

Phase I Stormwater  
Management Plan

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**Ada County Highway  
District**

Garden City, Idaho  
December 2017  
Permit No. IDS-027561

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## List of Abbreviations

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ACHD	Ada County Highway District	TSS	Total Suspended Solids
ACWP	Ada County Weed and Pest Control	UA	Urbanized Area
BMP	Best Management Practice	WLA	Waste Load Allocation
CASQA	California Stormwater Quality Association		
CGP	Construction General Permit		
CSDC	Construction Site Discharge Control		
CSSRC	Construction Site Source Runoff Control		
CWA	Clean Water Act		
EPA	Environmental Protection Agency		
ERP	Enforcement Response Policy		
FTE	Full Time Equivalent (position)		
GI	Green Infrastructure		
GIS	geographic information system		
GSI	Green Stormwater Infrastructure		
IDDE	Illicit Discharge Detection Elimination		
IDEQ	Idaho Department of Environmental Quality		
IGA	Intergovernmental Agreement		
LA	Load Allocation		
LID	Low Impact Development		
LOS	Level of Service		
MEP	Maximum Extent Practicable		
MSGP	Multi-sector General Permit		
MS4	Municipal Separate Storm Sewer System		
NPDES	National Pollution Discharge Elimination System		
O&M	Operation and Maintenance		
OVIP	Outfall Verification and Identification Program		
PCSM	Post Construction Stormwater Management		
PMEP	Program Monitoring and Evaluation Plan		
PoC	Pollutants of Concern		
QAP	Quality Assurance Plan		
ROW	Right of Way		
SOP	Standard Operating Procedure		
SWMP	Storm Water Management Plan		
SWPPP	Storm Water Pollution Prevention Plan		
TMDL	Total Maximum Daily Load		



## Section 1

# Introduction

### 1.1 Purpose

Ada County Highway District's mission "We drive quality transportation for all Ada County— Anytime, Anywhere!" involves planning, designing, constructing, and maintaining local transportation facilities (roadways, bridges, bike lanes, sidewalks, and park and ride lots) within Ada County, Idaho, including the cities. ACHD is responsible for accomplishing this mission in compliance with public policy and applicable regulations.

Environmental Protection Agency, Region 10 (EPA) issued a second cycle Phase I National Pollutant Discharge Elimination System (NPDES) Municipal Separate Storm Sewer System (MS4) Permit (Permit) (No.IDS-028185) to ACHD and five other entities: Boise, Garden City, Idaho Transportation Department District 3, Ada County Drainage District 3, and Boise State University, hereafter known as Permittees, on December 12, 2012. The Permit authorizes ACHD to discharge stormwater from ACHD's MS4 outfalls to waters of the United States in accordance with the conditions and requirements of the Permit. The Permit area covers the cities of Boise and Garden City, Idaho. The Permit was due to expire on January 30, 2018, but was administratively extended by EPA in October 2017. A copy of the current Permit is included in Appendix 1.

This document represents ACHD's Stormwater Management Plan (SWMP) for the Phase I Permit area of Boise and Garden City, Idaho. The Permit requires the Permittees, including ACHD "to implement and enforce a storm water management program designed to reduce the discharge of pollutants from their MS4 to the maximum extent practicable (MEP), and to protect the water quality of receiving waters." This SWMP will outline and direct the ACHD's Stormwater Management Program (Program) and its priorities and activities for the years 2013-2018. This SWMP establishes the foundation on which ACHD will continue to build as best management practices are identified and implemented and will be updated annually as required by the Permit (II.A.b.ii). ACHD will assess and report annually on the effectiveness of the program activities, and implement changes as necessary to ensure continued permit compliance.

### 1.2 Scope and Document Organization

This SWMP describes the procedures and practices ACHD currently uses throughout the planning, design, construction, operation and maintenance of the transportation infrastructure to limit the discharge of pollutants from ACHD's storm drainage systems. Newly developed and updated programs and procedures to comply with the components of the Permit will be submitted to EPA in the form of an updated SWMP as part of the annual reporting process.

The SWMP consists of the following components:

- Introduction (Section 1)
- Program Management (Section 2)
- Program Assessment and Evaluation (Section 3)
- Subwatershed Planning (Section 4)
- Minimum Control Measures and Activities (Section 5)
- Discharges to Water Quality Impaired Waters (Section 6)

- Monitoring Program (Section 7)

In Section 5, a discussion of each of the minimum control measures (measures) supported by multiple activities currently taking place or to be implemented during the second Permit cycle is included in the SWMP. The measures addressed include:

- Construction Site Runoff Control Program
- Stormwater Management for New Development and Redevelopment
- Industrial and Commercial Stormwater Discharge Management
- Stormwater infrastructure and Street Management
- Illicit Discharge Management
- Education, Outreach and Public Involvement

Each SWMP activity is defined by the overall objective, specific actions, timeframe for implementation, and the expected measurable goals. Some activities are tailored to meet the requirements of a single element while others play a role in multiple elements. Implicit in the discussion of each element of this SWMP is an administrative activity to assess the plan and submit annual progress reports to EPA on the status of SWMP implementation (Permit requirement IV.C.3).

### **1.3 Ada County Highway District Jurisdiction and Organization**

Established in 1972 as an independent government entity, the Ada County Highway District (ACHD) is responsible for all short-range planning, construction, maintenance, operations, rehabilitation and improvements to Ada County's urban streets, rural roadways (excluding state highways) and bridges. Geographically, the ACHD's jurisdiction includes Boise, Eagle, Garden City, Kuna, Meridian, Star, and the unincorporated areas of Ada County; it is the only consolidated countywide highway district in the State of Idaho.

ACHD maintains and operates approximately 2,924 center lane miles of roads and streets in Ada County, with an estimated value of three billion dollars. This infrastructure includes facilities that range from multi-lane, arterial streets with a computerized signal system, to narrow, farm-to-market roadways. To protect public safety and prevent property damage, ACHD designs and operates its stormwater drainage systems to prevent standing water on traveled areas. Roadways in urban settings typically have curbs and gutters that direct storm water runoff to enclosed drainage systems, whereas stormwater from rural roadways typically flow to roadside ditches and swales.

Five Commissioners govern the ACHD. Together, they are responsible for guiding the planning, development and implementation of transportation facilities throughout the county. Commissioner elections are held every two years on a rotating basis, and each Commissioner represents a separate sub-district. A Commission-appointed Director, who serves as chief administrator, manages the ACHD on a day-to-day basis. The Director is responsible for managing three divisions: Maintenance, Planning and Projects, and Engineering.

### **1.4 Description of Phase I Permit Area**

The Phase I Permit area covers an area of approximately 89 square miles and consists primarily of urban and suburban landscapes. The largest city in the state, Boise, makes up 95% of the Permit area with Garden City covering the remaining 5%. The area has experienced rapid population growth along with residential and commercial construction over the last ten years.

### 1.4.1 Physical Setting and Climate

Boise and Garden City are located in Ada County, Idaho and are part of the Treasure Valley. The Treasure Valley is located in the Snake River Plain of southwest Idaho and is bound by the Boise Mountains to the north and the Owyhee Mountains to the south. The Boise River runs approximately east to west in the northern half of the county while the Snake River bounds the county's southern border. The ecological setting of the county is a semi-arid high mountain desert, characterized by cold wet winters and hot dry summers. Annually the area receives an average of 12 inches of precipitation with the majority received between the months of November through May.

### 1.4.2 Population

Over one-half (235,730) of Ada County's population (438,660) (COMPASS, 2015) reside in the Phase I permit area of Boise and Garden City. The cities of Boise and Garden City have experienced modest growth (~9%) in the last decade (COMPASS, 2015).

### 1.4.3 Land Use

Medium and low density residential land uses are dominant in both the City of Boise and Garden City. In comparison with the City of Boise, Garden City also has a large commercial presence. Impervious area (roads, buildings, and parking lots) makes up 28% of the City of Boise and 34% of Garden City. Details on land use category and percent of area for Boise and Garden City are depicted in Figures 1 and 2 respectively (Plan-it Geo, 2013).

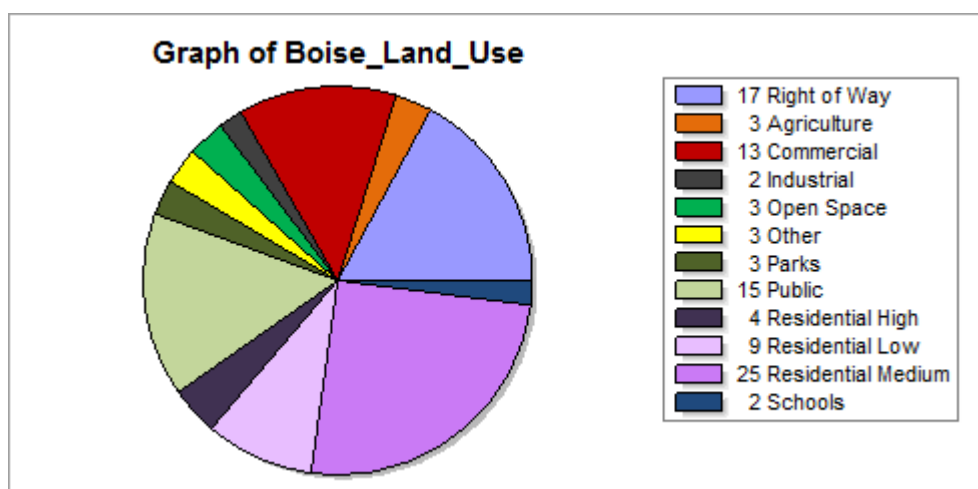


Figure 1. Pie chart depicting percent of area by land use types in the City of Boise.

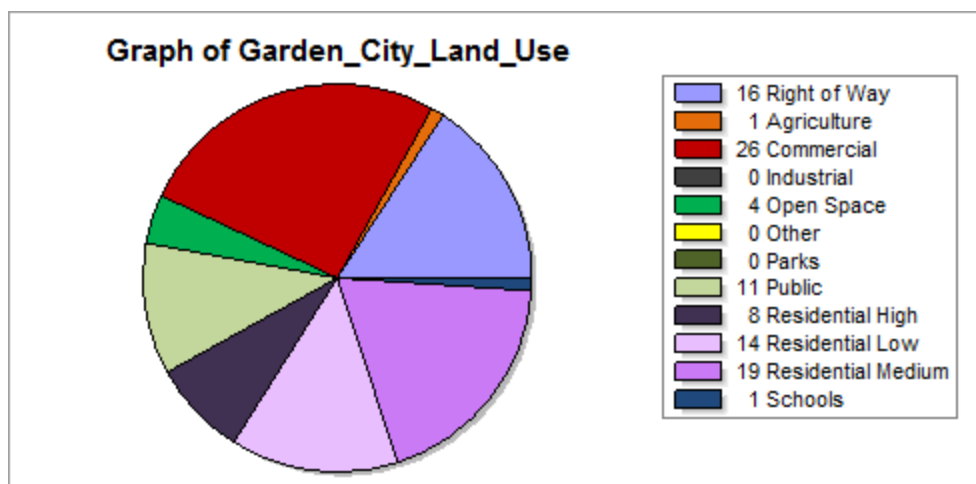


Figure 2. Pie chart depicting percent of area by land use types in Garden City.

#### 1.4.4 Economic Base

Boise is the state capital and ranks sixth in the nation for the number of corporate headquarters located in the city (in relation to its population base). Companies, such as St. Luke Medical Center, Micron Technology, Inc., Hewlett-Packard Company, Albertsons Inc., and J.R. Simplot are the largest private employers in the city (Idaho Department of Commerce, 2017). In the past few years, Garden City's artisan community (i.e. artists, craft breweries, cideries, and wineries) has grown exponentially. The commercial sector pays 44% of all property taxes in Garden City. (<http://www.gardencityidaho.org>).

#### 1.4.5 Description of Phase I MS4

The Phase I MS4 permit area is composed of the City of Boise and Garden City, Idaho. The storm drain system in the Boise area is characterized by areas north and northeast of the Boise River that drain directly to the Boise River, while areas south of the Boise River drain to Boise River tributaries and/or irrigation related facilities, many of which eventually drain to the Boise River. Stormwater facilities on private properties built after 1980 drain primarily on-site via infiltration facilities. In Garden City much of the stormwater drains to the Boise River and irrigation-related facilities that drain to the Boise River. A map showing the boundaries of the Phase I MS4 is located in Figure 3.

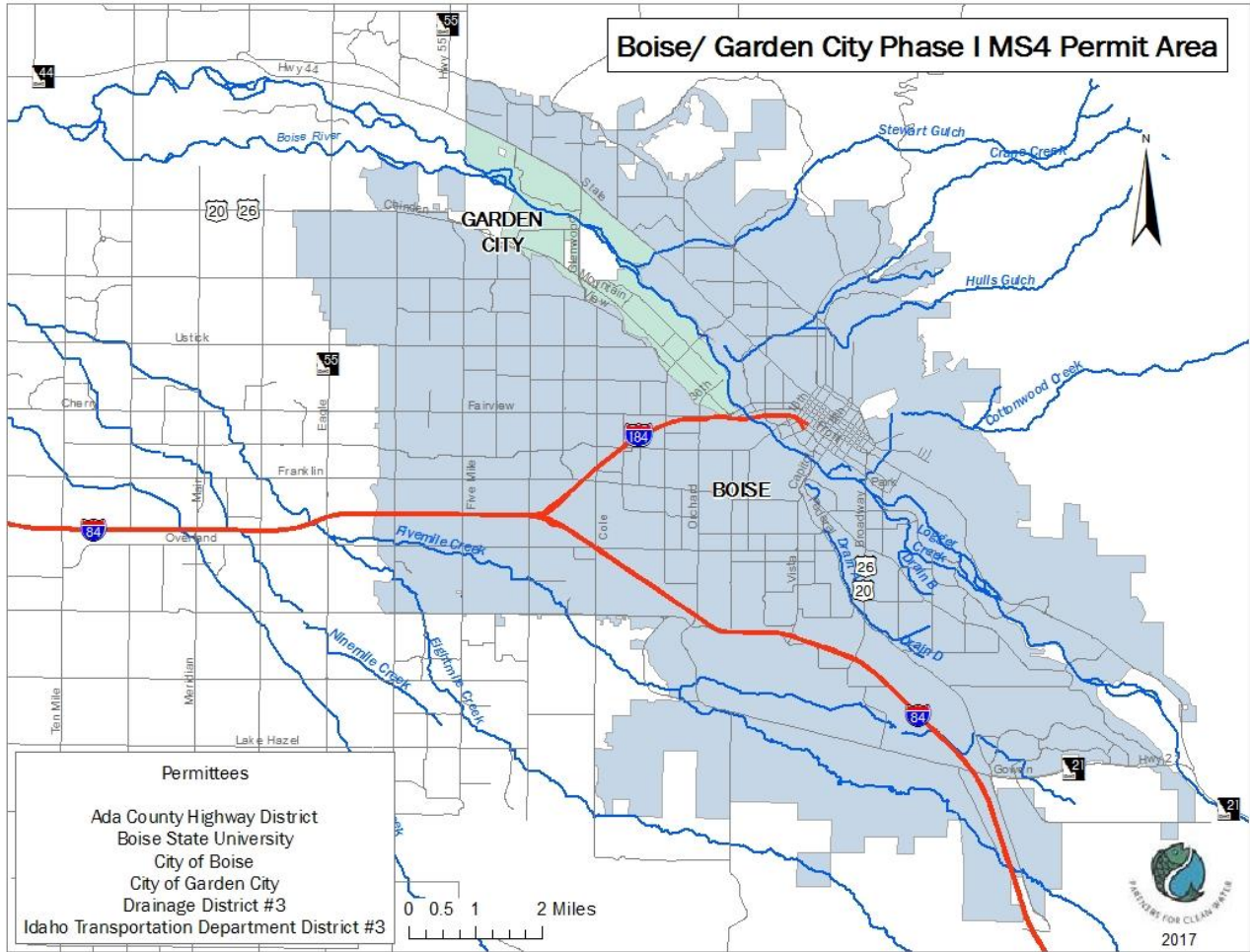


Figure 3. Map of Boise/Garden City area Phase I NPDES permit boundaries (December 2017).

ACHD's current inventory of stormwater facilities in the Phase I Permit area are detailed in Table 1-4.

Table 1-4. Phase I Area Stormwater Facility Inventory	
Structure Type	Inventory (November 2017)
Storm Drain Pipe (miles)	334
ACHD Outfalls	700
Total Outfalls (ACHD, permittee, and private)	1,006
Catch Basins	11,591
Sediment/combo boxes	2,265
Proprietary Hydrodynamic BMPs	10
Seepage Beds	1,131
Swales	54
Stormwater Tree Trench	18
Pervious Paver Installations	5
Dry Wells	18
ACHD Basins (detention and retention)	49
Homeowner Association Basins (detention and retention)	126

In the Permit area there are 1,006 outfalls inventoried to date; 700 are owned and operated by ACHD while the others are owned by other permittees, Ada County, or are private. ACHD owns and operates 49 stormwater basins in the Phase I Permit area. The remaining basins are privately-owned or owned by other public entities. ACHD is responsible for heavy maintenance activities, e.g. dredging, on the private ponds while the homeowner's association or other private party(s) is responsible for the regular, light maintenance activities, e.g. landscape maintenance.

#### 1.4.6 Jurisdiction of Drainage Systems

The stormwater drainage system within the Phase I Permit area is comprised of the ACHD owned and operated MS4, the smaller MS4's of the other Boise area NPDES Permittees, 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.

Water does not follow natural drainage paths in much of the lower Boise River valley. Historically, most natural waterways in the valley were deepened, lengthened, straightened, and diverted to serve primarily as irrigation conveyances to water agricultural crops and provide flood control. Drains, laterals, and canals were also constructed for agricultural purposes. Today, these conveyance systems are used and managed in much the same way as in the past with the exception that much of the water is now used to irrigate urban landscapes instead of agricultural fields and cropland.

### 1.5 Regulations and Regulatory History

The numerous activities performed and facilities operated by ACHD are regulated by local, state, and/or federal authorities in some form or fashion. Regulatory information associated with stormwater

management is discussed in this section. Major stormwater regulatory and ACHD stormwater management milestones are depicted in Figure 1.5.

