

Guidance Memorandum

This document provides guidance on the parameters considered by the Collection System Committee (CSC) of the Georgia Water Environment Federation (GWEF) during their review of utility systems which have applied for consideration as “Collection System of the Year”. This memorandum should be used in conjunction with the Collection System Award Evaluation Form.

The parameters considered by the CSC are based upon the Capacity, Management, Operations and Maintenance (CMOM) Consent Agreement Guidance, Georgia Water Environment Federation, April 2006.

When possible in this document the CSC has provided guidance as well as the proposed SSO rule that serves as the basis for the parameter. This information is provided in “*italics*”.

The information in this memo is strictly guidance and is subject to change. Use of this document does not guarantee your utility’s success in the Collection System of the Year competition.

1. GOALS

You must specifically identify the major goals of your CMOM program, consistent with the general standards identified below:

Guidance:

These goals are stated in a written document that has become standard practice, policy, etc. for the utility. Provide resolution or similar document from elected officials (such as city council, board, commission, etc.) demonstrating utility’s commitment to CMOM program. The written document, resolution or similar document must address the 5 following major goals (Items A thru E).

A. Properly manage, operate, and maintain

Properly manage, operate and maintain, at all times, all parts of the collections system you own or over which you have operational control;

Guidance:

Provide a statement in your CMOM program that your goal is to properly manage, operate and maintain your collection system at all times and all parts (gravity sewers, lift stations and force mains) to properly convey wastewater and prevent SSOs. Identify specific items in your CMOM that will help obtain this goal.

Proposed Rule: SSO Rule (01/2001), Section 122.42(e)(1)(i)

B. Provide adequate capacity

Provide adequate capacity to convey base flows and peak flows for all parts of the collection system you own or over which you have operational control;

Guidance:

Provide a statement in your CMOM program that your goal is to provide adequate capacity in all parts (gravity sewers, lift stations and force mains) of your collection system to convey base and peak flows.

Proposed Rule: SSO Rule (01/2001), Section 122.42(e)(1)(ii)

C. Stop and mitigate impact of SSO

Take all feasible steps to stop, and mitigate the impact of, sanitary sewer overflows in portions of the collection system you own or over which you have operational control;

Guidance:

Provide a statement in your CMOM program that your goal is to take all feasible steps to stop SSOs, and to mitigate the impact of any SSO that does occur, in your collection system.

Proposed Rule: SSO Rule (01/2001), Section 122.42(e)(1)(iii)

D. Provide sufficient notification

Provide notification to parties with a reasonable potential for exposure to pollutants associated with the overflow event; and

Guidance:

Provide a statement in your CMOM program that your goal is to provide sufficient notification to parties with a reasonable potential for exposure to pollutants associated with the overflow event that does occur, in your collection system.

Proposed Rule: SSO Rule (01/2001), Section 122.42(e)(1)(iv)

E. Written CMOM summary

Develop a written summary of your CMOM program and make it, and the audit under paragraph (e)(2)(ix) of this section, available to any member of the public upon request.

(e)(2)(ix) CMOM Program Audits: As part of the NPDES permit application, you must conduct an audit, appropriate to the size of the system and the number of overflows, and develop a report of such audit, evaluating your CMOM and its compliance with the subsection, including deficiencies and steps to respond to them.

Guidance:

Provide a statement in your CMOM program that your goal is to take all feasible steps to stop SSOs, and to mitigate the impact of any SSO that does occur, in your collection system. Provide a schedule for conducting the audits and preparing the reports.

Proposed Rule: SSO Rule (01/2001), Section 122.42(e)(1)(v)

2. ORGANIZATION

You must identify:

A. Administrative and maintenance positions

Administrative and maintenance positions responsible for the implementing measures in your CMOM program, including lines of authority by organization chart or similar document, and

Guidance:

Provide an organizational chart showing the personnel positions and the lines of authority. Provide the job description of each position including knowledge, skills and abilities (KSA). Indicate the personnel in each position and the positions that are vacant. Provide an explanation as to the actions being taken to fill the vacant positions.

