

FWEA Utility Council Sanitary Sewer Overflow (SSO) Enforcement Policy Recommendations

Purpose and Objective

The FWEA Utility Council formed the SSO Sub-Workgroup to provide a venue to discuss the increase in enforcement actions by FDEP over the past two years. The group was tasked with developing recommendations for the Utility Council to present to FDEP on affirmative defenses and mitigating circumstances that should be considered when evaluating an SSO.

Recommendations

The group finds that there is an inconsistency in SSO enforcement by FDEP around the state and the discretion exercised is unpredictable. Below is a summary of the recommendations the group developed that should be considered by FDEP when evaluating SSO's.

1. Affirmative Defenses

The following criteria should be sufficient justification for FDEP to elect not to take enforcement actions against a utility for an SSO:

- a. Event was caused by a known 3rd party not working for the utility (e.g. directional drilling) and the utility provided a correct locate;
- b. Event was caused by a force of nature (e.g. lightning strike, hurricane) without respect to the frequency or severity of a storm;
- c. Event was less than 1,000 gallons and did not have significant public health (i.e. public contact) or environmental impact (i.e. reached navigable waters of the state and caused water quality violations);
- d. Event was caused by an unknown 3rd party (e.g. vandals); or
- e. Event was from a privately owned portion of the collection system prior to the point of connection owned by the utility.

FDEP should seek enforcement action against the responsible 3rd party in cases where the utility had no control over the event.

2. Mitigating Factors

It should be noted that these recommendations represent a wide variety of operation and maintenance techniques implemented by utilities around the state and of varying size. As a result, the entire list of factors is not necessarily applicable for every utility. A subset of these factors should be more than adequate to influence enforcement decisions.

The following factors should be a basis to significantly reduce or eliminate penalties for an SSO:

a. SSO Response and Clean-up Actions

Utilities should get a dollar for dollar off-set in penalties based on the expenses incurred for response, remediation and clean-up activities. In this manner, pro-active efforts would begin immediately after an event rather than at some later date after FDEP involvement. This would reduce environmental and public health impacts and lower costs and efforts expended by FDEP.

- i. Written sewer overflow response protocol;
- ii. Timeliness of response;
- iii. Trained response personnel on-call (standby);
- iv. Extent of recovery back into the sewer system through the use of vac trucks and portable pumps;
- v. Efforts taken to contain the spill (e.g. earthened dikes, blocking storm drains);
- vi. Restriction of public access (e.g. barricades);
- vii. Public notification (e.g. neighborhood door hangers, posting of signs around waterbody);
- viii. Volume released versus volume recovered;
- ix. Application of lime to impacted ground;
- x. Water quality sampling efforts (e.g. upstream, downstream, impact areas);
- xi. Database of historical background water quality of waterways in service area for purposes of determining the necessary level of clean-up and impacts; and/or
- xii. Maintaining a database or GIS system of the collection and transmission system to aid in response activities.

b. Preventative and Predictive Maintenance Activities (maintenance planning and scheduling)

The following activities should also include Standard Operating Procedures (SOPs) outlining corresponding corrective actions to associated deficiencies.

- i. Systematic and scheduled cleaning of the gravity collection system;
- ii. Identification of 'hot-spots' for more frequent cleaning and assignment of resources;
- iii. Monitoring runtimes between pumps at lift stations;
- iv. Monitoring for dual starts (instead of alternating) at lift stations;

- v. Periodic analysis of pipe thickness within the system to locate potential areas needing replacement prior to failures;
- vi. Vibration analysis of pumps to identify necessary repairs (e.g. bearings) and check alignments before failure;
- vii. Thermal imaging of controls and bearing housings for proactive maintenance;
- viii. Routine load testing and exercising of generators;
- ix. Routine PLC battery backup load testing;
- x. Routine site visits of lift stations to check perimeter fencing for security breaches;
- xi. Routine checks for accumulation of grease in wet wells and scheduling of pump outs as needed;
- xii. Automatic pump down protocols to eliminate grease accumulation;
- xiii. Valve exercise program;
- xiv. Infiltration/Inflow Program with routine, systematic television inspection, smoke testing, and manhole inspections;
- xv. Implementation of other CMOM activities; and/or
- xvi. Placement of cheat sheets at lift stations so personnel not familiar with the particular equipment can repair and operate in a more timely fashion.

