending the training the District can make arrangements to accommodate additional attendees.

I am looking forward to the Committee's review of our application. If the Committee has any questions or would like to discuss the application, please contact me at 503-547-8123 or by email at sandhur@cleanwaterservices.org. Thank you for your consideration.

Sincerely,

Ryan J. Sandhu, PE
Field Operations Manager
Clean Water Services
(Operator Cert #11883)

Cc: Clean Water Services HR Department

ANNUAL SANITARY SEWER OVERFLOW RESPONSE TRAINING

GENERAL OVERVIEW

The District and member Cities are responsible for responding to and reporting sanitary sewer overflows (SSO). Fortunately, due to our preventive maintenance programs, overflows from the collection system are unusual occurrences. However, with wet weather approaching the possibility of an overflow from the collection system increases and an annual refresher training reviewing how to respond to and report SSOs is a permit requirement.

This 1 1/2-hour course will review actions to take in the event of a SSO. The basics of reporting, sampling, posting signage, and clean-up will be covered. Sampling supply refills for the Cities' overflow response kits will be available. The training will also briefly cover responding to and reporting Illicit Discharge Detection and Elimination (IDDE) issues related to the storm system.

Please attend either of the two identical 1 1/2-hour live virtual sessions being offered. A recording of one of the virtual sessions will be made available for those who cannot attend the live sessions.

0.1 CEU for Treatment or Collections will be given for attending this class, approved by the OESAC. For those not attending a live session, you will need to watch the recording and have your supervisor certify that you have completed the training. Please make sure to include your Wastewater System Operator certificate number when submitting your documentation.

The training is mandatory for new staff assigned to respond to overflows and highly recommended as a refresher for other staff. In general, crews that respond to SSOs and/or routinely perform line cleaning, TV inspection, or construction should attend. Duty officers or other staff that respond to after-hours calls or may be required to report an SSO, especially if not within the department that regularly maintains the sanitary sewer system, should also attend. The District requests Supervisors determine which staff members should attend based on assigned tasks.

COURSE OUTLINE

- Understand the regulatory requirements for responding to and handling an overflow;
- Review the procedures for notifying DEQ, OERS, and CWS in the event of an overflow;
- Understand the basics of overflow response and clean up;
- Know where and how to post required signs for public safety;
- Learn how and where to take initial water quality samples;
- Understand what information CWS needs to prepare the 5-day letter to DEQ; and
- Review Illicit Discharge Detection and Elimination (IDDE) program response and reporting expectations and points of contact.

INSTRUCTORS

Roger Dilts, Clean Water Services Water Resources Analyst
Jamie Hughes, Clean Water Services Water Resources Analyst
James Vitko, Clean Water Services Field Construction Maintenance Supervisor
Dan Marrin, Clean Water Services Laboratory Specialist

REGISTRATION

Please register using the links provided below or request an invitation by sending an email to speighth@cleanwaterservices.org a minimum of three business days prior to the selected class. Be sure to include all name(s), email addresses, organization/department for each individual and the session each person plans to attend. ***Supervisors, please send one email to request multiple invitations for employees***

DATES/TIME - (PICK ONE)

Session 1: **Tuesday, October 20, 2020, from 8:00 a.m. to 9:30 a.m.**
Register *Password: SSOT*

Session 2: **Tuesday, November 17, 2020, from 8:00 a.m. to 9:30 a.m.**
Register *Password: SSOT*

COST:

There is no registration fee for this training. Please make sure all of those who plan to attend have completed their registration in advance. Those in attendance must sign in using their first and last name during the training in order to receive CEUs. **Attendees who cannot be identified by name during the training will not receive CEUs.**

ADDITIONAL INFORMATION:

Spill kits and replacement supplies will be made available at no charge upon advanced request. Please check current inventory, indicate how many will be needed, and reach out to Dan Marrin at MarrinD@CleanWaterServices.org to coordinate pick up.

