

Keep it Clean Partnership

A partnership of communities in the Boulder and St. Vrain watersheds - working to protect our water quality

FOR THE WHOLE FAMILY

KEEP IT CLEAN PLEDGE

Thanks
We're excited you're going to help us keep our creeks and lakes clean!

Name _____ Phone/Email _____

Please help keep our creeks and lakes clean by taking these steps around your home. Please have your child return this form to his/her teacher by _____ so your family can be entered into a drawing for a free prize.

We pledge to:

- Pick up pet waste and put it in the trash.
- Wash paint brushes in the sink, not with the hose outside.
- Use fertilizers and pesticides sparingly.
- Properly dispose of used oil & household chemicals. Call the Boulder County Household Hazardous Waste hotline at 303-441-4800.
- Pick up trash and throw it away.
- Turn off running water when brushing teeth and washing hands.
- Wash our car at a commercial car wash.

Did you know?
That you should never put anything down the storm drain? Anything that goes down the storm drain will pollute our creeks and lakes where we fish, swim and play.

Please pledge
Please help keep our waters clean by taking the following steps around your home.

KEEP IT CLEAN PARTNERSHIP: www.KeepitCleanPartnership.org 303-413-7365

2009

Annual Report

Boulder County • City of Boulder • City of Longmont • City of Louisville • Town of Erie • Town of Superior



**KEEP IT CLEAN
PARTNERSHIP**

3450 Broadway, Boulder, CO 80304 • Phone: 303-441-1439 • Fax: 303-441-1468 • E-mail: jlöpitz@bouldercounty.org



**Keep it Clean Partnership
ANNUAL REPORT for 2009
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Executive Summary

Keep It Clean Partnership

2009 Annual Report



To address the impact of stormwater on water quality, the federal Clean Water Act was expanded to include requirements that municipalities control pollutants from municipal separate storm sewage systems (MS4s). The Keep it Clean Partnership (KICP) grew out of the need for local communities to respond to these stormwater regulations. The Partnership is a collaboration of communities in the Boulder and St. Vrain watersheds, and includes Boulder County; the cities of Boulder, Longmont, and Louisville; and the towns of Superior and Erie, working together to protect water quality through stormwater management.

The KICP uses a unique, collaborative approach to involve various levels of government in creating cost-effective solutions to stormwater and other water quality problems. The KICP embodies the spirit of the watershed approach that was envisioned in the federal Clean Water Act and adopted in the Boulder Valley Comprehensive Plan.



Into the Future

As the KICP Partnership enters its eighth year of implementation, there are a number of challenges in stormwater management approaching.

Effluent Limitation Guidelines for Construction Sites

This regulation will become effective on February 1, 2010, and will then be phased in over four years. After that date, all permits issued by the Environmental Protection Agency (EPA) or delegated states must incorporate the final rule requirements. The Colorado Department of Public Health and the Environment (CDPHE) will begin discussions in July 2010 as the Colorado General Construction permit update process is initiated.

All construction sites over an acre are currently required to obtain permit coverage and must implement a range of erosion and sediment controls and pollution prevention measures. Beginning on August 1, 2011, the regulation will phase in all sites that disturb 20 or more acres of land at one time. These sites will be required to sample stormwater discharges and comply with a numeric limitation for turbidity. On February 2, 2014, the limitation will apply to all construction sites disturbing 10 or more acres of land at one time.

Specific national minimum best management practices (BMPs) will also be specified for all sites over an acre. KICP Partners plan to support the Urban Drainage and Flood Control District (UDFCD) with the adoption of these specifications in their Volume 3, which currently all KICP Partners reference through their local ordinances for construction BMP design.

Stormwater Rule

In 2009, EPA began the process of asking for stakeholder input to strengthen stormwater regulations and to establish a comprehensive program to reduce stormwater from newly developed and redeveloped sites. EPA has proposed sending out a survey to the state, local, and development communities to solicit details on stormwater management and control practices, local regulations, and baseline financial information, as well as comments on the following areas:

- ◆ Expansion of the area subject to federal stormwater regulations.
- ◆ Establishment of specific requirements to control stormwater discharges from new development and redevelopment.
- ◆ Development of a single set of consistent stormwater requirements for all MS4s.
- ◆ Require MS4s to address stormwater discharges in areas of existing development through retrofitting the sewer system or drainage area with improved stormwater control measures.
- ◆ Explore specific stormwater provisions to protect sensitive areas.

EPA has proposed sending the survey out in the summer of 2010 and then taking action by November 2012 based on the results. KICP will certainly be affected by the outcome of the survey and EPA's regulatory response. A KICP Partner may receive and be required by law to fill out the time-consuming survey.

Total Maximum Daily Load (TMDL) for E. coli

In 2006, the City of Boulder began participation in the [Water Quality Forum](#) E. coli TMDL workgroup. The group funded a study on E. coli and recreational water quality issues in Colorado. This report was completed and presented to the KICP Partners in January 2010. The City of Boulder at that time also shared their research of the E. coli life cycle within Boulder Creek, a listed segment.

Boulder, Boulder County, Louisville, Erie and Superior all received letters for CDPHE indicating that their communities' listed stream segments would soon be evaluated for a TMDL. Currently, Boulder is in the process of writing their TMDL plan.

Representative language for the letters issued to the MS4 (Moore 2009) includes:

...the [CWQCD] must determine whether discharges from the permittee's MS4 are contributing E. coli to [listed] segments. If it is determined that there is a discharge from the permittee's MS4 to [the listed segment] and a contribution of E. coli, a Waste Load Allocation (WLA) will be included in the final TMDL for discharges from the permittee's MS4. The WLA would assign a limit on discharges of E. coli for the MS4. ...the MS4 permit addresses the process that will then be followed to ensure the permit includes adequate effluent limits to require discharges meet the WLA. In accordance with [the permit], if the [CWQCD] determines that the conditions of the current permit are not adequate to bring about compliance with the WLA, the [CWQCD] may modify the existing MS4 permit conditions, or require an individual permit or alternative general permit. Effluent limits in stormwater permits are often practice based, such as the permittee's current six minimum control measures, but could also be numeric limits.

The permittee should evaluate its current practices/discharges to proactively address any known sources of E. coli to possibly avoid the need for additional effluent limits. Specifically, any illicit discharges containing E. coli, such as cross connection or sanitary sewer seepage, must be addressed in accordance with the current requirements in [the permit].

The state is asking all MS4 to prepare for the TMDL by:

- ◆ Conducting dry weather surveys to identify illicit connections and discharges.
- ◆ Removing or controlling illicit connections/discharges.
- ◆ Providing public education and enforcement of pet waste ordinances and leash laws.
- ◆ Providing pet waste disposal cans in open space areas.
- ◆ Preserving natural riparian buffers.
- ◆ Working with local wildlife managers to assess the need for population controls or active management of urban wildlife.
- ◆ Where contributing drainage area, depth to groundwater, and soil conditions are appropriate for infiltration-oriented BMPs, consider use of such practices.

KICP may be able to assist in the regional effort of TMDL tasks. For 2010, no items or tasks have been identified but KICP will continue to monitor the E. coli TMDL and evaluate the potential for participation.

Regulatory Audits

CDPHE has indicated that all MS4 programs will be audited by 2013. The Town of Erie has been notified that their program will be audited in February 2010.

Now, more than ever, municipalities must find ways to meet multiple objectives, maximize the use of resources, and avoid duplication of effort. The KICP can serve as a model and possibly facilitate regional cooperation in meeting these challenges. Future activities should focus on:

- ◆ A holistic watershed approach.
- ◆ Pollution prevention, such as low-impact development, rather than costly pollution removal and treatment.
- ◆ Encouraging an active and engaged public to change water quality degrading behaviors and to support initiatives to protect water quality.

Partners may need to make modifications based on the results of Erie's audit. Since many shared and common goals were implemented as a group, it may be possible that some modifications can be made as a group.

2009 Highlights

In 2009, the KICP Partners continued to implement and maintain the shared and common programs of their municipal stormwater discharge permits for a second five-year term (2008-2013). All measurable goals of the second permit cycle were met.

Costs

The common and shared KICP programs are implemented by 3.50 full-time employees (FTE). The staff currently includes 1.00 FTE to support the business and municipal outreach, 1.75 to support the residential outreach program, and 0.75 FTE for the Keep it Clean coordinator position. In 2009, the KICP budget was \$399,981, of which \$62,336 (15.6%) was proportionately reimbursed to each of the Partners. The sharing of programs and costs saves each KICP Partner communities 25-50%, when compared with implementing programs individually.

School and Community Outreach Programs

KICP contracted with the City of Boulder's Watershed Education Program to implement the community outreach and school education programs. The Partnership developed a communication plan in 2009 to better reach the community at-large, including incorporating social marketing techniques and developing a pledge program to be implemented at the KICP booth during special events.

151,614 brochures and campaign materials were distributed
3,000 students and **200** classrooms/events attended school-based education programs
913 storm drains were labeled with the message, "Dispose no Waste, Drains to Creek."
2,338 door hangers were distributed as part of the storm drain marking program
3,003 residents visited the stormwater booths at **20** community events
191 residents attended one of **13** speaker's events
382 residents participated in one of **33** stream teams
40,000 visits to www.KeepitCleanPartnership.org
372,504 cars travel past the 'KICP' tributary signs each day



Stormwater Pollution Prevention Programs

The KICP contracted with the Boulder County Public Health Partners for a Clean Environment (PACE) Program to implement the business and municipal outreach.

Business outreach was provided to restaurants, auto repair facilities, and retail businesses regarding energy efficiency, water conservation, resource management, and stormwater protection. Outreach will continue in 2010.

The number of contracted municipal site visits exceeded the contractual number by 122%. Customized training was provided to nearly 200 municipal employees across 6 different departments in 6 different municipalities. Six municipal “Stormwater Heroes” were recognized for their efforts to protect stormwater.

PACE spent significant effort updating and modifying pollution prevention standard operating procedures to ensure that the Partners met the 2009 goal requiring the review of existing procedures and the development of new procedures to prevent or reduce pollutants in runoff from municipal operations.



45 pressure washers received a letter describing the PACE certification program
250 business stormwater pollution prevention evaluations were completed
80 other businesses with the potential to impact water quality were visited
7 rental stores received **550** brochures to distribute
186 municipal employees were trained at **9** stormwater pollution prevention trainings
43 municipal facilities were visited
126 municipal employees pledged to protect stormwater
1 newsletter was mailed to **180** municipal employees

Erosion Control, Permanent Water Quality Structures, and Illegal Discharge Prevention

KICP worked within their individual communities to implement operating procedures and regulations to manage illegal discharges, active construction, and post-construction management. A contractor was also hired to evaluate and make recommendations on the individual communities’ compliance with the construction requirements of the MS4 permit.



68 participants were provided with construction erosion control training
19 participants were provided with waterway construction training
186 municipal employees were trained about illegal discharge identification
73 illegal discharges received a response
130 active construction sites were inspected **1669** times
20 sites had post-construction controls installed

Background, Partnership Overview, and 2009 Highlights

Background

To address the impact of stormwater on water quality, the federal Clean Water Act was expanded to include requirements that municipalities control pollutants from municipal storm drainage systems. In 1990, the U.S. Environmental Protection Agency (EPA) issued the Phase I Stormwater Rules. These rules require National Pollutant Discharge Elimination System (NPDES) permits for operators of municipal separate storm sewer systems (MS4s) serving populations over 100,000 and for runoff associated with industry, including construction sites five acres and larger. In 1999, EPA issued the Phase II Stormwater Rule to expand the requirements to small MS4s and construction sites between one and five acres in size.

The Keep it Clean Partnership, formerly known as The Watershed Approach to Stream Health (WASH) Project, grew out of the need for local communities to respond to these new stormwater regulations. In 1999, water quality and stormwater professionals representing various communities in the Boulder Creek and St. Vrain watersheds participated in meetings to help develop the goals, objectives, and project focus that are now incorporated into the Keep it Clean Plan. To further focus efforts, a 2006 Water Quality Roundtable was conducted where experts from local, federal, and state agencies identified six areas of concern typical of urban runoff. These include: pathogens (e.g. e. coli), sediment, nutrients, flow modification, metals, and pesticides. These impacts are considered when implementing programs.

The Keep it Clean Partnership (individually referred to as “Partners”) is a collaboration of communities in the Boulder and St. Vrain watersheds working together to protect water quality through stormwater management. The communities include Boulder County; the cities of Boulder, Longmont, and Louisville; and the towns of Superior and Erie.

The primary goal of the Keep it Clean Partnership (KICP) is to implement a regional stormwater management program, not only to comply with federal Phase II stormwater regulations, but also to address broader water quality issues. The KICP uses a unique, collaborative approach to involve various levels of government in creating cost-effective solutions to stormwater and other water quality problems. The KICP embodies the spirit of the watershed approach envisioned in the federal Clean Water Act and adopted in the Boulder Valley Comprehensive Plan.