### Major Stormwater Regulatory and ACHD Stormwater Program Milestones

<u>Regulatory Milestones</u>	<u>Year</u>	<u>ACHD Program Milestones</u>
Congress enacts the Clean Water Act	1972	
Congress amends the Clean Water Act to require EPA to promulgate stormwater regulations in two phases	1987	
EPA promulgates Phase I Stormwater regulations	1990	
	1992	ACHD submits Phase I Part I Permit Application with Ada County Drainage District 3, Settlers Irrigation District, and ITD District 3
	1994	ACHD submits Phase I Part II Permit Application with co-applicants City of Boise, ITD District 3, Boise State University, and Ada County Drainage District 3
	1997	ACHD hires first two FTEs to implement anticipated stormwater quality requirements
EPA Promulgates Phase II Stormwater regulations	1999	ACHD begins Stormwater Monitoring Program
	2000	EPA issues Phase I Permit on November 29, 2000 to ACHD and its five copermittees: City of Boise, Ada County Drainage District 3, Garden City, BSU, and ITD District 3
	2003	ACHD submits Phase II Permit application to EPA
	2004	ACHD and copermittees submit Phase I Permit reapplication to EPA
	2009	EPA issues ACHD Phase II Permit on October 15, 2009
New CGP issued	2012	
New MSGP proposed	2013	Second Cycle Phase I permit is issued by EPA to ACHD and Boise/Garden City area Permittees (City of Boise, Garden City, ITD District 3, BSU, and Ada County Drainage District 3)
EPA discontinues new national stormwater rulemaking	2014	ACHD's Phase II permit is administratively extended by EPA
New MSGP issued	2015	
MS4 General Permit Remand Rule finalized	2016	
New CGP issued	2017	ACHD and copermittees submit Phase I reapplication to EPA Second Cycle Phase I permit administratively extended by EPA

Figure 4. Regulatory and Program Milestones

#### 1.5.1 Clean Water Act

The federal Clean Water Act (CWA) enacted in 1972 requires states and tribes to restore and maintain the chemical, physical, and biological integrity of the nation's waters and to adopt water quality

standards necessary to protect fish, shellfish, and wildlife while providing for recreation in and on the waters whenever possible (33 USC § 1251.10).

The CWA consists of the following primary programs:

1. Water quality standards – designated uses, antidegradation, and water quality criteria
2. Waterbody monitoring and assessment and reports on condition of the nation's waters (Section 305b)
3. Total maximum daily loads (TMDLs) (Section 303d)
4. NPDES permit program for point sources (Section 402)
5. Wetland delineation, filling (Section 404)
6. Nonpoint source program (Section 319)
7. State water quality certification (Section 401)
8. Spill prevention control and counter measures (Section 311)

ACHD stormwater management activities are regulated under the NPDES permit program. TMDLs and wetland permitting also play a role in how ACHD manages stormwater runoff. TMDLs and NPDES permitting are discussed in more detail in this SWMP.

### **1.5.2 TMDLs**

Section 303(d) of the Clean Water Act establishes requirements for states and tribes to identify and prioritize water bodies that do not meet water quality standards. The Idaho Department of Environmental Quality (IDEQ) is required to conduct a comprehensive analysis of Idaho's water bodies every two years to determine if they meet water quality standards. This analysis is published and submitted to the EPA in a document called an "Integrated Report." IDEQ must develop a water quality plan, called a total TMDL, for those water bodies not meeting water quality standards.

A TMDL is a pollutant budget. A TMDL is a calculation of the maximum amount of a pollutant that a water body can receive from human-caused sources and still meet water quality standards. This budget is expressed in terms of loads: the amounts of pollutants added to a water body during a given time or per a volume of water. For example, a load allocation to a water body might be 5 kilograms of phosphorus per day from a given source.

A TMDL budget takes into account loads from point, nonpoint, and natural background sources. The load assigned to point sources is called a waste load allocation (WLA); the load assigned to nonpoint sources is called a load allocation (LA). The budget is balanced at the point where water quality standards are just being met and is allocated among all the various sources. Like keeping money in the bank for a rainy day, some of the budget is set aside as a margin of safety. And, like cash flow in a business, the pollution budget must take into account the seasonal or cyclic nature of pollutant loads and the receiving water's capacity, so a temporary exceedance does not occur.

In addition to being a pollutant load, "TMDL" also refers to the written, quantitative assessment of water quality problems and contributing pollutant sources. IDEQ has the authority and the responsibility to ensure that TMDLs are completed and submitted for EPA approval. The EPA has the responsibility to approve or disapprove all TMDLs. If the EPA formally disapproves a state TMDL, it is obligated under the Clean Water Act to issue a new TMDL within 30 days.

There is currently a Boise River TMDL for sediment and bacteria. The Boise River phosphorous TMDL addendum was approved by EPA Region 10 in December 2015. A sediment and bacteria TMDL addendum was approved by EPA Region 10 in September 2015 for tributaries of the Boise River



including Fivemile Creek, Tenmile Creek, Ninemile Creek, and Indian Creek. Stormwater has wasteload allocations in each of 2015 TMDL addendums.

### **1.5.3 NPDES Municipal Stormwater Permits**

Section 402 of the CWA addresses direct discharges into navigable waters. Direct discharges or "point source" discharges are from sources such as pipes and sewers. NPDES permits, issued by either EPA or an authorized state/tribe contain industry-specific, technology-based, and/or water-quality-based limits, and establish pollutant monitoring and reporting requirements. EPA has authorized 40 states to administer the NPDES program; Idaho is not an EPA authorized state. In Idaho, EPA Region 10 administers the NPDES permitting program. A facility/entity that intends to discharge into the nation's waters must obtain a permit before initiating a discharge. A permit applicant must provide quantitative analytical data identifying the types of pollutants present in the facility's effluent. The permit will then set forth the conditions under which a facility may make a discharge.

In 1987 the CWA was amended to require EPA to establish a program to address stormwater discharges. In 1990, EPA promulgated rules establishing Phase I of the National Pollutant Discharge Elimination System (NPDES) stormwater program. Polluted stormwater runoff is often transported to municipal separate storm sewer systems (MS4s) and ultimately discharged into local rivers and streams without treatment. A MS4 is a conveyance or system of conveyances that is: owned by a state, city, town, village, or other public entity that discharges to waters of the U.S.; designed or used to collect or convey stormwater (including storm drains, pipes, ditches, etc.); not a combined sewer; and not part of a publicly owned treatment works (sewage treatment plant).

The Phase I Program for MS4s requires operators of "medium" and "large" MS4s to implement a stormwater management program as a means to control polluted discharges from these MS4s. In 1999, the Stormwater Phase II Rule was promulgated. Phase II extends coverage of the NPDES stormwater program to certain "small" MS4s but takes a slightly different approach than the Phase I program in how the stormwater management program is developed and implemented.

Generally, Phase I MS4s are covered by individual permits and Phase II MS4s are covered by a general permit. Each regulated MS4 is required to develop and implement a stormwater management program to reduce polluted stormwater runoff and prohibit illicit discharges.

### **1.5.4 Phase I NPDES Permit Program**

EPA's Stormwater Phase I Rule establishes a MS4 stormwater management program for large and medium MS4s and is intended to improve the waterways of the United States by reducing the quantity of pollutants that stormwater picks up and carries into storm sewer systems during storm events.

The Phase I Permit Program requires, on a nationwide basis, all medium and large cities or counties with population of 100,000 or more to obtain NPDES permit coverage for their stormwater discharges. There are approximately 750 Phase I MS4s in the country. The Boise/Garden City Area Phase I NPDES Permit is an individual permit and is the only Phase I permit in the state of Idaho.

## Section 2

# Program Management

## 2.1 Stormwater Management Responsibilities

This SWMP describes specific actions ACHD will take to ensure compliance with Phase I stormwater NPDES permit requirements. The overall goal of the stormwater management program at ACHD is to ensure that pollutants in discharges from municipal separate storm sewer systems owned or operated by the ACHD are reduced to the MEP. Responsibility for meeting this overall goal rests with various departments within the ACHD organization.

Within the ACHD organization, the Stormwater Quality Section provides primary administrative oversight of ACHD’s NPDES Phase I Permit. The Stormwater Quality Section is also responsible for implementing portions of this SWMP. Departments such as Maintenance also play a significant role in ACHD’s stormwater management activities. ACHD also works with other agencies to implement Permit requirements. Stormwater Phase I Permit responsibilities within ACHD are detailed in Table 2-1.

Table 2-1. ACHD Stormwater Management Program Responsibilities		
ACHD Department	Summary of Activities	SWMP Component or Measure <sup>1</sup>
Engineering Stormwater	Administration of ACHD’s NPDES Phase I and Phase II stormwater permits; Lower Boise Watershed Council activities; review and inspection of construction controls for ACHD projects and private work in ACHD right-of-way (ROW); educational activities; outfall delineation and inspection; illicit discharge inspection and response; stormwater BMP design standards and policy updates; industrial and commercial monitoring/inspection; stormwater and BMP monitoring	Monitoring; Subwatershed Planning; Impaired Waters; Construction ESC, Education, New Development, Illicit Discharge, Industrial Inspection, Stormwater Infrastructure
Development Review	Development project review, inspection of public roadways and storm drain system in private developments e.g. subdivisions and developer sponsored roadway projects	New Development
Zone Inspection	Issuance of Work in ROW permits, collection of fees; inspection of private construction in ROW; distribution of pollution prevention educational brochures; illicit discharge response	Construction ESC, Education, Illicit Discharge
Construction	Inspection of ACHD projects for construction and new development stormwater controls	Construction ESC, New Development
Design	Incorporation of construction and new development controls into roadway project plans and stormwater facility repair and retrofit plans;	Construction ESC, New Development, Stormwater Infrastructure
Traffic Operations	Implementation of pollution prevention activities in traffic operations e.g. roadway stripping, signal construction/installation	Stormwater Infrastructure
Maintenance Administration	Administration and implementation of pollution prevention and good housekeeping at ACHD facilities and operation yards	Stormwater Infrastructure
Cloverdale	Maintenance of MS4 system including detention and retention ponds (ACHD and HOA-owned); illicit discharge response	Stormwater Infrastructure, Illicit Discharge
Adams	Maintenance of MS4 system; street sweeping; illicit discharge response	Stormwater Infrastructure , Illicit Discharge

**Table 2-1. ACHD Stormwater Management Program Responsibilities**

ACHD Department	Summary of Activities	SWMP Component or Measure <sup>1</sup>
Programs and Planning Capital Projects	Incorporation of construction and new development controls into ACHD roadway project planning and design	Construction ESC, New Development

<sup>1</sup> See Section 1.2 of this Plan for list of components and measures

## 2.2 Legal Authority

ACHD is the governing agency responsible for construction and maintenance of all local roads, including the storm drain system, in Ada County, Idaho. ACHD's legal authority is based upon the laws of the State of Idaho. Specific authority is found in Title 40, *Idaho Code*, Chapters 13 and 14 (Appendix 2). Because of the limited purpose of ACHD, as defined by the State Code, such legal authorities and provisions are interpreted as intended for facilities and operation and maintenance within the jurisdictional right-of-way of ACHD. ACHD does not provide police or enforcement power and must rely on the powers of municipal government.

Specific legal authority granted to ACHD through state code includes the following:

### Powers – Ordinance Authority, Idaho Code 40-1406

ACHD Commissioners are empowered to pass ordinances, rules, and regulations as necessary for carrying into effect or discharging all powers and duties conferred to a countywide highway district by state code.

### Drainage Authority, Idaho Code 40-1451(1)(d)

ACHD has authority over drainage where it is necessary for motorist safety or necessary for right-of-way maintenance. This code provision limits the extent and nature of authority in which ACHD is empowered.

### Subdivision Plat Review, Acceptance and Approval, Idaho Code 40-1415(6)

Subdivision plats are required to be submitted to ACHD for acceptance and approval for highway design, drainage provisions, and traffic conditions.

### Common Law Authority

ACHD has certain common law authority to control discharges of stormwater into any storm drains which are located within the public right-of-way by means of ACHD's control and owner's interest in the public right-of-way.

### Authority as a Municipal Corporation

ACHD may have certain inherent authority as a municipal corporation by virtue of its ordinance authority to regulate discharges of stormwater into ACHD's stormwater system.

At the present time, ACHD does not have ordinances regulating stormwater drainage. ACHD implements the following ACHD policy sections and provisions to address stormwater system design and construction site illicit discharges and erosion and sediment control (respectively): Section 8000, 8200 – Drainage, Section 6000 – Construction, and Section 8300 – Construction Site Discharge Control Program.

The municipal governments of Boise and Garden City do have specific stormwater ordinances related to illicit discharge and construction site discharge control. ACHD has intergovernmental agreements with both Boise and Garden City to address enforcement authority requirements. These agreements are included in Appendix 3 of this SWMP.

## 2.3 Staff and Fiscal Resources

Stormwater Phase I Permit implementation is performed by numerous ACHD staff in various departments. The Stormwater Quality Section is the point of contact and permit administrator for all MS4 NPDES permit activities (Phase I and Phase II). The Stormwater Quality Section consists of seven full-time equivalent positions (FTEs) and one part-time student intern. Stormwater Quality Section FTE positions include: Stormwater Quality Supervisor (1), Stormwater Quality Coordinator (1), and Stormwater Quality Specialist (5). The Maintenance Department performs countywide MS4 maintenance activities. Stormwater related FTEs in the Maintenance Department include 12 FTEs dedicated to stormwater system cleaning and 21 FTEs dedicated to street sweeping activities, and 6-8 temporary employees. Additional Maintenance and Operations staff perform stormwater system repairs along with other roadway repair activities.

The primary funding mechanisms for obtaining operating funds for ACHD are property tax revenues and highway user revenues from the State of Idaho. These two mechanisms represent the largest components of the income sources for ACHD. Other sources include special fees, revenue bonds, and impact fees. The Stormwater Quality Section's operating budget is funded through ACHD's general fund. There is no dedicated fund (e.g. stormwater utility) for stormwater management activities.

ACHD's fiscal year runs October 1 through September 30. The Stormwater Quality Section budget includes funding and staffing Phase I and Phase II permit implementation. Table 2-2 includes the staffing, operational, and total budgets for 2013-2018.).

Budget Year	Staff	Operation	Total Budget
2013 <sup>1</sup>	\$570,460	\$259,462	\$887,036
2014 <sup>1</sup>	\$522,273	\$250,824	\$814,680
2015 <sup>1</sup>	\$563,752	\$380,111	\$943,863
2016	\$599,600	\$429,500	\$1,029,100
2017	\$669,900	\$362,500	\$995,700
2018	\$733,200	\$388,600	\$1,121,800

<sup>1</sup>Actual expenditures.

## 2.4 Interaction and Coordination with Other Entities

The Phase I Permit includes six Permittees: ACHD, Boise, Garden City, Idaho Transportation Department District 3, Ada County Drainage District 3, and Boise State University. Section I.C.3. of the Permit requires the Permittees to maintain an intergovernmental agreement that describes each organization's respective roles and responsibilities related to the Permit. A copy of this agreement is located in Appendix 4. Coordination and cooperation amongst the Permittees is imperative for overall successful Permit implementation. As previously discussed in Section 2.2, ACHD has intergovernmental agreements with Boise and Garden City for enforcement authority. There are also intergovernmental agreements with Boise and Garden City to perform industrial inspections on ACHD's behalf (Appendix 5).

The work performed by ACHD requires coordination among multiple local, state, and federal government entities, service organizations, private irrigation and drainage districts, and individuals. Permit requirements and potential situations arise where there is need for external coordination and cooperation. The interest of most organizations in assisting ACHD activities varies depending on

jurisdictional oversight and control and how directly the activities may affect them. Specific entities and SWMP minimum measures in which interaction and coordination occur are detailed in Table 2-3.

<b>Table 2-3 Interaction and Coordination Activities</b>		
<b>Agency</b>	<b>Summary of Activities</b>	<b>SWMP Component or Measure<sup>1</sup></b>
City of Boise	Enforcement assistance in illicit discharge, erosion and sediment control; public education lead; industrial inspections and enforcement; Permittee cost-share	Illicit Discharge, Construction, Education, Industrial Inspection
Garden City	Enforcement assistance in illicit discharge, erosion and sediment control; industrial inspections and enforcement; Permittee cost-share	Illicit Discharge, Construction, Industrial Inspection
ITD District 3, Ada County Drainage District 3 and Boise State University	Assist in locating stormwater facilities; illicit discharge and erosion and sediment control activities; Permittee cost-share	Illicit Discharge, Construction
Idaho Department of Environmental Quality	Enforcement assistance in illicit discharge response related to hazardous materials, dust control (air quality)	Illicit Discharge, Construction
Idaho Department of Water Resources	Provide GIS coverage and resources, information regarding irrigation/drainage districts and facilities, shallow/deep injection well program	Illicit Discharge, New Development
Environmental Protection Agency, Idaho Operations Office	Enforcement assistance in illicit discharge, erosion and sediment control	Illicit Discharge, Construction
Irrigation and Drainage Districts	Assist in locating drainage facilities, review roadway drainage plans	Illicit Discharge, New Development
Public	Report illicit discharges, participate in education and activities	Education, Illicit Discharge
Service Organizations	Assist in storm drain marking, participate in education and activities	Education and Outreach, Public Participation

<sup>1</sup> See Section 1.2 of this Plan for list of components and measures

## Section 3

# Program Assessment and Evaluation

In the first year of the permit, the Permittees established a monitoring workgroup that was tasked with the oversight and development of a Program Monitoring and Evaluation Plan (PMEP). This process provided a specific direction for the monitoring efforts associated with the Permit. As a result, the plan identified how each monitoring program will address program expectations, goals and objectives, and permit requirements. The workgroup identified Level of Service (LOS) expectations in order to relate stormwater management solutions with community expectations. Outcome Levels were identified to directly relate permit requirements with the LOS expectations identified in the PMEP. This section describes the methods for assessment and evaluation of the Permit requirements and approaches identified in Sections 4, 5, 6, and 7.

### 3.1 Effectiveness Assessment

A Permit-required element of the SWMP is to assess the effectiveness of the activities implemented to control pollutants to the Maximum Extent Practicable (MEP). Effectiveness assessment is a process that is used to evaluate whether stormwater management activities are resulting in desired outcomes. This SWMP adopts an effectiveness assessment approach based on the *Program Monitoring and Evaluation Plan* (Appendix 6). In this approach, a range of assessment methods are used to determine if activities meet specific desired outcomes and goals. Applicability of assessment methods to specific outcome levels are described as Outcome Levels. Outcome Levels are further detailed in the PMEP and introduced below.

#### 3.1.1 Outcome Levels

This PMEP identifies six Outcome Levels to evaluate the results of control measures and activities discussed in sections 4, 5, 6, and 7 of this SWMP. Outcome Levels help to categorize and describe the desired results or goals of programs and activities. Each Outcome Level is described below:

**Outcome Level 1:** Outcomes at Level 1 include documentation of program activities across almost all minimum control measures. Level 1 outcomes are not typically a direct measurement of impact on the watershed or the environment. Rather, Level 1 outcomes provide permittees a record of control measures that have been implemented and document compliance with permit-mandated efforts such as number of outfall inspections or monitoring events completed. Additional examples might include number of construction site inspections completed or frequency and volume of street sweeping activities or volume and site identification of sand and grease trap maintenance.

**Outcome Level 2:** Level 2 outcomes are those associated with efforts that raise public awareness about stormwater issues. Minimum control measures producing results at Level 2 include tracking progress of education, outreach, and public involvement efforts. Results of these assessments provide feedback as to the effectiveness of control measures at affecting the level of awareness and understanding of the community. Results of surveys, inspection reports, and a measurable increase in calls to the stormwater pollution prevention hotline can all be used to quantify measurable outcomes at Level 2.

**Outcome Level 3:** The goal of Level 3 outcomes is to change behaviors in target audiences such as increasing use of the different types of structural controls used in the community. Outcomes

at this level provide permittees with feedback on how well program elements or control measures motivate target audiences to change behaviors contributing to pollution of stormwater discharges. Similar to Level 2 outcomes, results of Level 3 assessments are often presented as a percent increase or decrease in a specific activity or opinion.

