



# FACT SHEET

NPDES Permit Number:	IDS-027561
Date:	October 28, 2011
Public Comment Period Expiration Date:	January 30, 2012
Technical Contact:	Misha Vakoc (206) 553-6650 or (800) 424-4372 vakoc.misha@epa.gov

## **The U.S. Environmental Protection Agency Region 10 (EPA) Proposes to Reissue a National Pollutant Discharge Elimination System (NPDES) Permit for Storm Water Discharges To**

**Ada County Highway District,  
Boise State University,  
City of Boise,  
City of Garden City,  
Ada County Drainage District #3,  
and the Idaho Transportation Department District #3.**

EPA proposes to reissue a NPDES permit for storm water discharges from all municipal separate storm sewer system (MS4) outfalls owned or operated by Ada County Highway District (ACHD), Ada County Drainage District #3 (DD3), Boise State University (BSU), Boise City, Garden City, and the Idaho Transportation Department District #3 (ITD3). Permit requirements are based on Section 402(p) of the Clean Water Act (CWA), 33 U.S.C. § 1342(p), and EPA regulations for permitting municipal storm water discharges (40 CFR §§ 122.26, and 122.30-35, 55 Federal Register 47990 [Nov. 16, 1990] and 64 FR 68722 [Dec. 8, 1999], respectively).

The proposed NPDES permit establishes conditions, prohibitions and management practices for discharges of storm water from the MS4s owned or operated by the entities listed above. These entities are referred to collectively in this document as “the permittees.” The permit requires the continued implementation of a cooperative jurisdiction-wide municipal storm water management program (SWMP), and outlines the actions and activities to be used by all permittees to control pollutants in urban storm water discharges to the maximum extent practicable (MEP). Monitoring of certain storm water discharges is required to assess the effectiveness of best management practices (BMPs) and to estimate pollutant loading to the Boise River and its tributaries. Annual reporting is required to reflect the collective status of the SWMP implementation.

This fact sheet includes information on EPA's request to the State of Idaho for certification of the permit; public comment, public hearing and appeal procedures, and a description of the permit requirements, schedules of compliance, and other conditions.

### **The State of Idaho Certification**

EPA intends to request that the Idaho Department of Environmental Quality (IDEQ) consider certifying the NPDES permit pursuant to Section 401 of the Clean Water Act, 33 U.S.C. §1341. EPA may not issue the final NPDES permit until the state has granted, denied or waived certification. IDEQ has reviewed preliminary drafts of the permit. EPA will request certification of the permit upon completion of the public comment period. See Appendix B of this document.

### **Public Comment**

EPA is requesting comments on all aspects of the permit; topics about which EPA is particularly interested in receiving public input are identified in this document using ***bold italics***. Persons wishing to comment on the permit may do so in writing to EPA Region 10, Office of Water and Watersheds OWW-130, 1200 Sixth Avenue, Suite 900, Seattle, WA 98101, or via email to [yakoc.misha@epa.gov](mailto:yakoc.misha@epa.gov), no later than January 30, 2012. All comments must include the name, address and telephone number of the commenter and a concise statement of the exact basis of any comment and the relevant facts upon which it is based.

### **Opportunity for Public Hearing**

Persons wishing to request that a public hearing be held may do so in writing to the address indicated above no later than November 30, 2011. A request for a public hearing must state the nature of the issues to be raised, as well as the requester's name, address and telephone number.

After the public comment period expires and all significant comments have been considered, EPA's regional Director of the Office of Water and Watersheds will request certification of the permit from the Idaho Department of Environmental Quality and subsequently make a final decision regarding permit issuance. If no comments requesting a change in the proposed permit are received, the tentative conditions in the proposed permit become final, and upon receiving certification of the permit from IDEQ, the permit will become effective upon issuance. If comments are submitted, EPA will prepare a response to comments, and, if necessary, will make changes to the proposed permit. After making any necessary changes, and obtaining certification from IDEQ, EPA will issue the permit with a response to comments unless issuance of a new proposed permit is warranted pursuant to 40 CFR § 122.14. The permit will become effective no earlier than 33 days after the issuance date, unless the permit is appealed to the Environmental Appeals Board within 30 days pursuant to 40 CFR § 122.19.

**Documents Are Available for Review**

The draft NPDES permit and fact sheet can be reviewed or obtained by visiting or contacting the EPA Region 10 Office in Seattle at 1200 Sixth Avenue, Suite 900, OWW-130, Seattle, Washington 98101.

The documents are also available for review at EPA's Idaho Operations Office at 1435 North Orchard St, Boise, ID 83706.

The documents can be downloaded from EPA's internet website at <http://yosemite.epa.gov/r10/WATER.NSF/NPDES+Permits/DraftPermitsID>, or requested by e-mail from [washington.audrey@epa.gov](mailto:washington.audrey@epa.gov) or [vakoc.misha@epa.gov](mailto:vakoc.misha@epa.gov)

**Disability Reasonable Accommodation Notice**

For technical questions regarding the permit or fact sheet, contact Misha Vakoc at the phone number or e-mail address at the beginning of this fact sheet. Those with impaired hearing or speech may contact a TDD operator at 1-800-833-6384 (ask to be connected to Misha Vakoc at the above phone number). Additional services can be made available to a person with disabilities by contacting Misha Vakoc.

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## 1. Introduction

Storm water is the surface runoff that results from rain and snow melt. Urban development alters the landscapes' natural infiltration, and human activity generates pollutants that can accumulate on paved or impervious surfaces. Uncontrolled pollutants and flow associated with storm water discharges from urban areas can negatively impact water quality.<sup>1</sup>

The federal Clean Water Act (CWA) and the U.S. Environmental Protection Agency's (EPA) National Pollutant Discharge Elimination System (NPDES) storm water regulations establish permit requirements for discharges from certain publicly-owned separate storm sewer systems located in urban areas to control pollutants to the maximum extent practicable (MEP). 33 U.S.C. § 1342(p)(3); 40 CFR § 122.26 and 40 CFR §§ 122.30-37.

EPA defines the term "municipal separate storm sewer" (MS4), and identifies those considered to be "large-," "medium-," and/or "small-" MS4s at 40 CFR § 122.26(b). In general, a MS4 includes any publicly-owned conveyance or system of conveyances used for collecting and conveying storm water which discharges to waters of the United States. MS4s include roads with drainage systems, municipal streets, catch basins, curbs, gutters, ditches, man-made channels, and/or storm drains. EPA has designated and defined large, medium and small MS4s in the federal regulations based on the size of the population the system serves. Operators of such regulated MS4s must obtain NPDES permit coverage for their discharges. Permits for regulated MS4 discharges require the implementation of storm water management programs (SWMPs) designed to control pollutants in the MS4 discharge to the MEP.

Under the "Phase I" NPDES storm water regulations at 40 CFR§ 122.26, the Ada County Highway District (ACHD), Ada County Drainage District #3 (DD3), Boise City, Boise State University (BSU), Garden City, and Idaho Transportation Department District #3 (ITD3) are considered to be "medium" MS4s, based upon the 1990 Census population of the greater Boise/Garden City area. EPA previously issued a NPDES permit for discharges from the MS4s owned or operated by the permittees on October 30, 2000; the permit expired on November 28, 2005. Following the application requirements specified in 40 CFR § 122.26(d) and direction from EPA, the permittees submitted a renewal application for reissuance of their permit to EPA on October 14, 2004. The permit was administratively extended by EPA pursuant to 40 CFR § 122.6.

The permittees have continued to implement SWMP activities in compliance with the administratively extended permit, and to submit Annual Reports. In 2010-2011, EPA received input and comment from the permittees on a preliminary draft of the permit; EPA considers the comments received from the permittees in February 2011 to augment the 2004 renewal application and Annual Report information. EPA did not provide written responses

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<sup>1</sup> See *Results of the Nationwide Urban Runoff Program*, Executive Summary, EPA Office of Water (1983); *NPDES Regulations for Revision of the Water Pollution Control Program Addressing Stormwater Discharges*, 64 Fed. Reg. 68726 (Dec. 8, 1999); and *National Water Quality Inventory, 1998 Report to Congress*, EPA.

to the 2011 comments. The renewal application, Annual Reports, EPA's July 2010 preliminary draft permit, and 2011 permittee comments are all available in the Administrative Record for the permit. If the permittees have subsequent comments regarding the permit as proposed for public comment, such comments must be submitted during the comment period in order for EPA to provide written responses as required by NPDES regulations at 40 CFR §124.17.

This fact sheet explains the rationale for the proposed NPDES permit conditions. EPA requests public comment on the scope and breadth of the proposed requirements. Specific issues on which EPA asks for input and feedback are highlighted using ***bold italic font***.

EPA has substantially revised the organization of the permit requirements, compared to the previous expired permit. The permit's current format is consistent with other NPDES permits for regulated MS4 discharges issued by EPA Region 10 since 2005. The entities are collectively referred to as "permittees" within this fact sheet and in the permit document. In the previous expired permit, EPA referred to the group as "co-permittees," which is defined in the federal regulations as "a permittee to a NPDES permit that is only responsible for permit conditions relating to the discharge for which it is operator." EPA recognizes the continued cooperative working relationship among the six entities, but chooses to revise the reference in these documents to be consistent with other MS4 permits issued by EPA Region 10.

## 2. Permit Area and Permittees' System Description

In accordance with Section 402(p) of the CWA, 33 U.S.C. § 1342(p), and 40 CFR § 122.26(d), EPA proposes to reissue the permit on a jurisdiction wide basis to the following MS4 operators:

Permittee	Physical Address
Ada County Highway District	3775 Adams Street Garden City, Idaho 83714
Ada County Drainage District #3	c/o Elam & Burke P.O. Box 1539 Boise, Idaho 83701
Boise City	150 N. Capitol Blvd P.O. Box 500 Boise, ID 83701-0500
Boise State University	1910 University Drive Boise, ID 83725
Garden City	6015 Glenwood Street Garden City, ID 83714
Idaho Transportation Department District 3	8150 Chinden Blvd P.O. Box 8028 Boise, ID 83701-0500

The MS4s subject to the permit are owned and operated by the permittees, and are located within the corporate boundaries of the City of Boise and the City of Garden City. See Appendix A for a map of the greater Boise.Garden City area.

Surface runoff within the Boise/Garden City area is directed to a wide network of subsurface conveyances, ditches, and surface streets. These MS4s provide drainage for an area of approximately 120 square miles, and includes all areas within the Boise/Garden City boundaries under the direct jurisdiction of each permittee. These MS4s discharge to waters of the United States, as discussed in detail below. Within the permit area the MS4s are owned and operated as follows:

- ACHD owns and operates all public roadways and associated storm water conveyances, except routes and storm water facilities operated solely by ITD3. ACHD is responsible for approximately 1,044 outfalls discharging to Boise River and its tributaries within the permit area.
- ITD3 owns and operates the conveyances and storm water facilities associated with Interstate-84, Interstate-184, U.S./State Highways 20, 21, 26, 30, 44, and 55; Glenwood Street, Chinden Boulevard, and the Chinden-Broadway Connector. Drainage facilities include gutters, culverts, ditches, swales, pipes, poly drains, French drains, catchbasins/inserts, sand & grease traps, edge drains, transverse drains, and retention/detention ponds. ITD3 is responsible for at least two known outfalls within the permit area, located near Barrister Drive at Cole and American Boulevard at Kathryn Albertson Park.
- Boise City has jurisdiction over City owned facilities, private property within its city limits, and floodway conveyances from the Boise Foothills to the Boise River, including Hulls Gulch, Cottonwood Creek, Sand Creek, and Crane Creek. The outfalls owned or operated by the City are associated with the natural and modified foothills floodway conveyance systems, ponds, and dams, as well as the following City owned properties: Julia Davis Park, Ann Morrison Park, parking areas of the Boise Library, Log Cabin, and Library Storage; Fire Department Training Station; a leased portion of Gowen Field, and the Boise Airport.
- Garden City has jurisdiction over City owned facilities and private property within its city limits; at least one known outfall discharges directly from City property to the Boise River.
- DD3 owns and operates drainage channels and drain pipes in the southeast section of Boise. The DD3 system receives drainage from storm drains under ACHD control, irrigation runoff from irrigated land and irrigation canals, and drainage from both residential and commercial development. DD3 is responsible for eight known storm water outfalls.
- BSU is responsible for 153 acres of State owned university land adjacent to the Boise River south of Julia Davis Park. Facilities consist of drainage conveyances, drop

grates, and manhole/catch basin structures. BSU is responsible for eight known storm water outfalls that discharge from the campus directly to the Boise River.

According to an inventory of major outfalls (i.e., those outfalls at least 36 inches diameter or greater) submitted by the permittees as part of the Year 2009-2010 Annual Report, these MS4s discharge to the Boise River and its tributaries, including but not limited to: North Slough; South Slough; Milk Lateral; Gruber Lateral; Settlers Canal; Chaffin Ditch; Ridenbaugh Canal; Wilson Fruit Lateral; Five Mile Creek; Synder Lateral; Threemile Creek; Boise City Canal; Crane Creek; Davis Drain; Thurman Mill Canal; Drain A; Drain A-1; Drain B; Drain E; Julia Davis Pond; Dry Creek; Logger Creek; Powell Lateral; Rust Lateral; Farmers Lateral; Bennett Lateral; Rossi Mill; New York Canal; Eagle Drain; Riverside Creek; Elmore Drain; Warm Springs Canal; Zinger Lateral; Karnes Lateral; Farmers Union Canal; Lake Elmore; Stewart Gulch; Dry Creek Canal; Boise Valley Canal; and Hull's Gulch.

