CHAPTER III - SWMP IMPLEMENTATION STATUS

INTRODUCTION

The purpose of this chapter is to show the implementation status of the storm water management plan. The BMP components for the year 2009 of the storm water management plan are presented below. This includes the BMP goal, description, measurement, reduction or benefit, and the method of implementation.

BMP 1:

Clean all required portions of the drainage system every five years.

GOAL:

To keep the storm drainage conveyances clean and clear of debris, and minimize organic matter and litter from entering into the storm drainage system and Waters of the State.

DESCRIPTION:

The Salt Lake City Storm Drainage Utility is responsible for keeping the drainage conveyances clean. Approximately 382 miles of pipe, 50 miles of open ditches and channels, and 12.5 miles of river are in the drainage system. Salt Lake City maintains a fleet of three Vactor trucks to clean storm drain structures.The maintenance program is designed to facilitate cleaning the entire system on a five-year cycle.Major storm drains are inspected on an annual basis. Detention basins are inspected annually. Salt Lake City operates four, dragline machines to clean storm drains larger than 24 inches. A main line is scheduled to be cleaned when the annual inspection indicates approximately 20 percent of the pipe capacity is filled with sediment.

MEASUREMENT:

The CITYWORKS Work Order System will be used to track system maintenance. Each system feature such as pipes, manholes, and detention basins, have been assigned a unique record in the data- base. Maintenance activity on each structural feature of the Salt Lake City system will be tracked. The number of complaints is also tracked.

REDUCTION OR BENEFIT:

The benefit attributed to the implementation of this Best Management Practice is the removal of sediments and pollutants that collect in the storm drain conveyances and ultimately enter the Waters of the State. The removal of this sediment mitigates adverse consequences to aquatic life in streams and lakes. Additional benefits include the enhancement of aesthetic values of the waters by reducing the litter and sediment load. Keeping the lines free and clear of debris allows storm water runoff to convey through the drainage system as designed.

IMPLEMENTATION:

Salt Lake City Storm Drainage will continue to implement this Best Management Practice. The Storm Drainage Manager is responsible for coordinating and prioritizing this task. The CITYWORKS Work Order System will be used for scheduling, and as a tracking measure of the status of the drainage system. With proper implementation and the available resources, the goal of cleaning the drainage system every five years should be met. The following presents the portion of the drainage system cleaned during 2003, through 2009

SYSTEM FACILITIES CLEANED

YEAR	PIPE	GUTTER	INLETS	BOXES
2003	55,895 ft.	153,590 ft.	3,484 inlets	857 boxes
2004	41,632 ft.	110,699 ft.	7,007 inlets	752 boxes
2005	42,776 ft.	64,215 ft.	4,866 inlets	3,570 boxes
2006	33,561 ft.	12,370 ft.	6,507 inlets	3,782 boxes
2007	39,454 ft.	29,760 ft.	3,490 inlets	4,048 boxes
2008	45,817 ft.	10,970 ft.	8,168 inlets	2,222 boxes
2009	69,792 ft.	34,335 ft.	9,458 inlets	4,546 boxes

- During 2003, 8,600 feet of ditches and canals were cleaned.
- During 2004, 25,430 feet of ditches and canals were cleaned.
- During 2005, 19,830 feet of ditches and canals were cleaned.
- During 2006, 7,540 feet of ditches and canals were cleaned.
- During 2007, 32,953 feet of ditches and canals were cleaned.
- During 2008, 31,447 feet of ditches and canals were cleaned.
- During 2009, 25,721 feet of ditches and canals were cleaned.

BMP 2:
Inspect all major storm drains and detention basins annually. Clean and repair the facilities as needed.

GOAL:
To keep all of the major storm drains and detention basins in repair and clean of any debris or sediment that may keep them from efficient operation.

DESCRIPTION:
The Salt Lake City Storm Drainage Utility is responsible for keeping all major storm drains and detention basins clean and repaired. Major storm drain lines are inspected on an annual basis. The Storm Drainage Utility Manager is responsible for coordinating these efforts and he will use the CITYWORKS Work Order System to keep track of the inspection dates, cleaning, and repairs. Salt Lake City operates four-drag line machines to clean storm drain lines larger than 24 inches. A main line is scheduled to be cleaned when the annual inspection indicates approximately 20 percent of the pipe capacity is filled with sediment. Detention basins are inspected annually. The Storm Drainage Utility Manager will schedule these inspections during the months of January through March, prior to spring run-off. Inspection dates, cleaning and repairs will be tracked on the CITYWORKS Work Order System.

MEASUREMENT:
The CITYWORKS Work Order System will be used for keeping track of all of the major storm drains and detention basins inspected, and document any repairs or cleanup.

REDUCTION OR BENEFIT:
The benefit attributed to the implementation of this Best Management Practice is the maintenance of flow capacity, and the reduction of sediments and pollutants that would collect in the storm drain conveyances and ultimately enter the Waters of the State. The removal of this sediment and debris mitigates adverse consequences to aquatic life in streams and lakes. Aesthetic values of the waters are also enhanced, by reducing the litter and sediment load. Keeping the major storm drainage conveyances and detention basins free from any obstructions allows the storm water runoff to convey through the drainage system as designed.

IMPLEMENTATION:

The Salt Lake City Storm Drainage will continue to implement this Best Management Practice. The Storm Drainage Manager is responsible for scheduling and coordinating the inspections and cleaning of these facilities on an annual basis. As lines are inspected, repairs are made and the line is cleaned, as necessary. Any repairs or clean up will be documented on the CITYWORKS Work Order System.

YEAR	FEET OF PIPE INSPECTED	DETENTION BASINS INSPECTED
2003	894,077	39
2004	436,211	39
2005	582,799	39
2006	609,013	39
2007	595,963	39
2008	323,067	39
2009	792,607	39

BMP 3:
Support Salt Lake City Leaf Bag Program.

GOAL:
To minimize or eliminate fall leafs from getting into the gutters and storm drain system.

DESCRIPTION:
The leaf bag program is administered through the Public Service Division. Between five-and-six hundred thousand leaf bags are given out in October and November. Three crews, with three team members, and three long bed dump trucks are used to pick up the leaf bags. The leaves are used in the composting operation at the landfill. The composting is available for government landscaping projects, commercial landscaping, and residential use. The inception of the leaf bag program was October 1985. The leaf bags have shown up in various parts of the world including Ontario, Canada, Milwaukee, Wisconsin and Kauai, Hawaii.

Prior to implementing this BMP the old City ordinance asked residents to pile their leaves in the gutter, and City crews would remove them at a specified time. Problems such as water backing up in the gutters, slippery roads, leaves washing into and plugging storm drain intakes, and safety issues for children existed.

MEASUREMENT:
The number of leaf bags provided, and the tons of leaves composted and used for landscaping will be used to measure the effectiveness of this Best Management Practice.

REDUCTION OR BENEFIT:
The implementation of this Best Management Practice helps prevent organic pollutants to the (M.E.P.) maximum extent practicable, from entering the drainage system, mitigating the consequences of organic pollution from the leaves that may otherwise enter the storm drain conveyance and the receiving water bodies. Additional benefits include providing safety to the community and the availability of composting material for landscaping.

IMPLEMENTATION:

Salt Lake City Storm Drainage Utility will continue to support this Best Management Practice. The Storm Drainage Utility will assist Public Works in distributing bags, and dissemination of information to the City residents. The costs of keeping this BMP implemented in 2009. Was approximately $34,890 per year used for the cost of the bags, cleanup crews and equipment. The following table presents the number of leaf bags given to the public, and tons of leaves collected in leaf bags:

YEAR	BAGS GIVEN OUT	TONS OF LEAVES COLLECTED
2003	600,000	1,345
2004	600,000	3,738
2005	600,000	1,900
2006	600,000	2,513
2007	500,000	1,860
2008	600,000	2,466
2009	600,000	2,450

BMP 4:
Continue the Neighborhood Clean up Program.

GOAL:
To keep household junk and debris from finding its way into the storm drainage conveyances that lead to the rivers and canals.

DESCRIPTION:
Salt Lake City conducts a yearly neighborhood clean up program. Residents may place yard debris such as grass, leaves, tree limbs, and other non-hazardous waste by the curb for collection by City crews. An effort is made to separate bushes and trees for mulching, the program runs for thirty-one weeks, from April to November with approximately 13,000 tons of yard debris collected annually. The areas are rotated each year in an effort to offer the citizens both spring and fall clean up every other year. Each week approximately 1,300 to 1,500 residential homes receive the service.

MEASUREMENT:
The amount of residential debris removed each year is the measurement used for this Best Management Practice.

REDUCTION OR MEASUREMENT:
The benefits attributed to the implementation of this Best Management Practice is the reduction of yard debris that may migrate into the storm drainage conveyances and ultimately into the Waters of the State. The removal of this debris mitigates nuisance materials from plugging storm drains, or from having an adverse impact to aquatic life in streams and lakes. Implementing this BMP also enhances aesthetic values to the neighborhood and receiving waterways.

IMPLEMENTATION:

Salt Lake City Storm Drainage will continue to implement this Best Management Practice. The Sanitation Division of the Salt Lake City Public Works is responsible for the coordination of this BMP, and provides the labor. The manpower and equipment used include three front-end loaders with operators, ten dump trucks with drivers, and laborers at each site.

YEAR	TONS OF MATERIAL REMOVED
2003	12,800
2004	15,806
2005	9,996
2006	9,801
2007	9,424
2008	7,500
2009	8,065

BMP 5:
Remove leaves from gutters during the fall leaf season.

GOAL:
To clean leaves out of the gutters and drainage intakes before they get into the storm drain system. This minimizes organic material that may otherwise convey into the Waters of the State.

DESCRIPTION:
The Salt Lake City Storm Drainage Utility will continue to clean leaves from the gutters and drainage inlets during the fall leaf season. This Best Management Practice will be done in conjunction with the Public Services Division. Street sweepers and Vactor trucks are deployed in a coordinated effort during early September to clean leaves from the streets and storm drain intakes .BMP 3: The Leaf Bag Program, BMP 4: the Neighborhood Annual Clean up Program, work hand in hand with BMP 5. The combinations of these BMPs synergistically mitigate leaves and other debris that may migrate into the storm drains and waterways from residential areas.

MEASUREMENT:
The tons of leaves that are removed and taken to various locations for composting will be used for measuring the success of this Best Management Practice.

REDUCTION OR BENEFIT:
The implementation of this Best Management Practice eliminates several tons of organic material from entering the drainage system, and Water of the State. Additional benefits of this BMP include clean intakes and gutters.

IMPLEMENTATION:

This Best Management Practice was previously implemented and the Salt Lake City Storm Drainage Utility will continue the program. An annual cost of $300,000 will be appropriated by the Storm Water Utility to provide this BMP. The Drainage Manager, Sanitation Manager, and the appropriate personnel will meet early September to coordinate their efforts prior to the leaves falling. Street sweepers and Vactor truck efforts will be prioritized through a continual coordination effort. In 2003, through 2009 street sweeper, and Vactor trucks removed a total of , 2,588, 2404, 2,409, 1,120, 1,092, 1,488 and 1,978 tons respectively of material from the gutters.

YEAR	TONS OF MATERIAL REMOVED BY STREET SWEEPERS AND VACTORS
2003	2,588
2004	2,404
2005	2,409
2006	1,120
2007	1,092
2008	1,488
2009	1,978

BMP 6:
Support the Salt Lake City Curbside recycling effort.

GOAL:
To reduce or eliminate material that can be recycled from getting into curbs, storm drainage conveyances, and Waters of the State.

DESCRIPTION:
Salt Lake City is proactive regarding recycling and offers a convenient recycling program to the residents of Salt Lake City, Since the inception of this program in 1994 the participants, and tons of material recycled has grown rapidly, the service is free to the residents and offered on a voluntary basis. The following material can be placed in the recycling bins: newspaper, tin and aluminum cans, and # 1 PET plastic, clear plastic coated milk or juice cartons, magazines, phone books, and non ferrous Metals. Pickup is on a weekly basis. A yard waste recycling program was also added to the curbside collection program in 2008. The following material can be placed in the recycling bins lawn clippings, weeds, tree branches, leaves, fruits and vegetables.

MEASUREMENT:
The measurement of this Best Management Practice regarding storm water is the amount of material recycled and kept out of the storm drain system. Approximately 880 tons of material per month is recycled in Salt Lake City.

REDUCTION OR BENEFIT:
The benefit of implementing this Best Management Practice is the reuse of material that would otherwise take up valuable space at the landfill .The depletions of natural resources are less stressed when material is recycled. The reduction of several tons of material that may migrate to storm drain systems is reused.