Partnership Overview

The KICP operates under a five-year plan that outlines programs tasks, schedules, and budget. Emphasis is placed on developing programs that meet federal Phase II Municipal Stormwater Discharge Regulations. The first plan, developed in 2002, used existing, successful programs; addressed community water quality goals; and allowed for flexibility within jurisdictional oversight. The second plan was finalized in October 2008 when the Partners applied for the 2008-2013 Phase II Municipal Stormwater Discharge Permit with the Colorado Department of Public Health and Environment (CDPHE).

Implementation of the Keep it Clean Plan is governed by an intergovernmental agreement (IGA) and supporting bylaws. The initial IGA was executed in January 2003, and the subsequent one was signed in December 2007. The IGA identified a steering committee as the managing entity; it is made up of one voting representative from each Partner community. The steering committee directs the KICP coordinator, who provides administrative and management services to implement the Keep it Clean Plan and budget. The IGA identifies Boulder County Public Health (BCPH) as the contracting/fiscal agent. BCPH is also the employer of the KICP coordinator. The Keep it Clean Partners participate in workgroups, which direct implementation of the Keep it Clean Plan.

Municipal stormwater regulations call for implementation of six minimum control measures (MCMs) to address the impact of stormwater runoff on water quality and stream health. These programs implemented through the KICP Plan are as follows:

1) MCM 1 - Public Education and Outreach

- School-based education programs (classroom programs, water festival, and teacher training)
- Community outreach programs (outreach booth, speakers program, website, watershed stewardship, and stream volunteers supported with brochures and other outreach materials)
- Tributary signage and storm drain marking
- Business education program (see MCM 3)

2) MCM 2 - Public Participation and Involvement

- Website
- Annual outreach event booths to solicit input on Keep it Clean programs

3) MCM 3 - Illicit Discharge Detection and Elimination

- Legal prohibition of illicit discharges (ordinances)
- Illicit discharge enforcement (hotline, spill response plan, inspections, enforcement, and data tracking)
- Business Education Program
- Storm drainage system mapping

4) MCM 4 - Construction Site Stormwater Runoff Control

- Training and education for construction site operators and inspectors
- Erosion control ordinance (required erosion control for construction sites)
- Erosion control standard operating procedures (SOP) (outlines application and approval procedures for construction site stormwater management plan submittals)
- Erosion control inspection and enforcement (implementation of erosion control ordinance)
- Public input

5) MCM 5 - Post-Construction Stormwater Management

- Post-construction ordinance (required treatment of stormwater runoff)
- Design criteria and standards (outlines type of stormwater treatment or best management practices [BMP] required)
- Development review (ensures appropriate design of BMPs)
- BMP operation and maintenance (requires long-term maintenance of BMPs)

6) MCM 6 - Pollution Prevention and Good Housekeeping for Municipal Operations

- Training and certification for municipal facilities, activities, and employees

Implementation of the Keep it Clean Plan

The Keep it Clean Plan uses a variety of approaches to reduce the discharge of pollutants from the storm drainage system to protect water quality standards, and to satisfy the appropriate water quality requirements of the Colorado Water Quality Control Act and the Colorado Discharge Permit Regulations.

- **Common Elements:** Program elements that have common themes and common implementation procedures. An example was the development of ordinance language.
- **Individual Programs:** Program elements that are exclusively the responsibility of individual Partners to implement. An example is the enforcement of erosion control and illicit discharge ordinances.
- **Shared Programs:** Program elements that are shared by all Partners. The following two contracts are examples:
 - ◆ The City of Boulder Water Quality Education Program provides community outreach materials and school programs in each of the Partner jurisdictions.
 - ◆ Boulder County's Partners for a Clean Environment (PACE) Program provides outreach materials and conducts site visits, addressing commercial and municipal operations.

2009 Highlights

Through implementation of the Keep it Clean Plan, all Partners achieved compliance with their stormwater discharge permits. A summary of major tasks completed in 2009 follows.

Permit for 2008-2013

The Phase II stormwater discharge permit for the Partners' first permit term expired at the end of 2007. The Partners submitted their program descriptions in June 2008 to be covered under the state's general discharge permit for the second permit term, which covers March 2008 to March 2013. In late August, CDPHE asked for more program specifics to be submitted addressing the individual Partner programs surrounding construction and post-construction plan review and enforcement. The final plan was submitted in October 2008. However, the state issued an additional request for details on individual Partner programs. Though the state did require a response in writing, it has been the intention of the Partners to revise the plan and submit it to the state. Although this was not accomplished in 2009, the KICP Partners plan to submit it in 2010.

Program Implementation

As part of an annual review, each Partner evaluated their individual community's goals and identified potential compliance program deficiencies and support need from the KICP shared programs. The Partners reaffirmed the benefits of KICP participation and developed individually tailored programs to meet specific community objectives. In 2010, in preparation for the overall program evaluation to be conducted in 2011, the Partners will begin to look at the overall structure of the program.

Costs

The Partner communities fund the common and shared program costs. Cost allocation is based on each Partner's urbanized population, as outlined in the Keep it Clean IGA. Costs to implement the individual community programs are the responsibility of each individual community. The KICP programs emphasize cost-effectiveness by sharing programs and using common strategies and leveraging existing programs. The common and shared programs are implemented by 3.50 full-time employees (FTE). The staff currently includes 1.00 FTE to support the business and municipal outreach, 1.75 to support the residential outreach program, and 0.75 FTE Keep it Clean coordinator position.

In 2009, the KICP budget was \$399,981, of which \$62,336 (15.6%) was proportionately reimbursed to each of the Partners. The majority of the reimbursement represents the

unspent contingency funds and staff vacancy with the City of Boulder's Watershed Outreach Program.

Grants

In the beginning of 2009, KICP continued exploring interest and identifying supporters for a statewide water quality outreach campaign. Initially, there seemed to be promise, as the Colorado Foundation for Water Education (CFWE) showed interest in playing a key role in bringing a campaign to reality. However, funding limitations from many key entities including the CFWE, Colorado Water Conservation Board, and the Colorado Stormwater/NPS Program prevented this project from progressing in 2010. The CFWE through the Colorado Water Education Task Force project, has identified a communications campaign as an area of interest for the future. KICP will continue to participate and take a leadership role in these discussions.

The City of Boulder finalized the E. coli study, funded by a grant from the U.S. Environmental Protection Agency (EPA). The study evaluated the relative contribution of E. coli contamination from municipal storm drainage discharges into Boulder Creek. The study successfully identified the specific stream segments with high levels of E. coli and a strong seasonal trend. The study also included the analysis of chemical generally associated with wastewater contamination to identify potential human sources of contamination, which would pose a greater risk to public health. This multiple analysis approach proved to be very useful in assessing E. coli contamination and potential pollution prevention strategies.

School and Community Outreach Programs

The Keep it Clean Partners contracted with the City of Boulder's Watershed Education Program to implement the community outreach and school education programs.

Staff accomplished the contract goals, but continued to realize that reaching the adult audiences, which unlike school programs are not a captive audience, is a challenge. Though the Neighborhood Stewardship Program resulted in measurable actions taken by participants, it was determined that the return on investment for this program was not achieving the desired goals. Although the Neighborhood Stewardship Program will continue to be offered in all communities, the effort in 2010 will be transferred to working with the existing Boulder County Youth Corps in the creeks and surrounding community areas. Efforts will also be applied to further cultivating the Speakers Program, with a focus on homeowners' associations.

In 2009, the community/residential pledge and school-based pledge were offered at each of the KICP outreach booth events and school programs. Residential participants were invited to pledge to mark a local storm drain and hang door hangers in the same area. The school-based pledge program invited students and their families to select and pledge to specific water protection actions at home.

In addition to offering the pledge during classroom presentations, the pledge was offered during the water festival programs. Based on feedback from Operation Water Festival teachers, it was indicated that the pledge program was too much of a time commitment, so the Keep it Clean Pledge Program will not be offered as part of Operation Water Festival in 2010. The focus will be on classroom-based education programs.

Each pledge program participant who chose to provide an email address received the first Keep it Clean newsletter. As of December 2009, 85 pledge program participants provided an email address. The detailed newsletter report indicates that of the 85 attempted emails, 70 were successfully delivered. Of these, 34.3% opened the email, and 2.9% clicked on a web link included in the newsletter. In addition, one person requested a speakers program in response to the newsletter.

Stormwater Pollution Prevention Programs for Private and Public Sectors

The KICP contracted with Boulder County Public Health's Partners for a Clean Environment (PACE) Program to implement the business and municipal outreach.

Business Outreach

PACE offers a pollution prevention certification program to various business sectors. PACE services are free of charge to interested businesses. In 2009, PACE offered the Keep it Clean Partners five programs to address business activities with stormwater impacts:

- ◆ Continued Outreach to Existing Sectors
- ◆ Outreach to New Sectors
- ◆ PACE Allies
- ◆ One-on-One Training
- ◆ Beyond PACE

Keep it Clean Partners ranked priority for these programs in their communities, and based on these priority rankings, each KICP community received a customized scope of work.

Business outreach continued to the restaurant and vehicle service facilities. For over 14 years, PACE has delivered educational outreach on a range of topics, including energy efficiency, water conservation, and resource management to businesses in Boulder County. For the past seven years, PACE has included stormwater protection messages in its outreach to restaurants, auto repair facilities, and retail businesses in support of the KICP. While the majority of the businesses in these sectors have been contacted by PACE, repeated visits are typically necessary to counteract such factors as employee turnover and simple apathy.

PACE visited several businesses unannounced. Pictures of both good and bad stormwater practices were taken and included in follow-up letters to the manager of the facility. In 2010, the effort will be transferred to meeting one-on-one with homeowners' association property managers.

Municipal Outreach

In 2009, PACE exceeded the number of contracted site visits by 122% and provided customized training to nearly 200 municipal employees across 6 different departments in 6 different municipalities. PACE also recognized 6 municipal "Stormwater Heroes" for their efforts to protect stormwater.

A significant effort was spent on the update and modification of the pollution prevention procedures that were originally drafted in 2005. This effort ensured that the Partners met the measurable goal slated for completion in 2009 that required permittees to review existing documented procedures and develop new written procedures, as necessary, for the implementation of an operation and maintenance program to prevent or reduce pollutants in runoff from the permittee's municipal operations. The one-time inventory included a list of

the industrial facilities the permittee owns or operates that are subject to separate coverage under the State's general stormwater permits for discharges of stormwater associated with industrial activity. Each Partner modified template procedures and saved them to their communities' server.

In 2010, PACE will follow up to make sure the procedures are in place and are being adhered to. PACE will continue to train and conduct site visits of municipal operations to support compliance.

Erosion Control, Permanent Water Quality Structures, and Illegal Discharge Prevention

The Keep it Clean Partners spent a significant amount of effort working within their individual communities implementing operating procedures and regulatory mechanisms needed to manage illegal discharges, active construction, and post-construction management. The Partners reviewed and refined their standard operating procedures in preparation for submitting the detail the State required in the resubmitted 2008-2013 program description.

Erosion Control Program Implementation Audit

The Keep it Clean Partners chose to hire a contractor to audit municipal construction inspectors to be sure that individual Partners are implementing the requirements that surround the MS4 construction program oversight. The contractor made individual Partner observations, as well as general KICP recommendations. The communities will individually respond to the suggestions. In 2010, KICP will conduct an audit to determine if the requirements are being met.

Erosion Control Training

The KICP offered one recertification class, which was attended by 33 individuals and 1 Colorado Department of Transportation erosion control certification class, which was attended by 35 individuals. In 2009, 19 individuals attended a class on managing projects in waterways. In 2011, a certification and recertification class will be offered.

Illegal Discharge and Detection

The Partners continue to respond to and track responses to illicit discharges in their communities. The data is entered into a shared database so the Partners can jointly evaluate the sectors in need of education and outreach.

KICP's Approach to 2010

As the KICP Partners enter the eighth year of implementing the shared and common programs for the benefit of all of the Partners, they continue to fine-tune the outreach their shared programs offer and continue to identify programs that will ensure compliance with the stormwater discharge permit and improve local water quality.

One Partner has asked that the KICP Partners focus their shared outreach on regionally operating businesses than to the current fixed facilities approach. This will be discussed as the budget for 2011 is developed. As the budget is developed for 2011, plans for the routine fourth year program evaluation will also be discussed.

In 2010, the KICP campaign consisting of H₂O Jo and Flo will be refreshed. The campaign was developed in 2004 and has been utilized in various forms of media. A survey will be conducted of the campaign's look and messaging focusing in both message penetration and brand recognition. The survey results will inform the campaign's next steps.

