

# Effective Standard Operating Procedures

S.O. What?

# National Environmental Investigations Division & Region X

- May 31- June 6, 2006, the NEIC & Region X EPA staff completed an audit of the City of Boise Wastewater collection system.
- NEIC was tasked with auditing all wastewater systems with flow greater than 100 mgd (considered large systems), and
- One third of the medium systems with flows greater than 10 mgd (Boise's flow is 28 mgd).

# Prior to EPA's Arrival

- EPA corresponded with the Operations Manager...
- Regarding all the information they needed to review.
- A check list was used to organize the information request.

# Examples of Information Requested

- Organizational Structure
- Overview of “the system(s)”
  - System features, including pump/lift stations
  - Satellites (Sewer Districts)
  - Jurisdiction/Legal Authority
  - System Monitoring (telemetry, SCADA)
  - Information Management System (Hansen)
  - Finance & Budgeting

# Examples of Information Requested - continued

- Operation & Maintenance
  - Sewer inspections, CCTV
  - Sewer cleaning, schedule, etc.
  - Sewer repair, rehabilitation, replacement
  - Manhole inspection & repair
  - Pump/lift station inspection/operation & maintenance
  - Pretreatment program

# Examples of Information Requested - continued

- Operation & Maintenance – continued
  - Grease control program
  - Corrosion control
  - Fleet maintenance & equipment inventory
  - Complaint programs
  - Training

# Examples of Information Requested - continued

- Sewer system evaluation
  - Engineering, design, new sewers – design period & design flow
  - Modeling
  - Infiltration/inflow studies
  - Smoke testing, dye studies
  - Asset management
  - Capacity assurance

# Examples of Information Requested - continued

- SSO Procedures
  - Identification
  - Notification
  - Response & corrective action(s)
  - Performance indicators
  - Problem area(s)
- WWTF Capacity Management
  - West Boise WWTP
  - Lander Street WWTP

# Initial Meeting

- Eight staff members from EPA and one from Idaho Department of Environmental Quality met with our staff and sewer district representatives.
- The EPA staff toured many of our facilities and...
- Reviewed hundreds of pages of documents.

# EPA Completed Audit & Debriefing

- EPA had high regards for our preparation:
  - Record keeping including data management
  - Maintenance program
  - Engineering & pretreatment programs
- EPA Identified three issues-two very minor ones and one pipeline issue.

# Issues Included

- Document control
- SSO response plan
- Sludge pipeline

# Before you start writing SOPs...

- Remember the “importance” begins with the understanding the organization’s (City, Dept, Div.) vision, mission statements and goals.
- Regarding Wastewater Collection System Management...the goals are embodied in the need to provide customers with a trouble-free wastewater collections system.

# To achieve the goals...

- It is necessary to develop and use Standard Operating Procedures (SOPs).
- In the case of developing emergency SOPs/plans; be sure to develop plans that dovetail with local emergency agencies, planners, etc.

# Goal Criteria

- The goals should be:
  - Specific
  - Measurable
  - Attainable
  - Realistic
  - Time dependent
  - ...and must be achieved through appropriate course of actions.

# SOPs, suggested components..

- Purpose (statement): this describes the intent & purpose of the SOP, Emergency Plan or Operational Manual.
- Legal Authority: This includes a list or “partial” list of laws &/or regulations...(i.e., NPDES permits)

# General Planning Factors & Assumptions

- **Planning factors...**
  - ...take into consideration “local conditions” influencing the content of the manual, plan or SOP...
- **Planning Assumptions...**
  - ...typically describe advance judgment concerning the details related to the manual, plans or SOP...

# Organizational Roadblocks

- “Everyone agrees on a course of action, but nothing changes”
- “It’s a great idea; it will never happen.”
- “The businesses and functions just aren’t working together to get results.”
- “We have the right strategy and clear implementation plan, but we can’t seem to execute.”

# Organizational Roadblocks - continued

- Reluctance...
  - ...in general, if information about the progress of changing (revising) or implementing (developing) SOPs is not conveyed or shared...
  - ...there may develop a roadblock of reluctance.
- Changes in policy and/or procedures (i.e., that's not how we've done it in the past) is another roadblock.

# Organizational Roadblocks - continued

- Different people expect different results.
  - ...perhaps there is a “discovered” new task flow (or a flow chart/task that is obsolete or not accurate)...
- The pace at which the change is proceeding.
  - ...is the implementation date(s) realistic
  - ...are the necessary funds available, and
  - ...are the employees with the right knowledge base trained, updated and prepared to move forward with implementation.

# S.O. What?

- Effective Standard Operating Procedures
- Questions?