Fact Sheet

NPDES Permit Numbers:

IDS028185	Ada County Highway District MS4
IDS028134	Canyon Highway District MS4
IDS028177	Idaho Transportation Department District #3

Public Comment Period Issuance Date: September 25, 2020

Public Comment Period Expiration Date: November 9, 2020

Technical Contact: Misha Vakoc

(206) 553-6650 or (800) 424-4372

vakoc.misha@epa.gov

The U.S. Environmental Protection Agency (EPA) Proposes to Reissue a National Pollutant Discharge Elimination System (NPDES) Permit for Stormwater Discharges To:

Ada County Highway District

Canyon Highway District No. 4

Idaho Transportation Department-District #3

EPA Region 10 proposes to reissue three (3) individual NPDES permits authorizing the stormwater discharges from all municipal separate storm sewer system (MS4) outfalls owned and/or operated by the Ada County Highway District (ACHD), Canyon Highway District (CHD), and Idaho Transportation Department-District #3 (ITD3) located in the Boise and Nampa Urbanized Areas in Ada County and Canyon County, Idaho.

In each instance, the MS4 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 stormwater discharges (40 CFR §§ 122.26, 122.30-35, and 123.35; see also 64 FR 68722 [Dec. 8, 1999] and 81 FR 89320 [Dec. 9, 2016].

The Permits require the continued implementation of a comprehensive stormwater management program (SWMP). Each permit outlines the control measures to be used by the Permittee to reduce pollutants in their stormwater discharges to the maximum extent practicable (MEP), to protect water quality, and to satisfy the appropriate water quality requirements of the CWA. Annual reporting is required to reflect the status of the SWMP implementation.

This Fact Sheet includes:

- information on public comment, public hearing, and appeal procedures;
- descriptions of the regulated MS4 discharges to be covered under each Permit listed above; and
- explanation of the control measures and other Permit terms and conditions.

EPA requests public comment on each these three individual MS4 Permits.

State CWA Section 401 Certification

EPA has requested that the Idaho Department of Environmental Quality (IDEQ) certify each Permit pursuant to Section 401 of the CWA, 33 U.S.C. § 1341.

Questions or comments regarding the certifications for ACHD, CHD and ITD3 MS4 Permits should be directed to:

Idaho Department of Environmental Quality
Boise Regional Office
ATTN: Kati Carberry, Water Quality Program
1445 N. Orchard St.
Boise, ID 83706

(208) 373-0550

Public Comment and Opportunity for Public Hearing

Because of the COVID-19 virus, access to the Region 10 EPA building is limited. Therefore, EPA requests that all comments any of these draft permits or requests for a public hearing be submitted via email to Misha Vakoc (vakoc.misha@epa.gov). If you are unable to submit comments via email, please call 206-553-6650.

Persons wishing to comment on, or request a Public Hearing for, any of the draft Permits must do so in writing by the expiration date of the Public Comment period. A request for Public Hearing must state the specific NPDES permit, the nature of the issues to be raised as well as the requester's name, address and telephone number. All comments and requests for Public Hearings must be in writing and should be submitted to EPA as described in the Public Comments Section of the attached Public Notice.

After the comment period ends, and all comments have been considered, EPA's Regional Director for the Water Division will make a final decision regarding permit issuance. If EPA receives no comments, the tentative conditions in that draft permit will become final. If comments are submitted, EPA will prepare an individual response to comments document for that Permit and, if necessary, will make changes to the draft Permit. After making any necessary changes, EPA will reissue each Permit with its corresponding response to comments document, unless issuance of a new draft Permit is warranted pursuant to 40 CFR § 122.14. The individual Permit will become effective no earlier than thirty (30) days after the issuance date, unless the Permit is appealed to the Environmental Appeals Board pursuant to 40 CFR § 124.19.

Documents Available for Review

Each of the draft Permits, and other information is available on EPA Region 10 website at: https://www.epa.gov/npdes-permits/stormwater-discharges-municipal-sources-idaho-and-washington OR https://www.epa.gov/npdes-permits/idaho-npdes-permits.

Because of COVID-19 response, there is no public access to the Region 10 EPA buildings at this time. Therefore, EPA cannot make hard copies available for viewing at our offices.

For technical questions regarding the Permits listed above or this Fact Sheet, contact Misha Vakoc at the phone number or E-mail listed above. Services for persons with disabilities are available by contacting Audrey Washington at (206) 553-0523.

Contents

Acronyms

ACM	Alternative Control Measure
BMP	Best Management Practice
CFR	Code of Federal Regulations
CGP	Construction General Permit, i.e., the most current version of the *NPDES General Permit for Stormwater Discharges from Construction Activities in Idaho*
CWA	Clean Water Act
CZARA	Coastal Zone Act Reauthorization Amendments
EFH	Essential Fish Habitat
ESA	Endangered Species Act
EPA	United States Environmental Protection Agency, Region 10
FR	Federal Register
GI	Green Infrastructure
GSI	Green Stormwater Infrastructure
IDAPA	Idaho Administrative Procedures Act
IDEQ	Idaho Department of Environmental Quality
ITD1	Idaho Transportation Department–District #1
LA	Load Allocation
LID	Low Impact Develoopment
mg/L	Milligrams per Liter
MEP	Maximum Extent Practicable
MS4	Municipal Separate Storm Sewer System
MSFCMA	Magnuson-Stevens Fishery Conservation and Management Act
NEPA	National Environmental Policy Act
NHPA	National Historic Preservation Act
NOAA	National Oceanic and Atmospheric Administration
NPDES	National Pollutant Discharge Elimination System
O&M	Operation and Maintenance
PCBs	Polychlorinated biphenyls
SWMP	Stormwater Management Program
SWPPP	Stormwater Pollution Prevention Plan
TMDL	Total Maximum Daily Load
UA	Urbanized Area
US	United States
USC	United States Code
USFWS	U.S. Fish and Wildlife Service
WA	Washington
WAC	Washington Administrative Code
WD	EPA Region 10 Water Division
WDOE	Washington Department of Ecology
WLA	Wasteload Allocation
WQS	Water Quality Standards

1. Introduction

Stormwater is the surface runoff that results from rain and snow melt. Urban development alters the land's natural infiltration, and human activity generates a host of pollutants that can accumulate on paved surfaces. Uncontrolled stormwater discharges from urban areas can negatively impact water quality. The National Pollutant Discharge Elimination System (NPDES) regulations establish permit requirements for discharges from certain municipal separate storm sewer systems (MS4s) located in a U.S. Census-defined Urbanized Area (UA). Appendix 1 of this Fact Sheet details the types of pollutants typically found in urban stormwater, and explains the regulatory background for the MS4 permit program.

The terms "municipal separate storm sewer" and "small municipal separate storm sewer system" are defined at 40 CFR §122.26(b)(8) and (b)(16), respectively. MS4s include any publicly-owned conveyance or system of conveyances used for collecting and conveying stormwater that discharge to waters of the United States. MS4s are designed for conveying stormwater only, and are not part of a combined sewer system, nor part of a publicly owned treatment works. Such a system may include roads with drainage systems, municipal streets, catch basins, curbs, gutters, ditches, man-made channels, or storm drains.[1] In Idaho, various public entities own and/or operate MS4s, including, but not limited to: cities and counties; local highway districts; Idaho Transportation Department; and colleges and universities.

This Fact Sheet explains the rationale for the proposed Permit terms and conditions for reissuing three (3) existing Permits authorizing stormwater discharges from the regulated small MS4s located in the Nampa and Boise UAs owned and/or operated by the Ada County Highway District (ACHD), Canyon Highway District (CHD) and Idaho Transportation Department District #3 (ITD3), respectively, located in Ada and Canyon Counties, Idaho.

Other entities have responsibilities to manage MS4 discharges in the Nampa and Boise UAs. However this Fact Sheet addresses requirements and responsibilities for ACHD, CHD, and ITD3 only. For example, the Cities of Nampa, Caldwell and Middleton own and/or operate regulated small MS4s in Canyon County; EPA is addressing those discharges through separate NPDES permits. If any other Idaho entities own and/or operate a MS4 in the Nampa or Boise UAs, they must seek NPDES permit coverage for those MS4 discharges by submitting a MS4 permit application.

EPA notes that ACHD and ITD3 individually own and/or operate NPDES-regulated MS4s in the corporate boundaries of Boise City and Garden City, Idaho. Under the federal NPDES Phase I stormwater regulations, these portions of the ACHD and ITD3 MS4s are defined as "medium MS4s" based on the 1990 Census population, and are separately authorized by EPA to discharge as co-permittees under NPDES Permit #IDS027561.

1.1 Permittees and Permit History

In accordance with Clean Water Act (CWA) Section 402(p), 33 U.S.C. § 1342(p), and 40 CFR §122.32, EPA is reissuing each NPDES permit on a system-wide basis for the portion of the MS4 owned and/or operated by the entities listed below and located in the boundaries of the Nampa and/or Boise UA as defined by both the Year 2000 and Year 2010 Decennial Census. See Appendix 3 for maps of the Nampa and Boise UAs.

[1] *See*: 40 CFR §122.26(b); 40 CFR §122.32(a); and EPA 1990.

Permittee	Physical Address
Ada County Highway District	3775 Adams Street Garden City, ID 83714
Canyon Highway District No. 4	15435 Highway 55 Caldwell, ID 83607
Idaho Transportation Department-District #3	8150 W Chinden Blvd. Boise, ID 83714

See Appendix 6 for a summary of the history for each Permit.

In 2016 and 2017, EPA was working on a general permit that would cover all small regulated MS4 discharges in Idaho. During this period of time, EPA received comments from various stakeholders on two versions of the draft general permit. EPA subsequently decided to issue individual permits instead of a general permit. However, the information received, in conjunction with the permit renewal applications and Annual Reports, has been used to inform each of the current draft Permits. All of these materials are available as part of the Administrative Record for each Permit.

1.2 Idaho NPDES Program Authorization

On June 5, 2018, EPA approved Idaho's application to administer and enforce the Idaho Pollutant Discharge Elimination System (IPDES) program. IDEQ will be assuming permitting authority under the IPDES program in phases over a four-year period in accordance with the Memorandum of Agreement (MOA) between IDEQ and EPA, and subject to EPA oversight and enforcement. IDEQ will obtain permitting authority for the stormwater phase on July 1, 2021. At that time, all documentation required by the Permits will be sent to IDEQ rather than to EPA and any decision under the permit stated to be made by EPA or jointly between EPA and IDEQ will be made solely by IDEQ. Permittees will be notified by IDEQ when this transition occurs.

1.3 Description of the MS4s and Discharge Locations

See Appendix 2 and Appendix 6.

1.4 Stormwater Management Program Accomplishments

Since 2009, ACHD, CHD and ITD3 have each successfully implemented SWMP control measures in their jurisdiction, and have documented their accomplishments in their respective Annual Reports, which are part of the Administrative Record(s) for these permits. Examples of their SWMP accomplishments include:

- Permittee-led training for personnel, consultants and construction contractors working within the Permittees' rights of way;
- Relevant stormwater management information available through each Permittee's website(s) – See Appendix 6;
- Ongoing litter removal from the I-84 right of way through the Adopt a Highway Program;

- Current maps and detailed outfall inventories of the MS4s;
- Policies/protocols for screening and response to illicit discharges into the MS4s;
- Requirements for erosion and sediment controls at all construction activities that disturb one or more acres; and
- Ongoing inspection and maintenance of the road/highway system under its jurisdiction;
- Regular staff training on stormwater construction best management practices (BMPs) and NPDES requirements protecting water quality; and
- For ACHD and ITD3 only, MS4 discharge monitoring between 2009 – 2019.

After review of the Annual Reports and EPA inspection reports, EPA concludes that ACHD, CHD, and ITD3 have each effectively implemented the stormwater control measures in compliance with their prior NPDES permit(s) in a manner that has reduced pollutants discharged through each MS4 to the maximum extent practicable (MEP). See also Part 2.1 of this Fact Sheet.

1.5 Permit Development

The NPDES permitting authority must include terms and conditions in each successive MS4 permit that meet all of the requirements of 40 CFR § 122.34(a)(2) "*based on its evaluation of the current permit requirements, record of permittee compliance and program implementation progress, current water quality conditions, and other relevant information.*" The permitting authority must consider adjustments in the form of modified permit requirements, where necessary, to reflect current water quality conditions, best management practices (BMP) effectiveness, and other current relevant information. The permitting authority cannot reissue the same permit conditions for subsequent five-year permit term(s) without considering whether more progress can or should be made in meeting water quality objectives (especially in areas where the receiving waters are not attaining the applicable water quality standards).[2]

For the ACHD, CHD, and ITD3 MS4 Permits, EPA has considered a variety of information in order to develop the terms and conditions in each Permit, including but not limited to:

- NPDES Permits #IDS028185, IDS028134, and IDS028177 as issued in 2009 and subsequent EPA issued MS4 permits in Idaho;
- Permit renewal applications submitted by each entity;
- IDEQ's 2016 *Integrated Report*, describing IDEQ's assessment of waters in the within the Boise and Nampa UAs;
- Annual Reports submitted by each Permittee as required by the prior Permits;
- Updated UA maps and boundaries based on the Year 2010 Census;
- Input from stakeholders and the Permittees on EPA's preliminary draft MS4 general permit(s), which were not issued;

[2] See 40 CFR §122.34(a), EPA 2016a and EPA 2016b.

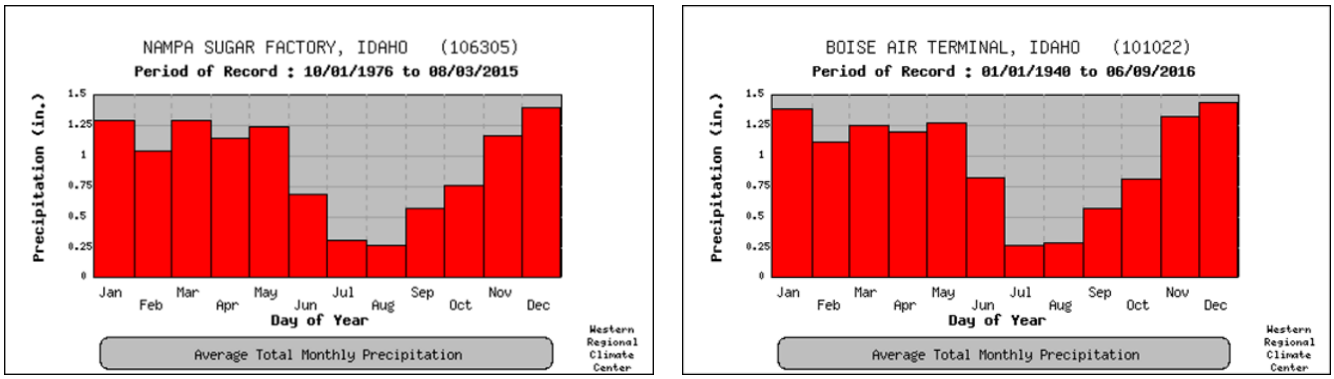
- EPA guidance and national summary information regarding MS4 permits,[3] including:
  - *Compendium Part 1: Six Minimum Control Measure Provisions*, November 2016;
  - *Compendium Part 2: Post Construction Performance Standards*, November 2016;
  - *Compendium Part 3: Water Quality-Based Requirements*, April 2017;
  - *Summary of State Post Construction Stormwater Standards*, July 2016;
  - EPA's November 2014 Memo entitled *Revisions to the November 22, 2002 Memorandum "Establishing TMDL Wasteload Allocations (WLAs) for Stormwater Sources and NPDES Permit Requirements Based on Those WLAs*;" and the
  - *MS4 Permit Improvement Guide*, April 2010.
- Conclusions and recommendations from the National Research Council Report entitled *Urban Stormwater Management in the United States*, dated October 2008;
- Technical developments in the field of stormwater management, including recent research and information on the effective and feasible methods for the on-site management and treatment of stormwater using practices commonly referred to as "low impact development" (LID), "green infrastructure" (GI) and/or "green stormwater infrastructure" (GSI) techniques.
- Other MS4 permits issued by EPA for regulated MS4s in Washington, Puerto Rico, Massachusetts, and New Mexico, as well as MS4 permits issued by other state NPDES permitting authorities.

A partial list of references supporting the development of the ACHD, CHD, and ITD3 MS4 Permits is provided in Section 6 of this Fact Sheet. All supporting references are available in the Administrative Record for this action.

1.6 Average Annual Precipitation in the Nampa and Boise Urbanized Areas

The National Oceanic and Atmospheric Administration's (NOAA's) Western Regional Climate Center maintains historical climate information for various weather stations throughout the western United States. Annual average precipitation in the Boise and Nampa Urbanized Areas show average precipitation of approximately 11.1 and 11.7 inches, respectively, and the annual average snowfall is approximately 10.3 inches.

Figure 1. Average Total Monthly Precipitation in the Nampa and Boise Urbanized Areas.



[3] EPA documents listed here are available at https://www.epa.gov/npdes/stormwater-discharges-municipal-sources

1.7 Receiving Waters

EPA intends to reissue the individual Permits authorizing discharges from the MS4s owned and/or operated by ACHD, CHD and ITD3 in the Boise and Nampa UAs to waters of the United States (U.S.) that include Indian Creek, Mason Creek, Fivemile Creek, Eightmile Creek, Ninemile Creek, and the Boise River. All discharges to waters of the U.S. located in the Permit Area defined by each Permit must also comply with any limitations that may be imposed by the State as part of its water quality certification pursuant to CWA Section 401, 33 U.S.C. § 1341. See also Section 3.7 of this Fact Sheet.

IDEQ has classified these waterbodies as fresh water with designated beneficial uses as listed in Table 1 below.

Table 1*. Designated Beneficial Uses for Waters Receiving Regulated MS4 Discharge*s
See: IDAPA 58.01.02.140.12

Receiving Water	**Designated Beneficial Uses** *Note: All waters in Idaho must also be protected for industrial and agricultural water supply, wildlife habitats, and aesthetics*	**Permittee**
Indian Creek	Cold water aquatic life, secondary contact recreation	ITD3
Mason Creek	Secondary contact recreation	ITD3
West Hartley Gulch	Unassessed; presumed cold water aquatic life and primary or secondary contact recreation	CHD
Dry Creek	Cold water aquatic life, secondary contact recreation	ACHD
Tenmile Creek	Cold water aquatic life, secondary contact recreation	ACHD
Fivemile, Eightmile, and Ninemile Creeks	Cold water aquatic life, secondary contact recreation	ACHD
Boise River – *Middleton to Indian Creek*	Cold water aquatic life, salmonid spawning, primary contact recreation	CHD, ITD3
Boise River- *Veterans Memorial Parkway to Star Bridge*	Cold water aquatic life, salmonid spawning, primary contact recreation	ACHD

1.7.1 Antidegradation

EPA is required under Section 301(b)(1)(C) of the CWA, 33 U.S.C. § 1311(b)(1)(C) and implementing regulations (40 CFR §§ 122.4(d) and 122.44(d)) to establish conditions in NPDES permits that ensure compliance with State water quality standards, including antidegradation requirements. The State of Idaho has an EPA-approved antidegradation policy as well as antidegradation implementation procedures (IDAPA 58.01.02.051). EPA expects that IDEQ will provide an antidegradation analysis in the CWA §401 certification. Once EPA has received a final §401 certification for each permit, EPA will review the respective antidegradation analysis to ensure that it is consistent with CWA Section 301(b)(1)(C).