**Outcome Level 4:** Outcomes at Level 4 assess effectiveness at reducing pollutant loads entering the stormwater system from specific sources. Specific pollutants reduced might include sediment from construction sites or debris removed during street sweeping. Outcomes may include estimates or direct measurements of the amounts of material being removed and/or retained.

**Outcome Level 5:** The goal of outcomes at Level 5 is to improve stormwater discharge quality from the MS4. The assessment of monitoring efforts including trend analyses, load reductions through stormwater controls, and threshold comparisons are all examples of Level 5 outcomes.

**Outcome Level 6:** The Level 6 outcome represents the overall goal and desired end result of the SWMP, which is protection of receiving water quality. Level 6 outcomes assess compliance with water quality standards, attainment of beneficial uses, and protection of biological integrity. It is important to note that assessment at this Outcome Level is often the most complex due to the extent that other factors influence receiving water quality, including agricultural and/or irrigation discharges, groundwater, and other non-point source discharges.

Evaluating the individual programs with the Outcome Levels will assist ACHD in trying to meet the Permit's purpose of protecting receiving water quality. Through this process, ACHD will have the opportunity to tie each permit component with Outcome Levels and, ultimately, the goals and objectives of the program. In order to evaluate activities from an Outcome Level perspective it is important to identify the types of data that need to be collected. Assessment methods are the approach identified for this program (CASQA, 2007).

### 3.1.2 Assessment Methods

Assessment methods are activities, actions, or processes used to obtain and evaluate assessment data or information (CASQA, 2007). The assessment methods used in this SWMP vary depending on control measure or activity. Each of the assessment methods to be used by ACHD in determining program effectiveness is discussed below:

- **Confirmation:** Consists of documenting whether an activity has been done.
- **Tabulation:** The tracking and accounting of activities performed. This method relies on good record keeping and can be used to document trends over time. An example of tabulation is the number of catch basins cleaned in a year.
- **Surveys:** Can be done via different methods and are designed to determine the knowledge, awareness, and behaviors of a specific population (school children, residents, etc.). For public education and involvement activities, surveys will be used to assess change in the public's awareness and attitudes regarding stormwater management.
- **Inspections or site visits:** Includes any method used to directly observe or assess practices used by a target audience. They may be regulatory or part of an information gathering educational outreach effort. ACHD will document inspections of activities that can be visually assessed.
- **Quantification:** Consists of quantity tracking and pollutant load estimation. General loading estimates for specific activities will be combined with tabulation data to estimate load reductions. For example, load estimates for sediment and phosphorus may be calculated based on truckloads of sediment removed from detention/retention ponds.

- **Monitoring:** Collection of monitoring data to demonstrate effectiveness of activities is difficult due to the variability of stormwater runoff and the resource intensity needed to perform the monitoring. For this reason, the other effectiveness assessment methods discussed previously will be the primary focus of ACHD's assessment efforts. ACHD is performing stormwater discharge characterization monitoring at five sites in the Phase I permit area. In addition to outfall monitoring, ACHD will also evaluate BMP and Green Stormwater Infrastructure (GSI) effectiveness. Monitoring details are identified in Section 7.

Table 3-1 presents the relationship between assessment methods and the Outcome Levels described in this section.

Assessment Methods	Outcome Levels					
	Level 1 Document Activities	Level 2 Raise Awareness	Level 3 Change Behavior	Level 4 Reduce Loads from Sources	Level 5 Improve Runoff Quality	Level 6 Protect Receiving Water Quality
Confirmation	X					
Tabulation	X	X	X			
Surveys		X	X			
Inspections	X	X	X	X		
Quantification				X	X	X
Monitoring				X	X	X

## 3.2 Effectiveness Assessment Strategy

Section 5 identifies all of the minimum measures identified in the permit. For each minimum measure there are specific requirements that must be tracked and reported in the annual report. In order to meet the permit requirements, LOS expectations, and Outcome Level objectives, the following approach has been developed and is presented in Section 5.

For each Minimum Control Measure (MCM) there is a section summary followed by a list of the permit requirements for that section. After the general permit requirements have been outlined there is a table that includes the following information for the MCM:

- Ordinance/Policy.
- Measureable Goals for the MCM.
- Public Education/Outreach.

For each of these components, the table presents action items, assessment methods, and a schedule. Below the table is a summary of the objectives of the permit requirement and ACHD's approach.

There are multiple permit requirements for each MCM. Each MCM has multiple subsections that represent each permit requirement. Each subsection will have the following components:

- **Permit requirement.** This section is a general overview of the permit requirement for the subsection.
- **Affected Parties.** This section identifies the stakeholders who are impacted by the permit requirement.
- **Current Status.** A brief description of current ACHD practices that address the permit requirement if a program is already in place.



- **Action to implement.** Steps that ACHD plans to take in order to meet the permit requirement.
- **Assessment methods.** Assessment ACHD uses to document that they achieved the actions to implement.
- **Outcome Levels.** At the end of each subsection the Outcome Levels are summarized.

In addition to the details identified in Section 4, 5, 6 and 7, ACHD is required to prioritize decisions to have the most impact on the program goals and objectives. In order to track the identification of an approach, ACHD has adopted a matrix, detailed in the PMP. The matrix is a tool that allows ACHD to review each major decision point considering program expectations, goals and objectives, and permit requirements.

## Section 4

# Subwatershed Planning

The Permittees are required to jointly complete at least two individual subwatershed plans for areas served by the MS4s within the Permit area. For each plan document, the subwatershed planning area must drain to at least one of the water bodies listed in Permit Table II.C. Selected subwatersheds must be identified in the 1st Year Annual Report. Two completed subwatershed plan documents must be submitted to the EPA as part of the 4th Year Annual Report.

### 4.1 Subwatershed Planning (II.A.4)

This section describes activities and actions the Permittees will implement to fulfill Permit requirements for subwatershed planning. The Permit requirements for subwatershed planning are summarized Part II.A.4 as follows:

The Permittees must jointly complete at least two subwatershed plans and engage stakeholders and the public in the planning process. The plans must identify priority resources and uses and incentivize the management principles described in Permit part II.A.4.d.

Monitoring, Recordkeeping, and Reporting Requirements (Permit Part IV)	Action Items	Assessment Methods	Schedule
Ordinance/Policy	N/A	N/A	N/A
Measurable Goals	Identify two subwatershed planning areas	Document selections	Permit Year 1 (2013)
	Develop subwatershed plans consistent with Permit requirements	Document planning activities Track progress and milestones	Permit Year 4 (2016)
Public Education/Outreach	Engage stakeholders and public in planning process	Document outreach efforts Track input from stakeholders and attendance at meetings	Permit Year 4 (2016)

### Current Status

The Permittees selected the Americana and Main subwatersheds in 2013. In 2014 a scope of work was drafted for developing the plans, a consultant was selected and work on the plans began in December 2014. In 2015 an existing condition analysis was conducted including characterization of the land uses, storm drain delineation, identification of priority aquatic resources and beneficial uses. A hydrologic and water quality model Stormwater Management Model (SWMM) was developed for both subwatersheds and calibrated to existing monitoring data. A priority methodology for implementing green stormwater infrastructure in the subwatersheds was completed and is part of final planning report. A public involvement meeting was held in February 2016. The final report was completed in June 2016. The final document is located in Section 3.1 of ACHD's 2015-16 annual report.

### Affected Parties

- ACHD Stormwater Quality staff
- City of Boise staff
- Permittees
- Community

### Actions to Implement

- Identify selected subwatersheds in first year annual report. **Completed, 2013**
- Draft scope of work, solicit proposals, and select consultant(s) to draft subwatershed plans. **Completed, 2014**
- Engage stakeholders and general public in planning process. **Completed, 2016**
- Update existing watershed planning documents if applicable. **Not Applicable**
- Develop subwatershed plans consistent with Permit requirements. **Completed, 2016**  
In each plan, identify priority aquatic resources and beneficial uses to be protected or restored. Provide incentives and enforcement provisions to minimize impervious surfaces, protect sensitive areas, prevent or reduce thermal impacts, avoid hydromodification of streams and other waterbodies, and preserve and protect vegetation and soils.

### Assessment Methods

- **Confirmation** – Document planning process.
- **Confirmation** – Complete subwatershed plans.
- **Tabulate** – Track planning and implementation progress through milestones and achievements.
- **Quantification** – Reduce loads from subwatershed areas through implementation of multiple Green Stormwater Infrastructure projects that reduce stormwater runoff volumes and pollutant loads.

### Outcome Levels

- Level 1 – Document Activities.
- Level 2 – Raise Awareness.
- Level 3 – Change Behavior.

## Section 5

# Minimum Control Measures and Activities

This section describes minimum control measures (MCM) and associated activities and actions ACHD will implement to fulfill ACHD's Permit requirements listed Section II.B. The six minimum measures are:

- 5.1 Construction Site Runoff Control Program (SWMP Section 5.1, Permit Part II.B.1)
- 5.2 Stormwater Management for Areas of New Development and Redevelopment (SWMP Section 5.2, Permit Part II.B.2)
- 5.3 Industrial and Commercial Stormwater Discharge Management (SWMP Section 5.3, Permit Part II.B.3)
- 5.4 Stormwater Infrastructure and Street Management (SWMP Section 5.4, Permit Part II.B.4)
- 5.5 Illicit Discharge Management (SWMP Section 5.5, Permit Part II.B.5)
- 5.6 Education, Outreach, and Public Involvement (SWMP Section 5.6, Permit Part II.B.6)

The minimum measures listed in this SWMP consist of multiple permit requirements. For each permit-required minimum measure, one or more activities to be implemented by ACHD are described. Each minimum measure and the associated activities and actions are described in Sections 5.1-5.6 of this Plan. Each MCM general description includes the following:

- MCM Description
- Action Items
- Assessment Methods
- Schedule
- Ordinance/Policy
- Measurable Goals
- Public Education/Outreach

The following information is included for each subsection:

- Permit Requirement
- Affected Parties
- Current Status
- Actions to Implement
- Assessment Methods
- Outcome Levels

### **Intergovernmental Agreements (IGAs)**

ACHD is a Permittee of the NPDES Phase I Permit. Other Permittees to the Phase I Permit include the City of Boise, Boise State University, Garden City, Idaho Transportation Department District 3, and Ada County Drainage District 3. The Permittees have entered into IGAs (Appendix 4 and 5) to help coordinate stormwater permit requirement compliance. The Permit language describes the requirements for shared implementation.

**Part I.C.****2. Joint Responsibility.** Each Permittee is jointly responsible for Permit compliance:

- a) Related to portions of the MS4 where operational or SWMP implementation authority has been transferred to all of the Permittees in accordance with an intergovernmental agreement or agreement between the Permittees;
- b) Related to portions of the MS4 where Permittees jointly own or operate a portion of the MS4;
- c) Related to the submission of reports or other documents required by Parts II and IV of this Permit; and
- d) Where this Permit requires the Permittees to take an action and a specific Permittee is not named.

**3. Intergovernmental Agreement.** The Permittees must maintain an intergovernmental agreement describing each organization's respective roles and responsibilities related to this Permit. Any previously signed agreement may be updated, as necessary, to comply with this requirement. An updated intergovernmental agreement must be completed no later than July 1, 2013. A copy of the updated intergovernmental agreement must be submitted to the Environmental Protection Agency (EPA) with the 1st Year Annual Report.

**Part II.A**

**2. Shared Implementation with outside entities.** Implementation of one or more of the SWMP minimum control measures may be shared with or delegated to another entity other than the Permittee(s). A Permittee may rely on another entity only if:

- a) The other entity, in fact, implements the minimum control measure;
- b) The action, or component thereof, is at least as stringent as the corresponding Permit requirement; and
- c) The other entity agrees to implement the minimum control measure on the Permittee's behalf. A binding written acceptance of this obligation is required. Each Permittee must maintain and record this obligation as part of the SWMP documentation. If the other entity agrees to report on the minimum control measure, the Permittees must supply the other entity with the reporting requirements in Part IV.C of this Permit. The Permittees remain responsible for compliance with the Permit obligation if the other entity fails to implement the required minimum control measure.

The following table summarizes the IGA setup for this permit between the Permittees.

IGA Parties	Role	Responsibilities	Cost Share
ACHD	Program Administration and Management Lead	Preparing agenda, minutes, for quarterly meetings Compiling materials from permittees for the annual report Coordinating various activities among permittees under the permit	ACHD - 65.3% City of Boise - 15.3% Garden City - 7.7% BSU - 3.9% ITD - 3.9% DD3 - 3.9%
	Monitoring Program Lead	Monitoring and Planning Preparing the monitoring program plan including monitoring protocol, testing, and other activity Implementing the monitoring program as approved by Permittees	ACHD - 65.3% City of Boise - 15.3% Garden City - 7.7% BSU - 3.9% ITD - 3.9% DD3 - 3.9%

IGA Parties	Role	Responsibilities	Cost Share
City of Boise	Public Education Program Lead	Conducting public outreach program Assessing the penetration of information and any changes in behavior as a result of the education program	ACHD - 7.7% City of Boise - 65.3% Garden City - 15.3% BSU - 3.9% ITD - 3.9% DD3 - 3.9%
Garden City	Permittee	NA	NA
Boise State University (BSU)	Permittee	NA	NA
Idaho Transportation Department District #3 (ITD)	Permittee	NA	NA
Ada County Drainage District 3 (DD3)	Permittee	NA	NA

## 5.1 Construction Site Runoff Control Program (Permit Part II.B.1)

This section describes activities and actions ACHD conducts or will implement to fulfill Permit requirements for a construction site runoff control program. The Permit requirements for the construction site runoff control program are summarized as follows:

Summarized from Part II.B.1

Implement a construction site runoff control program to reduce discharges of pollutants from public and private construction activity within jurisdiction. Construction site management program must include:

1. Ordinance and/or other regulatory mechanism.
2. Manuals describing construction stormwater management controls and specifications.
3. Plan Review and Approval.
4. Construction Site Inspections.
5. Enforcement Response Policy (ERP) for Construction Site Management Program.
6. Construction General Permit (CGP) Violation Referrals.
7. Construction Program Education and Training. Ensure proper training of staff responsible for implementation of the construction program.

Construction Site Runoff Control Program (Permit Part II.B.1)	Action Items	Assessment Methods	Schedule
Ordinance/Policy	Update policies	Document that policies(s) were updated as necessary	Permit Year 3 (2015)
	Develop ERP for construction site management and CGP violation referral procedures	Track ERP actions and CGP violation referrals	Permit Year 3 (2015)

Construction Site Runoff Control Program (Permit Part II.B.1)	Action Items	Assessment Methods	Schedule
Measurable Goals	Update construction stormwater management manuals	Document that construction stormwater management manuals were updated	Permit Year 3 (2015)
	Refine, then conduct plan review and approval activities	Document plan review activities	Permit Year 3 (2015)
	Update inspection prioritization system	Document progress of prioritization system	Permit Year 3 (2015)
Public Education/Outreach	Internal training on updates to ordinances, stormwater management manuals, inspection procedures, and ERPs	Qualitatively evaluate the number of ACHD staff complying with updated ordinances, manuals, and procedures	Permit Year 4 (2016)
	Advertise updates to policies and manuals to development community and offer trainings	Track educational and outreach efforts and any educational materials distributed  Qualitatively evaluate the number of contractors complying with updated ordinances and manuals	Permit Year 4 (2016)

The objective of the Construction Site Runoff Control Program is to reduce/eliminate construction site-related pollutant discharges to the MS4. ACHD intends to accomplish this objective and meet permit requirements for the Construction Site Runoff Control Program by, as needed, updating standard operating procedures (SOPs), policy language, and an education and outreach program targeted at construction site operators and personnel that implement erosion and sediment control on behalf of ACHD. The following activities and associated actions are currently being implemented or will be implemented in accordance with the schedule identified in the table.

### 5.1.1 Update Construction Runoff Ordinances/Regulatory Mechanisms, if Necessary (II.B.1.a)

ACHD is required to adopt, implement, and enforce requirements for adequate and effective erosion controls, sediment controls, and materials management controls.

#### Current Status

The ACHD Commission adopted the Construction Site Discharge Control (CSDC) Program (Policy 8300) on August 28, 2002, and became effective September 1, 2002. In 2015, Policy 8300 was reviewed to ensure the policy is accurate and does not conflict with the Construction General Permit (CGP) and ACHD's escalated response policy (ERP). On November 9, 2016 Policy 8300 updates were presented to ACHD Commission as part of a larger ACHD policy revision (Ordinance 323). The Ordinance was deferred to address questions and was approved by Commission in April 2017. ACHD is in the process of updating the Construction Site Discharge Control Program Guidance document. A draft of this document is reported in ACHD's 2016-17 annual reports.

#### Affected Parties

ACHD Stormwater Quality staff

Development and Construction Community

## Implementation Actions

Construction Runoff Ordinances/Regulatory Mechanisms actions to implement include:

- Review current regulatory language for ACHD and applicable Permittees (Garden City, City of Boise). **Completed, 2015**
- Document updates to ACHD policies. **In Progress, 2017** Document provisions of existing IGAs or agreements with Permittees to implement efforts on ACHD's behalf in accordance with Part II.A.2.c of the Permit. **Ongoing, 2017**
- Report the status of policy updates and modifications annually. **In Progress, 2017**

## Assessment Methods

Construction Runoff Ordinances/Regulatory Mechanisms assessment methods include:

- **Confirmation** - Document that policies were updated as necessary.
- **Inspections** - Following adoption of updated ordinance language, review applicable erosion control inspection notes to qualitatively identify levels of awareness and compliance with updated regulations.

## Outcome Levels

Outcome Level 1 – Document Activities

Outcome Level 2 – Raise Awareness

Outcome Level 3 – Change Behavior

### 5.1.2 Update Construction Stormwater Management Manual(s) (II.B.1.b)

ACHD is required to update construction manuals to include acceptable practices and proper installation, operation, and maintenance of control measures including selection and sizing criteria, illustrations, and design examples. The manual must include the requirements for erosion and sediment control and pollution prevention to compliment, and not conflict, with the CGP.

## Current Status

ACHD has adopted the Erosion and Sediment Control BMPs from the Idaho Transportation Department *Best Management Practices Manual (2011)* or the Idaho Department of Environmental Quality *Catalog of Stormwater Best Management Practices for Idaho Cities and Counties (2005)*. Idaho Department of Environmental Quality is currently revising the catalog. According to DEQ, the catalog is nearing completion and is expected to be available for public comment by the end of 2017 (personal communication 11/7/17, Larry Waters, P.E., DEQ). An updated DEQ catalog is anticipated in 2018.

## Affected Parties

ACHD Stormwater Quality

ACHD Zone, Subdivision and Project Inspection staff

Development and Construction Community

## Actions to Implement

Construction Stormwater Management Manual actions to implement may include:

- Review current construction stormwater management manuals for compliance with ACHD Policy and SOP guidance.



- Propose updates to existing policy, as needed, to include acceptable control practices applicable to ACHD projects. Alternatively, incorporate provisions of existing construction stormwater management manuals into an ACHD-specific manual.
- Amend Policy 8300 to incorporate the use of approved construction stormwater BMP manuals, as needed.
- Advertise (via website, fact sheets) updated manuals, as needed.