_____ Full spill kit

_____ Sampling instructions

_____ Chain of Custody Form

_____ Whirlpak bags

_____ Syringes

_____ Flagging Tape

SANITARY SEWER OVERFLOW RESPONSE

Control, Contain, Clean up, Collect, Communicate

SSO Response Training

Fall 2020

Clean Water Services

TODAY'S AGENDA

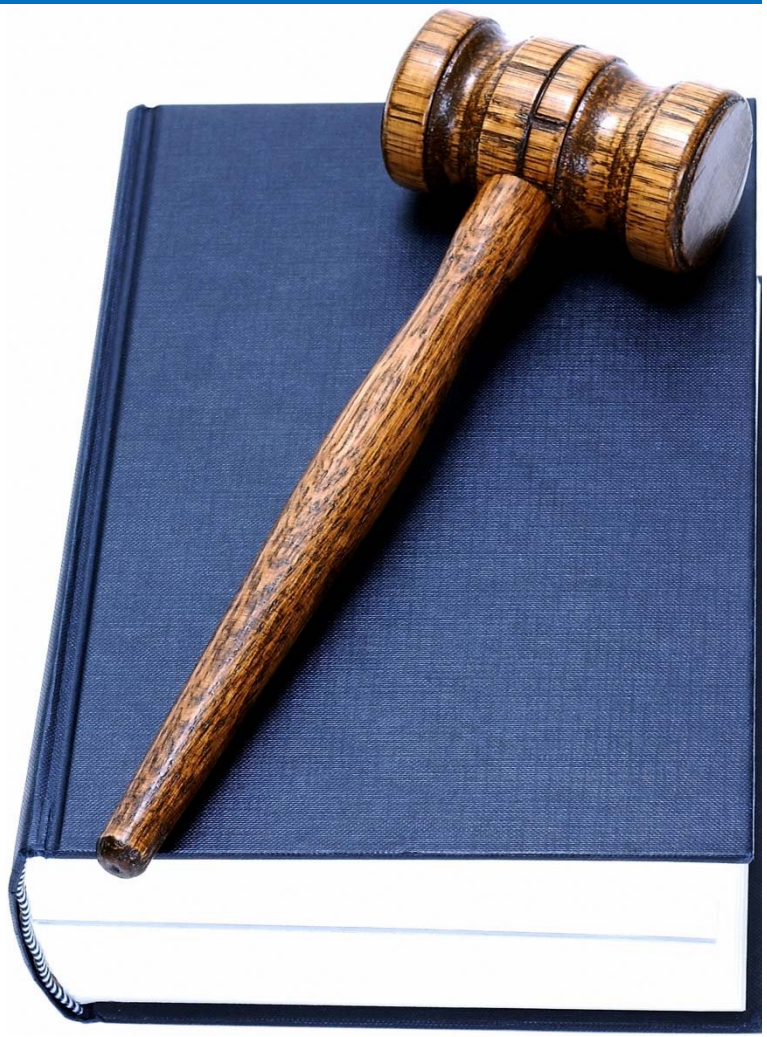
- **C**ontext – Roger Dilts/Jamie Hughes
- **C**ontrol – James Vitko
- **C**lean up – James Vitko
- **C**ollect Samples – Dan Marrin
- **C**ommunicate – Roger Dilts/Jamie Hughes
- Illicit Discharges – Roger Dilts/Jamie Hughes
- Questions - All

WHY HAVE AN SSO RESPONSE PLAN?

- Protect public health
- Protect the environment
- Protect property
- Customer service
- Avoid fines/penalties

AND…

- It’s required by our permit
- A proper response can protect us from DEQ enforcement

