



Recommended Updates to the *Illicit Connection and Illicit Discharge Field Screening and Source Tracing Guidance Manual*



Source Identification Subgroup, August 15, 2019

Funding provided by western Washington municipal stormwater permittees

Introduction and Background

What is the IC-ID Manual?

- Guidance document, published in 2013
- Field methods to help meet requirements for Illicit discharge detection and elimination (IDDE) in municipal NPDES permit
- Single source of information
- Audience: municipal stormwater staff
- IC-ID vs. IDDE

ILLICIT CONNECTION AND ILLICIT
DISCHARGE FIELD SCREENING AND SOURCE
TRACING GUIDANCE MANUAL

Prepared for
Washington State Department of Ecology

Prepared by
King County
Washington Stormwater Center
Herrera Environmental Consultants, Inc.

[2013 IC-ID Manual link](#)

Introduction and Background

Why update the IC-ID Manual

- Widely used resource for IC-ID work
- Updated manual coincides with reissuance of municipal stormwater permits (2019)
- Supports SAM program and regional adaptive stormwater management



Issuance Date: July 1, 2019
 Effective Date: August 1, 2019
 Expiration Date: July 31, 2024

PHASE I MUNICIPAL STORMWATER PERMIT

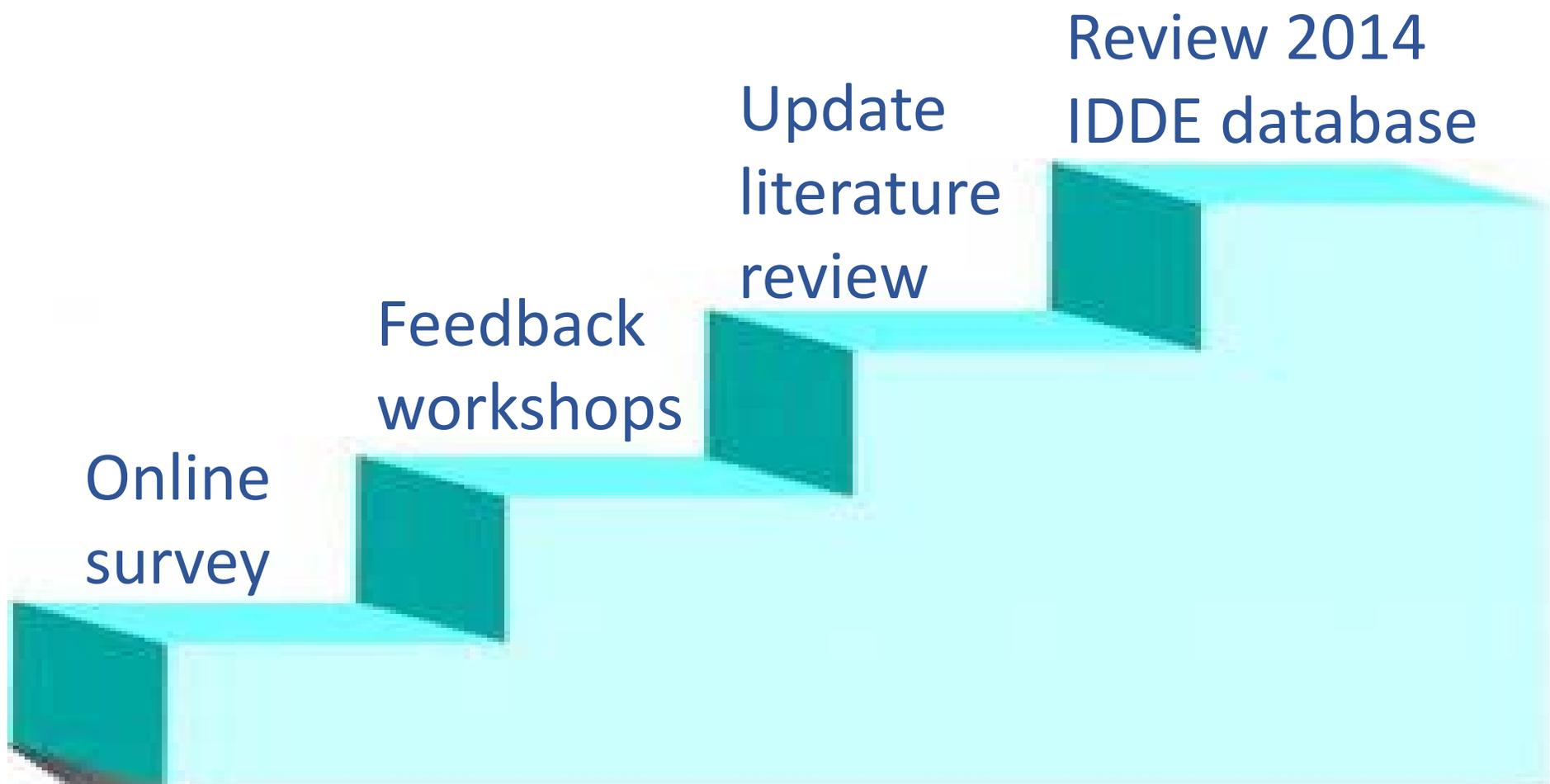
National Pollutant Discharge Elimination System and
 State Waste Discharge General Permit
 for Discharges from
 Large and Medium Municipal Separate Storm Sewer Systems