### **3. Storm Water Management Program Accomplishments**

The permittees have managed urban storm water discharges from their MS4s in accordance with their SWMP since the early 1990's and have been subject to NPDES permit requirements since 2000. The permittees have organized themselves as follows: ACHD is the lead agency responsible for administering the permit, water quality monitoring, and industrial facility inspections; Boise is the lead agency for public education and outreach within the City of Boise; Garden City is the lead agency for public education and outreach within Garden City; and BSU, DD3, and ITD3 are considered three "minor" co-permittees.

The permittees have developed a variety of specific local requirements, assessments and guidance material which allow them to effectively manage pollutants in storm water discharges within the Boise/Garden City area, including:

- Extensive intergovernmental coordination through a memorandum of understanding;
- *ACHD Development Policy Manual*, specifying structural controls, maintenance requirements and standards;
- *ACHD Operation and Maintenance Storm water Best Management Practices Manual*; *Boise City Storm water Management and Discharge Control Ordinance* (BCC 8-15) (STW Ordinance);
- *Boise City Non-Storm water Disposal Best Management Practices Handbook* (Handbook);
- *Boise City Storm water Management Design Manual* standards of SW treatment for residential, commercial, or industrial development;
- *ACHD Storm water Investigation Manual*, and associated enforcement agreements between ACHD, Garden City and Boise City;



- Agreement for General and Noxious Weed Control between ACHD and Ada County Weed Control (to address WQ issues);
- ACHD Resolution No. 812 – *Standard Operating Plan for Right-of-Way Spill, Container, and Debris Response*;
- Boise City Code Title 8 Chapter 17 *Construction Site Erosion Ordinance*;
- Boise City *Construction Site Erosion & Sediment Control Certificate Training Program*;
- Garden City Ordinance, Title 4, Chapter 15, *Construction Site Erosion & Sediment Control Ordinance*;
- Garden City Ordinance, Title 4 Chapter 14, *Storm water Management and Discharge Control ordinance*;
- Garden City *Storm water Investigation Manual*;
- ITD *Design Manual*;
- ITD *Standard Specifications for Highway Construction*;
- ITD *Maintenance Operations Manual*;
- ITD *Maintenance Storm water Manual*;
- ITD 2001 *Erosion & Sediment Control Manual*;
- *Partners for Clean Water*, the jointly funded education efforts that include volunteer storm drain stenciling programs; watershed-based outreach using Eddy Trout as “spokesfish” through public service media announcements and public appearances; a dedicated website; active participation in community events; development of community curriculum, newsletters and other regular messages to target audiences.

Links to these materials and other relevant references are posted on the website at <http://www.partnersfor cleanwater.org>.

#### **4. Average Annual Precipitation in the Greater Boise/Garden City Area**

The National Oceanic and Atmospheric Administration’s Western Regional Climate Center maintains historical climate information for various weather stations throughout the western United States. The greater Boise area has an annual average precipitation of approximately 11.7 inches per year and an annual average snowfall of 19.4 inches per year.

EPA’s analysis of average rainfall depth in the Boise area, based on 48 years of 24-hour precipitation data obtained from NOAA and collected at Boise Airport, demonstrates that approximately 95% of all storms in the Boise area result in a rainfall volume of 0.6

inches or less; 90 % of all storms result in a rainfall volume of 0.47 inches or less. See Figure 1 and Appendix C for more information on the calculation of this storm event volume.

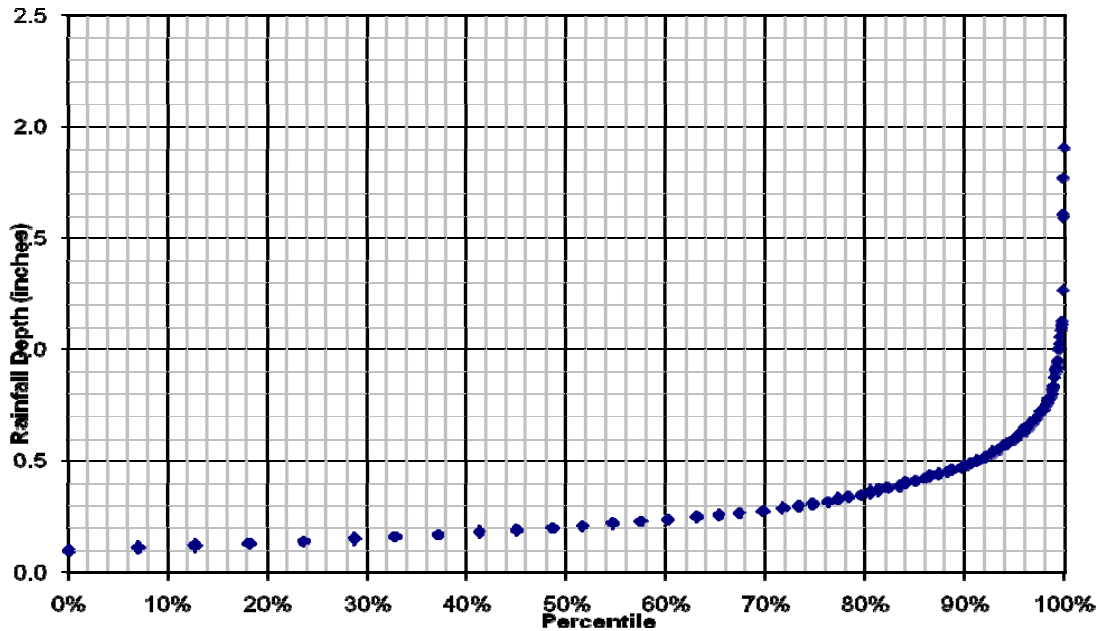


Figure 1. Rainfall Frequency Spectrum showing the 90<sup>th</sup> and 95<sup>th</sup> percentile rainfall event for Boise Air Terminal, Boise, Idaho (~0.476 and 0.6 inches, respectively).

## 5. Receiving Waters

### 5A. General Information

Through the permit, EPA proposes to authorize storm water discharges from the MS4s owned or operated by the permittees to the Boise River and other waters of the United States within the greater Boise/Garden City area as described in Section 2 of this document.

In addition to the permit conditions proposed by EPA, all discharges to state waters must also comply with any limitations imposed by the State of Idaho as part of its water quality certification of NPDES permits under CWA Section 401, 33 U.S.C. § 1341. EPA has provided the proposed permit to IDEQ for their consideration. After the close of the public comment period, if EPA has not yet received a final CWA 401 certification of the permit, including an anti-degradation analysis, EPA will revise the permit based on public comment, and at that time will formally request that IDEQ certify the final draft permit. See Appendix B of this document for more information.

IDEQ classifies the portions of the Lower Boise River receiving discharges from the permittees' MS4s as fresh water with designated uses as described in Table 1 below. See IDAPA 58.01.02.140.12 and 58.01.02.100.03.c.

### 5B. Water Quality & Total Maximum Daily Loads (TMDLs)

Any water body that does not, and/or is not expected to meet applicable water quality standards is described as “impaired” or as a “water quality-limited segment.” Section 305 of the Clean Water Act, 33 U.S.C. § 1315, requires the State to include that waterbody on its list of impaired waters submitted biannually to EPA for approval. Section 303(d) of the CWA, 33 U.S.C. § 1313(d), requires a State to develop water quality management plans, in the form of Total Maximum Daily Loads (TMDLs), for water bodies determined by the State to be impaired. TMDLs define both waste load allocations (WLAs) and load allocations (LAs) that specify how much of a particular pollutant can be discharged from both regulated and unregulated sources, respectively, such that the waterbody will again meet State water quality standards. In a water body where EPA has approved a TMDL, any NPDES permit conditions must be consistent with the assumptions and requirements of available WLAs. See 40 C.F.R. § 122.44(d)(1)(vii)(B).

IDEQ’s 2008 *Integrated Section 303(d)/Section 305(b) Report* (2008 Integrated Report) contains the list of impaired water bodies as required by CWA Section 303(d). The 2008 Integrated Report was partially approved by EPA in February 2009. Table 1 reflects the water body assessment units in the greater Boise/Garden City Area considered by IDEQ to be water quality-impaired (*i.e.*, meaning the water body does not meet water quality standards), as well as the status of associated TMDLs for those water bodies.

Waterbody Assessment Unit/ Description	Beneficial Uses	Impairment Pollutants of Concern	TMDLs
17050114011_06: Boise River, from the Diversion Dam to River Mile 50 (Glenwood Bridge)	Cold water biota, primary and secondary contact recreation, domestic and agricultural water supplies, salmonid spawning	Sediment Temperature # Nutrients	Sediment and bacteria TMDL approved by EPA in 2000.  TMDL for phosphorus is pending.
17050114005_06: Boise River, from River Mile 50 to Indian Creek		Sediment Bacteria ( <i>E. coli</i> ) Temperature # Nutrients	
17050114010_02 and _03: Fivemile Creek - 1 <sup>st</sup> , 2 <sup>nd</sup> & 3 <sup>rd</sup> order		Sediment Bacteria ( <i>E. coli</i> )	
<p># Note: According to the IDEQ website, “...Load allocations for temperature are not recommended for the lower Boise River segments listed for temperature since it has been found that atmospheric conditions preclude compliance with cold water biota temperature criteria during June, July, and August.”</p> <p>Sources: IDEQ Website- <a href="http://www.deq.idaho.gov/water-quality/surface-water/tmdls/table-of-sbas-tmdls/boise-river-lower-subbasin.aspx">http://www.deq.idaho.gov/water-quality/surface-water/tmdls/table-of-sbas-tmdls/boise-river-lower-subbasin.aspx</a> and IDEQ 2008 <i>Integrated Report</i>.</p>			

**Table 1. Idaho’s Waterbody Assessment Units, Beneficial Uses, Impairment and TMDL Status.**

### ***5.C Pollutant Allocations in the Lower Boise River TMDLs***

TMDLs must define waste load allocations (WLAs) for point source discharges, and load allocations (LAs) for nonpoint source discharges. In a guidance memo issued in 2002, EPA set forth options for addressing NPDES regulated storm water discharges in TMDLs. See “*Establishing Total Maximum Daily Load Wasteload Allocations for Storm Water Sources and NPDES Permit Requirements Based on Those WLAs*” (2002 TMDL Guidance Memo). The 2002 TMDL Guidance memo also explained how to establish effluent limits for NPDES regulated storm water discharges from applicable WLAs.

EPA approved the TMDL for both sediment and bacteria (in the form of fecal coliform) in the Lower Boise River in 2000. See IDEQ’s *Lower Boise River TMDL Subbasin Assessment, Total Maximum Daily Loads*, dated September 1999 (Lower Boise River TMDL). The approval of the Lower Boise River TMDL pre-dated the 2002 TMDL Guidance Memo. As was commonly done at the time, IDEQ assigned load allocations to nonpoint sources contributing to the Lower Boise River, including urban runoff. After reviewing the TMDL, due to statements in the TMDL, EPA is interpreting urban runoff to be the same as municipal storm water discharges, particularly where the area overlaps with NPDES regulated MS4 areas.

The TMDL defines three segments of the Boise River listed for sediment, and three monitoring locations are identified as compliance points for the sediment TMDL. Of these three compliance points, the Middleton monitoring location is immediately downstream of, and therefore represents, the permit area described for the Boise/Garden City NPDES MS4 permit. The TMDL assigns sediment load allocations to twelve tributaries of the lower Boise River as well as the riparian corridor. The TMDL’s sediment load targets were developed using a mass balance analysis for the river. Two tributaries located upstream of the Middleton monitoring location, Eagle Drain and Thurman Drain, together were assigned sediment load allocations equal 4.40 tons per day total suspended sediment. The TMDL estimates that all loads of suspended sediment upstream of Middleton must be reduced by 37% in order to meet the nonpoint source loading target criteria, representing IDEQ’s narrative sediment standard, of 50 mg/l. This target must be met during all flow events and at all monitoring points along the Boise River. The TMDL considers urban and suburban land uses upstream of the Middleton monitoring location as contributing nonpoint sediment sources to the mainstem Boise River. The TMDL states that the SWMP, as implemented through a NPDES permit, is sufficient to meet the 37% reduction goal of the sediment TMDL.<sup>2</sup>

IDEQ’s TMDL does not mention storm water, or urban runoff, as a source of bacteria to the river. Using the same monitoring compliance points as the sediment TMDL, the bacteria TMDL references the Middleton monitoring location, which as mentioned previously reflects the permit area of the Boise/Garden City MS4 permit. The TMDL assigns

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<sup>2</sup> See Lower Boise River TMDL (1999), pages 58-61; [http://www.deq.idaho.gov/media/451243-water\\_data\\_reports\\_surface\\_water\\_tmdls\\_boise\\_river\\_lower\\_boise\\_river\\_lower\\_entire.pdf](http://www.deq.idaho.gov/media/451243-water_data_reports_surface_water_tmdls_boise_river_lower_boise_river_lower_entire.pdf)

estimated bacteria load allocations to various tributaries based on meeting a WQS target of 50 CFU/100 ml of fecal coliform; IDEQ estimates that more than 70% of the nonpoint source bacteria load must be reduced from the area upstream of the Middleton compliance point.<sup>3</sup> In 2007, IDEQ revised its WQS indicator for bacteria from fecal coliform to *E.coli*. *E. coli* is now reflected in the Idaho WQS as 126 cfu/100 ml, based on the geometric mean of 5 samples taken 3-7 days apart over a 30 day period. Since there is no longer a water quality standard for fecal coliform, there was some confusion as to how to treat fecal WLAs in TMDLs. Recently, IDEQ and EPA reached agreement that EPA would apply *E.coli* limits at the end of the pipe where an outdated fecal TMDL WLA applied fecal limits at the end of the pipe.<sup>4</sup> Here, the TMDL assigned a fecal LA to the tributaries to the Lower Boise River and a target reduction at the Middleton compliance point. In establishing activities in the SWMP, EPA has required implementation of actions designed to reduce bacteria contribution from urban and suburban land uses upstream of the Middleton compliance point.

