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Colorado Department of Public Health and Environment

December 13, 2011

RE: "Draft Guidance for Discharges from Fire Safety Maintenance Activities"

To Whom It May Concern:

The Water Quality Control Division (Division) drafted the attached Draft Guidance for Discharges from Fire Safety Maintenance Activities (draft Guidance). The draft Guidance was developed to provide clear written guidance in response to frequent inquiries from operators and local government entities regarding the existing regulatory requirements and disposal options for wastewater generated from Fire Safety Maintenance Activities. The Division published the draft Guidance and requested public comment from October 28, 2011 to November 28, 2011. The Division is in the process of reviewing and responding to the written comments that were received from various stakeholders. Based on the Division's evaluation of the comments, changes to the draft Guidance are expected to provide clarification regarding the intent of the guidance and the options for appropriate disposal. This Guidance does *not* establish any new requirements to obtain a permit for these discharges, it merely clarifies existing rules and regulations.

Many of the comments received by the Division identified a misunderstanding of the intent of the draft Guidance. The requirement discussed in the draft Guidance for obtaining and complying with a discharge permit for point source discharges to Waters of the State of Colorado are established in the Colorado Water Quality Control Act, as passed by the Colorado General Assembly. Neither the draft Guidance, nor the permits or Low Risk policy referenced in the draft Guidance, establish a new requirement to obtain a permit for these discharges. Therefore, at this time the Division anticipates that changes to the draft Guidance will be limited in scope to providing additional clarification on permitting options for discharges to surface waters or the ground, and options for disposal without a discharge (e.g., discharging to a sanitary sewer system with permission of the systems owner), or discharging in accordance with the Division's Low Risk policy.

Stakeholders are encouraged to refer to the Draft Guidance for Discharges from Fire Safety Maintenance Activities for guidance until revised guidance can be developed, or to contact Michelle DeLaria michelle.delaria@state.co.us (303.692.3615) or Nicole Rolfe Nicole.rolfe@state.co.us (303.692.3217) with questions regarding permitting requirements for discharges from fire safety maintenance activities. Note that the draft guidance DOES NOT apply when all water from Fire Safety Maintenance Activities will be discharged to a wastewater treatment facility (i.e. the sanitary sewer system). A discharge to a wastewater treatment facility requires authorization from the treatment facility operator.

Once complete, the Division's response to the public comments received and the final guidance document will be made available on the Division's website.

The Division received comments from the following individuals and organizations:

Comment Number	Name	Organization
1	D.J.Winder, M.D.	
2	Walt Sneddon	Salida School District R32-J
3	Dustin Chapman	
4	Peter Meyer	
5	Christopher A. Butler	Timberline Lodge

6	Trisha Kellogg	Sunshine Gardens
7	Mike Foutz	
8	Shane M. Haas	FCI Constructors, Inc.
9	Tyler Shaw, EIT, CET	FIRE DEFENSE INC
10	Steve Suzuki	Integrated Safety Services
11	Dave Perrin	ADVANTAGE INSPECTIONS
12	Jeremy Friis	
13	Kenneth E. Isman	National Fire Sprinkler Association (NFSA)
14	Marilyn Thorsen	Silver Peaks Condominium Assoc.
15	Kelley and Sam Martinez	
16	Jane Chess	Florence Care Home, Inc.
17	Roger J. Wallace	Brick Wall Fire Sprinkler, LLC
18	Jim Dederick	Douglas County Engineering
19	Jeremy R. Klassen	
20	Jerry Stricker	Golden Fire Department
21	Susanne Cordery-Cotter, P.E.	Colorado State University
22	Karola J. Hanks	DFRA Fire Prevention Bureau
23	David Berry	
24	Andrew Dieter, CWP	Andrew's Backflow Testing, LLC
25	Roland Huggins, PE	American Fire Sprinkler Association
26	Rich Gessner	Business Agent Local Union #669
27	Tim Trostel	American Sprinkler Inc.
28	Scott & Agatha Hedlund	
29	Kimberly P. Henry, MS, CHMM	Jefferson County Public Schools R-1
30	Diana Scott	Eagle County Schools
31	Gregory Hronich	St Vrain Valley Schools
32	Lance Cochran	Sentinel Fire Protection, Inc.
33	Doyle Hebing	Sprinklers R Us, Inc.
34	Kent Stringer	Colorado Fire Sprinkler
35	Colin Stringer	Colorado Fire Sprinkler
36	David Lowrey	Fire Marshal's Association of Colorado
37	John Hulett	Western States Fire Protection Co.
38	Bill Hayashi	Williamson & Hayashi, LLC
39	Michael J. Ryan	Colorado Alarm, LLC
40	James McGowan	
41	Rix Rixford	Western Slope Fire & Safety, Inc.
42	Ireke Cooper	Cy Cooper Company
43	Jason Ryan	Colorado Alarm, LLC
44	Marc Sampson	Longmont Fire Department
45	Sandra McDonald	Colorado Stormwater Council
46	Jackie D. Pike	Red, White & Blue Fire District
47	Wayne Wagler	
48	Cy Cooper	Cy Cooper Company
49	Sam Crispin	Colorado School of Mines
50	Mike Eggleston	H2O Fire Protection, Inc.
51	Marla Wilcox	City of Englewood
52	Marc Sampson	Longmont Fire Department
53	Kara Gerczynski	Elizabeth Fire Protection District
54	Dennis Soles	East Grand Fire Protection District #4
55	Chantell R. Johnson	Tri-State Generation and Transmission Association, Inc.
56	Ginny Johnson	Colorado Springs Utilities
57	Ron Biggers	Glenwood Springs Fire Department

