

## CITY OF ALTON



## STORMWATER MANAGEMENT PROGRAM ADDENDUM NO. 1

Developed in accordance with the requirements of  
TEXAS COMMISSION ON ENVIRONMENTAL  
QUALITY - TEXAS POLLUTANT DISCHARGE  
ELIMINATION SYSTEM - TPDES GENERAL  
PERMIT TXR040000

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#### **4.0 BEST MANAGEMENT PRACTICES, MEASURABLE GOALS, IMPLEMENTATION SCHEDULE, AND MEASUREABLE GOAL EVALUATION PROCESS**

**Task Force Accomplishments to Date.** From 2002 and through 2007, the LTSTF participants completed the following work products:

- A Mission Statement was developed that outlines the goals and objectives for the LTSTF Project (see Appendix B).
- Interlocal agreements were entered into between LTSTF members and TAMUK (see Appendix C).
- Organization by-laws were developed that govern the LTSTF's procedures (see Appendix D).
- Tables were developed that outline the seven MCMs required by the Phase II MS4 regulations and additional stormwater programs
- A MS4 SWMP was developed for individual municipalities to achieve compliance with the TPDES requirements
- The LTSTF participants developed public outreach and educational seminars and numerous educational outreach events were developed, funded and hosted, including conferences in the LRGV, Coastal Bend area, City of Laredo, City of Monterrey, Mexico and San Antonio (see Appendix G).
- With funding provided by the member cities, the LTSTF operating budget was developed based on estimated costs for program implementation

**Overview of Conceptual SWMP.** In 2002, the LTSTF partners began laying the foundation for the development of the five-year SWMPs, which outline the BMP programs. Emphasis was placed on developing BMPs that meet the Phase II stormwater regulations. Development of the SWMPs was accomplished with input from the individual municipalities, the LTSTF MS4 committee, and TAMUK. By-laws were executed on January 23, 2003 (Appendix H). The by-laws identify the LTSTF as the managing entity made up of one voting representative from each member community. The LTSTF utilizes and directs TAMUK personnel, who provide administrative and management support to develop the SWMPs. The interlocal agreements between TAMUK and the member municipalities identify TAMUK as the contracting fiscal agent of the LTSTF. The LTSTF members also participate in workgroups, one of which directly assists TAMUK with the development of the SWMPs.

The SWMPs BMPs are divided into two main categories: Priority One activities are those required to comply with Phase II stormwater regulations and Priority Two activities are those that address broader stormwater and water quality management issues. The Priority One activities will be submitted in each city's application for a Phase II municipal stormwater permit with the TCEQ in February 2008; permits will be issued shortly thereafter by the TCEQ. Priority Two programs are those that augment programs to meet community standards and/or are already included in existing, comprehensive programs (City of Boulder, 2003).

The Phase II regulations call for MCMs to address the impact of stormwater runoff on water quality. These programs are described in detail in the conceptual SWMP.

The conceptual SWMP was developed in part, by incorporating existing BMP programs found in various SWMP templates into the methodology used by this project. The SWMP templates are listed in the reference section of this report. Selected BMPs, in the conceptual SWMP template for each required MCM are listed below, but not necessarily limited to those listed and described below:

**1) MCM 1 - Public Education and Outreach**

- School-Based Education Program (water quality curriculum and classroom programs)
- Business Education Program (see MCM 3)

*Note: TAMUK will facilitate many of these programs through the LTSTF.*

**2) MCM 2 - Public Participation and Involvement**

- Storm Drain Stenciling Program
- Illicit Discharge Hotline (see MCM 3)
- Annual Public Meetings to Solicit Input

*Note: TAMUK will facilitate many of these programs through the LTSTF.*

**3) MCM 3 - Illicit Discharge Detection and Elimination**

- Legal Prohibition of Illicit Discharges (ordinances and other code development)
- Illicit Discharge Enforcement (spill response plan, inspections and enforcement)
- Community-Based Education Program (brochures, fact sheets and other materials)
- Business Education
- Storm Sewer System Mapping

**4) MCM 4 - Construction Site Stormwater Runoff Control**

- Training and Education for Construction Site Operators and Inspectors
- Erosion Control Ordinance (required erosion control for construction sites)
- Erosion Control Standard Operating Procedures (SOPs) (outline application and approval procedures for construction site stormwater management plan submittals)
- Erosion Control Inspection and Enforcement (implementation of erosion control ordinance)
- Public Input

**5) MCM 5 - Post-Construction Stormwater Management**

- Post-Construction Ordinance (required treatment of stormwater runoff)
- Design Criteria and Standards (outline type of stormwater treatment or BMPs required)
- Development Review (ensures application of BMPs)
- BMP Operation and Maintenance (requires long-term maintenance of BMPs)

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

- Training and Certification for Municipal Employees (site-specific water pollution prevention activities)

*Note: TAMUK will work with LTSTF to develop appropriate training curricula.*

**7) MCM 7 – Authorization for Municipal Construction Activities**

- General SWP3 developed for permittee owned projects to be used by all contractors, architects and engineers
- MCM will apply in all urbanized areas, all non-urbanized areas within the city limits, and within the one (1) mile of city extraterritorial jurisdiction (ETJ);

**8) General Requirements**

The main objective of this section is to develop a method of “grading” the contents of the SWMP. TAMUK will work with the LTSTF in developing checklists, reports, surveys, quantitative and qualitative data, and evaluation techniques to assure the annual report provides effective feedback to the TCEQ and the permittee on the success of or on the shortcomings of the SWMP. Some of the tasks are as follows:

- Good Recordkeeping program
- Performance Measures
- Evaluation will determine changes to SWMP
- Annual Report

The LTSTF communities will fund the common and shared program costs within their respective jurisdictions. Cost allocation will be based on each member’s urbanized population. Costs to implement the individual community programs will be the responsibility of each individual community.

**Planned Year 1 SWMP tasks.** The conceptual SWMP template requires the LTSTF to do the following by the end of 2008:

- Produce and distribute brochures addressing prevention of stormwater pollution.
- Stencil stormwater drains with the message, “No Waste, Drains to Arroyo Colorado” or “No Waste, Drains to the Laguna Madre.”
- Implement a school-based education program for reaching students.
- Develop ordinance templates to regulate potential stormwater pollutants from commercial, industrial, municipal and residential sources, and from local, private and public construction activity.
- Further evaluate agricultural and publicly-owned activities (e.g., TxDOT and counties).
- Develop erosion control training programs and a certification program for public employees and private contractors and conduct training sessions.
- Develop stormwater runoff pollution prevention materials for businesses, residences and municipal operations and make materials will be available at City Halls.
- Work with Chambers of Commerce, Economic Development Corporations, and municipal operations staff in developing pollution prevention plans for restaurants, vehicle services facilities, and industrial sites.
- Organize focus groups comprised of employees from the LTSTF communities to facilitate discussions of maintenance practices for public works, parks, airports, solid waste facilities, wastewater and water treatment plants, and storm sewers.