The Partners have begun implementing the 2010 KICP plan, which continues to be dominated by KICP contract personal conducting outreach. The KICP continues to educate:

- ◆ School children
- ◆ Adults
- ◆ Businesses
- ◆ Construction operators
- ◆ Municipal employees

This year, additional efforts are being focused on encouraging the residential community to use commercial car washes.

In addition to common and shared programs, each individual Partner will continue to be responsible for the following tasks in 2010:

- ◆ Implement the individual ordinances adopted in 2004 and related procedures, such as:
 - Review and track erosion control plans and proposed permanent water quality structures.
 - Conduct and track construction and post-construction site inspections.
 - Respond to, enforce, and track all illegal discharges.
- ◆ Maintain storm drainage outfall maps.
- ◆ Ensure municipal operations are in compliance with stormwater regulations.
- ◆ Participate in the ongoing implementation of the 2008-2013 KICP Plan.
- ◆ Track the development of the state E. coli total maximum daily load (TMDL) process, which may require communities to control bacterial pollutant sources.

Future Watershed Considerations

In 2008, a report was released from the National Research Council on *Urban Stormwater Management in the United States*. The report addressed not only the challenges in managing stormwater in an urbanized environment, but it also recommended future management of all water-related permits on a watershed basis. The content of the report will guide the future work of the KICP. This report has been cited as supporting the need for the National Stormwater Rule survey, which will be used by EPA to strengthen the existing program.

Stormwater Rule

In 2009, EPA began the process of asking for stakeholder input to strengthen stormwater regulations and to establish a comprehensive program to reduce stormwater from newly developed and redeveloped sites. EPA has proposed sending out a survey to the state, local, and development communities to solicit input on the following areas including detailed information about stormwater management and control practices, local regulations, and baseline financial information:

- ◆ Expansion of the area subject to federal stormwater regulations.
- ◆ Establishment of specific requirements to control stormwater discharges from new development and redevelopment.
- ◆ Development of a single set of consistent stormwater requirements for all MS4s.

- ◆ Require MS4s to address stormwater discharges in areas of existing development through retrofitting the sewer system or drainage area with improved stormwater control measures.
- ◆ Explore specific stormwater provisions to protect sensitive areas.

EPA has proposed sending the survey out in the summer of 2010, and then taking action by November 2012, based on the results.

Effluent Limitation Guidelines for Construction Sites

This regulation will become effective on February 1, 2010, and will then be phased in over four years. After that date, all permits issued by the EPA or delegated states must incorporate the final rule requirements. CDPHE will begin discussions in July 2010 as the Colorado General Construction permit update process is initiated.

All construction sites over an acre are currently required to obtain permit coverage and must implement a range of erosion and sediment controls and pollution prevention measures. Beginning on August 1, 2011, the regulation will phase in all sites that disturb 20 or more acres of land at one time. These sites will be required to sample stormwater discharges and comply with a numeric limitation for turbidity. On February 2, 2014, the limitation will apply to all construction sites disturbing 10 or more acres of land at one time.

Specific national minimum best management practices (BMPs) will also be specified for all sites over an acre. KICP Partners plan to support the Urban Drainage and Flood Control District (UDFCD) with the adoption of these specifications in their Volume 3, which currently all KICP Partners reference through their local ordinances for construction BMP design.

Total Maximum Daily Load

On a semi-annual basis, the CDPHE Water Quality Control Division (WQCD) develops a list of impaired waters in the state, as mandated under Section 303(d) of the federal Clean Water Act. Pollutants entering the impaired water are generally controlled through numeric limits on permitted discharges, which could include wastewater treatment and/or stormwater discharges.

Three creek segments in the KICP communities have been listed as impaired for Escherichia coli, or E. coli. The following table outlines the stream segments, as well as the communities discharging to these segments:

303(d) Listed: Impaired Stream Segment	KICP Community Discharging to Segment*
Boulder Creek from 13 th Street to the confluence with South Boulder Creek	Boulder
Coal Creek from Highway 36 to Boulder Creek	Louisville
Boulder Creek from Coal Creek to St. Vrain Creek	Erie, Superior
Rock Creek in Segment 8	Superior

* Any National Pollutant Discharge Elimination System (NPDES) permittee discharging to these stream segments may be included in a TMDL process.

The municipal stormwater discharge permits include language that provide for the implementation of total maximum daily load requirements. Affected communities,

therefore, may have to meet numeric discharge standards through a TMDL process associated with their discharge permit(s).

The implication of an E. coli TMDL for any of these communities is uncertain at this time; however, if numeric standard of 126 cfu/100ml is established, it may be difficult, if not cost-prohibitive, to meet such a standard. KICP may be able to assist in the regional effort of TMDL tasks. For 2010, no items or tasks have been identified but KICP will continue to monitor the E. coli TMDL and evaluate the potential for participation.

Temperature Standard

In 2006, the CDPHE Water Quality Control Division (WQCD) proposed changes to statewide water temperature standards. A more restrictive and complex set of temperature standards were adopted in the Colorado Basic Standards and Methodologies for Surface Water. The WQCD will evaluate receiving water temperature data and determine whether discharges, such as treated effluent from wastewater treatment facilities, should have a lower effluent temperature to protect aquatic life (recognizing that temperature variations result from natural conditions and irreversible human impacts).

Nutrient Standards

In 2002, the WQCD released their Nutrient Criteria Development Plan for the development and implementation of nutrient criteria in Colorado. They have been working towards developing nutrient criteria for nitrogen, phosphorus, and chlorophyll a. Algae, measured as chlorophyll a, has been identified as the primary indicator for evaluating the health of lakes and reservoirs. The WQCD is also evaluating the relationship between chlorophyll a and nitrogen and phosphorus concentrations. For streams and rivers, the WQCD is focusing on controlling nitrogen and/or phosphorus contributions based on the health of the aquatic community, specifically macro invertebrates. The WQCD will propose statewide nutrient criteria to the Water Quality Control Commission at the 2010 Basic Standards Hearing. Nutrient criteria development work group meetings continued through 2010 and into early 2011 in preparation for the June 2011 proposal to the Water Quality Control Commission.

Aquatic Life Standards

The WQCD initiated the Aquatic Life Work Group in 2000 as part of their process of developing aquatic life water quality standards, which are expressed as biocriteria. The primary function of biocriteria is to describe the biological condition that is necessary to support the designated use of the water body, including lakes, reservoirs, rivers, and streams. Bioassessment tools are being developed to quantify the biological condition of an aquatic community. The primary intent of biocriteria is not to set a regulatory standard, but instead to be used to detect impairment in aquatic life and identify probable causes of the impairment. To date, the approach to developing biocriteria has focused on using macro invertebrate population data, habitat assessments (physical features), and fish population data. One of the main challenges in developing biocriteria is determining “expected conditions.” The expected condition will reflect a range of biological characteristics that are considered “normal” or “healthy” for a waterbody. Impairment of a waterbody will be based on the comparison of the expected condition to the actual condition, based on collected data. The Basic Standards Rulemaking Hearing is scheduled for June 2010.

Airborne contaminants

The U.S. Geological Survey’s National Water Quality Assessment Program included the first comprehensive evaluation of waterways in the U.S. The study identified airborne

contaminants as a source of hydrocarbon pollutants in surface water, stormwater, and groundwater. The burning of fossil fuels likely formed these contaminants. EPA has indicated that these contaminants will be regulated in the future.

Sediment

CDPHE has adopted guidance concerning sediment deposition impacts to aquatic life in streams and rivers. The guidance document, "Provisional Implementation Guidance for Determining Sediment Deposition Impacts to Aquatic Life in Streams and Rivers," focuses on the application of "expected conditions" with respect to aquatic life classification, nutrient criteria, and narrative sediment standard issues. The Water Quality Control Commission (WQCC) is currently developing sediment regulations, which are expected to be completed by 2011.

Effluent Limitation Guidelines

On November 28, 2008, a proposed rule regulating stormwater was added to the *Federal Register* (Volume 73, Number 230, pages 72561-72614). This rule proposes regulations that would establish technology-based effluent limitations guidelines and new source performance standards for the construction and development industry. EPA expects that the requirements of the effluent guidelines will be implemented over time, as states revise their general permits. EPA expects full implementation within five years of the effective date of the final rule, currently required to be promulgated in December 2009, which would mean the rule would be effective in all states by 2014.

Presence of Invasive Species in Colorado

In 2008, Quagga and Zebra Mussels were detected in Colorado reservoirs, including Carter Lake, upstream of Boulder Reservoir. The State of Colorado initiated an extensive monitoring and education program related to the invasive species.

Climate Change

One of the biggest factors impacting water quality is the modification of stream flows and groundwater levels. These modifications are due in a large part to increased runoff from urban areas and to diversions and return flows from agricultural and municipal water demands. This hydrologic modification of the natural stream system leaves little water in the creek to provide dilution of pollutants, or to maintain habitat and the natural stream channel. These hydrologic conditions may be further affected by climate change.

In a recent study completed by the University of Colorado for the City of Boulder's Water Resources Workgroup, researchers predict dryer winters and wetter springs with an earlier mountain snow runoff period. These conditions could lead to depleted stream flows in the winter, threatening aquatic life and resulting in more frequent and severe flooding in the spring, which could lead to accelerated stream bank erosion and degradation of aquatic and riparian habitat. Both conditions could lead to degraded water quality.

2009 Activities

MINIMUM CONTROL MEASURES

The following is a summary
of
activities implemented under
the Keep it Clean Plan
for each of the
Six Minimum Control Measures (MCMs)

MCM 1 - Public Education and Outreach

Permit Requirement

The 2008-2013 permit requires:

The permittee must implement a public education program in an effort to promote behavior change by the public to reduce water quality impacts associated with pollutants in stormwater runoff and illicit discharges that includes:

- 1) Targeting specific pollutants and pollutant sources determined by the permittee to be impacting, or to have the potential to impact, the beneficial uses of receiving waters;*
- 2) Conducting outreach activities about the impacts of stormwater discharges on water bodies and the steps that the public can take to reduce pollutants in stormwater runoff; and*
- 3) Informing businesses and the general public of the municipality's prohibitions against and/or the water quality impacts associated with illegal discharges and improper disposal of waste.*

Program Objective

Getting the Word Out - Public Education: Individuals play a key role in reducing stormwater impacts in their day-to-day activities. To successfully achieve water quality goals, a public education program must first educate the public on the extent and nature of the problems associated with urban runoff. Next, the public must be instructed on what they can do to help solve the problem; and finally, a successful program must provide opportunities for hands-on activities.

Program Implementation

The Keep it Clean Partners contract with the City of Boulder to provide the Keep it Clean education programs, which includes activities required under MCM 1 and MCM 2 for all Keep it Clean Partner communities. The Keep it Clean education staff, with direction from the Keep it Clean Education Workgroup and input from PACE staff, implemented programs outlined in the Keep it Clean Plan. Individual Partners are responsible for certain program elements, including the continued distribution of brochures and directing their citizens to KICP website. The KICP Education Program conducts school-based education and community-based outreach programs to educate teachers, students, and families (adults) on ways to change their behavior to reduce water pollutants. The entire KICP Stormwater Education Program's annual report is available at www.KeepitCleanPartnership.org. The following is a summary of that report.

School-Based Education Programs

Operation Water Festival

Annually, two daylong events with hands-on water quality activities will be conducted. The festival is provided for Boulder Valley School District (BVSD) and St. Vrain Valley School District (SVVSD) students.

H₂O Jo and Flo reappeared in 2009 as hosts for the BVSD and SVVSD water festivals with their message, "Keep it clean, 'cause we're all downstream!"

A total of 1,074 BVSD 4th and 5th grade students and their teachers from 45 classrooms in 18 BVSD schools attended the 17th annual Children's Water Festival held at the University of Colorado (CU) campus on May 20, 2009. Sponsors included the Northern Colorado Conservancy District, CU's Office of Community Relations, and the U.S. Bureau of Reclamation.

A total of 748 SVVSD 5th grade students and their teachers from 30 classrooms in 12 SVVSD schools attended the Longmont Children's Water Festival held at the Raintree Conference Center in Longmont on May 7, 2009. Additional sponsors included the City of Longmont, the U.S. Bureau of Reclamation, and the Northern Colorado Water Conservancy District.

This year marked the fourth year of the pre-festival Operation Water Festival Program. The materials focus on fundamental water awareness, conservation, pollution, and flooding designed for 4th and 5th graders. The program, Operation Water Festival, includes a complete teacher's packet featuring teacher's guides, student worksheets, and flashcards on each water topic.

A key benefit of the Operation Water Festival materials is the take-home water agent book. Students are encouraged to work with family members to complete the assignments. As a result, parents and siblings learn about water protection and conservation.

All BVSD and SVVSD classes attending the Children's Water Festival participated in the Water Ambassador Program.

School-Based Education Programs

Annually, a minimum of 60 classroom and/or field-based programs will be offered to BVSD and SVVSD teachers and students.