Enclosure: Draft Guidance for Discharges from Fire Safety Maintenance Activities

10/2011- DRAFT

GUIDANCE FOR DISCHARGES FROM FIRE SAFETY MAINTENANCE ACTIVITIES

Contact information

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A. INTRODUCTION

The guidance in this document on options for discharging water applies to discharges to Waters of the State. This includes discharges to the ground, to surface water (e.g., streams, lakes, wetlands, ditches), to storm sewers, or to any other conveyance that may eventually discharge into a surface water or to the ground. **The guidance in this document is not applicable when all water will be discharged to a wastewater treatment facility (i.e., into the sanitary sewer system). A discharge to a wastewater treatment facility requires authorization from the facility operator.**

There are standard maintenance activities associated with fire safety that may be a source of stormwater pollution or result in a point source discharge. The following fire-related activities will be covered in this fact sheet: Fire Hydrant Flushing, Fire Pump Test, and Fire Suppression System Discharges which includes the Inspector Test and Fire Suppression System Leak scenarios.

B. Terms Used

1. **Emergency Firefighting:** Emergency Firefighting Activities are different than Fire Safety Maintenance Activities. Emergency Firefighting Activities are limited to those activities directly related to responding to an emergency fire, and does not include planned burns and training activities. Discharges associated with Emergency Firefighting Activities are addressed as an authorized discharge in CDPS discharge permits for Municipal Separate Storm Sewer Systems and in general permits for stormwater discharges.

2. **Potable Water:** Potable water is water from a potable water distribution system, tank or storage that has been maintained for potable water distribution use. Water from fire suppression systems is not potable water. Although fire suppression systems are typically connected to potable water distribution systems, they are not "maintained for potable water distribution use." The backflow preventer valve will be used as a reference point to determine if the water being discharged is considered potable water or not. Specifically, the fire hydrant and booster pump are typically on the potable water side of the backflow preventer valve and the fire suppression system is after the backflow preventer valve.

C. Activity Specific Guidance

1. **Fire Hydrant Flushing:** Fire hydrants are typically connected directly to a potable water distribution system and therefore the water discharged from this type of hydrant meets the definition of potable water. Discharges from flushing this type of fire hydrant would fall under the Low Risk Discharge Guidance: Discharges of Potable Water: http://www.cdphe.state.co.us/wq/PermitsUnit/POLICYGUIDANCEFACTSHEETS/policyandguidance/LowRiskguidancepotable%20water.pdf
   A discharge of potable water from fire hydrant flushing that is in accordance with the provisions of the Low Risk Guidance may occur without obtaining a discharge permit from the Division. The Division will not pursue permitting or enforcement for such a discharge occurring without a permit as outlined in the Low Risk Guidance. However, this test typically discharges thousands of gallons of water and BMPs will likely be needed to reduce associated pollutants such as sediment from erosion that may be caused by the flushing activity, in accordance with the Low Risk Guidance. Refer to this guidance and use BMPs as needed. If the source water for the fire hydrants is not a potable water source, such as ground water or reclaimed water, then a Hydrostatic

Testing of Pipelines, Tanks, and Similar Vessels permit (Hydrostatic discharge permit) is required to discharge to a Water of the State.