- Apply for 319 Non-Point Source, Border 2012, and other funding from the TCEQ and EPA.

**Planned Year 2 SWMP tasks.** In 2009, the primary responsibility for the LTSTF members will be to adopt the ordinances developed in 2008, to develop Standard Operating Procedures (SOPs) to outline requirements for erosion control plans, to develop SOPs for site plan review and inspection, to develop SOPs for BMP selection guidance, and to prepare storm sewer system and outfall maps for their communities that will be completed by August 2009. The LTSTF will continue to implement the shared and common programs (conferences, workshops, seminars) at the benefit of all the communities. The mapping of the sewer systems will be expanded in some cities and initiated in others beginning in 2009.

The following sections describe in detail the plans incorporated into the conceptual SWMP template for each of the seven minimum control measures (MCMs).

**Planned Years 3-5 SWMP tasks.** In 2010, the LTSTF and TAMUK will work together to gradually phase in all the SWMP BMPs until fully implemented by 2012.

#### **4.1 MCM #1 - Public Education and Outreach**

To satisfy the regulatory requirements for this MCM, public education and outreach on stormwater impacts is required. The permittee must implement a public education program to include the following:

- I. Distribute educational materials to the community or conduct equivalent outreach activities about the impacts of stormwater discharges on water bodies and the steps that the public can take to reduce pollutants in stormwater runoff; and
- II. Inform businesses and the general public of the impacts associated with illegal discharges and improper disposal of waste.

**Program Objective.** The objective of MCM #1 is to increase the public's awareness of stormwater issues. To achieve this, a public education program must first educate the public on the definition of urban stormwater runoff. Next, the public must be made aware of the problems that are associated with stormwater and then be educated on what they can do to help solve the problems. Finally, a successful program must provide opportunities for hands-on activities and buy in from the community. The conceptual SWMP template's Education Program uses a variety of methods to "get the word out."

**Priority One Activities.** The activities planned to comply with Phase II MS4 MCM #1 are outlined below.

Public Education and Outreach. Brochures or fact sheets will be distributed with municipal water utility bills and by other appropriate means. Brochures equivalent to the number of households in each LTSTF partner's permitted area will be produced. Each partner will be responsible for distributing the materials. Other examples of outreach are explained below. The *After the Storm* brochure was developed, produced and made available for distribution to both residential and commercial audiences in certain cities by the LTSTF in 2005. This program will continue be expanded to include the entire

LTSTF membership. A new brochure will be developed that includes additional information on the impacts of illicit discharges and other water quality issues (<http://www.epa.gov/weatherchannel/>). In addition, the *No La Riegues* campaign developed by Texas Sea Grant and adopted by the LTSTF in 2005, will be revitalized and promoted again. The LRGVDC provided a \$10,000 grant to the LTSTF in 2005 to showcase the campaign ([www.nolariegues.com](http://www.nolariegues.com)). The *Chucho Salva el Dia* campaign initiated by the EPA will also be adopted by the LTSTF in 2008. TAMUK will facilitate the development and distribution of these materials ([http://epa.gov/region6/6xa/childrens\\_health\\_video.htm#jump](http://epa.gov/region6/6xa/childrens_health_video.htm#jump)).

**Water Quality Curriculum.** A watershed information curriculum with associated materials and training will be made available and advertised to all elementary classroom teachers in the LTSTF member's school districts. Program materials will include curriculum on water quality and water conservation, stormwater pollution prevention, and promotion of the ACWPP. The SWMP education will also include mailing of post-cards promoting the stormwater education program to all school district teachers, and creation of a comprehensive brochure listing K-12 programs to be printed and distributed in 2008.

**LTSTF Web Site.** Background information on the LTSTF project, including the seven (7) MCMs along with specific information promoting the stormwater education program, storm drain stenciling program, and annual meetings, will be developed and provided on a web site [www.stormwater.stei.org](http://www.stormwater.stei.org). This web site will be updated frequently. The website is currently under construction.

**Priority Two Activities.** The activities planned to address broader stormwater and water quality management issues related to the Phase II MS4 MCM #1 are outlined below.

**Annual Events.** Each municipality will include a stormwater pollution prevention outreach program in various annual community events. Booths, brochures, children-friendly materials, and other similar approaches shall be used. Each City shall consider designated a day or a week for stormwater pollution prevention awareness,

**Signage.** Stormwater pollution prevention signs will be designed, produced and installed along major intersections in each LTSTF city. The signs will bear the logos from the LTSTF, the ACWPP and the respective city. Each community will place signs at locations where pedestrians and vehicle drivers will recognize the sign as an indicator of a local water body that should be protected.

**Performance Measures.** The SWMP MCM #1 goals and programs will be measured for success by tabulating households reached, number of outreach events conducted, quantity of specific materials produced, tabulating web site "hits", grants obtained, and tracking the number of teachers and students that participate in events.

## 4.2 MCM #2 - Public Involvement and Participation

To satisfy the regulatory requirements for this MCM public involvement and participation is required. The permittee must implement a public involvement program to include the following:

- I. The permittee, must at a minimum, comply with Federal, State and local public notice requirements when implementing the SWMPs required under the TPDES program.
- II. Notice of all public hearings should be published in a community publication or newspaper of general circulation, to provide opportunities for public involvement that reach a majority of citizens through the notification process.
- III. Public Committees are recommended to act as a buffer between the LTSTF and the elected officials and the community. These committees shall represent a cross section of the regulated community and should be an active component of the SWMP during the implementation process.

**Program Objective.** The objective of MCM #2 is to promote public participation as a means of ensuring buy-in and support from the public. This includes providing information and seeking public input on stormwater management issues. The MCM #2 programs include participatory programs such as neighborhood storm drain stenciling, illicit discharge reporting and annual public meetings. The individual LTSTF partners will be responsible for scheduling and hosting annual public meetings in each of their communities. In addition, partners are responsible for ensuring that a significant number of the storm drains are stenciled in their communities.