Proposed Rule: SSO Rule (01/2001), Section 122.42(e)(2)(ii)(A)

B. Chain of communication for reporting SSOs

The chain of communication for reporting SSOs from receipt of a complaint or other information to the person responsible for reporting to the NPDES authority, or where necessary, the public.

Guidance:

Provide flow chart showing the lines of communication from the instant a SSO is reported thru the mobilization of personnel; the repair/correction; clean-up; notification and/or reporting to the NPDES authority; and notification and/or notification to the public. Include any follow-up required after the SSO has been resolved. Included both normal; work hour and after-hour/weekend chain of communications.

Proposed Rule: SSO Rule (01/2001), Section 122.42(e)(2)(ii)(B)

3. LEGAL AUTHORITY

You must demonstrate legal authority, through sewer use ordinances, service agreements and or other legally binding documents, the utility has the right to:

Guidance:

Provide the ordinance, rule, policy, regulation or similar approved by city commission, board or elected officials demonstrating the utility has legal authority for the following:

A. Control infiltration and inflow (I/I)

Control infiltration and connections from inflow sources;

Guidance:

Provide the ordinance, rule, policy, regulation or similar approved by city commission, board or elected officials demonstrating the utility has legal authority.

Proposed Rule: SSO Rule (01/2001), Section 122.42(e)(2)(iii)(A)

B. Require proper design and construction

Require that sewers and connections be properly designed and constructed;

Guidance:

Provide the ordinance, rule, policy, regulation or similar approved by city commission, board or elected officials demonstrating the utility has legal authority.

Proposed Rule: SSO Rule (01/2001), Section 122.42(e)(2)(iii)(B)

C. Ensure proper installation, testing and inspection

Ensure proper installation, testing, and inspection of new and rehabilitated sewers (such as new or rehabilitated collector sewers and new or rehabilitated service laterals);

Guidance:

Provide the ordinance, rule, policy, regulation or similar approved by city commission, board or elected officials demonstrating the utility has legal authority.

Proposed Rule: SSO Rule (01/2001), Section 122.42(e)(2)(iii)(C)

- D. Control municipal satellite flows both in quantity and quality
Address flows from municipal satellite collections systems; and

Guidance:

Provide the ordinance, rule, policy, regulation or similar approved by city commission, board or elected officials demonstrating the utility has legal authority. May also be in the form of an inter-jurisdictional agreement.

Proposed Rule: SSO Rule (01/2001), Section 122.42(e)(2)(iii)(D)

- E. Require the pretreatment of fat, oil and grease (FOG)
Implement the general and specific prohibitions of the national pretreatment program that you are subject to under 40 CFR 403.5. (See the attached copy of EPA 40 CFR 403.5)

Guidance:

Provide copy of FOG program. Provide the ordinance, rule, policy, regulation or similar approved by city commission, board or elected officials demonstrating the utility has legal authority.

Proposed Rule: SSO Rule (01/2001), Section 122.42(e)(2)(iii)(E)

4. MEASURES AND ACTIVITIES

Your CMOM program must address the following elements that are appropriate and applicable to your system and identify that person of position in your organization responsible for each element:

Guidance:

Utility must demonstrate that your CMOM program addresses and you are prepared for the following items. The personnel and resources may be in-house or out-sourced. If out-sourced then provide copies of current agreements/contracts with subcontractors/vendors.

- A. Adequate maintenance facilities and equipment
Provide adequate maintenance facilities and equipment;

Guidance:

Provide documentation of supplies and equipment in house or out-sourced. Provide tour of equipment/fleet yard and warehouse. Identify the personnel responsible for these items.

Proposed Rule: SSO Rule (01/2001), Section 122.42(e)(2)(iv)(A)

- B. Collection system map
Maintenance of a map of the collection system;

Guidance:

Demonstrate how the collection system maps are maintained. Include standard operating procedures, forms, etc. of how the map is maintained. Identify the personnel responsible for these items.

