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## APPENDIX A

### COMPILATION OF EXAMPLE CSO PERMIT CONDITIONS

*This appendix is a compilation of all of the example CSO permit conditions contained in the exhibits in Chapters 3 and 4 of this manual. It is intended for reference purposes only, and does not necessarily represent the Agency's recommendations for CSO permit language in all cases. Permit conditions should be developed based on careful consideration of site-specific factors.*

#### PHASE I PERMIT

The permittee is authorized to discharge from the CSO outfalls listed below and additional CSO outfalls within the boundaries of the permittee's jurisdiction identified after the effective date of the permit. The permittee shall ensure that all CSOs from the CSS comply with the requirements of **[insert appropriate permit sections containing CSO requirements]** and other pertinent portions of this permit.

<u>Outfall Number</u>	<u>Overflow Outfall Location</u>	<u>Receiving Water Body</u>
<b>[insert number]</b>	<b>[insert latitude/longitude (street address optional)]</b>	<b>[insert name of receiving water body]</b>

#### I. Effluent Limits

##### A. Technology-based requirements for CSOs

The permittee shall comply with the following technology-based requirements:

1. The permittee shall implement proper operation and maintenance programs for the sewer system and all CSO outfalls to reduce the magnitude, frequency, and duration of CSOs. The program shall consider regular sewer inspections; sewer, catch basin, and regulator cleaning; equipment and sewer collection system repair or replacement, where necessary; and disconnection of illegal connections.
2. The permittee shall implement procedures that will maximize use of the collection system for wastewater storage that can be accommodated by the storage capacity of the collection system in order to reduce the magnitude, frequency, and duration of CSOs.
3. The permittee shall review and modify, as appropriate, its existing pretreatment program to minimize CSO impacts from the discharges from nondomestic users.

**[Alternative language for a permittee without an approved pretreatment program:]** The permittee shall evaluate the CSO impacts from nondomestic users and take appropriate steps to minimize such impacts.

4. The permittee shall operate the POTW treatment plant at maximum treatable flow during all wet weather flow conditions to reduce the magnitude, frequency, and duration of CSOs. The permittee shall deliver all flows to the treatment plant within the constraints of the treatment capacity of the POTW.
5. Dry weather overflows from CSO outfalls are prohibited. Each dry weather overflow must be reported to the permitting authority as soon as the permittee becomes aware of the overflow. When the permittee detects a dry weather overflow, the permittee shall begin corrective action immediately. The permittee shall inspect the dry weather overflow each subsequent day until the overflow has been eliminated.
6. The permittee shall implement measures to control solid and floatable materials in CSOs.
7. The permittee shall implement a pollution prevention program focused on reducing the impact of CSOs on receiving waters.
8. The permittee shall implement a public notification process to inform citizens of when and where CSOs occur. The process must include (a) a mechanism to alert persons of the occurrence of CSOs and (b) a system to determine the nature and duration of conditions that are potentially harmful for users of receiving waters due to CSOs.
9. The permittee shall monitor CSO outfalls to characterize CSO impacts and the efficacy of CSO controls. This shall include collection of data that will be used to document the existing baseline conditions, evaluate the efficacy of the technology-based controls, and determine the baseline conditions upon which the long-term control plan will be based. These data shall include:
  - a. Characteristics of combined sewer system including the population served by the combined portion of the system and locations of all CSO outfalls in the CSS
  - b. Total number of CSO events and the frequency and duration of CSOs for a representative number of events
  - c. Locations and designated uses of receiving water bodies
  - d. Water quality data for receiving water bodies
  - e. Water quality impacts directly related to CSOs (e.g., beach closing, floatables wash-up episodes, fish kills).

**B. Water quality-based requirements for CSOs**

The permittee shall not discharge any pollutant at a level that causes or contributes to an in-stream excursion above numeric or narrative criteria developed and adopted as part of [insert State name] water quality standards.