**Priority One Activities.** The activities planned to comply with Phase II MS4 MCM #2 are outlined below.

Annual Public Meetings. Annual public meetings will be conducted to provide citizens with the opportunity to discuss various viewpoints and provide input concerning stormwater quality issues. Meetings will be publicized in accordance with public notification requirements in each jurisdiction, such as a local newspaper or appropriate publication of wide circulation. Records of the meetings will be tabulated as shown in Table 19 in Section 5 and kept in the SWMP.

Storm Drain Stenciling Program. A Storm Drain Stenciling Program will be initiated and incorporated into the MCM #1 Public Education Program. A minimum of number of storm drains will be stenciled per year in each LTSTF city. This criterion will be used to evaluate the program. Municipal staff will provide stormwater education programs and facilitate storm drain stenciling activities with youth and citizens organizations. LTSTF and TAMUK will facilitate the development of partnerships with local youth service groups to perform a significant portion of the storm drain stenciling work. These groups may include the Boys & Girls Clubs, Boy Scouts of America, and local environmental groups. Recordkeeping of stenciling of storm drains is important and shall be a key part of the program. Recordkeeping will include locations, type of storm drain, and volunteer group information. Figure 6 shows an example of a storm drain stencil template.



Figure 6. Example storm drain stencil.

Public Steering Committee. One of the first tasks of the LTSTF and TAMUK is to work with individual member cities in selecting representatives from their communities to form a steering committee comprised of a cross section of the regulated community. The group shall include, but will not be necessarily limited to, representation from the following industries: home building, engineering, academia, general contracting, developers, non-profit organizations, elected officials, municipal staff, environmental groups, regulators, industrial, residential and commercial. Each city shall have such a committee. The role of the group will be to provide input in the development and implementation of the SWMP.

Performance Measures. The SWMP MCM #2 goals and programs will be measured for success by achieving stenciling program goals, assuring significant attendance in meetings, and tallying the number of meetings held.

#### 4.3 MCM #3 - Illicit Discharge Detection and Elimination

To satisfy the regulatory requirements for this MCM the following is required:

- I. The permittee must develop, implement and enforce a program to detect and eliminate illicit discharges into the permittee's MS4 and/or neighboring MS4.
- II. Develop, if not already completed, a storm sewer system map, showing the location of all municipal storm sewer outfalls and the names and location of all state waters that receive discharges from those outfalls. In order to assure an effective illicit discharge elimination program, it is anticipated that the mapping should include the entire stormwater conveyance system (manholes, joints, inlets, and pipes).
- III. To the extent practical and allowable under federal, State, County or local law, effectively prohibit, through ordinance or other regulatory mechanism, non-stormwater discharges into the storm sewer system, and implement appropriate planning, enforcement procedures and actions.

- IV. Develop and implement a plan to detect and address non-stormwater discharges, including illicit discharges and illegal dumping, to the system. The plan must include the following three components:
- i. procedures for locating priority areas likely to have illicit discharges;
  - ii. procedures for tracing the source of an illicit discharge;
  - iii. procedures for removing the source of the discharge.

**Program Objective.** The objective of MCM #3 is to detect and eliminate improper or illegal connections and discharges. A cost-effective way to reduce some stormwater pollutants is to identify and eliminate illicit connections and discharges. The SWMPs will include public and municipal education programs and spill response and ordinance requirements to control these discharges. In addition, public information materials will be developed, which will discuss the impacts of spills on water quality, and a hotline for reporting illicit discharges will be advertised.

**Priority One Activities.** The activities planned to comply with Phase II MS4 MCM #3 are outlined below.

Municipal Separate Storm Sewer System (MS4) Mapping. Each individual community, as required, will develop or enhance existing storm sewer maps, which will show the locations of municipal storm sewer outfalls, the conveyance system as warranted, and the names and locations of state waters that receive discharges from those outfalls, to assure compliance with TPDES.

Ordinance Development and Spill and Enforcement Response Plan. The LTSTF will develop draft Stormwater Pollution Prevention Ordinance templates (Appendix D) for various activities and to comply with TPDES goals. The LTSTF MS4 Ordinance Committee will be empowered to develop ordinances, to accept input from the public committees, and to work with TAMUK in evaluating and implementing them. All of the individual partners' city attorneys will be required to review the ordinance language. The templates will also be submitted to neighboring Phase I cities, the TCEQ and the EPA for review. Their comments, if any, will be review by the workgroup and distributed to the membership.

Business Education Program. The LTSTF and TAMUK will work together to provide stormwater pollution prevention education and/or materials to the commercial sectors identified as potentially significant contributors of pollutants to the MS4s. These sources include restaurants and vehicle service facilities.

Certification Criteria for Automotive Businesses and Restaurants. The LTSTF and TAMUK will work together to conduct internet research and communicate with staff from model stormwater programs across the U.S. to collect and review BMPs and outreach materials developed for these sectors (this research will overlap with research for municipal operations as part of MCM #6). The LTSTF and TAMUK will also develop draft stormwater criteria to be required of all businesses, and solicit input from existing businesses regarding feasibility and appropriateness of the new criteria. A Criteria Checklists will be developed for vehicle repair shops, auto body shops, and restaurants.

Incorporate Stormwater Education in Landscaping, Subdivision Development and Commercial Planning. The LTSTF and TAMUK will work together to conduct internet research and work with the ACWPP to develop a fact sheet on stormwater protection for landscape professionals, and to develop smart growth, green engineering and low impact development programs. In addition, the three groups will share information on potential stormwater impacts from pressure-washing sidewalks, shopping carts, etc., with the retail store focus group. A brochure and outreach plan regarding pressure washing and window washing BMPs will be developed in 2009.

Conduct Site Visits to Educate Businesses and Assess Stormwater Impacts. The LTSTF members will visit major businesses in their respective cities and review stormwater criteria during the site visits. Educational materials, such as EPA's *After the Storm* brochure, will also be mailed to businesses. Detailed recordkeeping of activities performed will be maintained by each LTSTF member city.

Coordinate Materials Development with TAMUK and ACWPP. The *After the Storm* brochure and other materials will be jointly developed by the LTSTF, TAMUK, and the ACWPP for use with both residential and business audiences. Door stickers will be developed to educate business staff (restaurants, groceries, auto facilities, etc.) to never dump wastes on the ground, and to help individuals understand that the storm drain connects directly to surface water. A stormwater fact sheet will be developed specifically for automotive businesses. Stormwater information will be added to any existing restaurant permitting fact sheets. All of the activities will be conducted in coordination with the activities performed to comply with the MCM #6 requirements so that one educational fact sheet would meet the needs for municipal fleet maintenance operations and vehicle repair and auto body businesses.