1.7.2 Water Quality and Total Maximum Daily Loads

Any water body that does not, and/or is not, expected to meet the applicable State water quality standards is described as "impaired" or as a "water quality-limited segment." Section 303(d) of the CWA, 33 U.S.C. § 1313(d), requires States to identify impaired water bodies in the State and develop total maximum daily load (TMDL) management plans for those impaired water bodies. TMDLs define both wasteload allocations (WLAs) for point sources and load allocations (LAs) for non-point sources that specify how much of a particular pollutant can be discharged from both regulated and unregulated sources, respectively, such that the water body will again meet State water quality standards.

IDEQ's 2016 *Integrated Section 303(d)/Section 305(b) Report* (2016 Integrated Report) contains the list of impaired water bodies in Idaho required by CWA Section 303(d).[4] Table 2 below summarizes the status of waters receiving the MS4 discharges covered by the three Permits, including; the waterbody assessment units, or segments, that IDEQ considers impaired.

See Appendix 5 of this Fact Sheet for further discussion of receiving waters for each MS4 Permit and associated water body impairments.

NPDES permit terms and conditions for regulated stormwater discharges must be consistent with the assumptions and requirements of applicable WLAs or LAs in the TMDLs.[5] In general, EPA's guidance recommends that the NPDES permitting authority use BMPs to implement WLAs and load reduction targets for MS4 discharges in a NPDES permit. When using BMPs as narrative permit limitations to implement a WLA or load reduction target, the NPDES permit must include a monitoring mechanism to assess compliance.[6]

Therefore, to continue appropriately addressing the impairment pollutants discharged from the ACHD and ITD3 MS4s into the Boise River and other associated tributary conveyances, each Permit requires the Permittee to continue conducting monitoring/assessment activities; and to conduct at least two (2) pollutant reduction activities during the Permit term. Based on actions previously required by the administratively continued permit, the CHD Permit requires the Permittee to begin monitoring/assessment activity, and to conduct at least one (1) pollutant reduction activity. Each Permittee must update and submit descriptions of their monitoring/assessment and pollutant reduction activities within 23 months of the Permit effective date. Upon EPA and IDEQ review, the permitting authority will revise the respective

[4] The IDEQ's 2016 Integrated Report is available online at: https://www.deq.idaho.gov/water-quality/surface-water/monitoring-assessment/integrated-report.aspx
[5] See: 40 C.F.R. §§ 122.34(c)(1) and 122.44(d)(1)(vii)(B).
[6] See: EPA 1996; EPA 2002; EPA 2014a; EPA 2014b; and EPA 2016b. See also EPA 2008b.

Permit as appropriate to incorporate explicit reference to the specific monitoring/assessment and pollutant reduction activities. Additional discussion of EPA's rationale for these provisions is provided in Section 2.5 of this Fact Sheet.

In the event that EPA approves new or revised TMDLs for the receiving waters listed in Table 2 below and those TMDL(s) contain WLA(s) for regulated MS4s, EPA may, after consultation with IDEQ, choose to modify the specific Permit to incorporate additional provisions. Permit Part 8.1 addresses such a permit modification, consistent with the NPDES regulations at 40 CFR §§ 122.62, 122.64 and 124.5.

Table 2*. Status of Waters Receiving Regulated MS4 Discharges*

MS4 Permittee	Receiving Water/ Waterbody Assessment Unit	Impairment Pollutants	TMDL Status
ITD3	Indian Creek ID17050114SW002_04 *Indian Creek - Sugar Avenue to Boise River*	Cause Unknown, Nutrients suspected; Temperature; *E. coli;* Sedimentation/ Siltation	Temperature: No TMDL completed. Fecal Coliform & Sediment: *Lower Boise River TMDL - 2015 Sediment and Bacteria Addendum.* June 2015. Approved September 2015
ITD3	Mason Creek ID17050114SW006_02 *Mason Creek – entire watershed*	Cause Unknown, Nutrients suspected; Temperature; *E. coli;* Sedimentation/ Siltation; Malathion; Chlorpyrifos	Temperature: No TMDL completed. *E. coli* & Sediment: *Lower Boise River TMDL - 2015 Sediment and Bacteria Addendum. June 2015. Approved September 2015.* Malathion and Chlorpyrifos: No TMDL completed.
CHD	West Hartley Gulch ID17050114SW005_03 *West Hartley Gulch*	Unassessed.	N/A
ACHD	Dry Creek ID17050114SW013_04 *Dry Creek - 4th order (Spring Valley Creek to mouth)*	Unassessed,	N/A
	Dry Creek ID17050114SW013_03 *Dry, Currant and Spring Valley Creeks - 3rd order sections*	Fully Supporting	N/A

Table 2*. Status of Waters Receiving Regulated MS4 Discharges, Continued*

MS4 Permittee	Receiving Water/ Waterbody Assessment Unit	Impairment Pollutants	TMDL Status
ACHD	Tenmile Creek ID17050114SW008_03 *Tenmile Creek - 3rd order below Blacks Creek Reservoir*	Cause Unknown, nutrients suspected; Sediment/ Sedimentation; *E coli*; Chlorpyrifos	E. coli & Sediment: *Lower Boise River TMDL - 2015 Sediment and Bacteria Addendum.* June 2015. Approved September 2015. Chlorpyrifos: No TMDL completed.
ACHD	Fivemile, Eightmile, and Ninemile Creeks ID17050114SW010_02 *Fivemile, Eightmile, and Ninemile Creeks - 1st and 2nd order*	*E.coli*	*E. coli:* *Lower Boise River TMDL - 2015 Sediment and Bacteria Addendum. June 2015. Approved September 2015.*
	Fivemile Creek *ID17050114SW010_03* *Fivemile Creek - 3rd order*	Cause Unknown, nutrients suspected; Sediment/ Sedimentation; *E coli;* Chlorpyrifos	*E. coli* & Sediment: *Lower Boise River TMDL - 2015 Sediment and Bacteria Addendum.* June 2015. Approved September 2015. Chlorpyrifos: No TMDL completed.
CHD, ITD3	Boise River ID17050114SW005_06b *Boise R.-Middleton to Indian Creek*	Temperature; Fecal Coliform; Sedimentation/ Siltation; Total Phosphorus	Temperature: No TMDL completed. Fecal Coliform & Sediment: *Lower Boise River TMDL Subbasin Assessment, Total Maximum Daily Loads*, September 1999. Approved January 2000. Total Phosphorus: *Lower Boise River TMDL - 2015 Total Phosphorus Addendum.* August 2015. Approved December 2015.
ACHD	Boise River ID17050114SW005_06 *Boise River - Veterans Memorial Parkway to Star Bridge*	Temperature; Fecal Coliform; Sedimentation/ Siltation;	Temperature: No TMDL completed. Fecal Coliform & Sediment: *Lower Boise River TMDL Subbasin Assessment, Total Maximum Daily Loads*, September 1999. Approved January 2000.

2. Basis for Permit Conditions

2.1 General Information

NPDES permits for regulated small MS4s must include terms and conditions to reduce the discharge of pollutants from the MS4 to the MEP, to protect water quality, and to satisfy the appropriate water quality requirements under the CWA. At a minimum, MS4 permit terms and conditions must satisfy the requirements set forth in 40 CFR § 122.34(a) through (e).

MEP is the statutory standard that describes the level of pollutant reduction that MS4 operators must achieve. What constitutes MEP "should continually adapt to current (*water quality*) conditions and BMP effectiveness, and should strive to attain water quality standards."[7] Neither the CWA nor the stormwater regulations provide a precise definition of MEP which provides for maximum flexibility in MS4 permitting.

EPA has described the iterative process of imposing the MS4 standard, including what is necessary to reduce pollutants to the MEP, over consecutive permit terms as: (1) the NPDES permitting authority defining clear, specific, and measurable NPDES permit requirements; (2) the MS4 Permittee implementing the required actions as part of a comprehensive program; and (3) the NPDES permitting authority and MS4 Permittee evaluating the effectiveness of BMPs used to date, current water quality conditions, and other relevant information.[8]

All MS4 permits must include terms and conditions that are "clear, specific, and measurable," and consist of narrative, numeric, and/or other types of requirements. Examples include: implementation of specific tasks or practices; BMP design requirements; performance requirements; adaptive management requirements; schedules for implementation, maintenance, and/or frequency of actions.[9]

Such stormwater control measures are managerial, physical, and/or structural BMPs that, when used singly or in combination, reduce the downstream quality and quantity impacts of storm water runoff. A variety of studies demonstrate that such stormwater control measures effectively reduce runoff volume and peak flows, and remove pollutants. When designed, implemented, constructed, and maintained correctly as part of a comprehensive stormwater management program (or SWMP), the control measures - in combination with the prohibitions and other conditions of the Permits as described in this Fact Sheet below - have a positive effect on water quality and other biological indices.[10]

In order for the Permittee to comply with the MS4 standard during the Permit term, EPA has defined the stormwater management control measures and evaluation requirements that the Permittee must implement. Each Permit describes these requirements in more detail than was previously required under the administratively extended Permit to ensure that the terms and conditions are "clear, specific, and measurable." To reduce the discharge of pollutants from the MS4 to the MEP, the Permittee must implement and enforce the stormwater management control measures outlined in Permit Part 3 (*SWMP Control Measures*). To protect water quality, the Permittee must conduct monitoring and/or assessment activities targeted at reducing the impairment pollutants in Permit Part 4 (*Special Conditions for Discharges to Impaired Waters*). Where the Permittee's MS4 discharge(s) may be contributing to an ongoing excursion above an applicable water quality standard, and a long-

[7] EPA 1999, pages 68753-68734.
[8] EPA 2016 pages 89338.-89339; 40 CFR 122.34(a)(2)
[9] See 40 CFR 122.34(a).
[10] EPA 1999a; EPA 1999b; EPA 2006; NRC 2008; EPA 2016b; WERF 2017.

term solution is needed to address the MS4 contribution, each Permit establishes an adaptive management process in Permit Part 5 (*Required Response to Excursions of Idaho Water Quality Standards*). Evaluation and reporting requirements are outlined in Permit Part 6 (*Monitoring, Recordkeeping and Reporting*).

2.2 Discharges Authorized By Each Permit

Permit Part 1.2 conditionally authorizes municipal stormwater discharges, and certain types of non-stormwater discharges, from the Permittee's MS4 in the individual Permit Area, provided that the Permittee complies with the Permit's terms and conditions. Where monitoring or other information shows that a pollutant in a Permittee's MS4 discharge is causing or contributing to an ongoing excursion above the applicable Idaho water quality standard, the Permittee must comply with the notification and other adaptive management requirements in Permit Part 5 (*Required Response to Excursions of Idaho Water Quality Standards*). See also Section 2.6 of this Fact Sheet.

Each Permit outlines conditions and prohibitions related to snow disposal (Permit Part 2.2); stormwater discharges associated with industrial and construction activities (Permit Part 2.3); and discharges unrelated to precipitation events (i.e., "non-stormwater discharges;" Permit Part 2.4) that are similar to the requirements in the respective administratively continued Permits.

EPA acknowledges that, in some urban Idaho watersheds, non-stormwater sources (in the form of landscape irrigation, springs, rising ground waters, and/or groundwater infiltration) are routinely present during dry weather discharges from the MS4(s). The Permit requires the Permittee to determine whether a detected dry weather MS4 discharge is an "allowable" discharge. Section 2.4.2 of this Fact Sheet discusses the related dry weather outfall screening requirements included as Permit Parts 3.2.5 and 3.2.6.

2.3 Permittee Responsibilities

Permit Part 2.5 outlines Permittee responsibilities. In general, the Permittee is responsible for Permit compliance related to its MS4 and associated discharges.

Permit Part 2.5.1 allows the Permittee to implement one or more of the control measures by sharing responsibility with another entity. The Permittee must enter into a written agreement with the outside party, in order to minimize any uncertainty about the other entity's responsibilities to the Permittee. The Permittee remains responsible for compliance with the Permit obligations in the event the other entity fails to implement the control measure (or any component thereof). See 40 CFR §122.35.

Permit Part 2.5.2 requires the Permittee to maintain adequate legal authority to implement and enforce the required SWMP control measures as allowed and authorized pursuant to applicable Idaho law.[11] Without adequate legal authority or other mechanisms that allow control over what enters or discharges from the MS4, the Permittee cannot perform vital stormwater management functions, such as performing inspections, requiring installation and proper operation of pollutant control measures within its jurisdiction, and/or enforcing such requirements.

EPA recognizes that highway districts, state transportation departments, and other special purpose entities do not have formal ordinance authority under Idaho state law. In such cases,

[11] See EPA 2010

EPA expects the Permittee to control pollutants into and from the MS4 by using all relevant regulatory mechanisms available pursuant to applicable Idaho state law.

EPA has specifically avoided using references to "ordinances," as cited in the federal stormwater requirements at 40 CFR §122.34(b) in the three Permits. EPA acknowledges that ACHD, CHD, and ITD3's jurisdictional authority extends only within the boundaries of its right of ways, and that the principle regulatory mechanisms for ensuring compliance with the Permits' stormwater control measures are through policies, standard operating procedures, construction contracts, and/or right of way permits. As necessary, EPA has therefore retained the term "regulatory mechanisms" in the reissued Permits, recognizing that the term includes relevant policies, contract terms, standard operating procedures, and/or other means available to ACHD, CHD, and ITD3 pursuant to Idaho state law.

EPA has reviewed Annual Reports and other information submitted by each of the Permittees and finds that each entity maintains sufficient legal authority to impose and enforce the required control measure components in their jurisdiction.

Permit Part 2.5.3 requires the Permittee to develop, and update as necessary, a written SWMP Document.[12] The SWMP Document summarizes the physical characteristics of the MS4, and describes how the Permittee conducts the required SWMP control measures in its jurisdiction. EPA has provided a suggested format for the SWMP Document as an appendix to each Permit, and notes that other MS4 Permittees have already developed such documents that can be used as examples.[13] The SWMP Document addresses three audiences and purposes:

1. General Public – The written SWMP serves to inform and involve the public in implementation of the local SWMP;
2. EPA and IDEQ - The written SWMP provides the permitting authority a single document to review to understand how the MS4 Permittee will implement its stormwater management program and comply with Permit requirements; and
3. Elected officials and local staff - The written SWMP can potentially be used by the Permittee(s) as an internal planning or briefing document.

The SWMP Document should also describe the Permittee's unique implementation issues such as cooperative or shared responsibilities with other entities.

The requirement for the Permittee to develop and maintain a SWMP Document is an enforceable condition of each Permit. However, the contents of the SWMP Document are not directly enforceable as requirements of the Permit. As a result, the Permittee may create and subsequently revise the SWMP Document, as necessary, to reflect how the stormwater

[12] See 40 CFR §122.34(b) and discussion of the relationship between the SWMP and required permit terms and conditions in *EPA 2016b* at pages 89339-89341. In contrast, the purpose of the Annual Report is to summarize the Permittee's activities during the previous reporting period, and to provide an assessment or review of the Permittee's compliance with the Permit.

[13] See, for example, SWMP plan documents authored by the City of Coeur d'Alene (http://www.cdaid.org/files/Engineering/Storm waterManagementPlan.pdf); City of Nampa (http://www.cityofnampa.us/DocumentCenter/View/1513); and Boise State University (http://www.partnersforcleanwater.org/media/182277/2014_boise_state_university_swmp.pdf). Other examples include the Cities of Bellevue, WA; Tacoma, WA; and/or available through the Permit's Administrative Record.

management activities are implemented in compliance with the Permit. Therefore, updates to the SWMP Document may occur without review or approval by EPA or IDEQ.

The first iteration of the Permittee's SWMP Document under this reissued permit must be available to EPA, IDEQ, and the public by posting the SWMP Document on a publicly available website (required by Permit Part 3.1.8) no later than the due date of the 1st Year Annual Report. If applicable, the SWMP Document must be updated to include any waterbody specific requirements pursuant to Permit Part 4, no later than the due date of the 2nd Year Annual Report. At a minimum, the SWMP Document must be updated to reflect the Permittee's current implementation of their control measures and submitted with the Permit Renewal Application, as required by Permit Part 8.2 no later than 180 days prior to the expiration date of the Permit.

Permit Part 2.5.4 requires the Permittee to track indicator statistics and information to document and report on SWMP implementation progress.

Permit Part 2.5.5 requires the Permittee to provide adequate financial support, staffing, equipment, and other support capabilities to implement the SWMP control measures and other Permit requirements. The Permittee demonstrates compliance with this provision by fully implementing the requirements of the Permit. The Permittees are not required to keep track of, or report, their implementation costs, though it might be appropriate and helpful for the Permittees to track their program investment in some manner. The Permits do not require specific staffing or funding levels, thus providing flexibility and incentive for Permittees to adopt the most efficient methods to comply with Permit requirements.

EPA encourages the Permittees to establish stable funding sources for ongoing SWMP implementation, and enter cooperative working relationships with other regulated small MS4s. Technical resources, such as the *Water Finance Clearinghouse* developed by EPA's Water Infrastructure and Resiliency Finance Center,[14] are available to help Permittees identify sustainable funding solutions. EPA supports comprehensive long-term planning to identify investments in stormwater infrastructure and system management that complement other community development initiatives and promote economic vitality.

Permit Part 2.5.6 requires the Permittee to extend its stormwater control measures to all areas under their direct control when new areas served by the MS4 are annexed, or when areas previously served by the MS4 are transferred to another entity. The Permittee must report changes in ownership or operational authority to EPA and IDEQ through the SWMP Document and Annual Reports. The Permittee is reminded to make associated revisions to MS4 system maps or other records as soon as possible.

2.3.1 Alternative Control Measure Requests

Each Permit requires the implementation of SWMP control measures, or control measure components. Where a Permittee must revise or update SWMP control measures, or control measure components, full implementation must be accomplished no later than 180 days prior to the Permit expiration date. To provide implementation flexibility, each Permit allows the Permittee the discretion to submit requests to implement one or more Alternative Control Measures (ACM).

As outlined in Permit Part 2.6.1, the Permittee may submit supplemental or individualized documents, plans, or programs that are deemed equivalent to a comparable SWMP control measure, or control measure component, in Permit Part 3, along with supporting rationale

[14] See: https://www.epa.gov/waterfinancecenter

and information. Requests for ACM(s) must be submitted no later than two years after the Permit effective date.[15] Upon determining that the ACM request(s) is equivalent to a comparable Permit SWMP control measure, or control measure component, and results in a modification of the Permit terms and conditions, EPA will provide opportunity for public comment and, if requested, a public hearing. EPA will consider all comments received on the ACM and resulting change in permit terms and conditions before issuing a final agency decision.[16]

The opportunity for ACM(s) relative to any SWMP control measure, or control measure component, in Permit Part 3 offers the Permittee maximum flexibility for SWMP implementation. For example, the Permittee may request EPA and IDEQ to consider an alternative means of implementing a SWMP control measure as a whole (such as the Construction Site Runoff control measure specified by Part 3.3); or, the Permittee may request EPA to consider an alternative SWMP control measure component, such as the specific requirement in Part 3.3.3 (*Construction Site Runoff Control Specifications*).