IMPLEMENTATION:

Salt Lake City will continue to implement the recycling program. The program is in its fourteenth year, with approximately 38,393 households receiving the service. The coordinator for Salt Lake City is Debbie Lyons. Salt Lake City also implemented a yard waste recycling program in 2008 and in its first year approximately 7,200 households have subscribed to the program the cost is $3.50 per container. Smaller less expensive trash container can be used to help offset the cost of the yard waste containers. As a result of the program 2900 tons of "yard waste" was kept out of the landfills recycled and resold as compost and mulch. In 2009 3447 tons of yard waste was collected with 8,046 subscriptions.

YEAR	TONS OF MATERIAL RECYCLED/MONTH	# OF SUBSCRIPTIONS
2004	1,062	34,895
2005	857	35,428
2006	915	36,261
2007	964	37,169
2008	836	37,980
2009	849	38,393

BMP 7:
Support citizens clean up days of selected waterways.

GOAL:
To improve the aesthetics of selected waterways by removing debris and to promote citizen awareness and responsibility regarding the waterway.

DESCRIPTION:
Salt Lake City Departments of Public Utilities and Public Works combine labor, equipment, and supplies to assist the community in cleaning the waterway. Approximately 200 tons of debris is hauled out to the landfill on the waterway clean up day. The clean up is scheduled in April around Earth Day. The community and Salt Lake City Departments work together to improve and beautify the waterway. Approximately 400-700 volunteers were involved in the project each year.

As a result of the success of the volunteers pulling debris from the river and an ongoing effort to maintain the waterway the debris hauled to the landfill has diminished. Volunteers still pull debris out of the river. However, the effort has become more of a beautification effort. Two full time and two seasonal employees maintain the river and work on beautification projects.

MEASUREMENT:
The change in the amount of debris removed from the waterway and hauled to the landfill is one measurement of the success of this Best Management Practice. The support of the community volunteers is an important aspect of this BMP. As the community becomes involved, awareness of preventing pollutants from entering the waterways should increase. Thus, fewer tons of debris should be in the river, which would result in fewer tons of debris removed each year. This is an important measurement of the success of this BMP. Another measurement is the trails chipped, native trees and plants planted and other improvements made.

REDUCTION OR BENEFIT:
The benefit of this Best Management Practice is the reduction of garbage and debris destroying the beauty and water quality of the selected waterway. The community involvement in the clean up increases general awareness. The community benefit is a waterway that has better aesthetics, recreational use, and water quality.

IMPLEMENTATION:

Salt Lake City will continue to implement this Best Management Practice. The Public Utilities Drainage Manager and the Parks Department make the coordination efforts. The estimated cost of this BMP for equipment, supplies, disposal fees etc., is approximately $25,000. In addition to the river cleanup, several beautification projects were completed to enhance the river and its surroundings for the citizen's enjoyment. Park benches, a boat ramp, tree planting and pruning and a major effort of chipping trails were completed. As a result of the past years of cleanup in the Jordan River the tons of debris removed is declining. Therefore, the efforts have entailed more beautification projects and a Jordan River Celebration. The celebration was held on May 30, 1998 at the Jordan Park. Games, prizes, canoe rides, and fishing tournaments were part of the celebration. The Bennion Center donated trees, and the area was patrolled for litter. The City may adopt another segment of the river from North Temple to 20th North to concentrate the clean-up efforts.

2003 Water Way Clean-up and Beautification Projects

1/21/2003 - Federation for Youth – 12 Volunteers – 1500 South Jordan River: painted Bridge, and liter control.

3/10/2003 – Federation for Youth – 20 Volunteers – 1500 South Jordan River: Raked and picked up garbage and debris.

4/25/2003 – Federation for Youth – 50 Volunteers – 1500 South Jordan River: Spread chips and planted Glendale peninsula.

5/1/2003 – Federation for Youth – 10 Volunteers – 1500 South Jordan River: Spread chips.

5/17/2003 – Friends of Jordan River – 20 Volunteers - 300 South Jordan River: Painted tables, spread chips, litter control, trimmed brush area.

6/14/2003 – Scout Troop 312 – 12 Volunteers – Liter control along trail areas.

6/14/2003 – Federation for Youth – 20 Volunteers – 1500 South Jordan River: Painted Bridge and peace pole, litter control, and spread chips.

8/9/2003 – Federation for Youth – 30 Volunteers – 1500 South Jordan River: Painted Bridge and planted trees.

8/26/2003 – 100 Volunteers – 1175 South Jordan River: Installed playground, built picnic tables, and spread chips

Two full time and two seasonal employees continue to maintain the river on a daily basis from 2100 South to 1600 North.

2004 Water Way Clean-up and Beautification Projects

Bennion Center, U of U volunteers cleaned the 1100 South to 1200 South area all year long and provided various beautification projects.

A lighting project from 1300 South to 1700 South was started and is being completed in 2005.

Several Volunteer groups were involved in wood chip, painting of picnic tables and general clean up during 2004.

A 2005 major river clean up is proposed. This clean up in the past has attracted approximately 500 volunteers.

2005 Water Way Clean-up and Beautification Projects

Home Depot water project on Modesto Avenue and 1100 South, volunteers planted shrubbery, placed wood chips for trails, and cleaned up the area. Home Depot donated the plants and shrubbery. The project involved 20 volunteers.

Jordan River Clean-up Celebration beginning on North Temple and ending on 1700 south. This event took place on Earth Day, April 23, 2005. Approximately 150 volunteers cleaned along the trails and banks of the river, including volunteers in canoes cleaning debris from the river.

Lighting project from 1300 south to 2100 south tying the river trail from Salt Lake City to West Valley City.

Bennion Center, U of U volunteers continued monthly beautification projects along the Jordan River.
Additional projects on Modesto Avenue, volunteers installed irrigation systems, planted 600 shrubs, pathway clean-up, and wood chipping at trails.

2006 Water Way Cleanup and Beautification Projects

Bennion Center, U of U volunteers supported the water ways with beautification projects, including spring clean-up, summer planting, and winter solstice on the Jordan River

Weed control and branches were trimmed along the Jordan River with Parks Department Personnel and Volunteers.

Two full time Parks Department employees maintained the Jordan River and trails with clean-up repairs, and trail wood chipping.

A beautification project was completed at Liberty Park with a new Bridge and gazebo.

2007 Water Way Cleanup and Beautification Projects

The Jordan River Trail from10th North to the Rose Park Golf Course Bridge was cleared and paved, and 200 feet of Gabion wall was installed along the bank of the Jordan River for erosion control. At a cost of $350,000

Bennion Center, U of U volunteers continued to support the water ways with beautification projects, including spring clean-up, summer planting, and winter solstice on the Jordan River

May 2007 volunteers from the Boy Scouts and Church groups cleaned portions of the Jordan River and painted picnic tables and benches.

The Parks Department continues to employee two full time and two seasonal employees to maintain the Jordan River and trails with clean-up, repairs and trail wood chipping.

2008 Water Way Cleanup and Beautification Projects

Bennion Center, U of U volunteers continue support the water ways with beautification projects, including spring clean-up, summer planting, and winter solstice on the Jordan River.

Federation for Youth held two camping adventures in June and again in July along the river that included cleaning and planting native plants and shrubs along the river.

In May, June and July the Glendale Community along with help from Salt Lake City Corporation and the Bend in the River volunteers cleaned the Modesto trail way along the Jordan River and added new wood chips.

2009 Water Way Cleanup and Beautification Projects

Salt Lake City Corporation cleared, cleaned and added new trails along the Jordan River from 1000 north to the Rose Park Golf course and has plans to continue along the trail in 2009.

Salt Lake City purchased the fisher Mansion in 2008 and added 200 yards of trial along the river. "Clean-up days" will give opportunities for volunteers to participate in keeping this portion and other areas of the Jordan River clean and free of trash. Salt Lake City supports the efforts with equipment, guidance and supervision of the projects.

In May of 2009 Salt Lake City participated in a science project along the Jordan River with students from the Salt Lake Center for Science Education (a new science focused charter school in Rose Park). The project focused on water quality and the impact pollutants have on the River.

In 2009 Salt Lake City participated in two clean up days along the Jordan River the Bend in the River and Modesto continues to be good opportunities for outreach and education. Salt Lake City will continue to participate in clean up days along the Jordan River.

Two full time and two seasonal employees continue to maintain the river on a daily basis from 2100 South to 1600 North.

BMP 8:
Use the CITYWORKS work order system to track and schedule storm drain maintenance activities.

GOAL:
To document and track system maintenance with the computerized work order system. (CITYWORKS). This documentation will be used to keep track of maintenance activity on each structural feature of the Salt Lake City system and provide information for future maintenance activities.

DESCRIPTION:
Salt Lake City implemented the CITYWORKS work order system in 1993 for tracking of the sanitary sewer, and storm water systems. The work order system allows each system feature such as pipes, manholes, and detention basins to have its own assigned unique record in the database. Work orders are generated for routine scheduled maintenance, needed repairs in the system, and emergencies. These work orders are assigned to maintenance personnel to make repairs and/or replacements. The amount of time spent on the maintenance activity, materials used, and work performed is recorded on the work order and the information is input into the CITYWORKS database.

MEASUREMENT:
The measurement for this Best Management Practice is the work performed on the storm drainage system. The number of work orders assigned and the repairs and/or replacements to portions of the drainage system to insure the systems are clean and function properly.

REDUCTION OR BENEFIT:
The benefit attributed to the implementation of this Best Management Practice is the availability of a tracking system to access records regarding maintenance and repairs on the drainage system. These records provide information for scheduling of maintenance, repairs, and cleaning of the drainage system. The maintenance activities provide a drainage system that functions properly to mitigate the amount of pollutants entering Waters of the State.

IMPEMENTATION:

Salt Lake City Public Utilities will continue implementation of this Best Management Practice. The Storm Drainage Manager is responsible for assigning work orders, making sure that proper notes are asserted on the work order by maintenance personnel, and making sure that work orders are provided to the work order office. The work order office is responsible to input the information into the CITYWORKS Work Order system for future use in maintaining the storm drainage system.

BMP 9:
Conduct an annual training seminar for maintenance personnel on their role in maintaining storm water quality.

GOAL:
To insure that storm drainage maintenance personnel are aware of their responsibility in maintaining storm water quality as work is performed on the drainage system.

DESCRIPTION:
The Salt Lake City Storm Drainage utility is responsible for maintaining the storm drainage conveyances and keeping them clean. As part of this responsibility maintenance crews are trained to understand and obtain knowledge of their role in maintaining storm water quality. Salt Lake City storm drainage maintenance personnel are trained regarding their role in maintaining storm water quality in the following areas. Construction activities, cleaning storm drain lines, boxes and inlets, identifying flows or discharges into the storm drain system and reporting them for investigations, and working on beautification projects and cleanup of selected waterways with citizens.

MEASUREMENT:
The measurement for this Best Management Practice is the training provided for maintenance personnel. The quality of the training and topics discussed should focus on Best Management Practices that they can implement to maintain storm water quality while performing their job. Another aspect of the training should focus on illicit discharge identification.

REDUCTION OR BENEFIT:
The benefit attributed to this Best Management Practice is providing support and training to the drainage maintenance crew in order for them to understand the significance of maintaining storm water quality. With a maintenance staff that has received training, maintenance of the system should be performed with storm water quality addressed to eliminate or mitigate poor judgment or accidents that may discharge pollutants into the storm drain system and Waters of the State. Illicit connections and/or discharges are reported for investigations and solutions. Thus, the benefit of this Best Management Practice is a reduction of pollutants to the Waters of the State.

IMPLEMENTATION:

Salt Lake City will continue to implement this Best Management Practice. The Storm Drainage Manager and Storm Water Coordinator are responsible for this training. Several training sessions have been given over the years and will continue to be an ongoing process. The training sessions will continue to focus on Best Management Practices and illicit discharge identification. The Storm Drainage Manager and Storm Water Coordinator will lead the efforts regarding training.

- An eight-hour Hazmat refresher course was provided for Storm Drain and Watershed personnel on July 31, 2003.

- In 2004, no formal trainings were given, other than safety meetings which remind employees as to their role of maintaining storm water quality.

- In 2005, training was given to the maintenance personnel and the street sweeping division regarding their responsibility in keeping pollutants out of the storm drain system. Specifically, not dumping decant or debris from street sweepers and Vactor trucks. Safety meetings also included reminders to the employees regarding their role in maintaining storm water quality.

- In 2006, safety meetings were used to remind in both the wastewater division and storm water division as to their role of maintaining storm water quality. The use of safety equipment and illicit discharges and connections were discussed.

- In 2007 Storm Water and Environmental power point presentations were given to the street sweeping and parks department. In conjunction with the Training, discussions were held regarding their responsibility for keeping pollutants out of storm drains and water ways, and reporting any dumping, illegal or accidental.