Respond to Illicit Discharge Incidents as Appropriate. The LTSTF will assist cities to develop a program to conduct inspections to identify the presence and determine the source of illicit connections and illegal dumping activities. The LTSTF will assist member cities in training their building inspectors and their engineering and utility inspectors to implement this BMP.

**Priority Two Activities.** The activities planned to address broader stormwater and water quality management issues related to the Phase II MS4 MCM #3 are outlined below.

Household Hazardous Waste Disposal (HHW) Program. All LTSTF members will develop a Household Hazardous Waste Program facilitated by TAMUK, ACWPP and various municipal recycling programs. The LTSTF will develop a regional program to support the local programs.

Performance Measures. The SWMP MCM #3 goals and programs will be measured for success by assigning levels of completion to the required mapping BMP, targeting a set number of ordinances per time period, keeping track of the number of illicit discharges detected and eliminated, measuring pounds of household waste recovered, tallying number of business meetings and site visits, and other similar measures.

#### 4.4 MCM #4 - Construction Site Stormwater Runoff Control

To satisfy the regulatory requirements for this MCM the following is required:

- I. The permittee must develop, execute, and enforce a construction site stormwater runoff control ordinance that reduces pollutants in stormwater runoff. The ordinance must regulate construction activities that result in land disturbance of greater than or equal to one (1) acre pursuant to the TPDES regulations. Reduction of pollutants in stormwater discharges from construction activity disturbing less than one acre must be included in the program if that construction activity is part of a larger common plan of development that would disturb one (1) acre or more. This includes a construction site on a lot that measures one-quarter (1/4) acre that exists within a ten (10) acre forty (40) lot subdivision development. (TCEQ, 2007).
- II. The construction site stormwater runoff control program must be developed and implemented to assure adequate design, implementation, and maintenance of BMPs at construction sites within the MS4 service area to reduce pollutant discharges and protect water quality. The program must include the development and implementation of:
  - i. An ordinance or other regulatory mechanism to require erosion and sediment controls, as well as sanctions to ensure compliance, to the extent allowable under Federal, State or local law;
  - ii. Requirements for construction site operators to implement appropriate erosion and sediment control BMPs;
  - iii. Requirements for construction site operators to control waste such as discarded building materials, refueling, concrete truck washout, chemicals, litter, and sanitary waste at the construction site that may cause adverse impacts to water quality;
  - iv. Procedures for site plan review during planning and permitting which incorporate consideration of potential water quality impacts;
  - v. A policy that defines responsibility for the on-site Stormwater Pollution Prevention Plan (SWP3) pursuant to TPDES regulations. It is conceivable that each contractor working at the same job site, whether simultaneously or not, may be required to obtain its own TPDES permit, unless the developer allows for use of one (1) overall TPDES permit under the developers authority.
  - vi. Procedures for site inspection and enforcement of control measures.

**Program Objective.** The objective of MCM #4 is to minimize construction site stormwater runoff. Effective construction site stormwater pollution prevention can dramatically reduce sediment loading to receiving surface waters. An effective erosion control program must include adequate ordinance language, consistent and reasonable inspection and enforcement, and appropriate development and construction standards. The SWMP will include all of these components. In addition, the SWMP will include a contractor training and a certification program. These program elements will ensure consistent city-wide and region-wide education and minimum standards.

**Priority One Activities.** The activities planned to comply with Phase II MS4 MCM #4 are outlined below.

Erosion Control Ordinance. A template construction and post-construction ordinance that focuses on erosion control will be developed. A model ordinance is shown in Appendix C. The template will be distributed to the public steering committees and to the LTSTF membership. The public committees will provide input to the LTSTF Ordinance Development Committee.

**Priority Two Activities.** The activities planned to address broader stormwater and water quality management issues related to the Phase II MS4 MCM #4 are outlined below.

Contractor Certification Program. With EPA Border 2012 grant funding, the LTSTF introduced the membership to the Texas A&M University Engineering Extension Service (TEEX) stormwater contractor certification course during a conference held in 2005 at South Padre Island. The TEEX course provides a curriculum that complies with the “competent individual” requirement of the TPDES rules. Approximately 50 individuals were trained during the training session. The LTSTF and TAMUK will continue to develop an effective education and training program to be utilized by the membership.

Performance Measures. The SWMP MCM #4 goals and programs will be measured for success by tabulating and tracking permits and citations issued, inspections conducted, number of training events conducted, certifications issued, ordinances adopted, and accounting for revenue generated.

#### **4.5 MCM #5 - Post-Construction Stormwater Management**

To satisfy the regulatory requirements for this MCM, the following is required:

- I. The permittee must develop, implement, and enforce a program to address stormwater runoff from new development and redevelopment projects that disturb greater than or equal to one (1) acre, including projects less than one (1) acre that are part of a larger common plan of development, that discharge into the MS4. The program must ensure that controls are in place that would prevent or minimize water quality impacts.
- II. The permittee must develop and implement strategies which include a combination of structural and/or non-structural BMPs appropriate for the community, including the use of an ordinance or other regulatory mechanism to address post-construction runoff from new development and redevelopment projects to the extent allowable under Federal, State or local law. The permittee must also ensure adequate long-term operation and maintenance of BMPs.

**Program Objective.** The objective of this MCM is to address stormwater runoff pollution in new development and redevelopment of lands within the permittee’s jurisdiction and extra territorial jurisdiction (ETJ). It is estimated that when the surface area of a drainage basin of a receiving waterbody becomes ten (10) to twenty (20) percent impervious, significant ecological stresses result that adversely impact the aquatic ecosystem of that waterbody (Schueler, 2003).

Therefore, the most important strategy for addressing stormwater pollution prevention is to develop effective land use and development management strategies. One of the best strategies is to address the aggregate amount of new impervious surfaces. This can be done with developed land vegetation requirements, drainage policies and use of innovative BMPs like smart growth and low impact development (LID). Other strategies include implementing effective BMPs for the control and treatment of site stormwater runoff, such as stormwater detention ponds, vegetative buffer zones or grass swales. The SWMPs for post-construction include the development of programs and ordinances that address stormwater runoff from new development and redevelopment. The SWMP will use a successful, existing BMP manual as part of its program. TAMUK will conduct a comprehensive search for these type of manuals during development of the SWMP.