Proposed Rule: SSO Rule (01/2001), Section 122.42(e)(2)(iv)(B)

C. Management of information

Management of information and use of timely, relevant information to establish and prioritize appropriate CMOM activities and identify and illustrate trends in overflows, such as frequency and volume;

Guidance:

Demonstrate the management of information within the utility and between personnel, departments and ordinance enforcement to address immediate SSO issues and proactively plan SSO prevention maintenance activities. Demonstration may be related to computer management systems, work orders, standard operating procedures, etc. Identify the personnel responsible for these items.

Proposed Rule: SSO Rule (01/2001), Section 122.42(e)(2)(iv)(C)

D. Routine preventive operation and maintenance

Routine preventive operation and maintenance activities;

- a. Gravity lines
- b. Force mains
- c. Pump stations
- d. FOG management program
- e. Root management program

Guidance:

Describe preventative and/or predictive operation and maintenance activities and procedures. Demonstrate that the utility is moving away from reactive SSO activities to preventative and/or predictive activities. Demonstrate SSO prevention decisions are based upon information versus “gut feelings” or “this is the way we have always done it”. Identify the personnel responsible for these items.

Proposed Rule: SSO Rule (01/2001), Section 122.42(e)(2)(iv)(D)

E. Assessment of current collection and treatment capacity

A program to assess the current capacity of the collections system and treatment facilities which you own or over which you have operational control;

Guidance:

Describe your current program to access the current hydraulic capacity of the collections system and treatment facilities. This program must have a time frame associated with the frequency of the assessment. Is this flow monitoring, visual inspection, pump run times, etc.? What is the root causes of your collections system and treatment facility short comings? Identify the personnel responsible for these items.

Proposed Rule: SSO Rule (01/2001), Section 122.42(e)(2)(iv)(E)

- F. Identification of structural deficiencies and remediation
Identification and prioritization of structural deficiencies and identification and implementation of short-term and long-term rehabilitation actions to address each deficiency;

Guidance:

Where and how are you looking for these deficiencies? What is the frequency for identification activities? Are these activities reactive or proactive? Are the activities based upon information or “gut feelings”? Is your staff PACP and MACP certified? What are your guidelines for rehabilitation once a deficiency is discovered, what are the priorities and what are the parameters for action? Identify the personnel responsible for these items.

Proposed Rule: SSO Rule (01/2001), Section 122.42(e)(2)(iv)(F)

- G. Appropriate training
Appropriate training on a regular basis; and

Guidance:

Describe and document the regular training provide to enhance safety, sewer collection system knowledge, sense of ownership and accomplish the utility’s overall goals. Identify the personnel responsible for these items.

Proposed Rule: SSO Rule (01/2001), Section 122.42(e)(2)(iv)(G)

- H. Equipment and replacement parts inventories
Equipment and replacement parts inventories including identification of critical replacement parts.

Guidance:

Provide documentation of equipment and replacement parts inventory. Identify critical replacement parts. Describe how the equipment and replacement parts inventories are maintained. Provide tour of equipment

and replacement parts inventory. Identify the personnel responsible for these items.

Proposed Rule: SSO Rule (01/2001), Section 122.42(e)(2)(iv)(G)

5. DESIGN AND PERFORMANCE PROVISIONS

You must establish:

- A. Requirements and standards for installation, rehabilitation and repair
Requirements and standards for the installation of new sewers, pumps and other appurtenances; and rehabilitation and repair projects; and\

Guidance:

Provide requirements, specifications and standard details for the installation, rehabilitation and repair for collections system utilities. Identify the personnel responsible for these items.

Proposed Rule: SSO Rule (01/2001), Section 122.42(e)(2)(v)(A)

- B. Procedures for inspecting and testing
Procedures and specifications for inspecting and testing the installation of new sewers, pumps, and other appurtenances and for rehabilitation and repair projects.

Guidance:

Provide procedures, specifications and standard details for inspecting and testing the installation of new sewers, pumps, and other appurtenances and for rehabilitation and repair projects. Identify the personnel responsible for these items.