The Get to Know Your H₂O postcard featuring a school-based graphic of H₂O Jo, brief description, and link to the website with classroom programs was distributed to all K-5 teachers and 6-12 science teachers in BVSD and SVVSD, as well as to local private schools. The postcard was also sent to teachers via an email attachment. Keep it Clean Partnership education staff facilitated 106 stormwater education programs and reached a total of 3,108 BVSD and SVVSD students in 2009.

In addition to providing classroom and field-based programs, Keep it Clean Partnership staff provided training and loan equipment/resources to teachers wishing to teach programs in their own classrooms. In 2009, 26 teachers provided programs for 511 students in 18 BVSD and SVVSD classrooms.

This year marked another successful year partnering with local environmental organizations to host the Science is Everywhere Program. This year's program included hosting a water education table at Loma Linda Elementary School in Longmont, where 100 students participated in a stormwater pollution prevention program. The following week, many of these same students, along with their families (siblings and grandparents included) attended the Science is Everywhere night at the National Center for Atmospheric Research (NCAR) in Boulder. A total of 75 people attended this event where students taught families lessons learned at the water quality station and other stations they visited the prior week.

Teacher Workshop

Annually, one training will be offered to BVSD and SVVSD K-12 teachers on the use of KICP-sponsored and other water quality curriculum.

The Watershed Resource Guide contains background information and activities related to the Boulder Creek and St. Vrain Creek watersheds. Watershed and Project WET (Water Education for Teachers) materials are used as the basis for the annual Get to Know Your H₂O Teacher Training. All BVSD and SVVSD K-5 grade teachers and 6th-12th grade science teachers received an email advertising the free two-day training.

A total of 15 educators participated in this workshop in August 2009. Together, these educators will reach over 927 students in the 2009-2010 school year.

Community-Based Outreach Programs**Outreach Booth**

Provides stormwater pollution prevention materials to the public. Annually, a staffed booth travels to at least one special event in each of the partner communities.

Utilizing graphics and messages created for the “Keep it Clean” water quality campaign, a special events outreach booth was developed. The booth includes hands-on, portable, engaging activities that serve as tools for community members to learn about stormwater pollution and recognize how their behaviors can affect water quality. KICP staff provides citizens with an opportunity to discuss, provide input on, and learn about stormwater issues.

The booth reached 4,634 individuals at a minimum of one large-scale community event.

Festivals or Special Events

Partner	Date of Event	Event	Number of Visitors
Boulder	April 14, 2009	CU Internship Fair	40
	April 21, 2009	Earth Day Whole Foods	56
	April 22, 2009	Bear Creek Earth Day	40
	April 24, 2009	Colorado Children’s Day	650
	May 16, 2009	Community Cleanup	20
	May 31, 2009	B-360 Bike Ride	620
	July 15, 2009	Farmer’s Market	102
	August 10, 2009	CU RA Resource Fair	200
	September 9, 2009	Farmer’s Market	60
Longmont	March 14, 2009	Science is Everywhere Family Night	75
	March 19, 2009	NGLA	50
	April 25, 2009	Arbor Day Event	171
	April 28, 2009	St. Vrain MESA Summer program	10
	July 12, 2009	Rhythm on the River	190
	September 11, 2009	St. Vrain MESA Advisor	80
Boulder County	April 16, 2009	IBM Earth Day Fair	40
	June 11, 2009	Rhythm on the Rails	65
Louisville	June 6, 2009	Taste of Louisville	308
Erie	June 20, 2009	Bark in the Park	122
Superior	September 13, 2009	Chili Cook-off	104
Total			3,003

The H₂O Jo mascot attended 10 school and community events in the Keep it Clean communities and an additional 3 events throughout the state of Colorado.

Speakers Program

Staff and expert speakers attend events in each of the KICP communities to present water quality information to various community groups.

The Speakers Program includes a list of speakers available to present water quality information at local events. A program overview, the presentation options, and a list of speakers are available at www.KeepitCleanPartnership.org. KICP staff provided 13 presentations and reached 191 people.

Speaking Events

Date	Group	Number of Participants	Location
1/21/09	CU Sewall Hall	5	Boulder
3/4/09	CU Earth Ed	15	Boulder
3/20/09	Paul Lander's CU Class	20	Boulder
6/18/09	NIST	16	Boulder
6/8/09	Adult Scout Masters	8	Longmont
7/21/09	Quail Crossing HOA	3	Longmont
3/4/09	Nederland Area Seniors	35	Boulder County
12/9/09	Macroinvertebrate class	15	Boulder County
10/7/09	South Boulder Creek Restoration Project	39	Boulder County
7/9/09	Louisville Library Program	9	Louisville
2/17/09	Arapahoe Ridge HOA	5	Erie
7/22/09	Erie Rotary Club	12	Superior
1/27/09	Rock Creek HOA	9	Superior
Total		191	

Watershed Stewardship Program

Trains volunteers to be neighborhood water quality advocates. Staff will offer programs in each KICP community.

The Watershed Stewardship Program is a neighborhood-based behavior change and outreach program. The goal is to engage residents in water protection activities so they reduce stormwater pollution in their community. To accomplish this goal, the program includes two main components:

- ◆ **Implement the Empowerment Institute Livable Neighborhood Water Stewardship Program** Host a meeting or series of meetings to involve community members in learning about local water quality issues and participating in actions that encourage behavior changes.
- ◆ **Measurable Results** Water quality action logs and surveys are used to gain quantifiable feedback on the behaviors taken and the environmental impacts. In 2009, a total of 5 people representing 5 households participated in the project and completed water protection/conservation actions.

The Keep it Clean Partnership Education and Outreach workgroup determine in 2009 that the return on investment for this program was not achieving the desired goals. It was determined that the amount of staff time spent on recruitment efforts was not generating the amount of interested parties required to warrant the effort. The decision was made to still offer this program, if individuals requested it, but active recruitment would cease.

Watershed Stewardship Groups

Partner	Date of Event	Name of Group	Number of Participants
Boulder	September 30,2009	Boulder Group	1
Longmont	June 15, 2009	Longmont Senior Center	0
Longmont	September 2, 2009	Longmont Rec Center	2
Boulder County	September 30, 2009	Boulder County Group	1
Louisville	October 5, 2009	Louisville Public Library	0
Erie	October 7, 2009	Erie Community Center	1
Superior	October 1, 2009	Superior Town Hall	0
Total			5

Stream Teams

Provides community volunteers the opportunity to be involved in water protection activities by providing resources and training for creek cleanups, water quality monitoring, and more. Staff will support teams in each KICP community.

KICP education staff continues to meet and consult with program partners, the United States Geological Survey (USGS), and the Boulder Creek Watershed Initiative (BCWI) to develop program resources and recruit and manage volunteers. The StreamTeam Program was promoted to the general public via press releases and direct mail/email to target groups. To date, 33 groups are enrolled as active StreamTeams. Keep it Clean Partnership staff provided training on how to perform safe creek clean up activities and, where appropriate, how to use sampling equipment, which is loaned free of charge to all interested parties.

Stream Teams

Partner	Number of Groups	Number of Participants	Bags of Trash Collected
Boulder	16	173	86
Longmont	8	157	37
Boulder County	3	17	0
Louisville	3	23	6
Erie	1	6	4
Superior	2	6	2
Total	33	382	135

Informational and Promotional Materials

Brochures, fact sheets, and product give-aways are produced, as needed, for distribution at school and community events. At a minimum, distribution will take place annually at special events in each partner community. Distribution also takes place through the school-based education programs and within public municipal areas.

Distribution of the Keep it Clean general residential brochure continued. A total of 23,345 Spanish and English language brochures were distributed throughout KICP communities at school, community, business outreach, and residential direct mail programs. The City of Boulder produced a 1/3-page version of the Keep it Clean brochure for inclusion in utility bill inserts. This brochure featured information in both Spanish and English and was mailed to 29,000 Boulder residents. The City of Longmont included a quarter page on stormwater quality in a newsletter, and 42,000 copies were printed. In total, the KICP distributed 151,614 brochures and flyers.

This year, KICP staff developed and distributed the new “Get Involved” brochure as a key recruitment tool for StreamTeams, Storm Drain Marking and Speakers Programs.

Campaign promotional materials, as take-home components to the Get to Know school and community programs are distributed to bring the campaign message into Keep it Clean Partnership community homes, businesses, and schools. KICP distributed 2,058 magnets; 4,553 tattoos; 9,847 stickers; 3,621 *Adventures of H₂O Jo and Flo* activity books; and 1,233 place mats.

Informational and Promotional Material Distribution

Partner	Number of households	Number of brochures and campaign materials distributed in 2009
Boulder	39,596	48,948
Longmont	26,667	82,981
Boulder County	8,900	4,192
Louisville	7,216	7,875
Erie	3,750	7,078
Superior	4,500	540
Total	90,629	151,614

Pledge Program

In 2009, though not a permit requirement, the education staff coordinated with the PACE team to outline a community and school-based pledge program, including goals, content, and a work plan. PACE and education staff, with the assistance of a social marketing expert, developed a pledge program concept paper. KICP education staff and PACE hired a graphic designer to develop key graphics pieces for a pilot program, which was launched in the spring of 2009.

The pledge was implemented in school programs and at outreach booth events. The pledge program addresses both the state's and KICP's goal of thoughtfully incorporating community-based social marketing techniques into each program area.

Both the community-based and school-based Keep it Clean Pledge Program pilot season was initiated in late spring of 2009 with the goal of increasing the number of Keep it Clean Partnership community residents who take action to reduce the amount of stormwater pollution that washes into local streams.

The community/residential pledge was offered at each of the KICP outreach booth events, inviting community members to pledge to mark a local storm drain and hang door hangers in the same area. In the 2009 pilot program, a total of 88 people pledged to mark 209 storm drains and hang 299 door hangers. Through email and phone communication, staff confirmed that pledge program participants marked 131 storm drains.

The school-based pledge program, offered through the school education program, invited students and their families to selected and pledge to specific water protection actions at home. Participating families select from a list of seven actions. A total of 229 families pledged to take a total of 1,381 water protection actions.

In addition, to offering the pledge during classroom presentations, the pledge was offered during the Water Festival programs. Based on feedback from Operation Water Festival teachers, it was indicated that the pledge program was too much of a time commitment so the Keep it Clean Pledge Program will not be offered as part of Operation Water Festival in 2010. The focus will instead be on school-based education programs.

Each pledge program participant who chose to provide an email address received the first Keep it Clean newsletter on November 10, 2009. As of December 31, 2009, 85 pledge program participants provided an email address. The detailed newsletter report indicates that of the 85 attempted emails, 70 were successfully delivered. Of these, 34.3% opened the email, and 2.9% clicked on a web link included in the newsletter. In addition, one person requested a speakers program in response to the newsletter.

Tributary Signage and Storm Drain Marking

Storm Drain Marking

In the first permit term, 25% of all KICP storm drains were marked. KICP education staff will maintain equipment and support volunteer groups to mark an additional 3% of the storm drains in each KICP community. Where appropriate, program participants may also post door hangers that explain the stormwater pollution prevention message.

Keep it Clean education staff facilitated storm drain stenciling activities with over 358 youth and citizens in Keep it Clean communities. Keep it Clean education staff used curb markers to identify 743 storm drains, exceeding the goal of 3% marked drains. In addition, the Town of Erie installed 170 stormwater lids with the ‘no dumping’ message imprinted on them. A total of 913 drains were marked.

Storm Drain Marking Program volunteers distributed 2,338 fish door hangers as part of the marking program in neighborhoods. The brightly colored, fish-shaped door hangers, available in both English and Spanish, were distributed to property owners in the same block that the storm drains were marked. The door hangers included information about the Storm Drain Marking Program and provided tips on ways to protect and conserve local waters. The door hanger also lists the www.KeepitCleanPartnership.org website and the Keep it Clean spill hotline (303-441-4444).

Volunteers were recruited via a flyer to local community groups, the cities of Boulder and Longmont community service programs, and through school and scout groups.

Storm Drain Marking

Partner	Total Number of Storm Drains	2003	2004	2005	2006	2007	2008	2009	Percent of Total Marked in 2009
Boulder	4,180	209	439	402	264	402	228	440	10.5%
Longmont	1,820	99	95	115	170	193	83	115	6.3%
Boulder County	225	82	40	31	23	50	36	15	6.7%
Louisville	600	43	137	31	31	83	26	58	9.7%
Erie	685	62	17	162	144	70	42	253	36.9%
Superior	300	22	20	74	20	30	36	32	10.7%
Total	7,810	517	748	815	652	828	451	913	12.0%

Tributary Signage

A minimum of 5 tributary signs are posted within each of the KICP Partner communities in prominent locations.

In 2003, tributary signs were designed and installed along major intersection marking significant waterways, with the intent of increasing public awareness of local water resources. The sign caption reads, “Keep it clean, ‘cause we’re all downstream!” and includes the local creek name.

