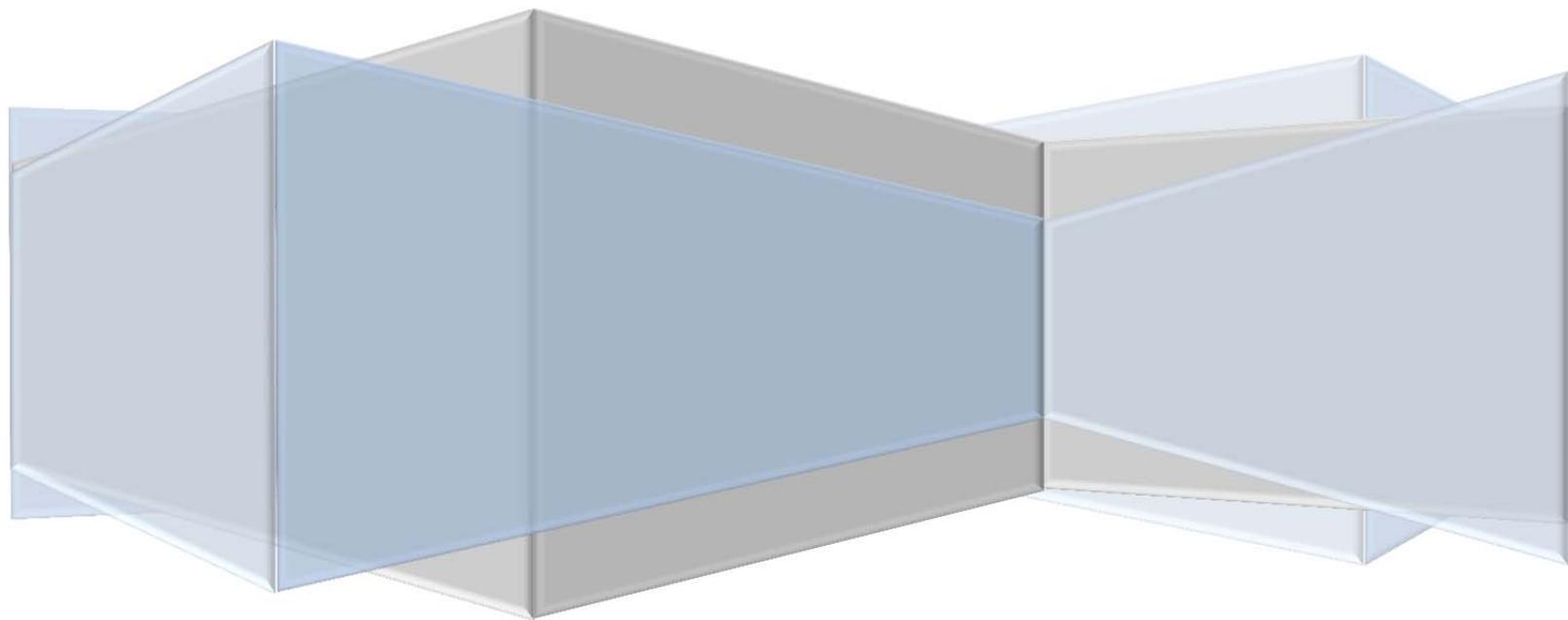




Annual Report to the Public

2013 Stormwater Utility

City of Arvada



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I. INTRODUCTION

The 2013 Annual Report to the public details the programs for which the Stormwater Utility revenue was used, including program expenditures and subsequent accomplishments. Residents and businesses in Arvada are charged a Stormwater Utility Fee based on the impervious area of each property. Revenues from the Stormwater Utility Fee funds flood control projects, storm system maintenance, and programs required under a federally mandated Stormwater Permit obtained by the City. Any questions concerning this material may be directed to the Stormwater Hotline at 720-898-7810 or send an email to stormwater@arvada.org.

A. ARVADA'S STORMWATER UTILITY FEE

Stormwater Utility Citizen Task Force began to discuss development of Arvada's Stormwater Utility fee in August 2000. The Task Force concluded and recommended to City Council that Arvada's Stormwater Utility Fee be based upon the amount of impervious area on each property. Impervious area includes surfaces such as rooftops, driveways, and parking lots. Because impervious area increases runoff, assessing each property's impervious area and applying the same rate throughout the City was deemed most equitable, consistent, and accurate assessment method.

Beginning in February 2001, a significant public outreach effort began to let residents and businesses know about the proposed Stormwater Utility Fee. After public notification and hearing, the Stormwater Utility Fee was unanimously passed the City Council in June, 2001. From a digitized aerial photograph, the impervious area for every property in the City was determined and in late 2001, every utility bill customer with improvements on their property was notified about the assessed square footage of the impervious area and provided an opportunity to dispute that assessment. Beginning in January 2002, the Stormwater Utility Fee was added to bimonthly utility bills. For those within the City limits not receiving water and/or wastewater services and, thus, do not receive utility bills from the City of Arvada, a separate bimonthly bill is sent for stormwater.

As new homes and commercial facilities are built, additions are permitted, or demolition occurs, the impervious area is updated and fees are adjusted appropriately. This way, impervious area data is maintained and remains current.

