

# SANITARY SEWER OVERFLOW RESPONSE

Control, Contain, Clean up, Collect, Communicate

SSO Response Training

2023

CleanWater  Services

## TODAY'S AGENDA

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



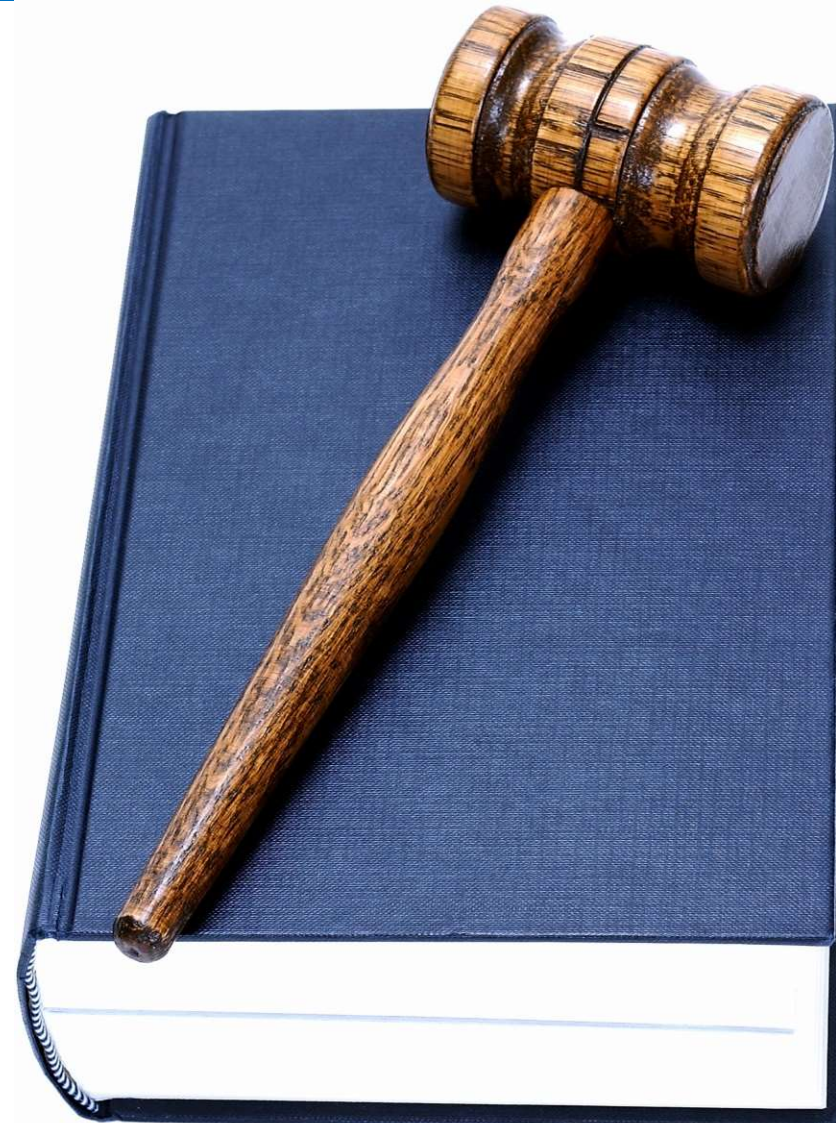
## WHY HAVE AN SSO RESPONSE PLAN?

- 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.



## 2022 SSOs (7 for calendar year)

- Roots: 1
- Blockage, roots, grease and rags: 1
- Contractor plug foul: 1
- Contractor bore through: 2
- Pump station force main break: 1
- Capacity: 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

