Utilizing Asset Management Database Systems to Meet NPDES Requirements

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The Challenge
(Do it, Track it, and Report it)

- NPDES Permit Requirements:
  - Illicit Discharge Detection Elimination (IDDE)
    - Investigation
    - Enforcement
  - Post Construction, Operations & Maintenance
    - Stormwater Maintenance Inspections
    - Enforcement

The Project Goals

- Develop a standardized approach for tracking and reporting NPDES requirements
  - Geolinked (assets & mapping):
  - Useful and reliable database to query for management and NPDES reporting needs
  - Improve quality of tracking data and simplify annual reporting.
The Tool For Job

- GIS Integrated Asset Management Database System
  - Several systems on the market with Public Works focus
    - VueWorks, Hansen, Cartograph, Cityworks, etc.
  - SeaTac's Considerations
    - GIS Compatibility, Functionality, Cost

Tool Chosen

Some Assembly Required

- Service Request Form
  - All City Complaints
  - IDDE and Spill Hotline Tracking
- Work Order Forms
  - IDDE Field Screening
  - Storm Drainage Inspections
    - Public Storm Systems
    - Private Storm Systems
  - Post Storm Spot Check Inspections
  - Catch Basin Inspection (Coming Soon)
  - Catch Basin Maintenance (Coming Soon)
- Reports

IDDE and Spill Hotline Complaints
Web Form & Phone App
- Generates a Service Request (SR)
- Sends email notification to gate keeper
  - Gate keeper verifies and assigns SR
  - Assignee also receives email notification

Inbox Shows Active SRs
Select SR ID #

Service Request
- Tracks
  - All Complaints
  - IDDE Complaints
  - Spill Hotline Calls
  - Existing Actions
    - tracks each action taken to resolve complaint
  - Submit To: Dept/Div
  - Dispatch to: Staff
Request/Comment Info Panel

- Tracks
  - Address
  - Geolink Info
  - Location details
  - Details of Request or complaint

Caller Information Panel

- Mandatory Fields in Red
- Tracks
  - Mode of Request
  - Owner info
  - Permit info
  - Findings
  - Type of Request
  - IDDE info
  - DOE Notification

Custom Fields Panel
Custom Field
- Taken VIA (Mode)
  - Tracks Spill Hotline calls

Custom Field
- Type of Request
  - Extensive Pick List
  - Lists types by Dept and Division
  - Enhances Tracking & Reporting
  - Management Tool

Stormwater Inspections
(Customized Work Order Forms)
Stormwater Inspection
Private System

- Locate site on map
- Zoom in till assets are visible

Select Assets to be Inspected

Selection ties inspection to stormwater features

Create Inspection
Field Inspection Form

Timeliness requirements are on the back of the form

Site Map Attached for Inspections
Stormwater Inspection Data Panels

- Custom Fields
  - Mandatory Fields
  - Corrections & Enforcement
  - SWM Rebate
  - IDDE
  - Number & type of structures

Field Screening

Field Screening Inspection Form
Field Screening Inspection Form
(Customized Work Order)

- Designed to simplify NPDES Reporting
- Serves a management tool
- NPDES requirements tracked in three reports
  - IDDE Field Screening Report
  - NPDES Tracking Report
    - IDDE Investigations & Spill Hotline
  - Maintenance Inspection Report
    - Private & public stormwater inspections and spot check inspections

Reports & Reporting

NPDES Elements

- Designed to simplify NPDES Reporting
- Serves a management tool
- NPDES requirements tracked in three reports
  - IDDE Field Screening Report
  - NPDES Tracking Report
    - IDDE Investigations & Spill Hotline
  - Maintenance Inspection Report
    - Private & public stormwater inspections and spot check inspections
Select Date Range

Field Screening Inspection Report

Mapping Field Screening Compliance
**IDDE Reporting**

**Stormwater Inspection Reporting**

**Benefits**

- Provides consistent and reliable tracking data
- Simplifies and streamlines NPDES reporting
- Inspections are geolinked and tied to assets
- Serves as a program management tool
- Information is just a query away - you frame the question
Database as a Management Tool

Query 1
Map of Illicit Discharges

Query 2
Map of Illicit Discharges - Oil Spills & Leaks

Lessons Learned

- Biggest challenge – getting user buy in
  - Staff resistant to change
- Garbage in/Garbage out
  - Clarity roles and responsibilities
  - QA/QC – Check in several times during 1st year
- Geolinking is essential
  - Map based queries important management tool