The Lower Boise River is also considered impaired for nutrients. Nutrient loads originating in discharges from the Lower Boise River watershed are contributing to the impairment of beneficial uses downstream within the Snake River. In the Snake River-Hells Canyon TMDL approved by EPA in 2004, IDEQ establishes a load allocation for total and dissolved phosphorus from both nonpoint sources and from tributaries to the Snake River including the Boise River. A final TMDL determining specific LAs and WLAs for sources of total phosphorus within the Lower Boise River watershed is pending. IDEQ identifies urban runoff (such as from densely populated residential areas and golf courses) as a source of phosphorus loading in both the Lower Boise River TMDL and in the subsequent TMDL implementation plan.<sup>5</sup> EPA interprets IDEQ's references to urban runoff, and to phosphorus, within the TMDL documents as specifying the actions necessary to reduce nutrient loading in the form of phosphorus from NPDES regulated municipal storm water. IDEQ's preliminary analysis of the Lower Boise River phosphorus allocations for the Snake Canyon Hells Canyon TMDL states that a 50% reduction of total phosphorus should be implemented through best management practices that target phosphorus reduction in urban runoff; and that such reductions can be achieved through local requirements to limit runoff from new development, and through increased inspection and maintenance of onsite best management practices.<sup>6</sup>

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<sup>3</sup> See *Lower Boise River TMDL Subbasin Assessment, Total Maximum Daily Loads*, Revised: September 29, 1999 pages 70-72; [http://www.deq.idaho.gov/media/451243-water\\_data\\_reports\\_surface\\_water\\_tmdls\\_boise\\_river\\_lower\\_boise\\_river\\_lower\\_entire.pdf](http://www.deq.idaho.gov/media/451243-water_data_reports_surface_water_tmdls_boise_river_lower_boise_river_lower_entire.pdf)

<sup>4</sup> See Letter from IDEQ to EPA, dated August 4, 2011.

<sup>5</sup> See *Lower Boise River TMDL Subbasin Assessment, Total Maximum Daily Loads*, Revised: September 29, 1999 pages 51, and 61; *Implementation Plan for the Lower Boise Total Maximum Daily Load, Appendix B*, December 2003; [http://www.deq.idaho.gov/media/451449-water\\_data\\_reports\\_surface\\_water\\_tmdls\\_boise\\_river\\_lower\\_boise\\_river\\_lower\\_plan\\_entire.pdf](http://www.deq.idaho.gov/media/451449-water_data_reports_surface_water_tmdls_boise_river_lower_boise_river_lower_plan_entire.pdf).

<sup>6</sup> *Lower Boise River Phosphorus Allocations for the SR-HC TMDL*, August 2007.

The 2003 *Implementation Plan for the Lower Boise Watershed* (Lower Boise Implementation Plan) addresses both urban and suburban storm water sources, and provides guidance to municipal entities required to reduce pollutants in their storm water discharges. The Lower Boise Implementation Plan describes a menu of activities for regulated MS4 operators to implement which, when fully and effectively conducted, are expected to reduce the pollutants of concern (i.e., sediment, bacteria, and nutrients) in discharges to the Lower Boise River and its tributaries.<sup>7</sup> The plan references the federal NPDES storm water requirements, and includes activities such as targeted public education, construction site runoff control, and on-site management of post-construction runoff from new development and redevelopment. As discussed in more detail below, EPA is proposing to include activities in the SWMP that implements the actions set forth in the Implementation Plan.

IDEQ's *Lower Boise River TMDL Five Year Review* documents that necessary pollutant reduction targets for sediment and bacteria are not yet met within various segments of the Lower Boise River.<sup>8</sup> Urbanization, and associated storm water runoff, continues to be identified by IDEQ as a contributing source of pollutant loading to the Boise River system.

As a result of the TMDLs and the Lower Boise Implementation Plan, EPA has included explicit SWMP actions and activities in the permit intended to target the elimination of pollutants of concern (sediment, bacteria and phosphorus) from reaching the Lower Boise River. See Section 6.B. below for a discussion of MS4 permit requirements intended to meet the Lower Boise River sediment, bacteria and total phosphorus load allocations specified by IDEQ and/or assumed by EPA to be attributed to urban runoff upstream of the Middleton monitoring location.

***EPA requests comment on the appropriate NPDES storm water management program elements to be included as permit requirements which reflect the applicable pollutant reduction goals of the Lower Boise River TMDL.***

## **6. Basis for Permit Conditions**

### ***6A. General Information***

The conditions established by the permit are based on Section 402(p)(3)(B) of the CWA, 33 U.S.C. § 1342(p)(3)(B), which requires an NPDES permit for MS4 discharges to:

- 1) effectively prohibit non-storm water from entering the MS4; and

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<sup>7</sup> *Implementation Plan for the Lower Boise TMDL*, December 2003, [http://www.deq.idaho.gov/media/451449-water\\_data\\_reports\\_surface\\_water\\_tmdls\\_boise\\_river\\_lower\\_boise\\_river\\_lower\\_plan\\_entire.pdf](http://www.deq.idaho.gov/media/451449-water_data_reports_surface_water_tmdls_boise_river_lower_boise_river_lower_plan_entire.pdf)

<sup>8</sup> See *Lower Boise River TMDL Five Year Review, Final*, February 2009, [http://www.deq.idaho.gov/media/451665-water\\_data\\_reports\\_surface\\_water\\_tmdls\\_boise\\_river\\_lower\\_boise\\_river\\_lower\\_five\\_year\\_review\\_final\\_0209.pdf](http://www.deq.idaho.gov/media/451665-water_data_reports_surface_water_tmdls_boise_river_lower_boise_river_lower_five_year_review_final_0209.pdf)

2) require controls necessary to reduce pollutants in municipal storm water discharges to the maximum extent practicable (MEP), including management practices, control techniques, and system design and engineering methods, and other such provisions determined by the NPDES permitting authority to be appropriate.

The NPDES application requirements for Phase I MS4 operators at 40 CFR §122.26(d), and EPA's policy memorandum dated August 9, 1996,<sup>9</sup> describe in detail the information that must be submitted to EPA by the MS4 operators to obtain (and renew) permit coverage. EPA considered information submitted by the permittees in the MS4 application for permit renewal dated October 2004 (2004 application), as well as information contained in Annual Reports from the previous permit term, to define the required actions of the proposed permit.

EPA's permitting approach for storm water discharges uses best management practices (BMPs) in the first five year permit, and expanded or better tailored BMPs in subsequent permits to provide for the attainment of water quality standards. See "*Interim Permitting Approach for Water Quality-Based Effluent Limitations in Storm Water Permits*," 61 Fed. Reg. 43761 (Aug. 26, 1996).<sup>10</sup> EPA reiterated this approach to address how to incorporate WLAs for storm water discharges into NPDES permits in the 2002 TMDL Guidance Memo.<sup>11</sup>

EPA has determined that BMPs, implemented and enforced through a comprehensive SWMP, are the most effective mechanisms for reducing the discharge of pollutants to the MEP and for complying with the water quality provisions of the Clean Water Act. The permit requires continued implementation of BMPs as the primary means to ensure storm water discharges meet the Idaho water quality standards and the LAs set forth in the Lower Boise River TMDL. In accordance with EPA policy and guidance, EPA is also proposing monitoring and other specifications based on the TMDL analysis to augment the SWMP activities set forth in the permittees' NPDES permit application. Further discussion of these requirements is contained below.

Numeric water quality effluent limitations are not proposed at this time. Numeric effluent limitations would be included in the final permit only if required by the State of Idaho as a condition for final certification of the permit pursuant to Section 401 of the CWA, 33 U.S.C. § 1341. Through the process of permit modification as outlined in 40 CFR § 124.5, EPA or the State may elect at a future date to add numeric effluent limitations to the permit after its issuance, only after EPA or the State determines that State water quality standards are not being met due to the contributions of pollutants by storm water discharges, and determines that such permit modifications are reasonably needed to ensure the attainment of the Idaho water quality standards.

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<sup>9</sup> Available online at <http://www.epa.gov/npdes/pubs/owm0125.pdf>

<sup>10</sup> Available on-line at <http://www.epa.gov/npdes/pubs/swpol.pdf>

<sup>11</sup> Available on-line at <http://www.epa.gov/npdes/pubs/final-wwtmdl.pdf>

### ***6B. Permit Requirements for TMDL Implementation***

As previously noted, all NPDES permit conditions must be consistent with the assumptions and requirements of available WLAs. See 40 C.F.R. § 122.44(d)(1)(vii)(B). EPA's 2002 TMDL Guidance Memo further defines how NPDES permit conditions for regulated storm water discharges can be consistent with the assumptions and requirements of available WLAs through the use of narrative BMPs. Where BMPs are used as permit limitations to implement WLAs, the permit must require monitoring activities as necessary to assure compliance with the WLAs.

The TMDLs for the Lower Boise River attribute a portion of the sediment, bacteria, and phosphorus loadings as coming from urban and suburban sources.

EPA's permit recognizes and implements the load allocations within these TMDLs which are attributed to urban and suburban storm water runoff, and includes certain activities that are designed to address pollutants of concern in the Lower Boise River.

The 2002 TMDL Guidance Memo recommends the use of BMPs in a NPDES permit to implement WLAs and load reduction targets addressing storm water discharges. In addition, when BMPs are used, the permit must provide a mechanism to require the use of expanded or better tailored BMPs when monitoring demonstrates improved implementation is necessary to meet the WLA targets and protect water quality. Although the Lower Boise TMDL does not contain WLAs for regulated municipal storm water, EPA uses this approach in the permit. As such, the permit requires the implementation of certain practices to meet the load allocation reduction targets. In addition, the permit requires discharge monitoring and optional water quality sampling to help assess whether the permittees are meeting the target pollutant reductions. If water quality monitoring indicates a failure to protect water quality or meet the TMDL targets, EPA and the State will consider re-evaluating the specific permit actions and activities and may elect to formally modify the permit requirements, if necessary, in accordance with permit modification procedures at 40 CFR §124.5.

### ***6C. Discharges Authorized By the Permit***

The permit authorizes the discharge of urban runoff through the MS4s owned and operated by the permittees, provided they comply with the permit terms and conditions limiting the discharge of pollutants from their MS4s to the MEP. Part I.D of the permit limits this authorization to discharge municipal storm water in the following ways:

- Storm water runoff that is commingled with process wastewater, non-process wastewater, and storm water associated with industrial or construction activity (as defined in 40 CFR §122.26(b)(14) and (15)) are allowed to be discharged from the MS4s, provided the commingled flows are authorized by a separate individual or general NPDES permit (as necessary).
- Certain types of discharges unrelated to precipitation events (i.e., “non-storm water discharges”) that are listed in the permit pursuant to 40 CFR §122.26(d)(2)(iv)(B)(1), are allowed to enter into and discharge from the MS4s, provided that such discharges are not considered to be sources of pollution to the waters of the United States within



the Boise-Garden City area. Part II.B.5 of the permit requires the permittees to continue to prohibit, through ordinance or other enforceable means, all other so-called “illicit discharges” into the MS4(s). The permittees are responsible for the quality of the discharge from the MS4s, and therefore have an interest in locating and discontinuing any uncontrolled non-storm water discharges to their MS4s.

- Discharges from the MS4s must not cause violations of State water quality standards.
- Disposal of snow directly into waters of the United States, or directly to the MS4s, is prohibited, due to concerns that the accumulated snow and melt water may contain elevated levels of chloride and other salts, suspended sediment, turbidity, and metals associated with sediment and turbidity. Discharges of snow melt resulting from or associated with the permittees’ snow management practices (such as street plowing, and application of traction material) are conditionally authorized, provided such activities are conducted in a manner that minimizes adverse water quality impacts.

#### ***6D. Permittee Responsibilities***

EPA regulations at 40 CFR § 122.26(d)(2)(iv) require regulated MS4 operators to implement a comprehensive SWMP. Where more than one public entity owns or operates MS4s within a geographic area, the operators are allowed to participate in a joint permit application as co-permittees (see 40 CFR § 122.26(a)(3)(iii) and (d)). Once a permit is issued to the group, each entity is responsible for compliance with the permit terms and conditions related to the MS4 operated under their sole authority.