It is recognized that a wastewater collection and transmission system can be compromised during the process of performing any of the above preventative or predictive maintenance activities (e.g. cleaning). As a result, SSO's that occur during the process of performing these actions or within a reasonable period of time after completion should be given special consideration.

c. Alarms and SCADA

Consideration should be given to technology utilized to improve operations and provide early notification of failures which are beyond regulatory requirements, such as:

- i. Auto-dialers for critical lift station alarms;
- ii. Remote monitoring of wet well levels;
- iii. Remote monitoring of the status of electric utility service to lift stations;
- iv. Monitoring of electrical grid circuits with respect to affected lift stations;
- v. Remote SCADA monitoring and operational systems with off-site staffing;
- vi. Alarms to alert to pumps left in manual vs. auto mode;
- vii. Alarms to monitor pump seal failure (moisture sensor); and/or
- viii. Alarms to monitor pump over-temp.

d. Redundancies

- i. Standardization of Equipment;
- ii. Spare pump and impeller inventory;
- iii. Spare critical parts program with non-critical parts readily accessible through known and documented sources;
- iv. Staff qualified to rebuild or repair pumps to expedite turnaround time (e.g. in-house pump shop);
- v. Portable generator inventory;
- vi. Electrical connections on smaller lift stations for prompt connections with portable generators;
- vii. Installation of third pumps (e.g. diesel powered pony pumps using level switches);
- viii. Periodic testing of backup transmission routes; and/or
- ix. Level of staffing (e.g. 24-hr staffing, on-call personnel)

e. FOG Program

It is recognized that fats, oil, & grease account for a significant portion of SSO's and hinder operations of a sewer system. A sound and effective FOG program should be considered when making enforcement decisions, such as:

- i. Requirement for applicable commercial customers to provide proof of grease trap pump-outs;
- ii. Routine inspection program of grease traps;
- iii. Residential customer education program; and/or
- iv. Education on how grease impacts SSO's.

f. Standards, Ordinances, Codes, Rules and Regulations

- i. City or County ordinances to require stricter standards for private systems;
- ii. Lower thresholds for mandatory on-site generators at lift stations;
- iii. Utility engineering standards should be higher than the minimum regulatory requirements;
- iv. Specifications should be regularly reviewed and improved upon over time; and/or
- v. Use of dual force mains, flexible routing, and/or multi-plant treatment options intended to assist in mitigating overflows when designing newer, larger lift stations and force mains.

g. SSO's Related to Infrastructure Improvements, Back-up Testing, and Rehabilitation Activities

Consideration should be given to accidental releases during the following types of construction and back-up testing processes:

- i. Pipe bursting;
 - ii. Rebuilds of older lift stations;
 - iii. Replacement of collection or transmission lines or manholes;
 - iv. Viability testing of back-up transmission routes; and/or
 - v. Installation of SCADA systems.
- h. Compliance History, Severity of Event, and Operational Performance
- i. Historical environmental compliance with respect to the wastewater collection, transmission, and treatment system should be considered;
 - ii. The frequency of events in the location should be considered;
 - iii. The steps being taken by the utility to prevent recurrence of a similar event;
 - iv. The severity of harm impact, or damage to the environment (e.g. fecal or DO data, fish kills);
 - v. Rate and volume of SSO's in perspective relative to size of the utility (e.g. volume of wastewater treated, miles of pipe maintained), excluding 3rd party events; and/or
 - vi. Improvements in the rate of SSO's over time.
- i. Private Systems
- i. Maintaining a database of responsible parties for privately owned systems; and/or
 - ii. Providing pamphlets to private lift station owners on proper operation and maintenance practices.

j. Field Locates

Accurate field locates should be considered when deciding who the responsible party is for a particular SSO.

k. Asset Management Program

Consideration should be given to utilities that have an asset management program to allocate funds for rehabilitation or replacement of aging infrastructure.

3. Penalties

The utilities find that penalties collected as the result of SSO's should be used and calculated, as follows:

- a. Legislative changes should be made so monies collected as the result of enforcement actions against utilities for SSO's are provided to small, disadvantaged community utilities for improvements to their wastewater collection and transmission systems; and
- b. When electing to pursue enforcement for an SSO, FDEP should use the ELRA guidelines instead of the enforcement manual guidelines.

ELRA as enacted has not provided adequate guidance to the local district offices on enforcement. ELRA's implementation should be defined and enforcement guidance be provided as such. In some cases, ELRA legislation has not resulted in any visible change in the manner in which penalties are being calculated.

4. Questions

- a. The group would also like to better understand why there has been a dramatic change in the frequency and penalties assessed during the last two years for SSO's;
- b. It is noted that FDEP still tends to utilize the enforcement manual to calculate penalties for SSO's instead of using the \$2,000 and \$5,000 penalties under ELRA; and
- c. The utilities recommend that FDEP hold privately owned systems to the same standard as municipal utilities by using the same level of enforcement discretion for SSO's.