### Assessment Methods

Construction Stormwater Management Manual assessment methods include:

- **Confirmation** - Document that review of existing manuals was conducted.
- **Tabulation** - Document proposed changes and edits to existing manuals or activities associated with development of an ACHD-specific manual.
- **Tabulation** - Track educational and outreach efforts and any educational materials distributed.
- **Surveys** - Qualitatively evaluate the number of contractors and ACHD staff complying with updated construction stormwater management manual(s).

### Outcome Levels

Level 1 – Document Activities

Level 2 – Raise Awareness

Level 3 – Change Behavior

### 5.1.3 Conduct Plan Review and Approval Activities (II.B.1.c)

ACHD is required to review and approve preconstruction plans from construction site operators. This includes work performed in ACHD's right-of-way and subdivisions.

### Current Status

Stormwater staff currently conducts construction site Erosion and Sediment Control Plan, Stormwater Pollution Prevention Plan, and Dewatering Plan reviews for projects within ACHD's jurisdiction. A new database system, called TRAKiT, was implemented in 2014. TRAKiT ties inspections, permits, and plan reviews together creating an integrated system to determine project status, project inspection, etc. A summary of the project plans reviewed annually are located in ACHD's Phase I annual reports.

### Affected Parties

ACHD Stormwater Quality staff

ACHD Construction staff

Development and Construction Community

### Actions to Implement

Ongoing Plan Review and Approval implementation activities include:

- All inspections are logged into the TRAKiT system. **Ongoing, 2017**
- Review of SWPPPs and/ESC Plans for ACHD roadway projects and ACHD maintenance projects as applicable. **Ongoing, 2017**
- SWPPP/ESC Plan and Dewatering Plan review for work in ACHD right-of-way. **Ongoing, 2017**
- SWPPP/ESC Plan review for subdivisions. **Ongoing, 2017**

- Schedule meeting(s), as needed, with Permittees to review and discuss process for plan review activities, and outline any new requirements that affect plan review efforts. *Ongoing, 2017*

### Assessment Methods

Plan review and approval assessment methods include:

- **Tabulation** - Document meeting attendance and results.
- **Tabulation** - Document number of plans reviewed, approved, and declined.

### Outcome Levels

- Level 1 - Document Activities.
- Level 2 - Raise Awareness.
- Level 3 - Change Behavior.

#### 5.1.4 Conduct Construction Site Inspections (II.B.1.d)

ACHD is required to perform construction site inspections to assess construction site operator compliance with ordinances and regulations. In addition, ACHD is required to perform follow-up inspections and engage in enforcement actions as necessary.

### Current Status

A summary of the inspections performed annually are located in ACHD's annual reports.

- Zone inspection staff may perform erosion and sediment control inspections for work performed in the ACHD right-of-way by public and private entities (e.g. utility contractors).
- Project inspectors perform erosion and sediment control inspections on ACHD roadway projects.
- Subdivision/bridge inspectors perform erosion and sediment control inspections related to the roadways under construction in new subdivisions.
- Stormwater staff provides guidance and assist the zone, project, and subdivision/bridge inspectors in ESC and dewatering site inspections as necessary based on requests and complaints received.

### Affected Parties

ACHD Stormwater Quality staff

ACHD Zone, Subdivision and Project Inspection staff

Development and Construction Community

### Actions to Implement

Ongoing Construction Site Inspection activities may include:

- Review current erosion control inspection procedures and documentation methods. *Ongoing, 2017*
- As necessary, update prioritization criteria applicable to ACHD active project sites in order to establish a defined inspection frequency. *Ongoing, 2017*
- Internally coordinate with ACHD erosion control inspectors to update ESC inspection procedures and prioritization criteria.
- Conduct internal training for erosion control inspectors related to updated ESC inspection procedures and any applicable updates to the construction stormwater management BMP manuals being implemented. *Ongoing, 2017*
- Update standard operating procedures (SOPs) to outline inspection procedures and activities. *Ongoing, 2017*

## Assessment Methods

Construction Site Inspection assessment methods include:

- **Tabulation** - Document the current inspection process including inspection forms.
- **Tabulation** - Track inspection activities conducted and results of the inspection activities, particularly related to enforcement.

## Outcome Levels

- Level 1 – Document Activities.
- Level 2 – Raise Awareness.
- Level 3 – Change Behavior.

### 5.1.5 Develop and Implement Enforcement Response Policy (ERP) for Construction Site Management (II.B.1.e) and Construction General Permit (CGP) Violation Referrals (II.B.1.f)

ACHD is required to develop and implement a written escalating ERP with the legal ability to stop work and assess penalties. Permittees have the option to refer the contact information of construction site operators that do not comply with the CGP to the EPA. The Permittees must track instances of non-compliance.

## Current Status

The current enforcement policy is in 8300 (8310, 8311, 8312) and 6000 (6007.21-25) of the ACHD Policy and specific details are identified in the Construction Site Discharge Control Program SOP. A summary of ACHD enforcement actions are included annually in ACHD's Phase I annual report. Additionally, ACHD works with Boise, Garden City, and EPA Region 10 staff as requested and/or necessary regarding CGP enforcement actions.

## Affected Parties

ACHD Stormwater Quality staff

City of Boise staff

Garden City staff

Development and Construction Community

## Actions to Implement

Enforcement Response Policy actions to implement include:

- Review current enforcement policy. **Completed, 2015**
- Develop/update enforcement procedures, as needed, including escalation measures as outlined in Permit Part II.B.1.e. Enforcement procedures should also reference specific activities if violations to construction general permits occur (i.e., notification of DEQ).
- Incorporate enforcement procedures into SOPs and ordinance language, as needed. **Ongoing, 2017**
- Conduct training for internal inspectors related to updated procedures. **Ongoing, 2017**

## Assessment Methods

Enforcement Response Policy assessment methods include:

- **Confirmation** - Confirm development and implementation of ERPs.
- **Tabulation** - Tabulate number of enforcement activities required and nature of enforcement efforts.

## Outcome Levels

- Level 1 – Document Activities.
- Level 2 – Raise Awareness.
- Level 3 – Change Behavior.

## 5.2 Stormwater Management for Areas of New Development and Redevelopment (Permit Part II.B.2)

This section describes activities ACHD conducts or will implement to fulfill Permit requirements for stormwater management in the area of new development and redevelopment.

The Permit requirements for stormwater management in the areas of new development and redevelopment are summarized below.

The following is summarized from Part II.B.2.

The Permittee must implement and enforce a program to control stormwater runoff from new development and redevelopment projects that result in land disturbance of 5,000 square feet or more, excluding individual one or two family dwelling development or redevelopment, including the following.

- a. Ordinance and Other Regulatory Mechanisms.
- b. Stormwater Design Criteria Manual.
- c. Green Infrastructure/Low Impact Development (LID) Incentive and Pilot Projects.
- d. Development Plan and Review Approval.
- e. Develop Priority Riparian Area List and Complete Outfall Disconnection Project
- f. Repair of Public Streets, Roads and Parking Lots.
- g. Operation and Maintenance (O&M) of Permanent Stormwater Management Controls.
- h. Inspection and Enforcement of Permanent Stormwater Management Controls.
- i. Education and Training on Permanent Stormwater Controls.

Stormwater Management for Areas of New Development and Redevelopment (Permit Part II.B.2)	Action Items	Assessment methods	Schedule
Ordinance/Policy	Update regulations pertaining to long-term stormwater management controls	Document regulation updates Quantify estimated load reduction accomplished via onsite runoff retention	Permit Year 5 (2017)
Measurable Goals	Update Stormwater Design Criteria Manuals	Document updates to design criteria manual	Permit Year 3 (2015)
	Develop Green Stormwater Infrastructure (GSI) incentive strategy	Document incentive strategy approach	Permit Year 3 (2015)
	Identify GSI pilot projects	Document and describe pilot projects	Permit Year 3 (2015)
	Complete effectiveness evaluation of GSI practices in pilot projects and make recommendations accordingly	Monitor water quality and/or quantity and flow into and out of GSI	
Document progress of project in annual report			Permit Year 4 (2016)

Stormwater Management for Areas of New Development and Redevelopment (Permit Part II.B.2)	Action Items	Assessment methods	Schedule
		Quantify reduction in pollutant loading with each project	Permit year 5 (2017)
	Develop priority riparian area list	Document completion of list compilation	Permit Year 3 (2015)
	Complete outfall disconnection project	Document project Quantify estimated load reduction resulting from outfall disconnection	Permit Year 5 (2017)
	Consider/install stormwater runoff reduction techniques for streets, roads, and parking lot repair work	Track projects where runoff reduction techniques are feasible and implemented Quantify estimated volume of runoff reduced	Permit Year 5 (2017)
	Incorporate permanent stormwater controls into O&M database	Document progress	Permit Year 1 (2013) incorporate new controls Permit Year 3 (2015) incorporate existing controls
	Identify high priority stormwater controls locations for annual inspections and implement inspection program and enforcement strategy	Document development of inspection forms, high priority list, and inspection schedule Track number of inspections conducted annually Quantify pollutant load reduction achieved through corrective actions	Permit Year 5 (2017)
Public Education/Outreach	Internal training on updates to long-term stormwater management controls ordinances, stormwater design criteria manual, stormwater controls installation and maintenance	Qualitatively evaluate ACHD staff's understanding of ordinances	End of Permit Term (2018)
	Advertise updates to long-term stormwater management controls ordinances, and stormwater design criteria manuals	Track regulatory compliance	End of Permit Term (2018)
	Advertise GSI incentive strategy	Track educational and outreach efforts and any educational materials distributed	Permit Year 4 (2016)
	Advertise outfall disconnection project	Track educational and outreach efforts and any educational materials distributed	Permit Year 4 (2016)
	Develop training curriculum and conduct training annually for ACHD staff and appropriate	Qualitatively evaluate understanding of principles of permanent stormwater control selection,	Permit Year 3 (2015)

Stormwater Management for Areas of New Development and Redevelopment (Permit Part II.B.2)	Action Items	Assessment methods	Schedule
	public audiences	installation, and maintenance	

The objectives of the New Development and Redevelopment Program are to reduce the total volume of stormwater runoff to the MS4 and to reduce pollutant loading in discharges to the MS4. ACHD intends to accomplish these objectives and meet the Permit requirements by updating policy and existing stormwater facility design standards, coordinating with Permittees, ensure facility tracking and maintenance is achieved, implementing low impact development-related pilot projects, and conducting targeted training and education activities.

### 5.2.1 Update Ordinance/Regulatory Mechanism Requiring Long-term On-site Stormwater Management Controls (II.B.2.a)

ACHD is required to update applicable ordinance or regulatory mechanisms which require the installation and long-term maintenance of stormwater management controls at new development and redevelopment projects. The ordinances or regulatory mechanisms must include site design standards to meet permit requirements for runoff retention, provisions for projects that cannot meet requirements onsite, as well as address sites with potential for excessive pollutant loading, and allow for Permittee review and approval of plans and authority for sanctions (including fines), if necessary. In addition, ordinances must include specific water quality requirements including:

- Projects with potential for excessive pollutant loading(s) must provide water quality treatment prior to infiltration.
- Projects with the potential for excessive pollutant loading that are unable to implement adequate preventive or water quality measures must convey stormwater to a NPDES permitted treatment/disposal facility.

#### Current Status

Sections 8000 and 8200 of the ACHD Policy Manual provide requirements and guidance for ACHD stormwater facility design and approved BMPs. A professional advisory group (PAG) was formed to develop recommendations for policy 8000 and 8200 updates and met February 2016 through March 2017. The policy was approved in July 2017 and became effective August 23, 2017. The updated policy 8000 and 8200 are included in ACHD’s 2014-15 annual report.

#### Affected Parties

- ACHD Stormwater Quality staff
- ACHD Development, Design, Project, and Maintenance staff
- Development Community

#### Actions to Implement

Long-term on-site stormwater management control policy actions to implement include:

- Review existing policy language related to tools and manuals, specific design requirements, facility selection, and maintenance. **Completed, 2014**

- Develop policy updates to reflect ongoing work related to design manual and standard updates. **Completed, 2015; Updates, 2017**
- Finalize and approve updated policy language. **Completed, 2017**
- Provide education and outreach to internal staff, professional, and development stakeholders on updated policy language. **Ongoing, 2017**

### Assessment Methods

Long-term on-site stormwater management control policy assessment methods include:

- **Confirmation** - Document that policy(s) were updated as necessary.
- **Surveys** - Following adoption of updated policy language (and associated design manuals/guidance), qualitatively evaluate compliance with updated regulations and the need for additional education and training during plan submittal and approval efforts.

### Outcome Levels

- Level 1 – Document Activities.
- Level 2 – Raise Awareness.
- Level 3 – Change Behavior.

#### 5.2.2 Update Stormwater Design Criteria Manual(s) (II.B.2.b), Plan Review and Approval Process (II.B.2.d), and Education and Training (II.B.2.g.i and ii)

ACHD is required to update design criteria manuals, as necessary, specifying acceptable permanent stormwater management and control practices, and include design criteria for control measures. ACHD is then required to review and approve preconstruction plans for permanent stormwater management for consistency with ordinances and regulatory mechanisms and the ACHD *Stormwater Design Manual and Approved BMPs*, and implement a training program for appropriate audiences regarding the selection, design, installation, operation, and maintenance of permanent stormwater controls.

### Current Status

ACHD policies 8000 and 8200 establish the standards for new stormwater facilities and the retrofitting of existing stormwater facilities. The *Stormwater Design Manual and Approved BMPs*, can be found in Section 8200 of the ACHD Policy Manual. A professional advisory group (PAG) was formed to develop recommendations for policy 8000 and 8200 updates and met February 2016 through March 2017. . The policy was approved in July 2017 and became effective August 23, 2017. The updated policy 8000 and 8200 are included in ACHD's 2015-16 annual report.

ACHD Development Services staff review proposed subdivision and development plans to ensure compliance with ACHD policies and procedures. A review template has been developed that incorporates a plan review checklist of items that typically require comments, including a section on drainage. This template is drafted in a letter format so staff can send the checklist, complete with comments to the applicant, upon completion of the plan review.

### Affected Parties

ACHD Stormwater Quality staff

ACHD Development, Design, Project, and Maintenance staff

Developer and Contractor Communities

## Actions to Implement

Design Criteria Manual Updates and Plan Review Process Updates include the following implementation actions:

- Review current design manuals and design criteria. Design manuals may include those from other local jurisdictions. **Completed, 2014**
- Conduct internal reviews to identify and evaluate required modifications to existing design standards. **Completed, 2015; Updates, 2017**
- Update design manuals to correspond to permit requirements. **Completed, 2015; Updates, 2017**
- Conduct training and outreach for internal plan reviewers. **Completed, 2015; Ongoing 2017**
- Conduct training and outreach for external stakeholders. **Ongoing, 2017**

## Assessment Methods

Design Criteria Manual Updates and Plan Review Process assessment methods include:

- **Tabulation** - Participation in internal workshops to develop design manual updates.
- **Tabulation** - Documentation of proposed measures and methods to update the existing design standards.
- **Tabulation** - Document and quantify the number of internal staff and external stakeholders receiving training on updated design standards.
- **Tabulation** - Track number of stormwater plan reviews and approvals.
- **Tabulation** - Track number and type of stormwater facilities approved.

## Outcome Levels

- Level 1 – Document Activities.
- Level 2 – Raise Awareness.
- Level 3 – Change Behavior.
- Level 4 – Reduce Loads from Sources.

### 5.2.3 Develop and Implement Green Stormwater Infrastructure Incentive Strategy and Pilot Projects (II.B.2.c. i, II.B.2.c.ii)

ACHD will use the term Green Stormwater Infrastructure (GSI) to replace Green Infrastructure/Low Impact Development (GI/LID) terminology used in the Permit. ACHD is required to develop a strategy to provide incentives for the increased use of GSI techniques in private and public sector development projects. When the strategy is submitted to the EPA it must include descriptions and a narrative report on the pilot projects it has implemented. The permittees must also evaluate the performance of GSI techniques or practices in each pilot project. Pilot projects must meet at least one of the following criteria:

1. The project manages runoff from at least 3,000 square feet of impervious surface.
2. The project involves transportation related locations (including parking lots).
3. The drainage area of the project is greater than 5 acres in size.
4. The project involves mitigation of existing stormwater discharges to one or more of the water bodies listed in Table II.C of the permit.

## Current Status

ACHD has developed a GSI Guidance Manual. Applicable stormwater control techniques were identified during the development of the manual.



ACHD completed the design of three permeable paver alley projects and the construction of each of these projects which will serve as a pilot project. Construction of a second pilot project, a system of stormwater tree cells located at 1405 W Main St was completed in November 2015 and evaluation will begin in 2016.

ACHD monitored the pilot projects in order to assess effectiveness. Monitoring details are identified in Section 7.1.6. A final GSI Incentive Strategy (Strategy) has been developed which identifies barriers and opportunities for the implementation of GSI. The pilot project selection process is described in the GSI Incentive Strategy completed in 2015 (ACHD's 2015 annual report) and finalized in the 2017 annual report. Appropriate right of way GSI techniques were identified during the development of the GSI Guidance Manual which was included in ACHD's 2014 annual report. The process for ongoing retrofit of public streets, roads, and parking lots with GSI facilities is discussed in the Integration and Capacity Development section of the Strategy.

### **Affected Parties**

ACHD Stormwater Quality staff

ACHD Development and Engineering staff

Development and Construction Community

### **Actions to Implement**

GSI Incentive Strategy Development actions to implement include:

- Review existing policies, processes and activities. **Completed, 2015**
- Identify barriers to the implementation of GSI and recommendations for changes. **Completed, 2015**
- Identify opportunities for implementation of a GSI pilot project. **Completed, 2015**
- In conjunction with development of a GSI guidance manual, specify applicable stormwater control techniques that would be included in the GSI Incentive Strategy. **Completed, 2014**
- Define selection criteria for each project to support identification as a pilot project. Selection criteria may include the ability to treat untreated stormwater runoff (as a retrofit project) per requirement II.B.2.c.iii. **Completed, 2015**
- Select projects to serve as GSI pilot projects. **Completed, 2015**
- Identify opportunities to cooperate with other Permittees to implement GSI pilot projects. **Completed, 2015**
- Define evaluation criteria to assess project performance for the GSI pilot projects. **Completed, 2015**
- Document the overall facility identification and project selection/prioritization/evaluation in a GSI Strategy Document. Submit the document with the 3rd Year Annual Report. Coordinate development of the strategy document with development of an updated design manual/GSI manual. The strategy document should define the process for ongoing retrofit of public streets, roads, and parking lots with GSI facilities. **Completed, 2017**
- Initiate construction of GSI pilot projects that are under the oversight of ACHD. **Completed, 2015**

### **Assessment Methods**

GSI Incentive Strategy Development assessment methods include:

- **Tabulation** - Track progress related to development of the GSI Strategy Document and selection of pilot projects.
- **Monitoring** - Use established evaluation criteria, assess performance of the pilot projects during construction (4th Year Annual Report) and final implementation (5th Year Annual Report).