In 2007 and 2008, a significant update to the impervious area within the City was conducted using color-metrics and aerial photography. Where significant changes in color existed on a property between the previous aerial and the most recent aerial, a technician compared the aerials and made needed adjustments. Some properties increased in impervious area, while others decreased. Some recent annexations were also added.

B. STORMWATER UTILITY RATE, REVENUE, AND EXPENDITURES

In 2013 all properties were charged the rate of \$0.00298 per square foot of impervious area per bimonthly bill. The 2013 revenue was just over \$3.2 million with average single-family home paying about \$4.14 per month, or \$8.28 per bimonthly bill.

C. 2013 ANNUAL REPORT TO THE PUBLIC

The 2013 Annual Report to the Public is divided into the following three sections:

Flood Control Projects – In 2013, \$6.5 million of the Stormwater Utility was expended on City flood control projects. Approximately \$932,000 in additional funds was allocated for previously issued bonds. The City's Flood control activities are described in Section II of this report.

Stormwater Permit – In 2013, approximately \$955,000 was expended on the City's Stormwater Program in response to the Municipal Separate Storm Sewer System (MS4) Permit is a regulatory mandate under the Clean Water Act that was issued in 2003. In 2008, the Stormwater Program submitted an application and received approval from the Colorado Department of Public Health and Environment for the second five-year term. City activities under the permit are described in Section III of this report. It is anticipated that a third permit renewal for the City of Arvada will be issued in 2014.

Other Environmental Programs – In 2013, over \$84,500 was expended on other environmental programs. A summary of these programs is included in Section IV of this report, including surface water regulatory involvement, safety, and recycling.

II. FLOOD CONTROL PROJECTS

There are two categories of flood control projects: miscellaneous drainage projects and major drainage projects. Miscellaneous drainage projects are minor in cost and construction complexity, and may be conducted by City crews or by private contractors. Major drainage projects generally require extensive planning and are costly to complete.

A. MISCELLANEOUS PROJECTS

The Stormwater Utility Fee funded \$274,630.00 in miscellaneous drainage projects in 2013. Below is a list of projects to install gutters and pans, storm pipes, and inlets to help with drainage concerns:

- W 58th and Simms St
- W 74th Ave and Carr Dr.
- Newland St – From W 60th to W 61st Ave
- W 60th Pl and Lamar St
- Harlan St – from W 54th Ave approximately 500 feet north
- W 51st Ave – from Carr St to Everett St
- W 86th Parkway – 280 feet west of Kipling St
- W 80th Dr – Lamar St. to 300 feet SW
- Ridge Road Culvert Replacement
- Bridge Details – Ralston Creek, Croke Canal, Farmer’s Highline Canal

B. MAJOR DRAINAGE PROJECTS

In 2013, the Stormwater Utility Fee funded nearly \$5.5 million in major flood control projects. The largest project was the continuing work on the Garrison Street Bridge replacement project. This work began in 2012 and is scheduled to be completed in 2014 with improvement to accommodate flooding. Other projects included improvements to the Rooney Road Tributary and on the Lee Street Outfall.

C. 2013 FLOOD

Between September 9th to September 13th, the northern front range of Colorado experienced a record-breaking rainfall event, which caused excessive flooding of many of these waterways, including the City of Arvada. It was estimated that the damage state-wide was nearly 2 billion dollars. Leyden Creek, which converges with Ralston Creek, received the heaviest amount of rainfall for the City. The flood event caused severe flood damage upstream from the Leyden Detention Facility located near 82nd and Indiana and the Arvada/Blunn Reservoir Bothe of which experienced forced spillway release into Leyden Creek and Ralston Creek.

Resultant damages included:

- Flooding of Leyden Road, Indiana Street, Quaker Road, and Alkire Street where it crosses Leyden Creek. Leyden Road received major damage and required emergency replacement.

- Breach in the Church Ditch where it crosses Leyden Creek
- Breach of the Croke Canal at Leyden Creek.
- Due to the Croke Canal flood damage, an intentional breach of the Croke Canal at its Leyden Creek crossing was necessary to lower the water levels in it.
- Homes and businesses along Leyden Creek suffered flood damage
- The volumes of stormwater inflows resulted in the banks of Van Bibber Creek, Ralston Creek, Moon Gulch, Leyden Creek, and the Croke Canal to be exceeded.

Arvada is fortunate to have a high quality source of water, however during the storm event, Arvada's source water was inundated with debris, including dirt, boulders and organics. To address the resultant decrease in water quality during and shortly after the flood, the City asked its residents to conserve water to give our water treatment plant necessary time to treat the water to drinking water quality standards.

Various recommendations have been made following the floods to help the City improve the flood prone areas, detection, and responses. Projects to repair areas damaged by the flood and to improve flood prone areas will be addressed in 2014. Ralston Creek stream bank repair and stabilization will be a priority and addressed as necessary to ensure no further damage is incurred. Many areas along Leyden Creek sustained significant damage. A Major Drainageway Master Plan for Leyden Creek will be updated in cooperation with Urban Drainage and Flood Control District. The Master Plan will assist in better identifying construction priorities needed to reduce potential future flooding on Leyden Creek.