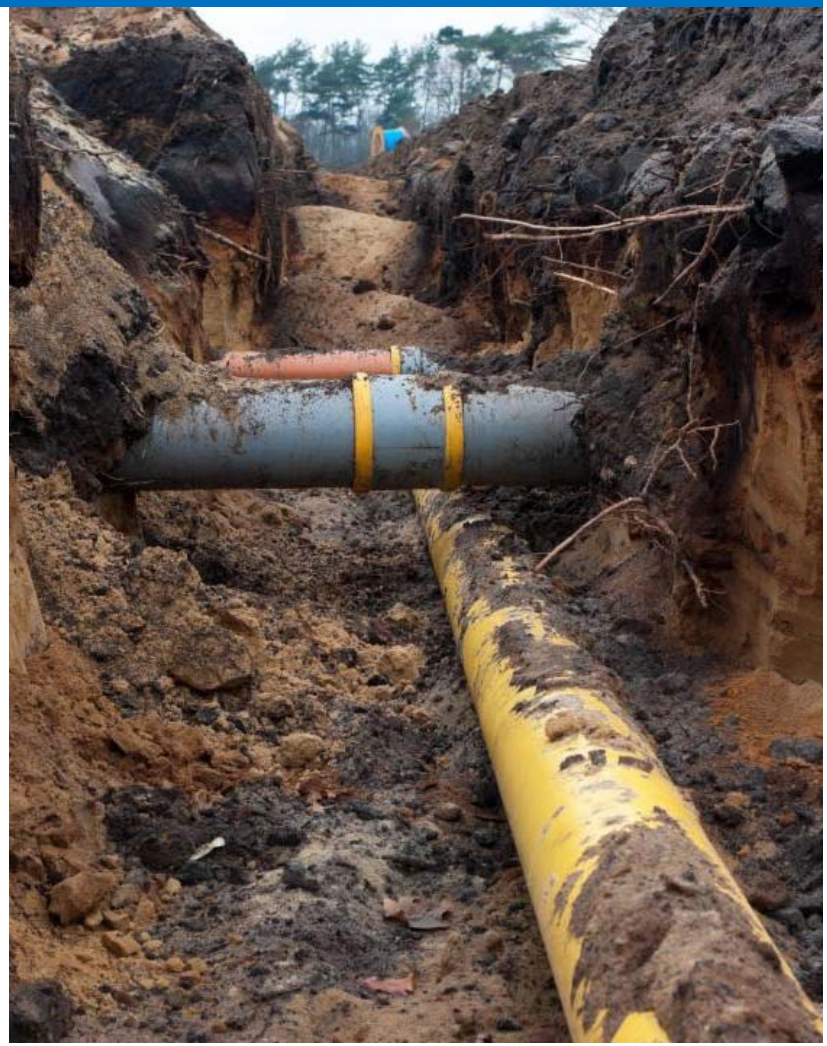


WHAT IS A SANITARY SEWER OVERFLOW (SSO)?

- An escape of sewage…
  - Even if “only liquid”
- …that is caused by a fault in the publicly maintained conveyance system
  - Even if it comes out of a private system
  - Even if on private property
  - Even if confined to a building
  - Even if it does not reach surface water

WHAT IS NOT AN SSO?

- Sewage overflow caused by faults in a privately maintained system: blockage in the lateral, even if on “the city side”
- Minor toilet burps from cleaning
- Releases from regular activities, as long as the sewage remains under control
- Cross connections



CAUSES OF SSOs

- Roots, grease, gravel, towels, wipes and other blockages
- Contractor bore-throughs
- Line breaks
- Flat lines, low flow
- Pump station failure
- Failed pump around
- Construction/repair errors
- High flows
- Vandalism
- Etc.

2019 SSOs (16 calendar year)

- Blockage, grease: 2
- Flat line, low flow: 2
- MH failure: 1
- Treatment Plant power loss backed system up: 1
- Wipes/towels: 4
- Roots: 2
- Force main failure: 1
- ARV clog: 1
- Big ol’ mess of cable: 1
- Unknown: 1

2020 SSOs (6 through 9/23/2020)

- Roots: 2
- Flat line, low flow: 1
- Failed creek bank broke line: 1
- Air Release Valve fail: 1
- Contractor bore through: 1

SOME ARE EASY TO SPOT

BUT OUT OF SIGHT DOES NOT MEAN OUT OF MIND…

THEY LOOK DIFFERENT ON THE SURFACE…

…THAN THEY DO AFTER SOME DIGGING.

SOME HAVE GREATER ENVIRONMENTAL IMPACTS.

OTHERS POSE A GREATER PUBLIC HEALTH RISK

SOME TAKE A LOT OF WORK TO FIX.

WHETHER IT'S A ROUTINE CALL AND EASY CLEANUP, OR A LOT MORE, WE FOLLOW THIS RESPONSE PLAN

RESPONDING TO OVERFLOWS

- SSOs
  - City/CWS must stop, clean up, and report following this procedure
- Other sewage overflows (“private”)
  - If reaching the storm system: It is an Illicit Discharge that we need to eliminate. Protect storm drains, work with the responsible party to stop and clean up. If no cooperation, take emergency corrective action. If reaching surface water or otherwise causing a health concern contact DEQ and Washington County Health Department

RESPONDING TO OVERFLOWS

- Other sewage overflows (“private”) – continued
  - If not reaching the storm system or surface water, it is the responsibility of the property owner to correct and clean up.
  - If causing a public health problem, may need to involve Health Department or DEQ.