In this case, the permittees submitted a joint NPDES renewal application; therefore the permittees share joint permit coverage, and joint responsibility, under the permit. The permit states that individual MS4 operators are jointly responsible for discharges related to portions of the MS4 where operational or SWMP implementation authority has been transferred to all of the permittees in accordance with an intergovernmental agreement or agreement between the permittees; related to portions of the MS4 where permittees jointly own or operate a portion of the MS4; related to the submission of reports or other documents required by Permit Parts II and IV; and where the permit requires an action and a specific permittee is not named.

Municipal co-permittees must describe the roles and responsibilities of each entity and procedures to ensure effective coordination (see 40 CFR §122.26(d)(2)(vii)). Permit Part I.C requires the permittees to maintain a binding interjurisdictional agreement between their organizations (referred to as a cooperative agreement in the previously issued permit); the permittees must submit an updated agreement to EPA and IDEQ within six months of the permit effective date.

#### ***6E. Storm Water Management Program (SWMP) Requirements***

EPA’s Phase I storm water regulations at 40 CFR §122.26(d)(2)(iv) outlines the general framework for a storm water management program (SWMP). The SWMP must include a comprehensive planning process, public participation (and where necessary,

intergovernmental coordination) to reduce the discharge of pollutants to the MEP through the use of management practices, control techniques and system, design, and engineering methods, and such other provisions as appropriate. The SWMP actions and activities are contained in Part II of the permit, broadly summarized as:

1. Construction Site Runoff Control
2. Storm Water Management for Areas of New Development and Redevelopment
3. Industrial and Commercial Storm Water Discharge Management
4. Infrastructure/Street Management and Maintenance
5. Illicit Discharge Management
6. Public Education and Involvement

The permittees are required to continue SWMP activities designed to limit the discharge of pollutants from the MS4s to the MEP, to protect water quality and to satisfy the appropriate water quality requirements of the Clean Water Act. The permit contains provisions directing overall program management, planning, and coordination between the permittees and with other entities.

In the permit, EPA has refined the narrative describing certain activities, or has incorporated additional SWMP actions and activities, to ensure that discharges from the permittees' MS4s are controlled to the MEP. Certain requirements specifically address the WLAs set forth in the TMDL plans for the Lower Boise River and its tributaries. The permittees' SWMP also provides opportunities to collectively target actions to achieve pollutant reductions in areas for which TMDLs have not yet been approved (including, but not limited to, phosphorus loading to the Lower Boise River).

Permit Part III contains a summary table of the actions/activities and the dates by which each must be accomplished.

Compared to the previously issued permit, the permit supported by this fact sheet replaces certain terminology with updated references reflecting contemporary storm water related nomenclature. For example, EPA's Phase I storm water regulations referred to "structural controls," and "floatables;" instead, the permit now refers to specific structures- such as *catch basins*- and/or to *litter* and other discharges broadly addressed through the Idaho water quality standards. Definitions of various terms used in the permit are included in Permit Part VII.

Monitoring, evaluation, reporting and recordkeeping requirements are specified in Part IV of the permit. Permittees must monitor water quality, storm water discharges, and BMP effectiveness in a various ways. Approved quality assurance plans (QAPs) must be used in conjunction with analytical sampling and monitoring activities; SWMP documentation and Annual Reports will provide narrative accounting of program implementation accomplishments.

## General Requirements

**Permit Part II.A** contains EPA's expectations for the overall SWMP implementation and program coordination. The permit contains a requirement for a written SWMP document summarizing program implementation, collectively and individually, by the permittees. Although the previously issued permit did not require a specific SWMP document, in 2009, EPA clarified its expected MS4 permit requirements, including a written SWMP document.<sup>12</sup> EPA believes the Annual Report format used by the permittees during the first permit term provides a suitable template for creating each permittees' SWMP documentation. The SWMP document(s) outline each permittee's legal authorities, identifies MS4 system characteristics, and discusses how SWMP requirements are implemented (particularly to identify when and where a SWMP element is not relevant to the specific permittee's jurisdictional role/responsibility). The SWMP document is intended to concisely summarize how each permittee implements the required SWMP elements of the permit. *EPA invites comment on how to specify requirements for updating the SWMP document that complement the annual reporting requirements, such that SWMP document(s) reflect the overall description of the SWMP and the Annual Report focuses solely on recording implementation efforts over the reporting period.*

**Permit Part II.A 2** allows the permittees to share implementation of SWMP activities with other parties, just as shared implementation is allowed in EPA's regulations at 40 CFR §122.34 for regulated small MS4s. The premise of "shared implementation" allows the permittees to cooperate with other organizations which are not subject to the permit, and to acknowledge shared responsibility to EPA through the Annual Reports. Sharing responsibility for particular SWMP actions and activities is optional, and may be used at the permittees' discretion. This requirement differs from the required interjurisdictional agreement between the permittees in Permit Part I.C.3 of the permit; Permit Part II.A.2 allows the permittees to engage with outside entities which are not subject to the terms and conditions of the permit. The permittee(s) remain responsible for compliance with the permit in the event the outside entity fails to implement the required action/activity.

**Permit Part II.A.3** requires the permittees to complete watershed plans for at least two Boise/Garden City sub-watersheds. Watershed planning is a valuable opportunity to engage the community and identify necessary choices and actions that will maintain or restore watershed quality. Such plans must be developed in concert with the Storm Water Management for New Development/Redevelopment requirements outlined in Permit Part II.B.2.

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<sup>12</sup> See EPA's *MS4 Permit Improvement Guide*, April 2010:  
[http://www.epa.gov/npdes/pubs/ms4permit\\_improvement\\_guide.pdf](http://www.epa.gov/npdes/pubs/ms4permit_improvement_guide.pdf)

## Construction Site Runoff Control Requirements

In **Permit Part II.B.1** the permittees must refine and continue existing programs to control pollutant discharges from construction sites.

Storm water discharges generated during construction activities can cause an array of physical, chemical, and biological water quality impacts.<sup>13</sup> A primary concern at most construction sites is the erosion and transport of fine sediment. Storm water runoff from construction sites also includes pollutants related to the construction activity itself, and can contain phosphorus, nitrogen, pesticides, petroleum derivatives, construction chemicals, and solid wastes that may be mobilized when vegetation is removed and the landscape is altered for development.

Preventing erosion (as well as the runoff containing other pollutants) from active construction sites is fundamental to protecting water quality in urban areas. Properly implemented and locally enforced construction site ordinances requiring erosion, sediment and material management controls can effectively reduce pollutants.<sup>14</sup> Municipal jurisdictions are best suited to define how construction activities should be designed and conducted, as well as to enforce those requirements. Other public entities, such as state transportation and/or local drainage entities are similarly positioned to control activities conducted within their rights of way/jurisdiction. EPA expects MS4 operators to use ordinances, or other reasonable mechanisms as provided by State law, to create basic expectations for construction activity occurring within their jurisdictions in order to protect water quality. EPA expects MS4 operators to fully enforce those requirements when necessary.

In the 2004 application, the permittees state their intention to “redesign the construction program to conform to the Construction General Permit and improve performance.” EPA is proposing that the permittees continue to enforce a construction site storm water management program to reduce pollutants in storm water runoff from private and public construction activities. ***EPA is requesting comment on the scope and breadth of the specific activities proposed in the permit which are intended to ensure adequate oversight of construction activities within the greater Boise-Garden City area.***

The permittees must continue existing programs to control pollutant discharges from construction sites in the following ways:

- Permittees must implement and enforce requirements for erosion, sediment and onsite material controls.
  - Boise City and Garden City currently require Erosion and Sediment Control (ESC) Plans and other controls through Boise Code Title 8

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<sup>13</sup> EPA, 1999.

<sup>14</sup> Paterson, 1994.

Chapter 15 and Garden City Ordinance Title 4, Chapter 15. Although ACHD, BSU, DD3 and ITD do not have the power to enact ordinances, they may comply with this requirement by ensuring through policies, contracts, etc. that all staff, contractors, and right-of-way projects follow the construction-related requirements as developed by the permittees. These requirements must be conducted in a manner that a) complements, and does not conflict with, the requirements of the NPDES Construction General Permit and b) ensures adequate and enforceable local oversight of construction projects.

- As necessary, permittees must update their construction program specification manuals or equivalent.
- Permittees must refine ESC plan review and approval procedures, as necessary.
  - The permittees have detailed plan review procedures. EPA includes minimum expectations for plan review and approval, based upon consideration of MS4 permit text developed by the State of California for MS4 operators in Ventura County, CA<sup>15</sup> which articulates fundamental and technically available methods necessary to control pollutants in discharges from construction sites.
  - Permittees must continue to inspect sites and enforce local requirements, as necessary. Permittees may prioritize construction site inspections based on project type, size, potential for water quality problems, and other factors. EPA outlines minimum inspection requirements, based on consideration of the permittees' existing programs and MS4 permit language reviewed by EPA in similar NPDES permits, particularly the San Diego MS4 permit.
- Permittees must implement a written enforcement policy for construction sites.
  - The permittees are currently enforcing their respective requirements. EPA has proposed minimum expectations for the enforcement policy based on the 2007 San Francisco Bay Regional MS4 Draft Permit (Parts 1, 2, and 4) and the Los Angeles MS4 Permit (Part 3).

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<sup>15</sup> See MS4 Permit Improvement Guide, EPA (April 2010). Also, Revised Draft Ventura County MS4 permit, May 7, 2009, [http://www.swrcb.ca.gov/rwqcb4/water\\_issues/programs/stormwater/municipal/ventura\\_ms4/Ventura\\_ms4-2009-04-29-Draft-Tentative-Documents/Revised\\_Tentative\\_Ventura\\_County\\_MS4\\_Permit.pdf](http://www.swrcb.ca.gov/rwqcb4/water_issues/programs/stormwater/municipal/ventura_ms4/Ventura_ms4-2009-04-29-Draft-Tentative-Documents/Revised_Tentative_Ventura_County_MS4_Permit.pdf)

- Permittees must ensure that their plan review/inspection staff is sufficiently trained to enforce the local construction requirements. Permittees must also require and provide appropriate education for construction site operators.

The permittees made considerable progress in their Construction Site Runoff Control Program during the first permit term, evidenced by increased awareness of the requirements for managing storm water among construction operators. The required Construction Site Runoff Control Program actions are intended to continue a complete and effective local program.

To minimize redundant requirements between the federal NPDES requirements for construction sites and required local programs in regulated municipalities, EPA regulations at 40 CFR § 122.44(s) allows EPA and States to acknowledge a “qualifying local program” for local oversight of regulated construction activity. EPA (and/or the NPDES permitting authority) may approve and recognize local construction oversight programs in Phase I municipalities as “qualifying local programs (QLP),” wherein the construction site operator would follow the requirements of the recognized jurisdiction. EPA has proposed in the permit the suite of actions for the permittees to enhance their oversight of discharges from construction activity such that EPA could in the future consider granting QLP status to the permittees’ construction site runoff control program.

The permittees’ 2004 application identified that Boise City would continue the Boise City Erosion & Sediment Control Certificate Training Program to provide appropriate training to operators who manage onsite activities to protect water quality. As such, the permit requires permittees to provide ongoing education and training for construction site operators, and to require that there is one certified person onsite at all times during construction activity. The Boise City program provides raining for construction site operators within the Boise-Garden City area.

Reducing sediment and other materials from construction sites supports the necessary actions to accomplish the pollutant reductions called for by the Lower Boise River TMDLs. Adequate erosion and sedimentation control during the active construction phase serves to reduce the amount of pollutant material potentially discharged directly from a construction site and/or tracked out by construction vehicle traffic and accumulate on paved street surfaces.

*EPA requests comment on the breadth, scope and adequacy of these requirements for the Construction Site Storm Water Management requirements in light of the other actions required by the permit.*

## **Storm Water Management for New Development and Redevelopment**

**Permit Part II.B.2** requires the permittees to continue improving their program to reduce pollutants in permanent (i.e., post-construction) runoff from new development and redevelopment through enforceable requirements, plan review and approval, inspection and education. In addition, the permit proposes that the permittees further evaluate the use of green infrastructure and low impact development (LID) practices through pilot projects.