III. STORMWATER PERMIT

According to the United States Environmental Protection Agency (EPA), nearly 40% of surveyed water bodies do not meet standards due, in a large part, to polluted stormwater runoff from streets, neighborhoods, and parking lots. To address this concern, in 1990 the EPA required large municipalities such as Denver and Aurora, to apply for and operate under a Phase I Stormwater Permit as outlined in the Clean Water Act. Starting in 2003, cities with population between 50,000 and 100,000 (based on the 1990 census) and densely populated unincorporated areas throughout the nation were required to apply for and operate under a Phase II Stormwater Permit. The Phase I and Phase II Stormwater Permits' provisions are designed to improve the quality of stormwater runoff by implementing the programs outlined in the following pages.

The City applied for its first five-year Stormwater Permit to the Colorado Department of Public Health and Environment in March 2003. A second application was required in June 2008 that addressed activities to be conducted under the second five-year term Stormwater Permit from 2008 to March of 2013. Both of Arvada's Stormwater Permit applications can be viewed on the City's website at <http://www.arvada.org> and typing the keyword "Stormwater Management Plan". Currently, the 2008 Permit was administratively extended by the State until such time in which the new permit will be issued, potentially in 2014.

Essentially, the City's Stormwater Permit includes all areas within the City limits except school sites. In addition, the Apex Recreation Center, under the Apex Park and Recreation District, was designated by the State as needing a Stormwater Permit because of the number of people each day that it serves. For the purposes of leveraging resources, the City of Arvada's Stormwater Permit includes this facility.

The Stormwater Permit requires that programs be implemented under the following Minimum Control measures:

1. Public Outreach / Education
2. Public Participation / Involvement
3. Construction Site Erosion Control
4. Illicit Discharge Detection and Elimination
5. Long-Term Maintenance of Stormwater Best Management Practices
6. Pollution Prevention and Good Housekeeping of Municipal Operations

More detail concerning Arvada's Stormwater Permit activities in 2013 on which Stormwater Utility funds were expended is described here.

A. PUBLIC EDUCATION AND OUTREACH

1.0 General Summary

The City of Arvada conducts public outreach to educate and engage our residents and members of the business community in understanding how their actions affect the quality of stormwater runoff, and consequently, water quality in our streams.

Approximately \$44,000 of the Stormwater Utility fund was expended in 2013 for Public Education and Outreach.

2.0 Summary of Programs

Every year the Stormwater Program provides multiple avenues to engage its citizens. For example, each year, a utility bill insert is sent to residents. The 2013 utility bill insert was information concerning litter and how it affects our community. The insert also contained information on maintaining healthy waterways by not dumping pollutants into street gutters. Figure 1 was included in the utility bill insert that showed how a waterway was contaminated by pollutants that were poured down the gutter.

Our waterways should be clear and clean

Not dirty or contaminated



Figure 1 Pictures on the 2013 insert showing waterways

The following table describes the activities conducted under this category.

ACTIVITY	DATE	DESCRIPTION	LOCATION	MEASURE OF SUCCESS
Storm Drain Marking	June 30 th	Girl Scout Gold Award Project. Continuation of 2012 project with "No Dumping Drains to Creek" painted on market center parking lots.	Lowe's at 54 nd and Wadsworth	All storm drains in Lowe's parking lot were painted with stencils as well as providing education to the employees

Adopt a Street/ Park/ Trail	All Year	Citizens pick up trash and debris on adopted routes 2 to 4 times each year	Citywide	Over 55 miles of streets were adopted
Fillup A Can City-Wide Litter Clean Up	March	A new Fillup A Can costume was constructed with the help of the staff at the Arvada Center for Arts and Humanities.	Arvada Center for Arts and Humanities	Fillup A Can is present in costume at festivals Participated in several festivals including the Harvest Festival Parade
	April 30 th	Responded to resident about pollution in a drainage way		Promoted Fillup A. Can day to help clean up the city.
	Between April 22 nd and June 1 st	Citywide trash pickup conducted by volunteers between Earth Day and the Trails Day	Citywide	30 routes were cleaned with over 20 miles of streets, trails, and parks.
Rooney Road Recycling Center	All Year	Promote and fund facility used by residents to properly dispose of household chemicals.	Golden, CO	Over 3,400 customers were served with Arvada residents accounting for 20% of those customers. More than 425,000 pounds of material collected
Stormwater Utility Report	Annual	Describes programs funded by the Stormwater Utility Fee	Website	Also available on request
Majestic View Nature Center	All Year	23 School Groups attended Environmental Education Programs	Majestic View Nature Center	2274 school participants
	All Year	Walk in visitors viewing Water Quality/ Nonpoint Source Display	Majestic View Nature Center	3293 visitors to the Center
	All Year	Special Interest Groups attended Environmental Education Programs	Majestic View Nature Center	523 participants
Distribute Brochures	April 8 th	Booth at Arvada Kite Festival – Provided education including brochures and giveaways. Registered visitors for the citywide litter cleanup	Robby Ferrufino Park	Between 7000-8000 people in attendance
	May 11 th	Booth at Sustain Arvada Festival – Provided information on ways to help protect the waterways in Arvada. Fillup A. Can toured the festival.	Old Town Arvada	Over 50 people visited booth
	June 1 st	Booth at Trails Day. Demonstrated the Enviroscape to residents attending. Fillup A Can greeted visitors	Majestic View Nature Center	Over 600 visitors
	July 4 th	Booth at the City's 4 th of July celebration. Distributed brochures and rubber ducks	Lutz Sports Complex	Over 1000 visitors