Proposed Rule: SSO Rule (01/2001), Section 122.42(e)(2)(v)(B)

6. MONITORING, MEASUREMENTS AND PROGRAM MODIFICATIONS

You must:

- A. Monitor component implementation and effectiveness
Monitor the implementation and, where appropriate, measure the effectiveness of each element of your CMOM program;

Guidance:

Demonstrate how and when the SSO prevention program is being monitored for its implementation and effectiveness. Address the program both by component and overall. Identify the personnel responsible for these items.

Proposed Rule: SSO Rule (01/2001), Section 122.42(e)(2)(vi)(A)

- B. Update programs as appropriate
Update program elements as appropriate based on monitoring or performance evaluations; and

Guidance:

Demonstrate how and when your program is updated. Describe the items that trigger an update. Identify the personnel responsible for these items.

Proposed Rule: SSO Rule (01/2001), Section 122.42(e)(2)(vi)(B)

- C. Modify and update CMOM summary as appropriate
SSO Rule (01/2001), Section 122.42(e)(2)(vi)(C)
Modify the summary of your CMOM program as appropriate to keep it updated and accurate.

Guidance:

Demonstrate how and when the CMOM summary is modified and updated. Describe the items that trigger a modification and update. Identify the personnel responsible for these items.

Proposed Rule: SSO Rule (01/2001), Section 122.42(e)(2)(vi)(C)

7. OVERFLOWS EMERGENCY RESPONSE PLAN

You must develop and implement an overflow emergency response plan that identifies measures to protect public health and the environment. The plan must include mechanisms to:

- A. Ensure overflow awareness
Ensure that you are made aware of all overflows (to the greatest extent possible);

Guidance:

What is the notification procedure when an overflow is discovered? Does this notification vary depending on who discovers the overflow - utility personnel versus the public? How does the notification vary during business hours versus non-business hours? Who is notified of an overflow and how is this notification documented? Identify the personnel responsible for these items.

Proposed Rule: SSO Rule (01/2001), Section 122.42(e)(2)(vii)(A)

- B. Ensure proper response to overflows
Ensure that overflows (including those that do not discharge to waters of the U.S.) are appropriately responded to, including ensuring that reports of overflows are

immediately dispatched to appropriate personnel for investigation and appropriate response;

Guidance:

Describe your response to an overflow. Include the dispatching of personnel and equipment, and notification to other utility staff and departments. Describe your response during and after the overflow. Describe effort to understand the root cause of the overflow. Identify the personnel responsible for these items.

Proposed Rule: SSO Rule (01/2001), Section 122.42(e)(2)(vii)(B)

C. Ensure appropriate notification

Ensure appropriate immediate notification to the public, health agencies, other impacted entities (e.g., water suppliers) and the NPDES authority pursuant to paragraph (g) of this sections. The CMOM program should identify the public health and other officials who will receive immediate notification;

Guidance:

Describe your notification to the public, health agencies, other impacted entities (e.g., water suppliers) and the NPDES authority. Include contact names, addresses, phone number and e-mail addresses. Provide copies of and filled out samples of the required notification forms. Describe follow-up procedures with the above mentioned entices. Identify the personnel responsible for these items.

Proposed Rule: SSO Rule (01/2001), Section 122.42(e)(2)(vii)(C)

D. Ensure appropriate personnel and training

Ensure that appropriate personnel are aware of and follow the plan and are appropriately trained; and

Guidance:

Document the proper personnel have been trained in the correct procedures during and following an overflow. Specific when the training is updated and when new employees are trained. Identify the personnel responsible for these items.

Proposed Rule: SSO Rule (01/2001), Section 122.42(e)(2)(vii)(D)

E. Provide emergency operations

Provide emergency operations.

Guidance:

Describe your procedures for actions during and following an overflow. For critical assets and/or critical locations demonstrate you have specific

procedures to limit the impact of an overflow. Identify the personnel responsible for these items.