- **Tabulation** - Document GSI retrofit projects initiated on public streets, roads, and parking lots.
- **Tabulation** - Document GSI retrofit project efforts designed to reduce the flow of untreated stormwater in the 5th Year Annual Report.

### Outcome Levels

- Level 1 – Document Activities.
- Level 2 – Raise Awareness.
- Level 4 – Reduce Loads from Sources.

### 5.2.4 Repair of Public Streets, Roads, and Parking Lots (II.B.2.c.iv)

When public streets, roads, or parking lots are repaired, ACHD is required to evaluate the feasibility of incorporating runoff reduction techniques into the repair. When these techniques are feasible ACHD must incorporate them into the repair design.

### Current Status

Stormwater Quality staff met with ACHD staff to discuss the requirement and how it can be met. A protocol for evaluating feasibility of incorporating runoff reduction techniques was created and a form has been developed to track the projects. Based on documentation received, 3 minor projects were evaluated. In general, most of the repair projects performed by ACHD or contracted out by ACHD disturb less than 5,000 square feet or fall under the list of activities that are exempted from the Permit requirement including: shoulder regrading, pot hole and square cut patching, reshaping/regrading ditches, etc.

### Affected Parties

ACHD Stormwater Quality staff

ACHD Pavement Management, Design, Projects, and Maintenance staff

### Actions to Implement

Repairs actions to implement include:

- Develop protocol for evaluating feasibility of incorporating runoff reduction techniques in repair projects. **Completed, 2014**
- Conduct training for personnel involved. **Ongoing, 2016**
- Implement runoff reduction design techniques in repair projects where feasible. **Ongoing, 2017**
- Prepare project documentation including general project design, estimated total cost, and estimates of flow and pollutant reduction compared to traditional design techniques, as applicable. **Completed 2017**
- Submit project descriptions, if applicable, with 5<sup>th</sup> year annual report. **Completed 2017**

### Assessment Methods

Repairs assessment methods include:

- **Confirmation** – Document feasibility evaluation process and projects progress.
- **Tabulation** – Track number, relative success, and impacts of projects where runoff reduction techniques are feasible and implemented.
- **Quantification** - Estimate volume and pollutant reduction achieved compared to traditional design practices.

## Outcome Levels

- Level 1 – Document Activities.
- Level 3 – Change Behavior.
- Level 4 – Reduce Loads from Sources.

### 5.2.5 Develop Priority Riparian Area List and Complete Outfall Disconnection Project (II.B.2.c.iii)

ACHD and the Permittees are required to identify and prioritize riparian areas appropriate for Permittee acquisition and protection as it applicable to the mission of the Permittee. Additionally, ACHD is to undertake and complete at least one project that uses vegetated treatment techniques and/or other appropriate techniques to reduce flow of untreated urban stormwater discharging through the MS4 as an outfall disconnection project.

#### Current Status

ACHD's mission is the safe and efficient movement of people and goods throughout Ada County. Acquisition of riparian areas for protection is not a part of this mission unless it is necessary for roadway drainage. For all new/retrofit ACHD projects that are located in areas with a MS4, disconnection is evaluated as an option. At a minimum, runoff reduction is addressed for the project areas affected.

One outfall disconnection was completed in the permit area over the last permit term (2013). Outfall 3N2E05\_026 (Pleasanton Street outfall) was removed during the construction of the Whitewater Park Boulevard project. Approximately 170 acres is now directed to an infiltration/detention basin.

Over the last five years ACHD has focused on disconnecting alleys and associated building rooftops within the Boise downtown area from the MS4. To date, ACHD has installed 5 permeable paver alleys; 3 more alleys have been designed and will be installed in the summer of 2018. Design and construction of permeable alleys are included in ACHD's Integrated Five Year Work Plan through 2020. A list of alleys and area disconnected is included in ACHD's 2016-17 Annual Report.

#### Affected Parties

ACHD Stormwater Quality staff

#### Actions to Implement

Riparian Zone Management implementation efforts may include:

- Compile list of ACHD owned riparian properties. Assess opportunities for outfall disconnection project. **Ongoing 2017**
- Monitor flows and water quality from outfall(s) prior to disconnection.
- Document outfall disconnection project(s).

#### Assessment Methods

Riparian Zone Management assessment methods include:

- **Tabulation** - Track the efforts to develop a list of prioritized riparian protection areas.
- **Tabulation** - Document ongoing efforts annually.

#### Outcome Levels

- Level 1 – Document Activities.
- Level 2 – Raise Awareness.
- Level 4 – Reduce Loads from Sources.

### 5.2.6 Incorporate Permanent Stormwater Controls into O&M Database (II.B.2.e)

The Permittees must maintain a database tracking all new public and private sector permanent stormwater controls which incorporates geographic information system (GIS) information, the type and number of practices, O&M requirements, activity and schedule, responsible party, and self-inspection schedule. The Permittees must also require a legally enforceable and transferable O&M agreement when parties other than the Permittees are responsible for O&M.

#### Current Status

ACHD's Maintenance and GIS staff have migrated from a system of tracking stormwater structural control maintenance using hand-held GPS units to using tablet computers and a web based GIS attribute collecting application. Using the Mobile 311 app, drainage maintenance crews enter inspection and maintenance information in a table tied geospatially to the structure being inspected. When maintenance is performed the same application will be used to record what type of maintenance and how much debris was removed. This information is made available on the internal ACHD mapping system.

#### Affected Parties

ACHD Stormwater Quality staff

ACHD Maintenance and GIS staff

#### Actions to Implement

Permanent Stormwater Control Tracking and Identification actions to implement may include:

- Review existing mechanism for ensuring O&M by homeowner associations. **Completed, 2015**
- Per updated design manual and development review processes, refine methods for tracking facility installations that fall under the jurisdiction of ACHD.
- Work with other Permittees to share data as needed. **Ongoing, 2016**
- Continue to require submittal of O&M agreements in conjunction with new stormwater facility installation as defined in the design manual and development review process. **Ongoing, 2017**
- Per updated design manual and development review processes, review tracking (per the inventory database/GIS inventory) of new facility installations into the development review process. **Ongoing 2017**
- Review existing procedures to ensure ACHD stormwater facility information is input accurately into inventory database and GIS. **Ongoing 2017**

#### Assessment Methods

Permanent Stormwater Control Tracking and Identification assessment methods include:

- **Tabulation** - Document the number of existing facilities documented in the inventory database.
- **Tabulation** - Document updates to development review process to ensure tracking of new facilities.
- **Tabulation** - Document the number of new facilities incorporated into the inventory database annually.

#### Outcome Levels

- Level 1 – Document Activities.

### 5.2.7 Conduct Stormwater Facility Inspections and Implement Enforcement Strategy (II.B.2.f) and Education and Training (II.B.2.g.i)

ACHD is required to ensure proper long-term operation and maintenance of all permanent stormwater management practices and implement an inspection program and enforcement strategy.

#### Current Status

Prior to acceptance, all permanent stormwater controls are inspected by ACHD subdivision and zone inspection staff. For ACHD projects, the Project inspector performs the inspection. ACHD is in the process of updating tracking tools. Details on new activities are available in ACHD's 2016-17 Annual Report, section 3.3.6.

#### Affected Parties

ACHD Subdivision, Zone, and Project Inspection staff

ACHD Maintenance staff

ACHD Stormwater Quality staff

General Public

#### Actions to Implement

High Priority Inspection Program actions to implement may include:

- Develop criteria to be used to identify existing and future stormwater facilities as high priority.
- In conjunction with the inventory and tracking of existing and future stormwater facilities, prioritize stormwater facilities for inspections.
- Develop checklists for use during inspections of new development and redevelopment sites.
- In conjunction with development of the stormwater facility inventory database, assign inspection schedules for identified high priority facilities.
- Review policy language and update (as necessary) to include escalating enforcement measures for high priority facilities that do not receive appropriate maintenance. **Completed 2017**
- Conduct training for ACHD staff conducting high priority facility inspections.
- Implement the high priority facility inspection program.

#### Assessment Methods

High Priority Inspection Program assessment methods:

- **Tabulation** - Track the number of high priority facilities identified annually.
- **Tabulation** - Track the number of high priority facility inspections conducted annually.
- **Inspections** - Identify enforcement actions required based on inspection results.
- **Tabulation** - Document the number of staff trained on inspection efforts and protocols annually.

#### Outcome Levels

- Level 1 – Document Activities.
- Level 2 – Raise Awareness.
- Level 3 – Change Behavior.
- Level 4 – Reduce Loads from Sources.

### 5.3 Industrial and Commercial Stormwater Discharge Management (Permit Part II.B.3)

This section describes activities ACHD conducts or will implement to fulfill Permit requirements for industrial and commercial stormwater discharge management.

The industrial and commercial stormwater discharge management permit requirements are:

The following is summarized from Part II.B.3

Implement a program to reduce to the maximum extent practicable the discharge of pollutants from industrial and commercial operations through education and/or enforcement efforts.

Minimum requirements are as follows:

- a. Update inventory and map of facilities and activities discharging directly to the MS4.
- b. Identify specific industrial/commercial activities for which stormwater discharges are not currently being adequately addressed.
- c. Inspect industrial and commercial facilities/activities.
- d. Maintain industrial and commercial facility/activity inventory.

Industrial and Commercial Stormwater Discharge Management (Permit Part II.B.3)	Action Items	Assessment Methods	Schedule
Ordinance/Policy	Update policy/ordinance as needed		Permit Year 4 (2016)
Measurable Goals	Update inventory and map of industrial and commercial facilities and activities annually	Document inventory updates	Permit Year 4 (2016) and ongoing annually
	Identify two specific activities/sectors where stormwater discharges are not currently being adequately addressed	Document activity/sectors and description of conditions for choosing them	Permit Year 4 (2016)
	Develop BMPs for identified activities/sectors	Document BMP selection and design	Permit Year 4 (2016)
	Inspect industrial outfalls and activities	Track number of inspections conducted annually Estimate pollutant loading reduction resulting from enforcement actions	Permit Year 4 (2016)
Public Education/Outreach	Implement compliance education program for two identified activities/sectors	Track BMP implementation Estimate pollutant loading reduction resulting from compliance assistance program	Permit Year 4 (2016)

The objective of the Industrial and Commercial Stormwater Discharge Management Program is to actively engage these dischargers in protecting the quality of runoff and managing facilities and activities to prevent the discharge of pollutants associated with industrial and commercial facilities and activities. ACHD intends to meet the industrial and commercial stormwater discharge management permit

requirements by implementing the following activities and associated actions, some of which are currently being implemented.

### **5.3.1 Inventory Industrial and Commercial Facilities/Activities and Develop Targeted Pollutant Reduction Strategy Document (II.B.3.a and II.B.3.c)**

ACHD is required to identify and inventory industrial and commercial facilities that discharge directly into ACHD's MS4 or have the potential to contribute substantial pollutant loading to the MS4. ACHD does not have jurisdiction over private facilities that discharge exclusively into receiving water or onsite treatment systems. Specific types of facilities are outlined in the Permit. The inventory must include information regarding watershed/receiving water body, facility name, address, nature of business or activity, and classification code(s). The inventory must be updated at least annually and include a summary of compliance assistance and inspection activities and escalation/follow-up proceedings.

ACHD and the Permittees are also required to identify at least two specific industrial/commercial activities or sectors operating within the Permit area for which stormwater discharges are not being adequately addressed through existing programs and develop BMPs for the selected types of facilities/sectors and implement an education program.

#### **Current Status**

ACHD continues to contract with City of Boise and Garden City Pretreatment staff to implement and maintain a Microsoft Access database containing all known facilities within the City of Boise jurisdiction that meet high risk industrial criteria and other commercial facilities that discharge stormwater to the MS4. The database was modeled after the City of Boise pretreatment database and contains the facility standard industrial classification code, location, Multi-Sector General Permit (MSGP) requirements, contact information, inspection dates, and links to recent inspection reports. ACHD uses this database to maintain a list of industrial and commercial facilities throughout the permit area. ACHD also develops an annual list of prioritized industrial/commercial facility stormwater inspections to be conducted by the City of Boise and Garden City in their respective jurisdictions. In 2016, permittees identified residential and commercial landscapers and mobile businesses as sectors in which to focus education activities. In 2017, Boise City, on behalf of the Partner's for Clean Water, developed new fact sheets for mobile businesses and commercial landscaping.

#### **Affected Parties**

ACHD Stormwater Quality staff

City of Boise and Garden City Pretreatment staff

#### **Actions to Implement**

Industrial and Commercial Facilities/Activities Inventory actions to implement may include:

- Coordinate with Permittees to identify current practices for tracking business (commercial and industrial) operations. Identify businesses that each Permittee would track under this requirement. **Ongoing, 2016**
- Review applicable license agreements for private entities to discharge stormwater into the MS4. **Ongoing, 2017**
- Coordinate with Permittees, as necessary, to compile an inventory of existing businesses that meet high risk industrial criteria and other commercial facilities that discharge stormwater to the MS4. Information to include in the inventory is based on requirements of the Permit. **Ongoing, 2016**
- Based on the compiled inventory, coordinate with Permittees to categorize businesses by activity and identify a minimum of two types of businesses (or activities) that have the greatest likelihood of

pollutant generation that is not currently being addressed adequately. Work with Permittees to develop industry-specific BMPs for each. **Completed, 2016**

- Coordinate with Permittees to update business license applications for new or renewing businesses to include specific questions related to stormwater discharge. Such information could be used to populate the inventory.

### Assessment Methods

Industrial and Commercial Facilities/Activities Inventory assessment methods include:

- **Quantification** - Identify the total number of existing high pollutant generating businesses (per review of existing business licenses) (once over the permit term).
- **Tabulation** - Track updates to the business inventory annually. Identify whether any new businesses may be classified as high pollutant generating.
- **Tabulation** - Track new stormwater license agreements.
- **Tabulation** - By September 30, 2016, report on the development of industry-specific BMPs.

### Outcome Levels

- Level 1 – Document Activities.

### 5.3.2 Inspect Industrial and Commercial Facilities/Activities (II.B.3.b)

Work cooperatively through the Permit term to prioritize and inspect selected industrial and commercial facilities/activities which discharge to receiving waters or to the MS4.

#### Current Status

In April and August of 2009 ACHD entered into interagency agreements with City of Boise and Garden City, respectively, for the inspection, monitoring, and enforcement of industrial high risk stormwater runoff. Draft updates to these agreements have been completed and are available in Appendix 5. Annually, ACHD works with City of Boise Pretreatment staff and Garden City Environmental staff to develop scope of work documents.

#### Affected Parties

ACHD Stormwater Quality staff

City of Boise and Garden City Pretreatment staff

Business community with the potential to be inspected

#### Actions to Implement

Industrial and Commercial Facility Inspections include the following implementation actions:

- Work with City of Boise and Garden City to develop priorities for facility inspections. Development of priorities shall reflect results of the business inventory and identification of high pollutant generating businesses. **Ongoing, 2017**
- Update intergovernmental agreement with City of Boise and Garden City to establish a high pollutant generating business inspection program. **In Progress, 2017**
- Review existing policies and legal enforcement procedures to ensure adequate legal authority for inspections and enforcement within ACHD jurisdiction. **In Progress, 2017**
- Work with City of Boise and Garden City to review inspection reporting procedures and inspection form. The procedure shall include follow-up activities and enforcement mechanisms and authority. **Completed, 2016**



## Assessment Methods

Industrial and Commercial Facility Inspections include the following assessment methods:

- **Tabulation** - By September 30, 2016, report on the status of IGA development and updates.
- **Confirmation** - By September 30, 2016, report on the status of any ordinance updates to implement this requirement.
- **Tabulation** - Track the number of high pollutant generating business inspections conducted annually in cooperation with other Permittees.
- **Tabulation** - Track the number of inspected businesses requiring follow-up measures annually.
- **Tabulation** - Annually, after September 30, 2016, track the number of staff (ACHD and Permittees) attending pollutant generating facility inspection training.

## Outcome Levels

- Level 1 – Document Activities.
- Level 2 – Raise Awareness.
- Level 3 – Change Behavior.
- Level 4 – Reduce Loads from Sources.

## 5.4 Stormwater Infrastructure and Street Management (Permit Part II.B.4)

This section describes activities ACHD conducts or will implement to fulfill Permit requirements for a stormwater infrastructure and street management program. The stormwater infrastructure and street management permit requirements are:

Summarized from Part II.B.4

Maintain the MS4 and related facilities to reduce the discharge of pollutants to the MS4 to the maximum extent practicable.

- a. Map and Inventory Storm Sewer System.
- b. Inspect and Clean Catch Basins and Inlets.
- c. Maintain street and roads.
- d. Adopt Street, Road, and Parking Lot Sweeping Program as outlined in the Permit.
- e. Implement Appropriate Requirements for Pesticide, Herbicide, and Fertilizer Applications.
- f. Develop and Implement Stormwater Pollution Prevention Plans.
- g. Evaluate Stormwater Management Retrofitting Possibilities.
- h. Litter Control.
- i. Training.

Stormwater Infrastructure and Street Management (Permit Part II.B.4)	Action Items	Assessment Methods	Schedule
Ordinance/Policy	NA	NA	NA
Measurable Goals	Update MS4 system inventory and map	Document inventory updates	Permit Year 5 (2017)

Stormwater Infrastructure and Street Management (Permit Part II.B.4)	Action Items	Assessment Methods	Schedule
	Develop and implement inspection program for catch basins	Inspect all catch basins and inlets at least once every two years	Permit Year 4 (2016)
	Update SOPs for street and road maintenance	Document SOP updates	Permit Year 3 (Sept 2015)
	Develop and implement plan to address material storage areas exposure to stormwater	Document material storage area locations	Permit Year 1 (2013)
		Document plan and activities Track efforts to achieve reduction in pollutant loading resulting from storage areas (Part II.B.4.c.iii)	Permit Year 5 (2017)
	Update street/road/parking lot sweeping plans	Document updates to sweeping plans	Permit Year 3 (2015)
	Update inventory and map of streets, roads, paved alleys, and parking lots	Document inventory activities	Permit Year 2 (2014)
	Sweep according to schedule outlined in permit	Document sweeping activities Tabulate sweeping miles based on prioritized locations (i.e. curb and gutter and discharge to receiving water) Quantify tons of sediment, organic matter, and debris removed based on prioritized area	Permit Year 3 (2015)
	Identify infeasible sweeping areas and identify alternative schedule or alternative program	Document process and outcomes	Permit Year 1 (2013)
	Estimate sweeping effectiveness	Document sweeping activities and track trends	Ongoing/annually
	Develop facility and maintenance yard SWPPPs	Document SWPPP development activities	Permit Year 3 (2015)
	Evaluate the feasibility of retrofitting existing control devices and litter control	Document feasibility analysis and retrofit project plan Document litter control activities Track litter reduction over time	Permit Year 5 (2017)
Public Education/Outreach	Distribute updated SOPs to appropriate ACHD staff	Document staff distribution	Permit Year 3 (2015)
	Conduct O&M and SWPPP training for appropriate ACHD staff	Document training attendance	Permit Year 3 (2015)

The objective of the Stormwater Infrastructure and Street Management Program is to optimize ACHD's approach to maintenance and operations in order to minimize discharge of pollutants from ACHD activities. ACHD intends to meet the stormwater infrastructure and street management permit

requirements by implementing the following activities and associated actions, some of which are currently being implemented.