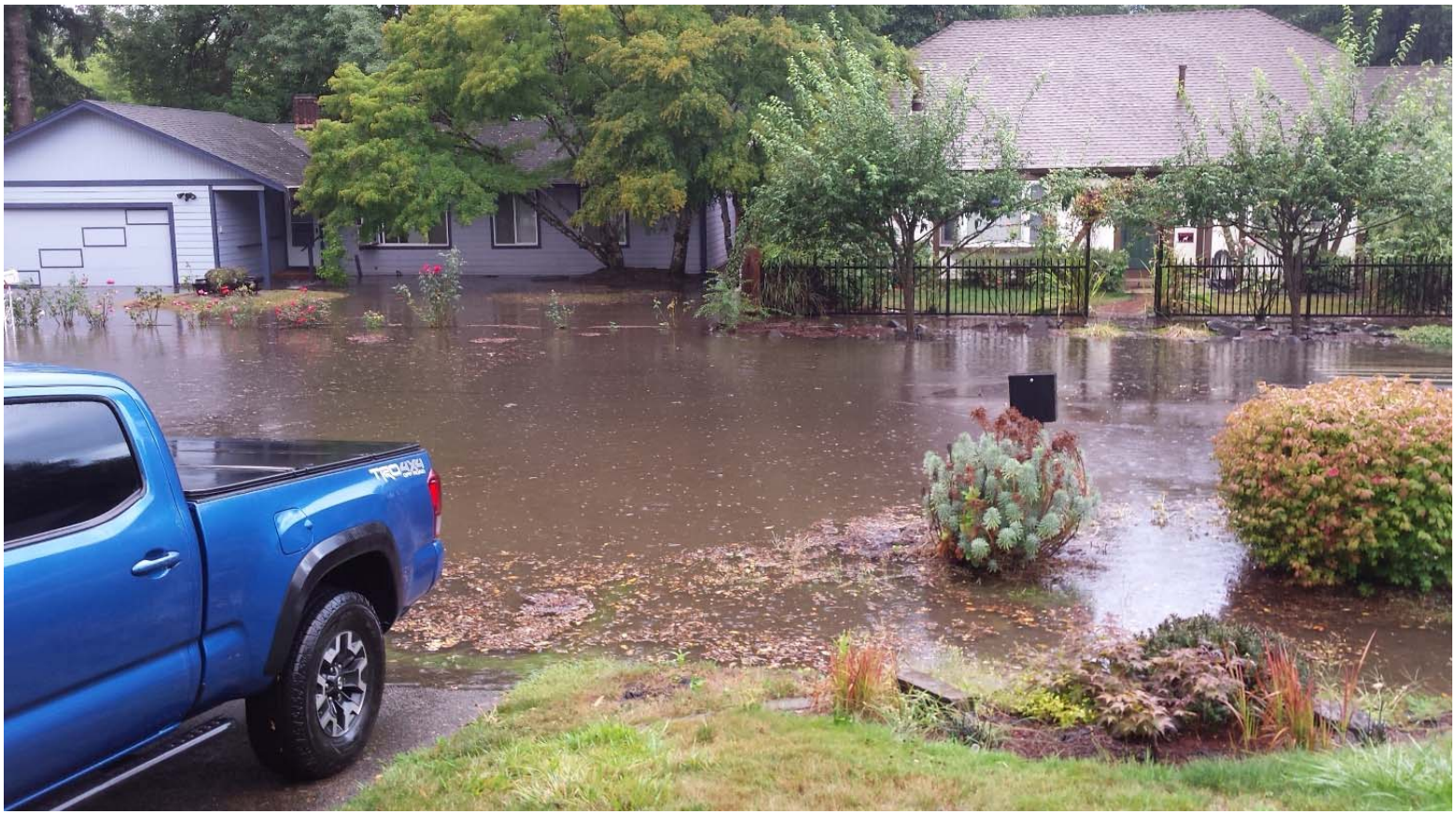
FIRST ON THE SCENE: CONTROL, CONTAIN, CLEAN UP

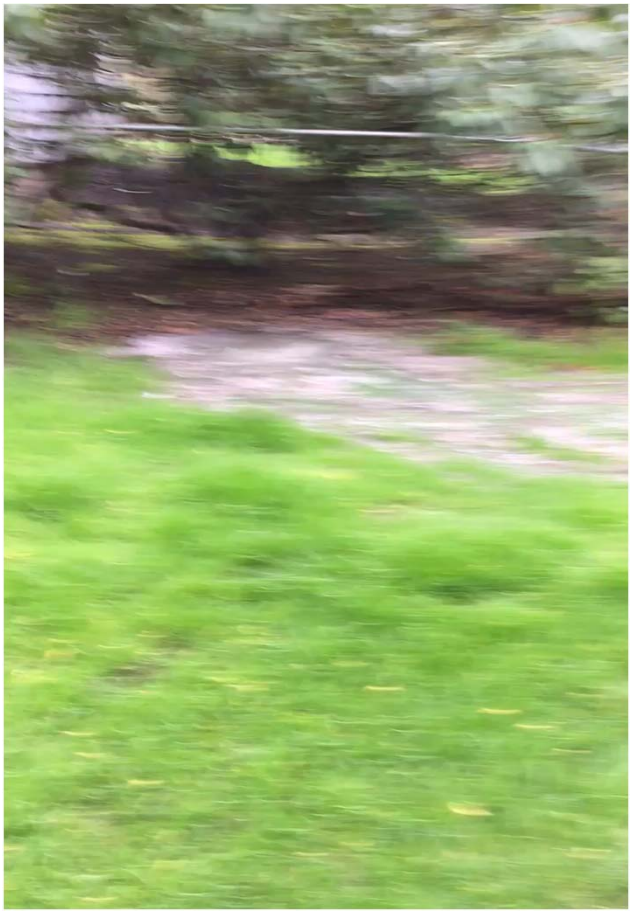
What in 1957 was the fastest object to be launched by humans?

