



City of Cañon City

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2010 Annual Program Review

Public Education and Outreach

Program Element	Compliance Status	*Assessment of Effectiveness	Modifications	**Measurable Goals
Forming Partnerships	Fully Implemented	Effective.	None	NA
Quarterly Newsletters	Fully Implemented	Effective	None	NA
Stormwater Website	Fully Implemented	Less Effective	Reconstruct website	NA
Demonstrations in local schools and to civic organizations	Fully Implemented	Effective	None	NA
Coordinate with local schools, organizations, businesses and artists to design stormwater murals to be mounted on river rafting shuttle busses.	Program modification was sent to CDPHE on 8/21/10. (See discussion below.)	Less Effective	See discussion below.	NA
Disseminate industry appropriate BMP information quarterly	Fully Implemented	Effective	None	NA
Public service announcements/programs on local radio/TV stations	Fully Implemented	Effective	None	NA
Financial support and advertising for Upper Arkansas Recycling program	Fully Implemented	Effective	None	NA
Annually stencil at least twenty-five storm drains	Fully Implemented	Effective	Modification to be submitted. See discussion below.	NA
Stormwater murals displayed on river rafting shuttle busses.	Program modification was sent to CDPHE on 8/21/10. (See discussion below.)	Less Effective	See discussion below.	NA

*Assessment of Effectiveness in this category is a subjective evaluation as it is difficult to directly track the effect each of these has on public awareness and participation.

****There were no Measurable Goals listed in The City of Cañon City's Stormwater Management Program Descriptions for the 2008 – 2013 Stormwater Permit.**

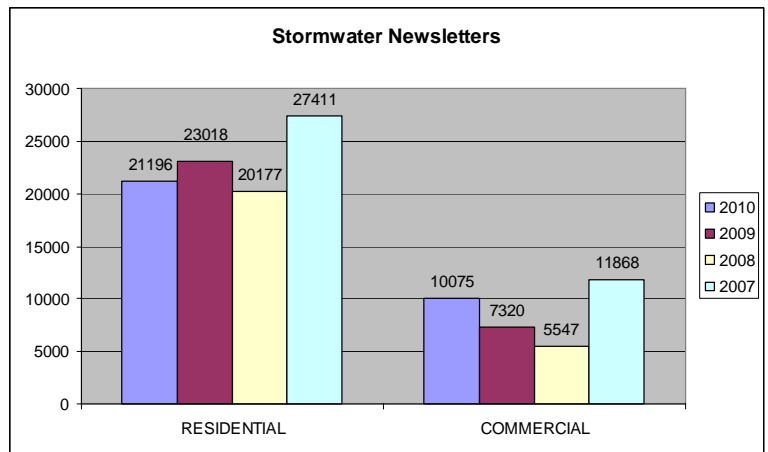
Discussion of Elements:

1. Forming Partnerships: The City of Cañon City is a member of, or involved in, several councils and associations. The following meetings/presentations were attended during 2010:

- A. Colorado Stormwater Council: 9 meetings attended (2 via phone).
- B. Urban Drainage and Flood Control District: 3 quarterly meetings.
- C. Arkansas River Basin Water Forum: 6 meetings attended in preparation for the annual forum which was held in Cañon City April 6-7, 2010. A presentation on Stormwater was given by Jane Clary of Wright Water Engineers during the forum.
- D. Attended Colorado Association of Stormwater and Floodplain Managers Annual Conference.
- E. Attended Urban Watershed Research Institute's BMP Design Class.
- F. Colorado Water Congress: 1 meeting regarding nutrient criteria was attended via phone.
- G. Chamber of Commerce's Environmental Health & Safety Advisory Council: 2 meetings were attended.
- H. The City of Cañon City is partnered with the Upper Arkansas Recycling Program and Cañon Proud Program.

2. Using Educational Materials and Strategies: All programs listed were ongoing and will continue to be utilized during 2011.