#### **5.4.1 Update MS4 System Inventory and Map (II.B.4.a)**

ACHD is required to update current records to develop a comprehensive inventory and map of the MS4s and all associated features.

##### **Current Status**

ACHD currently maintains maps of storm drainage system structures, outfalls, and pipes, and updates the inventory/map regularly as new/updated information becomes available.

##### **Affected Parties**

ACHD Stormwater Quality staff

ACHD GIS staff

##### **Actions to Implement**

MS4 System Inventory Mapping actions to implement include:

- Compile existing stormwater infrastructure mapping to create a single stormwater infrastructure inventory. Include as-built information as needed. Mapping efforts to include:
  - ACHD owned and operated maintenance and material storage facilities (in conjunction with the industrial/commercial facility inventory effort [requirement II.B.3.a]), map. Also include snow disposal sites and ACHD owned and operated parking areas. **Completed, 2013**
  - Public and private stormwater treatment and flood control facilities discharging to ACHD owned and operated MS4 (in conjunction with the inventory and tracking of permanent stormwater controls [requirement II.B.2.e]). **Ongoing, 2016**
- Identify locations where additional survey, video inspection, and mapping are needed due to a lack of available information. Prioritize areas for additional data collection efforts.
- Collect data (via field survey) and map additional stormwater infrastructure as needed. **Ongoing, 2016**

##### **Assessment Methods**

MS4 System Inventory Mapping assessment methods:

- **Tabulation** - Track status of updating the MS4 system inventory (ongoing over the Permit term).
- **Tabulation** - Document additional survey and data collection efforts required annually.
- **Tabulation** - Document survey and video inspection efforts conducted annually.

##### **Outcome Levels**

- Level 1 – Document Activities

#### **5.4.2 Inspect and Maintain Catch Basins (II.B.4.b) and Update Street/Road/Parking Lot Sweeping Plans (II.B.4.d)**

ACHD is required to update their maintenance program with provisions to inspect and maintain all Permittee-owned and operated catch basins and inlets at least every two years. Additional requirements include updating sweeping management plans and designating streets, roads, and parking lots as residential, arterial, or public. If sweeping in any area is infeasible for any reason, each area must be included in the annual report and a description of alternative controls must

be outlined and implemented. Additionally, ACHD must estimate the effectiveness of street sweeping activities, and document any significant changes to the inventory/map, document sweeping statistics including, type of sweeper used, swept curb or lane miles, volume of debris removed, etc., and report on public outreach efforts.

## Current Status

A draft Storm Drain Inspection and Cleaning Plan was developed in 2016 (Appendix 7). There are currently 11,591 catch basins and 2,265 sediment/combo boxes inventoried within the Phase I Permit area that are a part of the inspection and maintenance rotation. In 2017, 2,906 catch basins and 579 sediment /combo boxes were cleaned in the Phase I and Phase II areas. ACHD currently maintains 496 miles of storm drain pipe in the Phase I and Phase II areas. Storm drain structures, pipes, and outfall GIS data continue to be updated and refined annually. Mobile 311 app allows for more robust tracking enabling Phase I and Phase II designated areas to be tracked separately.

In 2015 ACHD developed a Sweeping Management Plan, (Appendix 7). The document outlines the structure of the current street sweeping program including organizational roles and responsibilities, maps, routes, effectiveness evaluation, waste management, and equipment inventory. Since October 2015 street sweeper activity has been monitored with an Automatic Vehicle Location (AVL) system. This technology allows ACHD to track when and where sweepers have cleaned streets in Ada County. In 2017, ACHD utilized 17 vacuum sweepers and 5 mechanical brooms for street cleaning in Ada County. Sweeping is currently completed within nine zones. Principal arterials and collectors are completed every 6 weeks with vacuum sweepers and residential streets are completed four times per year with mechanical sweepers, assuming weather and staffing permits it. Downtown areas are swept every other week and routine sweeping within the permit area is done on an as-needed basis. Currently, sweeping effectiveness is tracked for vacuum and mechanical sweepers where the. The total volume of debris picked up, percentage of total estimated debris, and debris/mile are tracked and reported annually.

ACHD conducts training for new and current staff as needed. ACHD's *Operation and Maintenance Storm Water Best Management Practices Manual* was developed in 2002. Pollution Prevention and Good Housekeeping for Municipal Operations training is provided annually to all Maintenance and Traffic Operations staff.

## Affected Parties

ACHD Maintenance (Drainage and Sweeper crews) staff

ACHD Stormwater Quality staff

## Actions to Implement

Catch Basin and Street Sweeping Maintenance Program implementation actions include:

- Review existing street sweeping areas/routes, and frequencies. **Completed, 2015**
- Review existing catch basin cleaning areas and frequencies.
- Identify, by the 1st Year Annual Report (January 2014), ACHD-regulated areas where sweeping is infeasible. Identify alternative methods of source control and debris control. **Completed, 2013**
- In conjunction with the system inventory mapping effort (requirement II.B.4.a), categorize roads in accordance with residential, arterial/other, and public parking. Establish a required sweeping frequency for each road per Table II.B-2 and in consideration of known information related to traffic volumes. **Completed, 2015**

- Using information from the system evaluation and required sweeping frequencies, establish an inspection and maintenance procedure and schedule for catch basins. All catch basins and inlets shall be inspected at least once every two years.
- By September 30, 2015, define sweeping frequency in a sweeping management plan. **Completed, 2015**
- By September 2016 define catch basins inspection and/or cleaning in a catch basin management plan. **Draft, 2016**
- Conduct ongoing street sweeping and catch basin inspection and cleaning in accordance with frequencies outlined in the sweeping and catch basin management plans. **Ongoing, 2017**
- Develop/provide outreach materials related to street sweeping and leaf pick-up programs. **Ongoing, 2017**

### Assessment Methods

Catch Basin and Street Sweeping Maintenance Program assessment methods include:

- **Tabulation** - Track ACHD-regulated areas where sweeping is infeasible and alternative methods of source control annually.
- **Confirmation** - By September 30, 2015, track development of the Sweeping Management Plan. By September 30, 2016 track development of Catch Basin Management Plan.
- **Tabulation** - Track the number and percentage of total catch basins inspected and maintained annually. Document the volume of material removed annually by location/zone.
- **Tabulation** - Track the frequency and number of lane miles swept annually by roadway type. Include dates of sweeping, types of sweepers used, and volume of material removed by location/zone.
- **Tabulation** - Identify any proposed changes to existing sweeping frequency annually.
- **Quantification** - Based on calculated volume removed by street sweeping versus catch basin cleaning efforts, qualitatively discuss the impact of sweeping on overall stormwater program effectiveness.
- **Tabulation** - Track public outreach material distribution and number of website hits annually.

### Outcome Levels

- Level 1 – Document Activities.
- Level 4 – Reduce Loads from Sources.

#### 5.4.3 Update Standard Operating Procedures (SOPs) for Street and Road Maintenance (II.B.4.c.)

Permittees responsible for road and street maintenance must update any standard operating procedures for stormwater controls to ensure the use of BMPs that, when applied to the Permittee's activity or facility, will protect water quality, and reduce the discharge of pollutants to the MEP. The updates must include pollution prevention/good housekeeping practices for all streets, roads, highways, and parking lots with more than 3,000 square feet of impervious surface that are owned, operated, or maintained by the permittees. Any sand, salt, or sand with salt material stockpiles must be included as well.

ACHD is also required to provide regular training to appropriate Permittee staff on all operations and maintenance procedures associated with infrastructure and street management designed to prevent pollutants from entering the MS4 and receiving waters.

## Current Status

ACHD's *Operation and Maintenance Storm Water Best Management Practices Manual* (2002) is currently utilized for guidance in street and road maintenance. Updates will be incorporated as needed to meet new permit requirements. Pollution Prevention and Good Housekeeping for Municipal Operations training is given annually to all Maintenance and Traffic Operations staff.

ACHD stores sand and salt materials at two locations in the Phase I Permit area. These sites are the Adams Maintenance yard located at 3775 Adams Street in Garden City, Idaho and the Cloverdale Maintenance yard located at 440 N. Cloverdale Road, Boise, Idaho. ACHD completed a covered facility for sand with salt and salt storage at the Cloverdale location in September of 2017. A second storage facility at the Adams Street location is currently under construction and is expected to be completed in early 2018. The storage facilities at the Adams Street and Cloverdale yard each have a capacity to cover 6,000 tons of material.

Currently ACHD stores road maintenance materials at several sites throughout Ada County, some of which are outside the Phase I Permit area. A location map of ACHD's maintenance materials storage areas, updated in November 2017, is located in Appendix 8.

## Affected Parties

ACHD Maintenance staff

ACHD Stormwater Quality staff

## Actions to Implement

Street and Road Maintenance Standard Operating Procedures actions to implement include:

- Review current street and road maintenance SOPs. Identify gaps in current procedures per requirement II.B.4.c.i. **Ongoing, 2016**
- Update the current street and road maintenance SOPs by September 30, 2015, to address identified gaps. Identify additional pollution prevention and housekeeping practices as necessary. **Ongoing, 2016**
- In conjunction with the MS4 System Inventory Mapping (requirement II.B.4.a), identify sand or salt material stockpile areas. **Completed, 2013**
- Inspect current sand or salt material stockpile areas. Determine BMPs for sand and salt material storage areas. This effort may be conducted in conjunction with the inventory of industrial and commercial facilities/activities (requirement II.B.3). **Ongoing, 2016**
- By September 30, 2017, implement BMPs for sand and salt material storage areas. **Completed, 2017**
- Provide education for internal staff related to updated street and maintenance SOPs and the BMPs for sand and salt material storage areas.

## Assessment Methods

Street and Road Maintenance SOP assessment methods include:

- **Tabulation/Quantification** - Identify, by the 1st Year Annual Report, ACHD regulated sand and salt material storage areas. Estimate the average quantity of material stored at each.
- **Tabulation/Quantification** - Quantify sand and salt material usage annually.
- **Confirmation** - Document updates to the street and road maintenance SOP by September 30, 2015.

- **Tabulation** - Track pollution reduction efforts targeted at sand and salt material storage areas over the permit term. By September 30, 2017, compile and document all strategies conducted at the storage areas to address pollutant discharge in runoff from the material storage piles.

### Outcome Levels

- Level 1 – Document Activities.
- Level 2 – Raise Awareness.

#### 5.4.4 Implement Requirements for Pesticide, Herbicide, and Fertilizer Applications (II.B.4.e)

ACHD must continue to implement practices to reduce the discharge of pollutants to the MS4 associated with the application, storage, and disposal of pesticides, herbicides, and fertilizers from municipal areas and activities.

### Current Status

ACHD maintains facilities throughout the Permit area and Ada County. Locations where pesticides, herbicides, and fertilizers are applied consist of ACHD administration and maintenance facilities on Adams Street in Garden City, the Commuteride office in Boise, maintenance facilities on Cloverdale Road in Boise, stormwater basins and park and ride lots. ACHD's vegetation staff does not use products that require applicator certification. ACHD contracts with a local landscaping company to apply herbicides to ACHD roadsides. These contractors are certified applicators.

### Affected Parties

ACHD Maintenance staff

ACHD landscape contractor(s)

ACHD Stormwater Quality staff

### Actions to Implement

Pesticide, Herbicide, and Fertilizer implementation requirements include:

- Survey ACHD landscape maintenance staff to identify the current number of registered applicators. **Completed, 2016**
- Provide opportunities for annual training to ensure that staff maintains certification.
- Require all contractors providing landscape maintenance services to be registered as a certified applicator. **Ongoing, 2017**
- Require all contractors providing landscape maintenance services to track herbicide, fertilizer, and insecticide usage. **Ongoing, 2017**

### Assessment Methods

- **Tabulation** - Annually track the number of ACHD staff registered as a certified applicator. Indicate new staff certified based on attendance at training.
- **Tabulation** – Track ACHD and ACHD contractor usage of herbicides, fertilizers, and insecticides on ACHD right of way and properties.

### Outcome Levels

- Level 1 – Document Activities.
- Level 2 – Raise Awareness.

- Level 3 – Change Behavior.

#### 5.4.5 Develop Facility and Maintenance Yard SWPPPs (II.B.4.f)

ACHD is required to develop and implement SWPPPs for all Permittee-owned material storage facilities and maintenance yards located within the permit area and identified in Parts II.B.3.a and II.B.4.viii of the permit.

##### Current Status

SWPPP's for both the Adams Maintenance Yard in Garden City and the Cloverdale Maintenance Yard in Boise were completed in 2015. Plans for both locations are located in Appendix 9. Due to the redesign of the Cloverdale Maintenance Yard to retain stormwater on-site, and the newly constructed sand/salt storage facilities at both maintenance yards, a new SWPPP will be developed for both facilities in early 2018.

##### Affected Parties

ACHD Stormwater Quality staff

ACHD Maintenance staff

##### Actions to Implement

SWPPP Development and Implementation actions include:

- In conjunction with the MS4 System Inventory Mapping (requirement II.B.4.a) and the inventory industrial/commercial facilities, identify ACHD owned and operated maintenance yard facilities and material storage facilities. Conduct a site inspection of each site identified. Inventory current materials stored, pollutant generating activities conducted, and existing stormwater pollution controls. **Ongoing, 2016**
- Develop SWPPPs for ACHD maintenance yards. Development of a SWPPP should correspond to development of the BMPs for sand and salt material storage areas (identified under requirement II.B.4.c.iii) or industry-specific BMPs (identified under requirement II.B.3.a.iii). **Completed, 2015**
- By September 30, 2015, implement pollution reduction measures outlined in the SWPPP for each facility. **Ongoing, 2016**

##### Assessment Methods

SWPPP assessment methods include:

- **Tabulation** - By September 30, 2014, document all ACHD owned and operated maintenance yards and material storage facilities.
- **Confirmation**- Document the status of SWPPPs for each facility annually.
- **Tabulation** - Starting September 30, 2015, document the implementation of pollution reduction measures (per SWPPP documentation) at each maintenance facility and material storage facility.

##### Outcome Levels

- Level 1 – Document Activities.
- Level 2 – Raise Awareness.
- Level 3 – Change Behavior.

#### 5.4.6 Stormwater Management for Retrofit Projects and Litter Control (II.B.4.g, h)

ACHD is required to ensure that ACHD stormwater management projects are designed and implemented to prevent adverse impacts on water quality and implement effective methods for reducing litter.



## Current Status

Over the last several years ACHD has been working on developing policy, implementing programs, and evaluating technologies that are designed to improve the quality of runoff discharging from our stormwater management control facilities into local waterways and groundwater. Specifically, recent ACHD policy updates require new and re-built ACHD ponds to be vegetated per the *Ada County Highway District Stormwater Management Basin Revegetation Guidance* (October 2017). The ACHD Commission directed staff in December 2016 to begin retrofitting ACHD-owned basins with vegetation. During permit year 2016-17, two ACHD-owned basins were seeded with native grasses and planted with native shrubs. A five-year vegetation plan has been developed to guide retrofit vegetation efforts on approximately 65 ACHD-owned basins in the next several years. Additional information on retrofit activities can be found in the Phase I annual report Section 3.5.9.

ACHD continues to implement its Adopt-a-Highway Program. During 2016-17, 100 groups participated in 81 clean-up events in the Adopt-a-Highway Program.

## Affected Parties

ACHD Stormwater Quality staff

ACHD Design, Planning, Projects, and Maintenance staff

General Public

## Actions to Implement

Retrofit and litter control implementation actions may include:

- Develop protocol for evaluating feasibility of retrofitting existing systems to improve pollutant removal.
- Evaluate feasibility of retrofitting existing stormwater control devices to improve pollutant removal.
- Identify all locations where retrofits are feasible, identify appropriate funding sources, and outline project timelines and schedules.
- Evaluate current programs such as the Adopt-a-Highway Program to ensure that litter control methods are effective at reducing litter on a regular basis and after major public events.

## Assessment Methods

Retrofit and litter control assessment methods include:

- **Confirmation**- Document retrofitting opportunities.
- **Confirmation**- Document litter control activities.
- **Tabulation** – Track retrofitting evaluations and project progress toward completion of retrofit projects.
- **Tabulation** – Track litter reduction on a broad scale.

## Outcome Levels

- Level 1 – Document Activities.
- Level 2 – Raise Awareness.
- Level 3 – Change Behavior.
- Level 4 – Reduce Loads from Sources.

## 5.5 Illicit Discharge Management (Permit Part II.B.5)

This section describes activities ACHD conducts or will implement to fulfill Permit requirements for illicit discharge management.

The illicit discharge management permit requirements are:

Summarized from Part II.B.5

Permittees must continue to implement their illicit discharge management program to reduce to the maximum extent practicable the unauthorized and illegal discharge of pollutants to the MS4.

- a. Ordinances or Other Regulatory Mechanisms.
- b. Illicit Discharge Complaint Reporting and Response Program.
- c. Illicit Discharge Mapping.
- d. Dry Weather Outfall Screening Program.
- e. Conduct Follow-up Investigations.
- f. Prevent and Respond to Spills to the MS4.
- g. Facilitate Disposal of Used Oil and Toxic Materials.
- h. Conduct Training for Appropriate Audiences.

Illicit Discharge Management (Permit Part II.B.5)	Action Items	Assessment Methods	Schedule
Ordinance/Policy	Prohibit illicit discharges to the MS4 through the use of ordinances	Document ordinance development and updates	Permit Year 1 (2013)
Measurable Goals	Inventory and map illicit discharge reports	Document inventory and mapping activities	Permit Year 2 (2014)
	Identify high priority areas based on discharge reports	Tabulate reports and document areas determined to be high priority	Permit Year 2 (2014)
	Update dry weather screening plan	Document screening plan updates	Permit Year 3 (2015)
	Continue dry weather outfall screening program	Inspect 20% of outfalls per year Monitor dry weather flows recording flow data, physical observations, and collecting analytical samples	Permit Year 1 (2013) Permit Year 3 (2015)
Public Education/Outreach	Engage public to eliminate illicit discharges/connections	Document public outreach activities Tabulate estimated pollutant loading reduction resulting from elimination of illicit discharges/illicit connections	Permit Year 3 (2015)

The objective of the Illicit Discharge Management Program is to eliminate illicit discharges and illicit connections to the MS4 and to receiving waters. ACHD intends to meet the illicit discharge management permit requirements by implementing the following activities and associated actions, some of which are currently being implemented.

### 5.5.1 Ordinance/Regulatory Mechanism Update (II.B.5.a)

ACHD is required to effectively prohibit non-stormwater discharges to the MS4 (except those identified in Part 1.d of the Permit) and illicit connections to the MS4, and control the discharge of spills and prohibit dumping or disposal of materials other than stormwater to the MS4.

#### Current Status

For work performed by contractors in the ACHD right-of-way ACHD Policy 6007.12.5 and 6007.12.8 addresses non-stormwater discharges. The City of Boise and Garden City have ordinances that address prohibited discharges to the MS4. The following ordinances include:

- Boise City Code Stormwater Management and Discharge Control Ordinance Chapter 8-15.
- City of Garden City Storm Water Management and Discharge Control Ordinance Title 4 Chapter 14.