	August 2 nd	Distributed “Industrial Activities and Stormwater Pollution” brochures and “Clean Choice for Clean Water” brochures to industrial area	Near 56 th and Marshall	Visited 16 businesses
	September 7 th	Fillup A Can mascot present during parade. Handed out Fillup A. Can bags.	Old Town Arvada	Over 400 people attending parade. Local honor student wore Fillup A. Can costume during the parade.
	October 12 th	Booth at Festival of Scarecrows. Demonstrated EnviroScape to visitors. Distributed brochures and rubber ducks.	Old Town Arvada	Over 800 visitors
Publications	January	Article discussing the process of developing nutrient control guidelines with state and other municipalities.	Author Jim McCarthy	Public Works Magazine
	April 25 th	Article in Your Hub that announced Fillup A Can days with details of program	YourHub	Distributed in Denver Post and available online
	May 30 th	Article in Arvada Press spotlighting the Arvada Bulldog football team participating in Fillup A Can days.	Arvada Press	Distributed to Residents of Arvada
	June	2013 Water Quality Report. Included information on Stormwater	2013	Distributed to Residents and Available at City Hall
	June/July	Utility bill insert explaining the storm gutter system and where that water goes. Discussed how to keep pollutants out of waterways.	Utility Bill Insert	31,000 bills
Website	All Year	The City and Stormwater Program continuously updates information provided on Arvada’s website	www.arvada.org	Increased use of Ask Arvada and Site Development Permit webpages.
Pet Waste Bags	March	Park Department installed pet waste bags dispensers	Columbine Park and Foster Elementary	2 pet waste bag dispenser installed
	July	Eagle Scout Project making and installing pet waste bag dispenser in three newly built parks.	Spring Mesa, Saddlebrook, Thundercloud	9 pet waste bag dispensers built and installed
	September	Eagle Scout project making and installing pet waste bag dispensers along Ralston Creek between Simms and Indiana Street.	Ralston Creek	17 dispensers installed with more built for future use. Arvada’s KATV did feature of his efforts.

Leverage Existing Programs	Ongoing	APEX Park and Recreation Stormwater permitting requirements	APEX Center	Annual Report Received
	Meets Monthly	Colorado Stormwater Council.	UDFCD	Active with council in discussing upcoming permit to be released by the State



In 2013 the City of Arvada was fortunate enough to work with Eagle Scout Candidate Aidan Scheck. For his project Aidan chose to build and install 17 pet waste bag dispensers along the Ralston Creek Trail between Simms and Indiana Street. Additional dispensers were also made at this time and given to Arvada Parks for future use. Because of his efforts Arvada’s TV Station KATV did a news spot on his project. The video is available on youtube.com at <http://youtube.com/uJCuwIWKXmU>.

Brochures and Information

The following brochures continue to be the focus of our public education program including:

- “Clear Choices for Clean Water” brochures on landscaping and household chemicals
- “Hidden Household Hazards” describe the services provided to residents by the Rooney Road Recycling Center
- “City of Arvada A to Z Recycling Guide” identifies the many places where residents in Arvada can recycle their waste products
- City of Arvada’s Water Quality report describes the results of drinking water sampling of their pervious year and also has a clip about stormwater.

The City distributes these brochures at events, schools, and scout groups. Every year the City shares its education resources with the Apex Center for distribution to its patrons.

B. PUBLIC PARTICIPATION AND INVOLVEMENT

1.0 General Summary

The City of Arvada must comply with applicable State and local public notice requirements using an effective mechanism for reaching the public. Much of Arvada’s legal public notice requirements are conducted to the City Clerk’s Office whose expenditures are not reflected here. Additionally, most public participation programs are recorded under Public Education and Outreach. Thus, expenditures in this program seem small in comparison to others.

In 2013 \$338 of the Stormwater Utility funds were expended for Public Participation and Involvement.

2.0 Summary of Programs

Local Public Notice Requirements

The City of Arvada published its legal notices on a Publication Board at City Hall and in the Legal Section of the local newspaper.

Ask Arvada

The City of Arvada further developed the Ask Arvada System where residents can get answers to frequently asked question 24 hours a day, 7 days a week. City responses to specific questions submitted are automatically provided by sending an email or electronic voicemail. The web address for “Ask Arvada” is <http://user.govoutreach.com/arvada/faq.php>. Since September 2007, there had been nearly 85,000 hits to the Frequently Asked Questions with nearly 5,000 of those resulting in service requests. Responses to customers are 1 day for 80% of those requests, with 92% satisfaction rate.