*Site-Specific Language:*

1. *The permittee shall not discharge any floating debris, oil, grease, scum, foam, or other objectionable materials that may result in amounts sufficient to be unsightly or otherwise objectionable or to constitute a nuisance under State law.*
2. *The permittee shall not discharge settleable solids, sediments, sludge deposits, or suspended particles that may coat or cover submerged surfaces.*
3. *The permittee shall not discharge any pollutants that may impart undesirable odors, tastes, or colors to the receiving water body or to the aquatic life found therein, may endanger public health, or may result in the dominance of nuisance species.*

**II. Reporting Requirements****A. Reporting implementation of nine minimum controls**

The permittee shall submit documentation that demonstrates implementation of each of the nine minimum controls that includes the elements below. The permittee shall submit this documentation to the permitting authority on or before [insert due date].

[insert appropriate list of documentation items]

**III. Long-Term Control Plan**

The permittee shall develop a long-term control plan that will include the elements contained in Sections III.A through III.D below and shall submit the plan elements in accordance with the schedule contained in Section III.E:

**A. Public Participation**

The permittee shall prepare and implement a public participation plan that outlines how the permittee will ensure participation of the public throughout the long-term control plan development process.

## B. CSS Characterization

The permittee shall develop and implement a plan that will result in a comprehensive characterization of the CSS developed through records review, monitoring, modeling, and other means as appropriate to establish the existing baseline conditions, evaluate the efficacy of the CSO technology-based controls, and determine the baseline conditions upon which the long-term control plan will be based. The characterization shall adequately address the response of the CSS to various precipitation events; identify the number, location, frequency, and characteristics of CSOs; and identify water quality impacts that result from CSOs.

To complete the characterization, the permittee shall employ the following methods:

1. Rainfall Records Review. The permittee shall examine the complete rainfall records for the geographic areas of the CSS and evaluate the flow variations in the receiving water body to correlate between the CSOs and receiving water conditions.
2. CSS Records Review. The permittee shall review and evaluate all available CSS records and undertake field inspections and other necessary activities to identify the number, location, and frequency of CSOs and their location relative to sensitive areas (as identified in III.B.4) and to pollution sources, such as significant industrial users, in the collection system.
3. CSO and Water Quality Monitoring. The permittee shall develop and submit a monitoring program that measures the frequency, duration, flow rate, volume, and pollutant concentration of CSOs and assesses the impact of the CSOs on receiving waters. Monitoring shall be performed at a representative number of CSOs for a representative number of events. The monitoring program shall include CSOs and ambient receiving water body monitoring and, where appropriate, other monitoring protocols, such as biological assessments, toxicity testing, and sediment sampling.
4. Identification of Sensitive Areas. The permittee shall identify sensitive areas to which its CSOs occur. These areas shall include Outstanding National Resource Waters, National Marine Sanctuaries, waters with threatened or endangered species and their designated critical habitat, waters with primary contact recreation, public drinking water intakes or their designated protection areas, shellfish beds, and any other areas identified by the permittee or permitting authority, in coordination with appropriate State or Federal agencies.
5. CSS and Receiving Water Modeling. The permittee may employ models, which include appropriate calibration and verification with field measurements, to aid in the characterization. If models are used, they shall be identified by the permittee along with an explanation of why the model was selected and used in the characterization.

## C. CSO Control Alternatives

1. Development of CSO Control Alternatives. The permittee shall develop a range of CSO control alternatives that would be necessary to achieve **[insert appropriate range of levels of control (e.g., zero overflow events per year, an average of 1 to 3, 4 to 7, and 8 to 12 overflow events per year)]**. The permittee shall consider expansion of the POTW treatment plant secondary and primary capacity as an alternative.  
Alternatives presented must give the highest priority to controlling CSOs to the sensitive areas identified in III.B.4 above. For such areas, the alternatives included in the plan must (1) prohibit new or significantly increased CSOs, (2) eliminate or relocate CSOs from such areas wherever physically possible and economically achievable, except where elimination or relocation would provide less environmental protection than additional treatment, (3) where elimination or relocation is not physically possible or economically achievable or would provide less environmental protection than additional treatment, provide the level of treatment for remaining CSOs deemed necessary to meet water quality standards for full protection of existing and designated uses.
2. Evaluation of CSO Control Alternatives. The permittee shall evaluate each of the alternatives developed in accordance with III.C.1 to select the CSO controls that will ensure compliance with CWA requirements.
3. Cost/Performance Considerations. The permittee shall develop and submit cost/performance curves that demonstrate the relationship among the set of CSO control alternatives that correspond to the ranges identified in III.C.1 above.