In 2009, Longmont purchased three additional signs, which will be installed near Lefthand Creek in 2010. Louisville also purchased signs for Coal Creek that were installed along the on bike trail where Coal Creek crosses HWY 42.

In total, over 372,504 cars travel past these signs each day.

Daily Vehicle Miles passing Tributary Signs

Partner	Number of daily vehicles traveled (DVT) for streets with tributary signs installed
Boulder	227,592
Longmont	59,371
Boulder County	22,144
Louisville	22,297
Erie	4,700
Superior	36,400
Total	372,504

Reaching Diverse Audiences

Businesses, teachers, students, and residents of diverse backgrounds are reached through the programs mentioned above. In addition, the KICP program has published and distributed two brochures that were translated into Spanish.

The Spanish vehicle maintenance and general KICP brochures continue to be distributed.

Illicit Discharge Education to Business and the Public

Partners for a Clean Environment (PACE) program reaches restaurants, vehicle service facilities, and other businesses that have the potential to adversely impact water quality. Outreach is performed either by direct personal contact, educational materials, or web resources.

The KICP Education Program informs residents of the impact of improper disposal of wastes. This is done through direct personal contact, educational materials, or web resources.

The PACE Program conducts visits and observations with commercial business. The point of contact is to educate on proper practices so water quality is not adversely affected. For details on the business outreach effort, see the minimum control measure 3 section.

The KICP Education Program continued personal contact to educate the public on the impact of daily activities on water quality. This is conveyed during event booth and school interactions.

2010 Focus

During the development of the 2008-2013 KICP programs, a stronger emphasis on adult outreach was outlined. The KICP Stormwater Education Program has realized that the development of a communications plan is instrumental in effectively recruiting for the predominately adult-focused Stream Team, Speaker, and Watershed Stewardship Programs. In 2009, the Get Involved brochure, focusing on these programs, was created and distributed. In 2010, staff will focus efforts on volunteer management, retainment and appreciation. In addition, staff will identify those more deeply engaged Stream Team volunteers. For example, they will promote the Speakers Program to Stream Team members in hopes that they will facilitate speaking events. In addition, they will be invited to volunteer at KICP outreach events, as this may engage them in water protection outreach on a deeper level.

The KICP Pledge Program, which was developed as an extension of the outreach booth and school programs will be evaluated and continued in 2010.

In 2010, KICP will also work with the Boulder County Youth Corps to provide each of the KICP communities with stormwater pollution prevention outreach, stream evaluation, and stream restoration.

In 2009, a survey was sent out to several education and outreach programs in Colorado and nationwide to determine areas where KICP programs could improve or change strategy. In 2010, those surveys will be analyzed and used to inform future KICP program development.

Refreshing the Keep it Clean Campaign is a priority for 2010. Under the direction of the Education Coordinator and in partnership with PACE and the KICP Coordinator, the Education staff will work with the original creators of the Keep it Clean campaign to develop a survey and campaign “refresh” project. Planning work will begin in early 2010 and will include the design and implementation of a community survey of target audiences and development of an action plan that will include recommendations for future Keep it Clean marketing and messaging activities.

Keep it Clean Partnership Programs in the Press

- ◆ The KICP Education Program was featured in an article in the May edition of *Municipal Sewer and Water Magazine*.
- ◆ The Stream Team Program was the focus of an article and photo caption in the “Local” section of the *Daily Camera* on September 21, 2009.
- ◆ The Water Festival Program was mentioned in a caption and in a large picture in the Local section of the *Daily Camera* on May 21, 2009.
- ◆ The Teacher Workshop was featured in an article that appeared in the *Longmont Times-Call* on July 31, 2009.

Program Changes

The neighborhood stewardship program will still be offered but not actively promoted. Resources will be allocated to developing the Youth Corps program and expanding the Speaker’s Program.

Budget

Proposed: \$131,266

Actual: \$122,047

Unexpended funds: \$13,719

Members of Workgroup

Wendi Palmer, Town of Erie

MCM 2 - Public Involvement and Participation

Permit Requirement

The 2008-2013 permit requires:

The permittee must implement a public involvement program as follows:

1) The permittee must comply with the State and local public notice requirements when implementing the CDPS Stormwater Management Programs required under this permit. Notice of all public hearings should be published in a community publication or newspaper of general circulation, to provide opportunities for public involvement that reach a majority of citizens through the notification process.

2) The permittee must provide a mechanism and process to allow the public to review and provide input on the CDPS Stormwater Management Program.

Program Objective

Promoting Public Participation: To ensure buy-in and support from the public, participation is critical. This includes providing information and seeking public input on stormwater management issues.

Program Implementation

The Keep it Clean Partners contract with the City of Boulder to provide the Keep it Clean education programs, which includes activities required under MCM 1 and MCM 2 for all Keep it Clean Partner communities. Individual Partners are responsible for certain program elements, such as directing their citizens to the Keep it Clean website. The Keep it Clean programs include participatory programs, such as storm drain stenciling and stream teams. The KICP Steering Committee agendas and minutes are posted monthly online. The entire KICP Education Program's annual report is available at www.KeepitCleanPartnership.org. The following is a summary of that report as it relates to public participation.

Public Notices

The KICP Steering Committee agendas and minutes are posted monthly online. All individual KICP Partner's meetings are publicly noticed, as required by local ordinance.

Providing a Mechanism for Public Involvement/Feedback

Either the general KICP or the KICP education phone number is listed on publications. The KICP website lists all the contact information for all Partners. Each Partner's website provides a link to the KICP website. The KICP Stormwater Management Program descriptions' document is posted on the KICP website. An outreach booth (see MCM 1) is sponsored annually in each Partner community, where program feedback and suggestions are welcomed from the public.

The public continued to navigate through the Keep it Clean Partnership background information (including the six MCMs, annual reports, and stormwater resources) and Education and Outreach Program information. The www.KeepitCleanPartnership.org website is updated frequently to include the most current project information. In addition, teachers and staff continue to use this site for program registration.

Website Viewings

Year	Average Monthly Requests	Average Monthly Distinct Hosts Served
2004	1,587	703
2005	3,363	859
2006	3,029	1,543
2007	2,653	1,380
2008	3,373	1,340
2009	3,332	1,150

All Keep it Clean Partners list the Keep it Clean website on their own communities' websites, which include:

- ◆ **Boulder County:** www.bouldercounty.org
- ◆ **Boulder:** www.boulderwater.net
- ◆ **Longmont:** www.ci.longmont.co.us
- ◆ **Louisville:** www.ci.louisville.co.us
- ◆ **Superior:** www.townofsuperior.com
- ◆ **Erie:** www.erieco.gov

Program Changes

None

Budget

Funds are identified in MCM 1

Members of Workgroup

Wendi Palmer, Town of Erie

MCM 3 - Illegal Discharge Detection and Elimination

Permit Requirement

The 2008-2013 permit requires:

The permittee must develop, implement and enforce a program to detect and eliminate illicit discharges (as defined at 61.2) into the permittee's MS4. Illicit discharges do not include discharges or flows from fire fighting activities, or other activities specifically authorized by a separate CDPS permit. The permittee must:

1) Develop and maintain a current storm sewer system map, showing the location of all municipal storm sewer outfalls and the names and location of all state waters that receive discharges from those outfalls.

2) To the extent allowable under State or local law, effectively prohibit, through ordinance or other regulatory mechanism, illicit discharges (except those identified in subparagraph 5 and 6 of this section) into the storm sewer system, and implement appropriate enforcement procedures and actions.

3) Develop, implement, and document a plan to detect and address non-stormwater discharges, including illicit discharges and illegal dumping, to the system. The plan must include the following three components: procedures for locating priority areas likely to have illicit discharges, including areas with higher likelihood of illicit connections; procedures for tracing the source of an illicit discharge; and procedures for removing the source of the discharge.

4) Develop and implement a program to train municipal staff to recognize and appropriately respond to illicit discharges observed during typical duties. The program must address who will be likely to make such observation and therefore receive training, and how staff will report observed suspected illicit discharges.

i) Specific Deadline for Renewal Permittees: Renewal Permittees must comply with the requirement of subparagraph (4) by no later than December 31, 2009.

5) Address the following categories of non-stormwater discharges or flows (i.e., illicit discharges) only if the permittee identifies them as significant contributors of pollutants to the permittee's MS4: landscape irrigation, lawn watering, diverted stream flows, irrigation return flow, rising ground waters, uncontaminated ground water infiltration (as defined at 40 CFR 35.2005(20)), uncontaminated pumped ground water, springs, flows from riparian habitats and wetlands, water line flushing, discharges from potable water sources, foundation drains, air conditioning condensation, water from crawl space pumps, footing drains, individual residential car washing, dechlorinated swimming pool discharges, and water incidental to street sweeping (including associated side walks and medians) and that is not associated with construction.

The permittee may also develop a list of occasional incidental non-stormwater discharges similar to those in the above paragraph, (e.g., non-commercial or charity car washes, etc.) that will not be addressed as illicit discharges. These non-stormwater discharges must not be reasonably expected (based on information available to the permittee) to be significant sources of pollutants to the MS4, because of either the nature of the discharges or conditions the permittee has established for allowing these discharges to the MS4 (e.g., a charity car wash with appropriate controls on frequency, proximity to sensitive water bodies, BMPs, etc.). The permittee must document in their program any local controls or conditions placed on the

discharges. The permittee must include a provision prohibiting any individual non-stormwater discharge that is determined to be contributing significant amounts of pollutants to the MS4.

6) The following sources are excluded from the prohibition against non-stormwater discharges and the requirements of subsections (2) and (3) above:

i) Discharges resulting from emergency fire fighting activities. Such discharges are specifically authorized under this permit (see Part I.A.2)

ii) Discharges specifically authorized by a separate CDPS permit.

Program Objective

Detecting and Eliminating Improper or Illegal Connections and Discharges: A cost-effective way to reduce some of the worst stormwater pollutants is to identify and eliminate illegal connections and discharges.

Program Implementation

The Keep it Clean Plan includes public and municipal employee education training, spill response, and regulatory language to control illegal discharges. In addition, public information material discusses the impacts of spills on water quality and lists a hotline for reporting illegal discharges.

The maintenance of the outfall map, the response to discharges, and enforcement is performed by the individual KICP Partners.

Outfall Map

All KICP Partners have completed their outfall maps, which are updated on an as-needed basis.

The CDPS Stormwater Management Program Description document submitted by KICP in October 2009 details the individual Partners' process for updating outfall maps.

Regulatory Mechanism

All Keep it Clean Partners have illegal discharge ordinances in place. The following table includes web links to the Partners' ordinances.

Partner	Ordinance Adopted	Web Link
Boulder	December 6, 2004	Boulder Revised Code 1981, Title 11, Chapter 5, Section 5 (b) (BRC 11-5-5b)
Longmont	January 12, 2005 June 2009 (revised)	Chapter 14.26, Stormwater Illicit Discharges and Permit Requirements
Boulder County	September 13, 2005	Ordinance no. 2005-1, Ordinance Concerning Illicit Stormwater Discharge
Louisville	December 21, 2004	Title 13, Water/Sewer, Chapter 13.36
Erie	November 9, 2004	Title 8, Chapter 4, Illicit Discharges and Storm Water Quality Permit Requirements
Superior	December 13, 2004	Chapter 11, Article IV

Illicit Discharge Detection and Elimination Plan

Each KICP Partner has developed and is implementing a plan that addresses illicit discharges and illegal dumping to their storm drainage systems. The plans include the following three components: procedures for locating priority areas likely to have illicit discharges, procedures for tracing the source of an illicit discharge, and procedures for removing the source of the discharge. In addition, Boulder County's Partners for a Clean Environment (PACE) Program assists in identifying illicit and threatened discharges. They educate the offender and refer the information to the enforcing community. Discharges that are unknown or hazardous in nature are responded to by the local municipal fire department with assistance from the County's Environmental Emergency Response Team.

The CDPS Stormwater Management Program Description document submitted by KICP in October 2008 details the individual Partners description of plans and procedures in place for locating, tracing, and removing illicit discharges.

The Keep it Clean Partners share an illegal discharge incident database, hosted on the www.KeepitCleanPartnership.org website. The Boulder County Environmental Emergency Response Team (EERT), which responds to hazardous material and other spills, contributes data to the database as well.

Illicit Discharge Response

Partner	Responses	Enforcement Actions
Boulder	17	8 verbal, 2 written, 6 PACE, 1 fine
Longmont	37	17 verbal, 15 written, 1 fines, 4 clean up
Boulder County	9	5 verbal, 4 written
Louisville	3	1 written, 2 fines
Erie	5	3 verbal, 2 written
Superior	2	1 verbal, 1 written
Total Responses	73	

Illicit Discharge Education to Businesses

Partner for a Clean Environment (PACE) program reaches restaurants, vehicle service facilities, and other businesses that have the potential to adversely impact water quality. Outreach is performed either by direct personal contact, educational materials, or web resources.