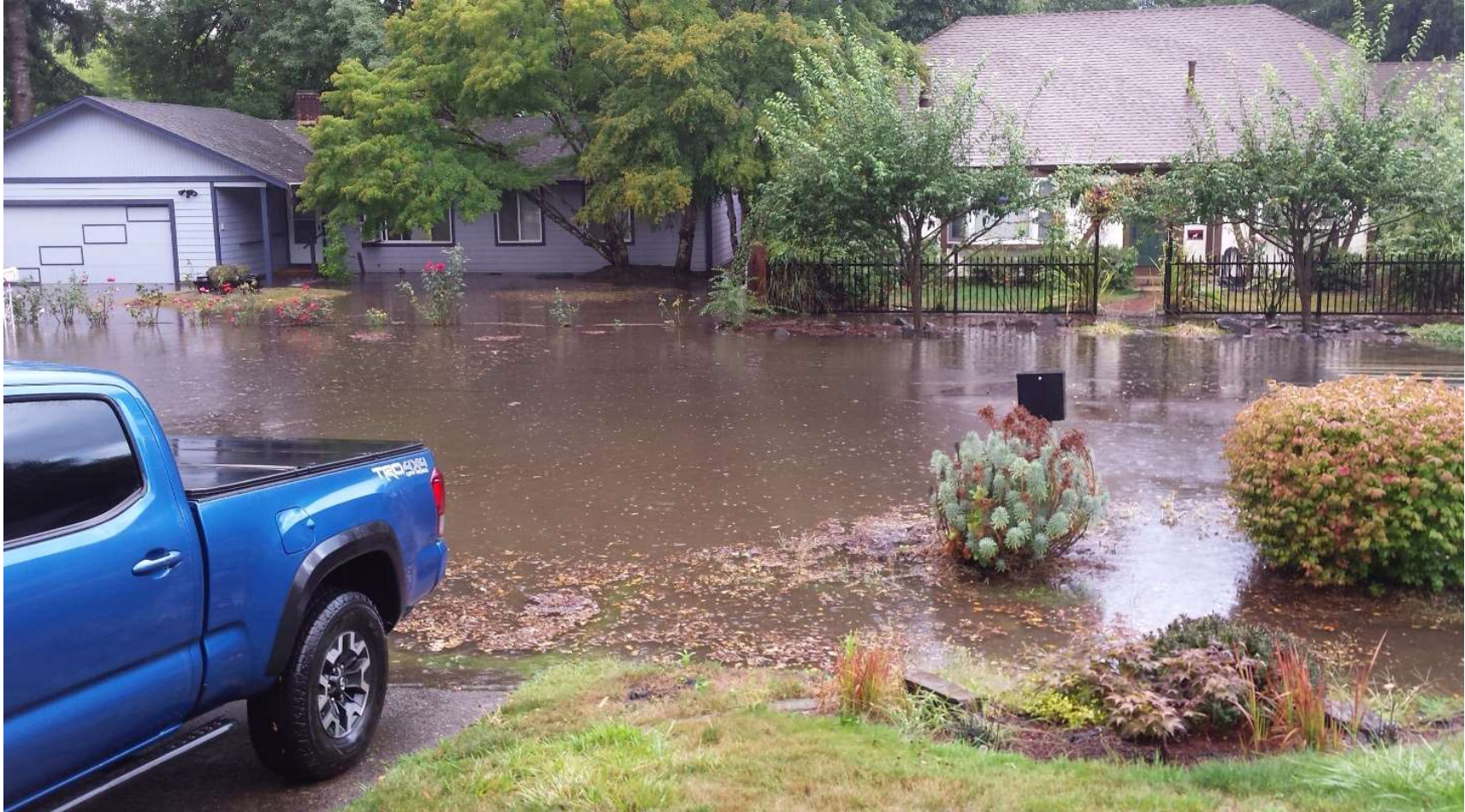
- Other sewage overflows (“private”) – continued
  - If not reaching the storm system or surface water, it is the responsibility of the property owner to correct and clean up.
  - If causing a public health problem, may need to involve Washington County Health Department or DEQ.



**FIRST ON THE SCENE: ASSESS,  
CONTROL, CONTAIN, CLEAN UP**



# ASSESSING THE CALL



## FIRST THINGS FIRST

- What do you need
  - Maps
  - Camera
  - Notepad
- Keep you and your crews safe
  - Rubber Boots
  - Gloves
  - Eyewear
  - Proper 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



## 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 vector 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  $\frac{3}{4}$  full. Leave an air space of more than an inch at the top of the sealed bags.



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# SAMPLING DEMONSTRATION



## 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  $\frac{3}{4}$  full. Leave an air space of more than an inch at the top of the sealed bags.

  
**Hillsboro**  
OREGON

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## 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.





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## 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.