- During safety meetings held in 2008 storm water and water quality issues were addressed topics included meter box pumping and filter socks for discharge hoses. Maintenance personnel are constantly reminded of their role in maintaining storm water quality.

- During 2009 BMP's were discussed during safety meetings. The State of Utah also required that the Fleet maintenance facility, Parks department and Public Utilities acquire their own Storm water permit and implementing a SWPPP for their own facilities.

BMP 10:
Develop disposal program for sediments from storm drain cleaning.

GOAL:
To insure proper disposal of sediments from storm drain cleaning in an efficient and environmentally sound manner.

DESCRIPTION:
The Salt Lake City Storm Drainage Utility is responsible for sediment removal and proper sediment disposal. As sediment and debris is removed from the storm drain facilities during regular scheduled maintenance it is hauled to a bio solids de-watering bed at the Water Reclamation Facility. The bio solids de-watering bed has been reserved for storm drainage sediment and debris. The sediment and debris is stacked in windrows for de-watering to take place. The water from the sediment conveys through the sluice gates in the bed and is returned to the head-works of the plant for proper treatment. When the windrows of sediment and debris have de-watered the debris is loaded on ten wheel dump trucks and hauled to an approved landfill for disposal.

MEASUREMENT:
The measurement for this Best Management Practice is the number of loads that are properly de-watered and hauled to the landfill for proper disposal. This disposal method is used to dispose of the sediment in an environmentally sound manner.

REDUCTION OR BENEFIT:
The benefit attributed to the implementation of this Best Management Practice is the amount of sediment and debris removed from the storm drainage system that receives environmentally sound disposal. Cleaning the storm drainage system and removing sediment and debris mitigates this pollution from entering Waters of the State. The reduction of several tons of sediment from the storm drain system mitigates adverse consequences to aquatic life in streams and lakes. Reducing the litter and sediment load also enhances aesthetic values of the waters.

IMPLEMENTATION:
Salt Lake City will continue to implement this Best Management Practice. In 2003 through 2009 respectively approximately 180, 399, 287, 205,124, 312 and 260 twelve cubic yard ten wheeler dump truck loads of sediment and debris were taken to the bio solids beds for de-watering. After the sediment and debris was de-watered it was taken to the landfill for proper disposal.

BMP 11:
Continue requirements for on-site detention for developments.

GOAL:
To improve water quality by engineering on-site storage facilities, which are designed to improve water quality and allow a more controlled runoff discharge through storm drain piping or groundwater recharge.

DESCRIPTION:
Salt Lake City has had a drainage regulation requiring on-site detention for developments since 1978. Salt Lake City requires all commercial, industrial, and residential developments with impervious areas greater than 15,000 square feet to provide on site detention facilities to limit the discharge to a pre development rate of 0.2 cubic feet second/acre during the 100-year storm. The uses of on site detention promote storm water quality by reducing the post development run off velocities and resulting sediment transportation.

MEASUREMENT:
The measurement for this Best Management Practice is the number of drainage plans approved.

REDUCTION OR BENEFIT:
The benefit attributed to the Best Management Practice of requiring on-site detention is the enhancement of water quality by settling out some of the pollutants that have an effect on the receiving waters. The mitigation of flooding is another benefit of this BMP. Thus, the capacities of all design areas are to be sufficient to contain the estimated runoff volume from a 100-year, 24- hour storm event over those portions of the gross aggregate area under design.

IMPLEMENTATION:
Salt Lake City will continue to implement this Best Management Practice. The Development Review and Inspection teams are responsible for reviewing and inspecting proposed construction development to insure it conforms to the City's Surface Water Runoff Policy, the City's Restrictive Discharge Policy, and good engineering practices. During 2003 through 2009 respectively 30, 33, 94, 100, 116, 112 and 100 drainage plans were approved. 100 % of the plans approved met the drainage regulations developed by Salt Lake City.

BMP 12:
Enforce the requirements of the Zoning Ordinance Chapter 21A.34.050 and 21A.34.130 for developments adjacent to waterways.

GOAL:
To provide protection, preservation, proper maintenance, and use of Salt Lake City's Water courses, lakes, ponds, floodplain, and wetland areas to include downstream drainage areas for present and future residents of Salt Lake City.

DESCRIPTION:
The Salt Lake City Community and Economic Development Division are responsible for enforcing the LC Lowland conservancy ordinance. The ordinance protects water-bodies that encompass the LC lowland conservancy overlay district such as streams, lakes, ponds, and wetlands, as identified on the zoning map, and also the Jordan River and the Surplus Canal. The ordinance has certain protection area standards such as setback requirements, permitted use, conditional uses, natural vegetation buffer strips, and landscape plan requirements .the Riparian Corridor Overlay District (RCO) provides protection for all stream corridors and wetlands east of Interstate 215 Highway and includes City Creek, Red Butte Creek, emigration Creek, The Jordan River and Parleys Creek and their tributaries.

MEASUREMENT:
The measurement for this Best Management Practice is the approval of required plans, and enforcement of the ordinance. Soils reports identifying soil stability, drainage control plans, and site grading and excavation plans must be submitted and approved prior to any work being done.

REDUCTION OR BENEFIT:
The benefit attributed to this Best Management Practice is in the stated purpose of the overlay zone to "improve water quality". "The water quality is improved by filtering and storing sediments and attached pollutants, nutrients, and compounds before they drain into streams or wetlands, and by maintaining the natural pollutant assimilating capabilities of the stream, floodplains and wetlands."

IMPLEMENTATION:
Salt Lake City will continue implementing this Best Management Practice which has been in place since 1992. 21A.34.050 and the newly passed 21A.34.130 Riparian Corridor Overlay the Planning Section of Community and Economic Development is responsible for reviewing requests to build or use the overlay and or RCO district. Their review of plans and the criteria in Zoning Ordinance 21A.34.050 and 21A.34.130 are used in the process of request being approved or rejected. In 2001 through 2008 no plans were approved during 2009 12 plans were approved.

(See ordinance 21A.34.050 and 21A.34.130 presented in the next several pages of this chapter)

BMP 13:
Prepare Standard BMPs for site development.

GOAL:
To have a set of standard construction BMPs that are available to developers and engineering consultants that may be used to enhance storm water quality.

DESCRIPTION:
The purpose of this Best Management Practice is to have a guidance document available to developers, engineering consultants, and contractors regarding storm water management during site development and construction activities. This document would provide Best Management Practices and discuss the impacts of construction activities to storm water quality.

MEASUREMENT:
The measurement of this Best Management Practice is the quality of the guidance document and the Best Management Practices that are implemented during site development as a result of this document.

REDUCTION OF BENEFIT:
The benefit of this guidance manual is to provide developers, engineering consultants, and contractors with information regarding Best Management Practices that may be implemented at construction sites during site development. As these BMPs are implemented storm water pollution prevention techniques and practices are used to mitigate pollutants from conveying to storm drain systems and Waters of the State.

IMPLEMENTATION:
This Best Management Practice was implemented prior to its permit schedule. The guidance document was developed in May of 1994. Salt Lake City has referred this guidance manual, "Storm Water during Construction Activities" to several contractors in Salt Lake City. A new and updated manual was completed in June 1999. The document is a "Guidance Document for Storm Water Management". Chapter Two is entitled, "Storm Water Management from Construction Activities". The document is available on the internet @ www.co.slc.ut.us. Salt Lake City will continue to implement this Best Management Practice by referring the manual to contractors and developers.

BMP 14:
Develop annual review program for private drainage detention facilities.

GOAL:
To insure that control structures are in place and functioning properly on private drainage detention basins to protect water quality and meet 100-year, 24-hour storm event runoff requirements.

DESCRIPTION:
Salt Lake City Public Utilities has a restrictive discharge policy for developments that meet the criteria found in Salt Lake City Storm Drainage Regulation No. SW-1. The policy generally applies to developments proposing installation of more then 15,000 square feet of impervious surface if either of the following property areas is exceeded:

> One (1) gross aggregate acre if the project comprises of a commercial, industrial, institutional governmental or utility construction project.
>
> Two (2) gross aggregate acres if the project comprises of a subdivision (residential, non-residential, and minor), a group of planned unit development (P.U.D.) or a residential construction project.

The gross aggregate area shall include streets and other dedicated lands, easements, and rights of way.

The restrictive discharge policy requires the on-site concentration or collection of all surface and storm water runoff within the project area, and restricts the eventual discharge of this runoff to a maximum allowable discharge rate of two-tenths cubic feet per second per acre (0.20 cfs/acre) of development. Private drainage detention basins for development are one of the designs used to meet the restrictive discharge policy. Salt Lake City Public Utilities Drainage Division is responsible for inspecting these private detention basins.

MEASUREMENT:
The measurement for this Best Management Practice is the inspections on the private detention basins to insure control structures are in place and functioning properly.

REDUCTION OR BENEFIT:

The benefit of this Best Management Practice is a drainage system that addresses the treatment of surface and storm water runoff, both wet-weather and dry weather discharges. The detention basins function is the temporary storage of storm runoff, which is used to control the peak discharge rates, and which provides gravity settling of pollutants. Orifice plates may be used to restrict the discharge of the runoff to the maximum allowable discharge rate of two-tenths cubic feet per second per acre. Large debris such as cups, sticks, cans, cardboard, etc generally do not pass through the orifice plate. They eventually drop to the bottom of the detention basin. The reduction of sediment and pollutants to Waters of the State is one of the purposes of this Best Management Practice. As a result of this Best Management Practice water quality and the aesthetics of the waterway is improved.

IMPLEMENTATION:

Salt Lake City has partially implemented this Best Management Practice. Salt Lake City's Industrial Storm Water Coordinator inspects facilities regarding their UPDES State Storm Water Permit and implementation of their Storm Water Pollution Prevention Plan. During this inspection detention basins are inspected to make sure they are clean of debris and sediment, and functioning properly. Salt Lake City has 924 private detention basins that will require annual inspection. The Industrial Storm Water Coordinator and Drainage Manager are responsible for providing resources to fully implement this Best Management Practice. During 2003 through 2009 respectively 33, 48, 36, 100, 116, 112 and 100 private drainage detention facilities were reviewed and approved by Salt City Public Utilities.

BMP 15:
Support the existing Salt Lake City Street Sweeping program.

GOAL:
The goal of this Best Management Practice is to reduce the impact on receiving waters from pollutants and debris accumulating on the streets from residential, industrial, and commercial use.

DESCRIPTION:
Salt Lake City Public Service Department operates a fleet of nine street sweepers. Sweeping industrial and commercial areas scheduled on a monthly basis. Sweeping residential areas is scheduled on a six months rotation. A street-sweeper is attached to the street departments' asphalt grinding and chipping section to sweep the streets behind maintenance activities. Streets are also swept following the collection of debris placed by residents during the neighborhood clean up program.

MEASUREMENT:
The measurement of this Best Management Practice is the miles of street swept and debris removed from the streets.

REDUCTION OR BENEFIT:
The benefit attributed to street sweeping on regular basis is to reduce floatable material, sediments and other attached pollutants from transporting into the storm sewer system and Waters of the State.

IMPLEMENTATION:

Salt Lake City will continue to implement this Best Management Practice. Salt Lake Storm Sewer Utility pays one-half of the cost for street sweeping in Salt Lake City. The Public Service Division Manager tracks and schedules the street sweeping.

DATE	AMOUNT SPENT ON STREET SWEEPING	LANE MILES SWEPT
2003	$1,202,192	33,378 Miles
2004	$ 993,798	29,455 Miles
2005	$1,031,985	28,162 Miles
2006	$1,169,589	30,890 Miles
2007	$1,211,865	32,699 Miles
2008	$ 1,167,737	30,740 Miles
2009	$ 902,964	24,132 Miles

BMP 16:
Review salt pile storm water management.

GOAL:
To have an environmentally sound storm water management plan implemented around street deicing salt piles.

DESCRIPTION:
Salt Lake City Public Service Department is responsible for implementing the Best Management Practice around street deicing salt piles. Five locations are used to store street deicing salt piles. These five locations include: Victory road, Bonneville, Guardsman way, Forrest Dale, and Delong Street. All five locations have no flow asphalt pads that slope to concrete holding sumps. The sumps are pumped out and the brine solution is used to pre-wet streets prior to a storm that has been forecasted. Barriers are placed on the perimeter of the site for secondary containment as an added protection.
At the end of the season the salt piles are removed the pads and sumps are cleaned the sumps equipped with shutoff valves that are opened allowing runoff from rain storms to drain into the storm water system.

MEASUREMENT:
The measurement for this Best Management Practice is the prevention of the salt, and brine solution from leaving the containment area and migrating to storm drainage systems or leaching into the groundwater.