**Priority One Activities.** The activities planned to comply with Phase II MS4 MCM #5 are outlined below.

Post-Construction Ordinance. A template construction and post-construction ordinance will be drafted and adopted by each LTSTF member. A template is found in Appendix C. As a matter of policy, the template will be distributed to the public committees and the membership for input.

Performance Measures. The SWMP MCM #5 goals and programs will be measured for success by ordinances adopted, developing a measurable post construction inspection program, assuring allocation of funds annually to operation and maintenance of these BMPs, and tracking education outreach in this area of interest.

#### **4.6 MCM #6 - Pollution Prevention/Good Housekeeping for Municipal Operations**

To satisfy the regulatory requirements for this minimum control measure the following is required:

- I. The permittee must develop and implement a stormwater pollution prevention operation and maintenance program. The program must prevent and/or reduce stormwater pollution from facilities such as landfills, airports, streets, roads, right-of-ways, alleys, highways, municipal parking lots, maintenance and storage yards, fleet or maintenance shops with outdoor storage areas, caliche, soil, and compost storage locations, recycling centers, disposal areas operated by the permittee, and waste transfer stations. The program will also regulate activities such as park and open space maintenance, fleet and building maintenance, street maintenance, new construction of municipal facilities, and stormwater system maintenance, as applicable.
- II. The permittee must implement a training program that includes an employee component and has the ultimate goal of preventing or reducing pollutant runoff from municipal operations. The program must also inform public employees of the impacts associated with illegal discharges and improper disposal of waste from municipal operations.

**Program Objective.** The objective of MCM #6 is to implement pollution prevention programs for municipal operations. A significant number of municipal operations can adversely affect water quality and quantity. Municipal activities ranging from the storage and handling of harmful chemicals, pickup, transportation and disposal of solid waste, to the routine maintenance of municipal properties, vehicles, roads, and storm sewer appurtenances can be stormwater pollution contributors. Activities such as integrated pest management, water conservation, recycling and education programs are proven BMPs in addressing these pollutant sources.

**Priority One Activities.** The activities planned to comply with Phase II MS4 MCM #6 are outlined below.

Develop an Inventory of All Potential Sources of Stormwater Pollution. A template will be developed for each city to identify municipal operations that are potential sources of stormwater pollution.

- In 2005, civil engineering students visited with city staff of each LTSTF member and developed inventories. These inventories will be reviewed by TAMUK and updated.
- TAMUK will contact municipal departments to fill gaps and expand upon information provided by the inventories.
- Data needed from the inventories may include:
  - Source or type of operation
  - Location of facility/operation
  - Contact information
  - Activities conducted on-site
  - Proximity to stormwater or surface water
  - Potential impact to stormwater or surface water
  - Percent of site with impervious surface
  - Existing and needed control measures
- The inventory of all municipal operations by LTSTF members can be represented as a breakdown of potential sources by jurisdiction, type location

Identify Priority Operations. TAMUK will use the inventory to prioritize municipal operations based on number of facilities, number of stormwater polluting activities identified, acreage affected, distance to surface water or to conveyance structure and the percent of impervious surface on-site. Municipal operations that will be scrutinized include:

- Vehicle repair or fleet maintenance
- Street and road maintenance
- Right of way mowing
- Storm drain system maintenance including regional detention facilities, on site detention ponds, and outfalls within MS4 jurisdictions from neighboring communities
- Parks maintenance
- Golf course maintenance
- Landfill maintenance
- Transfer station and recycling center operations

- Municipal curb side solid waste activities
- Wastewater and water treatment facility operations
- Operation and maintenance of intermediate receiving waterways owned by the permittee
- Operation and maintenance of lift stations

Certification Program. The LTSTF will develop a certification program for municipal operations. The SWMP will develop policy, SOPs, and certification programs that will be evaluated annually.

Develop BMPs and SOPs. The LTSTF will develop BMPs for stormwater pollution runoff control for municipal activities or operations. A BMP table will also be created to help determine what BMPs would likely apply to which activities. In addition, focus group meetings will be conducted to get input from municipal employees on the draft BMPs. The attendees will be asked what activities they perform each day that impact stormwater and whether or not the BMPs are reasonable or attainable. After the focus group meetings, the BMPs will be modified to reflect input received from the focus groups.

Develop Educational Materials and Certification Criteria. The LTSTF will develop criteria checklists for the priority operations that specify required BMPs. Staff will use these checklists to gather data on-site to determine if an operation is a concern. The LTSTF will also develop resource sheets for BMPS for the priority municipal operations. These sheets will list the required BMPs for effective management of stormwater runoff from municipal operations.

Conduct Site Visits. The LTSTF members will conduct site visits of municipal operations to determine the practicality of the BMPs and certification criteria and also to give provide staff with a better understanding of operations. The BMPs and certification criteria will be edited based on the site visit experiences. Follow-up letters will be sent to each operation after the each visit, noting the practices that were already in place to protect stormwater and the potential stormwater impacts that need to be corrected to achieve effective management.

Identify Common Deficiencies.

Good recordkeeping is essential for an effective housekeeping program. All information required for BMP evaluation will be kept for the annual SWMP evaluation.

Developing Elements of a Municipal Stormwater Pollution Control Plan. TAMUK will recommend designing a generic Stormwater Pollution Control Plan that will include the elements listed below. The plan will provide a central location for copies of required BMPs and resource sheets.

- Employee training plan and logs
- Implementation and tracking of BMPs
- Run-off control plans
- Map of facility
- Spill Prevention and Response Plan
- Recordkeeping
- BMP lists, resource sheets, stormwater messages, and other resources

- Tracking of inspections (copies of site visit checklists, follow-up letters, etc.)

Develop Training Messages and Videos. Continuous outreach and education must be provided to employees. LTSTF can work with TAMUK to develop key training messages for stormwater pollution prevention for municipal activities. Site visits will also be conducted to photograph local operations and practices. A PowerPoint presentation will be developed containing photographs and text to show good and bad practices and “what is wrong with this picture” scenarios. The slides will be used to train supervisors and employees on BMPs and common activities that impact stormwater. TAMUK and the LTSTF will also develop a training video from the actual information, data, and media from the site visits.