## D. Selected CSO Controls

Once the permittee has selected the CSO controls in consultation with the permitting authority, the permittee shall submit the following:

1. Implementation Schedule. The permittee shall submit a construction schedule for the selected CSO controls as part of the implementation schedule. Such schedules may be phased based on the relative importance of the adverse impacts on water quality standards and on the permittee's financial capability.
2. Operational Plan. The permittee shall submit a revised operation and maintenance plan that addresses implementation of the selected CSO controls. The revised operation and maintenance plan shall maximize the removal of pollutants during and after each precipitation event using all available facilities within the collection and treatment system.
3. Post-Construction Compliance Monitoring Program. The permittee shall develop and submit a post-construction monitoring program that (a) is adequate to ascertain the



effectiveness of the CSO controls and (b) can be used to verify attainment of water quality standards. The program shall include a plan that details the monitoring protocols to be followed, including CSO and ambient monitoring and, where appropriate, other monitoring protocols, such as biological assessments, whole effluent toxicity testing, and sediment sampling.

#### E. Schedule and Interim Deliverables

The following reports shall be developed in accordance with the requirements specified in Sections III.A through III.D and submitted to the permitting authority by the dates specified below:

1. Public Participation Plan, as required in Section III.A, shall be submitted on or before [insert due date].
2. CSS Characterization Monitoring and Modeling Plan, as required in Section III.B, shall be submitted on or before [insert due date].
3. CSS Characterization Monitoring and Modeling Results, including identification of sensitive areas, as required in Section III.B, shall be submitted on or before [insert due date].
4. CSO Control Alternatives Identification, as required in Section III.C.1, shall be submitted on or before [insert due date].
5. CSO Controls Evaluation and Cost Performance Curves for the selected CSO controls, as required in Sections III.C.2 and 3, shall be submitted on or before [insert due date].
6. Implementation Schedule, as required in Section III.D.1, including any supporting analyses, shall be submitted on or before [insert due date].
7. Operational Plan revised to reflect selected CSO controls, as required in Section III.D.2, shall be submitted on or before [insert due date].
8. Post-Construction Compliance Monitoring Plan, as required in Section III.D.3, shall be submitted on or before [insert due date].

#### IV. Special Conditions

This permit may be modified or revoked and reissued, as provided pursuant to 40 CFR 122.62 and 124.5, for the following reasons:

- To include new or revised conditions developed to comply with any State or Federal law or regulation that addresses CSOs that is adopted or promulgated subsequent to the effective date of this permit
- To include new or revised conditions if new information, not available at the time of permit issuance, indicates that CSO controls imposed under the permit have failed to ensure the attainment of State water quality standards
- To include new or revised conditions based on new information generated from the long-term control plan.

In addition, this permit may be modified or revoked and reissued for any reason specified in 40 CFR 122.62.

## PHASE II PERMIT

The permittee is authorized to discharge from the outfalls listed below in accordance with the requirements of [insert appropriate permit sections containing CSO requirements] and other pertinent provisions of this permit.

<u>Overflow Number</u>	<u>Overflow Outfall Location</u>	<u>Receiving Water Body</u>
[insert number]	[insert latitude/longitude (street address optional)]	[insert receiving water body]

### I. Effluent Limits

#### A. Technology-based requirements for CSOs

The permittee shall comply with the following technology-based requirements:

1. Conduct proper operations and regular maintenance programs. The permittee shall implement the operation and maintenance plan for the CSS that will include the elements listed below. The permittee also shall update the plan to incorporate any changes to the system and shall operate and maintain the system according to the plan. The permittee shall keep records to document the implementation of the plan.