A MANHOLE COVER

- August 27th, 1957
- Robert Brownlee
- Pascal B test
- Calculated lid speed at 125,000 MPH
- Government will not confirm or deny the test.

ASSESSING THE CALL





FIRST THINGS FIRST

- Keep you and your crews safe
  - Rubber Boots
  - Gloves
  - Eyewear
  - Proper Equipment

SAFETY EQUIPMENT

CONTROL

- Relieve or bypass
- Plug or cover storm drains
- Divert with a berm
- Pump around overflow and return to sewer
- Retain and collect sewage in a low area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CONTAIN

- Goal: keep sewage where it can be recovered and returned to the sanitary sewer or more easily cleaned up.
- Tools: sand, sand bags, neoprene mat, etc.

CLEAN UP

- Remove debris
- Use vactor trucks
- Or…just rakes and shovels
- Protect the storm water system
- Documentation

AFTER THE CLEAN UP IS DONE

COLLECTING SAMPLES

- Where
- How many
- How to

WHO DOES THE SAMPLING?

- First responders (City/CWS Field Ops) collect initial samples for analysis to determine public health or environmental impact
- Clean Water Services Water Quality Lab collects follow-up samples and performs necessary testing at no charge. Tests are run for: E. coli, ammonia, nitrite/nitrate, chloride, ortho-phosphate, and total phosphorus

YOUR OVERFLOW RESPONSE KIT

- Sampling supplies
  - Sampling Instructions
  - Pens and Marker
  - Chain of Custody Form
  - Whirlpak bags
  - Syringes
  - Flagging Tape
- Sample cooler

YOUR OVERFLOW RESPONSE KIT

- Signs
- PPE (Disposable Gloves)
- You may want to add
  - Lath or Stakes
  - Staple Gun

WHERE TO SAMPLE

- In every SSO:
  - "Overflow" source – collect two sample bags of the overflow itself
- If the overflow reached a waterway:
  - "Upstream" – collect two sample bags of uncontaminated water approximately 150 feet upstream of the overflow.
  - "Downstream" – collect two sample bags of possibly contaminated water approximately 150 feet downstream of the overflow.

THE CHAIN OF CUSTODY FORM

- A Chain of Custody Form is needed with all samples which includes:
  - Report To or Supervisor Name and Phone Number
  - Sampler's Name
  - Sample ID indicating the specific location where each sample is collected (e.g.: spill or overflow, upstream, downstream)
  - Date and Time of sample collection

MORE INFORMATION, PLEASE

- In addition to the Chain of Custody form, we need to know:
  - Was the water flowing or stagnant at the sample points?
  - What do you think is in the sample (e.g.: sewage, diluted sewage, contaminated stormwater, recycled water, etc.)?
  - Where did you collect the sample? A detailed description of each sample collection location (a drawing, photo or map is helpful).

COLLECTING THE SAMPLE

- Write the Sample ID and Date with a permanent marker on two whirlpak bags for each sample location (mark them before they get wet!)
- Post an identifying sign with flagging right at each exact sample location to facilitate follow-up sampling.

THE CORRECT WAY TO SAMPLE

- Collect the sample directly into the bags when possible. Face the bag opening upstream and collect the sample just below the water surface. If the water is too shallow, use the syringe to fill the bags.
- Avoid mud and debris.
- Fill each bag ¾ full. Leave an air space of more than an inch at the top of the sealed bags.

SAMPLING DEMONSTRATION

KEEP COOL

- Put the samples on ice or keep them cold until they can be delivered to the laboratory

CWS LABORATORY SERVICES

- During regular business hours, call:
  - CWS Lab 503-970-2966 or
  - CWS Field Operations 503-547-8100 or
  - CWS Main Office 503-681-3600
    - Advise CWS that you will be collecting a sample, and when you expect to arrive at the lab. Samples should be delivered as soon as possible, but no longer than 18 hours from time of collection.
- Deliver samples to:
  - Clean Water Services Water Quality Laboratory
    2550 SW Hillsboro Highway, Hillsboro

CWS LABORATORY SERVICES

- After hours, call:
  - (503) 681-3600 and
  - State you had a sewer overflow and
  - Leave a name and number where you can be called back.