Performance Measures. The SWMP MCM #6 goals and programs will be measured for success by recordkeeping of the following:

- Pounds of fertilizer applied.
- Pounds of pesticide applied.
- Capital expenditures for BMPs.
- Number of spills/leaks/discharges greater than 1 gallon and corrective actions taken.
- Number of catch basins cleaned.
- Tons or cubic yards of debris collected.
- Number of contaminated or suspected contaminated basins.
- Number of curb miles swept.

#### **4.7 MCM #7 – Authorization for Municipal Construction Activities**

The development of a MCM for municipal construction activities is an optional measure and is an alternative to the MS4 operator seeking coverage under TPDES general permit TXR150000. To satisfy the regulatory requirements for this MCM the following are required:

- I. The permittee must describe how construction activities will generally be conducted so as to take into consideration local conditions of weather, soils, and other site specific considerations;
- II. The permittee must describe the area that this MCM will address and where the permittee’s construction activities are covered (e.g., within the boundary of the urbanized area, the corporate boundary, a special district boundary, an extra territorial jurisdiction, or other similar jurisdictional boundary);
- III. The permittee must either provide a description of how the permittee will supervise or maintain oversight over contractor activities to ensure that the Storm Water Pollution Prevention Plan (SWP3) requirements are properly implemented at the construction site; or how the permittee will make certain that contractors have a separate authorization for storm water discharges.
- IV. The permittee must provide a general description of how a SWP3 shall be developed, according to Part VI.E of general permit TXR040000, for each construction site.

**Program Objective.** The objective of MCM #7 is to exempt the permittee from having to use TPDES GCP TXR150000 for each construction site owned by the permittee. This will save the local governments a considerable amount of revenue. Contractors working for the permittee will not be required to obtain a separate authorization and will be authorized to use MCM #7 for authorization to discharge stormwater runoff into the MS4.

**Priority One Activities.** The activities planned to comply with Phase II MS4 MCM #6 are outlined below.

Storm Water Pollution Prevention Plan (SWP3). TAMUK will assist the MS4 Planning Committee in developing a general SWP3 to meet the requirements of MCM #7. The SWP3 will include the following:

- A site or project description
- A description of the BMPs that will be used to minimize pollution in runoff. The description must identify the general timing or sequence for implementation.
- A description of permanent storm water controls.
- Other required controls and BMPs.
- Documentation of compliance with approved state and local plans.
- Maintenance requirements.
- Inspections of controls.
- The SWP3 must identify and ensure the implementation of appropriate pollution prevention measures for all eligible non-storm water components of the discharge, as listed in Part II.A.3 of General Construction Permit (GCP) TXR150000.
- The SWP3 must include the information required in Part III.B of GCP TXR150000.

**Priority Two Activities.** The activities planned to address broader stormwater and water quality management issues related to the Phase II MS4 MCM #7 are outlined below.

Annual Evaluation. The SWP3 and MCM #7 will be evaluated each year and changes proposed for increasing effectiveness of the program. The SWMP will include development of a method of evaluating the SWP3s for a random selection of various types of projects.

Contractor, Engineer, Architect Survey. Each contractor, engineer and architect involved in a construction project will be required to submit a survey to the permittee upon completion of the project. The survey will be developed to evaluate MCM #7.

Performance Measures. The SWMP MCM #7 goals and programs will be measured for success by evaluating permits issued, inspections conducted, citations issued, success of BMPs used, and results of contractor surveys.

## 5.0 STORMWATER MANAGEMENT PROGRAM

The City of Alton SWMP has been developed to meet the following regulatory requirements from the TCEQ TPDES General Permit TXR40000:

**To the extent allowable under state and local law, a SWMP must be developed and implemented according to the requirements of Part III of this general permit, for storm water discharges that reach waters of the United States, regardless of whether the discharge is conveyed through a separately operated storm sewer. The SWMP must be developed to reduce the discharge of pollutants from the MS4 to the maximum extent practicable (MEP), to protect water quality, and to satisfy the appropriate water quality requirements of the Clean Water Act and the Texas Water Code. Existing programs or best management practices (BMPs) may be used to fulfill the requirements of this general permit. The MS4 operator must develop the SWMP to include the six minimum control measures described in Part III.A.1. through 6, and the operator may develop and include the optional seventh minimum control measure in Part III.A.7. Small MS4s have five years from the date of issuance of this general permit to fully implement their SWMP. A discharger's compliance with its approved SWMP will be deemed compliance with Part III of this permit.**

This Section describes the City of Alton's SWMP and the Best Management Practices (BMPs) selected to comply with the TPDES program's six (6) Minimum Control Measures (MCMs) and is organized in the following outlined format:

- Section 5.1 - Public Education and Outreach
- Section 5.2 - Public Involvement in Storm Water Management Program Development
- Section 5.3 - Illicit Discharge Detection and Elimination
- Section 5.4 - Construction Site Storm Water Controls
- Section 5.5 - Post Construction Storm Water Management for New Development/  
Redevelopment
- Section 5.6 - Pollution Prevention/Good Housekeeping for Municipal Operations
- Section 5.7 - Authorization for Municipal Construction Activities

Each of these sections includes a brief description of the BMPs selected for each MCM, a proposed implementation schedule for each BMP, performance measures for the programs, and identifies the municipal departments assigned to each BMP.

**5.1 Public Education and Outreach BMPs**

The BMPs listed in this section were selected to meet the following regulatory requirement (Minimum Control Measure #1):

**Public Education and Outreach on Storm Water Impacts**  
**(a) A public education program must be developed and implemented to distribute educational materials to the community or conduct equivalent outreach activities that will be used to inform the public. The MS4 operator may determine the most appropriate sections of the population at which to direct the program. The MS4 operator must consider the following groups and the SWMP shall provide justification for any listed group that is not included in the program:**

- (1) residents;**
- (2) visitors;**
- (3) public service employees;**
- (4) businesses;**
- (5) commercial and industrial facilities; and**
- (6) construction site personnel.**

**The outreach must inform the public about the impacts that storm water run-off can have on water quality, hazards associated with illegal discharges and improper disposal of waste, and steps that they can take to reduce pollutants in storm water runoff.**

The following table lists BMPs that meet the requirements of MCM 1.