Pursuant to Permit Part 2.6.2, an ACM also includes the Permittee's individual or collective plans or programs to address discharges to impaired waters, as specified by Permit Part 4 (*Special Conditions for Discharges to Impaired Waters*). The opportunity to modify a Permit to incorporate specific monitoring/assessment and pollutant reduction activities offers flexibility for the Permittee to specify how they intend to make continued progress toward applicable water quality improvement targets for their watershed. A Permittee may work independently, or with others, to conduct reasonable, meaningful, and necessary actions that reduce pollutants from the MS4 and protect water quality.

2.4 SWMP Requirements

Permit Part 3 contains clear, specific, and measurable requirements to address the minimum control measures in 40 CFR §122.34(a) and (b) that serve to reduce pollutants in MS4 discharges to the MEP. For each control measure, EPA has outlined specific tasks, BMPs, design requirements, performance requirements, adaptive management requirements, schedules for implementation and maintenance, and/or frequency of actions. Each minimum control measure is comprised of actions and activities that EPA refers to as SWMP control measure components.

EPA considered the existing programs implemented by ACHD, CHD, and ITD3 during development of each Permit terms and conditions. EPA has incrementally refined each SWMP control measure component to iteratively clarify the MS4 permit standard for the Permittee and establish expectations for the level of effort necessary to reduce pollutants in MS4 discharges.

EPA recognizes that each regulated MS4 is unique, and that each operator has different circumstances that guides their approach to stormwater management and pollutant control. To address these unique circumstances, each Permit allows implementation flexibility, while setting consistent expectations through clear, specific, and measurable permit requirements.

2.4.1 Public Education, Outreach, and Public Involvement/Participation

Permit Part 3.1 addresses the required SWMP control measures for public education, outreach, and involvement requirements consistent with 40 CFR §§ 122.34(b)(1) and (b)(2).

[15] Pursuant to Permit Part 8.1, no provision is stayed until the modification process to recognize the ACM is complete.
[16] EPA 2016b.

Public education, outreach, and involvement are essential parts of any plan to reduce stormwater pollutants, because the daily activities of people contribute significantly to the types and sources of pollutants in urban settings. As citizens learn about the impacts of their actions on local water resources, they are more likely to change their behaviors.

The prior MS4 permits for ACHD, CHD and ITD3 contained public education and involvement requirements. As transportation organizations, ACHD, CHD and ITD3 do not have a traditional "resident population" like cities and counties. The Annual Reports submitted by each entity demonstrate that they incorporate stormwater management education into their in-house employee training courses, includes stormwater information on their internal and external websites, and conduct public meetings on major construction projects when necessary. Other activities include internal staff newsletters on stormwater topics, and Adopt a Highway programs along various roadways. EPA encourages ACHD, CHD, and ITD3 to continue working cooperatively with the other entities, particularly the regulated MS4 Cities of Nampa, Caldwell, Middleton, Boise, and Garden City and others throughout the State, to assist with stormwater education and public involvement activities that are both meaningful and relevant to their transportation missions and local needs. Permit Part 3.1 allows the Permittee to choose which education and public involvement activities to continue or initiate during the next permit cycle.

When scoping possible activities, EPA also recommends that each Permittee consider the recommendations found in EPA document, *Promising Practices for Permit Applicants Seeking EPA-Issued Permits: Ways to Engage Neighboring Communities*. See also Section 3.1 of this Fact Sheet.

Each Permit contains the following Public Education, Outreach, and Involvement SWMP control measure components:

- Permit Part 3.1.1 establishes a compliance deadline of one year from the Permit effective date for the Permittee to update and continue their public education, outreach, and involvement activities in the Permit Area. This provision also establishes a deadline by which any ACM Request must be submitted.
- Permit Part 3.1.2 specifies requirements for the Public Education, Outreach and Involvement Program. To the extent allowable pursuant to the authority granted the Permittee under Idaho state law, the Permittee must work to educate and engage interested stakeholders in the development and implementation of the SWMP control measures.
- Permit Part 3.1.3 requires the Permittee to distribute and/or offer a minimum of eight educational messages to at least one of the four audiences listed in Part 3.1.4 during the Permit term.
- Permit Part 3.1.4 identifies target audiences (i.e., General Public; Business/Industrial/Commercial/Institutions; Construction/Development Professionals; and Elected Officials, Land Use Policy and Planning Staff). For each audience, the Permit includes a non-exclusive list of suggested topics for the Permittee to consider as its focus during the Permit term.
- Permit Part 3.1.5 requires the Permittee to assess, or to participate in an effort to assess, the understanding and adoption of behaviors by the target audience(s). A vital, yet challenging, component of a successful education program is the assessment of whether the Permittee's efforts are achieving the goals of increasing

public awareness and behavior change to improve water quality. EPA recognizes and encourages the long-term nature of such assessment activities, and notes that there may be opportunities for the Permittee to work together within the State, or with other watershed organizations, on specific MS4 topics if they choose to do so.

- Permit Part 3.1.6 requires the Permittee to maintain records of its education, outreach, and public involvement activities.
- Permit Part 3.1.7 requires the Permittee to provide educational opportunities related to certain SWMP control measures at least twice during the Permit term. The Permittee may plan opportunities in a manner such that the relative success of their educational efforts can be articulated as required by Permit Part 3.1.5.
- Permit Part 3.1.8 requires the Permittee to maintain and promote at least one publicly-accessible website to provide relevant SWMP information to the public. Relevant information includes the Permittee's SWMP Document, links to relevant public education material, and easily identifiable (and up to date) Permittee contact information such that members of the public may easily call or email to report spills or illicit discharges, and/or ask questions, etc.

  ACHD, CHD, and ITD3 each maintain informational websites where SWMP information is available; see: Appendix 6.

2.4.2 Illicit Discharge Detection and Elimination

Permit Part 3.2 contains requirements for the Permittee to address illicit discharges and spill response within their jurisdiction. At a minimum, EPA requires the Permittee to maintain the ability to prohibit, detect, and eliminate illicit discharges from their MS4s.

The purpose of this SWMP control measure is to require the Permittee to provide ongoing surveillance and deterrence to prevent pollutant loadings caused by illicit discharges into the Permittee's MS4. Illicit discharges can enter the MS4 through direct connections (e.g., wastewater piping mistakenly or deliberately connected to the storm drains), or through indirect connections (e.g., infiltration into the MS4 from cracked sanitary systems, spills collected by drain inlets, or discarded paint or used oil dumped directly into a drain). Both types of illicit discharge can contribute excessive pollutants into the MS4, and in turn can negatively affect water quality. Investigating for and eliminating such illicit discharges from entering the MS4 improves water quality.

The Permittee is responsible for the quality of the discharges from their MS4, and therefore has an interest in locating and discontinuing any uncontrolled non-stormwater discharges into and from their MS4. To ensure that pollutants from non-stormwater discharges are adequately controlled, the Permittee should continue to work cooperatively with neighboring MS4 jurisdictions and use their collective abilities to address illicit discharges in their jurisdiction.

The Illicit Discharge Detection and Elimination control measure components required by 40 CFR §122.34(b)(3) directs the Permittee to manage illicit discharges to the MS4 by:

- Maintaining a map of the MS4 showing the location of all outfalls and names of the receiving waters;
- Effectively prohibiting discharges of non-stormwater to the MS4 through the use of an appropriate regulatory mechanism, and provide for enforcement of that prohibition as needed;

- Implementing a program to detect and address non-stormwater discharges, including procedures to identify problem areas, determine sources of the problem(s), remove the source if one is identified, and document the actions taken; and
- Informing public employees, businesses, and the general public of the hazards associated with illegal discharges and improper disposal of waste, and publicize appropriate public reporting of illicit discharges when they occur.

ACHD, CHD, and ITD3 each have established programs to prohibit, detect, and respond to illicit discharges, as appropriate, within their legal power, in their respective jurisdictions. As noted above, EPA encourages each Permittee to continue working with the neighboring jurisdictions as needed to implement this SWMP control measure through the components described below:

- Permit Part 3.2.1 establishes a compliance deadline 180 days before the Permit expiration date for the Permittee to update their existing illicit discharge program activities, and/or to fully impose any new program components outlined in this Part. EPA believes this timeframe is justified to allow the Permittee adequate opportunity to adjust its existing programs, as necessary, to ensure all the components are sufficiently addressed in the Permit Area. This provision also defines the date by which any ACM Request must be submitted.
- Permit Part 3.2.2 continues to require the Permittee to maintain a current MS4 map, with a new requirement for the Permittee to provide an accompanying inventory of the features that comprise the MS4 system. EPA has refined the content of the MS4 Map and Outfall Inventory, and requires updated materials to be submitted as part of the Permit Renewal Application pursuant to Permit Part 8.2. The purpose of the MS4 Outfall Map and Inventory is to record and verify MS4 outfall locations, including relevant descriptive system characteristics. EPA expects the Permittee to know the locations and characteristics of all outfalls that it owns/operates through mapping their infrastructure and associated assets. The Permittee is encouraged to couple the Inventory with other SWMP control measures, such as the operation and maintenance requirements in Permit Part 3.5, to help inform their inspection and/or maintenance prioritization.

  EPA notes that each entity has completed outfall maps as required by the administratively continued Permits. See Appendix 6. Each Permittee must continue to maintain accurate MS4 mapping and inventory reflecting the locations and nature of wet weather discharges from their MS4.

  Permit Part 3.2.2 also requires the Permittee to identify and characterize any MS4 outfall(s) with ongoing dry weather flows as a result of irrigation return flows and/or groundwater seepage. Knowing both the location and characteristics of such outfall(s) is an important data point in areas where the MS4 discharges to phosphorus- and/or nitrogen- impaired waters. The MS4 Map and Outfall Inventory can be collectively reassessed by EPA, IDEQ, and the Permittee at the time of Permit reissuance to tailor future control measures in the next permit term that address potential non-stormwater discharges that may be contributing to the impairment.
- Permit Part 3.2.3 requires the Permittee to prohibit non-stormwater discharges into the MS4 through enforcement of an ordinance or other legal mechanism to

the extent allowable under Idaho state law. Part 3.2.3 identifies minimum prohibitions that EPA expects the Permittee to enforce in its jurisdiction.

As previously noted, EPA recognizes that ACHD, CHD, and ITD3 do not have the legal authority to enact enforceable ordinances. In each case, the Permittee may continue to cite its existing policies, standard operating procedures, cooperative agreements, or other legal means of ensuring that non-stormwater discharges found discharging through the MS4 will be eliminated when necessary.

EPA reviewed the policy mechanisms currently imposed by ACHD, CHD, and ITD3 and finds that the existing procedures and mechanisms can be used to address the types of non-stormwater flows listed in Permit Part 3.2.3, within the powers available to each entity under Idaho state law. EPA clarifies that it is unnecessary for the legal mechanism to cite all the individual prohibitions listed, provided that the Permittees' legal mechanism can be used to address such discharges if they are found to be discharging into the MS4. This provision provides a minimum expectation for the legal mechanism to prohibit non-stormwater discharges that negatively impact water quality.

- Permit Part 3.2.4 describes EPA's expectations for the Permittee's Illicit Discharge Complaint Reporting and Response Program. The Permittee must maintain and advertise a publicly accessible and available means to report illicit discharges. The Permittee must respond to reports within two (2) days and maintain records regarding actions taken. These programs can be promoted to the public in concert with the public education requirements in Permit Part 3.1. Staff assigned to handle calls should be trained in stormwater issues and emergency response in order 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 program.
- Permit Part 3.2.5 requires the Permittee to conduct a dry weather analytical and field screening monitoring program to identify non-stormwater flows from MS4 outfalls during dry weather. Additionally, this program must emphasize screening activities to detect and identify illicit discharges and illegal connections, and to reinvestigate potentially problematic MS4 outfalls throughout the Permit Area. EPA has added prescriptive requirements to (1) prioritize visual screening of at least 50 outfalls per year throughout the Permittee's jurisdiction (Permit Part 3.2.5.2); (2) use appropriate screening and monitoring protocols when flows are identified during dry weather (Permit Part 3.2.5.3.); and (3) ensure proper recordkeeping/documentation (Permit Part 3.2.5.4).

  Data collected through the Permittee's regular screening of its outfalls during dry weather, and through the public reporting of illicit discharges and connections, can reveal important trends in the types of pollutants generated within and transported into the MS4. Permit Part 3.2.2.6 requires the Permittee to locate and map the occurrences of illicit discharges in order to target appropriate response actions over time. EPA recommends that samples taken during dry weather screening be analyzed for pH, total chlorine, detergents, total copper, total phenols, fecal coliform bacteria, and/or turbidity to assist in source identification.

Appropriate threshold limits for dry weather monitoring results are important to distinguish pollutant spikes from normal background conditions at a particular outfall. For example, ACHD has established threshold levels for their dry weather screening program that, when exceeded, result in retesting to determine whether the sample was an isolated event or an ongoing water quality issue.[17] The Permittee should also consider establishing a visual baseline for each outfall type to aid in determining what constitutes "normal" dry weather flows, and to distinguish between background conditions (uncontaminated ground water infiltration, for example) versus abnormal, non-stormwater flows that are prohibited by the Permit.

- Permit Part 3.2.6 requires mandatory follow-up actions for recurring illicit discharges (identified through complaint reports and/or Permittee screening activities). Response activities must begin within 30 days of identifying elevated concentrations of screening parameters, and action must be taken to eliminate problem discharges within 60 days. Specific timelines are included to direct timely initiation of actions to reduce or fully eliminate a known or newly identified problem.

  Due to the diverse nature and sources of water quality impacts in urban settings in Idaho, both EPA and IDEQ are concerned about inputs of irrigation return flows and/or groundwater seepage through MS4s. Permit Part 3.2.6 requires the Permittee to list identified MS4 outfall locations where irrigation return flows and/or groundwater seepage are present during dry weather (see also See also Permit Part 3.2.2.6.). This is a first, interim step towards an assessment of water quality impacts resulting from these specific non-stormwater discharges. For any MS4 outfall where ongoing dry weather discharges are identified by the Permittee as associated with irrigation return flows and/or groundwater seepage, the term "appropriate action" in Permit Part 3.2.6 means, at a minimum, documentation in the Annual Report of the MS4 outfall location, and the Permittee's determination of the source as either irrigation return flows or groundwater seepage. EPA encourages the Permittee to take action to eliminate such flows if it is identified as a source of pollutants pursuant to Permit Part 2.4.5.2. At a minimum, a summary list of all such outfall locations must be submitted with the Permit Renewal Application. This information will be collectively reassessed by EPA, IDEQ, and the Permittee at the time of the permit renewal to tailor future control measures to appropriately address non-stormwater discharges that may be contributing excess nutrient loads to receiving waters.

- Permit Part 3.2.7 requires the Permittee to respond to spills, and maintain appropriate spill prevention and response capabilities as appropriate within their jurisdiction. Through coordination with state and/or local agencies (under this provision, "agencies" refers to the organizations responsible for spill response), the goal is to provide maximum water quality protection at all times. EPA has included an explicit requirement directing the Permittee to notify the appropriate IDEQ regional office, Idaho State Communications Center, and/or the National

[17] ACHD 2019.

Response Center, as specified by IDEQ in its CWA Section 401 certifications for prior MS4 permits issued by EPA.[18]

- Permit Part 3.2.8 requires coordination with appropriate agencies to ensure the proper disposal of used oil and toxic materials by employees and the public.
- Permit Part 3.2.9 requires the Permittee to train appropriate staff to respond to spills, complaints, and illicit discharges/connections to the MS4. Permittee staff can be the "eyes and ears" of the stormwater program if they are trained to identify illicit discharges and spills or evidence of illegal dumping.

2.4.3 Construction Site Storm Water Runoff Control

This SWMP control measure requires the Permittee to control construction site runoff discharges into their MS4s. 40 CFR §122.34(b)(4) requires the Permittee to use an ordinance or regulatory mechanism to require proper construction site controls for sediment, erosion, and waste management at sites with land disturbance of one (1) or more acres. Additionally, construction activities disturbing less than one (1) acre are subject to this regulation if that activity is part of a common plan of development or sale that exceeds one (1) acre. Other mandatory control measure components are procedures for site plan review that considers potential water quality impacts; procedures for site inspection and enforcement; and procedures for the receipt and consideration of information submitted by the public.

Construction activities (such as clearing vegetation and excavating, moving, and compacting earth and rock) significantly change the land surface. The consequences of construction activitities during rain events include: reduced stormwater infiltration, increased runoff volume and intensity, and higher soil erosion rates. While sediment and other pollutants are readily mobilized by precipitation during land disturbance activity, such discharges can be effectively prevented through the use of reasonable and effective erosion and sedimentation controls. Examples include the use of construction sequencing, and vegetative- or non-vegetative stabilization techniques.[19]

Local oversight is key to ensuring that construction site operators use appropriate techniques to prevent pollutant discharges to the MS4s. Although discharges from all construction sites disturbing one or more acres in Idaho are independently subject to the *NPDES General Permit for Storm Water Discharges from Construction Activity*, #IDR120000 (Construction General Permit or CGP), it is appropriate for the MS4 operators to directly impose local construction site management requirements to prevent construction-related pollutants from entering the MS4s.

ACHD, CHD, and ITD3 each have procedures and policies in place that meet the required construction runoff control measure components consistent with their legal authority under State law. For example, to implement their policy, ITD3 developed and rountinely refines their Standard Specifications for Highway Construction to include stormwater management; known in its ITD3 nomenclature as the "Clean Water Act" insert, the specification focuses on strict adherence to the Construction General Permit. ITD3 has described their responsibility for construction activities related to its road and drainage system and their oversight of construction activities through contracts that specify appropriate storm water management. ITD3 staff review site plans for proper controls, perform inspections, and enforce the

[18] IDEQ 2017; IDEQ 2019; IDEQ 2020.
[19] EPA 1999, pages 68758-68759; EPA 2009a, pages 7-3 through 7-26.

contracts if controls are not implemented. Relevant ITD manuals are used to define appropriate erosion, sediment and onsite materials management.

As previously noted, EPA recognizes that ACHD, CHD, and ITD3 are only responsible for the construction and maintenance of local roads and state highways in their jurisdiction, and do not have legal authority to enact enforceable ordinances. They each may cite their existing policies, design manuals, standard specifications for highway construction, construction contracts, bid documents, cooperative agreements, and/or other legal means of ensuring that construction projects that impact their right-of-ways are appropriately controlled to reduce pollutant discharges through their MS4.

Individual components of the Permit's Construction Site Runoff Control Measure are described below:

- Permit Part 3.3.1 establishes a compliance deadline of 180 days before the Permit expiration date for the Permittee to update its existing programs, if needed, to impose any new or revised control components in the Permit Area. This provision also defines the date by which any ACM Request must be submitted.
- Permit Part 3.3.2 outlines the expected scope of the Permittee's legal mechanism to reduce and prevent runoff from construction sites in its jurisdiction that disturb one (1) acre or more.
- Permit Part 3.3.3 requires written specifications to define appropriate site level controls for construction activities within the Permittee's jurisdiction. EPA clarifies that the type and extent of site-level erosion, sediment, and waste management controls will likely be different depending on site size and location. Therefore, the Permittee has the discretion to determine how best to control sediment and other pollutants in runoff from different sized construction sites.
- Permit Part 3.3.4 requires a preconstruction site plan review process to address construction site activity that will result in land disturbance of one (1) or more acres, and includes consideration of public input. This review can be conducted using a checklist or similar process to consider and address potential water quality impacts from the site activities.
- Permit Part 3.3.5 requires the Permittee to conduct prioritized construction site inspections and to enforce the applicable requirements as needed. At a minimum, the Permittee must inspect and enforce their requirements at construction sites occurring in their jurisdictions that disturb one (1) or more acres.
- Permit Part 3.3.6 requires the Permittee to have a written enforcement response policy or plan to guide and prioritize their oversight, inspection, and enforcement efforts.
- Permit Part 3.3.7 requires the Permittee to provide proper training for construction staff conducting plan review and inspections.