A. Quarterly stormwater newsletters are sent out with City water bills. Each issue addresses stormwater concerns and provides information about the Stormwater Program and the prevention of illicit discharges. The public is encouraged to contact us with their concerns and questions or if they have suggestions for future topics or programs; newsletters also include the contact information. There were 21,196 residential newsletters sent in 2010 and 10,075 newsletters sent to commercial establishments.



- B. The Stormwater web page was updated with a new SW Utility Fee flyer and the Annual report. The City's entire web site is being updated in 2011; the Stormwater page will include more general information, additional links and access to more reports. Some examples of areas to be added or updated are watershed information, stormwater impacts on water quality and what the public can do to minimize their impact on stormwater, more complete illicit discharge information, prior newsletters (already added in 2011), BMPs, annual reports on inspections and compliance and public participant events.
- C. Demonstrations/presentations in local schools and to civic organizations are given as requested. Programs are continually evaluated and updated. Presentations were given to the following during 2010:
 - i. Four (4) EnviroScape demonstrations at Harrison Elementary School.
 - ii. Coordinated 5 talks to the Colorado Legends and Legacies Youth Corps.
 - iii. Presentation to Garden Park High School in conjunction with the stenciling project.
 - iv. A stormwater information booth was set up at one of the craft fairs during the Blossom Festival on May 1-2. The booth had a total of 256 visitors. Numerous flyers,

pamphlets and children's activity booklets were distributed. The EnviroScape was used to give 46 demonstrations about stormwater runoff.

- D. The contest to design new storm water murals for display on river rafting shuttle buses was not held during 2010 as the current murals are still in good condition. A program modification was submitted to CDPHE on 8/21/10. It modified the program element to read as follows: "Coordinate with Canon City area schools, civic organizations, businesses and local artists to design, produce and display stormwater related materials as needed for educational campaigns." The rationale for the program modification is that the murals have been designed and produced and are still in good shape for display.
- E. Dissemination of industry appropriate stormwater BMP information is done through quarterly newsletters. (See Section 2.A. above). An additional 214 newsletters were sent to local businesses concerning power washing of parking lots and buildings. Public service announcements concerning stormwater were aired on local radio stations during 2010 for a total air time of 1,312 minutes. Four stormwater related programs were run on CCTV-Channel 19 with a total air time of 9 hours and 52 minutes. Public service announcements and programs are rotated and new ones added throughout the year. Newspaper notices were also run in conjunction with the leaf pick-up program.
- F. The Upper Arkansas Recycling Program received \$12,852 in financial support and advertising during 2010. Cañon Proud received approximately \$2,000 in support this year for its annual city-wide clean-up program.

3. Signage and Stenciling:

- A. Twenty-two storm drains were stenciled in 2010 with the assistance of 11 students from Garden Park High School. Since a majority of the inlets within the City limits have been stenciled a modification to this program element will be submitted with the Annual Report to the State. It will change the wording from "Annually stencil twenty-five high visibility stormdrains inlets utilizing stencils developed locally by high school students and/or service groups" to "Annually refresh stormdrain stencils as needed and stencil any new stormdrain inlets which have been placed into service."



- B. Murals were not displayed on river rafting busses this year due to the mural size interfering with regulations regarding the display of identification of the buses. A program modification was submitted to CDPHE on 8/21/10 removing this program element.

4. Reaching Diverse Audiences: Direct mail, public service announcements and programs and personal contact were all utilized in 2010 to reach a broad spectrum of our citizens and businesses. A stormwater information booth was set up at one of the craft fairs during the Blossom Festival on May 1-2. The booth had a total of 256 visitors. Numerous flyers, pamphlets and children's activity booklets were distributed. The EnviroScape was used to give 46 demonstrations about stormwater runoff. Programs are evaluated and updated continually in

order to reach as many people as possible and promote interest and participation in the programs. New programs are developed and implemented to maintain freshness in disseminating stormwater information.