*Site-Specific Language:*

Designation of a Manager for Combined Sewer System. The permittee shall designate a person to be responsible for the wastewater collection system and serve as the contact person regarding the CSS.

Inspection and Maintenance of CSS. The permittee shall inspect and maintain all CSO structures, regulators, pumping stations, and tidegates to ensure that they are in good working condition and adjusted to minimize CSOs and prevent tidal inflow. The permittee shall inspect, or cause to be inspected, each CSO outfall at an appropriate frequency to ensure no dry weather overflows are occurring. The inspection shall include, but is not limited to, entering the regulator structure if accessible, determining the extent of debris and grit buildup, and removing any debris that may constrict flow, cause blockage, or result in a dry weather overflow. The permittee shall record in a maintenance log book the results of the inspections. For CSO outfalls that are inaccessible, the permittee may perform a visual check of the overflow pipe to determine whether or not the CSO is occurring during dry weather flow conditions.

Provision for Trained Staff. The permittee shall ensure the availability of trained staff to carry out the operation, maintenance, repair, and testing functions required to ensure compliance with the terms and conditions of this permit. Each staff member shall receive appropriate training.



Allocation of Funds for O&M. The permittee shall allocate adequate funds specifically for operation and maintenance activities. The permittee shall submit a certification of assurance from the appropriate local government entities that the necessary funds, equipment, and personnel have been or will be committed to carry out the O&M plan.

2. Maximize use of the collection system for storage. The permittee shall maximize the in-line storage capacity. The permittee shall keep records to document implementation.

*Site-Specific Language:*

*The permittee shall 1) maintain all dams or diversion structures at their current heights (as of the date of permit issuance) or greater, 2) minimize discharges from the CSO outfall locations designated as [insert appropriate designation] until the specified capacity of the [named] Combined Sewer Retention Basin is used to store the overflow for later treatment at the plant, and 3) keep records of the flow entering and leaving the [named] Combined Sewer Retention Basin*

3. Review and modify pretreatment program. The permittee shall continue to implement selected CSO controls to minimize the impact of nondomestic discharges on CSOs. The permittee shall re-evaluate at an appropriate frequency whether additional modifications to its pretreatment program are feasible or of practical value. The permittee shall keep records to document this evaluation and implementation of the selected CSO controls to minimize CSO impacts resulting from nondomestic discharges.

*Site-Specific Language:*

*The permittee shall require significant industrial users (SIUs) discharging to the CSS to minimize batch discharges during wet weather conditions*

**[Alternative language for a permittee without an approved pretreatment program:]** Actions to minimize impact of nondomestic discharges on CSOs. The permittee shall continue to implement selected CSO controls to minimize CSO impacts resulting from nondomestic discharges.

4. Maximize flow to POTW treatment plant. The permittee shall operate the POTW treatment plant at maximum treatable flow during wet weather flow conditions/events and deliver all flows to the treatment plant within the constraints of the capacity of the treatment plant. The permittee shall keep records to document these actions.
5. Prohibit combined sewer overflows during dry weather. Dry weather overflows from CSO outfalls are prohibited. All dry weather overflows must be reported to the permitting authority within [insert appropriate number of days] days of when the

permittee becomes aware of a dry weather overflow. When the permittee detects a dry weather overflow, the permittee shall begin corrective action immediately. The permittee shall inspect the dry weather overflow each subsequent day until the overflow has been eliminated. The permittee shall record in the inspection log book dry weather overflows, as well as the cause, corrective measures taken, and the dates of beginning and cessation of overflow.

6. Control solid and floatable materials in CSOs. The permittee shall implement measures to control solid and floatable materials in CSOs.