Ensuring that construction sites use appropriate erosion and sedimentation controls through BMP specifications, site plan review, in field inspection and enforcement has been shown to significantly reduce sediment loadings to nearby water bodies. By reducing sediment discharges, the Permittees also commensurately reduce nutrients and other pollutants that bind to the sediment particles. Such control measures, when properly implemented, reduce

overall pollutant loading, and are therefore consistent with the pollutant reduction expectations in the applicable TMDLs identified in Appendix 5 of this document.

2.4.4 Post Construction Stormwater Management from New Development and Redevelopment

Permit Part 3.4 requires the Permittee to implement and enforce a program to control runoff from new development and redevelopment project sites, including projects involving streets and roads.

Pursuant to 40 CFR § 122.34(b)(5), ITD1 must impose these controls at sites disturbing one (1) or more acres and at sites less than one (1) acre, which are part of a common plan of development or sale that exceeds one (1) acre. The Permittee must address runoff from new development and redevelopment project sites using a locally appropriate combination of structural and/or non-structural BMP requirements.[20] Further, the Permittee must enforce the requirements using an appropriate regulatory mechanism, to the extent allowable under state or local law, and ensure the adequate long-term operation and maintenance of these BMPs.[21]

Each Permit uses the term “permanent stormwater controls” instead of “post-construction stormwater management controls” to mean those controls that will treat or control pollutants in stormwater runoff from the development site on a permanent basis after construction is complete. This terminology is consistent with other MS4 permits issued by EPA Region 10 since 2012.

- Permit Part 3.4.1 establishes a compliance deadline of 180 days before the Permit expiration date to refine the existing runoff control program, if needed, to impose any new SWMP control measure components in the Permit Area. This timeframe is justified to allow ITD3 the flexibility to adjust its existing programs as necessary. This provision also defines the date by which any ACM Request must be submitted.
- Permit Part 3.4.2 requires the Permittee to update their legal regulatory mechanism to incorporate an onsite stormwater retention standard, or require treatment equivalent to the onsite retention standard, for new development and redevelopment sites. The purpose of this requirement is to prevent the creation of excess stormwater discharges, and pollutant loadings, from the impervious surfaces associated with the urban development. Use of onsite stormwater management controls at such sites will reduce pollutants in regulated MS4 discharges to the MEP and proactively protect Idaho receiving waters by ensuring that water quality protections continue over the long term. Additional rationale for including the requirement for onsite retention of stormwater runoff from new development and redevelopment is provided Appendix 4 of this Fact Sheet.

  Permit Part 3.4.2 also allows for alternative mitigation in situations where complete onsite retention of the target runoff volume is infeasible. The Permittee may apply an alternative standard if it is deemed to be equally protective, or more protective, of the onsite stormwater management design standard as articulated in the Permit. For

[20] “Non-structural requirements” include, but are not limited to, planning, zoning, and other local requirements such as buffer zones. “Structural controls” include, but are not limited to, the use of storage, infiltration basins, or vegetative practices such as rain gardens or artificial wetlands. *See*: 40 CFR§122.34(b)(5)(iii).
[21] See EPA 2012; EPA 2009; and 40 CFR §122.34(b)(5).

example, alternative local compliance with the Permittee's calculated stormwater management design standard could take the form of off-site mitigation or payment in lieu programs. The Permittee could consider creating an inventory of appropriate alternative stormwater management techniques, and/or using planning mechanisms (such as completed sub-watershed plans or other appropriate means) to identify priority areas within sub-watersheds of their jurisdiction(s) where off-site mitigation, and/or public stormwater mitigation projects, could be implemented.

On a statewide level, ITD has adopted its ITD Best Management Practices Manual and ITD Standard Specifications for Highway Construction for managing stormwater associated with its projects. ITD3's continued implementation of these requirements are consistent with Permit Part 3.4.2. ACHD and CHD have comparable provisions as developed as part of their SWMP and described in their respective Annual Reports.

- Permit Part 3.4.3 requires the Permittee to maintain written specifications for the permanent stormwater controls allowed by the Permittee at development sites within their jurisdiction. These specifications must be utilized at sites disturbing at least one (1) or more acres.
- Permit Part 3.4.4 requires the Permittee to review and approve site plans for permanent stormwater controls at sites resulting from land disturbance of one (1) or more acres. Specific standards are a critical component of the program, but even the best local requirements must be supported by a review component to ensure that the locally established performance standards are met. To comply with this requirement, the Permittee must have the authority to withhold approvals when it determines that the controls at a specific site are not designed to meet established standards for permanent stormwater control.
- Permit Part 3.4.5 outlines the requirement for the Permittee to inspect and enforce its requirements for permanent stormwater controls at sites resulting from land disturbance of one or more acres. Inspection of permanent control measures is key to ensuring water quality protection over the long term. Without periodic inspection or maintenance, the permanent controls can instead become pollutant sources, rather than a means of prevention. An effective local inspection process, combined with appropriate enforcement if necessary, ensures that onsite controls are built according to approved plans and specifications, and use proper materials and installation techniques. EPA expects the Permittee to prioritize its inspection and enforcement to include any new permanent stormwater controls installed after the Permit effective date.
- Permit Part 3.4.6 requires the Permittee to ensure the long-term operation and maintenance (O&M) of permanent stormwater controls through the use of a database inventory to track and manage the operational condition of permanent stormwater controls within its jurisdiction. This database inventory can take the form of a computerized maintenance management system or asset management system that allows for the electronic logging of O&M tasks. Ongoing O&M is necessary to ensure that the BMPs will perform as designed over time. Inadequate maintenance of existing stormwater management controls is a primary shortcoming for most local SWMPs across the country. As with any infrastructure, deferred maintenance can increase costs and negatively affect receiving waters. Unmaintained BMPs will ultimately fail to perform their design functions, and can become a nuisance and/or

pose safety problems.[22] The Permittee must track those permanent controls which are known to them, or for which they accept ownership, beginning no later than the Permit effective date.

- Permit Part 3.4.7 requires the Permittee to ensure that their staff are sufficiently trained and/or qualified to review site plans for permanent stormwater controls, and/or for inspecting the installation and operation of permanent stormwater controls.

2.4.5 Pollution Prevention and Good Housekeeping for MS4 Operations

As noted above, O&M is an integral part of any SWMP, and, when coupled with good housekeeping and pollution prevention principles, reduces the risk of water quality problems from MS4 discharges. The minimum requirements for this control measure are set forth in 40 CFR § 122.34(b)(6). The administratively continued MS4 permits for ACHD, CHD and ITD3 each required the implementation of an O&M program "intended to prevent or reduce pollutant runoff from municipal operations;" to develop an employee training program; and to prepare site-specific stormwater pollution prevention plans (SWPPPs) at the Permittees' own maintenance buildings and similar facilities.

Permit Part 3.5 requires the Permittee to continue to properly operate and maintain their MS4s, actively manage runoff from Permittee owned and/or operated facilities, and conduct their municipal activities to prevent or reduce the discharge of pollutants from the MS4.

ACHD, CHD, and ITD3 must continue to focus on maintenance of their MS4s to protect water quality. Due to the diversity of MS4 facilities, which include not only the streets and parking lots, but also stormwater ponds, underground pipes, drainage ditches, etc., ensuring appropriate inspection and maintenance schedules are in place for each type of infrastructure/facility is both relevant and necessary. Appropriate procedures and schedules for inspection and maintenance are relevant and necessary for each type of infrastructure/facility. Where needed, O&M procedures should include some manner or protocol for testing and safely disposing of waste materials and any associated decant water collected from catch basins or other MS4 infrastructure.

The individual SWMP control measure components under the Pollution Prevention/Good Housekeeping control measure in Permit Part 3.5 are reasonable, practicable, and consistent with other MS4 permits issued by EPA Region 10 since 2012.

ACHD, CHD, and ITD3 have each outlined their O&M procedures in their respective MS4 Annual Reports; in addition, the Permittees provide regular, comprehensive training to staff about conducting their work in a manner that protects water quality. In general, ACHD, CHD, and ITD3 each perform their maintenance operations in a manner that is consistent with the Permit's SWMP control measure components outlined below:

- Permit Part 3.5.1 establishes a compliance deadline of 180 days before the Permit expiration date for the Permittee to update its existing program(s), and/or to impose any new program components, in the Permit Area. EPA believes this timeframe is justified to allow the Permittee adequate opportunity to adjust its existing programs, as necessary, and ensure the required actions are sufficiently addressed in the Permit Area. This provision also defines the date by which any ACM Request(s) must be submitted.

[22] NRC 2008; Shaver, et al 2007.

- Permit Part 3.5.2 outlines requirements for the inspection of all Permittee catch basins and inlets within the MS4 service area at least once every five years, and requires appropriate cleaning and/or maintenance activities based on the findings of those inspections.

  Because roads and streets function as an integral part of the drainage conveyance systems within the Permit Area, and other Urbanized Areas of Idaho, EPA has included explicit provisions for appropriate stormwater management through O&M activities for roads, streets, highways and parking lots.

- Permit Part 3.5.3 requires the Permittee to review and update their O&M procedures for streets, roads, highways, and parking lots that are owned, operated, and/or maintained by the Permittee to ensure procedures are protective of water quality and reduce the discharge of pollutants through the MS4.

  Permit Part 3.5.3.3 also requires the Permittee to consider using water conservation measures for all landscaped areas associated with streets, roads, highways, and parking lots to prevent landscape irrigation water from discharging through the MS4. Excessive landscape watering can contain fertilizers and other compounds that, when discharged through the MS4, can increase nitrogen and phosphorus loading to impaired waters. Landscape irrigation can be considered an allowable non-stormwater discharge only when it is not a source of pollution under the Idaho WQS. See Permit Part 2.4.

- Permit Part 3.5.4 requires the Permittee with street, road and highway maintenance responsibilities to ensure that road material stockpiles (such as sand, salt, or sand with salt stockpiles) are managed in a manner that prevents pollutants from discharging to the MS4 or into any receiving water. An inventory of all such street materials must be maintained. No later than 180 days prior to the Permit expiration date, as part of the Permit Renewal Application required by Permit Part 8.2, the Permittee must assess their Material Storage Locations for water quality impacts, and must describe any structural or non-structural improvements made by the Permittee to prevent runoff from discharging to the MS4 or directly to a receiving water.

- Permit Part 3.5.5 requires the Permittee with street, road, highway and parking lot responsibilities to document the adequacy of their sweeping activities through a sweeping management plan. Any Permittee without street sweeping responsibilities does not have an obligation to comply with this provision.

- Permit Part 3.5.6 requires the Permittee to review and update their O&M procedures for a variety of other typical municipal activities to ensure procedures protect water quality and reduce the discharge of pollutants through the MS4.

- Permit Part 3.5.7 requires the Permittee to ensure that their staff, and others operating in public areas owned and/or operated by the Permittee, are appropriately handling and/or using pesticides, herbicides, and fertilizers used within the Permit Area. This provision is consistent with the *NPDES General Permit for Discharges from The Application of Pesticides, for the State of Idaho,* NPDES Permit No. IDG870000.

- Permit Part 3.5.8 requires the Permittee to manage onsite materials at their maintenance yards and to prevent pollutants in runoff through use of SWPPPs.

- Permit Part 3.5.9 requires the Permittee to work cooperatively to reduce litter in their jurisdictions to prevent the conveyance of trash and other material through the MS4.
- Permit Part 3.5.10 requires the Permittee to ensure that all staff responsible for the stormwater infrastructure management and O&M activities are trained and/or otherwise qualified to conduct such activities with attention to prevent potential water quality impacts.

2.5 Requirements for Discharges to Water Quality-Impaired Receiving Waters

Consistent with 40 CFR § 122.34(c), Permit Part 4 requires ACHD, CHD, and ITD3 to continue pollutant reduction activities, and to quantitatively monitor/assess the effectiveness of those activities, in order to address impairment pollutants in MS4 discharges to the water quality impaired segments listed in Table 2; see Section 1.7.2. For the purposes of each Permit, the phrase "impairment pollutants" means any pollutant identified by IDEQ or EPA as a cause of impairment of any waterbody that receives MS4 discharges authorized under the Permit.

Additional discussion of the water quality impairments for MS4 receiving waters listed in Table 2 is provided in Appendix 5 of this Fact Sheet.

Since 2009, ACHD, CHD, and ITD3 have each confirmed their MS4 outfall locations and other features of their MS4s. The administratively continued permits for ACHD and ITD3 required each entity to conduct monitoring from MS4 outfall(s) into the Boise River or a tributary to the Boise River for the following parameters: flow; total suspended solids; total phosphorus; total nitrogen; and E. coli. The permit required a minimum of four samples to be collected each calendar year, with at least one sample collected during the each of the following periods: March - April, May - June, July - August, September - October. The ACHD and ITD3 permits further specified that such sampling be collected using either grab or automated methods, and occur within the first 120 minutes of storm events to catch the 'first flush. The CHD permit did not previously require discharge monitoring in order for CHD to verify its outfall locations.

ACHD and ITD3 have each summarized their monitoring data in corresponding Annual Reports.[23] The resulting data is useful for assessing overall SWMP effectiveness and, if continued, can provide a baseline against which future improvements may be measured.

After review of the ACHD, CHD, and ITD3 Annual Reports, submitted monitoring data, available water quality assessment information for Boise River and its tributaries, the respective permit renewal applications,and other information related to the issuance of other Idaho MS4 permits, EPA determines it appropriate for ACHD, CHD and ITD3 to continue conducting specific pollutant reduction and monitoring/assessment activities to further reduce the impairment pollutants from their MS4 into the receiving waters listed in Table 2. EPA has included requirements in Permit Part 4 of the ACHD and ITD3 Permit for the Permittee to submit, within twenty-three months of the Permit effective date, a written description of at least two pollutant reduction activities, and an updated monitoring/assessment plan, to be conducted during the remainder of the Permit term. Since CHD did not have monitoring requirements in the previous permit, the Permit requires CHD to submit, within twenty-three months of the Permit effective date, a written description of at least one pollutant reduction

[23] As previously noted: ITD3's MS4 Permit Annual Reports and other information are available on the ITD website at: https://itd.idaho.gov/env/?target=stormwater. ACHD's MS4 Annual Reports are available at: https://www.achdidaho.org/Departments/Engineering/Stormwater/resources.aspx

activity and anew monitoring/assessment plan. Each Permittee is encouraged to partner with neighboring jurisdictions to accomplish common watershed goals.EPA, in consultation with IDEQ, will review the submitted materials, and the NPDES permitting authority will modify each Permit to incorporate the pollutant reduction activities and monitoring/assessment plan.

Permit Part 6.2 outines how any monitoring/assessment activities must be conducted. See additional discussion in Section 2.7.2 of this document.

EPA clarifies that ACHD, CHD, and ITD3 are each free to choose new activities, or to continue implementation of ongoing efforts designed to reduce the discharge of the impairment pollutants into Indian Creek, Mason Creek, the Boise River and other tributary conveyances leading to the Boise River. Acceptable activities must be linked to the goal of reducing impairment pollutants into these receiving waters, be coordinated with available water quality management plan(s), and must be designed to measure the relative success or failure of such actions over time.

The Permit requirements outlined above provide ACHD, CHD, and ITD3 with flexibility to define what/how they will continue to address impairment pollutants in a manner consistent with the goals of available water quality assessments and watershed advisory groups. These requirements also allow ACHD, CHD, and ITD3 to work with others, if they choose, in order to accomplish mutual watershed related goals. Through the Permit modification process, the approach specified in Part 4 (namely, requiring a current written description of the continued or new actions to be submitted for inclusion in the specific Permit) also provides transparency to interested members of the public about the Permittee's actions.

2.6 Requirements for Excursions above the Idaho Water Quality Standards

Permit Part 5 sets forth requirements for the Permittee to report and address excursions above the Idaho WQS as directed by Permit Part 2.1. EPA has outlined an adaptive management approach for use when there are ongoing discharges from the MS4 that cause or contribute to excursions above the applicable Idaho WQS and are not being addressed by other SWMP control measure requirements.

Permit Part 5 provides the Permittee with the opportunity to use adaptive management principles to scope corrective action steps to address ongoing, prolific pollutant source(s). Where such solutions may involve structural controls, require capital expenditures, and/or that necessitate long term planning and implementation schedules, Permit Part 5 provides opportunity for the Permittee to define and articulate such long-range investment plans.

EPA supports robust long-term planning for stormwater management by MS4 entities, and recognizes that the most successful stormwater planning uses multi-benefit approaches to solve stormwater pollution control challenges. It also recognizes that for a plan to be more affordable, MS4 entities need to make financial investments over a time horizon of sufficient length to allow for cost efficiencies through working with other municipal programs.[24]

Any Permittee that submits information pursuant to Permit Part 5 will be prompted to report on their incremental progress towards their identified milestones in both their Annual Report, and as part of a complete Permit Renewal Application.

2.7 Monitoring, Recordkeeping and Reporting Requirements

Consistent with 40 CFR § 122.34(d), Permit Part 6 requires that the Permittee evaluate program compliance, keep records, and submit Annual Reports. Furthermore, Section 308 of

[24] EPA 2016e.

the CWA, 40 CFR § 122.44(i), and subsequent EPA guidance requires monitoring, where necessary, to determine compliance with terms and conditions of a NPDES permit.

2.7.1 Compliance Evaluation

Permit Part 6.1 requires the Permittee to assess their compliance with the Permit requirements annually and to document the evaluation through the submittal of an Annual Report. Although the regulations allow less-than-annual reporting in a second term MS4 permit, EPA has instead provided a concise "fillable PDF" Annual Report format for use during the Permit term. The five-year permit term will coincide with EPA's national transition to online reporting for MS4 permits; this transition is expected to be accomplished no later than December 2023. To maintain reporting continuity during this transition, EPA believes it appropriate to retain annual reporting in the Permit. In efforts to simplify this reporting process, EPA has developed streamlined fillable report format to replace the previously used narrative-style report. Once primacy for the NPDES stormwater permit program is transferred to IDEQ, the Permittee may request different reporting frequencies in the subsequent MS4 permit, pursuant to 40 CFR § 122.34(d)(3).[25]

2.7.2 Monitoring and/or Assessment Activities

As noted in Section 2.5 of this document, Permit Part 6.2 provides additional detail to supplement the requirements in Permit Part 4, and requires the Permittee to evaluate the effectiveness of their SWMP at protecting water quality by quantifying stormwater pollutant reductions. Conducting monitoring and/or assessment activities provides a means for the Permittee to measure the effectiveness of specific stormwater management actions, aides in determining whether the pollutant reduction goals in applicable watershed plans are met, and helps to justify budgets that support stormwater programs. While many MS4 program goals are output-based (e.g. number of stormwater treatment practices installed, number of educational brochures distributed) and can be useful from a program accounting standpoint, such measurements often cannot be used to quantify changes in water quality resulting from MS4 program activities.[26]

Permit Part 6.2 also requires the Permittee to submit a revised or updated monitoring/assessment plan as directed by Permit Part 4 that meets the quality assurance objectives at Permit Part 6.2.6 no later than two years after the Permit effective date. This deadline is consistent with other MS4 permits issued by EPA in Idaho since 2019. Standard NPDES permit conditions are included in Part 6.2 related to representative sampling, additional monitoring, and use of sufficiently sensitive testing methods. If the Permittee elects to monitor MS4 discharges, Permit Part 6.2.5 summarizes the basic components of any wet weather stormwater discharge monitoring.