ACHD has IGA's with City of Boise and Garden City for enforcement authority. These agreements are located in Appendix 3 of this SWMP.

#### Affected Parties

ACHD Stormwater Quality staff

City of Boise

Garden City

#### Actions to Implement

Implementation actions associated with updates to ordinance language and regulatory mechanisms include:

- Review current code/ordinance language related to the prohibition of non-stormwater discharges to the MS4 with the City of Boise and Garden City. **Completed, 2015**
- Identify gaps in current code/ordinance language as applicable to requirement II.B.5.a.
- Work with City of Boise and Garden City to update, as necessary, city ordinance language.
- Update ACHD policy as needed.

#### Assessment Methods

Ordinances and Regulatory Mechanisms assessment methods include:

- **Confirmation** - Track any applicable code/ordinance updates annually over the Permit term.

#### Outcome Levels

- Level 1 – Document Activities.
- Level 2 – Raise Awareness.

### 5.5.2 Illicit Discharge Complaint and Reporting Program (II.B.5.b and e)

ACHD is required to respond to reports of illicit discharges from the public. This will be accomplished in part through maintenance of a complaint/reporting hotline. ACHD must respond to all complaints/reports as soon as possible, but no later than two working days, and maintain a log of complaints/reports received and actions taken.

#### Current Status

ACHD's complaint response varies depending on the situation and the ACHD responder. ACHD has three different groups that may respond to illicit discharge complaints: Stormwater staff, Zone Inspection staff,

and Maintenance staff. ACHD also works closely with Boise Pretreatment and Garden City Environmental staff to address complaints that affect both private property and ACHD right-of-way.

Stormwater staff receives hotline calls and responds to the hotline calls or refers the call to Zone Inspection staff and Maintenance staff. Stormwater staff may also receive illicit discharge complaint referrals from Zone Inspection staff and Maintenance staff. ACHD's Maintenance Department responds to spills in accordance with the ACHD Standard Operating Plan for Right-of-Way Spill, Container, and Debris Response. Zone Inspection staff respond to complaints forwarded to them from Stormwater or other ACHD staff. If there is a discharge associated with the complaint, Maintenance staff may be called to address clean up.

Stormwater and Zone Inspection staff use the TRAKiT database to log complaints received and how the complaints were addressed. Maintenance staff uses a work order system to track complaints received from Maintenance Administrative staff.

On July, 20 2016, the ACHD commission approved Resolution No. 2152 ACHD Standard Operating Plan for Right-of-Way Spill, Container, and Debris Response replacing Resolution No. 812 (previously adopted in 2007). The new Resolution consists of two parts: an updated formal policy and a user friendly plan that addresses roles and responsibilities, training, and documentation. Resolution 2152 and *ACHD Spill Response Plan* is located in Appendix 18. In 2012 the Illicit Discharge Detection and Elimination Plan was updated.

### **Affected Parties**

ACHD Stormwater Quality staff

ACHD Zone Inspection and Maintenance staff

City of Boise Pretreatment staff

Garden City Environmental staff

### **Actions to Implement**

Illicit Discharge Complaints and Reporting Implementation actions include:

- Maintain a dedicated hotline or reporting mechanism for public reporting of illicit discharge complaints. *Ongoing, 2017*
- Document, by date and location, all reported complaints for purposes of mapping under requirement II.B.5.c. Include results of any field visit or follow up measure to identify whether the reported incident was an illicit discharge. *Ongoing, 2017*
- Update Illicit Discharge Detection and Elimination Plan as needed.

### **Assessment Methods**

Illicit Discharge Complaints and Reporting assessment methods include:

- **Tabulation** - Document all reports and complaints including follow-up actions taken.

### **Outcome Levels**

- Level 1 – Document Activities.
- Level 2 – Raise Awareness.

### 5.5.3 Illicit Discharge Mapping (II.B.5.c) and Implementation of a Dry Weather Outfall Screening Program (II.B.5.d and e)

ACHD is required to develop a map of reported and documented illicit discharges or illicit connections to identify priority areas and update annually for use in targeting specific locations for outfall screening.

Specific dry weather outfall screening program requirements include: Implement and update as necessary, a dry weather outfall identification and screening plan that includes analytical and field screening, and conduct dry weather analytical and field screening monitoring at least once annually, screening one third of the outfalls for the year within the June 1 to September 30 timeframe. ACHD must investigate recurring illicit discharges identified as a result of complaints or as a result of dry weather screening inspections and sampling within 15 days of detection and determination of the source. Appropriate action to address the source of the ongoing illicit discharge must be taken within 45 days of detection.

Additionally ACHD must coordinate appropriate spill prevention, containment, and response activities throughout all appropriate departments, programs, and agencies to ensure water quality protection at all times.

#### Current Status

Permit requirements for dry weather outfall screening are currently addressed through ACHD's Dry Weather Outfall Screening Plan (DWOS Plan), Appendix 15. Dry weather field screening of outfalls is one method ACHD uses to detect illicit discharges into the MS4. During 2016-2017, 206 outfalls were investigated for illicit discharges, structural integrity, and flow conditions. Information collected during these investigations, including photographs, is entered in ACHD's Outfall Database. See Section 7.1.7 of this document for more information regarding Dry Weather Outfall Screening. Dry weather flows were detected and sampled at 40 sites. To date, 45 outfalls have been removed from the original list identifying all previous dry weather flows. The location of these outfalls and rationale for discontinued frequent screening is available in Appendix 16.

Records of illicit connections, discharges, and complaints have been entered in to ACHD's GIS to create a map for purposes of prioritizing outfall investigations.

#### Affected Parties

ACHD Stormwater Quality staff

#### Actions to Implement

Illicit Discharge Mapping and Dry Weather Field Screening implementation actions include:

- Review, at a minimum, current stormwater system-wide mapping and outfalls. **Ongoing, 2017**
- Compile records of past illicit discharges/connections, and develop map showing locations of such connections in support of the dry weather field screening program by September 30, 2014. **Completed, 2014**
- By September 30, 2015, utilize existing mapping to update the DWOS Plan per requirements II.B.5.d.i. and ii. The plan shall contain identification and schedule for priority dry weather field screening efforts, monitoring and sampling procedures, documentation and mapping of results, and follow up procedures. **Completed, 2014**
- Annual inspection of 20% of ACHD-owned outfalls that discharge to waters of the U.S. **Ongoing, 2017**
- By September 30, 2015, implement the DWOS Plan. **Completed, 2015**
- Update the dry weather DWOS Plan as necessary. **Updated 2017**

- Sample and analyze all current and previously identified dry weather flows at least annually unless results comply with Part I.D by September 30, 2015. **Ongoing, 2017**
- Document dry weather flow locations and sampling results in the SWMP annually by September 30, 2015. **Ongoing, 2017**

### Assessment Methods

Illicit Discharge Mapping and Dry Weather Field Screening assessment methods:

- **Tabulation /Confirmation** - Annually update the illicit discharge mapping to reflect reported illicit discharge incidents and outcome from dry weather field screening efforts.
- **Tabulation** - Annually track outfalls where dry weather field screening efforts were conducted. Document any monitoring or follow up activities.
- **Tabulation** - Track any updates to the dry weather field screening SOP.

### Outcome Levels

- Level 1 – Document Activities.

### 5.5.4 Provide Training and Education Related to Disposal Methods and Illicit Discharges (II.B.5.g and h)

ACHD is required to continue to coordinate with appropriate agencies to ensure the proper management and disposal or recycling of used oil, vehicle fluids, toxic materials, and other household hazardous wastes by their employees and the public. ACHD must also develop and provide training to staff on identifying and eliminating illicit discharges, spills, and illicit connections to the MS4.

### Current Status

Pollution Prevention and Good Housekeeping for Municipal Operations training is given annually to all Maintenance, inspection and Traffic Operations staff.

### Affected Parties

ACHD Stormwater Quality staff

ACHD Maintenance, Construction, Zone Inspection, and Traffic Operations staff

### Actions to Implement

Training and Education implementation actions include:

- Continue coordination with agencies and disposal companies to provide mechanisms for disposal and recycling of used oil, fluids, toxic materials, and household hazardous waste. **Ongoing, 2017**
- Distribute public education and outreach information (in the form of signage, mailers, etc.) related to proper disposal and recycling methods when responding to applicable illicit discharge complaints. **Ongoing 2017**
- Provide annual (at a minimum) training to ACHD maintenance, code compliance, lead worker, crew chiefs, on-call and stormwater quality staff on illicit discharge identification and spill response. **Ongoing, 2017**

### Assessment Methods

Illicit Discharge Training and Education assessment methods include:

- **Surveys** - Annually document education and outreach materials distributed to the public as related to disposal practices and illicit discharge reporting.

- **Tabulation** - Annually document training activities provided for maintenance staff, inspection staff, and staff conducting dry weather field screening efforts.

### Outcome Levels

- Level 1 – Document Activities.
- Level 3 – Change Behavior.
- Level 4 – Reduce Loads from Sources.

## 5.6 Education, Outreach, and Public Involvement (Permit Part II.B.6)

This section describes activities ACHD conducts or will implement to fulfill Permit requirements for education, outreach, and public involvement efforts.

The education, outreach, and public involvement permit requirements are:

Summarized from II.B.6

- Comply with applicable State and local public notice requirements when implementing public involvement activities.
- Implement an ongoing education, outreach, and involvement program.
- Targeted education and training.
- Maintain Stormwater Website.

Education, Outreach, and Public Involvement (Permit Part II.B.6)	Action Items	Assessment methods	Schedule
Ordinance/Policy	N/A	N/A	N/A
Measurable Goals and Public Education/Outreach	Implement ongoing public education and outreach program	Track outreach efforts Survey public awareness and understanding Track behavior trends to assess program effectiveness	Permit Year 2 (2014); ongoing
	Maintain, promote, and update stormwater website	Document website maintenance activities and updates Monitor traffic on website	Permit Year 2 (February 1, 2014); ongoing

The objective of the education, Outreach, and Public Involvement Program is to proactively engage the public in stormwater management and protection by raising awareness about activities and practices that contribute to increased pollutant loading in stormwater runoff. ACHD intends to meet the education, outreach, and public involvement permit requirements by implementing the following activities and associated actions, some of which are currently being implemented.

### 5.6.1 Facilitate Public Involvement and Participation (II.B.6.a and d)

ACHD is required to comply with applicable State and local public notice requirements when implementing public involvement activities and conduct an ongoing program aimed at residents, businesses, industries, elected officials, policy makers, and Permittee planning staff/other employees that addresses reduction or elimination of behaviors and practices that cause or contribute to adverse stormwater impacts. ACHD is required to help target audiences understand

stormwater issues and what they can do to positively impact water quality by preventing pollutants from entering the MS4.

ACHD must additionally maintain and promote at least one publicly-accessible website that identifies each Permittee's SWMP activities and seeks to educate the audiences listed in II.B.6.b.i.

### **Current Status**

Stormwater staff currently organizes and participate in public education and outreach efforts on a routine basis and distribute educational materials through a variety of programs and media. ACHD maintains a stormwater section on its webpage and updates with current reports and documents. Additionally, ACHD participates in the Partners for Clean Water education partnership with the Phase I Permittees. Details on Partners for Clean Water activities are identified in the City of Boise's SWMP.

### **Affected Parties**

City of Boise Stormwater staff

ACHD Stormwater Quality staff

### **Actions to Implement**

Public Involvement implementation actions include:

- Maintain a stormwater website to facilitate public involvement and feedback related to ACHD's stormwater program. By September 30, 2014, the website shall include information referenced in requirement II.B.6.d including:
  - All existing plans, documents, and stormwater-related reports including this SWMP. **Updated 2017**
  - Links to stormwater ordinances and regulations. **Updated 2017**
  - Links to key sites that provide education, training, licensing, and permitting information to the development community. **Updated 2017**
  - Information and/or links to assist public with reporting illicit discharges/connections (see requirement II.B.5.b). **Updated 2017**
  - ACHD stormwater program contact information. **Ongoing, 2017**
- Over the Permit term, ensure public notice requirements are adhered to.

### **Assessment Methods**

Public Involvement assessment methods include:

- **Tabulation** - Track development/updates to the ACHD stormwater website annually.
- **Tabulation** - Document public notice start and completion dates for all documents requiring public review or involvement.

### **Outcome Levels**

- Level 1 – Document Activities.
- Level 2 – Raise Awareness.

### **5.6.2 Implement Public Education and Assess Understanding by Target Audiences (II.B.6.b and c)**

The City of Boise is the Lead Agency for public education and outreach programs under this Permit.



## Current Status

ACHD participates in the Partners for Clean Water education partnership with the Phase I Permittees. Details on Partners for Clean Water activities proposed and completed are identified in the City of Boise's SWMP and annual reports.

## Affected Parties

City of Boise Stormwater staff

ACHD Stormwater Quality staff

Partners for Clean Water

## Actions to Implement

Public Education implementation actions include:

- Participate in Boise City led education and outreach meetings and activities. *Ongoing, 2017*
- Identify targeted public education efforts to address gaps. Document additional efforts in annual reports. *Ongoing, 2017*

## Assessment Methods

Public Education assessment methods include:

- **Tabulation** - Document the status of development of the public education strategy document over the Permit term.
- **Surveys** - Document the status and outcome of coordination with Permittees to assess the effectiveness of public education programs over the Permit term.
- **Tabulation** - Annually document public education campaigns and materials distributed by date and topic.

## Outcome Levels

- Level 1 – Document Activities.
- Level 2 – Raise Awareness.
- Level 3 – Change Behavior.

## Section 6

# Discharges to Water Quality Impaired Waters

### 6.1 Overview

This section describes how ACHD will implement activities associated with minimum measures (Section 4) that control the pollutants of concern (PoC) listed in Table 6-1 and ensure to the MEP that the MS4 discharges will not cause or contribute to an excursion above applicable Idaho water quality standards. The Permit requirements are:

1. The Permittees must conduct a storm water discharge monitoring program as required in Part IV.
2. For the purposes of this Permit and as listed in Table II.C, the Clean Water Act §303 (d) listed water bodies are those cited in the IDEQ 2014 Integrated Report including, but not limited to the Lower Boise River, and its associated tributaries. “Pollutant(s) of concern” refer to the pollutant(s) identified as causing or contributing to the water quality impairment. Pollutants of concern for the purposes of this Permit are: total phosphorus, sediment, temperature, and E. coli.
3. Each Permittee’s SWMP documentation must include a description of how the activities of each minimum control measure in Part II.B are implemented by the Permittee to control the discharge of pollutants of concern and ensure that the MS4 discharges will not cause or contribute to an excursion above the applicable Idaho water quality standards. This discussion must specifically identify how the Permittee evaluates and measures the effectiveness of the SWMP to control the pollutants of concern. For those activities identified in Part II.B requiring multiple years to develop and implement, the Permittee must provide interim updates on progress to date. Consistent with Part II.A.1.b, each Permittee must submit this description of the SWMP implementation to EPA and IDEQ as part of the 1st Year Annual Report required in Part IV.C, and must update its description annually in subsequent annual reports.

Table 6-1. Clean Water Act §303 (d) listed Water Bodies and Pollutants of Concern (IDEQ, 2014)	
Receiving Water Body Assessment Unit/Description	Pollutants of Concern Causing Impairments
ID17050114SW011a_06 Boise River – Diversion Dam to River Mile 50	Temperature
ID1705011SW005_06 Boise River – River Mile 50 to Star Bridge	Temperature
ID17050114SW005_06a Boise River – Star to Middleton	Temperature
ID17050114SW005_06b Boise River – Middleton to Indian Creek	Temperature Total Phosphorus
ID17050114SW001_06 Boise River – Indian Creek to the mouth	Temperature Total Phosphorus Sediment (TSS) <i>E. coli</i>
ID17050114SW008_03 Tenmile Creek – 3 <sup>rd</sup> order below Blacks Creek Reservoir	Sediment (TSS) <i>E. coli</i> Chlorpyrifos Cause Unknown (nutrients suspected)
ID17050114SW010_02 Fivemile, Eightmile, and Ninemile Creeks – 1 <sup>st</sup> & 2 <sup>nd</sup> order tributaries	<i>E. coli</i>
ID1705114SW010_03 Fivemile Creek – 3 <sup>rd</sup> order tributaries	Sediment (TSS) <i>E. coli</i> Chlorpyrifos Cause Unknown (nutrients suspected)

## 6.2 ACHD Pollutants of Concern Guide for Phase I Permit Area (PoC)

The Permit requires ACHD and Permittees “to implement and enforce a SWMP designed to reduce the discharge of pollutants from their MS4 to the MEP, and to protect the water quality of receiving waters.” As part of the SWMP, ACHD has developed a document titled *Pollutants of Concern (PoC) Guide for ACHD’s NPDES Phase I Permit Area: Water Quality Controls and Effectiveness Assessment* (PoC Guide) (Appendix 10) to assist in meeting Permit requirements. The PoC Guide outlines and serves as a guide for ACHD priorities and activities associated with the pollutants of concern (PoC): phosphorous, bacteria, temperature, and total suspended solids (TSS). The PoC Guide is to be used in conjunction with the measures, actions, and activities described in Section 5 of this document and the *Program Monitoring and Evaluation Plan* (Appendix 6). Together, these documents are the basis on which ACHD will continue to build as new best management practices/actions and activities are identified and implemented. Pollutants of Concern Implementation activities are available in ACHD’s 2016-17 Annual Report, section 3.7.4.

## Section 7

# Monitoring Program

ACHD's Phase I monitoring program is designed to meet Permit requirements by providing stormwater quality monitoring data that can be used to characterize the stormwater discharging from ACHD's Phase I outfalls and assess the effectiveness and management of the minimum measure programs discussed in Section 5.

In order to meet these Permit requirements the Permittees must develop the following programs:

- Storm Water Outfall Monitoring.
- Water Quality Monitoring.
- Evaluate the Effectiveness of Required Structural Controls.
- Evaluate the Effectiveness of GSI Pilot Projects – Section 5.2.3.
- Dry Weather Discharge Screening – Section 5.5.3.

The PMEP defines how each program can meet the requirements identified above in detail and includes ACHD's approach to meeting both program and permit requirements. The PMEP is used to guide implementation and assessment of these programs and is discussed in greater detail in Section 3.

## 7.1 Monitoring (IV.A)

This section describes activities ACHD conducts or will implement to fulfill Permit requirements for monitoring programs.

The permit requirements for monitoring programs are summarized below.

The following is summarized from Part IV.A.

Permittees assess Permit compliance at least once per year.

Permittees must conduct a wet weather monitoring and evaluation program designed to characterize the quality of stormwater discharges from the MS4, and evaluate stormwater management effectiveness. Specifically the monitoring and evaluation program should provide sufficient information to broadly estimate reductions in pollutant loads, assess the effectiveness and adequacy of permanent stormwater controls and GSI, and identify and prioritize areas where additional controls can be accomplished to further reduce pollutant loads.