The Keep it Clean Partners contract with the Boulder County Partners for a Clean Environment (PACE) Program to provide stormwater pollution prevention education and materials to businesses operating in the Keep it Clean communities. Major work elements performed by PACE in 2008 for the KICP are outlined below. For more details, the complete PACE Annual Report is available online at www.pacepartners.com.

About PACE

PACE offers a pollution prevention certification program to various business sectors and has expanded outreach efforts beyond the certification program. PACE services are free-of-charge to businesses.

The five program areas implemented to address business activities with stormwater impacts are:

1. Continued Outreach to Existing Sectors
2. Outreach to New Sectors
3. PACE Allies
4. One-on-One Training
5. Beyond PACE

Annually, the Keep it Clean Partners assign priority to these programs for their communities. Based on these priority rankings, each KICP community receives a customized scope of work. Each of these programs is described below, along with the results achieved in 2009.

Continued Outreach to Existing Sectors/PACE Certification

For over 14 years, PACE has delivered educational outreach on a range of topics, including energy efficiency, water conservation, and resource management to businesses in Boulder County. For the past seven years, PACE has included stormwater protection messages in its outreach to restaurants, auto repair facilities, and retail businesses in support of the KICP. While the majority of the businesses in these sectors have been contacted by PACE, repeated visits are typically necessary to counteract such factors as employee turnover and simple apathy.

PACE conducted site visits, which provided one-on-one technical assistance to educate businesses, identify stormwater impacts, and identify solutions.

Existing Sector Outreach

Partner	Priority	Contacts per Contract	Total Actual Contacts
Boulder	3	40	149
Longmont	1	71	79
Boulder County	1	6	6
Louisville	1	5	7
Erie	1	4	5
Superior	1	3	4
Total		129	250

New Sector Outreach

PACE provides stormwater outreach to businesses that are not currently included in PACE's existing certification program. These business sectors included commercial building maintenance, facility managers, pressure washers, private golf courses, do-it-yourself auto parts stores, and equipment rental stores.

PACE developed stormwater pollution prevention best management practices (BMPs) and outreach material for gas stations and carwashes. In 2009, their activities were surveyed and signage thanking patrons for using a commercial carwash was developed.

PACE distributed 550 brochures to 7 rental stores in the KICP communities.

New Sector Outreach

Partner	Priority	Contacts per Contract	Total Actual Contacts
Boulder	4	7	7
Longmont	3	26	26
Boulder County	3	3	3
Louisville	3	3	4
Erie	3	2	2
Superior	3	1	1
Total		42	43

PACE Allies

The PACE Allies program was developed as a mechanism for working with service providers that do not fit the traditional PACE model of businesses – of being in a fixed location. Service providers such as mobile cleaners and landscape maintenance companies can affect a business’s ability to comply with stormwater ordinances. Certifying these service providers will allow PACE to present businesses with a list of service providers that understand and are able to follow stormwater BMPs.

Pressure Washers

- Online training and test completed and posted on the BCPH website.
- Three pressure washers completed the training and exam and are now recognized as PACE Allies.
- Five municipal employees have taken the training and passed the test.
- PACE shared the training module with the City of Denver’s Environmental Health Division, which plans to post a version on their website.
- Letters explaining the training and certification were sent to 45 pressure-washing businesses.

Landscapers

- The Landscape Maintenance criteria were presented to six companies.

One-on-One Training

Property managers can often have a greater impact on stormwater quality at a commercial area than the individual tenants. Property managers are typically responsible for the cleaning of parking areas and building exteriors, providing and maintaining dumpsters, and servicing HVAC equipment. PACE inspected a total of 38 commercial facilities in the KICP jurisdictions and identified a number of threatened stormwater discharges. PACE documented these threats and provided information packages – including photographs and descriptions of the threats, resource sheets detailing proper BMPs, and equipment catalogs – to the appropriate property managers. Individual follow-up took place with 14% of the property managers contacted.

One-on-One Training

Partner	Priority	Contacts per Contract	Total Actual Contacts
Boulder	2	15	15
Longmont	2	13	14
Boulder County	2	4	2
Louisville	2	3	3
Erie	2	2	2
Superior	2	2	2
Total		39	38

Beyond PACE Outreach

Activities that negatively impact stormwater quality are frequently observed in non-PACE sectors. The hours provided by the KICP Partners allow PACE to respond to these incidents and provide educational outreach on regulations and BMPs. The outreach was conducted at the request of a KICP community or when observed by PACE staff when working in the field.

PACE staff documented the incidents and forwarded the information to the appropriate KICP community personnel. At the end of the 3rd quarter, PACE notifies the Keep it Clean Partners with remaining hours and asks that they identify specific geographic business areas to be targeted by PACE for outreach.

Beyond PACE Outreach

Partner	Priority	Hours per Contract	Total Actual Hours
Boulder	1	80	84
Longmont	4	84	86.5
Boulder County	4	5	5
Louisville	4	4	5
Erie	4	2	2
Superior	4	3	3
Total		178	185.5

Municipal Staff Education

PACE provides yearly and as-requested training to KICP Partners' municipal staff on observing and reporting illicit discharges. This training is provided to field personnel during classroom and/or tailgate sessions.

Number of Employees Trained per Municipality and Department

Partner	Fleets	Public Works/ Streets	Parks/ Golf	Facility Maintenance	Fire Dept	WWTP and Contractors	Total
Boulder		5	51	5	15		76
Longmont			36			9	45
Boulder County			36				36
Louisville		12	7				19
Erie			5				5
Superior		1	1			3	5
Total		18	136	5	15	12	186

Household Hazardous Waste (HHW) Disposal Program

Though not a permit requirement, all of the Keep it Clean Partners signed a five-year intergovernmental agreement to participate in the countywide Household Hazardous Waste (HHW) Program. The shared cost for implementing the HHW Program is separate from the KICP Program, and therefore is not included in the MCM's budget.

Program Changes

None

Budget

Proposed: \$62,345

Actual: \$65,105

Unexpended funds: \$1,726

The PACE contract was drafted after the budget was adopted and monies were allocated from MCM 6 work to MCM 3.

Members of Workgroup

Kathryne Marko, City of Longmont

Ken Mason, City of Louisville

Donna Scott, City of Boulder

Cal Youngberg, City of Longmont

MCM 4 - Construction Site Stormwater Runoff Control

Permit Requirement

The 2008-2013 permit requires:

The permittee must:

1) Develop, implement, and enforce a program to reduce pollutants in any stormwater runoff, and to reduce pollutants in, or prevent when required in accordance with I.B.3, non-stormwater discharges that have the potential to result in water quality impacts (e.g., construction dewatering, wash water, etc.), to the MS4 from construction activities that result in a land disturbance of one or more acres. Reduction of pollutants in discharges from construction activity disturbing less than one acre must be included in the program if that construction activity is part of a larger common plan of development or sale that would disturb one or more acres. If the Division waives requirements for stormwater discharges associated with a small construction activity in accordance with 61.3(2)(f)(ii)(B) (the "R-Factor" waiver), the permittee is not required to develop, implement, and/ or enforce its program to reduce pollutant discharges from such a site.

2) Develop and implement the program to assure adequate design, implementation, and maintenance of BMP's at construction sites within the MS4 to reduce pollutant discharges and protect water quality. The program must include, at a minimum, the development, implementation, and documentation of:

i) Program Requirements, including:

A) An ordinance or other regulatory mechanism to require erosion and sediment controls, as well as sanctions and procedures adequate to ensure compliance, to the extent allowable under State or local law.

B) Requirements for construction site operators to implement appropriate erosion and sediment control BMP's.

C) Requirements for construction site operators to implement BMP's to control waste such as discarded building materials, concrete truck washout, chemicals, litter, sanitary waste, and other non-stormwater discharges including construction dewatering and wash water, at the construction site that may cause adverse impacts to water quality.

ii) Compliance Assessment, including:

A) Procedures for site plan review which incorporate consideration of potential water quality impacts.

B) Procedures for construction site compliance assessment, including

1) Site inspections; and

2) Receipt and consideration of information submitted by the public.

iii) Compliance Assurance, including:

A) Procedures for enforcement of control measures that includes documented procedures for response to violations of the permittee's program requirements. Procedures must include specific processes and sanctions adequate to minimize the

occurrence of, and obtain compliance from, chronic and recalcitrant violators of control measures.

1) Specific Deadline for Renewal Permittees: Renewal Permittees must comply with the requirement of subparagraph

(A) to develop, document and implement response procedures that specifically address chronic and recalcitrant violators by no later than December 31, 2009.

B) An education and training program for municipalities, their representatives and/or construction contractors. At a minimum, the program must include an information program for construction site operators unfamiliar with the reviewing authority's regulatory requirements.

Program Objective

Controlling Construction Site Runoff: Effective construction site pollution prevention can dramatically reduce sediment loading to stream ecosystems. An effective erosion control program must include adequate ordinance language, effective inspection and enforcement, and appropriate development and construction standards.

Program Implementation

The Keep it Clean Plan includes all of the previously mentioned components. In addition, the Keep it Clean Plan includes contractor training and a certification program. These program elements ensure consistent countywide education and minimum standards.

Regulatory Mechanism

All Keep it Clean Partners have construction ordinances in place. The following table includes web links to the Partners' ordinances.

Partner	Ordinance Adopted	Web Link
Boulder	December 6, 2004	Boulder Revised Code 1981, Title 11, Chapter 5, Section 5 (b) (BRC 11-5-5b)
Longmont	January 12, 2005 June 2009 (revised)	Chapter 14.26, Stormwater Illicit Discharges and Permit Requirements
Boulder County	August 11, 2005	Article 7, Development Standards
Louisville	December 21, 2004	Title 13, Water/Sewer, Chapter 13.36
Erie	November 9, 2004	Title 8, Chapter 4, Illicit Discharges and Storm Water Quality Permit Requirements
Superior	December 13, 2004	Chapter 11, Article IV

Requirements for Construction Site Operators to Implement Appropriate Erosion Control BMPs

All KICP Partners' ordinances require that stormwater management plans meet the requirements of the CDPS General Permit for Stormwater Discharges Associated with Construction Activities (Stormwater Construction Permit). All KICP Partners ordinances require that BMPs are designed to meet the technical standards of:

Urban Drainage and Flood Control District's Urban Storm Drainage Criteria Manual Volume 3-BMP or its successor.

Any other alternative methodology approved by the jurisdiction, which is demonstrated to be effective.

In 2009, Urban Drainage and Flood Control began the process of updating Volume 3 to include more detail for infiltration BMPs.

Requirements for Construction Site Operators to Control Waste including Discarded Building Materials, Concrete Truck Washout, Chemicals, Litter, and Sanitary Waste

All KICP Partners' ordinances require that stormwater management plans meet the requirements of the CDPS General Permit for Stormwater Discharges Associated with Construction Activities (Stormwater Construction Permit). The Stormwater Construction Permit requires that Stormwater Management Plans (SWMPs) include practices for stormwater pollution prevention, which includes controlling waste, such as discarded building materials, concrete truck washout, chemicals, litter, sanitary waste, and other non-stormwater discharges, including construction dewatering and wash water.

Procedures for Site Plan Review

All KICP Partners' ordinances require that stormwater management plans meet the requirements of the CDPS General Permit for Stormwater Discharges Associated with Construction Activities (Stormwater Construction Permit).

The CDPS Stormwater Management Program description document submitted by KICP in October 2008 details the individual Partners' processes for construction site plan submittal, review, and preliminary approval process; the system used to track status of stormwater control site plans; procedures for ongoing review of site plans during active construction; and how consideration of potential water quality impacts are achieved.

Procedure for Receipt and Consideration of Information Submitted by the Public

Each KICP Partner has community specific procedures in place for receiving and recording public complaints.

The CDPS Stormwater Management Program description document submitted by KICP in October 2008 details the individual Partners' processes for processing inquiries or tracking and documenting complaints received from the public.

Procedures for Site Inspection and Enforcement of Control Measures.

Each KICP Partner has community-specific procedures in place for conducting construction site inspections and enforcement. The procedures may include how inspections are conducted, documented and how enforcement is carried out. The KICP Partners utilize verbal warnings through stop work orders. Enforcement options are described in each Partner's ordinance.

The CDPS Stormwater Management Program description document submitted by KICP in October 2008 details the individual Partners' procedures used for inspections; it includes inspection documentation, frequency, and prioritization, and how sites and inspections are

tracked. Procedures for regularly scheduled compliance inspections, complaint response inspections, and reconnaissance inspections (as applicable) are described. In addition, procedures used for enforcement, to include any documentation used that dictates responses to non-compliance; tracking of enforcement actions; enforcement tools; and escalation procedures for chronic and recalcitrant violators are described.