As previously noted, the administratively continued Permits required ACHD and ITD3 to conduct stormwater discharge sampling four times per year from their MS4 outfalls. The resulting data, collected during calendar years 2009 – 2018, is useful for assessing overall SWMP effectiveness over time.

While developing this Permit, and other similar MS4 permits for regulated MS4 discharges in Idaho, EPA considered several options for how ACHD and ITD3 and other Permittees might monitor and/or assess compliance with Permit requirements given the general difficulty and overall expense associated with MS4 discharge monitoring. EPA envisions that there are

[25] EPA 2015c.
[26] CWP 2009.

many possible options a Permittee may consider to monitor/assess reductions in pollutant loading from their MS4(s) as a result of implementing their SWMP control measures. For example, Permittees may choose to continue to monitor stormwater discharges from the existing selected MS4 outfall monitoring locations. Alternatively, Permittees may revise their monitoring/assessment activities to better match their current goals and objectives in efforts to increase reductions in pollutant loadings from their MS4 and to improve their overall stormwater management. .

EPA recognizes that the MS4 permits in Idaho should not impose a "one size fits all" monitoring and assessment approach. The guidelines at Permit Part 6.2. provide the Permittee the flexibility to revise and implement monitoring/assessment activities that are appropriate for their MS4. The NPDES permitting authority will modify the Permit to incorporate the Permittee's intended monitoring plan. MS4 stakeholders around the country have found that relevant watershed-level questions must drive a Permittee's monitoring and assessment choices. Because water quality benefits will only be realized over the long-term, it is important for MS4 Permittees to invest their time and energy into long-term implementation mechanisms that are linked to appropriate monitoring and assessment actions. Monitoring and assessment data contributes to new knowledge, and resulting data should then be made broadly available.[27]

Examples of monitoring/assessment activities that the Permittee may consider include:

- Conducting biological or macroinvertebrate sampling, instream monitoring, or other means to assess certain parameters or watershed outcomes.
- Focused efforts to influence human behavior through outreach and educational efforts.
- Working collaboratively with other entities within a watershed or across the state to accomplish the SWMP goals.

Permit Part 6.2.6 requires Permittee to create, or revise any existing, Quality Assurance Project Plans (QAPP) to guide the intended monitoring/assessment activities.

2.7.3 Recordkeeping and Reporting

Permit Part 6.3 requires the Permittee to keep all records associated with each Permit for a period of at least five years, and submit such records only when requested by EPA. The Permittee must ensure that SWMP materials are available to the public, and they may charge a reasonable fee for copies and/or require a member of the public to provide advance notice of their request. As previously noted, Permit Part 3.1 requires the Permittee to provide their SWMP Document to the public electronically via one or more dedicated websites.

Permit Part 6.4 describes the overall reporting requirements, including the schedule and required content for the Annual Report, the final monitoring/assessment report, and the pollutant reduction activity report. At a minimum, the Permittee must submit Annual Reports of progress to both EPA and IDEQ using the recommended Annual Report format provided in each Permit's Appendix no later than 61 days after the close of relevant reporting period. The Annual Report format will prompt the Permittee for appropriate information according to compliance dates specified in the final Permit.

[27] Stein 2013; EPA 2016g; NRC 2008.

No later than December 21, 2023, all NPDES reports submitted in compliance with an applicable permit must be submitted electronically through EPA's national electronic reporting system. However, the MS4 Permit program is one of the last types of NPDES permits to be accommodated by this new system.[28] Until the electronic system is available, the Permittee must submit signed versions of their Annual Reports to EPA and IDEQ addresses provided in the Permit.

2.8 Standard Permit Conditions

Permit Parts 7 and 8 contain standard regulatory language that must be included in all NPDES permits. The standard regulatory language addresses compliance responsibilities, and other general requirements. Although certain provisions may not strictly apply to MS4 facilities (for example, the upset or bypass provisions), it is mandatory that each of the standard provisions be included in a NPDES permit. Such provisions were previously included in the prior MS4 permit, and are included in other Idaho MS4 NPDES permits issued by EPA since 2012. EPA notes that if a particular provision in Permit Parts 7 or 8 does not apply to the Permittee's MS4 discharges or facilities, the Permittee does not need to comply with that provision.

2.8.1 Duty to Reapply

In accordance with 40 CFR § 122.46(a), NPDES permits are in effect for a fixed term not to exceed five (5) years. Permit Part 8.2 requires the Permittee to submit an NPDES permit renewal application no later than 180 days before the Permit expiration date if it intends to continue operational control and management of MS4 discharges after the Permit expiration date.

Because there are no NPDES application forms for the MS4 permit program, Permit Part 8.2.1 describes the expected content of a complete Permit Renewal Application. The deadline for the Permit Renewal Application (180 days before the permit expiration date) corresponds to the Permit's implementation/compliance dates; therefore, as part of any request for continued permit coverage, the Permittee must submit the attachments listed in Permit Part 8.2.1 to demonstrate how they have complied with the current Permit requirements.

The Permittee must submit a 5th Year Annual Report, by the Permit expiration date, using the format provided in the Appendix B of the Permit. In the event that a new permit is not issued on or before the Permit expiration date, any Permittee that has submitted a Permit Renewal Application in accordance with Part 8.2, may be authorized to continue discharging under an administrative extension of the Permit. If the Permittee is granted an administrative extension, they must continue to adhere to the terms and conditions of the Permit, which includes submitting the Annual Report(s) by the anniversary of the Permit expiration date, until coverage under a reissued or replacement Permit is available.

3. Other Legal Requirements

3.1 Environmental Justice

Executive Order 12898, *Federal Actions to Address Environmental Justice in Minority Populations and Low-Income Populations*, directs each federal agency to "make achieving environmental justice part of its mission by identifying and addressing, as appropriate, disproportionately high, and adverse human health or environmental effects of its programs,

[28] EPA 2015c.

policies, and activities." EPA strives to enhance the ability of overburdened communities to participate fully and meaningfully in the permitting process for EPA-issued permits, including NPDES permits. "Overburdened" communities can include minority, low-income, tribal, and indigenous populations, or communities that potentially experience disproportionate environmental harms and risks. As part of an agency-wide effort, EPA Region 10 will prioritize enhanced public involvement opportunities for EPA-issued permits that may involve activities with significant public health or environmental impacts on already overburdened communities. For more information, please visit https://www.epa.gov/environmentaljustice/learn-about-environmental-justice

As part of the permit development process, EPA Region 10 conducted a screening analysis to determine whether the Permit actions could affect overburdened communities. EPA uses a nationally consistent geospatial tool that contains demographic and environmental data for the United States at the Census block group level. This tool is used to identify permits for which enhanced outreach may be warranted.

Based on this screening, only the Nampa Urbanized Area is identified as an area where potentially overburdened communities reside. In order to ensure that individuals in this area are able to participate meaningfully in the NPDES permit process, EPA will work to ensure that interested stakeholders in this area, and throughout the state, are informed and able to provide their input on appropriate local stormwater management activities.

EPA encourages all MS4 Permittees to review (and to consider adopting, where appropriate) *Promising Practices for Permit Applicants Seeking EPA-Issued Permits: Ways To Engage Neighboring Communities* as described in EPA document available at https://www.federalregister.gov/articles/2013/05/09/2013-10945/epa-activities-to-promote-environmental-justice-in-the-permit-application-process#p-104.

3.2 Endangered Species Act

The Endangered Species Act (ESA) Section 7(a)(2) requires federal agencies to consult with the National Oceanic and Atmospheric Administration – National Marine Fisheries Service (NOAA Fisheries) and the U.S. Fish and Wildlife Service (USFWS) regarding potential effects an action may have on listed endangered species.

EPA reviewed available information from the NOAA Fisheries website and the USFWS' Information for Planning and Consultation website for the Nampa and Boise UAs. There are no ESA listed species under NOAA Fisheries' jurisdiction in these UAs. both UAs. slickspot peppergrass (*Lepidium papilliferum*) was listed by USFWS as a threatened species in 2009; USFWS subsequently proposed critical habitat for the plant, but the designation has not been finalized. In the Boise UA, the yellow-billed cuckoo (*Coccyzus americanus*) - Western Distinct Population Segment (DPS), is also listed a threatened species; although USFWS proposed, but has not finalized, an action to designate critical habitat for the western yellow-billed cuckoo, none of the proposed critical habitat areas overlap with the MS4 Permit Areas discussed in this document. EPA has determined that reissuance of the Permits for discharges from the ACHD, CHD, and ITD3 MS4s will have no effect on any listed endangered or threatened species or designated critical habitat, and as a result, consultation is not required on these Permit actions.[29]

[29] USFWS 2020b, USFWS 2020c, NOAA 2020a; EPA 2020a, EPA 2020b..

3.3 Essential Fish Habitat

Essential Fish Habitat (EFH) is the waters and substrate (sediments, etc.) necessary for fish spawning, breeding, feeding, or growing to maturity. The Magnuson-Stevens Fishery Conservation and Management Act requires EPA to consult with the NOAA-Fisheries if a proposed action has the potential to adversely affect (by reducing the quality and/or quantity of) EFH. EPA reviewed the current NOAA-Fisheries maps reflecting EFH for freshwater species, and there is no EFH located in the Boise or Nampa UAs.[30] Therefore, EPA determines that the reissuance of the Permits will not affect any EFH species, and consultation is not required for this action.

3.4 National Historic Preservation Act

Section 106 of the National Historic Preservation Act (NHPA) requires federal agencies to take into account the effects of federal undertakings on historic properties listed on, or eligible for listing on, the National Register of Historic Places. The term federal "undertaking" in NHPA regulations to include a project, activity, or program of a federal agency that can result on changes in the character or use of historic properties, if any historic properties are located in the area of potential effects for that project, activity or program. See 36 CFR § 802(o). Historic Properties include prehistoric or historic districts, sites, buildings, structures, or objects that are included in, or are eligible for inclusion in, the National Register of Historic Places. See 36 CFR § 802(e). Federal undertakings include EPA's issuance of a NPDES permit.

EPA has determined that the reduction of pollutants in runoff through compliance with a MS4 discharge 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 each of the Permits are also in compliance with the terms and conditions of the National Historic Preservation Act.

Pursuant to Permit Part 8.10, each Permittee is reminded that they must comply with applicable state, Tribal and local laws, including those concerning protection of historic properties. If any permitted entity engages in any activity which meets all of the following criteria, then they must consult with and obtain approval from the State Historic Preservation Office prior to initiating the activity:

- The permitted entity is conducting the activity in order to facilitate compliance with the MS4 Permit;
- The activity includes excavation and/or construction; and
- The activity disturbs previously undisturbed land.

Examples of actions that may meet 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.

3.5 National Environmental Policy Act and Other Federal Requirements

40 CFR § 122.49 lists the federal laws that may apply to the issuance of permits i.e., ESA, NHPA, the Coastal Zone Act Reauthorization Amendments (CZARA), NEPA, and Executive

[30] NOAA 2020b.

Orders, among others. The NEPA compliance program requires analysis of information regarding potential impacts, development, and analysis of options to avoid or minimize impacts; and development and analysis of measures to mitigate adverse impacts.

EPA has not promulgated effluent limitation guidelines or new source performance standards specific to MS4 discharges. Therefore, MS4 permits are not subject the NEPA.

Idaho is not located in the U.S. coastal zone, so CZARA does not apply to the reissuance of the Permits. In addition, the Permits will not authorize the construction of any water resources facility or the impoundment of any water body. No regulated small MS4s are located in areas with Wild and Scenic River designations. Therefore, EPA determines that the Fish and Wildlife Coordination Act, 16 USC § 661 et seq., and the Wild and Scenic Rivers Act, 16 USC § 470 et seq., does not apply to the reissuance of these Permits.

3.6 Permit Dates

NPDES permits may be issued for no more than five years. The Permits will expire on a date consistent with other MS4 permits in Idaho, in order to align stormwater management activities among regulated MS4 operators within the Boise and Nampa UAs and maintain consistent compliance dates to facilitate IDEQ's role as the permitting authority to renew the MS4 permits in the future. As proposed, the Permit assumes an effective date of December 1, 2020. Compliance dates for SWMP control measure implementation, Annual Report submittals, etc., are identified in each Permit (in the upfront Schedule and in pertinent text) based on the final Permit's effective date.

During discussions Idaho stakeholders in late 2016 and early 2017 regarding preliminary draft MS4 documents, EPA was reminded to remain cognizant of local government budget planning cycles (based on a fiscal year calendar October – September) when establishing implementation deadlines in the Permit. In response, EPA previously considered calculating MS4 Permit compliance dates assuming an effective date of October 1. EPA also notes that in this case, ITD3 is a state government entity with a fiscal year of July – June.

3.7 State Certification of the Draft Permits

Section 401 of the CWA requires EPA to seek State certification before issuing a final permit. As a result of the certification, the State may require more stringent permit conditions or additional monitoring requirements to ensure that the specific permit complies with water quality standards, or treatment standards established pursuant to any State law or regulation.

As previously noted, EPA has requested that IDEQ certify the individual permits for the ACHD, CHD and ITD3 MS4 discharges. Questions or comments regarding the IDEQ's CWA §401 certifications should be directed to the IDEQ's Boise Regional Office at (208) 373-0550.

4. References Used in this Permitting Decision

The following is a partial list of references supporting the development of each Permit; additional references are available in the Administrative Record for specific permit action.

Ada County Highway District (ACHD), 2019. Phase I Stormwater Management Plan, Appendix 17, *Dry Weather Outfall Screening Plan*, specifically: *Appendix E: Thresholds for Documented Flowing Outfalls*. Ada County Highway District. December 2019. Permit No. IDS-027561. At: https://www.achdidaho.org/Documents/Engineering/Stormwater/StormwaterManagementPlanPhaseI.pdf

ACHD 2019b. Ada County Highway District NPDES Phase II Municipal Separate Storm Sewer System Annual Report Permit Year 2018 – 2019 NPDES Permit NO. IDS-028185.

ACHD 2014. Ada County Highway District NPDES Phase II Municipal Separate Storm Sewer System Annual Report Permit Year 2013-2014 NPDES Permit No. IDS-028185.

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Bozeman, City of. Montana, 2017. *Construction Site Management Program – Best Management Practices Manual for Construction Sites*. Version 6, June 30, 2017. Available at: https://www.bozeman.net/home/showdocument?id=4739

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Appendix 1 – Statutory And Regulatory Overview

Pollutants Typically Found in Urban Runoff

Stormwater is the surface runoff that results from rain and snow melt. Urban development alters the landscape's natural infiltration, and human activity generates pollutants that accumulate on paved or impervious surfaces. Uncontrolled pollutants and flow associated with stormwater discharges from urban areas can negatively affect water quality. Contaminants enter stormwater from a variety of sources in the urban landscape. Urban stormwater is often a contributing factor where there is a water quality standard impairment in a particular water body. Stormwater or urban runoff typically contains a mixture of pollutants, including the following major constituents:

- Sediment;
- Nutrients (nitrogen and phosphorus);
- Chlorides;
- Trace metals;
- Petroleum hydrocarbons;
- Microbial pollution;Organic chemicals (pesticides, herbicides, and industrial); and
- Temperature.[31]

An increase in impervious surface cover will increase the amount of runoff. Effects of runoff generally take one of two forms. First, an increase in the type and quantity of pollutants in stormwater runoff, where these pollutants become suspended in runoff and are carried to receiving waters, and can impair the aquatic life uses of these waters. The second kind of runoff effect occurs by increasing the quantity of water delivered to the water body as a result of storms. Increased impervious surface area (such as, parking lots, driveways, and rooftops) interrupts the natural process of gradual percolation of water through vegetation and soil, and the water that would percolate under natural conditions may instead be discharged through the MS4. The effects of this alteration include streambank scouring and downstream flooding, which can affect aquatic life and damage property.[32]

Statutory and Regulatory Background for the MS4 Permit Program

The federal Clean Water Act (CWA) Section 402(p), 33 U.S.C. § 1342(p) and the National Pollutant Discharge Elimination System (NPDES) stormwater regulations establish permit requirements for regulated MS4 discharges. Section 402(p)(3)(B) of the CWA, 33 U.S.C. §1342(p)(3)(B) requires any NPDES permit for MS4 discharges to effectively prohibit non-precipitation related flows from entering the MS4, and require controls to reduce the discharge of pollutants to the maximum extent practicable (MEP), including management practices, control techniques, and system design and engineering methods, and such other provisions determined to be appropriate by the NPDES permitting authority.

Definitions of relevant terms, such as "*municipal separate storm sewer*," and "*small MS4*," are found at 40 CFR §122.26(b). In general, a *municipal separate storm sewer* includes any publicly -owned conveyance or system of conveyances that discharges to waters of the United States, is designed or used for collecting and conveying stormwater, is not a combined sewer, and is not part of a publicly owned treatment works. A *municipal separate storm sewer system*, or MS4,

[31] Shaver, Horner, et al. 2007; EPA 1990; EPA 1999a, and EPA 1999b..
[32] USGS and EPA, 2015, page 61.

includes roads with drainage systems, municipal streets, catch basins, curbs, gutters, ditches, man- made channels, and/or storm drains.[33]

In 1990, EPA developed the first phase of federal stormwater regulations as directed by the CWA. The "Phase I" regulations established NPDES permit application and related requirements for discharges from large MS4s and medium MS4s. The Phase I regulation identified the large- and medium MS4s nationally based on the 1990 Census population. Based on the 1990 Census in Idaho, the Phase I stormwater regulations automatically designated MS4 operators discharging within the boundaries of Garden City and Boise as medium MS4s.[34]

In 1999, EPA developed the "Phase II" stormwater regulations, and designated additional small MS4s as needing NPDES permits. Regulated small MS4s include any MS4 discharge not already covered by Phase I that is located (partially or wholly) within an Urbanized Area (UA) as defined by the latest decennial Census. Regulated small MS4s in Idaho are located in Census-defined UAs of Coeur d'Alene; Lewiston; Nampa; Boise; Pocatello; and Idaho Falls. The Phase II regulation also defines regulated small MS4s as those systems with a UA that serve military bases or other properties owned by the United States; colleges and universities; large hospital or prison complexes; and highway systems.[35] In Idaho, various public entities own and/or operate regulated small MS4s within UAs, including, but not limited to: cities and counties; local highway districts; ITD; and state or community colleges and universities

The Phase II regulation includes authority for EPA (or states that administer the NPDES program as the permitting authority) to require NPDES permits for other unregulated stormwater discharges by a designation process.[36]

Permits for small MS4 discharges must include terms and conditions to reduce the discharge of pollutants from the MS4 to the MEP, to protect water quality, and to satisfy the appropriate water quality requirements of the Clean Water Act.[37] The MS4 permittee must control pollutants in their MS4 discharges to the MEP by addressing the six "minimum control measures," i.e., public education and outreach, public participation and involvement, illicit discharge detection and elimination, construction site runoff control, post construction runoff control, and pollution prevention and good housekeeping. A regulated small MS4 operator may seek NPDES permit coverage under an available general permit, or the operator may apply for an individual permit.[38]

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[33] *See*: 40 CFR §122.26(b); 122.32(a); and EPA 1990.
[34] In December 2000, EPA issued a single individual NPDES permit (#IDS027561) for the Phase I MS4 discharges owned/operated by six co-permittees operating in Garden City and Boise, ID; EPA reissued Permit #IDS027561 effective January 2013 -January 2018.
[35] *See*: 40 CFR §§ 122.26(b)(16) and 122.30 through 37; and EPA 1999. U.S. Census maps for the Coeur d'Alene, Lewiston (ID)-Clarkston (WA), Nampa, Boise, Pocatello, and Idaho Falls UAs are available at http://www2.census.gov/geo/maps/dc10map/UAUC_RefMap/ua/.
[36] *See:* 40 CFR § 122.26(a)(9)(i)(C) and (D)
[37] *See*: CWA Section 402(p)(3); 40 CFR §122.34(a); EPA 2016a and 2016b. EPA now refers to this phrase as the *MS4 permit standard*.
[38] *See:* 40 CFR § 122.34(b) and additional discussion in Section III of this Fact Sheet.