*Site-Specific Language:*

*These control measures shall include:*

- *Measures to ensure that baffles are in place to control overflows from the diversion structures or that other means are used to reduce the volume of floatables.*
- *Inspection and maintenance of the sewer system so that solid or floatable materials greater than [insert size] are not present in CSOs.*

7. Develop and implement pollution prevention program. The permittee shall implement a pollution prevention program focused on reducing the impact of CSOs on receiving waters. The permittee shall keep records to document pollution prevention implementation activities.

*Site-Specific Language:*

*This program shall include:*

- *Street sweeping and catch basin modification or cleaning at an appropriate frequency to prevent large accumulations of pollutants and debris*
- *A public education program that informs the public of the permittee's local laws that prohibit littering and the use of phosphate-containing detergents and pesticides.*
- *An oil recycling program.*

8. Notify the public of CSOs. The permittee shall continue to implement a public notification plan to inform citizens of when and where CSOs occur. The process must include:

- a. A mechanism to alert persons using all receiving water bodies affected by CSOs
- b. A system to determine the nature and duration of conditions that are potentially harmful to users of these receiving water bodies due to CSOs.

The permittee shall keep records documenting public notification.

*Site-Specific Language:*

*Within 3 months of the effective date of this permit, the permittee shall install and maintain identification signs at all CSO outfalls owned and operated by the permittee. The permittee must place the signs at or near the CSO outfalls and ensure that the signs are easily readable by the public.*

9. Monitor to effectively characterize CSO impacts and the efficacy of CSO controls.  
The permittee shall regularly monitor CSO outfalls to effectively characterize CSO impacts and the efficacy of CSO controls.

B. Water quality-based requirements for CSOs

The permittee shall not discharge any pollutant at a level that causes or contributes to an in-stream excursion above numeric or narrative criteria adopted as part of **[insert State name]** water quality standards.

The permittee shall comply with the following performance standards. These standards shall apply during **[insert average design conditions upon which controls are based]**.

1. **[The permit writer should select the appropriate standard below.]**

The permittee shall discharge no more than an average of **[insert appropriate number: 4, 5, or 6]** overflow events per year not receiving the treatment specified below.

**[or]**

The permittee shall eliminate or capture for treatment, or storage and subsequent treatment, at least 85 percent of the system-wide combined sewage volume collected in the combined sewer system during precipitation events under design conditions. Captured combined sewage shall receive the treatment specified below.

**[or]**

The permittee shall eliminate or remove the following mass of pollutants from the combined sewage volume collected in the combined sewer system during precipitation events under design conditions:

**[insert x]** pounds of **[insert pollutant]**

**[insert y]** pounds of **[insert pollutant]**

**[Insert the following language only if the first or second alternative is chosen above.]**

Any combined sewage captured shall receive a minimum of the following treatment:

- Primary clarification or equivalent.
- Solids and floatables disposal.
- **[Insert appropriate disinfection requirements as necessary to meet State WQS.]**
- Disinfection. Fecal coliform counts shall be maintained below **[insert applicable level]**.

**[Insert appropriate dechlorination requirements if applicable based on State WQS.]**

## II. Long-Term Control Plan

The permittee shall implement and effectively operate and maintain the CSO controls identified in the long-term control plan. The implementation schedule for these controls shall be as follows:

<u>Activity</u>	<u>Completion Date</u>
<b>[insert name of activity]</b>	<b>[insert date]</b>

### *Site-Specific Language:*

1. *Retention basin*
  - *Complete design of [named] retention basin.* **[insert date]**
  - *Submit construction drawings for [named] retention basin* **[insert date]**
  - *Initiate construction of [named] retention basin.* **[insert date]**
  - *Complete construction of [named] retention basin.* **[insert date]**
2. *[Named street] sewer separation*
  - *Complete design.* **[insert date]**
  - *Solicit bids.* **[insert date]**
  - *Award contracts.* **[insert date]**

**NOTE: A compliance schedule exceeding the term of the permit may only be included in the permit if explicitly authorized in the applicable State WQS.**