Construction Inspections and Enforcement

Partner	Number of Active Construction Sites Over an Acre	Number of Inspections	Enforcement Actions
Boulder	40	Full -525 Reconnaissance - 365	2 stop work, 19 written, 193 verbal
Longmont	51	Full -324 Reconnaissance - 15	5 stop work, 15 verbal
Boulder County	6	Full -75 Reconnaissance- 15	1 stop work, 1 written, 1 verbal
Louisville	9	Full - 90	6 written
Erie	22	Reconnaissance - 250	21 written, 25 verbal
Superior	2	Full - 2 Reconnaissance - 8	0

Training and Education for Construction Site Operators

Each KICP Partner informs construction site operators of the regulatory requirements during the pre-construction meeting. The KICP website has a page specific to construction and lists link to each Partner’s ordinance. The KICP Partners offer construction site stormwater management trainings, which are open to both municipal and private entities.

The KICP has been implementing a training program for construction site operators and inspectors since 2003. Most of the Keep it Clean Partners require, by ordinance, that the individuals inspecting erosion control and sediment removal practices be certified by an acceptable program.

The Keep it Clean Partners chose to hire a contractor to audit municipal construction inspectors to be sure that individual Partners are implementing the requirements that surround the MS4 construction program oversight.

The contractor’s findings will continue to aid the Partners in ensuring compliance. Recommendations made by the contractor include:

- ◆ Ensuring inspectors understand the content and the relationship of the MS4 Permit and the state general construction permit.
- ◆ Ensuring inspectors are not just inspecting BMPs but are evaluating potential pollution sources for appropriate controls.
- ◆ Ensuring inspectors are consistently matching BMPs for specific installation details to verify correct installation.
- ◆ Ensuring inspectors are documenting inspections.
- ◆ Ensuring inspectors have manager oversight so their efforts are calibrated across the individual municipality.

- ◆ Ensuring that, as the ordinances require, contractor certification is verified during the entire project.
- ◆ It was suggested that photos be taken to better document sight conditions.
- ◆ A feedback loop between inspectors and plan reviewers should be developed to ensure site plans are adequate.
- ◆ It was suggested that the contractor certification requirements match the requirement of the SWMP Administrator defined in the last revision of the state construction permit. Currently, operators must provide a trained/certified person “*responsible for supervising the installation and maintenance of sediment and erosion control practices.*” The KICP should consider expanding that role to include that this individual is “the contact for all SWMP-related issues and is the person responsible for its accuracy, completeness, and implementation... should be a person with authority to adequately manage and direct day-to-day stormwater quality management activities at the site.”

Sixty-eight individuals from the private and public construction sector participated in the Keep it Clean erosion control certification training and 19 individual participated in a waterway best management training class.

Program Changes

KICP is now offering Colorado Department of Transportation erosion control certification.

Budget

Proposed: \$25,641

Actual: \$23,898

Unexpended funds: \$1,743

Members of Workgroup

Brian Campbell, City of Boulder

Justin Gindlesperger, Boulder County

Kathryne Marko, City of Longmont

Ela Nelson, City of Longmont

MCM 5 - Post-Construction Stormwater Management

Permit Requirement

The 2008-2013 permit requires:

The permittee must develop, implement, and enforce a program to address stormwater runoff from new development and redevelopment projects that disturb greater than or equal to one acre, including projects less than one acre that are part of a larger common plan of development or sale, that discharge into the MS4. The program must ensure that controls are in place that would prevent or minimize water quality impacts. The permittee must:

- 1) Develop, implement, and document strategies which include the use of structural and/or non-structural BMPs appropriate for the community that address the discharge of pollutants from new development and redevelopment projects, and/or that maintain or restore hydrologic conditions at sites to minimize the discharge of pollutants and prevent in-channel impacts associated with increased imperviousness;*
- 2) Use an ordinance or other regulatory mechanism to address post- construction runoff from new development and redevelopment projects to the extent allowable under State or local law;*
- 3) Develop, implement, and document procedures to determine if the BMPs required under Item (1), above, are being installed according to specifications. (This may be developed in conjunction with the Construction program area, as described in Part I.B.4);*
- 4) Develop, Implement, and document procedures to ensure adequate long-term operation and maintenance of BMPs, including procedures to enforce the requirements for other parties to maintain BMPs when necessary;*
- 5) Develop, implement, and document an enforcement program, which addresses appropriate responses to common noncompliance issues, including those associated with both installation (subparagraph (3), above) and long term operation and maintenance (subparagraph (4), above) of the required control measures;*
- 6) Develop and implement procedures and mechanisms to track the location of and adequacy of operation of long-term BMPs implemented in accordance with the program.*

Program Objective

Addressing Stormwater in New Development and Redevelopment: It is estimated that when a tributary drainage basin reaches 10–20 percent impervious, there are significant ecological stresses on the aquatic ecosystem. Therefore, the most important strategy for addressing stormwater is to focus on land use and development. One of the best strategies is to address the aggregate amount of new impervious surfaces and disconnecting impervious areas. Other strategies include implementing effective best management practices (BMPs) for the control and treatment of site runoff, such as stormwater detention or grass swales. An effective post-construction program must include adequate ordinance language, effective inspection, and enforcement.

Program Implementation

The Keep it Clean Plan includes all of the aforementioned components. In addition, the Keep it Clean Partners continue to educate municipal staff and the private sector in the advantages of infiltration BMPs. The 2008-2013 permit language includes added language to strength the goal of implementing BMPs that would benefit water quality over time and attempt to reduce the impact of land development.

Regulatory Mechanism

All Keep it Clean Partners have post-construction ordinances in place. The following table includes web links to the Partners' ordinances.

Partner	Ordinance Adopted	Web Link
Boulder	December 6, 2004	Boulder Revised Code 1981, Title 11, Chapter 5, Section 5 (b) (BRC 11-5-5b)
Longmont	January 12, 2005 June 2009 (revised)	Chapter 14.26, Stormwater Illicit Discharges and Permit Requirements
Boulder County	August 11, 2005	Article 7, Development Standards
Louisville	December 21, 2004	Title 13, Water/Sewer, Chapter 13.36
Erie	November 9, 2004	Title 8, Chapter 4, Illicit Discharges and Storm Water Quality Permit Requirements
Superior	December 13, 2004	Chapter 11, Article IV

Design Criteria and Standards

All KICP Partners, by ordinance, have required BMPs designed to meet the technical standards of:

Urban Drainage and Flood Control District's Urban Storm Drainage Criteria Manual-Volume 3 BMP or its successor.

Any other alternative methodology approved by the jurisdiction that is demonstrated to be effective.

Review and Approval Procedures

Each KICP Partner has community-specific procedures and requirements in place that address how plans for both public and private BMPs are tracked, reviewed, and confirmed as built.

The CDPS Stormwater Management Program description document submitted by KICP in October 2008 details the individual Partners' procedures for plan review process; the systems implemented to track status of plans; how correct installation of BMPs is confirmed; and the enforcement procedures used when BMPs have not been built as approved.

Tracking

Each KICP Partner has a system to track permanent BMP locations, and requirements for maintenance of BMPs installed since the adoption of their ordinance.

The CDPS Stormwater Management Program description document submitted by KICP in October 2008 details the individual Partners' procedures for tracking permanent BMP locations and maintenance history.

Ensuring Operation and Maintenance

Each KICP Partner has community-specific procedures in place for conducting BMP inspections and enforcement. Each KICP Partner has community-specific procedures for enforcement. Enforcement options are described in each Partner's ordinance.

The CDPS Stormwater Management Program description document submitted by KICP in October 2008 details the individual Partners' inspection programs, including routine and complaint response inspections.

Post-Construction Inspection and Enforcement

Partner	Number of New Sites	Number of New BMPs	Total Number of Existing Sites	Total Number of Existing BMPs	Number of Site Inspections	Number of BMP Inspections	Actions
Boulder	6	7	15	16	77	106	7
Longmont		2		61		3	0
Boulder County	2		5		10		0
Louisville	2		13		15		0
Erie		2		4		47	0
Superior	6				19		

Program Changes

None

Budget

Proposed: \$9,785

Actual: \$3,536

Unexpended funds: \$6,248

Members of Workgroup

Brian Campbell, City of Boulder

Justin Gindlesperger, Boulder County

Kathryne Marko, City of Longmont

Ela Nelson, City of Longmont

MCM 6 - Pollution Prevention and Good Housekeeping for Municipal Operations

Permit Requirement

The 2008-2013 permit requires:

The permittee must develop and implement an operation and maintenance program that includes an employee training component and has the ultimate goal of preventing or reducing pollutants in runoff from municipal operations. The program must also inform public employees of impacts associated with illegal discharges and improper disposal of waste from municipal operations. The program must prevent and/or reduce stormwater pollution from facilities such as streets, roads, highways, municipal parking lots, maintenance and storage yards, fleet or maintenance shops with outdoor storage areas, salt/sand storage locations and snow disposal areas operated by the permittee, and waste transfer stations, and from activities such as park and open space maintenance, fleet and building maintenance, street maintenance, new construction of municipal facilities, and stormwater system maintenance, as applicable. The permittee must:

1) Develop and maintain written procedures for the implementation of an operation and maintenance program to prevent or reduce pollutants in runoff from the permittee's municipal operations. The program must specifically list the municipal operations (i.e., activities and facilities) that are impacted by this operation and maintenance program. The program must also include a list of industrial facilities the permittee owns or operates that are subject to separate coverage under the State's general stormwater permits for discharges of stormwater associated with industrial activity;

i) Specific Deadline for Renewal Permittees: Renewal Permittees must comply with the requirement of subparagraph (1) by no later than December 31, 2009.

2) Develop and implement procedures to provide training to municipal employees as necessary to implement the program under Item 1, above.

Program Objective

Implementing Pollution Prevention for Municipal Operations. A surprising number of municipal operations can affect water quality and quantity. These activities range from the storage and handling of harmful chemicals to the maintenance of municipal properties, vehicles, roads, and storm sewer systems. Activities like integrated pest management, water conservation, recycling, and education programs can prove to be very effective in addressing these pollutant sources.

Program Implementation

The KICP provides an education and certification/compliance program through the Partners for a Clean Environment (PACE) Program for municipal operations.

Implementation of an Operation and Maintenance Program

Partner for a Clean Environment (PACE) provides a stormwater pollution prevention program to KICP Partners' municipal facilities through an inspection and certification program. Certification is based on criteria developed specifically for the facility through industry standards and municipal staff recommendations. Facilities are targeted based on potential to impact water quality. PACE conducts yearly or biannual audits of municipal operations to ensure that procedures are being implemented that meet the self-imposed certification program.

PACE notifies the facility or operations manager, as well as the KICP Partner's stormwater manager, if any deficiencies are noted during sites visits.

The Keep it Clean Partners contracts with the Partners for a Clean Environment (PACE) Program to develop a certification program for municipal operations. The following outlines a summary of activities completed in 2009. The complete PACE annual report is available online at www.pacepartners.com.

Outreach to Municipal Operations

In 2009, 43 site visits were conducted at municipal facilities in the KICP communities. Site visits involved walking around the facility, performing an audit of stormwater BMPs, documenting non-compliance issues, taking photographs (that were later used for training staff), completing PACE's criteria checklist, sending follow-up letters including photos and information on how to improve, reviewing or providing self-inspection checklists, and/or reviewing the facility's certification status and plans. Pre-site visits, "windshield surveys," or "windshield screenings" were conducted prior to or separate from site visits but were not counted as a "site visit" until the final letter and meeting were completed.

Site Visits per Municipality

Partner	Contracted Site Visits or Reviews	Completed Site Visits or Reviews
Boulder	14	14
Longmont	10	10
Boulder County	4	10
Louisville	3	5
Erie	2	2
Superior	2	2
Total	35	43*

PACE exceeded the contracted number of site visits and reviews by 122%.

*There were also 8 windshield screenings conducted that were not counted as site visits.

Municipal Employee Stormwater Training Program

PACE provides yearly and as-requested training to municipal staff on operational BMPs and on observing and reporting illicit discharges. This training is provided to field personnel during classroom and/or tail-gate sessions.

Newsletters and recognition programs may be used to support this effort.

PACE has designed several training approaches to ensure the most effective approach for the target audience.

New and Seasonal Employee Training

Two different stormwater training presentations have been developed for the different municipal sectors: *Stormwater 101* for Tier 1 Operations (fleet, parks, golf course, street and storm drain maintenance), and *Stormwater 102* for Tier 2 Operations (municipal fire departments, building & facilities maintenance departments). Both trainings provide basic information on stormwater compliance, illicit discharge identification and reporting, local contact information, and best

management practices to prevent stormwater pollution. The “*Storm Watch*” video, created in 2006 for KICP/PACE, is viewed during the training classes. The *Stormwater 101* and *102* presentations can be found at www.pacepartners.com. In 2009, seasonal parks employees were targeted for training.