C. ILLICIT DISHCARGE DETECTION AND ELIMINATION

1.0 General Summary

Under the Illicit Discharge Detection and Elimination (IDDE) Program, the City of Arvada must develop procedures to protect receiving water quality from pollutant levels that degrade and threaten aquatic life, wildlife, and human health. The IDDE Programs attempt to reduce intermittent, storm-driven pollution carried into the storm sewers and illicit discharges that occur when pipes are not connected correctly and illegal waste water is discharged into the storm sewer system.

Approximately \$181,000 of the Stormwater Utility fund was expended in 2013 for Illicit Discharge Detection and Elimination

2.0 Summary of Programs

The City of Arvada IDDE Program efforts included inspection of stream outfalls, determination of sources of pollutant discharges to gutters or drains ensuring spill cleanups, funding cleanups of spills where the responsible party could not be determined, disposal of abandoned materials, and mapping the City’s stormwater infrastructure.

An example of one such discharge occurred on March 7, 2013. The City noticed that there was yellowish oil on top of the snow melt draining from an alley. A box of cooking oil was found leaking into an empty dumpster. Pads were placed on the snowmelt to soak up the oil and a boom was placed by the storm

drain inlet to catch any oil prior to it entering the storm sewer. The business cleaned its dumpster of oil and the wastewater vacuum truck came out to clean the inlet.



2.1 Develop a Stormwater Control Ordinance

In 1992 the City of Arvada developed an ordinance that prohibits any discharges into the storm sewer system except stormwater and other specified exceptions. In 2012 the ordinance was revised to include dirt and mud.

2.2 Develop the Storm Sewer System Map

The City of Arvada Engineering Mapping Section maps storm water conveyances, including inlets, manholes, and outfalls. In 2006, the City of Arvada completed the necessary updates to the storm sewer system maps with a field verification taking place in 2007. In 2012, staff developed procedures to update maps when new information is found, new infrastructure is built, or current infrastructure is revised. Revisions to and verification of maps require the coordination of staff from Wastewater, Engineering, Geodata Services and Stormwater.

2.3 Develop a Plan to Detect and Address Discharges

In 2004, the Illicit Discharge Detection and Elimination Plan was developed to comply with Permit requirements and relies on Arvada's ordinance prohibiting any discharges into the storm sewer system except stormwater. In 2012, the plan was significantly revised to accommodate programmatic changes.

Each year the Stormwater Program responds to reports of illicit discharges that vary in extent from minor locally isolated releases to major spills. Most discharges or spills were handled immediately. The party responsible for the release is generally required to clean up the spill and City confirms that the spill was cleaned appropriately. In some cases, however, the Stormwater Utility must fund cleanup if no responsible party is known. All citizen initiated calls were investigated and recorded.

In 2013 the City's Stormwater Program responded to 54 complaints from citizens and from those within the municipal organization about oil, concrete/cement, grease, chemical waste, and equipment washed out in the gutter, including:

of Spills Reported and Contaminant

1	Antifreeze
6	Concrete or masonry
4	Debris/Trash
3	Diesel/Gas
3	Grease
2	Ground Water/ Irrigation/ Pools
16	Oil
4	Paint
4	Sanitary
3	Unknown
7	Wash Water
1	Transmission Fluid

Of the spills reported in 2013, 17 were given verbal warnings, 22 written notifications, and 6 spills that were charged a monetary amount for cleanup. Of these, 2 were reported but not considered spill issues, 4 did not have an obvious responsible party, and 3 were not located within Arvada's jurisdiction.

2.4 Minimizing Illicit Discharges

The City must minimize illicit discharges to the maximum extent practicable. Arvada implements the following best management practices.

Dry Weather Screenings

The City conducted dry weather screenings of 335 outfalls in Arvada's rivers and canals in 2013. An outfall is the point at which the City pipe discharges storm flows into the streams, which are considered Waters of the State. By inspecting outfalls during dry weather, an inspector can determine whether there is a constant discharging from the pipe and observe any apparent contamination.

Follow-up was conducted when potential problems are found.

- Eight outfalls required maintenance, including concrete work and removal of trash and debris.

Stormwater Hotline

The Stormwater Hotline was established that uses the following number: 720-898-7810. Because the caller generally wants to talk to someone right away, the message allows the caller to press 0 to be connected with an operator. The Ask Arvada system has also been very effective way to allow residents to report potential problems. After hours, callers can contact Police Dispatch or the 24/7 Water Treatment Plant.

Rooney Road Recycling Center

The City's Stormwater Program funds the Rooney Road Recycling Center with over \$47,000 annually so that residents have a low cost means of properly disposing household chemicals. If residents did not have an appropriate disposal mechanism, it is possible that these household chemicals could become an illicit discharge. Residents can make an appointment to drop off household chemicals at the Center, or call to have them picked up. In 2013, of the 3424 customers served by the facility, nearly 20% were Arvada residents. A total of 425,090 pounds of materials were collected with 80% reused or recycled and the remaining materials disposed of in a proper and legal manner.

2.5 Training

Internal staff members are trained to recognize illicit discharges and to report them to the Stormwater Program for response. The responsibility for after-hour response has been delegated to the Streets Division who is contacted to evaluate and provide City presence in emergencies. Annual training has been conducted for these staff members. The Stormwater Program inventories and maintains City facility spill kits annually. Additionally, small spill kits have been provided to all DOT certified work trucks in the City's fleet.