Uncontrolled runoff from new development and redevelopment areas can significantly and negatively affect receiving water bodies if appropriate considerations are not taken at the planning, design and construction stages. Typical storm water management practices have resulted in the current convention of control and treatment strategies that are largely hard infrastructure engineered, end-of-pipe, and site-focused practices concerned with controlling peak flow rate and suspended solids concentrations control. Recent studies have shown that such conventional practices often fail to address the widespread and cumulative hydrologic modifications within the watershed that increase storm water volumes and runoff rates, and cause excessive erosion and stream channel degradation. Existing practices also fail to adequately treat for other pollutants of concern such as nutrients, pathogens, and metals.<sup>16</sup> A 2008 report entitled *Urban Stormwater Management in the United States*, by the Committee on Reducing Stormwater Discharge Contributions to Water Pollution of the National Research Council, confirms the shortcomings of such storm water control efforts. Three of the report's findings on storm water management approaches are particularly relevant:

1. Individual controls on storm water discharges are inadequate as the sole solution to storm water in urban watersheds;
2. Storm water control measures such as product substitution, better site design, downspout disconnection, conservation of natural areas, and watershed and land-use planning can dramatically reduce the volume of runoff and pollutant load from new development; and
3. Storm water control measures that harvest, infiltrate, and evapotranspire storm water are critical to reducing the volume and pollutant loading of small storms.<sup>17</sup>

Many jurisdictions across the country have adopted new storm water management strategies to address such issues. Transportation agencies are also discovering ways to incorporate such practices.<sup>18</sup> The practice of storm water management is evolving beyond engineered approaches applied at the site level to an approach that looks at managing storm water at various scales - the regional, neighborhood, and site scales- through natural approaches. EPA refers to such approaches as "green infrastructure," or GI, techniques, which represent long term storm water management techniques that are more cost-effective, sustainable, and environmentally friendly.<sup>19</sup> Green infrastructure involves the use of soil, trees, vegetation, and wetlands and open space (either preserved or created) in urban areas to capture storm water and snow melt while enhancing wastewater and storm water treatment. A comprehensive green infrastructure approach to storm water management seeks to:

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<sup>16</sup> Shaver, et al., 2007; Holz testimony, 2008; Horner testimony, 2008.

<sup>17</sup> National Research Council, 2008.

<sup>18</sup> For example, see Green Highways Partnership, <http://www.greenhighways.org/index.cfm>

<sup>19</sup> More information on EPA's green infrastructure recommendations can be found online at [http://cfpub.epa.gov/npdes/home.cfm?program\\_id=298](http://cfpub.epa.gov/npdes/home.cfm?program_id=298)

- *Preserve*: Protect and enhance natural features, such as undisturbed forests, meadows, wetlands, and other natural areas that provide natural storm water management.
- *Reduce*: Reduce land consumption and use land efficiently to reduce total watershed or regional impervious cover.
- *Recycle*: Recycle land by directing new development to already degraded land, e.g., parking lots, vacant buildings, abandoned malls.
- *Reuse*: Direct storm water into the ground near where it fell through infiltration, evapotranspiration, or reuse techniques.<sup>20 21 22</sup>

Low Impact Development (LID) techniques are part of the concept of green infrastructure, and include those techniques that serve to mimic the predevelopment site hydrology in order to store, infiltrate, evaporate and detain runoff.

The permittees routinely use infiltration practices which integrate aspects of the green infrastructure/LID approach for new development and redevelopment. Boise City has provided educational opportunities related to the use of LID practices – for example, the Water Wise garden is a bioretention facility in Boise Municipal Park, and Boise City has various examples of porous pavement installations. Boise City reports that since 2001, it has effectively achieved retention volumes reflecting the 50-year, 24-hour storm depth, or 100-year, 24-hour storm depth, on nearly 98% of the acres permitted for development.<sup>23</sup>

Through the permit, EPA requires the permittees to continue using GI and LID approaches, and to use local design requirements to require a volume-based target for onsite storm water management. Boise City, Garden City and ACHD currently have such requirements in place.

In Part II.B.2, EPA requires that each permittee;

- Implement, through ordinance or other regulatory requirements, the installation and maintenance of permanent storm water management controls at all new development or redevelopment sites.
  - EPA is proposing that, prior to the expiration date of the permit, the permittees establish, through an ordinance or other regulatory mechanism, design specifications to require onsite storm water management of at least the first 0.6 inches of rainfall.

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<sup>20</sup> National Management Measures to Control Nonpoint Source Pollution From Urban Areas, EPA-841-B-05-004, January 2006; and 64 FR 68725 – 68728 and 68759, December 8, 1999.

<sup>21</sup> Report to West Virginia Department of Environmental Protection: Options for WV's General Stormwater Permit under NPDES Phase II, US EPA and Tetrattech, Inc., November 2007.

<sup>22</sup> Technical Guidance on Implementing Section 438 of the Energy Independence and Security Act, US EPA, December 2009.

<sup>23</sup> 2009 NPDES Permit Annual Report, Section 3- City of Boise .



- Develop /update a design criteria manual which specifies acceptable management controls;
- Develop and implement a GI/LID Strategy including pilot project evaluations to examine the effectiveness of various practices at permittee – owned locations;
- Maintain a system to review and approve plans;
- Ensure proper operation and maintenance (O&M) of permanent controls through inventory and tracking of control facilities, O&M agreements, and inspection and enforcement of permittee requirements as necessary; and
- Conduct training and provide education for permittee staff and local audiences.

Since 2008, EPA has advocated a volume-based approach to storm water management.<sup>24</sup> In addition to existing specifications in the permittees' design guidelines and other documents), EPA is asking the permittees to incorporate approaches in their respective design guidelines that will effectively manage the total rainfall volume from the 95<sup>th</sup> percentile storm event. Using weather data collected from the Boise Airport, EPA estimates that approximately 95% of the storms in the Boise area result in .06 inches of total rain. See Appendix C. EPA has therefore proposed that the permittees require onsite management of volume of rainfall from at least a 0.6-inch storm for new development and redevelopment sites disturbing 5,000 square feet or more through an ordinance or other regulatory mechanism. The use of infiltration, reuse, or evapotranspiration techniques to prevent the volume of water from storms of 0.6 inches or less from being discharged to the MS4s (or to receiving waters) will protect water quality. Such techniques will reduce the overall loading of pollutants to Lower Boise River and its tributaries. EPA proposes that the permittees explore the use of techniques like water reuse or water harvesting, in addition to infiltration techniques, as a possible means to control runoff volumes at new development and redevelopment sites.

Retrofitting existing development is also a crucial consideration to better manage ongoing storm water runoff. Parking lots are excellent candidate locations for evaluating the effectiveness of site level management techniques designed to reduce receiving water impacts from both pollutants and overland flow.

***EPA invites comments on the scope and breadth of these requirements for managing storm water from new development and redevelopment.***

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<sup>24</sup> Report to West Virginia Department of Environmental Protection: Options for WV's General Stormwater Permit under NPDES Phase II, US EPA and Tetrattech, Inc, November 2007.

## **Industrial & Commercial Storm Water Discharge Management**

**Permit Part II.B.3** requires the permittees to continue its programs to reduce the discharge of pollutants from industrial and commercial operations to the MS4. Specifically, the permittees must:

- Maintain an inventory and map of certain industrial and commercial activities, including all animal related facilities within the permit area. The purpose of the inventory is to assist the permittees in identifying problem areas, with particular emphasis on sources known to likely contribute sediment, phosphorus or bacteria to receiving waters. The inventory and map should be updated at least annually using information obtained from field activities and intra-agency sources (e.g., business licenses, pretreatment permits, sanitary sewer hookups) to ensure that the inventory remains current and accurate. For any facilities identified as needing separate NPDES permit under the federal storm water requirements, the permittees may inform sources of their obligation directly, and/or may notify EPA by providing basic facility information for further Agency action.
- The permittees must collectively identify two specific industrial/commercial activities not adequately addressed through existing programs, and develop best management practices for each activity, and educate selected industrial/commercial audiences regarding performance expectations.
- The permittees must cooperatively prioritize and inspect selected industrial and commercial facilities/activities which discharge to receiving waters or to the MS4s.

These activities support the pollutant reduction goals of the Lower Boise River TMDLs by requiring the permittees to focus their assessment, education and enforcement efforts on facilities that are most likely to discharge pollutants of concern.

*EPA invites public comment on the scope and breadth of the requirements proposed in Part II.B.3 of the permit.*

## ***Storm Water Infrastructure and Street Management***

**Permit Part II.B.4** requires the permittees to continue operating and maintaining their MS4s, and associated permittee-owned facilities, to prevent or reduce pollutant runoff to the MEP. Consistent with the permittees' 2004 application, Annual Reports, as well as information submitted by the permittees in early 2011, and the Lower Boise River TMDL, EPA requires the permittees to:

- Maintain storm water system inventory and map of the MS4s located within the permit area;
- Inspect and maintain all catch basins and storm sewer system inlets;
- Ensure adequate pollutant reduction from street and road maintenance activities by updating the Street Maintenance Standard Operating Procedures (SOPs); maintaining the inventory of sand and salt usage on streets and roads, and build covered storage facilities at each permittee's primary sand/salt/material storage locations;
- Update the Street and Road Sweepings Management Plan to identify areas as needing street sweeping on a high, medium or low frequency schedule, and implement street sweeping to optimize pollutant removal;
- Ensure the proper use of pesticides, herbicides and fertilizers in all permittee uses and activities;
- Develop and implement industrial storm water pollution prevention plans for all permittee-owned vehicle equipment and maintenance yards, and material storage facilities;
  - EPA includes this requirement in order to clarify that, although such facilities are not clearly regulated by the industrial NPDES storm water permit requirements under the MSGP as determined by a Standard Industrial Classification (SIC) code, preventing pollution in runoff from such permittee-owned locations is both necessary and expected to reduce pollutant loadings from municipal operations. Locations operated by the permittees include the ITD Maintenance Yard in Garden City; the Boise/Orchard materials storage area; and the ACHD Adams Street and Cloverdale Maintenance Yards;
- Ensure that any new storm water or flood management projects are conducted, from design to implementation, in a manner that reduces pollutants and protects receiving water quality;
  - This provision includes a feasibility analysis of possible retrofit projects intended to increase pollutant removal efficiencies necessary to better implement the Lower Boise River TMDL, and is included to complement the outcomes of both the structural control and GI/LID effectiveness monitoring/evaluation requirements in Permit Parts VI.9 and VI.10;
- Continue efforts to reduce litter; and
- Conduct regular training for appropriate permittee staff.

Much of the work to develop a comprehensive, system-wide maintenance program was accomplished during the previous permit term. Permittees may modify and update existing SOPs and manuals as necessary. The permittees must continue to focus maintenance on their permittee-owned portions of the MS4s to protect water quality. Proper operation and maintenance of the storm drain system demands SOPs that integrate with other municipal maintenance activities. Because of the diverse nature of the permittees' MS4s (which includes streets, parking lots, storm water ponds, underground pipes, drainage ditches, etc.), individual SOPs, including inspection and maintenance schedules, are necessary for each type of infrastructure/facility. The SOPs should include a protocol for testing and safely disposing of waste materials and decant water.

Based on jurisdiction and relative responsibilities, the permittees must continue to inventory street maintenance materials used throughout the permit term. EPA has included a requirement for the permittees to build covered shelter for road sand and salt storage, and has included a requirement that permittees responsible for such activities evaluate and improve equipment and practices used for sweeping arterial and collector streets. The permittees must continue to diligently manage the application and removal of road traction materials, and is reflected in the permit through minimum street sweeping and other practices. These SWMP requirements are consistent with the suggested implementation of BMPs to achieve the goals of the Lower Boise River TMDLs.

The permit requires the permittees to ensure the appropriate use of pesticides, herbicides, and fertilizers, by both permittees themselves and others those operating in public areas owned or operated by the permittees. Similarly, existing programs implemented by the permittees to control litter are effective and comprehensive. Appropriate overall training for responsible staff ensures that such operation and maintenance activities are conducted properly with attention to water quality impacts. EPA continues the previous permit's requirements for staff training, control of pesticides/herbicides, and the control of floatables within the permit area.

In Permit Part II.B.4.f, EPA requires all permittee maintenance yards to manage onsite materials and conduct activities to prevent pollutants in storm water runoff through use of storm water pollution prevention plans. Plans developed for such locations can use the basic SWPPP framework identified in various EPA guidance materials, and may follow a "template plan" that establishes basic requirements but are tailored to the location/responsible staff,

In Permit Part II.B.4.g, EPA intends to continue the prior permit's requirement for the oversight of structural flood control measures by specifying that all storm water management projects, for either storm runoff volume or storm runoff quality, be designed and implemented to prevent adverse impacts to beneficial uses and other expressions of the Idaho water quality standards. As mentioned above, EPA includes a requirement for the permittees to conduct a feasibility analysis of possible retrofit projects to increase pollutant removal effectiveness.

***EPA invites public comment on the scope and breadth of requirements proposed in Part II.B.4.***

## Illicit Discharge Management & Spill Response Requirements

**Permit Part II.B.5** addresses illicit discharges and spill response. An illicit discharge is any discharge to a MS4 that is not composed entirely of storm water. Exceptions to this definition, such as fire fighting activities, certain types of *de minimus* discharges, or otherwise permitted discharges, are addressed in Part I.D of the permit.