- a. Assess permit compliance
- b. Stormwater monitoring and evaluation program plan and quality assurance plan
- c. Stormwater outfall monitoring
- d. In-stream water quality monitoring
- e. Evaluate effectiveness of structural controls
- f. Evaluate the effectiveness of GSI pilot projects – Section 5.2.3
- g. Conduct dry weather discharge screening – Section 5.5.3

Monitoring, Recordkeeping, and Reporting Requirements (Permit Part IV)	Action Items	Assessment Methods	Schedule
Ordinance/Policy	N/A	N/A	N/A
Measurable Goals	Assess and Document Permit Compliance and submit with annual report.	Document permit compliance actions Track Implementation status	Annually beginning in Permit Year 1
	Develop and complete stormwater monitoring and evaluation plan. Submit completed plan with 2nd year annual report.	Document progress and completion of PMEP development	Permit Year 2 (2014)
	Update Quality Assurance Plan (QAP) for all analytical monitoring conducted under Permit Part IV.	Document progress and completion of QAP	Permit Year 2 (2014)
	Update Boise NPDES Municipal Stormwater Outfall Monitoring Plan	Document progress and completion of stormwater outfall monitoring plan updates	Permit Year 3 (2015)
	Monitor five representative outfalls during wet weather; sample three times per year thereafter.	Document monitoring program implementation activities Track monitoring efforts Monitor water quality and quantity Quantify pollutant loads for each outfall area Broadly estimate reductions in annual pollutant loads occurring as a result of SWMP activities Track pollutant loading over time	Permit Year 2 (2014)
	Evaluate effectiveness of two structural control techniques currently required by the permittees, and document in annual reports.	Document evaluation activities Track monitoring efforts and results Monitor water quality and quantity data at selected structural controls Quantify pollutant loading to evaluate effectiveness of controls	Permit Year 3 (2015)
	Evaluate effectiveness of Green Stormwater Infrastructure (GSI) pilot projects	Outlined in Section 5.2.3	Permit Year 5 (2017)
Conduct dry weather discharge screening	Outlined in Section 5.5.3	Permit Year 3 (2015)	
Public Education/Outreach	N/A	N/A	N/A

### 7.1.1 Assess and Document Permit Compliance (IV.A.1)

ACHD is required to evaluate compliance with Permit conditions at least once annually, and include results of the evaluation in each annual report.

## Current Status

ACHD utilizes a table that accompanies this SWMP document entitled SWMP Compliance Status Table. This table is updated throughout the year and reviewed for evaluation of compliance during preparation of each year's annual report.

## Affected Parties

ACHD Stormwater Quality staff

## Actions to Implement

Compliance evaluation actions to implement include:

- Update SWMP Compliance Status Table as needed. *Ongoing, 2017*
- Review table annually. *Completed, 2017*
- Document compliance evaluation in each annual report. *Completed, 2017*

## Assessment Methods

Compliance Evaluation assessment methods include:

- **Confirmation** - Document compliance evaluation efforts.
- **Tabulation** - Track compliance status using SWMP Compliance Status Table.

## Outcome Levels

- Level 1 – Document Activities.
- Level 2 – Raise Awareness.

### 7.1.2 Stormwater Monitoring and Evaluation Program Plan and Quality Assurance Plan (IV.A.2-5)

ACHD and the other Permittees are required to conduct a wet weather monitoring and evaluation program.

## Current Status

In order to meet this permit requirement, the permittees have developed the Program Monitoring and Evaluation Plan (PMEP) to guide monitoring evaluation and assessment for all Permit-required monitoring efforts. The PMEP has been completed and is currently being utilized for guidance in the development of all Permit-required monitoring plans.

ACHD has completed a Quality Assurance Plan (QAP) to guide data collection, storage, analysis, and evaluation in accordance with the EPA guidance documents listed in the Permit (Appendix 17). As required by the Permit, a final document is included in the 2<sup>nd</sup> annual report (2013-14).

## Affected Parties

ACHD Stormwater Quality staff

City of Boise Stormwater Quality staff

Permittees

## Actions to Implement

Actions to implement regarding PMEP and QAP include:

- Update PMEP as needed.
- Complete QAP. *Completed, 2014*

## Assessment Methods

Stormwater Monitoring and Evaluation Program Plan assessment methods include:

- **Confirmation** - Document completion and updates to PMEP and QAP.
- **Tabulation** - Track compliance status using SWMP Compliance Status Table.

## Outcome Levels

- Level 1 – Document Activities.
- Level 2 – Raise Awareness.
- Level 3 – Change Behavior.

### 7.1.3 Stormwater Outfall Monitoring (IV.A.7)

ACHD must update the existing *Boise NPDES Municipal Storm Water Permit Monitoring Plan* to be consistent with the PMEP. At a minimum, the plan must describe five outfall sample locations, and any additional or alternative locations, as defined by ACHD. The outfalls selected to be monitored must be identified as representative of all major land uses occurring within the Permit area. This needs to be completed no later than September 30, 2015.

ACHD must begin monitoring discharges from the identified five stormwater outfalls during wet weather events at least three times per year. The specific minimum monitoring requirements are outlined in Table IV.A of the Permit but may be augmented based on the Permittee's updated PMEP. The Permittees must include any additional parameters to be sampled within the final updated PMEP submitted to EPA with the 2<sup>nd</sup> Annual Report. This must be completed no later than September 30, 2014.

## Current Status

The Stormwater Outfall Monitoring Plan (SWOMP) has been completed for this program and the Permittees have selected five representative outfalls as sample locations (Appendix 11). Standard operating procedures and procedure guidance documents have been updated and referenced in the SWOMP. As required by the Permit, a final document is included in the 2<sup>nd</sup> annual report. The necessary monitoring equipment has been installed at all five outfall sampling locations. Monitoring equipment installed at the monitoring stations includes rain gauges, flow meters, and automated samplers. Seven sampling events were completed for water year 2017. Many of these were partial events where not all monitoring stations and analyses were conducted at all sites. In March of 2017, the Americana and Main stormwater outfall monitoring stations were moved to alternate locations up-pipe, due to pipe surcharges from the Boise River flooding. Contributing runoff areas were adjusted accordingly. The information gained from this sampling year will be used to further inform equipment programming refinements as we learn more about the hydrology of the monitored subwatersheds.

## Affected Parties

ACHD Stormwater Quality staff

Boise City Water Quality Laboratory Staff

## Actions to Implement

Stormwater outfall monitoring implementation actions include:

- Complete Stormwater Outfall Monitoring Plan. **Completed, 2014**
- Continue to develop/refine approach to broadly estimate reductions as a result of SWMP activities (Permit IV.A.2.a.i.) **Ongoing, 2017**
- Update Standard Operating Procedures and procedure guidance documents as necessary.

- Annually conduct personnel training for familiarity with the Stormwater Outfall Monitoring Plan and the QAP. **Completed, 2016**
- Conduct stormwater monitoring at selected outfall locations as specified in the Stormwater Outfall Monitoring Plan and the QAP beginning no later than September 30, 2014. **Ongoing, 2017**

### Assessment Methods

Stormwater outfall monitoring assessment methods include:

- **Confirmation** – Document monitoring program implementation activities and updates to plans and procedures.
- **Tabulation** – Track monitoring efforts including number of storm events targeted, number of successful samples collected.
- **Monitoring** – Monitor water quality and quantity.
- **Quantification** – Quantify pollutant loads for each outfall area.
- **Tabulation** – Track pollutant loading over time.

### Outcome Levels

- Level 1 – Document Activities.
- Level 2 – Raise Awareness.
- Level 4 – Reduce Loads from Sources.
- Level 5 – Improve Runoff Quality.

#### 7.1.4 In-stream Water Quality Monitoring (IV.A.8)

The Permittees agreed to augment the storm water outfall discharge data collection required in Part IV.A.7 of the Permit and described above with in-stream water quality monitoring data collected within the Lower Boise River Watershed.

### Current Status

The City of Boise conducts water quality monitoring within the lower Boise River watershed to meet its wastewater treatment plant NPDES permit requirements. The Permittees have agreed to include these in-stream data in future annual reports.

At this time the Permittees have decided not to pursue the Fish Tissue Sampling optional requirement identified in the Permit. If the Permittees decide to change their approach to Fish Tissue Sampling the Permittees must meet the Permit requirements in Part IV.A.8.c.

### Affected Parties

ACHD Stormwater Quality staff

City of Boise Stormwater Quality staff

### Actions to Implement

In-stream water quality monitoring implementation actions include:

- Annually include City of Boise in-stream monitoring data as appendix in future annual reports. **Completed, 2017**
- Include City of Boise QAP as appendix in PMP. **Completed, 2013**

### Assessment Methods

In-stream water quality monitoring assessment methods include:



- **Confirmation** – Document data use decision and cooperative data collection efforts.
- **Confirmation** - Document progress/completion of including in-stream monitoring data in future annual reports.

### Outcome Levels

- Level 1 – Document Activities.
- Level 6 – Protect Receiving Water Quality.

### 7.1.5 Evaluate the Effectiveness of Required Structural Controls (IV.A.9)

ACHD is required to select and begin to evaluate at least two different types of permanent structural storm water management controls currently approved for use by the ACHD at new development or redevelopment sites. For each selected control, this evaluation must determine whether the control is effectively treating or preventing the discharge of one or more of the PoC into waterbodies listed in Permit Table II.C. The results of this evaluation, and any recommendations for improved treatment performance, must be submitted to EPA in subsequent annual reports as the evaluation projects are implemented and completed. ACHD's approach is defined in Section 5.2.

### Current Status

ACHD has selected two structural controls a seepage bed and a biofiltration swale-, to evaluate based largely on their prevalence throughout Ada County and the potential to reduce pollutants of concern. The designs of these structural controls have been assessed to determine factors that may limit their effectiveness. A combination of monitoring and modeling has been used to evaluate the effectiveness of the selected structural controls. Monitoring was used to collect information about precipitation for both the Pen Crossing Seepage Bed Site (Pen Crossing) and the Bogart Biofiltration Swale Site (Bogart). Influent stormwater runoff at Pen Crossing was monitored for water quality and runoff volume. Effluent data at both sites and influent data at Bogart will be modeled using WinSLAMM. The Structural Controls Monitoring Plan was finalized and monitoring began in early 2016. Stormwater samples were collected and analyzed from five storm events in 2017. Monitoring was completed in mid-July 2017. The final Structural Controls Monitoring Annual Report for Water Year 2017 is included in the 2016-17 annual report.

### Affected Parties

ACHD Stormwater Quality staff

Boise City Water Quality Laboratory staff

### Actions to Implement

Permanent structural control evaluation actions to implement include:

- Identify two different types of permanent structural controls for evaluation. **Completed, 2014**
- Develop monitoring plan structural controls evaluation. **Completed 2016.**
- Conduct personnel training for familiarity with monitoring procedures. **Completed 2015**
- Implement monitoring program. **Ongoing, 2017**
- Evaluate controls effectiveness. **Ongoing, 2017**
- Document program activities. **Ongoing, 2017**
- Submit evaluations results along with recommendations in annual reports as projects are completed. **Ongoing, 2017**

## Assessment Methods

Permanent structural control assessment methods include:

- **Confirmation** – Document selected types permanent structural controls targeted for evaluation.
- **Confirmation** – Document monitoring program implementation activities and development of plans and procedures.
- **Tabulation** – Track monitoring efforts.
- **Monitoring** – Monitor water quality and/or quantity.
- **Quantification** – Quantify pollutant reduction and estimate control effectiveness.

## Outcome Levels

- Level 1 – Document Activities.
- Level 2 – Raise Awareness.
- Level 3 – Change Behavior.
- Level 4 – Reduce Loads from Sources.
- Level 5 – Improve Runoff Quality.

### 7.1.6 Evaluate the Effectiveness of GSI Pilot Projects (IV.A.10)

ACHD must evaluate the performance and effectiveness of the GSI pilot projects required in Permit Part II.B.2.c This requirement is outlined above in Section 5.2.3.

## Current Status

A fourth year of monitoring was conducted for water year 2017 in accordance with The Permeable Paver Monitoring Plan (PPMP) drafted June 2014 (Appendix 13). A second pilot project, a stormwater tree cell, was installed in November 2015. This project has been evaluated similar to the permeable paver project and both were completed in 2017. The Stormwater Tree Cell Monitoring Plan is located in Appendix 14. Tree cell monitoring began in early 2016. Observation data, photos, and narrative documenting conditions for each pilot project has been compiled and is included in the 2016-17 annual report.

## Affected Parties

ACHD Stormwater Quality staff

## Actions to Implement

- Develop a monitoring plan for permeable paver alley pilot project. **Completed, 2014**
- Continue performance evaluation through monitoring existing GSI pilot projects according to the PPMP. **Completed. 2017**
- Develop a monitoring plan for new tree cell pilot project. **Completed, 2015**

## Assessment Methods

GSI pilot project performance evaluation assessment methods include:

- **Confirmation** – Document performance evaluation activities.
- **Tabulation** – Track performance evaluation efforts.
- **Monitoring** – Monitor pilot project performance.
- **Quantification** – Model GSI pilot project changes in runoff quantities.

## Outcome Levels

- Level 1 – Document Activities.
- Level 2 – Raise Awareness.
- Level 4 – Reduce Loads from Sources.
- Level 5 – Improve Runoff Quality.

### 7.1.7 Dry Weather Discharge Screening (IV.A.11)

The Permittees must implement a dry weather screening program, or contract with another entity to implement such a program. This program is described in more detail in Section 5.5.3.

The Permittees must implement and update as necessary, a dry weather screening program, or contract with another entity to implement such a program. The dry weather outfall screening program must emphasize frequent, geographically widespread monitoring to detect illicit discharges and illegal connections, and to reinvestigate potentially problematic outfalls. This program includes outfall identification, monitoring illicit discharges and maintaining records. Additional requirements of this program are described in Section 5.5.3 and provided in the Dry Weather Outfall Screening (DWOS) Plan in Appendix 15.

## Current Status

The Dry Weather Outfall Screening (DWOS) Plan was developed in 2014 and is included in Appendix 15. Standard operating procedures and procedure guidance documents have been created and are referenced in the DWOS Plan. The total number of outfalls screened and number of outfalls with dry weather flows sampled is provided in section 5.5.3. Location of samples collected and analytical results are reported in Appendix 16 of this document. Additional details on this program, including flow measurements and pollutant loading are located in ACHD's 2016-17 annual report.

## Affected Parties

ACHD Stormwater Quality staff

Boise City Water Quality Laboratory Staff

## Actions to Implement

Dry weather screening implementation includes:

- Complete DWOS Plan. **Completed, 2014, Updated 2017**
- Utilize the DWOS Plan to continue investigating 20% of the outfall inventory and make necessary alterations and updates to the DWOS Plan as necessary. **Ongoing, 2017**
- Continue to develop standard operating procedures and procedure guidance documents to support program functions. **Ongoing, 2017**
- Continue to update and refine the Outfall Database. **Ongoing, 2017**
- Screen newly identified and historical flows for illicit connections to comply with Phase I Permit II.B.5.d. **Ongoing, 2017**

## Assessment Methods

Dry Weather Outfall Screening assessment methods include:

- **Confirmation** – Document dry weather screening program implementation activities and updates to plans and procedures.

- **Tabulation** - Annually track dry weather field screening efforts. Document any monitoring or follow-up activities.
- **Inspections** – Conduct annual investigations on 20% of the outfall inventory.
- **Inspections** – Screen flowing outfalls and perform follow-up investigations.
- **Monitoring** – Monitor flowing outfalls for water quality and quantity.
- **Quantification** – Assess pollutant loading associated with all previously documented dry weather flows to comply with Phase I permit II.B.5.d.ii.
- **Quantification** – Estimate pollutant loads for each flowing outfall.

### Outcome Levels

- Level 1 – Document Activities.
- Level 2 – Raise Awareness.
- Level 3 – Change Behavior.
- Level 4 – Reduce Loads from Sources.
- Level 5 – Improving runoff quality.

## 7.2 Recordkeeping and Reporting Requirements and Duty to Reapply (IV.B, C; VI.B)

This section describes activities ACHD conducts or will implement to fulfill Permit requirements for recordkeeping and reporting requirements as well as permit reapplication.

The permit requirements for monitoring programs are summarized below.

Summarized from Parts IV.B, C and VI.B

- Permittees must retain records associated with the monitoring program and make them available to the EPA, IDEQ, and general public if requested.
- Monitoring data must be submitted with each annual report.
- The annual report must be submitted by January 30th each year, and include the contents listed in Permit Part IV.C.3.
- Permittees must reapply for permit coverage.

Monitoring, Recordkeeping, and Reporting Requirements (Permit Part IV)	Action Items	Assessment Methods	Schedule
Ordinance/Policy	N/A	N/A	N/A
Measurable Goals	Retain records and make records available to EPA and IDEQ when requested	Document activities	Ongoing
	Submit monitoring data	Document activities	Annually beginning in Permit Year 2
	Submit Annual Reports	Document activities	1st Year Annual Report due January 30, 2014; all subsequent Annual Reports are due annually no later than January 30

Monitoring, Recordkeeping, and Reporting Requirements (Permit Part IV)	Action Items	Assessment Methods	Schedule
	Submit Permit Renewal Application	Document application submittal	No later than 180 days prior to permit expiration date
Public Education/Outreach	N/A	N/A	N/A

## Current Status

ACHD currently maintains records of all monitoring data outlined in the Permit at the ACHD headquarters in electronic or hardcopy format where it is available to EPA, IDEQ, and the public. ACHD is in the process of populating an updated database, DataSight, with stormwater outfall monitoring, water quality, precipitation, and flow data. This database is used to electronically import analytical data and assist in annual reporting calculations. ACHD has submitted annual reports including monitoring data as required each year from 2001 to 2017.

ACHD and Permittees submitted a reapplication package in July 2017. Supplemental reapplication materials were included on behalf of the Permittees in the 2016-17 Annual Report, section 1. This section includes a summary description of the storm drain inventory and map for each Permittee.

## Affected Parties

ACHD Stormwater Quality staff

General Public

EPA and IDEQ

## Actions to Implement

Recordkeeping and reporting implementation actions include:

- Maintain records of new and existing monitoring information as outlined in Permit Part IV.B.1 **Ongoing, 2017**
- Compile monitoring data annually for inclusion in each annual report including summaries and interpretation of the data collected. **Completed, 2017**
- Continue to import new and historical data into DataSight. **Ongoing, 2017**
- Prepare and submit an annual report with contents satisfying the requirements of Permit Part IV.C.3 to EPA and IDEQ by January 30<sup>th</sup> of each year. **Completed, 2017**
- Apply for a new permit at least 180 days before the expiration of the current permit. **Completed, 2017**

## Assessment Methods

Recordkeeping and reporting assessment methods include:

- **Confirmation** – Document record retention and maintenance activities.
- **Confirmation** – Document data and annual report submittals.
- **Confirmation** – Document reapplication activities.

## Outcome Levels

- Level 1 – Document Activities.

# References

CASQA, 2007. Municipal Stormwater Program Effectiveness Assessment Guidance, California Stormwater Association.

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Idaho Department of Environmental Quality, 2014. *Idaho's 2012 Integrated Report*. Boise, ID: Idaho Department of Environmental Quality.