Proposed Rule: SSO Rule (01/2001), Section 122.42(e)(2)(vii)(E)

8. SYSTEM EVALUATION AND CAPACITY ASSURANCE PLAN

You must prepare and implement a plan for system evaluation and capacity assurance if peak flow conditions are contributing to and SSO discharge or to noncompliance at a treatment plant unless you have already taken steps to correct the hydraulic deficiency or the discharge meet the criteria of paragraph (f)(2) of this section. At a minimum the plan must include:

A. Evaluation

Evaluation. Steps to evaluate those portions of the collection system which you own or over which you have operational control which are experiencing or contributing to an SSO discharge caused by hydraulic deficiency or to noncompliance at a treatment plant. The evaluation must provide estimates of peak flows (including flows from SSOs that escape from the system) associated with conditions similar to those causing overflow events, provide estimates of the capacity of key system components, identify hydraulic deficiencies (including components of the system with limited capacity) and identify the major sources that contribute to the peak flows associated with overflow events.

Guidance:

Describe and demonstrate your process for evaluating and ensuring capacity. Identify the personnel responsible for these items.

Proposed Rule: SSO Rule (01/2001), Section 122.42(e)(2)(viii)(A)

B. Capacity enhancement measures

Capacity Enhancement Measures. Establish short- and long-term actions to address each hydraulic deficiency including prioritization, alternatives analysis, and a schedule.

Guidance:

Provide those items as described. Identify the personnel responsible for these items. (Note: this may not apply to systems that are not experiencing or currently expecting growth)

Proposed Rule: SSO Rule (01/2001), Section 122.42(e)(2)(viii)(B)

C. Plan updates

Plan Updates. The plan must be updated to describe any significant change in proposed actions and/or implementation schedule. The plan must also be updated to reflect available information on the performance measures that have been implemented.

Guidance:

Specify the timeframes and/or triggering events that would cause an update of the plan. Identify the personnel responsible for these items.

Proposed Rule: SSO Rule (01/2001), Section 122.42(e)(2)(viii)(C)

9. CMOM PROGRAM AUDITS

A. Submit audit report

As part of the NPDES permit application, you must conduct an audit, appropriate to the size of the system and the number of overflows, and submit a report of such audit, evaluating your CMOM and its compliance with this subsection, including its deficiencies and steps to respond to them.

Guidance:

Specify the schedule or triggering events for conducting an audit. Identify the personnel responsible for these items.

Proposed Rule: SSO Rule (01/2001), Section 122.42(e)(2)(ix)

10. COMMUNICATIONS

A. Communication with interested parties

SSO Rule (01/2001), Section 122.42(e)(2)(x)

The permittee should communicate on a regular basis with interested parties on the implementation and performance of its CMOM program. The communication system should allow interested parties to provide input to the permittee as the CMOM program is developed and implemented.

Guidance:

Identify who you will communicate with on a regular basis on the implementation and performance of your CMOM program. Specify how this communication will allow input from interested parties. Describe the method/s of that communication. Identify the personnel responsible for these items.

Proposed Rule: SSO Rule (01/2001), Section 122.42(e)(2)(x)

11. GEROGIA EPD SPECIFIC REQUIREMENTS

A. Highly operational efficient pump station

Guidance:

See attached Table 3.1 from the Georgia Water Environment Federation's Capacity, Management, Operations and Maintenance (CMOM) Consent Agreement Guidance. Copy is provided at the end of this document.

Table 3.1 includes various pump station measurements including 1) Pump stations overall CMOM effectiveness, 2) individual pump station maintenance reliability, 3) Pump station power source reliability, and 4) Individual pump station power source reliability.

B. Sewers 12-inch and larger have been externally inspected

Guidance:

What procedures are in place to externally inspect the sewers 12-inch and larger? This may included stream crossings (both aerial and buried), sewer mains running parallel to water bodies, and other critical sewers/force mains.