Appendix 2 – MS4 Maps

Figure A.2-1 Map of Ada County Highway District MS4

Map Excerpted from: Appendix 4 of ACHD's *MS4 Annual Report, Permit Year 2018-2019; at:* *https://www.achdidaho.org/Documents/Engineering/Stormwater/PhaseIIAnnualReport1920.pdf*

"The stormwater drainage system within the Phase II Permit area is comprised of the ACHD owned and operated MS4 and privately owned on-site drainage facilities. To add complexity, numerous irrigation/drainage conveyance systems are connected to the MS4 and conversely, the MS4 is connected to the irrigation/drainage systems. The irrigation and drainage districts are privately owned and operated and are not subject to NPDES MS4 permitting regulations." (ACHD 2017).

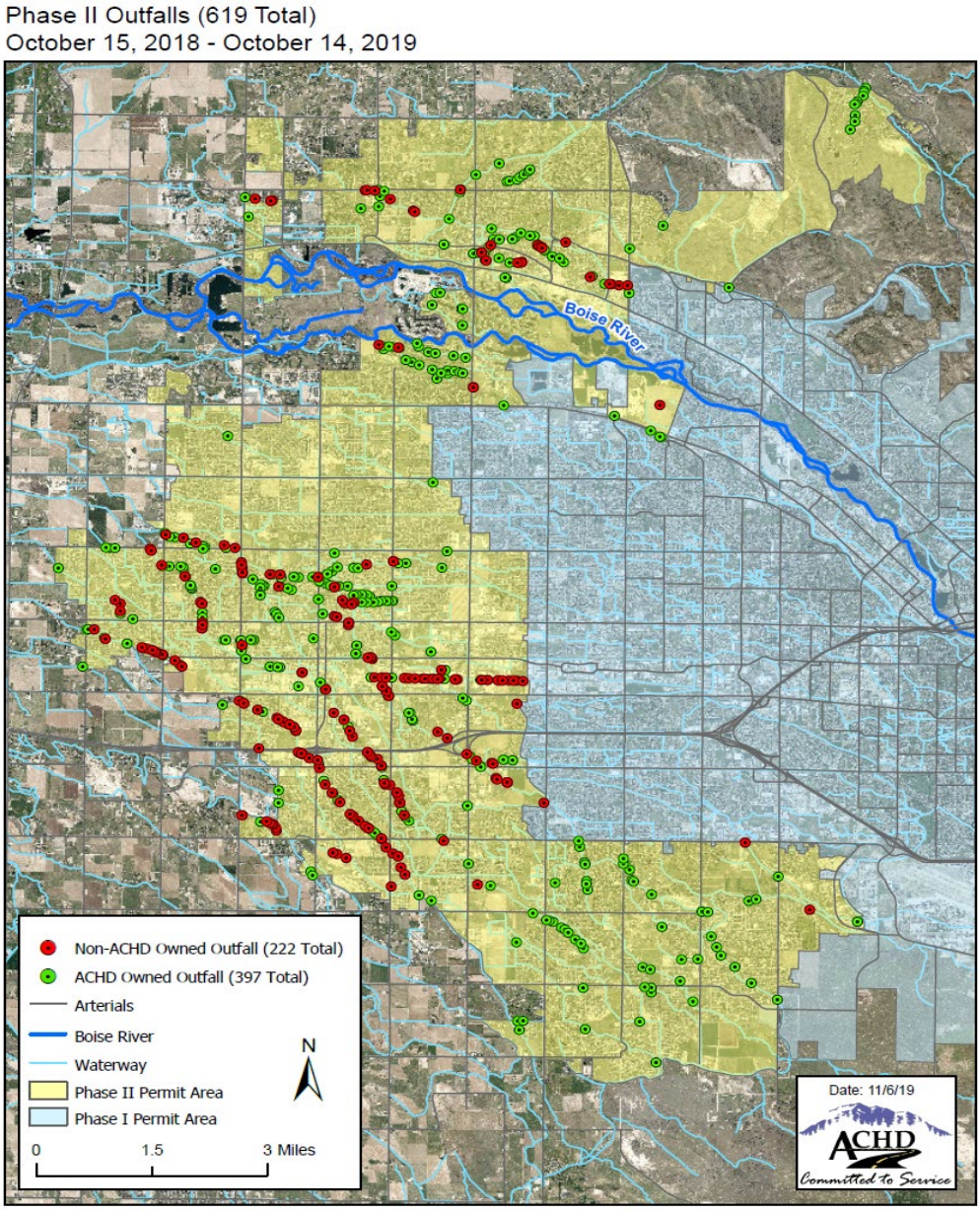


Figure A.2-2 Map of Canyon Highway District No. 4 MS4

CHD submitted a MS4 Map on a DVD as part of its MS4 Annual Report for Permit Year 2011-2012; this Annual Report is available as part of the Administrative Record for this Permit.

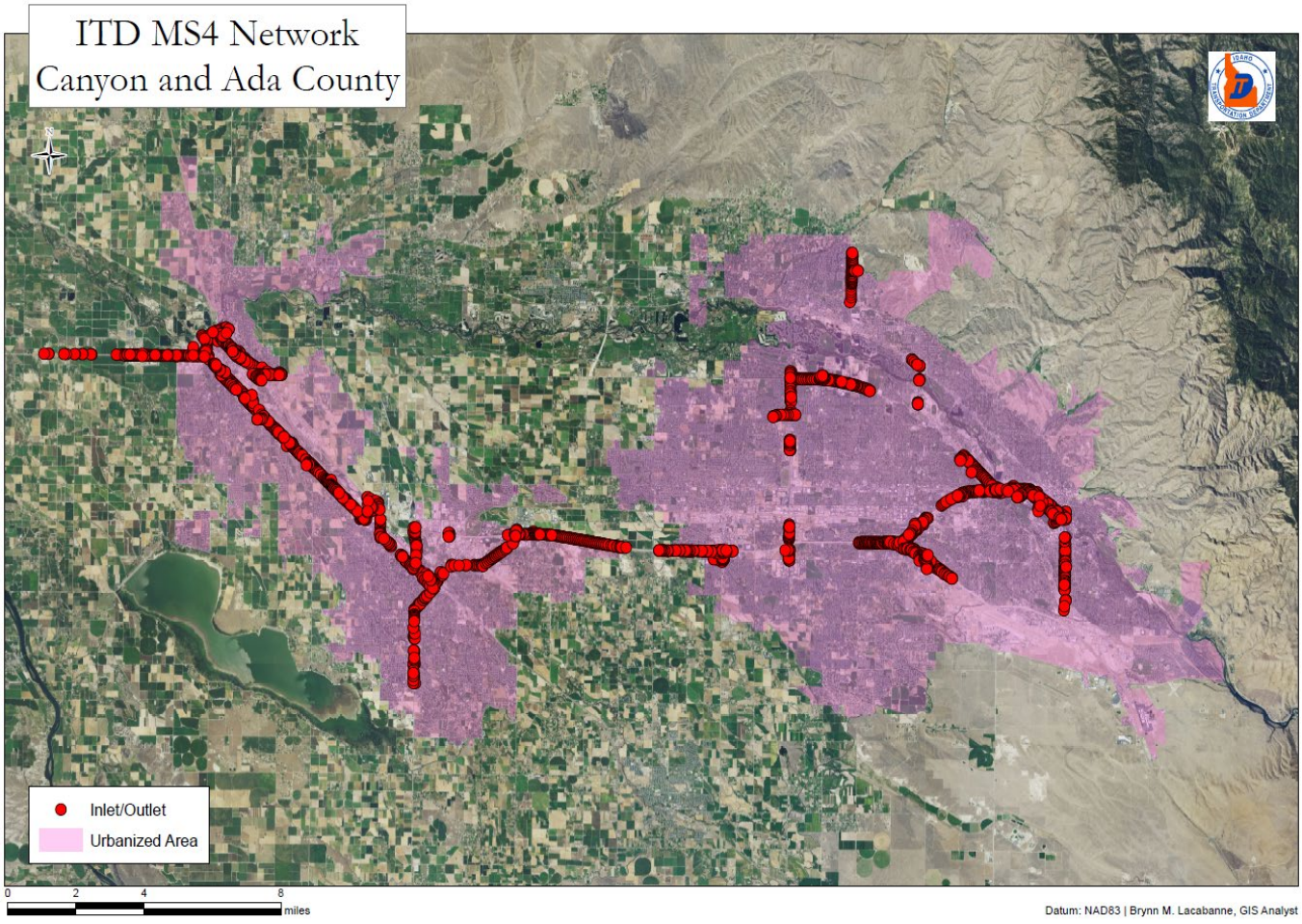
Due to limited access to EPA offices during the COVID-19 pandemic, an electronic representation of the CHD MS4 map was not available during the development of this Fact Sheet.

Refer to the CHD's MS4 Outfall Inventory, represented in Appendix 6.2.

Figure A.2-3 Map of Idaho Transportation Department District #3 MS4

Map Excerpted from: ITD3's 2011-2012 MS4 *Annual Report.* Available online at: *https://apps.itd.idaho.gov/Apps/env/d-3_ms4/2011_D3_Network_UrbanizedArea.pdf*

See also: *https://apps.itd.idaho.gov/Apps/env/d-3_ms4/2011_D3_MS4-Network.pdf*



Appendix 3 – Maps: Boise and Nampa Urbanized Areas

Boise Urbanized Area Census 2010 Map	https://www2.census.gov/geo/maps/dc10map/UAUC_RefMap/ua/ua08785_boise_city_id/DC10UA08785.pdf

Figure A.3.1: City and Year 2000 UA Boundaries for the Boise Urbanized Area

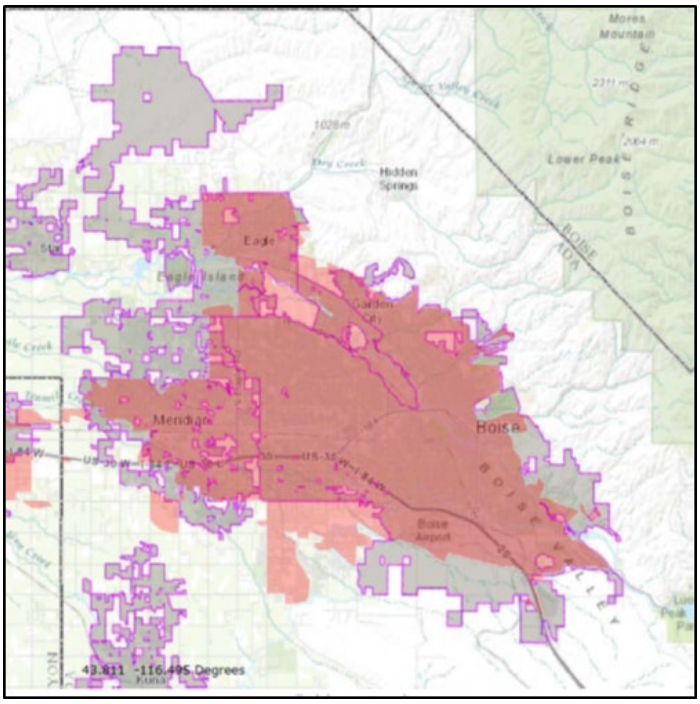
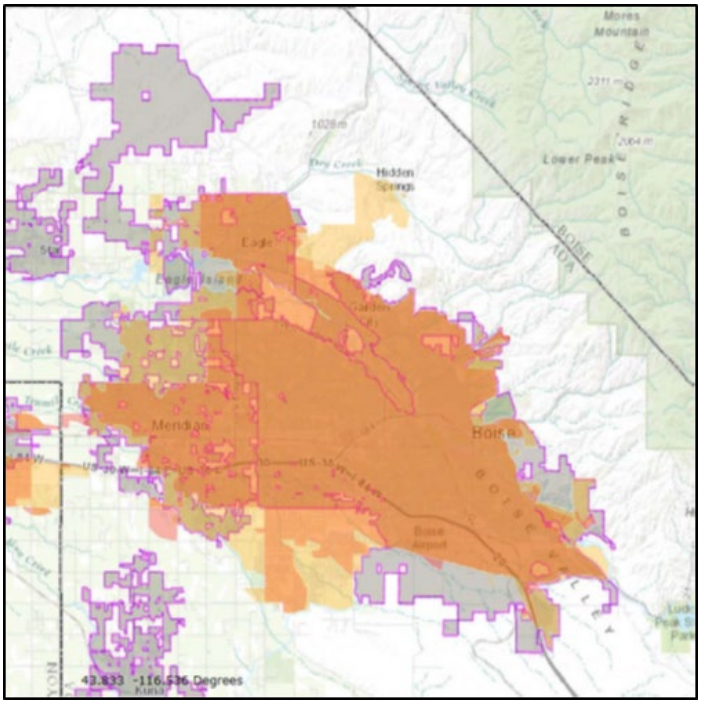


Figure A.3.2: Combined Year 2000 UA and Year 2010 UA Boundaries for the Boise Urbanized Area



Map: Nampa Urbanized Area

Nampa Urbanized Area	Census 2000	http://www2.census.gov/geo/maps/urbanarea/uaoutline/UA2000/ua60976/
	Census 2010	http://www2.census.gov/geo/maps/dc10map/UAUC_RefMap/ua/ua60976_nampa_id/

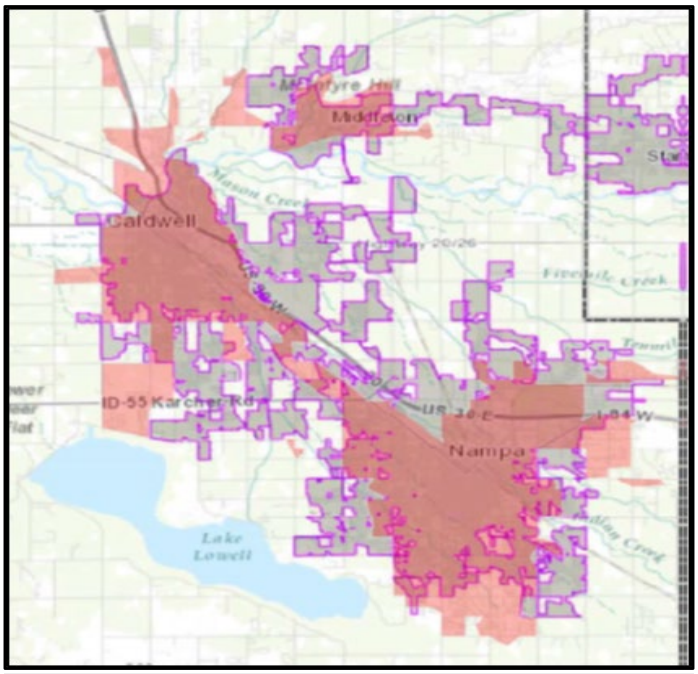


Figure A.3.3: City and Year 2000 UA Boundaries for the Nampa Urbanized Area

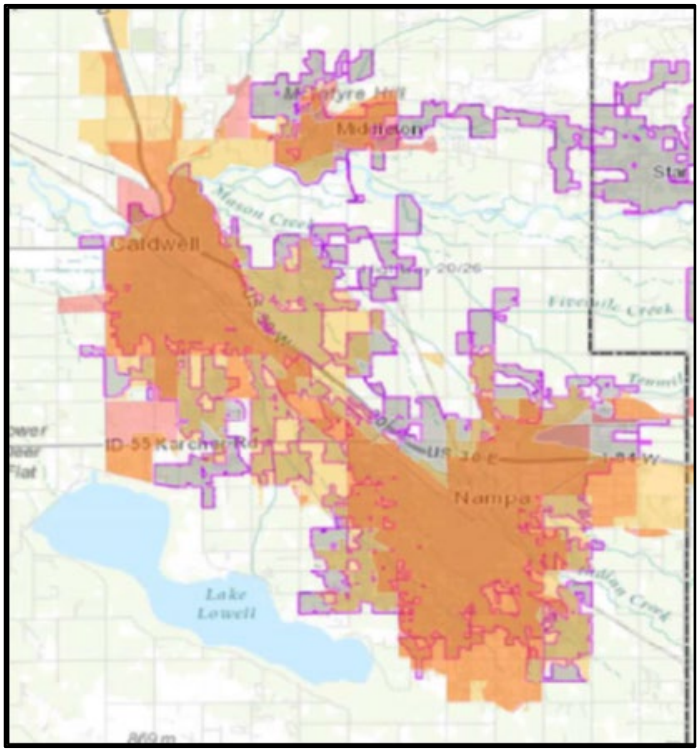


Figure A.3.4: Combined Year 2000 UA and Year 2010 UA Boundaries for the Nampa Urbanized Area

Appendix 4 - Rationale For The Onsite Stormwater Retention Standard Or Treatment Equivalent In Permit Part 3.4

The requirements in Permit Part 3.4 will improve upon the site design specifications, guidelines, and other policy documents that are currently required by MS4 Permittee jurisdictions in Idaho. The purpose of requiring an onsite stormwater design standard in this and other Idaho MS4 permits is to reduce pollutants in regulated MS4 discharges to the MEP, and improve upon the protection of water quality in Urbanized Areas of Idaho by helping to maintain or restore stable hydrology in adjacent receiving waters.

The following discussion provides additional background on EPA's rationale for including this requirement being necessary to meet the MS4 permit standard in the Nampa and Boise UAs.

It is well understood nationally that uncontrolled runoff from new development and redeveloped areas negatively affects receiving water bodies.[39] Pavement and other impervious surfaces in urban settings prevent infiltration of precipitation, and the resulting runoff increases both in volume and velocity, which in turn causes the erosion of stream banks and scouring of streambeds. Fine sediments and pollutants from automobiles, landscape pesticides, and fertilizers enter waterbodies, and can damage fish spawning areas and other aquatic habitat. Where traditional stormwater management practices typically employ engineered, end-of-pipe practices, (that tend to control only peak flow rates and total suspended solids concentrations), such conventional practices typically fail to address widespread and cumulative hydrologic modifications within a watershed that increase runoff volumes and rates, causing excessive erosion and stream channel degradation. Traditional practices also fail to treat runoff for nutrients, pathogens, and metals pollutants typically found in urban settings.[40]

Permanent stormwater control measures that involve prevention- such as product substitution, better site design, downspout disconnection, and conservation of natural areas - as well as watershed and land use planning, can dramatically reduce both the volume of runoff and pollutant loads from new development and redevelopment. In particular, site-level stormwater control measures that harvest, infiltrate, and evapotranspire stormwater runoff are critical to reducing the volume and pollutant loading associated with smaller storms.[41]

"Green Infrastructure" (GI) or "green stormwater infrastructure" (GSI), are terms used to describe the type of permanent stormwater management techniques that are cost-effective, sustainable, and environmentally friendly. Such techniques, including site level "Low Impact Development" (LID) practices, at new development or redevelopment projects involve both stormwater management and land development strategies emphasizing conservation and integration of natural features with small scale engineered hydrologic controls to more closely mimic predevelopment hydrologic function. A comprehensive approach to long-term stormwater management using GI/GSI, and LID seeks to:

- Preserve, protect and enhance natural landscape features, such as undisturbed forests, meadows, wetlands, and other undisturbed areas that provide natural stormwater management;
- Reduce overall land consumption, and use land efficiently, to reduce total watershed or regional impervious cover;

[39] EPA 1983; EPA 1999.