**Table 1: Public Education and Outreach BMPs**

Section	Description of BMP	BMP* Type	IMPLEMENTATION SCHEDULE (YEAR)				
			1	2	3	4	5
5.1.1	Utility Bill Inserts/Mass Mail-out	I	X	X	X	X	X
5.1.2	Web Site	S	X	X	X	X	X
5.1.3	Classroom Presentations	I, S	X	X	X	X	X
5.1.4	Stenciling	C, S	X	X	X	X	X
5.1.5	Videos	S	X	X	X	X	X
5.1.6	Signage	C	X	X	X	X	X
5.1.7	Community outreach	C, S	X	X	X	X	X
5.1.8	Education - ACWPP	S	X	X	X	X	X

*I - INDIVIDUAL BMP*

*C - COMMON BMP*

*S - SHARED BMP*

*\*see page 10 of this SWMP for explanation of the BMP Type*

*X – notes activity, see Section for details*

5.1.1 Utility Inserts/Mass Mailout

Inserts in the forms of small brochures, informative handouts or fact sheets will be distributed with municipal water utility bills or in a mail-out. Brochures equivalent to the number of households within the City’s permitted area will be produced. Inserts shall include information on various topics like waste oil disposal, use of pesticides and fertilizers on landscaping, household hazardous waste, water quality, and the SWMP in general. The mail-out brochures and utility inserts will also be available at public viewing areas in the lobbies of city hall, the public library, and other city-owned facilities. The topics of these brochures, mail-outs and/or utility inserts will target various audiences: residents, visitors, public service employees, businesses, commercial and industrial facilities, and construction site personnel.

The City of will develop a utility insert or a mass mail out program using existing outreach materials developed by the TCEQ, EPA and other organizations. Brochures, utility inserts and mass mail-outs are inexpensive tools that can be used for effective outreach to residents, visitors, public service employees, businesses, commercial and industrial facilities, and construction site personnel.

**Table 2: Implementation Schedule – Utility Inserts/Mass Mail-out**

Permit Period	Measurable Goal
Year 1	City will develop an annual budget and assign city departments to oversee this BMP.
Year 2	Delegated department will develop a comprehensive program to include acquiring existing outreach materials, and developing a consistent and regular schedule of disbursement.
Years 3-5	Full implementation and annual review conducted

**Table 3: BMP Responsibility – Utility Inserts/Mass Mail-out**

Primary Department	Support Groups
City Public Works Dept.	LRGV TPDES Stormwater Task Force (LTSTF) Texas A&M University-Kingsville (TAMUK) South Texas Environmental Institute (STEI) Lower Rio Grande Valley Development Council (LRGVDC) Arroyo Colorado Watershed Partnership (ACWP) City Engineering Department City Planning Department City Public Utilities Board

5.1.2 Web Site

Background and other information on the SWMP, including the seven (7) MCMs along with specific information promoting the stormwater education program, storm drain stenciling program, meetings, and other general information will be developed and provided on a web site [www.stormwater.stei.org](http://www.stormwater.stei.org). This web site will be updated frequently. The website is currently under

construction.

The City’s objective is to provide real time SWMP information to the public, including data, updates, policy and meeting schedules via a website. The website will provide outreach materials, training schedules, downloadable information and an email address for feedback. Ultimately, a list server may be developed to engage professionals, educators and regulators. The website will specifically target the TPDES Phase II program and topics that will outreach residents, visitors, public service employees, businesses, commercial and industrial facilities, and construction site personnel.

**Table 4: Implementation Schedule – Web Site**

Permit Period	Measurable Goal
Year 1	City will develop an annual budget and assign city webmaster to oversee this BMP.
Year 2	Delegated department will develop a comprehensive program to acquire existing outreach materials, develop a consistent and regular schedule for updating the website, coordinate links between stakeholders and support groups, and develop and develop and implement the final website design.
Years 3-5	Develop an on-line feedback mechanism and a possible list server.

**Table 5: BMP Responsibility – Web Site**

Primary Department	Support Groups
City Public Works Dept.	LRGV TPDES Stormwater Task Force (LTSTF) South Texas Environmental Institute (STEI) Arroyo Colorado Watershed Partnership (ACWP) City Engineering Department City Public Utilities Board

5.1.3 Classroom Presentations

A watershed information curriculum with associated materials and training will be made available and advertised to all elementary classroom teachers in the City’s school district. Program materials will include a curriculum on water quality and water conservation, stormwater pollution prevention, and promotion of the SWMP. Post-cards promoting the stormwater education program will be mailed to all school district teachers, and a comprehensive brochure listing K-12 programs will also be printed and distributed.

The City will also promote the Arroyo Colorado Watershed Protection Plan (ACWPP) and work with the ACWP to promote mutually beneficial goals. A watershed model developed by the ACWP will be made available to the City and the school district.

**Table 6: Implementation Schedule – Classroom Presentations**

Permit Period	Measurable Goal
Year 1	City will meet with school district officials to coordinate and agree on curriculum. City will develop a schedule.
Year 2	City will perform two (2) pilot classroom presentations to solicit feedback from teachers and students. Feedback data will be used to evaluate effectiveness and to adjust curriculum. Cost of classroom presentations BMP will be determined.
Year 3	Refined curriculum will be tested on four (4) additional schools.
Years 4-5	Budget developed for full implementation. Perform four (4) presentations per year.

**Table 7: BMP Responsibility – Classroom Presentations**

Primary Department	Support Groups
City Public Works Dept.	Local School District Texas A&M University-Kingsville (TAMUK) South Texas Environmental Institute (STEI) Arroyo Colorado Watershed Partnership (ACWP) City Engineering Department Region 1 Education Service Center

5.1.4 Stenciling

A Storm Drain Stenciling Program will be initiated and incorporated into the MCM #1 Public Education Program. A minimum number of storm drains will be stenciled per year in the City. This criterion will be used to evaluate the program. Municipal staff will provide stormwater education programs and facilitate storm drain stenciling activities with youth and citizens’ organizations. The City program will evaluate and attempt to develop partnerships with businesses and industrial facilities. Stenciling of existing storm drains at parking lots of businesses and industrial facilities will be evaluated and implemented.

The City will facilitate the development of partnerships with local youth service groups to perform a significant portion of the storm drain stenciling work. These groups may include the Boys & Girls Clubs, Boy Scouts of America, and local environmental groups. Records of stenciled storm drains, including locations, types of storm drain, and volunteer group information, will be maintained. The stencil will include the logo of the LRGV TPDES Task Force, the ACWP, and the City.

The City will evaluate and implement storm drain stenciling in new construction within its jurisdiction. Contractors will be provided with specifications and instructions on how to stencil storm drains. This program will be implemented on public and private new construction.