C. I/I (infiltration /inflow) reduction program has been initiated

Guidance:

What flow monitoring, work, repairs, replacements, etc. has been or is being done to actually remove I/I from the system. Studies do not count.

D. 100% Compliance with all spill reporting, notification and sampling

Guidance:

Must demonstrate 100% compliance with all spill reporting, notification and sampling.

12. OPERATOR CERTIFICATION

A. Employee to Certified Employee Ratio

Guidance:

Provide ratio of certified Wastewater Collection System Operators to all sewer system employees.

A = All sewer system employees

*B = # of sewer system employees who are certified Wastewater
Collection System Operators*

*C = A/B = ratio of certified Wastewater Collection System
Operators to all sewer system employees*

B. Ratio of number of certified crew leaders to number of crews

Guidance:

*Provide ration of crew leaders that are Certified Wastewater Collection
System Operators to the number of sewer system crews.*

*X = # of crew leaders that are Certified Wastewater Collection
System Operator crew leader*

Y = # of sewer system crews

*Z = X/Y = ratio of crew leaders that are Certified Wastewater
Collection System Operator to the number of sewer system crews*

13. SAFETY PROGRAM

A. Safety Program

Guidance:

Provide documentation of your safety program.

B. Safety Equipment

Guidance:

*Provide listing of safety equipment including personal and general.
Specify equipment carried on work vehicles and specific equipment
required for certain activities – example: confined space entry.*

C. Safety Training

Guidance:

Provide documentation of your safety training including sign-in lists.

14. INITIATIVES/INNOVATIONS

Initiatives/innovations to be considered for awarding bonus points. Use the comment section to briefly describe the initiatives and innovations.

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Guidance:

Provide discussion and demonstration of all initiatives/innovations you feel are unique to your utility. This may include policies, practices, equipment, etc. you feel demonstrate your utility's commitment to its CMOM program, CMOM employees, the public and the environment.

Attachments:

Table 3.1, Georgia Water Environment Federation: Capacity, Management, Operations and Maintenance (CMOM) Consent Agreement Guidance

END

COLLECTION SYSTEM OF THE YEAR
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Revised 07/22/2008

TABLE 3.1
Pump Station Performance Measures for Purposes of Compliance (“highly efficient operation of lift stations”)

Measure	Indicator	Data Needed	How Used
1. Pump station overall CMOM effectiveness	Number of overflows per pump station (Number of pump station overflows / Number of pump stations)	Number of pump station related overflows Number of pump stations	Determine overall effectiveness of the utility’s pump station CMOM program
2. Individual pump station maintenance reliability	Number of maintenance-related backups or overflows at each pump station (Number of events at pump station “X”)	Pump station identifier Number of maintenance backups Number of maintenance overflows	Determine effectiveness of utility’s pump station CMOM program at each pump station
3. Pump station power source reliability	Number of power failure related overflows per pump station (Number of pump station power related overflows / Number of pump station)	Number of power loss related pump station overflows Number of pump stations	Determine overall effectiveness of the utility’s pump station power reliability program [protection, duplicate source, stand-by, portable]
4. Individual pump station power source reliability	Number of power failure related backups or overflows at each pump station (Number of events at pump station “X”)	Pump station identifier Number of power failure backups Number of power failure overflows	Determine effectiveness of the utility’s pump station power reliability program [protection, duplicate source, stand-by, portable] at each pump station

Note 1: Measures 1 and 3 are used to normalize results so that compliance perspective is not skewed by the number of pump stations the utility has in its system. Measures 2 and 4 are used to identify pump stations that need to be prioritized for improvement.

Note 2: If the Utility participates in the CMOM Consent Agreement, it is recommended that the Utility keep data on their pump stations. Performance measures should be submitted with their Annual reports (see Report formats provided in Appendix F) along with an explanation of the data and comparison to past performance data. The discussion should propose a path forward, if the data indicates that the system’s performance has not improved from previous years. In addition, the system owner should maintain a complete record for the past 5 years. Performance data will assist GA EPD in establishing target performance criterion for extending Consent Agreement coverage to the Utility.