5. Illicit Discharge Education to Businesses and the Public: The quarterly newsletter often addresses the issue of illicit discharges. It also provides tips for preventing contamination of stormwater runoff. In July, 214 Special Business Edition newsletters were sent to local businesses concerning power washing of parking lots and buildings.

Public Participation/Involvement

Program Element	Compliance Status	*Assessment of Effectiveness	Modifications	**Measurable Goals
Public Notices	Fully Implemented	Effective.	None	NA
Contact Information is available through the newsletters, web page, news articles and public service announcements	Fully Implemented	Effective	None	NA
Feedback via phone calls, email or letters.	Fully Implemented	Effective	None	NA

*Assessment of Effectiveness in this category is a subjective evaluation as it is difficult to directly track the effect each of these has on public awareness and participation.

**There were no Measurable Goals listed in The City of Cañon City’s Stormwater Management Program Descriptions for the 2008 – 2013 Stormwater Permit.

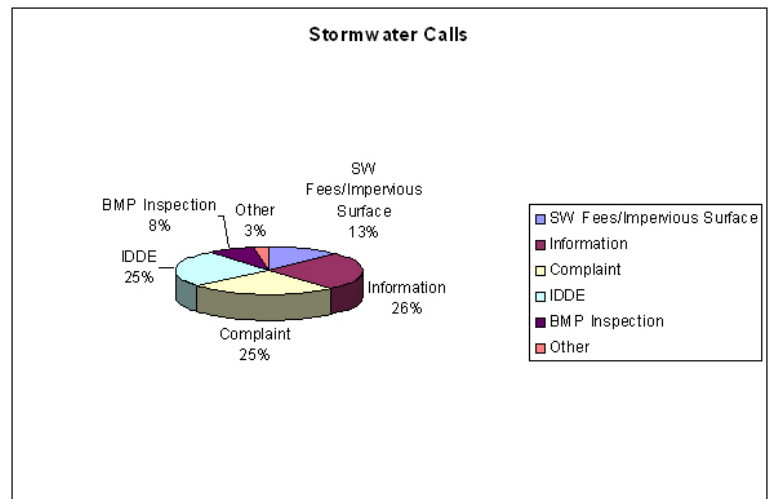
Discussion of Elements: All programs listed were ongoing and will continue to be utilized during 2011.

1. Public Notices: The City of Cañon City complies with the Open Meeting act as set forth in Colorado Revised Statutes. All public meetings are posted on a public bulletin board inside City Hall at least 24 hours in advance on any public hearing. A notice is also printed in the local newspaper.
2. Contact Information Availability: Contact information is available through the quarterly newsletters and on the web page. It is also included in any newspaper articles and public service announcements. All

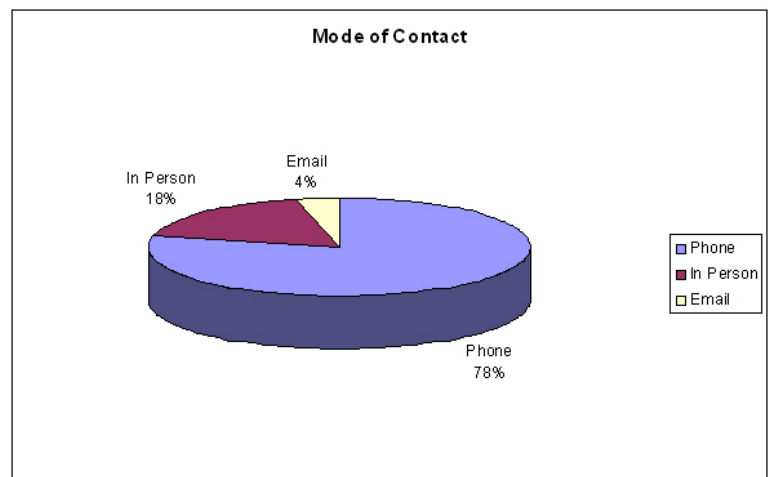
City of Cañon City field staff have the Stormwater Technician's direct line in order to report any suspected illicit discharges.