[40] Shaver, et al., 2007. Holz, 2008; and Horner, 2008.

[41] NRC 2008.

- Recycle land by directing new development to already degraded land, e.g., parking lots, vacant buildings, abandoned malls; and
- Direct stormwater into the ground near where it fell through infiltration, prevent rainfall from falling to the ground through interception, return water back to the atmosphere through evapotranspiration, and/or otherwise manage storm water through reuse techniques.[42]

Since 2008, EPA has encouraged MS4 jurisdictions to employ a volume-based approach to stormwater management at new development and redevelopment sites. This approach includes requirements for the design, construction, and maintenance of permanent stormwater practices that manage rainfall on-site, to generally prevent the off-site discharge of precipitation from all rainfall events below a certain size. EPA considers a volume-based stormwater management approach to be appropriate in this and other MS4 permits in Idaho because such techniques are widely acknowledged as a means of preventing pollutants from entering the receiving water; further, such techniques directly address the need to maintain and, where necessary, restore predevelopment hydrology for duration, rate, and volume of stormwater flows.

Many GSI/LID strategies involve bioretention, or infiltrating runoff through soil. Bioretention practices include use of porous pavements, green roofs, bioswales, and rain gardens. Various studies confirm the effectiveness of GSI/LID practices to reduce contaminants, restore hydrology, and protect the health of aquatic species. Research and on-the-ground experience suggests that all LID practices can perform effectively in a wide variety of geographic areas as long as procedures for proper design, implementation, and maintenance are established and followed.[43]

Many MS4 Permittees in Idaho currently require onsite retention and infiltration practices at development sites in their jurisdictions, and integrate aspects of a GSI/LID approach for such new development and redevelopment sites. Based on evidence that such GSI/LID approaches are indeed practicable for use in Idaho communities, EPA is now requiring such site design approaches in this and other MS4 permits in Idaho to better address post-construction stormwater discharges.

The Permits require each of the Permittees to use local ordinances or regulatory mechanisms to require the volume of water from storms $\leq$ 95th percentile event to be managed entirely onsite, and not discharged to surface waters, in order to fully protect Idaho receiving waters. The *95th percentile rainfall event* is the rainfall event that is greater than 95% of all rainfall events over a period of record (typically using a minimum 30-year period of record). In general, this calculation excludes extremely small rain events that are $\leq$0.1 of an inch of rainfall or less (because such small rainfall events typically do not result in any measurable runoff due to absorption, interception, and evaporation by permeable, impermeable, and vegetated surfaces).[44]

EPA has previously calculated example target design storm volumes, as illustrated below. Using available 24-hour precipitation data through 2012 from the National Oceanic and Atmospheric Administration, EPA analyzed the average rainfall depth occurring in the Idaho MS4 Permit Areas. See Table A below. In the Urbanized Areas of Idaho, approximately 95% of all storms result in rainfall volumes of approximately 0.82 inches or less, ranging between 0.57 inches to 0.82 inches.

[42] See: American Rivers 2013; EPA 2006*;* EPA 1999*,* at pages 68725 – 68728 and 68759; EPA 2008; and EPA 2009.
[43] For example, see Ahiablame, et al, 2012; Spromberg, J.A. et al. 2016; and McIntyre, J.K, et al. 2016; and other references in the Administrative Record.
[44] See: Hirschman and Kosco, 2008

Table A: ***Analysis of the 95th Percentile Storm Runoff Volumes for Idaho MS4 Permit Areas***

Urbanized Area/ Permit Area	Rainfall Depth (in) 95th	NOAA Station Location; Period of Record
Coeur d' Alene	0.81888	*COEUR D ALENE, ID (GHCND:USC00101956);1895-2012*
Moscow	0.8188	*MOSCOW U OF I, ID (GHCND:USC00106152);1893-2012*
Caldwell	0.6102	*BOISE AIR TERMINAL, ID (GHCND:USW00024131); 1940-2012*
Nampa	0.5708	*NAMPA 2 NW, ID US ZIP:83687; 1948-2012*
Boise	0.6102	*BOISE AIR TERMINAL, ID (GHCND:USW00024131); 1940-2012*
Lewiston	0.6299	*LEWISTON NEZ PERCE CO AIRPORT, ID (GHCND:USW00024149); 1940-2012*
Pocatello	0.6495	*POCATELLO REGIONAL AIRPORT, ID (GHCND:USW00024156); 1939-2012*
Idaho Falls	0.688	*IDAHO FALLS, ID 83402 ZIP:83402; 1913-2012*

EPA recommends the 95th percentile storm volume be calculated for the Boise and Nampa Urbanized Areas at the start of the Permit term and revisited at the time of permit renewal so that a consistent standard is applied for the duration of the Permit term.

Including a stormwater design standard for onsite stormwater retention in this and other MS4 Permits, expressed as a calculated runoff volume, serves to acknowledge the predicted, incremental increase in storm event volumes in Couer d'Alene and other areas of Idaho. EPA believes such a design standard is preferable to using a single, static statewide rainfall amount (e.g, "0.6 inches total rain"), or a volume calculated from a statistical storm frequency return interval using historic rainfall data.

EPA has evaluated the potential extreme storm event return interval for 24-hour storm events in each of the MS4 Permit Areas in Idaho.[45] The evaluation reflects estimated changes in rainfall patterns over 30-year averages, centered around the years 2035 and 2060, as compared to historical or present-day conditions. Under all evaluated scenarios, the predicted trends in Idaho MS4 Permit Areas show a general increase in ambient temperatures throughout the calendar year, and increased storm magnitude for all return frequencies (i.e., the 5 year, 10 year, …, and 100 year events). The evaluation also suggests significantly decreased summer precipitation statewide, balanced by increased precipitation during other seasons. Expressing the stormwater design standard for onsite storm water retention in Permit Part 3.4 as a calculated runoff volume therefore defines a practicable and feasible performance standard for permanent stormwater control at new development and redevelopment that will protect Idaho water quality over the long term.

[45] EPA Region 10's analysis of the extreme storm event return interval for the Idaho MS4 Permit Areas is available as part of the Administrative Record. EPA used a risk assessment application designed to help water utilities in adapting to extreme weather events through a better understanding of current and long-term weather conditions; it is available online at https://www.epa.gov/crwu/build-resilience-your-utility.

Appendix 5 – Rationale Supporting Requirements In Permit Part 4 For MS4 Discharges To Impaired Waters

Appendix 5.1 – Indian Creek

Summary: Consistent with the WLAs established in the EPA-approved TMDL, ITD3 must continue to monitor/assess, and conduct targeted pollutant reduction activities that address sediment and *E.coli* in MS4 discharges to Indian Creek.

Receiving Water	Waterbody Assessment Unit	Impairment Pollutants and TMDL Status
Indian Creek	ID17050114SW002_04 *Indian Creek - Sugar Avenue to Boise River*	Temperature*:* No TMDL completed. Fecal Coliform & Sediment*:* *Lower Boise River TMDL - 2015 Sediment and Bacteria Addendum.* June 2015. Approved September 2015

ITD3's MS4 discharges to Indian Creek through at least three outfalls.

IDEQ's 2016 Integrated Report lists this segment of Indian Creek as impaired for sediment, *E. coli*, and temperature.

Regarding sediment and E. coli:

IDEQ established bacteria and sediment targets for the impaired segment(s) of Indian Creek in the *Lower Boise River TMDL 2015 Sediment and Bacteria Addendum (LBR 2015 TMDL Addendum).*

The LBR 2015 TMDL Addendum establishes applicable storm water targets, of 20 mg/L, less 2.5 mg/L for natural background for sediment, and 126 cfu/100 mL for *E. coli*. These targets are not end-of pipe limits, but instead are averages (4-month average for sediment and 30 days average for *E. coli*) that only apply to MS4 outfalls discharging over the entire averaging period. The TMDL addresses pollutants in discharges of long-duration (4 months or more); stormwater discharges are typically only a few hours or days, and they do not receive WLAs in this TMDL. The targets only apply to MS4 outfalls that discharge for the entire averaging period (4 months or longer). Where such long-duration discharges from MS4 outfalls occur, the same target concentrations apply to every storm water outfall. However, because wet weather MS4 discharges typically last only a few hours or days, the TMDL considers such wet weather discharges to be short duration pollutant sources; DEQ provides the following narrative interpretation of the TMDL WLAs for short-term discharges of bacteria and sediment:

> "*1. Storm water entities must continue management practices that reduce sediment and E. coli; [and]*

2. Storm water entities must continue to identify and characterize inputs to their systems pollutant."[46]

Conclusion: The requirements for continued implementation of a comprehensive SWMP as directed in ITD3's Permit Part 3, and the monitoring/assessment and pollutant reduction activities required by Permit Part 4, are consistent with the WLA identified for MS4 discharges into Indian Creek and will ensure progress towards complying with the LBR 2015 TMDL Addendum.

Regarding temperature:

IDEQ's 2016 Integrated Report lists this segment of Indian Creek as impaired for temperature; no TMDLs have been established. ITD3 discharges to Indian Creek. Therefore, EPA requires ITD3 to monitor/assess MS4 discharges for temperature and other impairment pollutants as described in this Appendix and Section 2.5 of this document.

Conclusion: EPA is not requiring additional SWMP control measures to address temperature impairments at this time. The requirements for continued implementation of a comprehensive SWMP as directed in ITD3's Permit Part 3, and the monitoring/assessment and pollutant reduction activities required by Permit Part 4, are sufficient to address and assess the contribution of urban storm water to temperature impacts in Indian Creek.

[46] See: *Lower Boise River TMDL: 2015 Sediment and Bacteria Addendum*, pages 51-55.

Appendix 5.2 – Mason Creek

Summary: Consistent with the WLAs established in the EPA-approved TMDL, ITD3 must continue to monitor/assess, and conduct targeted pollutant reduction activities that address sediment, nutrients and *E. coli* in MS4 discharges to Mason Creek. Monitoring/assessment of potential temperature impacts from MS4 discharges, combined with targeted pollutant reduction activities, is necessary and appropriate to address waters impaired for temperature in the absence of an applicable TMDL.

Receiving Water	Waterbody Assessment Unit	Impairment Pollutants and TMDL Status
Mason Creek	ID17050114SW006_02 *Mason Creek*	Sediment & *E. coli*: *Lower Boise River TMDL - 2015 Sediment and Bacteria Addendum*. June 2015. Approved September 2015. Temperature: No TMDL completed. Malathion and Chlorpyrifos: No TMDLs completed.

ITD3's MS4 discharges to Mason Creek from at least one outfall.

IDEQ's 2016 Integrated Report lists Mason Creek as impaired for cause unknown (nutrients suspected), sediment, *E. coli*, temperature, and the agricultural chemicals chlorpyrifos and malathion.

Regarding sediment and E. coli:

IDEQ established bacteria and sediment targets for the impaired segments of Mason Creek in the *Lower Boise River TMDL 2015 Sediment and Bacteria Addendum (LBR 2015 TMDL Addendum).*

The LBR 2015 TMDL Addendum establishes applicable storm water targets, of 20 mg/L, less 2.5 mg/L for natural background for sediment, and 126 cfu/100 mL for *E. coli*. These targets are not end-of pipe limits, but instead are averages (4-month average for sediment and 30 days average for *E. coli*) that only apply to MS4 outfalls discharging over the entire averaging period. The TMDL addresses pollutants in discharges of long-duration (4 months or more); stormwater discharges are typically only a few hours or days, and they do not receive WLAs in this TMDL. The targets only apply to MS4 outfalls that discharge for the entire averaging period (4 months or longer). Where such long-duration discharges from MS4 outfalls occur, the same target concentrations apply to every storm water outfall. However, because wet weather MS4 discharges typically last only a few hours or days, the TMDL considers such wet weather discharges to be short duration pollutant sources; IDEQ provides the following narrative interpretation of the TMDL WLAs for short-term discharges of bacteria and sediment:

> "*1. Storm water entities must continue management practices that reduce sediment and E. coli; [and]*

2. Storm water entities must continue to identify and characterize inputs to their systems pollutant."[47]

Conclusion: The requirements for continued implementation of a comprehensive SWMP as directed in ITD3's Permit Part 3, and the monitoring/assessment and pollutant reduction activities required by Permit Part 4, are consistent with the WLA identified for MS4 discharges into Mason Creek and will ensure progress towards complying with the LBR 2015 TMDL Addendum.

Regarding temperature:

IDEQ's 2016 Integrated Report lists Mason Creek as impaired for temperature; no TMDLs have been established. EPA requires ITD3 to consider monitor/assess MS4 discharges for temperature and other impairment pollutants as described in this Appendix and Section 2.5 of this document.

Conclusion: EPA is not requiring additional SWMP control measures to address temperature impairments at this time. The requirements for continued implementation of a comprehensive SWMP as directed in ITD3's Permit Part 3, and the monitoring/assessment and pollutant reduction activities required by Permit Part 4, are sufficient to address and assess the contribution of urban storm water to temperature impacts in Mason Creek.

Regarding malathion and chlorpyrifos:

IDEQ's 2016 Integrated Report lists Mason Creek as impaired for the agricultural chemicals malathion and chlorpyrifos, based on available data indicating the presence of toxic substances in concentrations that impair beneficial uses and violate Idaho's narrative standard for toxic substances.[48] No TMDLs have been established. IDEQ considers the presence of these chemicals to be due to agricultural activities within the watershed.[49]

Conclusion: EPA is not requiring additional SWMP control measures to address impairments due to agricultural chemicals at this time. The requirements for continued implementation of a comprehensive SWMP as directed in ITD3's Permit Part 3, and the monitoring/assessment and pollutant reduction activities required by Permit Part 4, are sufficient to address and assess the contribution of urban storm water to water quality impacts in Mason Creek.

[47] See: *Lower Boise River TMDL: 2015 Sediment and Bacteria Addendum*, pages 51-55.
[48] See IDEQ 2018, Appendix K, page 40 of 64.
[49] Personal communication with K. Carberry, IDEQ, 6/22/2020.

Appendix 5.3 – Tenmile, Fivemile, Eightmile and Ninemile Creeks

Summary: The ACHD MS4 discharges to the Waterbody Assessment Units listed in the table below. Consistent with the WLAs established in EPA-approved TMDLs, ACHD must monitor/assess, and conduct targeted pollutant reduction activities, to address sediment and *E. coli* in MS4 discharges to the these impaired segments.

Receiving Water	Waterbody Assessment Unit	Impairment Pollutants and TMDL Status
Tenmile Creek	ID17050114SW008_03 *Tenmile Creek - 3rd order below Blacks Creek Reservoir*	*E. coli* & Sediment: *Lower Boise River TMDL - 2015 Sediment and Bacteria Addendum.* June 2015. Approved September 2015. Chlorpyrifos: No TMDL completed.
Fivemile, Eightmile, and Ninemile Creeks	ID17050114SW010_02 *Fivemile, Eightmile, and Ninemile Creeks - 1st and 2nd order*	*E. coli:* *Lower Boise River TMDL - 2015 Sediment and Bacteria Addendum. June 2015. Approved September 2015.*
Fivemile Creek	ID17050114SW010_03 *Fivemile Creek - 3rd order*	*E. coli* & Sediment: *Lower Boise River TMDL - 2015 Sediment and Bacteria Addendum.* June 2015. Approved September 2015. Chlorpyrifos: No TMDL completed.

The ACHD MS4 discharges directly to Tenmile, Fivemile, Eightmile, and Ninemile Creeks; in its 2019 Annual Report, ACHD notes that approximately forty-three percent of ACHD-owned Phase II outfalls discharge directly to the waterbodies set forth in the above table as well as the associated tributary conveyances of Eagle Drain, and Thurman Mill Canal.

Regarding sediment and E. coli:

IDEQ established bacteria and sediment targets for the impaired segments of Tenmile, Fivemile, Eightmile, and Ninemile Creeks in the *Lower Boise River TMDL 2015 Sediment and Bacteria Addendum (LBR 2015 TMDL Addendum).*

The LBR 2015 TMDL Addendum establishes applicable storm water targets, of 20 mg/L, less 2.5 mg/L for natural background for sediment, and 126 cfu/100 mL for *E. coli*. These targets are not end-of pipe limits, but instead are averages (4-month average for sediment and 30 days average for *E. coli*) that only apply to MS4 outfalls discharging over the entire averaging period. The TMDL addresses pollutants in discharges of long-duration (4 months or more); stormwater discharges are typically only a few hours or days, and they do not receive WLAs in this TMDL. The targets only apply to MS4 outfalls that discharge for the entire averaging period (4 months or longer). Where such long-duration discharges from MS4 outfalls occur, the same target concentrations apply to every storm water outfall. However, because wet weather MS4 discharges typically last only a few hours or days, the TMDL considers such wet weather discharges to be short duration pollutant

sources; IDEQ provides the following narrative interpretation of the TMDL WLAs for short-term discharges of bacteria and sediment:

> "*1. Storm water entities must continue management practices that reduce sediment and E. coli; [and]*
>
> *2. Storm water entities must continue to identify and characterize inputs to their systems pollutant*."[50]

Conclusion: The requirements for continued implementation of a comprehensive SWMP as directed in ACHD's Permit Part 3, and the monitoring/assessment and pollutant reduction activities required by Permit Part 4, are consistent with the WLA identified for MS4 discharges into Tenmile, Fivemile, Eightmile, and Ninemile Creeks and will ensure progress towards complying with the LBR 2015 TMDL Addendum.

[50] See: *Lower Boise River TMDL: 2015 Sediment and Bacteria Addendum*, pages 51-55.

Appendix 5.4 – Lower Boise River

Summary: The ACHD, CHD and ITD3 MS4s discharge directly and indirectly to the Lower Boise River Assessment Units listed in the table below. Consistent with the WLAs established in EPA-approved TMDLs, ACHD, CHD and ITD3 must monitor/assess, and conduct targeted pollutant reduction activities, to address sediment and *E. coli* in MS4 discharges to the Boise River. Monitoring/assessment of potential temperature impacts from MS4 discharges, combined with targeted pollutant reduction activities, is necessary and appropriate to address waters impaired for temperature in the absence of an applicable TMDL.