REDUCTION OR BENEFIT:
The benefit attributed to this Best Management Practice is that through proper management of street deicing and salt piles the storm drain system, and groundwater will not be polluted by the salt piles. If these salt piles are not properly managed the runoff may end up in storm drains and waterways without being used for the intended purpose to de-ice streets for the safety and welfare of Salt Lake City residents. Sodium Chloride the compound for salt is toxic to fresh water aquatic life and is very high in Total Dissolved Solids. Therefore, the benefit of properly managing salt piles is to reduce a saline solution discharge that is high in total dissolved solids, and is toxic to aquatic life from entering the Waters of the State.

IMPLEMENTATION:

Salt Lake City Public Works will continue to implement this Best Management Practice of properly managing salt piles. The asphalt pads and barriers is one measure that has been implemented on all of the sites. The holding sumps at the Victory road and Guardsman way location is another Best Management Practice that has been implemented. The sumps are pumped out and the brine solution is used to pre-wet streets prior to a storm that has been forecasted. In 2002, a cover was constructed at the Victory road site to cover the salt piles in the winter, and as a picnic area for residents during the summer.

BMP 17:
Procedures for monitoring storm water management on Public Service Projects.

GOAL:
The goal of this Best Management Practice is to meet General Storm Water conditions by identifying and controlling any problems with erosion, sedimentation, or other pollutants that may enter the drainage system on Public Works Projects.

DESCRIPTION:
Salt Lake City has developed a program for Public Services Projects regarding monitoring of storm water. Any site greater than one acres is required to obtain a UPDES construction permit and implement a Storm Water Pollution Prevention Plan. Best Management Practices are implemented to control sediment and erosion control. Salt Lake City has a design team and inspection team to insure that the storm water is properly managed and monitored to mitigate pollutants.

MEASUREMENT:
The measurement for this Best Management Practice is the UPDES construction permits, storm water pollution prevention plans, and erosion and sediment controls implemented on Public Service Projects.

REDUCTION OR BENEFIT:
The benefit of having this Best Management Practice is to mitigate sediment transportation and attached pollutants from entering storm drain systems and waterways. When the construction is complete, BMPs for water quality such as on-site detention basins, and grass swales may exist, which may have long term impact on the site.

IMPLEMENTATION:
Salt Lake City's Department of Public Services has a standard specification requiring contractors to submit a Notification of Intent to be covered under the State of Utah General construction Storm Water Permit for projects that will disturb more than five acres projects between one and five acres will be covered under Salt Lake City public Utilities. The general permit conditions require that the contractor implement a storm water pollution prevention plan (SWP3). Utility Inspectors and the Industrial Storm Water Coordinator make sure that Best Management Practices are in place on the project. Straw bales, berms, silt fencing and other erosion control methods are used when needed to mitigate pollutants. On site detention basins, and grass swales are used on these projects when applicable. In 2003 through 2009 respectively 2, 0, 4, 8, 9, 6 and 9 projects were completed. The projects were completed with pollution prevention controls implemented.

BMP 18:
Review proposed street projects for applicability of structural BMPs.

GOAL:
The goal of this Best Management Practice is to review all street maintenance projects for applicability of installation of structural BMPs such as grass swales and detention basins to reduce pollutants.

DESCRIPTION:
Salt Lake City has developed a process where a design team reviews all proposed street maintenance projects to determine if structural BMPs such as grass swales and detention basins should be installed. An inspection team inspects the project to make sure the structural BMPs are properly installed to specifications. The purpose of this BMP is to assess flood management projects on street maintenance to assure that water quality to the receiving water bodies is addressed for additional pollutant removal.

MEASUREMENT:
The measurement of this Best Management Practice is that 100% of all street maintenance projects are reviewed and inspected with structural BMPs installed. As these structural BMPs are installed, the key measurement is the reduction of pollutants transported into the rivers and streams.

REDUCTION OR BENEFIT:
The benefit of structural BMPs such as grass swales or detention basins is the improvement of water quality to the receiving water bodies. These BMPs rely primarily on settling to remove pollutants. The filtration action of the grass and ex-filtration through the soil layer remove some of the pollutants that would otherwise reach the receiving water bodies.

IMPLEMENTATION:
Salt Lake City Public Utilities will continue to implement this Best Management Practice with a design and inspection team to review all proposed street maintenance projects. In 2003, two projects South Temple and Montgomery Street were completed. During 2004 through 2009, 8, 2, 5, 7, 6 and 6 more projects were reviewed and completed in 2009.

BMP 19:
Review all proposed storm water projects for water quality impacts.

GOAL:
The goal of this Best Management Practice is to develop the best methodology for evaluating and improving water quality on all storm water capital projects.

DESCRIPTION:
Salt Lake City has developed a procedure for evaluating water quality aspects of all storm water capital improvements. Best Management Practices 17 and 18 are key elements and work synergistically with BMP 19 to meet this goal. Any site greater than one and less than acres is required to obtain a UPDES construction permit through Salt Lake City Public Utilities site that are greater than five will obtain permit through the state. All sites are required to implement a Storm Water Pollution Prevention Plan. A list of applicable structural BMPs that will improve water quality is part of the design and inspection process.

MEASUREMENT:
The measurement of this BMP is the number of storm water projects reviewed and the impact the capital improvements have on improving water quality discharging to the receiving water bodies.

REDUCTION OR BENEFIT:
The benefit of this Best Management Practice is the design of structural BMPs to improve water quality. As capital improvements occur structural BMPs will be installed which should conversely relate to water quality improvements as control devices are used to provide additional pollutant removal. Thus, the impact of pollutants on the receiving water bodies will be mitigated.

IMPLEMENTATION:
Salt Lake City will continue the implementation of this Best Management Practice. The design and review team assures that all storm water projects are reviewed for water quality impacts. UPDES construction permits are obtained and SWP3s are implemented and inspected to make sure that pollutants do not migrate into receiving waters. The design and review team assures that the proper structural BMPs are used to enhance water quality. In 2002 through 2003 respectively Salt Lake City reviewed 29 and 19 storm water projects. During 2004 through 2009, 13, 1, 6, 11, 0 and 2 storm water projects were reviewed by Salt Lake City Public utilities Engineers.

BMP 20:
Review detention basins for feasibility of retrofitting for water quality enhancements.

GOAL:
To review and develop a plan regarding the feasibility of retrofitting existing detention basins for water quality enhancements.

DESCRIPTION:
The purpose of this Best Management Practice is to review the existing structural controls in the flood basin to determine if structural components are feasible for enhancing storm water quality. This review will be conducted during a complete basin master planning effort to be conducted by the Salt Lake City Storm Water Sewer Utility.

MEASUREMENT:
The measurement for this Best Management Practice is the review process of existing structural controls and implementation of retrofits to the structures to enhance storm water quality.

REDUCTION AND BENEFIT:
The benefit of this Best Management Practice is the retrofitting of existing structural controls that are feasible to enhance storm water quality. As water quality enhancements are made to these structures sediments and pollutants are removed. The improved water quality is beneficial to the receiving Waters of the State.

IMPLEMENTATION:
Salt Lake City is currently working on the implementation of this Best Management Practice. During the master planning effort by the Salt Lake City Storm Water Sewer Utility the review process will be completed for existing detention basin modifications. The review process will determine the feasibility of modifications that may be used on existing detention basins to improve water quality. In 2002, though 2004 respectively 4, 3, and 1 detention basins received retrofitting for water quality enhancements. During 2005 trough 2009 No projects were completed requiring retrofitting for water quality enhancements.

BMP 21:
Develop an education program on the proper use of pesticides and fertilizers.

GOAL:
To have an education program available to educate residents, commercial applicators, and municipal agencies regarding the proper use of pesticides, fertilizers, and herbicides.

DESCRIPTION:
The purpose of this Best Management Practice is to have an education program available regarding the proper use of pesticides, fertilizers, and herbicides. This program is to reach residents, industries, and municipal agencies. The Salt Lake City Public Utilities and Salt Lake County Storm Water Coalition have programs available to provide this type of public information. Additionally, a Salt Lake City-County Health Department Facility is available at 6030 West 1300 South to provide information regarding use of the pesticides, fertilizers, and herbicides. This facility will accept pesticides, fertilizers, and herbicides from residents, and small businesses that have left over products. These excess products are available to the general public at no cost for their use. Various publications have been used to educate the general public regarding the use of pesticides, fertilizers, and herbicides. These publications are circulated in newspaper inserts, pamphlets, and fliers.

MEASUREMENT:
The measurement for this Best Management Practice is the education provided to the various groups applying pesticides, fertilizers, and herbicides. As these groups become educated the products are properly used and the pollutants from over application are mitigated.

REDUCTION OR BENEFIT:
The benefit of this Best Management Practice is an educated public that recognizes the significance of proper use of pesticides, fertilizers, and herbicides. The benefit attributed to this education effort is the reduction of pollutants to Waters of the State as a result of over application of these products.

IMPLEMENTATION:
This Best Management Practice will continue to be implemented with various publications produced to educate the public regarding the proper use of pesticides, fertilizers, and herbicides. In addition to the information circulated the Household Hazardous Waste Days held at various parts of Salt Lake City and Salt Lake County accepts pesticides, fertilizers, and herbicides that are not used. The Salt Lake City-County Facility is also available to accept unused product for reuse of the pesticides, fertilizers, and herbicides.

BMP 22:
Develop SWPP program similar to pretreatment program.

GOAL:
To develop a program similar to the wastewater pretreatment program that is proactive in working with the businesses in Salt Lake City. The goal is to provide the businesses with information and assistance to help them stay in compliance with storm water objectives.

DESCRIPTION:
The Salt Lake City Drainage Utility has developed a program to assist businesses in obtaining their UPDES industrial storm water permits, developing and implementing Storm Water Pollution Prevention Plans and staying in compliance with storm water regulations. An inspection of the facilities, along with providing information to the facilities is a big part of this program. The pretreatment program and SWPP program work together in this effort.

Monitoring of various outfalls is part of the program to determine any illicit connections or illegal discharges to the municipal separate storm sewer system (MS4). When a pollutant is found during a screening process, the system is traced back to the source or business when possible. This is followed up with a solution to prevent or mitigate the pollutants from entering the receiving waters.

MEASUREMENT:
The measurement for this Best Management Practice is the percent of industries with permits, and the percent of Storm Water Pollution Prevention Plans that are implemented. The ability to get businesses to comply and meet storm water standards is very important for the long-term success of the program. The number of inspections, enforcement of illegal discharges, and disconnection of illegal connections is another measurement beneficial to the storm water and pretreatment programs.

REDUCTION OR BENEFIT:
The benefit of this program is working with the industries in Salt Lake City in a positive manner to find solutions and Best Management Practices that will mitigate or eliminate pollutants. This approach will work for both short and long term solutions to improve the quality of water entering receiving waters. The pretreatment program in Salt Lake City has been very successful in working with industries. Businesses are assisted in meeting their discharge standards to the POTW. The reduction of pollutants leaving industry and entering the MS4 is a primary goal of the program.

IMPLEMENTATION:

Salt Lake City has established this program and will continue to implement this Best Management Practice through inspecting and working with businesses on a continual basis. Dry weather monitoring, wet weather screening, storm event sampling will be another aspect of the Storm Water program. During 2003 through 2009 respectively 106, 112, 111, 100, 65, 120 and 125 inspections were conducted, 66, 85, 7, 45, 38, 31 and 28 of these inspections were industrial.

BMP 23:
Maintain industrial user SIC code database.

GOAL:
To have an updated listing of local industries having a Standard Industrial Classification Code, (SIC) requiring them to acquire State Industrial UPDES storm water permits and a Storm Water Pollution Prevention Plan implemented.

DESCRIPTION:
Salt Lake City Public Utilities will maintain an updated industrial user SIC code database. The data base will be used to identify industries in Salt Lake City that are required to have State Industrial UPDES storm water permits and Storm Water Pollution Prevention Plans that are implemented. The first three digits of the business license is the SIC code. The updated list will identify any new or existing industries that are required to meet storm water regulations and be inspected on a regular basis.

MEASUREMENT:
The measurement of this Best Management Practice is the percent of total required industries on the database that obtain permits and meet storm water regulations as a result of contacts by letters, site visits, etc. made from the use of this data base.

REDUCTION OR BENEFIT:
The benefit of having an updated SIC database of industrial users will be to identify and contact new or unregulated industries in Salt Lake City and work with them regarding their compliance with storm water regulations. The end result will be better educated industries regarding storm water and fewer contaminants leaving their facilities to the MS4s storm drain system and eventually to the receiving water bodies.