3. **Feedback:** The quarterly newsletters encourage everyone to get involved by calling, emailing or writing in with their questions, complaints or ideas. A log is kept of contacts (phone, email, letters and "in person") concerning stormwater issues with the intent to better track the effectiveness of the public education and participation programs. The log represents those contacts handled directly by the Stormwater Technician and those that the technician is made aware of. A database for stormwater calls was created in CarteGraph in December to facilitate better tracking of calls. This database will be available for use by Public Works and GIS as well as the stormwater technicians. During 2010, 111 contacts were handled by the Stormwater Technicians. Calls and mode of contact were broken into the following categories:

Category	% of Calls
Information	26
Complaint	25
SW Fees/Impervious surface	13
Illicit Discharge	25
BMP Inspection	8
Other	3



Mode of Contact	%
Phone	78
In Person	18
Email	4



The number of calls is comparable to last year's (109). Calls concerning complaints, stormwater fees/impervious surface and for general information dropped slightly. Calls concerning illicit discharges rose, primarily due to the heightened awareness of City employees who phoned in more potential illicit discharges.

2011 Goals for Public Education and Outreach/Public Participation

1. Increase the number of presentations to groups and schools.
2. Have a booth at an additional festival (Blossom and at least one other).

3. Investigate the feasibility of starting an “Adopt-a-Drainageway” program.
4. Have a river &/or drainageway clean-up day, possibly in conjunction with Cañon Proud.
5. Update and increase the content of the Stormwater web page.
6. Develop a paint disposal brochure to be distributed to local paint supply stores.
7. Develop a BMP/grease disposal flyer for distribution to local restaurants.
8. Develop a wall mural program for local students to replace the river rafting bus murals.

Illicit Discharge Detection and Elimination

Program Element	Compliance Status	Assessment of Effectiveness	Modifications	*Measurable Goals
Outfall Map	Fully Implemented	Effective.	None	NA
Regulatory Mechanism	Fully Implemented	Effective	None	NA
Illicit Discharge Detection and Elimination Plan	Fully Implemented	Effective	None	NA
Staff Education	Fully Implemented	Effective	None	NA

*There were no Measurable Goals listed in The City of Cañon City’s Stormwater Management Program Descriptions for the 2008 – 2013 Stormwater Permit.

Discussion of Elements: All programs listed were ongoing and will continue during 2011.

1. Outfall Map: Outfall Reconnaissance Inventories (ORIs) and mapping continued during 2010. There are a total of 389 outfalls located along the Arkansas River, Four Mile Creek and the various drainages and irrigation canals throughout the City. Of these outfalls 162 are footing/roofing drains and irrigation return pipes which do not require yearly inspections but are noted during annual inspections of the drainages. There are 57 BMP (detention basin, etc.) outlets which are inspected annually. The remainders are major outfalls (20), lesser outfalls (141) and industrial discharge pipes (8). During 2010, 367 inspections and ORIs were conducted on outfalls. There are approximately 8 outfalls that were previously identified on the Oil Creek Ditch which still need to be verified and mapped. The ORI database in CarteGraph and the mapping assist in prioritizing inspections and monitoring of the outfalls.
2. Illicit Discharge Detection and Elimination Plan:
 - A. Thirty-four incidents of potential illicit discharges were reported or found during inspections in 2010. Of those, 27 were valid, requiring investigation. Investigations resulted in the following enforcement measures:

Enforcement Action	Number
Verbal Warning	15
Notice of Non-Compliance	8
Cease & Desist	0
Notice of Violation & Enforcement Action w/ fine	0

The number of illicit discharge reports was up slightly from last year’s 31, but the number of valid illicit discharge reports remained the same. More verbal warnings and Notices of Non- Compliance were

issued than last year; fewer Cease & Desist and Notices of Violation and Enforcement Action were issued.