RESTOCKING SUPPLIES

- When you bring in your samples, please bring your kit to refill.

COMMUNICATE

- The permit requires that we:
  - Notify the public
  - Call OERS and DEQ
  - Report to DEQ

NOTIFY THE PUBLIC

- Post warning signs
  - At a minimum, post signs at the overflow location, 100'-150' downstream, and at public access points especially near parks and schools where children and pets may be present.
  - Leave up until upstream and downstream bacteria counts are the same (CWS will notify you)

NOTIFY THE PUBLIC

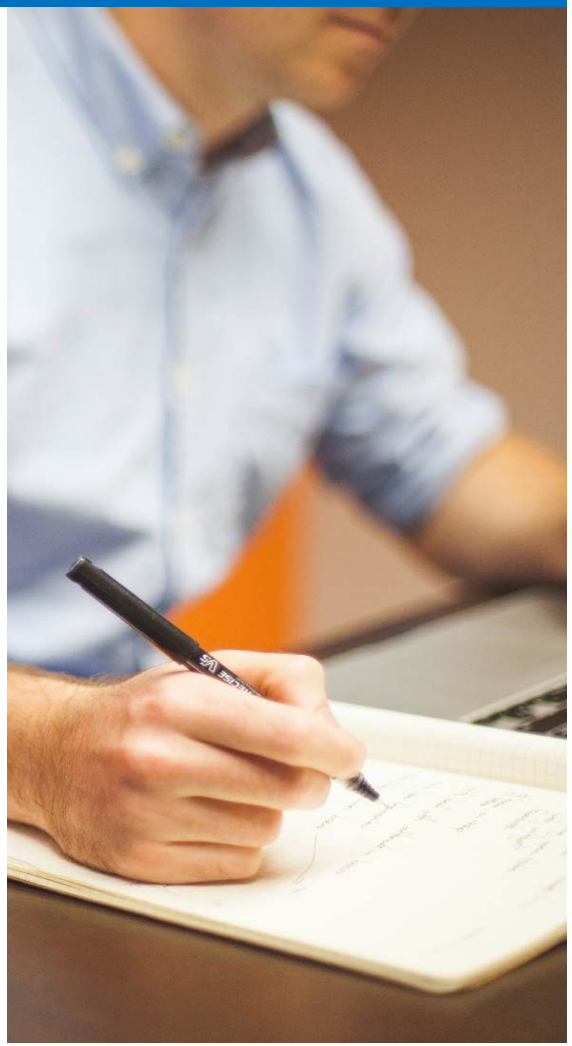
- If a large or continuing overflow, or it impacts a school, park or other public area, contact Washington County Public Health and have your Public Affairs staff contact news media and consider using door hangers to alert neighbors.
- If impacting a restaurant or other business licensed by the health department, or surface water, contact Washington County Env. Health
- Take other action as requested by DEQ.

CALL OERS, DEQ & CWS

- As soon as possible, but ALWAYS within 24 hours of learning of the overflow:
  - Call OERS at 1.800.452.0311 (unless the SSO is confined to a building), and
  - Call Mark Hynson 503.229.5295 or the DEQ Duty Officer at 503.229.5263, and
  - Call CWS
    - Office hours: Field Operations 503.547.8100
    - After hours 503.681.3600 (answering service), AND
  - Submit an Overflow Form to CWS on line

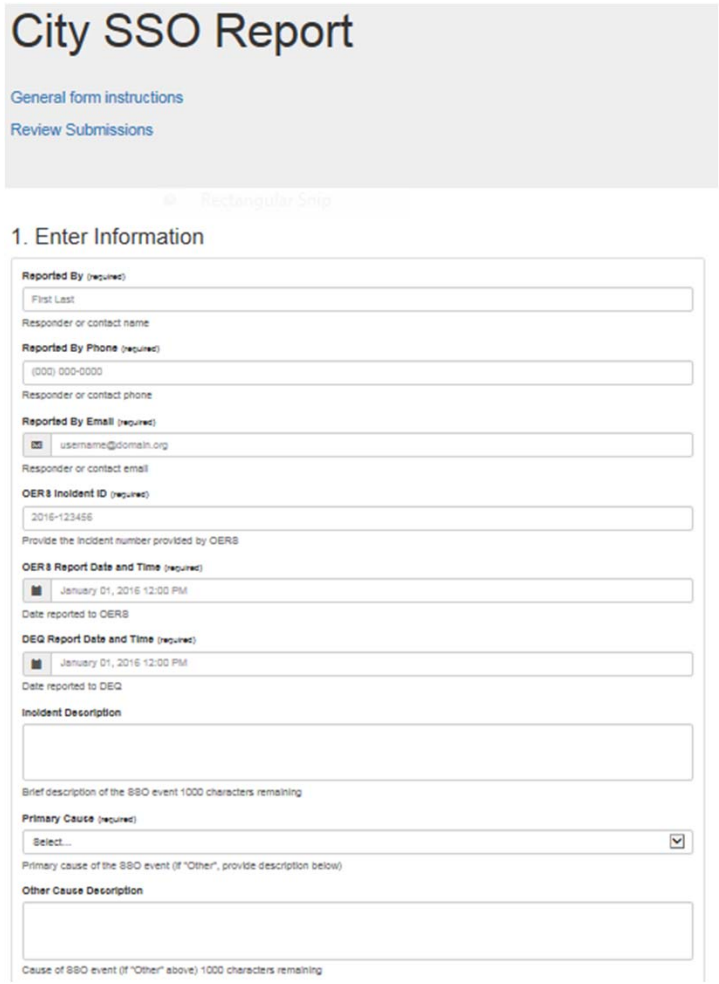
BE PREPARED TO DESCRIBE THE EVENT:

- Location (address and description)
- Date and time started and ended
- Cause
- Flow rate and estimated volume
- Name of any impacted water body
- Action you are taking (response, clean up, sampling, warning signs, press alerts, etc.)
- Follow up if the situation changes or lasts longer than one day



CWS: REPORT TO DEQ

- Within 5 calendar days of the overflow, CWS must submit a written report to DEQ
- CWS needs the City SSO Report and reporting contact's phone number to prepare the written report
- These are filled out and submitted on line



City SSO Report

General form instructions

Review Submissions

1. Enter Information

Reported By (required)

First Last

Responder or contact name

Reported By Phone (required)

(000) 000-0000

Responder or contact phone

Reported By Email (required)

username@domain.org

Responder or contact email

OER8 Incident ID (required)

2016-123456

Provide the incident number provided by OER8

OER8 Report Date and Time (required)

January 01, 2016 12:00 PM

Date reported to OER8

DEQ Report Date and Time (required)

January 01, 2016 12:00 PM

Date reported to DEQ

Incident Description

Brief description of the SSO event 1000 characters remaining

Primary Cause (required)

Select...

Primary cause of the SSO event (if "Other", provide description below)

Other Cause Description

Cause of SSO event (if "Other" above) 1000 characters remaining

WHAT IS AN ILLICIT DISCHARGE?

- Any discharge to the stormwater system that is not stormwater and not allowed by a permit
- The stormwater system includes streets, curbs, ditches, gutters, catchbasins, WQFs, etc.

EXAMPLES OF ILLICIT DISCHARGES

- Cross connections (sani to storm)
- Wash waters run to the street or ditch
- Wastes dumped into catchbasins
- Vehicle fluids from collisions or leakage
- Flow from construction sites that violates their permit (sediment, turbid water, fuel, concrete waste, etc.)
- Industrial process waters discharged to storm
- SSOs that reach storm are also Illicit Discharges, but handle them through the SSO process