During the year contact is made with local businesses for public outreach and training. Businesses that appear to have staining onsite are targeted for the training on discharge policies. In 2013 Midas Auto Services was contacted to staining outside their bay doors. No spill was identified but information on properly containing potential contaminates was shared.

The Stormwater Program also maintains involvement in the Environmental Crimes Task Force that trains on elements often associated with illegal dumping.

D. Construction Site Erosion Control

1.0 General Summary

Under the Construction Site Program, the City of Arvada must reduce pollutants in stormwater runoff to the City's waterways from construction activities that result in land disturbances of 10,000 square feet, or more or less than 10,000 square feet if part of a larger development or sale. The Construction Program is one of the most actively worked program areas because of its risk for state and federal penalties should the City not adequately control waste and sediment at construction sites.

Approximately \$214,000 of the Stormwater Utility funds were expended in 2013 for Construction Site Erosion Control

2.0 Summary of Programs

In 2012 the City began the major project of the Garrison St Bridge and Central Park off Ralston Road and Garrison Street. This project is an example of one of the City's projects and incorporates both building of a park and reworking of the trails and an installation of a pedestrian bridge across Ralston Creek. The park will include a playground, splash pad, and multiple seating areas and picnic sites. The park is scheduled for completion in the late summer/fall of 2014. This picture shows the construction of the picnic areas at the park. More information about the park and its final design is available on the City's website at Arvada.org/park-and-recreation.



2.1 Erosion and Sediment Control Ordinances

On August 20, 2007 the City Council approved significant revisions to Arvada's ordinance providing staff the ability to permit grading activities of 10,000 square feet or more. The Site Development Permit which includes stormwater runoff requirements similar to state construction permits went into effect on August 28, 2007. Stormwater programs must approve and issue a permit before earth disturbing activities may begin, and in most cases, a cash escrow or letter of credit is required to ensure that earth disturbance is stabilized.

2.2 Plan Review Process

The City of Arvada reviews development plans of proposed industrial, commercial, single family residential, and multi-family residential projects that disturb 10,000 square feet or more. Stormwater Management Plans are reviewed when a State permit requires that they be developed. Stormwater Management Plans and Erosion Control Plans are reviewed as a part of the overall plan review process. Reviews conducted for larger developments can be quite detailed and require multiple iterations prior to final approval. When plans are approved and the developer is ready to begin their project, completed Site Development Permit application form, permit fee, and escrow must be submitted to the Stormwater Program. In 2013, there were 51 Site Development Permits issued.

2.3 Construction Site Inspection and Enforcement Program

Stormwater Inspections incorporate the approved site plans to ensure that developments implement the approved best management practices. The City of Arvada conducted 1,558 construction-site runoff inspections of 129 construction sites throughout the City. Internal Capital Improvement Projects (CIP) are also inspected. An Access database called SILTS allows for electronic tracking of inspections. The City continues to communicate potential best management practices (BMP) issues by faxing or e-mailing inspection reports to on-site management. Should BMPs maintenance issues not be corrected enforcement is pursued. Each spring and fall, letters are sent to developers whose sites are ready to

stabilize, requiring that they take advantage of the seasonal rainfall. In the spring, 77 developers were contacted.

In 2013 there were 192 inspection report warnings, 36 written Compliance Orders and Violations.

2.4 Training and Education for Construction Site Owners and Operators

The Stormwater Permit requires that the program provide opportunities for development owners, operators, contractors, and City Staff to attend informational sessions. In September, after the 2013 flooding event, a flyer was sent to all active construction sites discussing the installation of maintenance of the Stormwater BMPs. This flyer reminded operators to:

- Repair all BMPs including inlet and outlet protection and tracking control
- Clean streets, gutters, and sidewalks in the area and downstream
- Maintain site, washout areas, and storage yards

The flyer gave construction sites one week to comply and fix issues that may have developed. After the one week, inspections were conducted and any enforcement needed was issued. Eight developments were placed in systemic violation with building permits issued only when a successful compliance inspection was conducted. It was a priority of the City to ensure construction sites maintained and repaired major issues post-flood to have the least amount of impact on the already strained water ways.

On September 25th an International Erosion Control Association (IECA) seminar was attended at Denver's waste water facility. The seminar presented was entitled "Navigating the Consent Decree".

2.5 Response to Public Concerns

The City of Arvada provided a Stormwater Hotline, 720-898-7810, for residents to call in complaints about construction sites. However, most complaints were received by direct telephone calls or through Ask Arvada. In 2013, the City received 12 complaints about construction sites from the Stormwater Hotline, e-mail, Ask Arvada, phone, or through the Streets or Engineering Divisions. Eight complaints resulted in a compliance inspection and all complaints documented and addressed.

E. POST CONSTRUCTION STORMWATER MANAGEMENT

1.0 General Summary

Under the Post-Construction Stormwater Management Program, the City of Arvada must prevent or minimize impacts to stormwater from new development or redevelopment. The City of Arvada must inventory stormwater Best Management Practices (BMPs) that were installed in new developments or in redevelopments since March 2003, when the Stormwater Permit began. BMPs must be inspected and the City must ensure that long-term maintenance is conducted through a control mechanism such as an ordinance, or by conducting the maintenance with City staff.