IMPLEMENTATION:

Salt Lake City will continue implementing this Best Management Practice in order to have a list of those businesses required to meet storm water regulations. In 2007, an updated list from the State of Utah, Division of Environmental Quality was obtained by Salt Lake City. This list supplied information regarding all of the industries in Salt Lake City that have obtained State storm water permits. It was used for facility inspections and Storm Water Pollution Plan reviews. The guidelines given in the State General Permit for Storm Water Discharges Associated with Industrial Activity, on page three, number 19a, 19b, 19c, 19d, 19e, 19f, 19g, 19h, 19i, 19j, and 19k will be used to determine which industries are on the database. The Salt Lake City Business Licensing Department will be used to obtain a database of businesses that meet the aforementioned State criteria for NOI permitting.

BMP 24:
Coordinate with POTW pretreatment program.

GOAL:
To work in parallel with the POTWs pretreatment program working in partnership with the industrial and business community to provide consistent guidance and direction.

DESCRIPTION:
Salt Lake City Public Utilities storm water and pretreatment sanitary sewage personnel work in a team effort to partnership with the business community to identify and remove illicit connections to the storm drain system. Both programs inspect facilities and respond to trouble calls. During inspections if any illicit connections or discharges are noticed a coordinated effort between the two programs is used to remove any illicit connection, or to resolve any illegal discharges.

MEASUREMENT:
The measurement for this Best Management Practice is the dissemination of information and consistent guidance given to the regulated business community. The number of illicit connections or illegal discharges found and resolved is another important measurement.

REDUCTION OR BENEFIT:
The benefit of this Best Management Practice is the coordination of program efforts, and providing consistent direction and guidance to the regulated business community. Storm water discharging to the sanitary sewer adds to the hydraulics of the plant and may hydraulically overload the plant. This decreases the efficiency of the plant and water that should not need treatment is treated. If laterals that should be tied to the sanitary sewer are tied to the storm drain, a pollution and health hazard may exist in storm drain system. Removing any illegal connections or resolving illicit discharges are beneficial to both systems.

IMPLEMENTATION:

Salt Lake City Public Utilities will continue to implement this Best Management Practice. The pretreatment program has three full-time and one part time position that inspect, and monitor waste streams discharged to the sewer from industries. The storm water program has one full time and one part time position to inspect industries regarding storm drain compliance. Coordination and cooperation between the two divisions assists both programs. Any illicit connection or discharge observed by any of the personnel is immediately reported to the proper program coordinator to resolve the problem. A coordination of efforts is required to resolve such problems. In incidents where a storm drain is improperly tied into the sanitary sewer, the business is required to tie into the storm drain system, where a sanitary sewer lateral is tied to a storm drain systems, the business is required to tie into the sanitary sewer. The storm water program coordinator will inspect industries with the pretreatment inspectors, or utilize information collected by the other department to reduce duplication of efforts. Storm water will work with pretreatment to include Storm water BMPs and other educational information for Storm water BMPs… Between the coordination of efforts of these two programs 21, 32, 28, 31, 19, 21 and 37 illicit discharges and illegal connections were resolved in 2001 through 2006 respectively. No illicit or illegal connections were found or reported during 2007.In 2008 one business was found to have the roof drains tied to the sewer line. We had them remove the roof drains from the sewer line and connect them to the storm drain system. In 2009 two lines were dye tested one of the two line was found to be connected to a storm drain pipe that was discharging to Red Butte Creek. SLVHD and SL County where also present during the testing. The line was removed and connected to the sanitary sewer and re-tested.

BMP 25:
Maintain records and database of all illicit connection investigations.

GOAL:
The goal of this Best Management Practice is to have records and a database of all illicit connections, their enforcement, and resolution for future reference.

DESCRIPTION:
Salt Lake City's Industrial Storm Water Coordinator maintains files and records of all illicit discharges or connections. Paradox is the database used to keep track of illicit connections, or discharges individual files are maintained on each business investigated. These files contain any correspondence, enforcement, and the resolution concerns.

MEASUREMENT:
The measurement of this Best Management Practice is the number of illicit connection investigations and their resolutions. In 2002 through 2009 respectively 32, 28, 31, 19, 21, 9, 3 and 2 investigations regarding illicit discharges or connections were investigated.

REDUCTION OR BENEFIT:
The benefit of this Best Management Practice is an active record of illicit connection inspections, enforcement, and the means of resolving the problem. As illicit connections are removed from the storm drain system the receiving waters have less pollution.

IMPLEMENTATION:
Salt Lake City will continue the implementation of this Best Management Practice by maintaining an updated database and filing system. The Storm Water Coordinator is responsible for these records and for keeping an updated database of the location, response and enforcement on illicit connections.

BMP 26:
Review all new development plans for compliance and illicit connections.

GOAL:
The goal of this Best Management Practice is to insure that all new commercial and industrial development plans are in compliance and that illicit connections to the storm drain are not constructed.

DESCRIPTION:
Salt Lake City Public Utilities has a design and review team that reviews all development plans to insure that illicit connections to the storm drains are not constructed. The design and review team makes sure that the storm drain system is properly connected to the storm drain and not to the sanitary sewer. They make sure that the ordinance requiring on-site detention for developments greater than 15,000 square feet is in the plans. Additionally, they insure that all laterals that should tie into the sanitary sewer are properly connected. The contracts division is a second backup as they review the plans before issuing permits for connected laterals. The final review is from the inspection team that actually works with contractors and developers to make sure that the laterals are physically connected to the proper system.

MEASUREMENT:
The measurement for this Best Management Practice is the number of plans reviewed.

REDUCTION OR BENEFIT:
The benefit of this Best Management Practice is an assurance that new connections are properly made. This eliminates illicit discharges to the storm drain system that would be untreated and pollute the receiving bodies of water. Additionally, it provides consistent guidance to the business community.

IMPLEMENTATION:
Salt Lake City will continue implementing this Best Management Practice by utilizing the design and review team as well as on site inspections to make sure all new developments are properly connected. As new development plans are submitted to Salt Lake City Public Utilities a design team is given the plans to review and assist the developer with any changes that may be required. Once the plans are approved the developer is required to take out the proper permits with the contracts division. As the development is being constructed an inspector works with the contractor making sure that proper connections are made. During 2003 through 2009 respectively Salt Lake City reviewed 103, 149, 188, 387, 450, 436 and 337….development plans for compliance and illicit connections.

BMP 27:
Promote City County Health Department Hazardous Waste Collection Days.

GOAL:
To provide individual households a collection day where they can properly dispose of household hazardous waste.

DESCRIPTION:
Salt Lake City Public Utilities has promoted this Best Management Practice by providing information to the general public. Fliers have been inserted in Salt Lake City customer water bills, inserts in the Deseret Newspaper and Tribune Newspaper have been used to promote the collection of household hazardous waste. Salt Lake City-County Health Department opened a permanent facility in 1995 located at 6030 West 1300 South. The facilities hours of operation 9 a.m. to 3 p.m. was included, and a phone number for additional information. The facility has been very well received by the public and business community. Household hazardous wastes are accepted, with the program encouraging reusing the products when possible. For example, paint is used by the graffiti removal program and is available free to the public.

MEASUREMENT:
The measurement for this Best Management Practice is the fliers, inserts, and additional information provided by Salt Lake City to promote the Household Hazardous Waste Collection at Salt Lake City-County Health Departments permanent facility.

REDUCTION OR BENEFIT:
The benefit of this program and Best Management Practice is providing a convenient way to properly dispose of household hazardous waste. As the program has developed new ideas such as the reuse program are being implemented. Pollutants that may have been causing potential damage to surface and ground water are eliminated.

IMPLEMENTATION:

Salt Lake City Public Utilities has implemented this Best Management Practice by hosting a Household Hazardous Waste Collection Day in 2002 and supporting the new facility. The collection day was held on July 13, 2002. In 2003 Salt Lake City Corporation did not host a Household Hazardous Waste Collection Day. In 2004 a permanent site in the city was used for residents to dispose of household waste. The local Costco located at 1800 south and 300 West was available once a month during the spring through the fall in 2005. During 2006 the site was changed to Jordan Park, located at 1100 South 900 West on the fourth Thursday from 7:00 a.m. to 10:00 a.m. from April through October. During 2007, 24,259 pounds of hazardous waste was collected from 366 households. In 2008 another 1,228,282 pounds were collected. The total amount of waste collected in 2009 including reusable materials was 1,416,212. The increase was due to electronic waste being accepted at all locations.

In addition to the hazardous waste collection Salt Lake City has implemented a program to dispose of unwanted or unused pharmaceutical drugs. Drop boxes are located at the Pioneer Police Office at 1040 West 700 South and the Public Safety Complex, 315 East 200 south Salt Lake City. Over the counter drugs are also accepted. The collected materials will be incinerated. During 2007 over 1000 pounds were collected and disposed of and in 2008 704 pounds of unwanted or unused pharmaceutical drugs were disposed of. During 2009 a total of 1,225 pounds were disposed of and incinerated. The result of this program has a positive impact on water quality.

BMP 28:
Develop a program for investigating illicit flows and connections.

GOAL:
To conduct on-going field screening in the MS4 to resolve any illicit connections or flows.

DESCRIPTION:
Salt Lake City Storm Drainage Utility has a program for investigating illicit flows or connections. Wet Weather Screening and Dry Weather Screening Programs screen the MS4. The intent of these two programs is to screen suspected major storm sewer sheds for the presence of excessive pollutants in discharges from the MS4. Salt Lake City maintains a series of storm drain maps for the entire City system. The maps are broken down by quarter section. The target area will be the I-15 corridor that contains a mix of older industrial and commercial land uses. The manholes located furthest downstream on each map will be investigated for illicit flows. Any suspected illicit flows would be investigated upstream until resolved.

The Wet Weather Screening will include the following field measurements: Temperature, Total Dissolved Solids, pH, and Dissolved Oxygen. A field analysis of Total Chlorine Residual will also be done. The laboratory analysis will include: Biochemical Oxygen Demand, Chemical Oxygen Demand, Total Suspended Solids, Total Dissolved Solids, Total Nitrogen, Total Kjeldahl Nitrogen, Total Phosphorous, Dissolved Phosphorous, Oil & Grease, (Total and Dissolved Cadmium, Copper, Lead, Zinc, Arsenic, Chromium, Cyanide, Nickel, Selenium, Silver) and a pH.

The Dry Weather Screening will include the following field measurements: Temperature, Total Dissolved Solids, and pH. A field analysis of Total Chlorine Residual, Copper, Phenols, and Detergents will be performed. Field observations of flow rate, odors, color, clarity, floatables, deposits/stains, biological growth, vegetation, and structural conditions will also be noted.

MEASUREMENT:
The measurement for this Best Management Practice is the data collected from the area screened during the life of the permit and the illicit flows removed from the MS4.

BENEFIT OR REDUCTION:
The benefit of this Best Management Practice is the screening of the system and removal of illicit flows that discharge to the Waters of the State.

IMPLEMENTATION:

Salt Lake City will continue implementing this Best Management Practice with Dry and Wet Weather Screening of the MS4.During 2002 through 2009 respectively thirteen, ten, eleven, six, five, three, eight sites and twenty five sites were dry weather monitored. The entire system will be screened during the life of the UPDES permit.

BMP 29:
Prepare Memorandum of Understanding with City-County Health Department.

GOAL:
To have a Memorandum of Understanding between Salt Lake City and the Salt Lake Valley Health department regarding enforcement of state health laws, rules, regulations, and standards applying to the municipal separate storm sewer system.

DESCRIPTION:
Salt Lake City Public Utilities and Salt Lake Valley Health Department will be required to enforce State and local storm sewer standards, ordinances, and regulations. Salt Lake City has enacted a storm water sewer system ordinance that states the following: The only substances dischargeable under the ordinance into the City storm sewer are storm water, surface drainage, ground water, roof runoff, cooling water, or other non-polluted water. All other such waters must be discharged into the City's sanitary sewer system. The Health Department also has statutory authority to control possible sources of pollution into the City's municipal storm sewer by storm water discharges associated with industrial activity and the quality of storm water discharge from sites of industrial activity. City Ordinance, Health Regulations and the Utah Water Quality Act are ordinances and regulations that are used to promote public health and environmental health quality. Salt Lake City and the Health Department met and prepared a Memorandum of Understanding (hereinafter MOU) in October 1993. The MOU discusses the procedures and methods that will be used to handle illicit connections, and illegal discharges.

MEASUREMENT:
The measurement for this Best Management Practice is the number of illicit discharges and illegal connections that are resolved as a result of this Memorandum of Understanding between the two agencies.

REDUCTION OR BENEFIT:
The benefit attributed to this Best Management Practice is an understanding of the procedures, and methods used to deal with illicit connections and discharges between Salt Lake City and the Health Department. With this understanding the agencies are able to work together in a cooperative effort in making sure the illicit connections and discharges are properly handled and enforced. As illicit connections and discharges are removed from the storm drainage system fewer pollutants are discharged to the Waters of the State.