MS4 discharges often include wastes and wastewater from non-storm water sources. The purpose of this program is to provide ongoing surveillance and deterrence of pollutant loadings that may discharge through the MS4. Studies have shown that dry weather flows from the storm drain system may contribute a larger annual discharge mass of some pollutants than wet weather storm water flows. Pollutant levels from these illicit discharges are often high enough to significantly degrade receiving water quality and threaten aquatic, wildlife, and human health. Various guidance materials are available from EPA and others to assist in the implementation of an illicit discharge detection and elimination program<sup>25,26</sup>

The Boise City ordinance (STW Ordinance BCC 8-15) was extended to all interested permittees through an interjurisdictional agreement identifying enforcement responsibilities; this agreement was submitted to EPA with the FY2005 Boise Area MS4 Annual Report. Each of the permittees established a program to prohibit, detect and respond to illicit discharges during the previous permit term, as appropriate to their jurisdiction and overall responsibilities. In addition, the permittees also ensure that they have the capacity to respond to accidental spills. The permittees continue to work jointly with other organizations to provide coordinated spill response and prevention activities. In the 2004 application materials, the permittees proposed to continue their respective programs providing complaint response (with ACHD assuming responsibility for the hotline in order to expand its availability throughout Ada County), dry weather screening of outfalls, investigation of pollutant sources, and spill response and prevention.

Permit Part II.B.5 requires each permittee to take the following actions:

- Update the ordinances or other regulatory mechanism prohibiting non-storm water discharges, as necessary.
  - EPA has proposed specific types of discharges that must be prohibited from entering the MS4s, based on consideration of MS4 permit

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<sup>25</sup> Pitt, R., M. Lalor, R. Field, D.D. Adrian and D. Barbe. 1993. *Investigation of Inappropriate Pollutant Entries into Storm Drainage Systems: A User's Guide*. US EPA Office of Research and Development. EPA/600/R-92/238 <http://www.epa.gov/clariton>;

<sup>26</sup> New England Interstate Water Pollution Control Commission, 2003. *Illicit Discharge Detection and Elimination Manual: A Handbook for Municipalities*.

The Center for Watershed Protection and Robert Pitt, University of Alabama. 2004. *Illicit Discharge Detection and Elimination*", *A Guidance Manual for Program Development and Technical Assessments*. EPA Cooperative Agreement X-82907801-0

language for the San Diego MS4 as developed by the State of California and other EPA guidance materials;

- Maintain a program to receive and respond complaints from the public;
- Map locations of illicit discharge/connections to identify priority areas;
- Continue dry weather screening of outfalls, including mandatory follow-up actions to identify and/or eliminate problems;
- Maintain all spill prevention and response capabilities, including a used oil and toxic material disposal program, through coordination with appropriate entities to provide maximum water quality protection at all times; and
- Provide training for appropriate municipal and state staff to respond to spills, complaints and illicit discharges/connections to the MS4.

The permit requires the permittees to continue their illicit discharge complaint reporting and response program through the use of a telephone hotline, community education, and detailed response procedures. This program must be advertised broadly in concert with the public education requirements in Permit Part II.B.6. Such a system and protocols are currently in place to track calls from citizens and to direct reports of discharges/dumping to appropriate emergency response authorities. Staff designated to handle calls must be trained in storm water issues and emergency response to gather and transfer the right information to responders. Conducting an investigation as soon as possible after the initial complaint report is crucial to the success of this activity. Sources of illicit discharges are often intermittent or mobile, yet the frequency or severity of such discharges can have lasting effects on water quality. The nature, extent, and conclusions of each inspection should be recorded with the original complaint to provide a full picture of each incident. This information will not only be helpful in tracking permittee activities in illicit discharge/spill response, but it also provides detailed information about the types and locations of discharges, their possible sources, and other information pertinent to targeting future inspection, outreach, and education activities. Additionally, a complete file documenting an incident can provide better evidence in cases where a criminal citation is issued.

Data collected through reporting of illicit discharges and connections, as well as through dry weather screening, can reveal important trends in pollutant generation and transport to the MS4. EPA has therefore included a requirement that the permittees map the occurrences of illicit discharges.

EPA requires that the permittees continue to conduct dry weather analytical and field screening monitoring of outfalls, and has consolidated the dry weather screening program requirements into Permit Part II.B.5.d. Samples taken during dry weather screening must be screened for pH, total chlorine, detergents, total copper, total phenols, fecal coliform bacteria, and turbidity.

Threshold limits for dry weather monitoring results are important to distinguish pollutant spikes from normal background conditions at a particular outfall. For example, through its Stormwater Investigation Manual, ACHD has established threshold levels which, when exceeded, results in retesting to determine whether the sample was an isolated event or an ongoing water quality issue. The permittees should also consider establishing a visual baseline for each outfall type to establish what constitutes “normal” dry weather flows so as to distinguish between background conditions (ground water sources, or irrigation water, for example) and abnormal non-storm water flows prohibited by the permit.

EPA has also included a requirement that follow-up activities for locations of recurring illicit discharges (identified by complaints or permittee screening activities) must begin within 15 days of identifying elevated concentrations of screening parameters

EPA has consolidated the spill prevention and response requirements of the SWMP into Permit Parts II.B.5.f and g. The permittees must appropriately respond to spills and facilitate the proper management, disposal and/or recycling of used oil, vehicle fluids, toxic materials, and other household hazardous wastes. Permittees must continue to encourage recycling and proper disposal of used oil and household hazardous waste through community outreach and public education. EPA has removed the specific element of the previous permit for participation in specific spill response task groups, and substitutes the requirement for each permittee to prevent, respond, contain and clean up any spill discharging to their MS4. Boise, Garden City, BSU are active participants specific interagency groups; ACHD and ITD3 maintain their own spill response programs, and, through enforcement agreements, DD3 relies on the spill response capacities of the other permittees.

Permittees must provide training to staff regarding how to identify and respond to illicit discharges, connections and/or spills to the MS4. Municipal staff can be the “eyes and ears” of the storm water program if they are trained to identify illicit discharges and spills or evidence of illegal dumping.

The permittees’ continued ability to adequately respond to reports of illicit discharges, and to effectively eliminate those discharges where necessary, supports the implementation of the Lower Boise River TMDL. Continued outfall screening and dedicated investigation of those outfalls found to have elevated levels of sediment, nutrients and bacteria will further reduce pollutant loading to the Boise River and its tributaries.

***EPA requests comment on all aspects of the Illicit Discharge Management Program requirements.***

## **Public Education and Public Involvement Requirements**

**Permit Part II.B.6** specifies the SWMP’s public education and involvement requirements. EPA believes that the public can provide valuable input and assistance to the local SWMP. Public support is crucial to the success of a SWMP and citizens who participate in the development and decision making process are more likely to take an active role in its implementation. Community education and opportunities for public involvement are important elements of successful water quality protection programs.

The permittees began their storm water public education programs in the mid 1990's and increased efforts during the previous permit term. Boise City is the lead agency for public education and outreach within Boise City's jurisdiction; Garden City is the lead agency for public education and outreach within Garden City. Together the permittees have created an extensive and creative education and outreach effort that successfully targets various audiences.

In the 2004 application, the permittees identified education projects that would occur in concert with the revisions to the SWMP and the MS4 permit, specifically for construction and development representatives and the general public. The following public education and involvement requirements include the actions outlined by the permittees:

- Conduct broad public outreach and education efforts to various audiences highlighting basic information on the impacts of storm water runoff on receiving waters, including assessment of the
- Conduct specific training/outreach to the public and MS4 permittee staff support various requirements of the permit, including appropriate construction site management, new development and redevelopment techniques, illicit discharge response, and maintenance of storm water infrastructure and streets.
- Maintain and promote a publicly accessible storm water website. The existing websites must be updated to reflect the activities and resources of the Boise-Garden City area permittees;

***EPA requests comments on all aspects of the public education and involvement requirements specified in the proposed permit.***

## **Discharges to Water Quality Impaired Receiving Waters**

**Permit Part II.C** addresses the federal regulatory requirement that all NPDES permits must include requirements necessary to achieve state water quality standards. (see 40 CFR 122.44(d)). In the Ninth Circuit Court decision *Defenders of Wildlife, et al v. Browner*,<sup>27</sup> the Court determined that the permitting authority has the ability to impose more stringent requirements to meet state water quality standards. The permit contains narrative limits to achieve Idaho water quality standards to the MEP. Based on the continued water quality impairment of the Boise River within the Boise-Garden City area due to sediment, bacteria, and phosphorus, and the conclusions of IDEQ's Lower Boise River TMDL Five Year Review<sup>28</sup> (February 2009), various provisions of the required SWMP are more

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<sup>27</sup> *Defenders of Wildlife v. Browner*, 191 F.3d 1159 (9th Cir. 1999)

<sup>28</sup> See Lower Boise River TMDL Five Year Review, Final, February 2009  
[http://www.deq.idaho.gov/media/451665-\\_water\\_data\\_reports\\_surface\\_water\\_tmdls\\_boise\\_river\\_lower\\_boise\\_river\\_lower\\_five\\_year\\_review\\_final\\_0209.pdf](http://www.deq.idaho.gov/media/451665-_water_data_reports_surface_water_tmdls_boise_river_lower_boise_river_lower_five_year_review_final_0209.pdf)



prescriptive to better remove these pollutants of concern from municipal storm water runoff discharging to the Boise River and its tributaries. In addition, EPA is requiring the permittees to improve efforts to estimate how much pollutant reduction occurs through their collective SWMP activities. EPA has proposed that the permittees begin a monitoring program to estimate and quantify pollutant loading from the permittees' MS4s, and to determine the effectiveness of various strategies meant to control pollutants of concern. The permittees must also report annually how the SWMP activities are being implemented to specifically address the pollutants of concern. Further discussion of the monitoring requirements is contained in Section V.F of this document.

## **Reviewing and Updating the SWMP**

**Permit Part II.D** describes procedures to be used to perform additional activities and minor changes to the SWMP. EPA has determined that minor changes to the SWMP do not constitute the need for permit modifications as defined in the regulations at 40 CFR § 122.6. The SWMP is the set of actions and activities used by the permittees to reduce the discharge of pollutants from the MS4 to the MEP and to protect water quality. Minor changes and adjustments to the various SWMP elements are expected and may be necessary to meet the permit requirements. The permit does not allow permittees to remove elements in the SWMP that are required through permit conditions or regulatory requirements. Both EPA and IDEQ will review any changes to the SWMP requested by the permittees. If the requested changes are found to be major modifications to the permit, as defined in 40 CFR § 122.62(a), then EPA will notify the permittees and comply with permit modification procedures, including the appropriate public notice procedures.

## **Transfer of Ownership, Operational Authority, or Responsibility**

**Permit Part II.E** requires each permittee to extend their SWMP programs to all areas under their direct control, and to acknowledge or report changes in ownership or operational authority to EPA and IDEQ through the Annual Reports.

## **SWMP Resources**

**Permit Part II.F** continues to require the permittees to provide adequate financial support and staff capabilities to implement their activities under the SWMP, and to report on annual expenditures in each Annual Report. Compliance with Part II.F will be demonstrated by the permittees' ability to fully implement the requirements of the permit. The permit does not require specific staffing or funding levels, thus providing the permittees with the flexibility and incentive to adopt the most efficient methods to comply with permit requirements. EPA encourages the permittees to establish stable funding sources to support ongoing SWMP implementation.

## **Legal Authority**

**Permit Part II.G** continues to require permittees to establish and maintain adequate legal authority to implement the SWMP as was required in the previously issued permit. EPA has included specific text revisions as requested by the permittees in the 2004 application

materials which clarify the types of legal authority available to each specific permittee. EPA is requiring each permittee to provide an updated list of citations and sources of their legal authorities as part of the SWMP documentation submitted with the first year Annual Report.

## **Schedule for SWMP Implementation and Compliance**

**Permit Part III** summarizes the schedule for SWMP implementation and compliance. In particular, Part III of the permit specifies the dates by which SWMP activities/milestones will be accomplished.

## **Monitoring, Recordkeeping and Reporting Requirements**

**Permit Part IV** specifies the monitoring, recordkeeping and reporting requirements. Federal regulations at 40 CFR § 122.26(d)(2)(v) requires MS4 operators to assess the effectiveness of their SWMP activities and the appropriateness of their selected BMPs. As previously mentioned, EPA's 2002 TMDL Guidance Memo also specifies that, when narrative BMPs are used as permit limitations to implement WLAs, that the NPDES permit require monitoring activities as necessary to assure compliance with the WLAs. EPA has included appropriate monitoring and assessment requirements in Part IV of the permit.

ACHD has conducted storm water discharge monitoring at five locations since 1999. Based on ACHD's statistical analysis of storm water monitoring data for water years 2002 through 2009, as well as results from earlier reports, ACHD recommended the following additions to the NPDES permit requirements to further understand the relationships and trends of the storm water system discharges:

- An annual Quality Assurance report identifying and flagging outliers would create a more reliable dataset.
- Further discussion on seasonal definitions could possibly create an opportunity to analyze more summer storm events
- Targeting a summer storm event would allow for a more complete seasonal analysis.
- Continued statistical analysis of the Annual Report data could reveal more significant trends.

EPA has outlined that the permittees conduct wet weather monitoring and evaluation activities intended to continue characterizing the discharges from the MS4s and to evaluate effectiveness of selected storm water management practices. A revised monitoring and evaluation plan must be submitted with the 2<sup>nd</sup> Year Annual Report. All chemical, physical or analytical monitoring must be conducted according to an approved Quality Assurance Plan (QAP). Monitoring activities must begin within one year of the permit effective date. The permit requires a revised QAP to be submitted with the revised monitoring and evaluation plan with the 2<sup>nd</sup> Year Annual Report.