- B. In December, 2010, a database was created in CarteGraph to track illicit discharge investigations; this database will replace the current method of tracking. It will also facilitate better tracking of the issues resulting in investigations and potential repeat offenders.
 - C. Six outfalls were sampled during 2010 for water quality/illicit discharge potential. In addition 3 samples were taken from a culvert in the Washington Street Channel and 1 from a manhole at Park Avenue and S. 10th Street. One outfall on the Washington Street Channel was sampled 3 times. All samples were taken due to either having a history of potential illicit discharges or were currently showing signs of a potential illicit discharge. Water quality samples of an outfall on the Arkansas River at S. 10th Street that has consistently had extremely high E. coli counts showed a marked decrease since the replacement of the sanitary sewer and stormwater pipes along S. 10th Street. Additional water quality samples will be taken at this outfall in 2011. Sampling along the Washington Street Channel pointed to a transitory contaminated discharge, most likely from irrigation return water. Additional sampling at the end of the irrigation pipe will be done in 2011. The other samples taken produced no signs of illicit discharges. The sampling data, notes and conclusions are contained in the attached report. Benthic macroinvertebrate sampling of the Arkansas River and Four Mile Creek was not conducted in 2010 due to time constraints and budgetary concerns.
3. Staff Education: A training session for illicit discharge detection was held for City staff on May 6th. The training session consisted of a video on municipal pollution prevention and a PowerPoint presentation on recognizing potential illicit discharges and procedures when one is seen. Attendance included 35 Public Works staff members, 17 Parks Department staff members and 5 staff members from Engineering.



2011 Goals for Illicit Discharge Detection/Water Quality

1. Begin additional testing of ground water discharges to drainage channels and ditches to establish more complete background data.
2. Complete mapping and ORIs of outfalls.
3. Perform benthic macroinvertebrate sampling on the Arkansas River and Four Mile Creek.
4. Update the IDDE manual.
5. Hold an Illicit Discharge Training for Law Enforcement Officers.

Construction Site Runoff Control

Program Element	Compliance Status	Assessment of Effectiveness	Modifications	*Measurable Goals
Regulatory Mechanism to require BMPs and sanctions to ensure compliance.	Fully Implemented	Effective	None	NA
Requirements for construction site operators to implement appropriate erosion and sediment control BMPs and materials handling BMPs.	Fully Implemented	Effective.	None	NA
Requirements for construction site operators to control waste including discarded building materials, concrete truck washout, chemicals, litter and sanitary waste.	Fully Implemented	Effective	None	NA
Procedures for site plan review which incorporate consideration of potential water quality impacts.	Fully Implemented	Effective	Under review	NA
Procedures for receipt and consideration of information submitted by the public.	Fully Implemented	Effective	None	NA
Procedures for site inspection and enforcement of control measures.	Fully Implemented	Effective	None	NA
Procedures to minimize the occurrence of, and obtain compliance from, chronic and recalcitrant violators of control measures.	Fully Implemented	Effective	None	NA
Training and Education for Construction Site Operators.	Fully Implemented	Effective	None	NA

*There were no Measurable Goals listed in The City of Cañon City's Stormwater Management Program Descriptions for the 2008 – 2013 Stormwater Permit.

Discussion of Elements: All programs listed were ongoing and will continue to be utilized during 2011.

1 -3. Regulatory and Compliance Mechanisms: Ordinance No. 20 and the City of Cañon City Grading, Erosion & Sediment Control (GESC) Manual were enacted in 2006. They have proved effective in obtaining compliance for construction site stormwater management.

4. Site Plan Review: The current procedures for site plan reviews prior to construction are under review and may be updated during 2011.

5. Procedures for information submitted by the public: A log is kept of all contacts (phone, email and letters) concerning stormwater issues with the intent to better track the effectiveness of the public education and participation programs. In December, a database was set up in CarteGraph to further facilitate tracking. All complaints and concerns are addressed promptly.