IMPLEMENTATION:

Salt Lake City and the Health Department met in September of 1997, to discuss the MOU and develop ways to continue working together on illicit connections and discharges.

Salt Lake City will continue implementing this Best Management Practice by working with the Health Department regarding illicit connections and discharges to the municipal separate storm sewer system. In 2001, and 2002, the Health Department entered into 3 settlement agreements both years for violations of water quality regulations involving storm water in Salt Lake City. The agreements were for a total of $14,870, and $2,867. In 2003, and 2004, five and, two settlements were finalized for $15,691 and, $7,383. During 2005 and 2006 two and five settlements were finalized for a total of $3,982 and 11,880. In 2007 two settlements were finalized for a total of $3,600. In 2008 Two Settlements for $ 2,023 during 2009 two NOV, were issued in Salt Lake City resulting in one settlement agreement for $ 1,910.00, the other NOV was withdrawn.

(Presented on the next page is a copy of the Memorandum of Understanding).

BMP 30:
Maintain staff to respond to reports of illicit discharges.

GOAL:
To have a staff available to respond to any illicit discharges and resolve the problem with clean up, and/or cease and Desist actions by the Salt Lake Valley Health Department or State of Utah, Division of Water Quality.

DESCRIPTION:
Salt Lake City Storm Drainage Utility has one full-time, and one part time position on staff to respond to any reports of illicit discharges and spills. The personnel are trained to respond, identify the pollutant, and investigate the source of the discharge and use regulatory authority to enforce actions against violators so that the illicit discharge activity is corrected.

MEASUREMENT:
The measurement for this Best Management Practice is the number of illicit discharges that have required response and correction.

REDUCTION OR BENEFIT:
The benefit of implementing this Best Management Practice is having a resource available to respond to and correct illicit discharge activity, and finding a resolution to the problem. As illicit discharges are removed from the storm drain system the receiving water bodies become less polluted.

IMPLEMENTATION:
This Best Management Practice has been implemented since September 1993, when a position for the Industrial Storm Water Coordinator was filled, and a part time position was filled in September 1994. These positions have received training in the 40 hour OSHA Hazardous Material Training. The staff is familiar with the storm drain system and trained regarding identifying and investigating the source of the discharge. In cases where an enforcement action is required against the violator the Salt Lake Valley Health Department or State of Utah, Division of Water Quality takes the action. During 2003 through 2009 a total of 28, 31, 19, 21, 17, 19 and 37 illicit discharges were resolved.

BMP 31:
Promote interagency cooperation concerning illicit flows investigation.

GOAL:
To work together in a cooperative effort with other regulatory agencies to resolve illicit and or illegal discharges.

DESCRIPTION:
A cooperative effort between the agencies for a thorough investigation, assessment, and gathering of evidence relating to illicit and illegal discharges has been promoted by Salt Lake City Public Utilities. Salt Lake City notifies the Salt Lake Valley Health Department and State of Utah, Division of Water Quality regarding illicit flows requiring their assistance. Salt Lake City Storm Drainage Utility works with the other agencies by providing maps, tracing the system to the illicit discharge and any other means required for investigating and resolving the illicit flow.

MEASUREMENT:

The measurement for this Best Management Practice is the number of illicit flows investigated and corrected.

REDUCTION OR BENEFIT:
The benefit of implementing this Best Management Practice is the interagency cooperation regarding the investigation, and gathering of evidence to resolve illicit and illegal discharges. As these illicit discharges are removed from the storm drain system the receiving water bodies become less polluted.

IMPLEMENTATION:
Salt Lake City will continue implementing this Best Management Practice by working with other agencies tracing and eliminating illicit flows. Salt Lake City has worked with the Salt Lake Valley Health Department, State of Utah Division of Water Quality, and the United States Environmental Protection Agency on past illicit flow investigations. This interagency cooperation concerning illicit flows investigation will continue. In 2003 and 2004, 28 and 31 violations were resolved with 5 and, 2 settlement agreements. During 2005, and 2006 respectively 19, 21 violations were resolved with 2 and 5 settlement agreements. During 2007 and 2009 17, 33 and 38 violations were resolved with 2, 2, and 1 settlement agreements.

BMP 32:
Pursue prosecutions and court ordered solutions to significant contamination problems.

GOAL:
To resolve significant contamination problems that may require court orders and prosecutions.

DESCRIPTION:
Salt Lake City Storm Drainage has the responsibility of eliminating significant contamination problems discharging to the MS4. In some incidents the contamination problem may be significant enough that it requires court orders and/or prosecutions.

MEASUREMENT:
The measurement used for this Best Management Practice is the number of prosecutions and court ordered solutions that resolve significant contamination problems. Salt Lake City has had one case where we worked with the Salt Lake Valley Health Department regarding a court ordered solution.

REDUCTION OR BENEFIT:
The benefit of implementing this Best Management Practice is in eliminating serious illicit discharges entering the storm drain system. The court ordered solutions are intended to get the violator to comply with the storm water regulations. The reduction of significant contamination problems from the receiving water bodies has a major impact on the improvement of water quality.

IMPLEMENTATION:
Salt Lake City Public Utilities will continue implementing this Best Management Practice through field investigation such as Dry and Wet Weather Screening, responding to reports of illicit discharges and, interagency cooperation regarding illicit and illegal discharges. Salt Lake City's Industrial Storm Water Coordinator involves the proper regulatory agency regarding any findings with significant contamination problems. The State of Utah, Division of Water Quality, and the Health Department has been and will continue to be made aware of significant contamination problems found in Salt Lake City. In 2003 there were five settlements with $15,691 in penalties. In 2004 there were two settlements with $7,383 in penalties. During 2005, and 2006 respectively there were two and five settlements with $3,982, and $11,880 in penalties. During 2007 through 2009 there were no court ordered settlements or prosecutions.

BMP 33:
Investigate Dry Weather flows.

GOAL:
To Dry Weather Screen the MS4 flows to systematically investigate and remove illicit flows.

DESCRIPTION:
Salt Lake City's Storm Water Inspectors will investigate sources of observed dry weather flows. Inspectors will rely mainly on visual observation and use of colorimetric field test kits. This measure will require personnel to trace an observed discharge through the storm drain system.

MEASUREMENT:
The measurement used for this Best Management Practice is the portion of the MS4 monitored, and the illicit discharges removed.

REDUCTION OR BENEFIT:
The benefit of this Best Management Practice is the elimination of illegal connections and discharges to the storm drain system. As the illicit discharges are removed from the storm drain system the receiving water bodies become less polluted.

IMPLEMENTATION:
Salt Lake City will continue implementing this Best Management Practice by investigating dry weather flows. The I-15 corridor is where the initial efforts have been made and the program has branched out to other areas of the MS4. The manholes located furthest downstream on each map will continue to be investigated for illicit flows. Any suspected illicit flows would be investigated upstream until resolved. Dry Weather monitoring will include the following field measurements: Temperature, Total Dissolved Solids, and pH. A field analysis of Total Chlorine Residual, Copper, Phenols, and Detergents will be performed. Field observations of flow rate, odors, color, clarity, floatables, deposits/stains, biological growth, vegetation, and structural conditions will also be noted. During 2002 through 2009 respectively thirteen, eleven, six, five, three, seven and twenty five sites were dry weather monitored. Salt Lake City will complete a dry weather monitoring program during the permit period.

BMP 34:
Develop a formal storm drain spill response plan.

GOAL:
To have a storm drain spill response plan that is consistently used when a spill occurs.

DESCRIPTION:
Salt Lake City Public Utilities has developed a storm drain spill response plan that is a Memorandum of Understanding with the Incident Response Team and the Salt Lake City Fire Department concerning the initial response to containment and cleanup of spilled materials. The departments involved in the spill response plan perform their role and work with the other teams to make sure that a safe, consistent, and efficient containment and cleanup occurs. The Fire Department takes the commanding role and determines what level of spill has occurred. Once a determination has been made Incident Response and Public Utilities assist in the spill response. This may include containment, and clean up decisions regarding proper disposal and safety issues.

MEASUREMENT:
The measurement for this Best Management Practice is the number of storm drain spill responses.

REDUCTION OR BENEFIT:
The benefit of this Best Management Practice is a consistent and, safe spill response plan. The spill response plan provides the best possible approach to cleaning spills and eliminating or mitigating pollutants from entering the storm drain system. Thus, the reduction is keeping materials from spills contained and out of receiving water bodies.

IMPLEMENTATION:
Salt Lake City Public Utilities will continue implementing this Best Management Practice to insure a proper spill response. Salt Lake City Public Utilities has worked with Incident Response and the Fire Department on several spills that have occurred. Public Utilities has provided maps of the storm drainage system, installed booms and helped with the cleanup. The Salt Lake Valley Health Department is also involved in the process to make sure cleanup meets their requirements and to issue A Notice of Violations" when appropriate. In 2001 through 2009, respectively Salt Lake City responded to 11, 4, 3, 4, 8, 6, 19 and 37 storm drain spills.

BMP 35:
Develop a list of certified contractors and suppliers for spill response.

GOAL:
To have a resource with supplies available to respond to spills.

DESCRIPTION:
Salt Lake City has a trained Hazmat Response team capable of handling most of the spills in Salt Lake City. The Hazmat Response team is equipped with protective clothing, booms, pads, pumps, and drums to contain and cleanup spills. Hazmat Response has a list of certified contractors used for major spills and spills beyond their scope. The contractors include: JBR Environmental, TW Environmental, and EnviroTech. The suppliers used include: LN Curtis, Parker Environmental, and Lab Safety. Businesses and industries responsible for the spill may use their own certified contractor to contain and cleanup the spill.

MEASUREMENT:
The measurement for this Best Management Practice is the generated list of certified contractors.

REDUCTION OR BENEFIT:
The benefit of this Best Management Practice is the resources available to handle spills as they occur. Thus, pollutants are eliminated or mitigated from getting into the storm drain system.

IMPLEMENTATION:
Salt Lake City will continue implementing this Best Management Practice of using Hazmat Response team. The other certified contractors are used upon request or as needed according to the circumstances of the spill.

BMP 36:
Provide 40 hours of OSHA required Hazardous Materials to selected personnel.

GOAL:
To have personnel trained to respond to spills correctly and safely.

DESCRIPTION:
OSHA required Hazardous Materials Operations is training given by a certified Salt Lake City Fire Department instructor. The class focuses on proper techniques for dealing with spills. This includes: safety, level of protective clothing required, chemical identification, proper containment, decontamination procedures, and proper disposal measures. The 40 hours of training for drainage personnel qualifies them to assist the HAZMAT team. However, the 40 hours does not qualify the drainage personnel to handle hazardous material spills. In severe hazardous spills evacuation may be required. HAZMAT is in charge of these types of spills. The drainage crew involvement might include assistance in determining where the fugitive spill conveys through the drainage system and locations that may require evacuation and other measures.

MEASUREMENT:
The measurement for this Best Management Practice is the number percent of personnel trained to respond to spills. Fifteen employees have received this training and refresher course.

REDUCTION OR BENEFIT:
The benefit of this Best Management Practice is the availability of trained personnel to work with HAZMAT on hazardous spills. The result is a better cleanup effort, which mitigates pollutants entering the storm drain system.

IMPLEMENTATION:
Salt Lake City Public Utilities has implemented this Best Management Practice by providing the 40-hour Hazardous Material training course to 15 storm drainage personnel. Salt Lake City Drainage Utility will continue training personnel with the OSHA required classes.

BMP 37:
Develop a program to promote public reporting of illicit discharges.

GOAL:
To have a program developed that promotes the interest of pollution prevention to the public, and provides information regarding illicit flows and reporting procedures.

DESCRIPTION:
The purpose of this Best Management Practice is to provide information to the public regarding recognition of illicit flows, and reporting procedures when an illicit discharge has occurred. With this information available the public can take an active role in preventing illicit discharges that pollute their local rivers and streams. Salt Lake City uses a quarterly News flyer that is inserted into the Storm Water Utility bills to provide information to the public regarding recycling, ways to dispose of hazardous waste, and other pollution prevention tips, with numbers to call regarding questions or information. In addition, the Salt Lake County Storm Water Coalition provides a yearly Storm Water and Groundwater Guide that is inserted into the local newspapers with information regarding storm water and pollution prevention with several phone numbers including the Salt Lake City-County Health Departments phone number.

MEASUREMENT:
The measurement for this Best Management Practice is the number of illicit flows reported and resolved.

REDUCTION OR BENEFIT:
The benefit of implementing this Best Management is a program that provides an opportunity for public involvement in removing illicit flows to their waterways. With an educated public and a program available to report illicit flows more illicit discharges will be investigated and resolved. As these illicit discharges are removed from the storm drain system the receiving waters become less polluted.

