

ES-301-4.07 Potable Water-Using Municipal Activities

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1) Activity Description:

Discharges of potable water are a type of industrial activity with short term infrequent discharges that with proper management are not expected to contain pollutants in concentrations that are toxic or in concentrations that would cause or contribute to a violation of a water quality standard. Discharges of potable water to State Waters may require a permit; however, the Colorado Department of Public Health and Environment (CDPHE) Water Quality Control Division (WQCD) has determined these types of discharges to be “low risk” discharges that may be addressed through policy rather than permit. In accordance with the Water Quality Control Division’s (WQCD) Low Risk Discharges policy WQP-27: Discharges Of Potable Water revised August 2009), DEN has developed this Best Management Practice (Environmental Guideline (EG)) to describe the procedures to be followed when discharging potable water to the ground surface, stormwater sewer system, or to surface waters on DEN property.

The types of activities conducted at DEN that may be allowed under this guidance include fire hose nozzle testing, water arches, testing of fire protection and life safety system, and other training or safety testing using only potable stored in containers that have only stored potable water. For example, water used for equipment testing that is stored in a tank that once held anything OTHER than potable water would not be an allowable discharge under this guidance and guideline. In addition, this guideline does not cover the commercial washing of buildings or other outdoor structures, washing of heat transfer equipment, deicing training activities (unless the water used is potable water from a potable water source stored only in potable water storage equipment), or the discharge of water generated during any other process.

2) Potential Environmental Risks

- A. The following environmental concerns are associated with these activities:
 - i) Sediment & erosion
 - ii) Total Residual Chlorine
 - iii) Discharging potable water to State Waters without a permit or not in compliance with WQCD’s Low Risk Discharges policy leading to a violation
 - iv) Land disposal of potable water without a permit or not in compliance with WQCD’s Low Risk Discharges policy

- B. Potential consequences from performing the activity incorrectly:
 - i) Property damage, personal injury or damage to the environment
 - ii) Possible regulatory non-compliance, Notices of Violation, and related [financial & non-financial] penalties

3) Critical Operating Requirements

- A. Prohibited Activities

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- i) The discharge of cleaning materials or chemicals, including dyes, is strictly prohibited, and should be sent to the sanitary sewer, with the permission of DEN Environmental Services, or otherwise collected and disposed of.
- ii) The discharge shall not cause erosion of the land surface.
- iii) Discharge of potable water from a non-potable water storage or distribution system.
- iv) Discharge of potable water used in an additional process such as washing, heat exchange, manufacturing, and hydrostatic testing of pipelines not associated with treated water distribution systems.
- v) The discharge shall not contain solid materials in concentrations that can settle to form bottom deposits detrimental to the beneficial uses of the state water or form floating debris, scum, or other surface materials sufficient to harm existing beneficial uses.
- vi) Discharges of potable water directly to a State surface water (any stream, creek, gully, whether dry or flowing), must not contain residual chlorine.
- vii) Discharges to the ground must not cause any toxicity to vegetation.

B. General Considerations

- i) Each operator and tenant using potable water in its activities is responsible for understanding the applicable regulations and managing their activities accordingly; this Environmental Guideline is meant as guidance only and does not supersede any regulations.
- ii) There is no discharge if the water is directed to an impervious surface and allowed to evaporate.
- iii) For discharges to land, route the discharge to landscaped areas and allow infiltration. Control the rate of potable water discharge to allow for effective infiltration and to control erosion.
- iv) For discharges to any drainage, utilize appropriate erosion BMPs or control the rate of the discharge to reduce sedimentation or erosion.
- v) For discharges to the MS4, select discharge locations upstream of pretreatment devices or water quality ponds if possible.
- vi) Discharges of potable water to the sanitary sewer are allowed with the approval of DEN Environmental Services.
- vii) The discharge must be diverted from building foundations or other areas that may be damaged from ground settling or swelling.
- viii) The discharge must be visibly clear and not contain floating or solid materials.
- ix) A visible sheen must not be evident in the discharge. When possible, an absorbent oil pad or boom or similar device should be used to eliminate oil from the discharge.
- x) If the discharge is directly to a State surface water (any stream, creek, gully, whether dry or flowing), it must not contain any residual chlorine. If the discharge is to a storm sewer, which has adequate travel time to allow for any chlorine to dissipate (generally ½ mile), dechlorination may not be necessary. If the discharge is to a ditch, chlorine content may be limited by the owner of the ditch. However, if the ditch returns flow to state water, it must not contain any residual chlorine, unless travel time will be sufficient for removal of the chlorine.

4) Planning Requirements

- A. Plan activities such that excessive volumes of potable water will not cause significant erosion and carry sediments in runoff.

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- B. Coordinate with DEN Environmental Services on the discharge locations to ensure that the assumptions about the infrastructure are correct.

5) Critical Tasks

- A. Notify Environmental Services before conducting activities involving the discharge of potable water.
- B. Notify Environmental Services if any significant erosion takes place during these activities. This is particularly important when stormwater structures are located in the immediate area.
- C. Ensure that ponding of the water does not occur as it can interfere with aircraft and equipment movement areas.

6) Emergency Response

- A. If a spill occurs, refer to Environmental Guideline ES-301-5.02 Spill Response.
 - i) Call DEN Communications Center immediately at 303-342-4200 for all spills.

7) Inspection and Maintenance Requirements

- A. Operator should visually inspect the area prior to and during water-generating activities to ensure BMP's are correctly installed and are functioning as required.
- B. Operator should visually inspect the area after water-generating activities to ensure that significant erosion damage has not occurred.
- C. Pretreatment devices and structural controls are to be inspected and maintained to ensure proper operation. Refer to ES-301-4.08.

8) Expected Records and Outputs

- A. None; there are no expected records for this activity.

9) References

- A. Phone Numbers
 - i) DEN Communications Center (for spill reporting) (303) 342-4200
 - ii) Craig Schillinger (DEN Environmental Services) (303) 342-2834
 - iii) Keith Pass (DEN Environmental Services) (303) 342-2689
- B. Guidance Materials (list is not limited to the following)
 - i) DEN Municipal Separate Storm Sewer System (MS4) Permit
 - ii) CDPHE WQCD WQP-27 "Low Risk Discharges" policy

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- iii) CDPHE Low Risk Discharge Guidance: Discharges of Potable Water (revised August 2009 or most current version)
 - iv) CDPHE Industrial Stormwater Permit # COS-000008
- C. Related Environmental Documents (list is not limited to the following)
- i) ES-301-5.02 Spill Response
 - ii) ES-301-2.07 Maintenance of Pretreatment Devices
 - iii) ES-301-4.08 Maintenance of Ponds and Channels
- D. Applicable Regulations (list is not limited to the following)
- i) 40 CFR 123 State Program Requirements
 - ii) 5 CCR 1002-61: Colorado Discharge Permit System Regulations
 - iii) 5 CCR 1002-65: Regulation Controlling Discharges to Storm Sewers
 - iv) Denver International Airport Rules and Regulations
 - v) 2006 International Fire Code (Section 913.5 Testing and maintenance *of fire pumps*)
 - vi) 2008 National Fire Protection Association (section 8.3.3 Annual Tests *of fire pumps*)
 - vii) 2008 Denver Building Code and Amendments
- E. Other Documents (list is not limited to the following)
- i) N/A

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