Receiving Water	Waterbody Assessment Unit	Impairment Pollutants and TMDL Status
Boise River	ID17050114SW005_06b *Boise R.-Middleton to Indian Creek*	Fecal Coliform and Sediment/Siltation: *Lower Boise River TMDL Subbasin Assessment, Total Maximum Daily Loads*, September 1999. Approved January 2000. Temperature: No TMDL for completed. Total Phosphorus: *Lower Boise River TMDL - 2015 Total Phosphorus Addendum.* August 2015. Approved December 2015.
	Boise River ID17050114SW005_06 *Boise River - Veterans Memorial Parkway to Star Bridge*	Fecal Coliform & Sediment: Lower Boise River TMDL Subbasin Assessment, Total Maximum Daily Loads, September 1999. Approved January 2000. Temperature: No TMDL completed.

The CHD MS4 discharges to the Boise River and other tributary conveyances leading to the Boise River, including but not limited to: Farmers Coop Canal; Canyon Canal; Newman Lateral; Canyon Hill Canal; Notus Canal; West Hartley Gulch; Phyllis Canal; Bardsley Gulch Drain; West End Drain; Forest Canal; Elijah Drain; Isaiah Drain; Upper Embankment Drain; and Jonah Drain.

ITD3's MS4 discharges to the Lower Boise River in at least one location, and discharges to the following tributary conveyances: Indian Creek; Mason Creek, Wilson Drain; Notus Canal; Riverside Canal; Elijah Drain; and the Phyllis Canal

ACHD's MS4 discharges to the Lower Boise River and tributary conveyances such as Dry Creek Lateral; Fivemile Creek Lateral; Lateral 10A; North Slough; Thurman Mill Canal; Graham Gilbert Canal; Thurman Drain; and other conveyances listed in Appendix 6.1 of this document.

IDEQ's 2016 Integrated Report lists the segments of the Boise River in the table above as impaired for sediment, E. coli, temperature, and total phosphorus.

Regarding sediment and E. coli:

In 1999, IDEQ originally established the *Lower Boise River TMDL: Subbasin Assessment, Total Maximum Daily Loads* (1999 LBR TMDL) for sediment and bacteria impairments in the segments representing the LBR main stem. The 1999 LBR TMDL establishes sediment allocations for

reaches of the LBR upstream of Middleton equal to the 1995 baseline conditions (e.g. the allocations represent a 0% reduction in sediment, or no net increase). The TMDL considers urban and suburban land uses upstream of Middleton as contributing sediment sources to the main stem LBR, and states that the comprehensive municipal SWMP, as implemented through a NPDES permit, is likely sufficient to meet the sediment TMDL allocations.[51]

In the same document, IDEQ's bacteria TMDL assigned estimated bacteria load allocations to various tributaries based on meeting a fecal coliform target concentration. The TMDL estimates that more than 70% of the nonpoint source bacteria load must be reduced from the area upstream of the Middleton compliance point. In 2007, IDEQ revised its WQS indicator for bacteria from fecal coliform to *E. coli,* represented as 126 cfu/100 ml, based on the geometric mean of five samples taken 3-7 days apart over a 30-day period. The *2003 Implementation Plan for the Lower Boise Watershed* (2003 LBR Plan) references the federal NPDES storm water requirements, and cites a menu of activities expected to reduce sediment and bacteria from upstream urban and suburban land uses, such as: targeted public education, construction site runoff control, and on-site management of post-construction runoff from new development and redevelopment.

> **Conclusion:** The requirements in each Permit for ACHD, CHD and ITD3 for continued implementation of a comprehensive SWMP as directed in Permit Part 3, and the monitoring/assessment and pollutant reduction activities required by Permit Part 4, are consistent with the WLAs identified for sediment and bacteria in MS4 discharges to the Lower Boise River and are sufficient to ensure progress towards complying with the 1999 LBR TMDL.

Regarding temperature:

IDEQ's 2016 Integrated Report lists this segment of Boise River as impaired for temperature; no TMDL has been established. EPA requires the ACHD, CHD, and ITD3 to monitor/assess MS4 discharges for temperature and other impairment pollutants as described in this Appendix and Section 2.5 of this document.

> **Conclusion:** EPA is not requiring additional SWMP control measures to address temperature impairments at this time. The requirements in each Permit for continued implementation of a comprehensive SWMP as directed in Permit Part 3, and the monitoring/assessment and pollutant reduction activities required by Permit Part 4, are sufficient to address and assess the contribution of urban storm water to temperature impacts in Boise River.

Regarding total phosphorus:

The Lower Boise River, from Middleton to its confluence with the Snake River, does not meet the narrative criteria for excess nutrients in the Idaho WQS. The *Lower Boise River TMDL 2015 Total Phosphorus Addendum* (LBR Phosphorus TMDL), approved by EPA on December 22, 2015, quantifies total phosphorus pollutant sources, and identifies responsibility for load and waste load allocations needed to achieve the WQS.[52] IDEQ's numeric target to describe nuisance aquatic growth within impaired Assessment Units of the main stem lower Boise River is established as the mean monthly benthic (periphyton) chlorophyll a ≤ 150 mg/m^2, year round.[53]

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[51] See: *Lower Boise River TMDL Subbasin Assessment* (1999), Table 14, pg 58-61

[52] See: Lower Boise River Phosphorus TMDL at: *http://www.deq.idaho.gov/media/60177413/lower-boise-river-tmdl-total-phosphorus-addendum-0815.pdf*.

[53] See: Lower Boise River Phosphorus TMDL, page 64.

IDEQ assigned two types of WLAs for total phosphorus to ACHD, CHD, ITD3 and other NPDES-regulated small MS4s discharging to the LBR. One WLA for municipal storm water discharges occurring during wet weather, representing a target total phosphorus load reduction of 42% on average across all regulated small MS4 discharges. A second WLA for dry weather discharges from MS4s represents a target of 84% total phosphorus load reduction on average across all MS4s.

The LBR Phosphorus TMDL also includes load allocations of 0.07 mg/L total phosphorus which are to be met at both the mouth of Mason Creek and Indian Creek. The WLAs (expressed as % reductions) described above for MS4 discharges were calculated by IDEQ to meet the 0.07mg/L target at each of these locations.[54]

IDEQ acknowledged at the time that it based these WLAs and load reduction targets on limited data and conservative assumptions. Because the "plumbing" of the MS4 systems with the LBR watershed is intricate and complex, and the quantity of the non-storm water inputs is unknown, IDEQ asked MS4 Permittees to provide initial estimates for the percentage of the non-storm water discharges through their MS4s that originates from nonpoint sources. IDEQ expects these estimates to be refined through monitoring and mapping in future permit cycles and as part of TMDL implementation. Further, IDEQ recommends that TMDL-related activities be determined on a watershed basis, such that all regulated small MS4 entities are conducting the same or similar types of actions. EPA agrees that it is necessary for ACHD, CHD, ITD3 and other MS4s to verify all existing MS4 outfalls discharging during dry weather, and to characterize such flows by type and source. It is also necessary to confirm whether such ground water and/or irrigation water flows are indeed uncontaminated. If dry weather flows from the MS4 are determined to be uncontaminated, they may be "allowable non-storm water discharges," as conditionally provided by Permit Part 2.4.

IDEQ encourages discharge or pollutant trading (between with other sectors and sources) to facilitate cost effective load reductions. The LBR Phosphorus TMDL recognizes that retrofitting the existing infrastructure may require considerable time and resources; and recommends that runoff from new urban development be managed carefully, using appropriate BMPs consistent with the overall total phosphorus reduction goals.[55]

Conclusion: EPA determines that continued implementation of the comprehensive SWMP control measures by the ACHD, CHD, and ITD3 is also consistent with the goal of meeting the numeric target for nuisance algal growth established by the LBR Phosphorus TMDL. To address the LBR Phosphorus TMDL WLAs for wet and dry weather MS4 discharges, EPA has required ACHD, CHD, and ITD3 to initiate storm water monitoring/assessment efforts, or contine efforts begun under the prior MS4 permit term, and to submit descriptions of at least two (2) pollutant reduction activities to target and control discharges of total phosphorus and other impairment pollutants. CHD must only implement one (1) pollutant reduction activity given the total size of their permit area, and EPA encourages CHD to work closely with other regulated MS4s to leverage overall effort. Such activities may augment existing control measures or target new actions. EPA encourages a watershed-based approach to monitoring/assessment efforts and encourages ACHD, CHD, ITD3 and other stakeholders to work together to fulfill the necessary objectives of the LBR Phosphorus TMDL implementation efforts in a consistent manner. EPA believes that monitoring/assessment data will help substantiate future modelling efforts to assess the effectiveness of stakeholders' ongoing efforts to reduce wet and dry weather pollutant loading from MS4 outfalls..

[54] IDEQ 2020b.
[55] See: LBR Phosphorus TMDL page 98

Appendix 6 – Permittee Specific Information

Appendix 6.1 - IDS028185 – Ada County Highway District

Website Information:
https://www.achdidaho.org/Departments/Engineering/Stormwater/resources.aspx

MS4 Map/Inventory: See Appendix 2.

Permit History: EPA previously issued Permit #IDS028185 for ACHD's MS4 discharges in September 2009. The Permit expired on October 14, 2014.

ACHD submitted a timely and complete application for the reissuance of NPDES Permit #IDS028185 in January 2014 as Appendix 11 of its *Annual Report for Permit Year 2012-2013.* (ACHD renewal application). Pursuant to 40 CFR § 122.6, the Permit was administratively continued upon the expiration date of the permit. Therefore, the Permit remains in effect untilit is reissued. ACHD continues to implement their stormwater management program (SWMP) activities and submit Annual Reports in compliance with the administratively continued Permit.

MS4 Description, Receiving Waters, and Outfall Locations: ACHD's Phase II MS4 is located in the cities of Meridan, Eagle, and unincorporated Ada County. The MS4 discharges through approximately 397 outfalls into Fivemile Creek, Eightmile Creek, Ninemile Creek,Tenmile Creek, Dry Creek, and the Lower Boise River, as well as other tributary conveyances leading to the Lower Boise River. These tributary conveyances include, but are not limited to:

> Dry Creek Lateral; Fivemile Creek Lateral; Lateral 10A; North Slough;Thurman Mill Canal; Graham Gilbert Canal; Thurman Drain; Mason-Catline Canal; Ballentine Canal; Eagle Drain; Farmer's Union Canal; Dry Creek Canal; Spoils Bank Canal; Lateral 16; Brusheres Lateral; New York Canal; Hardin Drain; Ridenbaugh Canal; Kennedy Lateral; Rutledge Lateral; Tenmile Sub Drain; Purdam Gulch Drain; Sky Pilot Drain; Settler's Canal; Safford Sublateral; Creason Lateral; New York Canal; Wood Lateral; Tenmile Feeder Canal; Evans Drain; Jackson Drain Waste Ditch; Gruber Lateral; Jackson Drain;Jackson Stub Drain; Downey Sublateral; Onweiler Lateral; Finch Lateral; South Slough;Milk Lateral; Hon Lateral; Cunningham Lateral; and Boller Lateral. [56]

As of December 2017, ACHD reports that its MS4 in the Phase II Permit Area is comprised of approximately 153 miles of storm drain pipe; 7,179 catch basins; 2,870 sand and grease traps; 1,658 seepage beds; and 38 stormwater ponds. There are an additional 269 basins that are privately-owned where ACHD is responsible for heavy maintenance activities, e.g. dredging, while the homeowner's association or other private party(s) is responsible for the regular, light maintenance activities, e.g. landscape maintenance. [57]

[56] ACHD 2017; ACHD 2019b.
[57] ACHD 2017.

Appendix 6.2 - IDS028134 – Canyon Highway District

Website Information: https://www.canyonhd4.org/about-us/what-we-do/stormwater-management/

MS4 Map/Inventory: See Outfall List, below.

Permit History: EPA previously issued Permit #IDS028134 for CHD's MS4 discharges in August 2009. The Permit expired on October 14, 2014. CHD submitted a timely and complete application for the reissuance of NPDES Permit #IDS028134 in June 2014. Pursuant to 40 CFR § 122.6, the Permit was administratively continued upon the expiration date of the Permit. Therefore, the Permit remains in effect until it is reissued. CHD continues to implement their stormwater management program (SWMP) activities and submit Annual Reports in compliance with the administratively continued Permit.

MS4 Description, Receiving Waters, and Outfall Locations:

In its 2014 permit renewal application, CHD describes its MS4 as follows: "Canyon Highway District No. 4's (MS4) is limited to storm drainage facilities located within the public road rights-of-ways under the Highway District's jurisdiction within the Nampa Urbanized Area. The systems primarily consist of roadside borrow ditches and culverts, with only a few piped systems. The borrow ditch systems frequently provide for conveyance of both storm water runoff and waste irrigation water from adjoining or underlying agricultural land. A total of 39 outfalls have been identified and inventoried."

The CHD MS4 discharges to the Boise River and other tributary conveyances leading to the Boise River, including but not limited to: Farmers Coop Canal; Canyon Canal; Newman Lateral; Canyon Hill Canal; Notus Canal; West Hartlety Gulch; Phyllis Canal; Bardsley Gulch Drain; West End Drain; Forest Canal; Elijah Drain; Isaiah Drain; Upper Embankment Drain; and Jonah Drain.

A list of CHD's identified MS4 outfalls is provided below.[58]

Outfall Number	Receiving Water	Latitude	Longitude
1001AOF1A	Name Unknown	43°42'12.3963"	-116°39'47.3134"
1001AOF1B	Name Unknown	43°42'12.4428"	-116°39'46.6468"
1001AOF2A	Canyon Canal	43°42'18.2874"	-116°39'47.1429"
1001AOF2B	Canyon Canal	43°42'18.9075"	-116°39'46.6778"
1007AOF1A	Canyon Canal	43°42'00.7787"	-116°40'50.0383"
1007AOF1B	Canyon Canal	43°42'00.7908"	-116°40'49.6086"
1007AOF2A	Canyon Canal	43°42'12.3973"	-116°40'23.0215"
1007AOF2B	Canyon Canal	43°42'12.2556"	-116°40'22.8429"
1008BOF1	Name Unknown	43°43'01.1090"	-116°35'33.5036"
1014AOF1	Canyon Canal	43°42'36.3014"	-116°39'11.0406"
1014AOF2	Canyon Canal	43°42'39.3059"	-116°39'11.0635"
1015BOF1	Newman Lateral	43°43'09.3692"	-116°35'42.0856"
1015BOF2	Newman Lateral	43°43'09.2265"	-116°35'35.9491"
1015BOF3	Newman Lateral	43°43'09.4854"	-116°35'46.7073"
1025AOF1	Canyon Hill Canal	43°42'26.7841"	-116°40'49.7556"

[58] CHD 2012

Outfall Number	Receiving Water	Latitude	Longitude
1029AOF1A	Notus Canal	43°41'27.9155"	-116°41'29.0505"
1029AOF1B	Notus Canal	43°41'28.0493"	-116°41'29.2913"
1029AOF2A	Boise River/Farmers Coop Canal	43°41'19.24"	-116°41'16.12"
1031AOF1	W. Hartley Gulch	43°41'58.5128"	-116°41'08.1707"
1034AOF1	West Hartley Gulch	43°42'22.8465"	-116°41'07.7660"
1034AOF2	Name Unknown	43°42'41.3462"	-116°41'07.0657"
2011AOF1A	Phyllis Canal	43°38'15.9492"	-116°42'38.2894"
2011AOF1B	Phyllis Canal	43°38'15.9568"	-116°42'38.0513"
2014EOF1	Phyllis Canal	43°38'14.1684"	-116°42'47.1266"
2014EOF2	Bardsley Gulch Drain	43°38'27.9562"	-116°42'46.8234"
2014EOF3	Bardsley Gulch Drain	43°38'34.1876"	-116°42'47.3177"
2014FOF1A	West End Drain	43°39'24.9381"	-116°42'47.8162"
2014FOF1B	West End Drain	43°39'24.9458"	-116°42'46.8983"
2014FOF2	Name Unknown	43°39'44.3179"	-116°42'47.0743"
3006AOF1A	Forest Canal	43°35'48.2824"	-116°42'46.6505"
3006AOF1B	Forest Canal	43°35'48.5892"	-116°42'46.4706"
3022FOF1	Elijah Drain	43°36'51.9008"	-116°37'58.3123"
3023BOF1	Forest Canal	43°36'33.1140"	-116°40'58.5505"
3023BOF2	Phyllis Canal	43°37'04.4834"	-116°40'58.7497"
3024AOF1A	Isaiah Drain	43°36'43.9831"	-116°38'06.9350"
3024AOF1B	Isaiah Drain	43°36'43.9655"	-116°38'06.5743"
3025GOF1	Phyllis Canal	43°35'24.8410".	-116°39'01.9034"
3025GOF2A	Upper embankment Drain	43°35'25.5053"	-116°38'34.2887"
3025GOF2B	Upper embankment Drain	43°35'24.6361"	-116°38'34.1950"
3025GOF3A	Jonah Drain	43°35'24.5678"	-116°38'19.9351"
3025GOF3B	Jonah Drain	43°35'24.6209"	-116°38'18.5465"

Appendix 6.3 - IDS028177 – ID Transportation Department District #3

Website Information: ***https://itd.idaho.gov/env/?target=stormwater.***

MS4 Map/Inventory: See Appendix 2, Figure A.2-3. See also the MS4 outfall inventory below.

Permit History: EPA previously issued Permit #IDS028177 for ITD3's MS4 discharges in August 2009. The Permit expired on October 14, 2014.

ITD3 submitted a timely and complete application for the reissuance of NPDES Permit #IDS028177 on October 9, 2014. Pursuant to 40 CFR § 122.6, the Permit was administratively continued upon the expiration date of the Permit. Therefore, the permit remains in effect until it is reissued. ITD3 continues to implement their stormwater management program (SWMP) activities and submit Annual Reports in compliance with the administratively continued Permit.

MS4 Description, Receiving Waters, and Outfall Locations:

ITD3 described its MS4 in its permit renewal application as follows: "The District is responsible for structural controls that include roadways and associated drainage facilities, bridges, roadsides, and traffic control devices. Drainage facilities include gutters, culverts, ditches, swales, pipes, poly drains, french drains, catch basins/inlets, sand and grease traps, edge drains, transverse drains, and retention/detention ponds."

The ITD3 MS4 discharges to Indian Creek, Mason Creek, the Boise River, and other tributary conveyances leading to the Boise River, including but not limited to: Notus Canal, Riverside Canal, Wilson Drain, Elijah Drain, and Phyllis Canal.

A list of ITD3's identified MS4 outfall location is provided below. See also https://apps.itd.idaho.gov/Apps/env/d-3_ms4/2011_D3_Network_UrbanizedArea.pdf and https://apps.itd.idaho.gov/Apps/env/d-3_ms4/2011_D3_MS4-Network.pdf

Latitude	Longitude	Receiving Water
43.64097115	-116.6429732	Notus Canal
43.63970881	-116.6413116	Notus Canal
43.6733044	-116.7033823	Riverside Canal
43.67796222	-116.6983296	Boise River
43.61313572	-116.599284	Indian Creek
43.58318191	-116.5559944	Indian Creek
43.58322077	-116.555918	Indian Creek
43.54794869	-116.572528	Wilson Drain
43.56313261	-116.5728262	Elijah Drain
43.56321068	-116.5730701	Elijah Drain
43.58332626	-116.5560663	Indian Creek
43.58805136	-116.5777896	Phyllis Canal
43.58784187	-116.5774506	Phyllis Canal
43.58863675	-116.5786499	Phyllis Canal
43.58629437	-116.5518097	Mason Creek
43.54702666	-116.5723573	Wilson Drain