In 2008, the Stormwater Permit was reissued and the Post-Construction Program had to be fully functioning, which means that all sites disturbing greater than one acre must implement water quality best management practices to reduce to the maximum extent practicable harmful effects of development on waterways. To this end, the City inspects, communicates, and enforces requirements to install and maintain these practices.

Approximately \$32,000 of the Stormwater Utility fund was expended in 2013 for Post-Construction Stormwater Management

2.0 Summary of Programs

The inventory of BMPs is continually updated as part of the construction process. Specifically, stormwater management practices (BMPs), such as detention ponds and retention ponds, are identified through plan review; oversight of their installation is performed through construction for new development and redevelopment; the warranty process ensures that the BMP performs as designed; and finally, the Land Development Agreement ensures the owner, whether it is business or homeowner's associated, maintains them. The Stormwater Program conducts annual inspections and ensures that maintenance is conducted.

2.1 Long-Term Maintenance Ordinance

An Ordinance has been in place to hold the owner or developer liable for the long-term maintenance of BMPs that they are required to install (Ordinance 3209, 8-28-00). The Code requires that the owner or developer of land to be improved maintain such facilities after construction. A Land Development

Agreement and approved construction plans further hold the owner responsible for BMP maintenance.



This stormwater detention pond and inlet is located at the Apex Field House at 58th and Oak Street. The detention pond detains stormwater to settle out contaminants before discharging, letting a portion of it infiltrate. Detention ponds like this one are found throughout the City and help aid in settling out sediment in stormwater prior to it entering our waterways.

2.2 Implement an Inspection Procedure

In 2013, 143 stormwater BMPs were inspected on 109 sites to ensure that constructed stormwater management appurtenances were operational and their maintenance was conducted. The City developed a communication tool that provides a list of issues with a cross reference to attached pictures. A cover letter is provided to further describe what is required and why. This package is sent to the owner or management company that was contracted to conduct maintenance. The City requests that once the work is done, they complete the form and return it.

In 2013, 81 BMP responses were received indicating that maintenance had occurred, and 62 BMPs received no response. The City conducted 41 verbal warnings and sent 24 violation/ reminder notices. Twelve BMPs were added in 2013 due to new construction.

2.3 Training

Training concerning post construction and low impact development attended included: 1) the International Erosion Control Associations (IECA) Annual Conference that was held in Denver on December 4th; 2) a webinar hosted by Center for Watershed Protection on February 13th entitled “Lose 10 pounds of pollution; 3) a webinar hosted by the Center for Watershed Protection on October 16th entitled “Stormwater Trading – Markets or Mayhem”; and 4) a webinar hosted by the American Public Works Association on November 14th entitled “LID Maintenance – Where’s the Runoff Going From Your Streets”.

F. POLLUTION PREVENTION/ GOOD HOUSEKEEPING FOR MUNICIPAL OPERATIONS

1.0 General Summary

The City of Arvada must develop a municipal operation’s Pollution Prevention/Good Housekeeping Program by drafting guidelines and procedures in the form of Runoff Control Plans and activity-specific standard operating procedures. Also included are storm sewer maintenance activities conducted by field crews throughout the year, facility improvements, street sweeping, and support by others.

Approximately \$23,200 of the Stormwater Utility fund was expended by the Stormwater Program for permit-related activities in 2013 in labor, contracts, and supply costs for Pollution Prevention/ Good Housekeeping. Approximately \$461,000 was expended for storm system maintenance, street sweeping and support by others.

2.0 Summary of Programs

Programs under the Pollution Prevention and Good Housekeeping for Municipal Operations require that plans be operational and updated for all municipal facilities, inspections be conducted to ensure facilities are reducing pollutants to the maximum extent possible, the storm sewer system be maintained, and City employees be trained.

2.1 RC and SPCC Plans

Runoff Control Plans (RCPs) have been developed for all City facilities and contain procedures for controlling and eliminating pollutant discharge in stormwater. The facilities for which RCPs were developed include:

- Indiana Service Center
- Wadsworth City Shops
- Lake Arbor Golf Course
- Westwoods Golf Course
- Ralston Water Treatment Plant
- Arvada Water Treatment Plant
- Ron Culbertson Building (Wastewater Collection)
- Arvada Center

A group plan was developed for the City Administration (City offices, parking lots, and public parking) and City Parks. The Apex Center, which is covered under the City's MS4 permit, also has a Runoff Control Plan developed for that facility.

Spill Prevention Control and Countermeasures (SPCC) Plans have been developed for the following City facilities due to the amount of petroleum related products that are stored onsite:

- Indiana Service Center
- Wadsworth City Shops
- Lake Arbor Golf Course
- Westwoods Golf Course

Plans were developed in 2004 and are required to be updated every five years. In 2008, a major effort to update these plans was conducted. The plans are kept by on-site personnel at each facility and a master is maintained at City Hall with the Stormwater Program.

The Stormwater Programs conducts biannual inspections at all facilities, and annual inspections are performed at the grouped facilities. Inspections identify where a facility might change a process or where a modification of a portion of a facility might improve stormwater quality. Finding from the inspections are reported to facility management who are then expected to resolve issues.