Issuance Date: July 1, 2019
 Effective Date: August 1, 2019
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Western Washington Phase II Municipal Stormwater Permit

National Pollutant Discharge Elimination System and
 State Waste Discharge General Permit for discharges from
 Small Municipal Separate Storm Sewers
 In Western Washington

Input For Potential Updates to Manual



Focus on Field Methods

- ✓ **Field Screening Methodologies (FSM)**
- ✓ **Indicators**
- ✓ **Source Tracing Methodologies (STM)**
- X **Does not cover elimination of IDs or ICs, enforcement, or corrective actions**

Field Screening Methodologies (FSM)

Flow chart

Revise flow chart and introduction with option to skip field screening

Ditch Inspections

Distinguish between creek and ditch, also mention under Flow indicator

BMP Inspections

Add reference to reviewing BMP as-built drawings to Methods section

Outfall Screening: Dry Weather vs. Wet Weather (Seasonal vs. Year-Round)

Expand description to include all options, pros/cons, applications

Field Screening Methodologies (FSM)

Business Inspections and BMP Inspections

Move to appendix. May be used for IC and ID investigation, but not typically tracked as part of IDDE activities.

Other

1. Check construction permits: add to Introduction and Methods
2. Add discussion in Introduction regarding calculating percent screened

Automated Sampling

Expand description?

Add Additional

1. Odor: expand Sources table to include dead animals, natural gas
2. Others: caffeine, DNA sampling, chemical oxygen demand, **fecal sterols**, oxygen stable isotopes, pharmaceuticals (EPA 1694), salinity, **UV light absorbance**

Soil Indicators, add to list of Others

Bacteria, dissolved metals

Color

1. Add test strips as equipment option, expand description accordingly
2. Expand information about color sampling: depth, lighting, 2nd opinion

Reclassify

1. Total petroleum hydrocarbons: move from Other to Follow-up
2. *E. coli* bacteria: move from Other to Follow-up, add EasyGel to equipment list
3. **Fluorescence**: move to Other, link to optical brightener monitoring (STM)
4. **Move fecal coliform to Other? Keep both *E. coli* and fecal coliform?**

Combinations

1. Caffeine with: bacteria, cholesterol, DNA
2. Conductivity with: ammonia, potassium, salinity

Expand Description

1. Turbidity, fluoride, and hardness: evaluate background conditions
2. Metals: add information about hardness correction factor for toxicity

Add Pollution Types

Expand *Sources* tables for each Indicator with common pollutant types

Source Tracing Methodologies (STM)

Add New

Pressure testing: drinking water or irrigation pipes. Add to Others list.

Add Information

1. Sand bagging: remove bags when finished
2. Dye testing: inform neighbors, traffic control, run-time, charcoal packs
3. Smoke testing: traffic control
4. Homeowner survey. Add questionnaire to appendix.

Reclassify

Optical brightener monitoring: move to Others list, shift description to appendix

Source Tracing Methodologies (STM)

Combinations and Sequencing

1. In-pipe methods (smoke, dye, video) for in-pipe sources: sewage, FOG
2. Ground methods (reconnaissance, inspection) for ground sources: spills, discharge

Add Pollution Types

Expand *Sources* tables for each STM with common pollutant types

Overall Updates or Edits

Add Discussion

1. Update permit requirements as related to scope of manual
2. Conditionally allowable discharges
3. Clarify permit field screening requirements

Visual Methodologies and Indicators

Can be subjective, have 2nd person verify

Order of Presentation FSMs, Indicators, and STMs

Keep alphabetical or reorder based on: frequency of use, priority, other?

Overall Updates or Edits

Equipment Costs

1. Update Appendix A
2. Update equipment lists as needed in each methodology or indicator

Document Navigation

1. Add index
2. Add section names in header or footer

Other

1. Create streamlined examples of field sheets
2. Request additional photos from permittees

Next Steps: Update Manual and Trainings

Update Manual

- Review and approval by Source ID subgroup and SAM coordinator
- Publish: by end of 2019
 - Ecology SAM website
 - WA Stormwater Center website

Trainings

- 8 throughout western WA
- Live, hands-on, demo stations
- Winter and Spring of 2020
- Videos of previous trainings on WSC website
 - 14 current videos
 - Create 6 more videos

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