IMPLEMENTATION:
Salt Lake City will continue implementing this Best Management Practice by providing information to the public regarding recognition and reporting procedures of illicit discharges. The quarterly bill stuffers and newspaper inserts will be used to provide pollution prevention information and numbers to call for problems in the community. Since 1998 The Storm Water Coalition has a budgeted for public information and education. The tasks involved included radio and TV advertising, a public perception poll, the newspaper insert, a web page, and business partnerships as a means for education and information.

BMP 38:
Develop an education program for industrial users on oil and toxic materials disposal.

GOAL:
To have an education program that is targeted to industry and business audiences encouraging proper disposal of oil and toxic materials.

DESCRIPTION:
The purpose of this Best Management Practice is to provide education to industries and businesses that encourages the proper disposal of oil and toxic materials. The Department of Public Utilities has an industrial storm water and wastewater program that provides information to industries. The storm water and wastewater programs are resources that industry can use to obtain information regarding proper disposal methods and for educational materials. Both programs make inspections of regulated facilities for compliance of clean water regulations. Additionally, the Salt Lake County Storm Water Coalition has a program that provides public education and information.

MEASUREMENT:
The measurement for this Best Management Practice is the number of industries and businesses that are educated and properly disposing oil and toxic materials.

REDUCTION OR BENEFIT:
The benefit of implementing this Best Management Practice is to provide information and education to industry regarding proper disposal of oil and toxic material. As the industries are educated they become more environmentally aware and generally are encouraged to properly dispose of oil and toxic materials. Proper disposal reduces the amount of pollutants that may otherwise pollute the storm drain system, and Waters of the State.

IMPLEMENTATION:
Salt Lake City will continue implementation of this Best Management Practice through distributing education material to industries and businesses. Inspections will also be conducted at industries that are regulated by the storm water, and wastewater programs. In 1997, Salt Lake City supported the Salt Lake County Storm Water Coalition program that provided public information and education. The Salt Lake Valley Health Department provided waste management training for the Dry Cleaning Industry and Construction and Demolition Contractors and Consultants. Salt Lake City distributed several brochures to automotive related industries a Best Management Practice guide related to the industry for sanitary sewer discharges and storm water pollution control. In 2009 Salt Lake City continues to support the aforementioned programs to help educate proper disposal of oil and toxic materials by industry.

BMP 39:
Develop an education program for residential users on oil and toxic materials disposal.

GOAL:
To have an education program aimed at residential audiences to promote the proper disposal of oil and household toxic materials.

DESCRIPTION:
The purpose of this Best Management Practice is to provide education to residential users to promote the proper disposal of oil and household toxic material. The Department of Public Utilities for Salt Lake City provides brochures and quarterly News information as stuffers in the Storm Water Utility bills (approximately 48,000 accounts). These bill stuffers promote the Household Hazardous Waste facility located at the landfill. They are used to announce the Hazardous Waste drop off days held at Salt Lake City Public Utilities. They provide information regarding what qualifies as a hazardous waste, proper disposal methods, and locations. The annual Salt Lake Valley Storm water and Ground water guide inserted in the local newspapers educate and inform residents regarding proper disposal of oil and toxic materials. Radio and Television education provided by the Salt Lake County Storm Water Coalition is another educational tool that has been used to educate residential audiences regarding proper disposal.

MEASUREMENT:
The measurement for this Best Management Practice is the number of residents that are educated and properly disposing of material at the Household Hazardous Waste Facility.

IMPLEMENTATION:
Salt Lake City will continue implementation of this Best Management Practice by providing information to residents regarding the proper disposal of oil and household toxic materials. Public Utilities provided an educational display in the foyer that provides information on storm water quality. The display is portable and is used at public meetings and events. In 1997 through 2009 quarterly bill stuffers with disposal information, and numbers to call in the community were provided. In 1998 through 2009 the Salt Lake County Storm Water Coalition sponsored radio and television advertising. Salt Lake City will continue to support the aforementioned programs to help educate the public of proper disposal of oil and toxic materials. Salt Lake City Public utilities will continue to support "Household Hazardous Waste community collection events" Drop off days will begin in June and go through September 2009. Salt Lake City will continue to provide the residents with a schedule of hazardous waste collection locations and times. The Health Department will transport the waste to the permanent facility at the landfill. Budget shortages required the shortened collection schedule however two of the collections locations will include "e" waste collections.

BMP 40:
Formalize reporting and investigating infiltration of sanitary sewage to storm drain.

GOAL:
To eliminate any exfiltration of sanitary sewage from the sanitary sewage collection lines that may infiltrate into the storm drain system.

DESCRIPTION:
The purpose of this Best Management Practice is to investigate the sanitary sewage collection system lines to address any exfiltration that may migrate to the storm drain system, and infiltrate sanitary sewage. The Sanitary Sewer Utility and Storm Water Utility for Salt Lake City are managed by the Department of Public Utilities. The manager over the two Utilities is responsible for coordinating the investigation, reporting, and the remedy for any exfiltration or infiltration problems that occur in the storm drain or sanitary sewer system. The methodology used includes the use of a camera to televise the sanitary sewer collection lines. The structural condition of the lines is checked to make sure a problem, or a future potential problem does not exist. Obstructions, in the line are part of the notations made by the camera operator. The operators videotape any areas of concern and the video is viewed by the Sanitary Sewer/Storm Water Utility Manager and if necessary a Public Utilities Engineer. They will determine what action is needed to resolve any exfiltration or infiltration problems. The storm drain conveyances and detention basins are inspected annually as part of Best Management Practices. If any problems are observed the camera may be used in the storm drain system as a means of analysis, and to develop a solution.

MEASUREMENT:
The measurement for this Best Management Practice is the number or problems resolved regarding infiltration of sanitary sewage to the storm drain system. The aggregate portion of the collection system investigated is another measurement.

REDUCTION OR BENEFIT:

The benefit of implementing this Best Management Practice is to have a storm drain system that is not receiving infiltration of sanitary sewage. The sanitary sewer collection system also benefits from investigating the lines to resolve any problems. The benefit of maintaining two separate systems reduces pollutants as they discharge to receiving waters. By eliminating infiltration of sanitary sewage into the storm drain system the pollutants remain in the sanitary sewer collection lines and convey to the Wastewater Treatment Plant for proper treatment. Thus, the Waters of the State are not receiving untreated raw sewage that may pose a threat to pubic health, safety, or welfare, or create a nuisance.

IMPLEMENTATION:

Salt Lake City will continue to implement this Best Management Practice to eliminate exfiltration of sanitary sewage that may infiltrate into the storm drain system. The sanitary sewer collection crew televises lines on a daily basis, which is prioritized by need. Emergency situations or suspicious collection line problems are first priority. New installations of collection lines are televised after their completion. The remaining sanitary sewer collection lines are systematically televised according to a mapping pattern that assures the lines are all televised within a 15-year period. The storm drain system is inspected annually to make sure infiltration problems do not exist.

BMP 41:
Maintain an industrial user database.

GOAL:
To have an industrial users database available with section 313 chemicals or heavy polluters for tracking purposes.

DESCRIPTION:
Salt Lake City uses paradox as the database for industrial users. As inspections are made and through field screening activities the database is modified. Industries that are subject to section 313 of title III of the 1986 (SARA), and industries that are determined to contribute substantial pollutant loadings to the City storm drain system are kept in this database. The intent of the database record is to be able to track potential pollutants upstream of any outfall. If a certain pollutant is detected in a drainage system outfall, a search of the database will reveal all upstream industries that have indicated the constituent pollutant is present at the industrial site.

MEASUREMENT;
The measurement for this database is an updated database record that is available when a pollutant is detected and traced back to the source as a result of the database.

REDUCTION OR BENEFIT
The benefit of this database is as a resource for tracking potential pollutants upstream of any outfall. The search of the database assists in the efforts and resolving the problem. The reduction of pollutants to the City storm drain system may result from using this database.

IMPLEMENTATION:
Salt Lake City has implemented this Best Management Practice by updating the records on a relational database. Site inspections and reviewing copies of Storm Water Pollution Prevention Plans are used to maintain this database. However, Salt Lake City needs to obtain the State list of businesses with section 313 chemicals and add them to the database.

BMP 42:
Obtain and review SWPPP prepared by industrial users within the Salt Lake City area.

GOAL:
To obtain copies and review SWPPPs prepared by industries in the Salt Lake City area and make sure of their implementation.

DESCRIPTION:
Salt Lake City's Industrial Storm Water Coordinator is responsible for setting up appointments with the industries in Salt Lake City regarding preparation and implementation of Storm Water Pollution Prevention Plans. Salt Lake City offers a 5% discount on an industries storm water fee for implementing a plan and providing a copy for the Industrial Storm Water Coordinator to review.

MEASUREMENT:
The measurement for this Best Management Practice is the number of industries that have prepared a SWPPP.

REDUCTION OR BENEFIT:
The benefit of obtaining an implemented SWPPP is the training of employees and pollution prevention measures that are in the plan. With a good plan that is properly implemented the industry reduces the amount of pollutants that may have entered the City's storm drain system.

IMPLEMENTATION:
Salt Lake City's Industrial Storm Water Coordinator will continue implementing this Best Management Practice. Appointments are set up with the industries that have not put together a plan, information such as the Guidance Document for Storm Water Management and the website, www.co.slc.ut.us are made available to the business. The State of Utah information sheet regarding contents of a plan is provided. Salt Lake City will continue to review Industrial Storm Water Pollution Prevention Plans that are prepared and have been implemented.

BMP 43:
Identify industrial groups and distribute water quality education materials to them.

GOAL:
To provide information to target industrial groups with Best Management Practices regarding water quality, including notifying the industrial facilities of the compliance requirements of the State General Industrial Storm Water Permit.

DESCRIPTION:
The purpose of this Best Management Practice is to identify industrial groups that may have an adverse impact on storm water quality. The State of Utah Industrial General Multi-Sector Permit for Storm Water identifies target industrial groups. These groups are required to obtain a State issued Storm Water Permit and implement water quality Best Management Practices. Educational material is distributed to these industries by Salt Lake City's Industrial Storm Water Coordinator. Another method used to distribute water quality education material is through workshops, and educational material that is published and distributed for target industrial groups.

MEASUREMENT:
The measurement of this Best Management Practice is the number of target industrial groups that are provided with water quality materials and obtain the State Industrial Storm Water Permit.

REDUCTION OR BENEFIT:
The benefit of implementing this Best Management Practice is to provide water quality educational material to target industrial groups. The information provided facilitates the target industries the opportunity to meet the requirements of the State Storm Water Permit. This permit focuses on meeting water quality compliance. The benefit of implementing this BMP is the industries are educated with water quality material, have an understanding of regulations, and Best Management Practices that they can implement to be in compliance. As a result proper facility management, proper disposal methods, and water quality measurements are available for implementation. With implementation of these Best Management Practices a reduction of pollutants are discharged to the storm drain system, and Waters of the State.

IMPLEMENTATION:

Salt Lake City will continue to implement this Best Management Practice by distributing information and water quality material to the target industries. The implementation of BMP 38 regarding education material for industrial users on oil and toxic materials disposal compliments this particular BMP. During 2002 through 2009 there were 97, 106, 66, 85, 71, 45, 38, and 28 industries that were formally inspected and provided water quality material. The Salt Lake County Storm Water Coalition program provided information and educational material. The Salt Lake City-County Health Department provided waste management workshops for the Dry Cleaning Industry, and Construction and Demolition Contractors and Consultants. Salt Lake City distributed several brochures to the automotive related industry regarding water quality. During 2009, Salt Lake City will continue to support and implement the aforementioned programs to distribute water quality education materials. Salt Lake City has developed a Storm Water information pamphlet mailed out to over 90,000 residents in March of 2009.

BMP 44:
Staff a position for coordinating storm water pollution prevention.

GOAL:
To have a full time position available to work with industry to minimize the pollutants released to the Salt Lake City storm drain.

DESCRIPTION:
Salt Lake City Public Utilities has one full time, and one part time position on staff to work with industry to minimize the pollutants released to the storm drain system. The staff is responsible and trained to work with other agencies and departments on illicit discharges or connections, and spill response. The Industrial Storm Water Coordinator works with industry regarding obtaining the State UPDES permit, preparing and implementing a SWPPP, and other issues regarding storm water that may require attention. Sampling for Storm Event Monitoring, and Dry Weather Monitoring, Part III B1&2 of the UPDES Municipal Separate Storm Sewer Permit, are also part of the staffs coordinating efforts

MEASUREMENT:
The measurement for this Best Management Practice is staffing the position.

REDUCTION OR BENEFIT:
The benefit of this Best Management Practice is having a staff available to handle storm water issues and assist the business community in meeting regulations. Water quality improvement to the receiving water bodies is a major goal of the program. Implementation of the BMPs in the permit should have an impact on this goal.