6. Inspections and enforcement of control measures: Inspections are performed at all construction sites and post-construction sites with appropriate enforcement actions being taken when needed. During 2010, 110 inspections were performed at 36 construction sites (of which 28 were active at some time during 2010). Twenty-nine were full inspections; 81 were reconnaissance inspections. The inspections resulted in the following actions:

Enforcement Action	Number
Verbal Warning	4
Notice of Non-Compliance	2
Cease & Desist	0
Stop Work Order	0
Notice of Violation & Enforcement Action w/ fine	0

A detailed tracking system is in place to assess the number and nature of inspections and actions and to identify repeat violators. A database in CarteGraph to track DESC & GESC permits and inspections is being considered for creation in 2011. In addition, Glenda attended a Stormwater Construction Compliance Training in July.

7. Procedures to minimize the occurrence of, and obtain compliance from, chronic violators: These were implemented with Ordinance No. 20 (2006). They range from increasing monetary fines to criminal penalties and/or prosecution and imprisonment.

8. Training and education for construction site operators: This is achieved using the GESC manual and through the plan review process. New information and resources are passed to local contractors and developers when available. Workshops are held when there is sufficient demand.

2011 Goals for Construction Site Runoff Control

1. Cross-training between the stormwater technicians on construction inspection techniques.
2. Update of the GESC Manual to reflect changes in the newly-released updated UDFCD Volume 3.

Post-construction Stormwater Management

Program Element	Compliance Status	Assessment of Effectiveness	Modifications	*Measurable Goals
Regulatory Mechanism	Fully Implemented	Effective	None	NA
Design Criteria and Standards	Fully Implemented	Effective.	None	NA
Review and Approval Procedures	Fully Implemented	Effective	None	NA
Tracking	Fully Implemented	Effective	None	NA
Requiring long-term maintenance of BMPs	Fully Implemented	Effective	None	NA
Monitor long-term compliance	Fully Implemented	Effective	None	NA

*There were no Measurable Goals listed in The City of Cañon City's Stormwater Management Program Descriptions for the 2008 – 2013 Stormwater Permit.

Discussion of Elements: All programs listed were ongoing and will continue to be utilized during 2011.

1 & 5. Regulatory Mechanisms: Ordinance 20 (2006) addresses the issues of the requirements for post-construction permanent BMPs including technical standards and specifications, review and approval procedures and the long-term operation and maintenance of the BMPs.

2. & 3. Design Criteria & Standards and Review & Approval Procedures: The site plan review process assures that post-construction structural BMPs meet design standards. Inspections during the construction process and final inspections assure that the BMP has been properly constructed.

4. Tracking: Permanent BMPs are recorded at final inspection and entered into the CarteGraph database. One permanent BMP was implemented during 2010.

6. Monitor long-term compliance: One hundred four permanent BMPs are inspected annually with the results of those inspections entered into the CarteGraph database. An inspection report and letter are sent to the custodian of the BMP, and if maintenance is required, the custodian is given 30 days to comply. All BMPs are re-inspected at the end of that time and enforcement procedures are instituted if the corrective maintenance has not been done. During 2010, a total of 180 inspections were performed on permanent BMPs. Fifty letters were sent out indicating some level of non-compliance (i.e. needing maintenance) and 12 letters of commendation were sent. The following table shows the breakdown of the inspections.

	Private			Municipal		
	Basins	Storm Vaults	Other BMPs	Basins	Storm Vaults	Other BMPs
Annual	50	7	13	26	7	1
Re-inspection	52	3	8	11	2	
Post-Storm						
Complaint						

Pollution Prevention/Good Housekeeping For Municipal Operations

Program Element	Compliance Status	Assessment of Effectiveness	Modifications	Measurable Goals*
Implementation of an operation and maintenance program	Fully Implemented	Effective	None	NA
Employee Training	Fully Implemented	Effective.	None	NA

* The City of Cañon City's Stormwater Management Program Descriptions for the 2008 – 2013 Stormwater Permit contained the Measurable Goal of "Written procedures and lists for the implementation of an operation and maintenance program to prevent or reduce pollutants in runoff from the permittee's municipal operations." This goal was met in 2009.