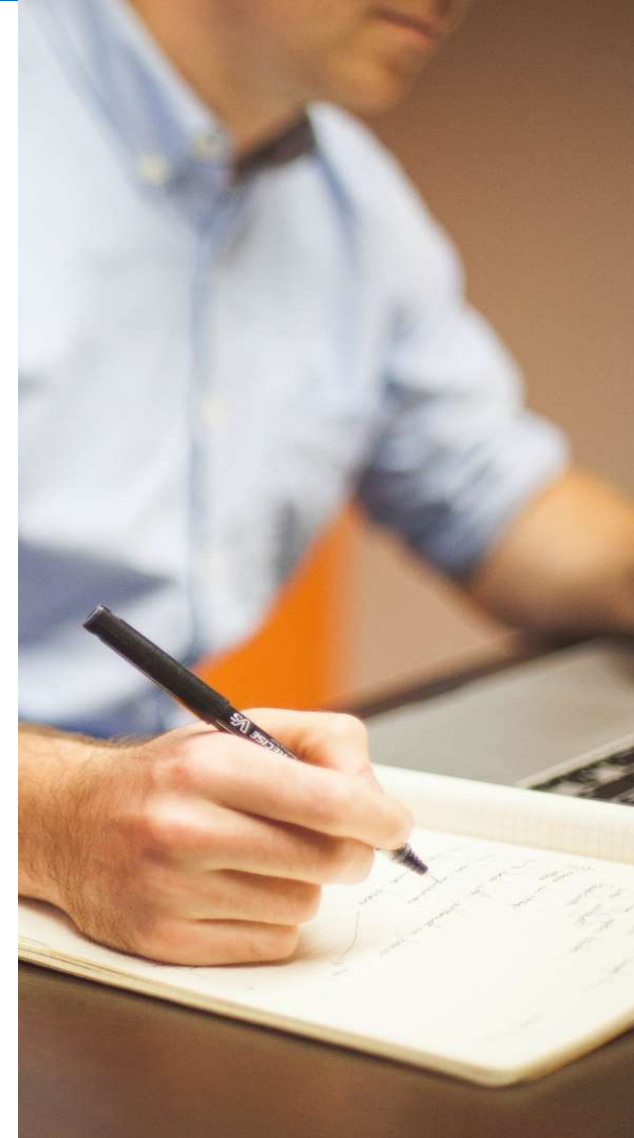
## CALL OERS, DEQ & CWS

- 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 Michael Pinney at 971.227.1765 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),
    - ❖ Jamie Hughes, Regulatory Affairs Department 503.559.8067, AND
  - Submit an Overflow Form to CWS online



## 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 online

Partner SSO Report

[General form instructions](#)

**Contact Information**

**Reported By\***  
Responder or contact name

**Reported By Phone\***  
Responder or contact phone

**Reported By Email\***  
Responder or contact email

**Incident Information**

**OERS Incident ID\***  
Enter the incident number provided by OERS

**OERS Report Date and Time\***  
Date and time reported to OERS



# CWS: REPORT TO DEQ

1. Go to CWS website: <http://cleanwaterservices.org>
2. Scroll down and click on “Forms” under “Popular Links” at the bottom of the home page

CleanWater Services

2550 SW Hillsboro Hwy.  
Hillsboro, Oregon 97123  
503.681.3600

.....

Contact Us  
Records Request  
Report a Problem

**POPULAR LINKS**

- Pay Your Bill
- Documents
- Forms**
- Bid Opportunities
- Careers

**STAY UP TO DATE**

Get a monthly email about what we are doing to serve 600,000+ residents in urban Washington County, Oregon.

Subscribe →

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# CWS: REPORT TO DEQ

3. Scroll down and under the “City Partners Reporting” header, click on “Cities and other partners report IDDE here” or “Cities and other partners report SSO here” depending on which form you want to fill out.



## Forms

**Jump to:** [Budget](#) | [Business](#) | [Community](#) | [City Partners](#) | [Permits](#) | [DEQ](#) | [Watershed](#)

**Searching for a form?** The list below includes forms you may need. Can't find what you're looking for? [Contact us](#).



### Budget/Rates

 [Request for Adjustment to Use Charge form](#) (PDF)

### Business

 [Sewered Waste Reporting Form and Instructions](#) (PDF)

 [Clean Water Services Wash Water Permit Application Form](#) (PDF)

 [New Industry Form](#)

### Community, Education, and Engagement

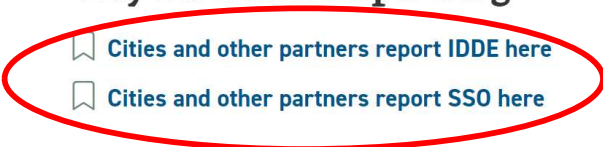
 [CWAC Application](#)

 [Learning Request](#)