IMPLEMENTATION:
Salt Lake City's Industrial Storm Water Coordinator will continue implementation of this Best Management Practice. Specific goals for 2008 have been developed to meet with industrial and construction sites. These goals include assisting industry, and construction sites in obtaining permits, preparing and implementing SWPPP, inspections, and meeting permit sampling conditions. This position will work closely with the Salt Lake City POTW pretreatment coordinator. With a combined effort illicit discharges will be removed from the storm drain system and industry will receive consistent guidance. Salt Lake City has one full time position and one part time position.

BMP 45:
Review landfill-monitoring data.

GOAL:
Review landfill data to determine if additional inspection, control, and monitoring requirements should be needed.

DESCRIPTION:
Salt Lake City's Industrial Storm Water Coordinator is responsible for inspecting and reviewing landfill data to determine if they are complying with the Utah General Permit for Industrial Discharges. The data is reviewed to determine if additional inspection, control, and monitoring requirements should be needed.

MEASUREMENT:
The inspections and obtaining monitoring data is the measurement for this Best Management Practice.

REDUCTION OR BENEFIT:
The benefit of implementing this Best Management Practice is to have monitoring results and baseline data for the landfill. The monitoring data can be used to determine if additional controls are needed to mitigate pollutants from the landfill. As monitoring data is obtained the baseline data can be used with BMPs, and any additional controls necessary to reduce pollutants conveying to the storm drain system.

IMPLEMENTATION:
The Salt Lake City-County landfill located at 6030 West 1300 South, was inspected and monitoring data was obtained on December 9, 2003, December 17, 2004, December 19, 2005, December 4, 2006, December 12, 2008 and December 17, 2009

Mountain View Landfill located at 6976 West 1300 South, was inspected and a SWPPP was obtained on September 24, 1996 and a yearly inspection was performed on December 9, 2003, and monitoring data was obtained. On August 18, 2004 Mountain View Landfill was inspected. An EPA representative was present at the 2004 inspection. Salt Lake City will continue implementation of this Best Management Practice. On August 16, 2005, August 8, 2006 and August 17, 2007, December 16, 2008 and December 15, 2009 the annual inspections were performed.

BMP 46:
Develop a storm water quality-training program for development review personnel.

GOAL:
To expand the knowledge of site development review personnel regarding storm water pollution prevention techniques and practices.

DESCRIPTION:
The Salt Lake City Public Utilities Engineering Department is responsible for reviewing site development. As part of this responsibility the review personnel require the development to meet regulations requiring the development and submission of temporary and permanent erosion control plans for both subdivisions and building site development. Salt Lake City development review personnel are trained regarding their role in making sure erosion control plans are included in new development. This training will address storm water pollution that may be contributed through construction activity by uncontrolled erosion and sedimentation, fueling activities and dust generation. Storm water permitting from the State of Utah, Best Management Practices, and wheel cleaning regulations are additional topics discussed in the training.

MEASUREMENT:
The measurement for this Best Management Practice is the training provided to the development review personnel. The quality of the training and topics discussed should focus on storm water quality techniques and practices for site development.

REDUCTION OR BENEFIT:
The benefit attributed to this Best Management Practice is providing support and training to the development review personnel to expand their knowledge of storm water pollution prevention techniques. With this information provided to the development review personnel, erosion control plans, and storm water pollution prevention techniques are addressed during reviews. Thus, developments are required to have implemented pollution prevention at the site. As a result fewer pollutants reach the storm drain system and Waters of the State.

IMPLEMENTATION:
Salt Lake City will continue to implement this Best Management Practice by providing training to development review personnel as needed during the permit period. Salt Lake City will continue this training through 2010.

BMP 47:
Coordinate with Salt Lake County to develop construction site BMP guidance manual.

GOAL:
To have a guidance manual for BMPs at construction sites that can be used by contractors in the Salt Lake area.

DESCRIPTION:
The purpose of this Best Management Practice is to have a guidance document available for contractors regarding storm water management during construction activities. This document would discuss the following: impacts of construction activities, preparing a SWPPP, and Best Management Practices.

MEASUREMENT:
The measurement for this Best Management Practice is the quality of the guidance document and the Best Management Practices at construction sites that are implemented as a result of this document.

REDUCTION OR BENEFIT:
The benefit of this guidance manual is to provide contractors with information regarding Best Management Practices that may be implemented at their construction site. As these BMPs are implemented storm water pollution prevention techniques and practices are used, and mitigate pollutants from conveying to storm drain systems and Waters of the State.

IMPLEMENTATION:
This Best Management Practice was implemented prior to its permit schedule. The guidance manual was developed in May of 1994. Salt Lake City has referred this guidance document, "Storm Water during Construction Activities" to several contractors in Salt Lake City. In 1999, Salt Lake County produced a Guidance Document for Storm Water Management along with a web site.www.slco.gov for updated manuals and other BMP material Salt Lake City will continue to implement this Best Management Practice during 2010.

BMP 48:
Develop a program for obtaining and reviewing SWPPP prepared by contractors.

GOAL:
To obtain Storm Water Pollution Prevention Plans prepared by contractors on all sites in Salt Lake disturbing more than one acre.

DESCRIPTION:
The purpose of this Best Management Practice is to obtain and review Storm Water Pollution Prevention Plans to insure construction sites are implementing pollution prevention techniques and practices. The State of Utah Storm Water Permit for Construction Activities requires contractors to develop and implement a SWPPP for construction activities that disturb greater than five acres. Salt Lake City Public Utilities will require a permit for sites that disturb one to five acres.

MEASUREMENT:
The measurement for this Best Management Practice is the number of construction sites which meet the (greater than 5 acre criteria, and 1-5 acre criteria), that have developed and implemented a Storm Water Pollution Prevention Plan.

REDUCTION OR BENEFIT:
The benefit attributed to this Best Management Practice is to have construction sites that are in compliance with storm water regulations. The implementation of a Storm Water Pollution Prevention Plan with Best Management Practices utilized will reduce the problems with pollutants including uncontrolled erosion and sedimentation from entering storm drain systems and Waters of the State.

IMPLEMENTATION:
Salt Lake City will continue implementing this Best Management Practice. Salt Lake City works closely with the State of Utah regarding construction site activities. The State of Utah sends copies of State issued Notice of Intent and Construction Permits to Salt Lake City. The Industrial Storm Water Coordinator reviews the permit, and inspects the construction site and requests a copy of their Storm Water Pollution Prevention Plan for review. When schedules are conducive the coordinators for both agencies team up for these inspections.

BMP 49:
Develop interdepartmental memorandum of understanding for enforcement of SWPPP.

GOAL:
To have an interdepartmental understanding of addressing the enforcement of construction activity erosion control plans and Storm Water Pollution Prevention Plans.

DESCRIPTION:
The purpose of this Best Management Practice is to have a memorandum of understanding regarding the procedures to enforce construction activity erosion control plans and SWPPP. The Salt Lake City Department of Public Utilities is responsible for obtaining the SWPPP, and addressing enforcement. The State of Utah is notified when construction sites greater than 5 acres require enforcement. Site equal to 1 acre but less than 5 acres will be enforced by Salt Lake City. The two water quality agencies will work together to assist the construction site contractors in meeting and complying with storm water regulations.

MEASUREMENT:
The measurement for this Best Management Practice is a memorandum of understanding that clearly defines the procedures for enforcement of SWPPP, and the number of enforcement actions taken.

REDUCTION OR BENEFIT:
The benefit of this Best Management Practice is to have an interdepartmental enforcement program developed for Storm Water Pollution Prevention Plans. The enforcement is utilized to bring construction sites into compliance with the storm water regulations. With the construction sites meeting compliance standards fewer pollutants enter the storm drain system and Waters of the State.

IMPLEMENTATION:
Salt Lake City. has an interdepartmental understanding of the enforcement procedures regarding Storm Water Pollution Prevention Plans Salt Lake City has a Storm Water General Permit for Construction Activities on Sites Between,1 and 5 acres. Salt Lake City will have enforcement authority on these construction sites. Sites greater than 5 acres will have State enforcement. Both agencies will work together to strengthen the enforcement of construction activities.

BMP 50:
For City projects identify erosion control measures as a specific bid item.

GOAL:
To have consistent erosion control measures for City projects.

DESCIPTION:
Salt Lake City will identify erosion control measures as a specific item in contract bid schedules and performance bond requirements. The purpose of identifying the erosion control measures is to make sure they are implemented to reduce pollutants from construction activity. Construction activity can contribute to storm water pollution through uncontrolled erosion and sedimentation, fueling activities and dust generation. Erosion control plans are needed temporarily during grubbing and the construction phase, and permanently after construction is complete. All construction projects disturbing 5 acres or greater are required to apply for coverage under the State of Utah general permit for construction activity. Sites that are greater than 1 acre and less than 5 acres will require a permit from Salt Lake City Public Utilities. Salt Lake City has added Section 6.07 paragraph G to its general contract conditions which specifically requires contractors to obtain coverage under the general permit. The General permit requires contractors to prepare a SWPPP for construction activity.

MEASUREMENT:
The measurement for this Best Management Practice is the City projects that have erosion control measures as specific bid items.

REDUCTION OR BENEFIT:
The benefit of implementing this Best Management Practice is requiring contractors to control erosion on projects within the city. This requirement mitigates the transportation of storm water pollution through uncontrolled erosion and sedimentation from construction activity.

IMPLEMENTATION:
Contractors are required under general contract conditions to obtain a general permit for construction from the State of Utah when disturbing 1 acre or greater. Sites between 1 and 5 acres require permits from both the State of Utah and Salt Lake City Public Utilities.

BMP 51:
Participate in seminars conducted by State of Utah and other agencies.

GOAL:
To share information and new techniques through storm water seminars.

DESCRIPTION:
Seminars conducted by the State of Utah and other agencies provide information to educate and train storm water personnel. New techniques and regulations are introduced to assist the storm water personnel in better job performance

MEASUREMENT:
The measurement of this Best Management Practice is the training and dissemination of information made available to Salt Lake City storm water personnel.

REDUCTION OR BENEFIT:
The benefit of this Best Management Practice is a consistent approach to resolving storm water issues State wide and sharing of information.

IMPLEMENTATION:
Salt Lake City has implemented this Best Management Practice by attending seminars that have been made available. The following seminars have been attended:

- Intermountain Hazardous Materials Conference May 2001.
- WEAU Conference, April 2002.
- WEAU Conference, April 2003.
- Hazmat Refresher Course, eight hours, July 2003.
- WEAU Conference, April 2004.

- 2005 Utah Nonpoint Source Water Quality Conference, September 27-29, 2005.
- Auto Salvage Workshop, Utah Department of Environmental Quality, October 11, 2005.
- WEAU Conference, April 2005
- Storm Water Compliance Training October 24, 2007
- FEMA ICS-100, IS-00100, and IS-00700 April 14, 2008.UDOT Storm Water Compliance Training October 7, 2008.
- Utah Storm Water Expo 2009 2 day training seminar including SWPPP compliance and inspector training.

Implementation Status of BMPs required in year one of the permit

BMP #	BMP DESCRIPTION	IMPLEMENTATION STATUS Full	Partial	None
32	Pursue prosecutions and court ordered solutions to significant contamination problems.			
33	Investigate dry weather flows.			
34	Develop a formal storm drain spill response plan			
35	Develop a list of certified contractors and suppliers for spill response.			
36	Provide 40 hours of OSHA required Hazardous Materials training to selected personnel.			
41	Maintain an industrial user's database.			
42	Obtain and review SWPPP prepared by industrial users within the Salt Lake City area.			
44	Staff a position for coordinating storm water pollution prevention.			
45	Review landfill monitoring data.			
50	For City projects identify erosion control measures as a specific bid item.			
51	Participate in seminars conducted by State of Utah			

	and other agencies.			

Salt Lake City Corporation has implemented all of the Best Management Practices required during 1996 for year one of the permit. All BMPs were completely implemented with the exception of two of them. These two BMPs were partially implemented and Salt Lake City Corporation will completely implement them in year two of the permit, 1997. The following BMPs were partially implemented:

X BMP 41: Maintain an industrial user's database. Salt Lake City has some of this database on paradox obtained by facility inspections. The database will be obtained from the State of Utah during 1997

X BMP 50: For City projects identify erosion control measures as a specific bid item. Salt Lake City has partially implemented this BMP and will completely implement it during 1997.

Salt Lake City Corporation implemented two Best Management Practices from year two during 1996. The following BMPs were implemented early:

X Provide 40 hours of OSHA required Hazardous Materials training to selected personnel.

X Obtain and review SWPPP prepared by industrial users with in the Salt Lake City area.

Salt Lake City will continue implementation of the aforementioned BMP. The BMPs that

require implementation in year two of the permit, 1997 will also be implemented.