Discussion of Elements:

1. Implementation of an O & M program: All municipally owned facilities (including parks) are inspected annually. The results of the inspections are presented to the appropriate department heads for compliance. Follow-up inspections are done to insure required maintenance is completed. In 2010, 42 facilities were inspected. One was re-inspected. In addition to the facilities, drainage channels, including those under private custodianship, are also inspected as well as infrastructure such as stormdrain inlets.

Drainage Channel Inspection results: Sixty-one channels under the custodianship of the City of Cañon City were inspected and 19 under private custodianship were inspected during 2010. Water quality monitoring occurred on 1 channel. (See discussion under Illicit Discharge and Detection and the attached water quality summaries.) The chart below shows the breakdown for inspection types.

	Private	Municipal
Annual	19	61
Re-inspection	12	1
Complaint	0	2
Monitoring		1

Routine maintenance (i.e. mowing, trash clean-up) was performed on 14 of the municipal channels during 2010. In addition, the Forestry Department performed fire mitigation in the Dawson Ranch Subdivision with the assistance of the Colorado Legends and Legacies Youth Corps. The fire mitigation has the added benefit of clearing drainages of overgrowth and debris which may block stormwater runoff.

Stormdrain inlet inspections: A total of 579 stormdrain inlets have been identified and mapped to date. Of these, 493 are under municipal jurisdiction and 86 are under private jurisdiction. The following chart shows the breakdown of the 234 inspections performed.

	Private	Municipal
Annual	47	182
Complaint	0	1
Hydraulic Analysis/Pipe mapping	4	0

Other infrastructure: Databases were designed in CarteGraph to track other stormwater infrastructure such as storm pipes, culverts and storm manholes. A majority of the culverts and manholes have been mapped, but have not been entered into a database. The databases will be completed in 2011.

Repair and Maintenance of infrastructure:

- New inlets and culvert at Fremont Dr. and Orchard Ave.
- Reconstruction of the outlet for the Tyrolean Way storm sewer
- New inlet on S. 5th St.
- New inlet and culvert at 12th St. and Main Street
- New culvert at 10th St. and Royal Gorge Blvd.
- Channel stabilization in Dawson Ranch.
- Repair, retrofit and cleanout of the 3rd St. Hogbacks Detention Basin.
- Repair of the Hydraulic Ditch spillway at the Abbey Detention Basin.
- Reconstruction of sections of the Mountain Vista drainage channel.

2. Employee training: Training on the Pollution Prevention Manual which was approved in December, 2009, occurred on May 6. The training session consisted of a video on municipal pollution prevention and a PowerPoint presentation on recognizing potential illicit discharges and procedures when one is seen. Attendance included 35 Public Works staff members, 17 Parks Department staff members and 5 staff members from Engineering.

2011 Goals for Pollution Prevention/Good Housekeeping For Municipal Operations

1. Complete database inventory and mapping of all inlets, manholes, culverts and storm pipes.

Special Projects and Trainings

Other projects and trainings completed during 2010:

Projects:

1. The Colorado Department of Public Health and Environment required that a one-time municipal facilities report be submitted along with the annual report. Both were completed and submitted in February.
2. The City of Cañon City received an Information Collection Request from the EPA in September. This mandatory survey was sent to random municipalities in an effort to collect information which may have relevance to the EPA's proposed Stormwater Program Rules changes. City staff spent approximately 50 hours completing this survey.

Additional Trainings:

1. EPA Webinar on the proposed stormwater program rules changes.
2. CarteGraph database users group.
3. Hach Online Water Quality Conference.