Tailored, On-site Training

These customized, on-site trainings required PACE staff to visit the facility the day before the training to take photos of stormwater issues/concerns, good housekeeping measures and/or BMPs. The photos were then incorporated into a customized presentation. This approach helps employees to recognize and take ownership of stormwater issues at their job site. It also provides PACE staff with a chance to conduct a site visit for stormwater compliance. Employees that implemented BMPs or good housekeeping measures were recognized by rewards of gift certificates and their names were listed in the quarterly *Stormwater* newsletters (See “Employee Recognition” below). PACE staff then returned to the facility to ensure issues were addressed, or they requested that the manager contact them when the matter was resolved.

Tailgate Training

“Tailgate” training sessions were conducted with municipal and contracted employees. PACE staff rode along with or were out in the field to observe daily operations and provide input on stormwater issues. These tailgate sessions allowed PACE staff to better understand the challenges to stormwater pollution prevention on the job and to observe standard operating procedures.

In total, 186 employees were trained at 9 different training sessions.

Number of Employees Trained per Municipality and Department

Partner	Fleets	Public Works/ Streets	Parks/ Golf	Facility Maintenance	Fire Depart	WWTP and Contractors	Total
Boulder		5	51	5	15		76
Longmont			36			9	45
Boulder County			36				36
Louisville		12	7				19
Erie			5				5
Superior		1	1			3	5
Total		18	136	5	15	12	186

Municipal Employee Recognition Program

The Municipal Employee Recognition Program or “*Stormwater Heroes*” program was designed to increase municipal staff’s knowledge and awareness of stormwater pollution prevention so they would participate in water protection behaviors. The program was also intended to empower staff to protect local water quality and to recognize that the work that they do directly affects water quality. PACE recognized employees who protected storm drains or reported illegal discharges with awards such as stickers, water bottles, names in newsletters, and/or gift certificates. Community-based social marketing techniques were utilized to change employee behavior.

The Municipal Employee Pledge Program was developed to create ownership and to motivate employees to take actions to protect storm drains and keep our water clean. Employees are asked during training sessions to pledge to “Keep It Clean.” They received a printed pledge form to remind them of their pledge and a water bottle as a prompt. The employees signed their pledge on a tear-off slip at the bottom, which was kept by PACE staff for recordkeeping. The three pledge actions are:

1. *Locate and Protect* storm drains near work site.
2. *Cover and Contain* any materials stored outside and *Clean Up* spills.
3. *Report* any pollutants that may enter storm drains.

Accomplishments

- ◆ 6 *Stormwater Heroes* announced in an annual newsletter.
- ◆ Four \$25 gift certificates distributed to 4 *Stormwater Heroes* via a raffle.
- ◆ Five \$15 gift certificates distributed to training attendees via a raffle.
- ◆ 50 “*Protect Storm Drains*” stickers distributed during trainings and site visits.
- ◆ 50 “*Keep it Clean*” static-cling window decals distributed during trainings and site visits.
- ◆ 126 “*Keep it Clean*” Pledge water bottles distributed.
- ◆ 126 employees signed the “*Keep it Clean*” Municipal Employee Pledge.
- ◆ 1 *Stormwater Newsletter* was written and distributed via e-mail to approximately 180 employees and posted on www.pacepartners.com website. The newsletter contained articles of interest, recognized operation(s) that had the most improvement in stormwater BMPs, and identified the operations most in need of improvement.

Best Management Practices (BMPs) and Standard Operating Procedures (SOPs)

Development and Support

PACE re-wrote and revised the *Stormwater Best Management Practices Library* that was created in 2005. This activity was in response to a requirement that was added to the MS4 Permit in 2008:

Part I.B.6.(a): “*the permittees must submit a one-time inventory of the written procedures developed for the Pollution Prevention/Good Housekeeping for Municipal Operations program. The inventory must address all facilities listed in Part I.B.6. (a) of the permit, and any other operations or facilities the permittees addressed in their Pollution Prevention/Good Housekeeping for Municipal Operations program. The (Water Quality Control) Division may specifically request additional types of operations or facilities to be included in the inventory.*”

The permit also states: “*written procedures for pollution prevention and good housekeeping must be in place for the facility/operations. Standard Operating Procedures must be documented for all operations (activities/facilities) that a permittee owns or operates including: procedures contained within larger documents, procedural manuals, separate stormwater*

quality guides/manuals, internal or external web pages, facility operations manual, ordinances, regulations, laws, employee handbooks, and contracts, etc.”

PACE provided research, documentation, and assistance in developing and implementing template Standard Operating Procedures (SOPS) for various activities and facilities as listed in the MS4 permit.

- ✔️🔴 Revised and updated twenty-four (24) stormwater Best Management Practices BMPs for municipal operations in *The PACE Stormwater BMP Library* and on www.pacepartners.com website.
- 🔴 Revised and updated fifteen (15) PACE resource sheets in *InDesign* format and posted on website.
- 🔴 Incorporated PACE’s *Stormwater BMP Library*, *Street Smart Fact Sheet*, *Storm Smart Program*, and *Green Lots Program* best management practices into customized, standard operating procedures (SOPs).
- 🔴 PACE researched SOPs (via the Internet from across the country) for all the activities/facilities required by the permit and incorporated that information into the SOPs.
- 🔴 Developed 18 SOP templates, including:
 1. Facility and Building Maintenance
 2. Fleet and Vehicle Maintenance
 3. Fueling and Cleanup of Fuel Spills
 4. Outdoor Materials Storage
 5. Outdoor Special Events
 6. New Construction
 7. Parking Lot Maintenance
 8. Parks, Golf Course, and Open Space Maintenance
 9. Pesticide, Fertilizer and Herbicide Application
 10. Pressure Washing and Exterior Surface Cleaning
 11. Spill Prevention, Cleanup, and Reporting
 12. Snow Plowing, Snow Storage, and Deicer Application
 13. Street Construction and Utility Installation in Roadways
 14. Street Sweeping, Cleaning, and Waste Disposal
 15. Street Maintenance and Repair
 16. Storm Drain System Maintenance
 17. Waste Transfer and Recycling Centers
 18. Waste Management, Storage, and Disposal
- ✔️🔴 Updated the “One-Time SOP Inventory Report” for submittal with annual report (for all KICP partners communities).
- 🔴 Updated the PACE database and provided facility lists for each KICP community and provided to KICP Steering Committee members.

Training and Assistance

PACE was also contracted to assist department managers with SOP implementation and customization. PACE met with numerous municipal department managers to educate them on the SOPs and to ensure that the documents were updated and saved in either a computer file or as hard copies in a manual or stormwater plan.

- 🔴 Met with 36 department managers in 6 KICP communities.
- ✔️🔴 Assisted affected facility managers with SOP documentation and recordkeeping.

✓ Provided electronic and/or hard copies of all BMPs, resource sheets and SOPs for placement in the facility's Stormwater Pollution Prevention Plan (SWPPP) binder or electronic files.

✓ Reviewed each facility's SWPPP binder for content and updates.

SOP Meetings per KICP Municipality and Department Managers

	Fleets	Streets Maintenance	Storm Drain System Maintenance	Facility Maintenance Parking Services	Parks, Golf Course	Other (Recycling Centers)	Total
Boulder	1	2	1	2	9		15
Boulder County	2	1	1	1	4	1	10
Louisville	1	1	1		2		5
Erie	1	1	1		1		4
Superior		1			1		2
Total	5	6	4	3	17	1	36

Note: The City of Longmont conducted SOP meetings for their departments/managers.

Program Changes

None

Budget

Proposed: \$86,457

Actual: \$79,274

Unexpended funds: \$2,673

Members of Workgroup

Ken Mason, City of Louisville

Kathryne Marko, City of Longmont

Donna Scott, City of Boulder

Cal Youngberg, City of Longmont

Partnership Working Agreement

Keep it Clean Partners Are:

- Dedicated to the stated goals and objectives of the project.
- Active participants, attending meetings and voicing opinions equally.
- Willing to share resources and data.
- Clear about their agencies' needs and interest in participating in the project.
- Completing the bulk of KICP work in subgroups.

Keep it Clean Partners Will:

- Be prompt to meetings and participate to the highest level of their ability.
- Maintain focus, prioritize all actions, and encourage involvement of all.
- Understand that not all communities have the resources to attend every meeting.
- Complete assigned tasks that are agreed upon in the group.
- Stay informed about discussions and decisions that take place at Keep it Clean meetings in their absence.

Keep it Clean Partners Are:

- Participating in good faith and working towards the identified common goals and objectives.
- Committed to the protection of water quality within the Boulder Creek and St. Vrain River watersheds.
- Committed to sharing information and resources with other Keep it Clean Partners.
- Committed to developing strategies and solution that benefit the general public and represent the shared goals and objectives of the KICP.

Keep it Clean Partnership Decisions:

- Will be discussed in an organized manner and the process will be open to all.
- Will be made by consensus, an approach to find an inclusive solution that everyone can support.

Keep it Clean Partners:

- Understand compromise may be necessary to reach Keep it Clean common goals.
- Show a commitment to mediate disagreement.

Partner Contact Information

City of Boulder

Jeff Arthur, Civil Engineer II
City of Boulder Public Works
1739 Broadway, Suite 300
Boulder, CO 80306-0791
303-441-4418
arthurj@bouldercolorado.gov

Brian Campbell, Civil Engineer II
City of Boulder Public Works
1739 Broadway, Suite 300
Boulder, CO 80306-0791
303-441-3121
campbellb@bouldercolorado.gov

Donna Scott, Stormwater Quality Specialist
City of Boulder Water Quality
4049 75th Street
Boulder, CO 80301
303-413-7364
scottd@bouldercolorado.gov

County of Boulder

Dale Case, Planner
Boulder County Land Use Planning
PO Box 471
Boulder, CO 80306
303-441-3930
dcase@bouldercounty.org

Denise Grimm, Planner
Boulder County Land Use Planning
PO Box 471
Boulder, CO 80306
303-441-3930
dgrimm@bouldercounty.org

Janice Lopitz, KICP Coordinator
Boulder County Public Health
3450 Broadway
Boulder, CO 80304
303-441-1439
jlopitz@bouldercounty.org

Dave Webster, Engineer
Boulder County Transportation/Engineering
PO Box 471
Boulder, CO 80306
720-564-2660
dwebster@bouldercounty.org

Mark Williams, Water Quality Coordinator
Boulder County Public Health
3450 Broadway
Boulder, CO 80304
303-441-1143
mwilliams@bouldercounty.org

City of Longmont

Cal Youngberg, Environmental Program Mgr
City of Longmont
350 Kimbark Street
Longmont, CO 80501
303-651-8399
cal.youngberg@ci.longmont.co.us

Ela Nelson, Civil Engineer
City of Longmont
350 Kimbark Street
Longmont, CO 80501
303-774-4390
ela.nelson@ci.longmont.co.us

Kathryne Marko, Associate Civil Engineer
City of Longmont
350 Kimbark Street
Longmont, CO 80501
303-651-8906
kathryne.marko@ci.longmont.co.us

Town of Erie

Wendi Palmer, Engineer
Town of Erie
645 Holbrook
Erie, CO 80516
303-926-2875
wpalmer@erieco.gov

City of Louisville

Ken Mason, Water Quality Coordinator
City of Louisville Public Works
749 Main Street
Louisville, CO 80027
303-335-4780
masonk@ci.louisville.co.us

Tom Phare, Public Work Director
City of Louisville Public Works
749 Main Street
Louisville, CO 80027
303-335-4601
pharet@ci.louisville.co.us

Town of Superior

Kurt Kowar Public Works Director
Town of Superior
124 East Coal Creek Drive
Superior, CO 80027
303-499-3675
kurtk@townofsuperior.com

Judy Hauschulz, Administrator
Town of Superior
124 East Coal Creek Drive
Superior, CO 80027
303-499-3675
judyh@townofsuperior.com

Other Participants

Pam Milmoe, Air Waste Coordinator
Boulder County Public Health
3450 Broadway
Boulder, CO 80304
303-441-1189
pmilmoe@bouldercounty.org

Bill Hayes, Environmental Specialist
Boulder County Public Health
3450 Broadway
Boulder, CO 80304
303-441-1574
bhayes@bouldercounty.org

Bonnie Greenwood, Environmental Specialist
Boulder County Public Health
3450 Broadway
Boulder, CO 80304
303-441-1174
bsgreenwood@bouldercounty.org

Curry Rosato
Watershed Outreach Coordinator
City of Boulder Water Quality
4049 75th Street
Boulder, CO 80301
303-413-7365
rosatoc@bouldercolorado.gov

Nathan Moore
CDPHE
WQCD-P-B2
4300 Cherry Creek Drive South
Denver, CO 80246-1530
303-692-3555
nathan.moore@state.co.us