### City Partners Reporting

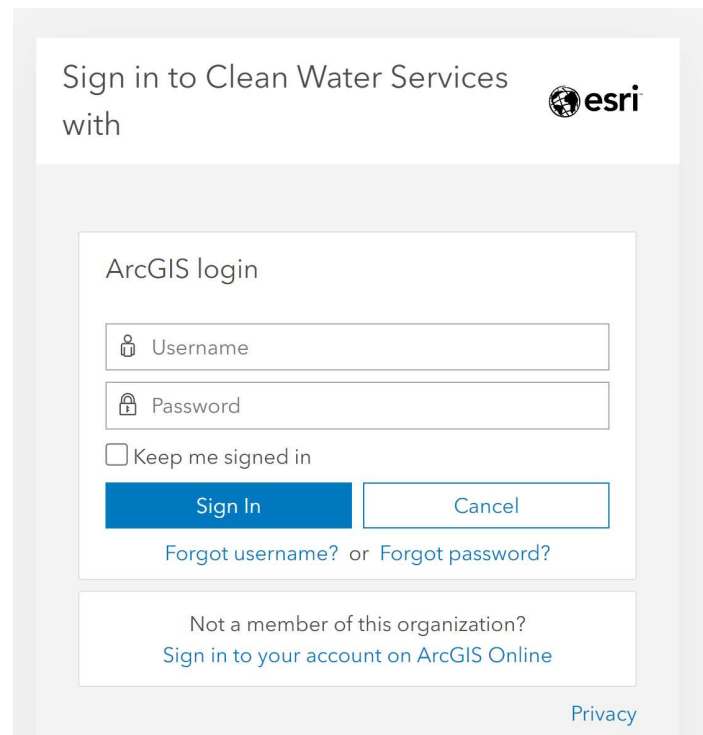
 [Cities and other partners report IDDE here](#)


 [Cities and other partners report SSO here](#)



## CWS: REPORT TO DEQ

4. Sign in to ArcGIS Online using the Username and Password provided by CWS (contact Jamie Hughes at [HughesJ@CleanWaterServices.org](mailto:HughesJ@CleanWaterServices.org) if you need the login information)



Sign in to Clean Water Services with 

ArcGIS login

Keep me signed in

[Forgot username?](#) or [Forgot password?](#)

Not a member of this organization?  
[Sign in to your account on ArcGIS Online](#)

[Privacy](#)



# CWS: REPORT TO DEQ



5. Fill out the form and attach any images or documents
6. There is a link for general form instructions should you have questions

**Partner SSO Report**

[General form instructions](#)

**Contact Information**

**Reported By\***  
Responder or contact name

**Reported By Phone\***  
Responder or contact phone

**Reported By Email\***  
Responder or contact email



**Overflow Location\***  
Where did the incident occur?

**Documentation**

**Attach Images**  
Additional images (optional)

1 Select image file (maximum number of files allowed: 5)

## 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



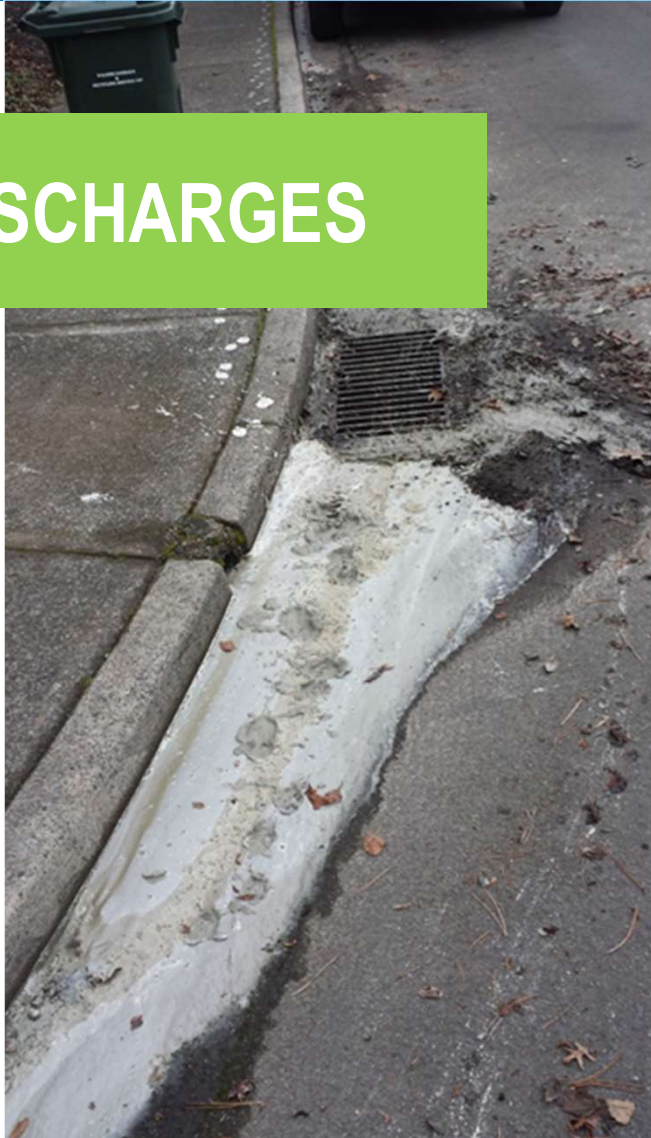
# ILLICIT DISCHARGES



# ILLICIT DISCHARGES



# ILLICIT DISCHARGES





## 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:
  - Jamie Hughes – 503-681-4456
- Illicit Discharges:
  - Jamie Hughes – 503-681-4456