2. **Fire Pump Test:** This annual test is required when a booster pump is used to provide the pressure needed to operate the fire suppression system. Typically the source water for the test is the potable water supply to the building with a tap directly off the potable water distribution system to the booster pump with a backflow preventer, and the water discharged from such a tap meets the definition of potable water. A fire pump test for such a system does not involve or include the fire suppression system. When a potable water supply is the source water for the Fire Pump Test, no discharge permit is necessary. Discharges from a test with this kind of setup would fall under the Low Risk Discharge Guidance: Discharges of Potable Water: http://www.cdphe.state.co.us/wq/PermitsUnit/POLICYGUIDANCEFACTSHEETS/policyandguidance/LowRiskguidancepotable%20water.pdf
   A discharge of potable water from a fire pump test that is in accordance with the provisions of the Low Risk Guidance may occur without obtaining a discharge permit from the Division. The Division will not pursue permitting or enforcement for such a discharge occurring without a permit as outlined in the Low Risk Guidance. This test may take 20 minutes and often involves 1500 gpm pumps. Therefore it is possible that this annual test will discharge 20-30 thousand of gallons of water. BMPs will likely be needed to reduce erosion that may be caused by the flushing activity, in accordance with the Low Risk Guidance. Refer to this guidance and use BMPs as needed. If the source water for the fire hydrants is not a potable water source, such as ground water or reclaimed water, then a Hydrostatic discharge permit is required to discharge the water to a Water of the State.

3. **Fire Suppression System Discharges:** While the source water for Fire Suppression Systems is typically potable water, a fire suppression system is not maintained as a potable water distribution system and the character of the water is different from the water in a hydrant. For example, some fire suppression system water has been in the system for decades. When it is discharged, it may be black and have a strong iron odor indicating the presence of potential pollutants. Additionally, this water may have Microbial Induced Corrosion (MIC), or biocides injected to reduce microbial corrosion or "pipe shield", which is a pipe coating to reduce MIC. The character of the discharged water is variable and does not fit under the Division Low Risk Discharge Guidance. Discharges to the ground, surface waters, or storm sewers or other conveyance to surface waters from Fire Suppression Systems require a Hydrostatic discharge permit. An application for coverage under this permit must be provided to the Division at least 30-days prior to the discharge commencing. The application is available at: http://www.cdphe.state.co.us/wq/PermitsUnit/FORMSandApplications/APPLICATIONS/HydrostaticFORM.pdf
   The two main activities that result in discharges from the Fire Suppression Systems are a monthly "Inspector Test" and a leak in the Fire Suppression System.

   a. Inspector Test - The inspector test involves opening the valve to confirm that the alarm sounds within 35-45 seconds of the valve being opened. Approximately 30-50 gallons is released during this test. This water cannot be discharged without a permit. Monitoring requirements and effluent limits will be included in the Hydrostatic discharge permit certification to address all potential contaminants, such as iron. If there are additives in the system, such as microbial inhibitors or glycol, the application for permit coverage will have to include MSDS's for all additives, and monitoring data for the water may be required. Additional monitoring and effluent limits will be included in the Hydrostatic discharge permit certification to address any additives. Capturing the water and providing active treatment (e.g., chemical treatment and filtering) may be needed to meet the effluent limits, especially if additives are present. In large systems, such as shopping malls, there may be different fire suppression systems zones, with vastly different water character making it expensive to test the water and characterize it for discharge permitting. Because of the low volume of discharge water associated with this test, it may be preferable to collect all water and either request authorization from the wastewater treatment facility operator to discharge to sanitary sewer, or to inject it back into the Fire Suppression System.

   b. Fire Suppression System Leak - A leak in the fire suppression system typically requires that the fire suppression system be drained as rapidly as possible to avoid damage to the interior of a building. This process could result in the discharge of 3,000 - 4,000 gallons and may contain additives or other contaminants inherent with the pipe, as discussed above for the Inspector Test. While a leak in the fire suppression system or an accidental discharge may constitute an urgent condition, it does not fit under the exemption allowed for emergency fire fighting activities and a permit would be needed for any discharge of the resulting water to a Water of the State. An unpermitted discharge is a violation of State statute and regulations. If a discharge does occur, it must be reported to the spill line and the Division will review and may pursue enforcement options concerning the violation. For additional information on reporting unpermitted discharges, please see "Guidance for Reporting Spills under the Colorado Water Quality Control Act and Colorado Discharge Permits" (http://www.cdphe.state.co.us/wq/WhatsNew/spills.html). The responders to a fire suppression system leak scenario may want to explore the possibility of responding to the scene with a storage tank that can receive the fire suppression system water.