In Part IV.A.7, EPA has included requirements for ongoing storm water outfall monitoring to continue throughout the permit term. EPA expects that results of this monitoring will be used by the permittees to assess and report upon the overall effectiveness of the SWMP activities. The specific parameters to be sampled have been revised based on input from the permittees contained in the 2004 application materials and the February 2011 supplementary information. EPA added turbidity to the list of parameters suggested by the permittees in order to compare storm water discharge sampling data to the comparable Idaho Water Quality Standard.

In Permit Part IV.A.8, EPA has allowed the permittees the option to develop an in-stream monitoring effort to augment the other storm water data collection efforts with additional information. Although not mandatory, such additional sampling may be useful to help interpret storm water discharge sampling and program effectiveness assessments. The permit states that the permittees may elect to conduct in-stream water quality monitoring. If the permittees decide to conduct such sampling, the specific locations and other details must be specified in a QAP, which must be submitted to EPA and IDEQ for approval prior to beginning this sampling. This review and approval step will assure that both IDEQ and EPA are fully cognizant of any additional sampling conducted within the Boise River where the data will be used to characterize attainment of the TMDL goals. If in-stream data is collected under this permit which will also serve other purposes in addition to characterizing/assessing storm water pollutant discharge reductions, both EPA and IDEQ must be in agreement that the data will be useful and relevant. .

Permit Parts IV.A.9 and IV.A.10 require the permittees to measure the effectiveness of existing structural controls and of green infrastructure/low impact development pilot projects implemented during the permit term to quantitatively assess whether selected practices result in expected pollutant reductions. The results of these monitoring efforts should be used to frame the retrofit feasibility analysis required in Permit Part II.B.4.g.

Permit Part IV.A.11 acknowledges the dry weather screening monitoring efforts required in Permit Part II.B.5.

***EPA requests comment on the breadth and scope of the storm water outfall and in-stream sampling requirements outlined in the permit. EPA requests comments on all aspects of these proposed monitoring requirements, and asks for specific recommendations on how to reasonably, and cost effectively, obtain information that demonstrates whether the permittees are reducing pollutants from the MS4s to the maximum extent practicable.***

Part IV.B of the permit requires the permittees to keep all records required by the permit for a period of at least five years. Records need to be submitted only when requested by EPA or IDEQ. Information regarding the permittees' SWMP must be available to the public, and permittees may charge a reasonable fee for copies. The permittees must make their program materials available to the public electronically via their website.

Part IV.C discusses the expected submittal of monitoring data and the requirements for annual reporting. EPA has updated and revised the Annual Reporting requirements to specify that ACHD is responsible for coordinating the submittal of the collective permittees'

Annual Report(s). Specific elements that are required in the Annual Report are consistent with EPA's *MS4 Permit Improvement Guide* (April 2010). Within the Annual Report, each permittee is required to update their descriptive SWMP document, and to evaluate their SWMP activities for compliance with the terms of the permit, and document progress towards achieving the permit requirements. Specific information to be reported is listed in Permit Part IV.C.3 of the permit. The permit specifies that all discharge monitoring (and water quality monitoring, as applicable) must be summarized and may be submitted with the Annual Report. The Annual Report must also contain a summary of any other information that has been collected during the reporting period. If necessary, the permittees must indicate those permit requirements which are being accomplished by another entity, and provide a status report of that activity/requirement. In the case of another NPDES permitted entity performing the required activity, the Annual Report author may cite, acknowledge, and/or incorporate the other entity's report by reference.

To conserve resources EPA will accept the Annual Report documentation in a readily accessible electronic format such as Adobe Acrobat, or other commonly available word processing program. Documents may be sent to EPA and IDEQ and permittees must continue to create and sign a hard copy of the certification statement required for all reports or documentation submitted to EPA. Any documents comprising the SWMP(s), and or the Annual Report(s), should accompany the certification and be submitted on a CD or other electronic means. If EPA develops a standardized Annual Report format for MS4 permits, EPA will subsequently provide that format to the permittees and recommend its use.

### **Standard Permit Conditions**

Permit Parts V and VI contain standard regulatory language that must be included in all NPDES permits, consistent with 40 CFR § 122.41. Because they are regulations, the language cannot be challenged in the context of an NPDES permit action. This standard regulatory language covers requirements such as monitoring, recording, reporting requirements, compliance responsibilities, and other general NPDES requirements.

The standard permit conditions have been updated to reflect NPDES permits currently issued in Region 10. Specific text in the previously issued permit regarding termination of coverage for a single permittee has been added to the permit in Part VI.A.

Part VII contains definitions which apply to the permit. This section has been significantly updated to reflect both terms used in the previously issued permit and terms which are added to the reissued permit. Where appropriate standard condition language related to monitoring has been included into Part IV of the permit.

## **7. Other Legal Requirements**

### **7A. *Endangered Species Act***

The Endangered Species Act (ESA) requires federal agencies to consult with the National Oceanic and Atmospheric Administration-Fisheries (NOAA-Fisheries) and the U.S. Fish and Wildlife Service (USFWS) on agency actions that could adversely affect any threatened or endangered species or critical habitat.

The Idaho Fish and Wildlife Office of the USFWS published its list, entitled *Endangered, Threatened, Proposed, and Candidate Species With Associated Proposed and Critical Habitats (updated August 17, 2011)*. This list indicates that in Ada County, bull trout (*Salvelinus confluentus*), Snake River snail (*Haitia natricinia*) and Slickspot peppergrass (*Lepidium papilliferum*) are listed as threatened species.

In E-mail messages dated May 15, 2006, and October 15, 2003, Ed Murrell of NOAA-Fisheries has stated that there are no threatened or endangered species under NOAA Fisheries' jurisdiction in the Boise drainage.

The USFWS 2002 Bull Trout Recovery Plan for the Southwest Idaho Recovery Unit notes that in the Boise River Recovery Subunit, bull trout are distributed in three core areas, all upstream of Lucky Peak Dam. Storm water discharges to the Boise River addressed by the permit occur from the permittees' MS4s downstream of the Lucky Peak Dam and Barber Diversion.

A review the Snake River Aquatic Species Recovery Plan (December 1995) notes that the Snake River Snail is not present in the permit area addressed by this permit. A review of the proposed critical habitat for slickspot peppergrass (76 FR 27184-27215, May 11, 2011) indicates that critical habitat has not been identified within the permit area addressed by this permit.

Therefore, EPA has determined that the reissuance of this NPDES permit will have no effect on any endangered or threatened species, and consultation is not required for this action.

### ***7B. Essential Fish Habitat***

Essential fish habitat (EFH) is the waters and substrate (sediments, etc.) necessary for fish to spawn, breed, feed, or grow to maturity. The Magnuson-Stevens Fishery Conservation and Management Act (January 21, 1999) requires EPA to consult with the NOAA-Fisheries when a proposed discharge has the potential to adversely affect (reduce quality and/or quantity of) EFH. Because of the location of these municipal storm water discharges, EPA has determined that the issuance of the permit will not affect any EFH species in the vicinity of the discharges, therefore consultation is not required for this action.

### ***7C. National Historic Preservation Act***

With regard to the National Historic Preservation Act (NHPA), EPA believes that the reduction of pollutants in runoff and issuance of the permit will not result in the disturbance of any site listed or eligible for listing in the National Historic Register. Therefore, EPA believes that the actions associated with the permit are in compliance with the terms and conditions of the NHPA. If any permitted entity engages in any activity that meets all of the following criteria, they must separately consult with and obtain approval from the State Historic Preservation Office prior to initiating the activity:

- 1) the permitted entity is conducting the activity in order to facilitate compliance with the permit;
- 2) the activity includes excavation and/or construction; and
- 3) the activity disturbs previously undisturbed land.

Some examples of activities subject to the permit condition and the above criteria include, but are not limited to: retention/detention basin construction; storm drain line construction; infiltration basin construction; dredging; and stabilization projects (e.g., retaining walls, gabions). The requirement to submit information on plans for future earth disturbing is not intended for activities such as maintenance and private development construction projects. EPA has provided a copy of the permit proposal package to the Idaho State Historic Preservation Office.

### ***7D. State Certification of the Permit***

Concurrent with the public notice of the proposed permit, EPA has requested that Idaho Department of Environmental Quality consider providing state certification of the permit, including an anti-degradation analysis, as required by Section 401(a)(1) of the CWA, 33 USC § 1341(a)(1), and 40 CFR § 124.53. IDEQ staff have reviewed preliminary drafts of the permit, and provided input during the development of the permit proposed for comment. After the close of the public comment period, if EPA has not received a final CWA 401 certification from IDEQ, EPA will revise the permit based on public comment, and at that time will formally request that IDEQ certify the final draft permit. See Appendix B of this document for more information.

## **8. References**

The following is a partial list of information used to develop the permit. A full list of materials used can be found in the Administrative Record for the permit, which can be obtained by contacting EPA as indicated at the beginning of this document.

Reducing Stormwater Costs through Low Impact Development (LID) Strategies and Practices, EPA 841-F-07-006, <http://www.epa.gov/owow/nps/lid/costs07/>

Panhandle Storm water and Erosion Education Program: <http://plrcd.org/SEEP/index.htm>

California Water Resources Board, 2009. Ventura County MS4 Permit, Revised Draft. [http://www.swrcb.ca.gov/rwqcb4/water\\_issues/programs/stormwater/municipal/ventura\\_ms4/Ventura\\_ms4-2009-04-29-Draft-TentativDocuments/Revised Tentative Ventura County MS4 Permit.pdf](http://www.swrcb.ca.gov/rwqcb4/water_issues/programs/stormwater/municipal/ventura_ms4/Ventura_ms4-2009-04-29-Draft-TentativDocuments/Revised_Tentative_Ventura_County_MS4_Permit.pdf)  
May 7, 2009.

California Water Resources Board, 2007. San Diego Phase I MS4 permit. [http://www.swrcb.ca.gov/rwqcb9/water\\_issues/programs/stormwater/docs/sd\\_permit/r9\\_2007\\_0001/2007\\_0001final.pdf](http://www.swrcb.ca.gov/rwqcb9/water_issues/programs/stormwater/docs/sd_permit/r9_2007_0001/2007_0001final.pdf). January 24, 2007.

California Water Resources Board, 2001. Los Angeles MS4 permit.

[http://www.swrcb.ca.gov/rwqcb4/water\\_issues/programs/stormwater/municipal/ms4\\_permits/los\\_angeles/01-182\\_LosAngelesMS4Permit.pdf](http://www.swrcb.ca.gov/rwqcb4/water_issues/programs/stormwater/municipal/ms4_permits/los_angeles/01-182_LosAngelesMS4Permit.pdf)

Center for Watershed Protection, and Pitt, R.M., October 2004. *Illicit Discharge Detection and Elimination – A Guidance Manual for Program Development and Technical Assessments*.

Cleland, B. 2007. TMDL Development from the “Bottom Up” – Part IV: Connecting to Storm water Management Programs. National TMDL Science and Policy 2007. WEF Speciality Conference. Bellevue, WA.

*Defenders of Wildlife v. Browner*, 191 F.3d 1159 (9th Cir. 1999)

Holz, Thomas Written Direct Testimony. 2008. *Pollution Control Hearings Board for the State of Washington*, Puget Soundkeeper Alliance and People for Puget Sound; Pierce County Public Works and Utilities Department; City of Tacoma; The Port of Seattle; Snohomish County; Clark County; and Pacificorp and Puget Sound Energy, Appellants, vs. Department of Ecology, Respondent, and King County; City of Seattle; Port of Tacoma, and Washington State Department of Transportation, Intervenors, August 2008.

Horner, Richard Direct Testimony. 2008. *Pollution Control Hearings Board for the State of Washington*, Puget Soundkeeper Alliance and People for Puget Sound; Pierce County Public Works and Utilities Department; City of Tacoma; The Port of Seattle; Snohomish County; Clark County; and Pacificorp and Puget Sound Energy, Appellants, vs. Department of Ecology, Respondent, and King County; City of Seattle; Port of Tacoma, and Washington State Department of Transportation, Intervenors, August 2008.