ILLICIT DISCHARGES

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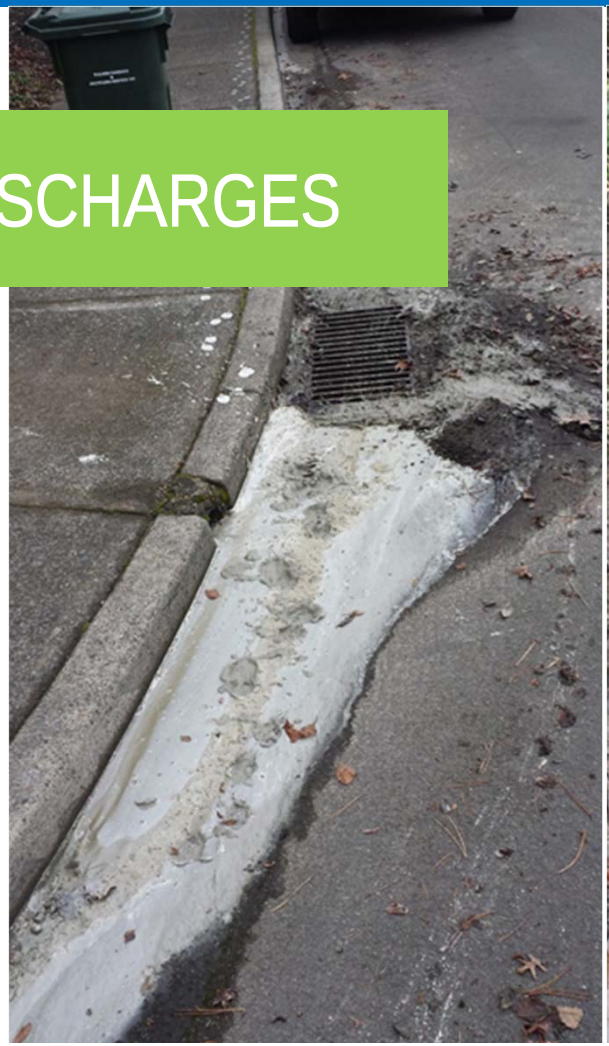
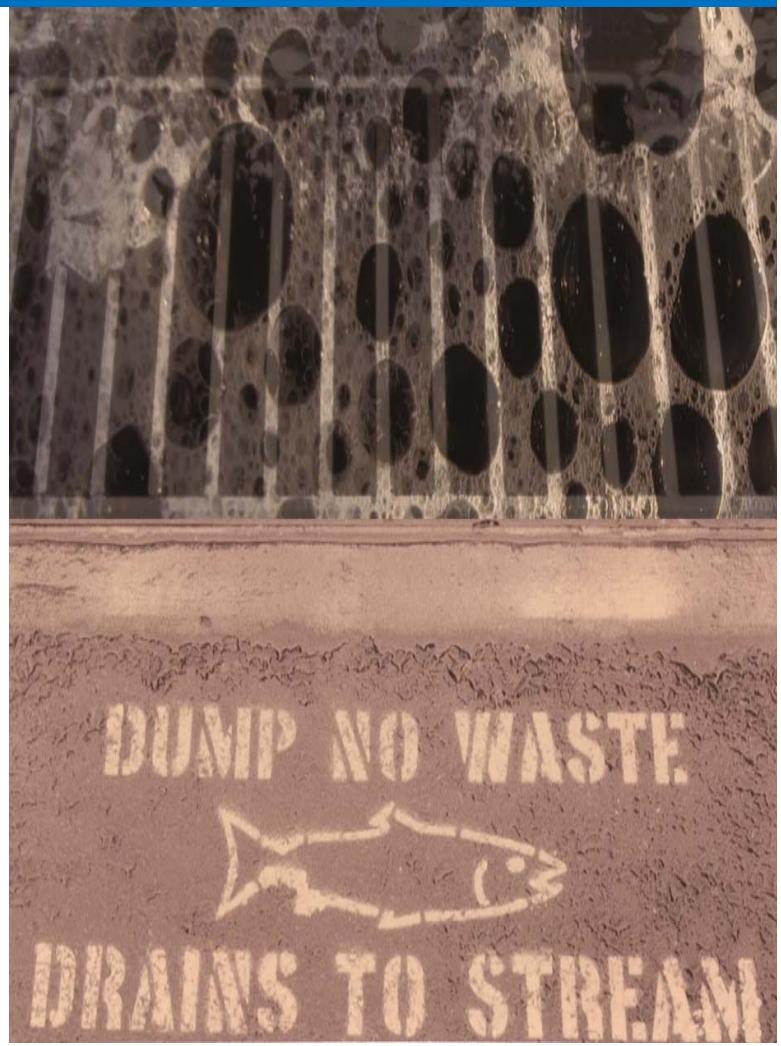


DETECTING ILLICIT DISCHARGES

- Watch for signs of contamination when cleaning catchbasins, WQ manholes, and maintaining water quality facilities, including filter vaults
- Could be food waste, sanitary waste, oil, paint, suds, etc. Also stressed vegetation in WQFs.
- Watch for unusual flow or unexpected connections when TV'ing storm lines



RESPONDING TO ILLICIT DISCHARGES

- Report signs of illicit discharge to supervisor
- Respond to public complaints or reports
- Investigate or refer to CWS Environmental Service
- Report to CWS using the web-based system
- Only report to DEQ/OERS if reaching surface waters

ELIMINATING ILLICIT DISCHARGES

- Clean up (gutter, c/b, lines, etc.)
- Identify source
- Contact, educate, request
- Refer to CWS, Code Enforcement, DEQ, WashCo Health, etc.
- Must eliminate within 5 days of identifying the source (or create a plan if a complex situation)

QUESTIONS?

- Control, Contain, Cleanup:
  - James Vitko – 503-547-8118
- Collecting Samples:
  - Dan Marrin – 503-681-5144
- Communicating with DEQ/CWS:
  - Roger Dilts – 503-681-4467
  - Jamie Hughes – 503-681-4456 (starting 1/1/2021)
- Illicit Discharges:
  - Roger Dilts – 503-681-4467
  - Jamie Hughes – 503-681-4456 (starting 1/1/2021)