### III. Monitoring Requirements

#### Site-Specific Language:

The permittee shall monitor CSOs and report results to the permitting authority in accordance with the following:

Characteristic			Monitoring Requirements	
Reporting Code	Units	Parameter*	Measurement Frequency	Sample Type
		Ammonia		Grab
		Ammonia		Composite
		BOD <sub>5</sub>		Grab
		BOD <sub>5</sub>		Composite
		Phosphorus		Composite
		Total Suspended Solids		Grab
		Total Suspended Solids		Composite
		Fecal Coliform Bacteria		Grab

1. The grab sample shall be collected within [insert appropriate number] minutes of the discharge at the following CSO outfalls [insert appropriate identification]. The grab sample shall be collected [insert appropriate number] times per year.
2. The composite sample shall be collected from the start of the discharge until it stops, with the sample period not to exceed 24 hours at the following CSO outfalls [insert appropriate identification]. The composite sample shall be collected [insert appropriate number] times per year, [insert appropriate number] times during the period from May - October and [insert appropriate number] times during the period from November - April. The permittee shall submit the results no later than November 30th and May 31st, respectively.

\*Parameters listed in this exhibit are examples only. The list of parameters to monitor must be developed on a site-specific basis.

### IV. Reporting Requirements

Within 14 days of each completion date specified in [insert appropriate section] of this permit, the permittee shall submit a written progress report to the permitting authority stating whether or not the particular activity was completed. If the activity was not completed, the report shall also include (1) an explanation of the failure to accomplish the activity, (2) actions taken by the permittee to correct the situation, and (3) an estimate of when the activity will be completed.



## V. Special Conditions

### A. CSO-related bypass.

A CSO-related bypass of the secondary treatment portion of the POTW treatment plant is authorized when the flow rate to the POTW treatment plant as a result of a precipitation event exceeds **[insert flow rate in MGD]**. Bypasses that occur when the flow at the time of the bypass is under the specified flow rate are not authorized under this condition and are subject to the bypass provision at 40 CFR 122.41(m). In the event of a CSO-related bypass authorized under this condition, the permittee shall minimize the discharge of pollutants to the environment. At a minimum, CSO-related bypass flows must receive primary clarification, solids and floatables removal, and disinfection. The permittee shall report any substantial changes in the volume or character of pollutants being introduced into the POTW. Authorization of CSO-related bypasses under this provision may be modified or terminated when there is a substantial change in the volume or character of pollutants being introduced to the POTW. The permittee shall provide notice to the permitting authority of bypasses authorized under this provision with 24 hours of occurrence of the bypass.

### B. Sensitive area reassessment.

**[This permit condition is only appropriate for CSSs with CSOs to sensitive areas that have not been eliminated or relocated.]**

The permittee shall reassess the feasibility of eliminating or relocating CSO outfalls **[insert outfall identification numbers for CSOs to sensitive areas]** discharging to **[insert name of receiving water body or bodies corresponding to each outfall identified]**. The permittee shall consider new or improved techniques to eliminate or relocate overflows or changed circumstances that influence economic achievability. The permittee shall prepare and submit to the permitting authority a report that presents the results of this reassessment, including the permittee's recommendations regarding the elimination or relocation of these outfalls. The permittee shall submit such report no later than **[insert date]**.

### C. Reopener clause.

This permit may be modified or revoked and reissued, as provided pursuant to 40 CFR 122.62 and 124.5, for the following reasons:

- To include new or revised conditions developed to comply with any State or Federal law or regulation that addresses CSOs that is adopted or promulgated subsequent to the effective date of this permit
- To include new or revised conditions if new information, not available at the time of permit issuance, indicates that CSO controls imposed under the permit have failed to ensure the attainment of State WQSs



- To include new or revised conditions based on new information resulting from implementation of the long-term control plan.

In addition, this permit may be modified or revoked and reissued for any reason specified in 40 CFR 122.62.