Facility Improvements

Occasionally, facility modifications are needed to substantially increase the facility's compliance with runoff requirements. In 2013 Lake Arbor and Westwoods Golf Courses changed over to electric golf carts. Lake Arbor moved their unleaded gas contact tank to the maintenance facility.

2.2 Storm Sewer Maintenance

The Streets' Division managed the Storm Crew in 2013, and maintained the underground storm sewer inlets, pipes, and proprietary BMPs assisted the Stormwater Programs in researching potential contaminant sources and repaired infrastructure. Responses to drainage complaints were conducted as-needed. According to the Streets' Annual Report, staff cleaned 810 inlets and inspected 786 storm drains. Streets jetted 6878 linear feet of storm pipes and 122 tons of debris was removed from the storm sewer system. 108 outfalls also received maintenance in 2013 by the Street's Division.

2.3 Continuing Training and Education

In 2013, new training packets were developed based on facility runoff requirements, SOPS, and site specific BMPs. Training packets were delivered to the different facilities for the employees to train individually or in groups. In 2013 training was completed for staff at the Ron Culbertson Building, Indiana Service Center, and Wadsworth City Shops for a total of 113 employees trained. In addition to the training inserts cards for all the City vehicles were made for a quick reference to spills observed out in the field. The Apex Center also continues yearly training of all staff in positions requiring stormwater training on the Runoff Control Plan for that facility. On August 21st 5 members of the vehicle maintenance crew attended a webinar entitled “The Subtleties of SPCC Planning”.

2.4 Conduct Street Sweeping

The streets of Arvada were swept multiple times in 2013, as is the Apex Center, which is covered under the City’s Permit. The Stormwater Utility fee provides a set funding annually support of the City’s street sweeping that significantly improves the water quality of discharges into the City storm sewer system.

IV. OTHER ENVIRONMENTAL PROGRAMS

The following programs are conducted to promote healthy environments in our streams and to promote the health of our citizens. These programs are not specifically required under the Stormwater Permit with the State, nor are they flood control projects, however, they are activities funded through the Stormwater Utility. These programs include Regulatory Involvement, Safety, and Recycling.

In 2013 the City expended \$84,500 in conducting these efforts.

A. Regulatory Involvement

The City of Arvada must be active in regulatory compliance with stream standards in the City's State classified streams. State classified streams include Ralston, Van Bibber, Leyden, and Little Dry Creeks. The City maintains an active role in the rulemaking process and works collectively with surrounding jurisdictions to protect water quality.

Activities conducted under this effort include the following:

- Monitoring and sampling streams that traverse the City.
- Monitoring and sampling the three major canals.
- Monitoring and sampling Clear Creek (one of the City's drinking water sources) with neighboring cities.
- Attending the Colorado Water Quality Control Commission meetings and commenting on potential rulemaking.
- Actively participating in coordinated efforts with other metro cities in enhancing stream water quality.
- Participates in the Upper Clear Creek Watershed/ Standley Lake Agreement, involving cooperative monitoring.

B. Safety

Safety of our citizens is taken very seriously. Under this category, the City monitors dam safety, responds to air quality issues, and assists with mosquito complaints.

The City monitors dams situated within the City and associated with stormwater management and drinking water reservoirs. These include Arvada/Blunn Reservoir, Tucker Lake, Leyden Dam, and Pomona Dam. Other smaller dams are also monitored. The City works closely with the State Dam Inspector to address issues that could jeopardize dam safety. In 2013, dams were closely monitored during the flood event and inspected after it to ensure dam safety.

Complaints about air quality, specifically as it relates to wood burning, are addressed generally during the winter months. Inspectors are certified to read opacity of smoke plumes to determine whether wood burning is being conducted within the requirements identified in City Ordinance.

The City also follows up on issues reported with mosquito populations. Often, a resident is unaware of standing water on their property that is contributing to adult mosquitoes. In 2013, Colorado reported 318 cases of West Nile Virus with 5 in Jefferson County and 24 in Adams County. The City received only two mosquito complaints even though a mosquito control program was not conducted.

C. Recycling

In 2013, the City offered recycling bins for residents to drop off material to be recycled at the Wadsworth Municipal Facility at 6161 Olde Wadsworth Blvd. A list of allowed items is available at <http://arvada.org/pages/recycling-drop-off-site-now-open>.

In addition to the recycling bins, the city offered 2 separate recycling events for leaf recycling. The leaf recycling consisted of the first two weekends in November with two locations, Timberline Gardens and Perma Green Organics. Both locations received a great turn out each weekend.

In addition, a vegetable oil recycling event was held the Saturday after Thanksgiving on November 30th. This event had two locations for residents to drop off; the Arvada Wadsworth City Shops and the Arvada Indiana Service Center. After the event, the vegetable oil is collected by RecycOil where 100% of the vegetable oil is reused to create alternative fuel sources. The 2013 event yielded 315 gallons of cooking oil brought in from residents for recycling. Arvada collected the most cooking oil during this weekend event where 5 other cities also held similar weekend events.

This picture is from the first weekend of the leaf recycling event. This event continues its popularity with residents.