State of Idaho’s Water Quality Standards:

[http://www.deq.state.id.us/water/data\\_reports/surface\\_water/monitoring/standards.cfm](http://www.deq.state.id.us/water/data_reports/surface_water/monitoring/standards.cfm)

IDAPA 58.01.02: <http://adm.idaho.gov/adminrules/rules/idapa58/0102.pdf>

IDEQ 2008 Integrated Section 303(d)/Section 305(b) Report:

[http://www.deq.state.id.us/water/data\\_reports/surface\\_water/monitoring/integrated\\_report.cfm](http://www.deq.state.id.us/water/data_reports/surface_water/monitoring/integrated_report.cfm)

IDEQ 2011. Idaho’s Integrated Report (Final). <http://www.deq.idaho.gov/media/725927-2010-integrated-report.pdf>

IDEQ 1999. Lower Boise River Subbasin Assessment, 1999:

- [http://www.deq.state.id.us/water/data\\_reports/surface\\_water/tmdls/boise\\_river\\_lower/boise\\_river\\_lower.cfm](http://www.deq.state.id.us/water/data_reports/surface_water/tmdls/boise_river_lower/boise_river_lower.cfm)
- IDEQ, 2003. Implementation Plan for the Lower Boise TMDL, December 2003.  
[http://www.deq.idaho.gov/media/451449-\\_water\\_data\\_reports\\_surface\\_water\\_tmdls\\_boise\\_river\\_lower\\_boise\\_river\\_lower\\_plan\\_entire.pdf](http://www.deq.idaho.gov/media/451449-_water_data_reports_surface_water_tmdls_boise_river_lower_boise_river_lower_plan_entire.pdf)
- IDEQ, 2001. Indian Creek Subbasin Assessment, December 2001.  
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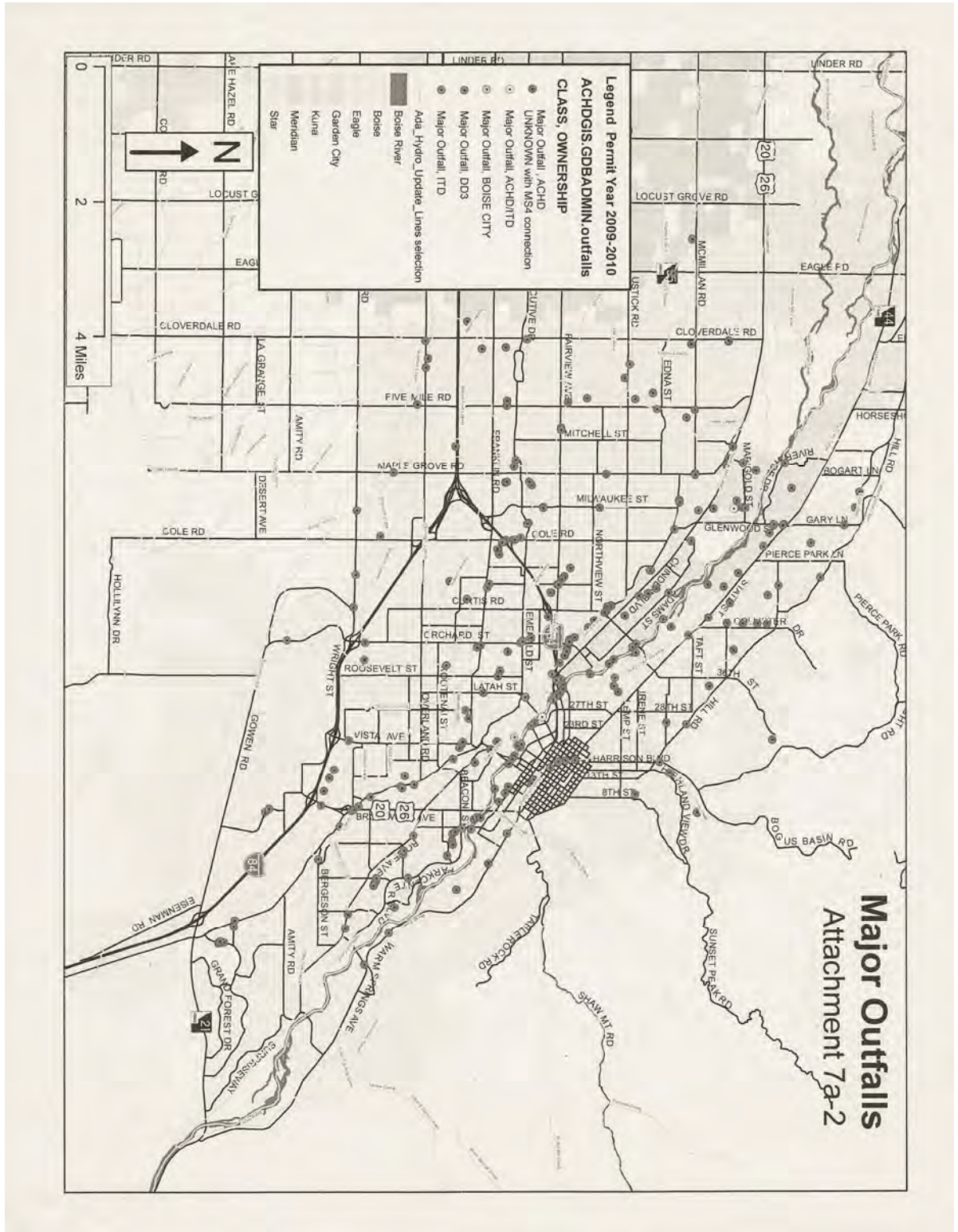
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### Appendix A - Boise-Garden City, Idaho, Area and Outfall Map

Map of Major Outfalls owned and operated by the permittees

Source: Attachment 7a-2 of the 2009-2010 Annual Report for Permit #IDS-027561.



## Appendix B- EPA Correspondence to IDEQ regarding CWA §401 Certification



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY  
REGION 10  
1200 Sixth Avenue, Suite 900  
Seattle, WA 98101-3140

OFFICE OF  
WATER AND  
WATERSHEDS

OCT 21 2011

Reply to Attn of: OWW-130

**CERTIFIED MAIL - RETURN RECEIPT REQUESTED**

Pete Wagner, Regional Administrator  
Idaho Department Environmental Quality  
Boise Regional Office  
1445 North Orchard  
Boise, Idaho 83706-2239

Re: Ada County Highway District, Boise State University, City of Boise, City of Garden City, Ada County Drainage District #3, and Idaho Transportation Department-District #3 Municipal Separate Storm Sewer Systems (MS4s)  
NPDES Permit No.: IDS-027561

Dear Mr. Wagner:

Enclosed for your review is a draft National Pollutant Discharge Elimination System (NPDES) permit for municipal separate storm sewer system discharges for the entities referenced above; the Fact Sheet which outlines the basis for the permit; and the public notice as it will appear in the local newspaper. We intend to begin the public comment period for this permit on or about October 28, 2011.

As you have discussed with my staff, the EPA feels that it is necessary to begin the public comment period on this permit as soon as possible. We explain in the Fact Sheet that we intend to continue working with your office to obtain final state certification pursuant to Section 401 of the Clean Water Act, 33 U.S.C. § 1341. After the comment period, the EPA will send a copy of the proposed final permit with a formal request for state certification, and will initiate the time period for final state certification, as set forth in 40 CFR §124.53. The EPA will not take final action on this permit until your agency has granted, denied, or waived certification or has been deemed to have waived certification as set forth in 40 CFR §§ 124.53 and 124.55. Technical questions regarding the permit may be referred to Misha Vakoc at (206) 553-6650.

Sincerely,

A handwritten signature in black ink, appearing to read "Michael J. Lidgard".

Michael J. Lidgard  
Manager, NPDES Permits Unit

Enclosures

cc: Lance Holloway, IDEQ-Boise

## **Appendix C – Calculation of the 95<sup>th</sup> Percentile Rainfall Event for the Boise-Garden City, Idaho Area.**

EPA has proposed that permittees require the design, construction and maintenance of permanent storm water practices that manage rainfall on-site, and prevent the off-site discharge of the precipitation from all rainfall events less than or equal to the 95<sup>th</sup> percentile rainfall event. The following discussion is summarized from Hirschman and Kosco, 2008, *Managing Storm water in Your Community: A Guide for Building an Effective Post-Construction Program*, Center for Watershed Protection, available online at [http://www.cwp.org/Resource\\_Library/Center\\_Docs/SW/pguidance/Manual/PostConstructionManual.pdf](http://www.cwp.org/Resource_Library/Center_Docs/SW/pguidance/Manual/PostConstructionManual.pdf)

The 95<sup>th</sup> percentile rainfall event is a rainfall event that is greater than 95% of all rainfall events over a period of record (this period of record should typically be > 30 years unless such data do not exist), excluding small rainfall events that are 0.1 of an inch or less. Small rainfall events less than 0.1 of an inch or less are excluded from this analysis because in general this volume does not result in any measureable runoff due to absorption, interception and evaporation by permeable, impermeable and vegetated surfaces.

This approach has been selected because it directly addresses the need to restore and maintain predevelopment hydrology for duration, rate and volume of storm water flows. The 95<sup>th</sup> percentile storm event was selected because in general this storm size approximates the predevelopment hydrologic conditions, i.e., only large storms typically generate runoff. In addition, this approach was selected because it employs natural treatment and flow attenuation methods that are presumed to have existed on a site prior to human disturbance.

EPA has proposed that the permittees require one hundred percent (100%) of the volume of water from storms less than or equal to the 95<sup>th</sup> percentile event be managed onsite and not discharged to surface waters.

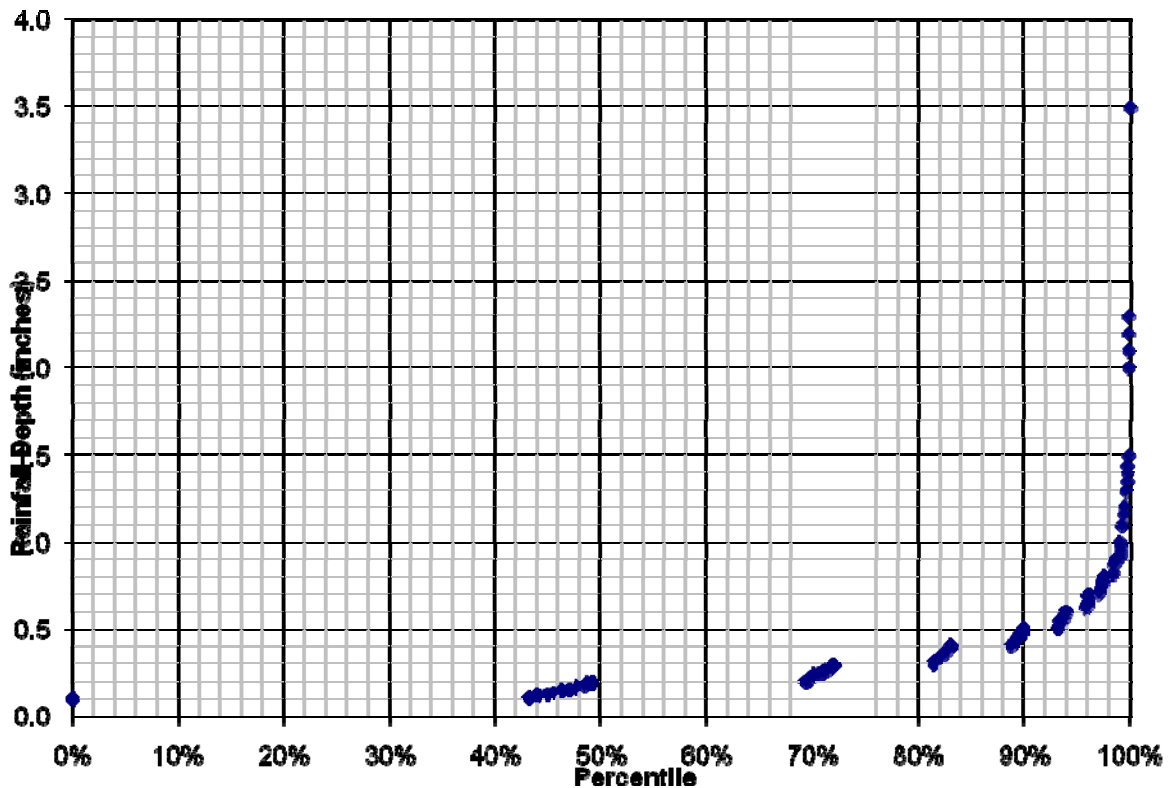
The 95<sup>th</sup> percentile event for the Boise-Garden City area was calculated by staff at Tetra Tech, Inc. on behalf of EPA in February 2009 using the following procedures:

- Long-term rainfall record from both Boise Air Terminal and Lucky Peak Dam was obtained from the National Climatic Data Center (NCDC).
- Data for small rainfall events that are 0.1 inch or less and snowfall events that do not immediately melt were removed from the data sets. These events should be deleted since they do not typically cause runoff and could potentially cause the analyses of the 90<sup>th</sup> percentile storm runoff volume to be inaccurate.
- Using a spreadsheet or simple statistical package, the rainfall events were sorted from highest to lowest. In the next column, the percentage of rainfall events that are less than each ranked event (event number/total number of events) were calculated. For example, if there were 1,000 rainfall events and the highest rainfall event was a 4" event, then 999 events (or a percentile of 999/1000, or 99.9%) are less the 4" rainfall event.
- Use the rainfall event at 95% as the 95<sup>th</sup> percentile storm event.

The table and charts below summarize the data analyses for the Greater Boise-Garden City area. Spreadsheets used to create the following summary chart are available in the Administrative Record for the proposed permit.

Station ID	Station Name	County	Latitude	Longitude	Start Date	End Date	Recharge 50% frequencies	Water Quality Event 90% frequencies	95% freq	One Year Storm 99% freq
							Rainfall Depth (in)	Rainfall Depth (in)	Rainfall Depth (in)	Rainfall Depth (in)
1018	BOISE LUCKY PEAK DAM	ADA	43.525278	-116.054167	1/19/1951	12/31/2006	0.20	0.50	0.60	0.91
1022	BOISE AIR TERMINAL	ADA	43.566667	-116.240556	7/1/1948	12/31/2006	0.20	0.47	0.60	0.88

**Lucky Peak Dam**



### Boise Air Terminal