**Table 8: Implementation Schedule – Stenciling**

Permit Period	Measurable Goal
Year 1	Inventory manhole covers, inlets and other structures. Establish partnerships, seek grants, and develop final stencil design. Develop budget and program.
Years 2-5	Establish goals and policies. Attempt to stencil 25% of existing inventory each year and stencil all new installations. <b>Attempt to stencil 25% of partnering businesses and industrial facilities.</b>

**Table 9: BMP Responsibility – Stenciling**

Primary Department	Support Groups
City Public Works Dept.	Local Environmental Groups Texas A&M University-Kingsville (TAMUK) South Texas Environmental Institute (STEI) Lower Rio Grande Development Council (LRGVDC) Arroyo Colorado Watershed Partnership (ACWP) City Engineering Department Local Youth Organizations

5.1.5 Brochures and Videos

The *After the Storm* brochure created by the EPA (<http://www.epa.gov/weatherchannel/>) was developed, produced and made available for distribution to both residential and commercial audiences in certain cities by the LTSTF in 2005. This program will continue to be expanded by the City. A new brochure will be developed that will include additional information on the impacts of illicit discharges and other water quality issues. In addition, the *No La Riegues* campaign developed by Texas Sea Grant and adopted by the LTSTF in 2005 ([www.nolariegues.com](http://www.nolariegues.com)) will be revitalized and promoted. The websites to these materials will be linked to the City’s website. In addition, the *Chucho Salva el Dia* video campaign initiated by the EPA will also be adopted by the LTSTF in 2008 ([http://epa.gov/region6/6xa/childrens\\_health\\_video.htm#jump](http://epa.gov/region6/6xa/childrens_health_video.htm#jump)). The City will facilitate the development and distribution of these materials. The City will also identify other videos readily available and use local public air time, libraries, and other outreach tools to promote this BMP. **The topics of these brochures and videos will target various audiences: residents, visitors, public service employees, businesses, commercial and industrial facilities, and construction site personnel.**

**Table 10: Implementation Schedule – Videos**

Permit Period	Measurable Goal
Year 1	City will identify stormwater videos. Develop a video program, budget allowances, and a schedule of production. Develop partnerships with local cable access entities. Identify environmental groups that can assist.
Years 2-5	Broadcast three (3) videos to public channels within the City’s viewing area and/or provide copies of videos to local school and public libraries.

**Table 11: BMP Responsibility – Videos**

Primary Department	Support Groups
City Public Works Dept.	Local School District Texas A&M University-Kingsville (TAMUK) South Texas Environmental Institute (STEI) Lower Rio Grande Development Council (LRGVDC) Public Access Cable Entity Neighboring city with public access channel capability Arroyo Colorado Watershed Partnership (ACWP) Local Cable Network Public Library Local Environmental Groups

5.1.6 Signage

Stormwater pollution prevention signs will be designed, produced and installed along major intersections within the City. The signs will bear the logos from the LTSTF, the ACWP and the City. The City will place signs at locations where pedestrians and vehicle drivers will recognize the sign as an indicator of a local water body that should be protected, the importance of water quality, and the potential effects of stormwater pollution. Attractive graphics and brief messages or captions along roadsides can be very effective. Messages can be conveyed in English and Spanish. **The sign campaign will primarily target visitors and public service employees. The installation of these signs will be privatized or completed by city staff.**

**Table 12: Implementation Schedule – Signage**

Permit Period	Measurable Goal
Year 1	City will identify design of signs and locations for posting. Develop an installation program, budget allowances, and a schedule. Develop partnerships with local entities; identify environmental groups that can help. Develop a signage program for new construction, development and greenspace areas. Review pet walking ordinances and other related policies and ordinances.
Years 2-5	Install 25% of total locations identified each year. Promote new installations. Implement any ordinances during the second year.

**Table 13: BMP Responsibility – Signage**

Primary Department	Support Groups
City Public Works Dept.	City Parks and Recreation Department City Engineering Department City Planning Department South Texas Environmental Institute (STEI) Arroyo Colorado Watershed Partnership (ACWP)

5.1.7 Community Outreach

City will provide educational and outreach materials to the community, including brochures, fact sheets and handouts. The topics of this outreach will target various audiences: residents, visitors, public service employees, businesses, commercial and industrial facilities, and construction site personnel. These materials will be made available at City Hall and throughout municipal facilities. Materials will also be made available to developers, businesses, and contractors during the planning and permitting processes. The City will include a stormwater pollution prevention outreach program in various annual community events. Booths, brochures, children- friendly materials, and other similar approaches shall be used. The City shall consider designating a day or a week for stormwater pollution prevention awareness. The City will also develop a partnership with various regional entities and help coordinate an annual conference that promotes the SWMP of the City and various SWMPs in the region.

**Table 14: Implementation Schedule – Community Outreach**

Permit Period	Measurable Goal
Year 1	Develop a program and budget.
Years 2-5	Provide educational materials to the public. Establish locations for self service distribution. Help organize an annual conference in the region. Contribute and participate at various annual events. Promote outreach to businesses, engineers, contractors, developers, and the general public at least once a year.

**Table 15: BMP Responsibility – Community Outreach**

Primary Department	Support Groups
City Public Works Dept.	LRGV TPDES Stormwater Task Force (LTSTF) City Engineering Department City Chamber of Commerce Professional organizations South Texas Environmental Institute (STEI) Arroyo Colorado Watershed Partnership (ACWP)

5.1.8 Education - Arroyo Colorado Watershed Protection Plan

A watershed information curriculum with associated materials and training will be made available and advertised to residents, visitors, public service employees, businesses, commercial and industrial facilities, and construction site personnel. Program materials will promote the ACWP. The City will work closely with the ACWP to implement this BMP.

**Table 16: BMP Responsibility – Education, Arroyo Colorado Watershed Protection Plan**

Permit Period	Measurable Goal
Year 1	City will develop an annual budget and assign a city department to oversee this BMP.
Year 2	Delegated department will develop a comprehensive program to include acquiring existing outreach materials, and developing a consistent and regular schedule.
Years 3-5	Full implementation and annual review conducted.

**Table 17: BMP Responsibility – Education, Arroyo Colorado Watershed Protection Plan**

Primary Department	Support Groups
City Public Works Dept.	LRGV TPDES Stormwater Task Force (LTSTF) South Texas Environmental Institute (STEI) City Public Utilities Board Arroyo Colorado Watershed Partnership (ACWP)

### ***5.7 Authorization for Municipal Construction Activities BMPs***

The BMPs listed in this section were selected to meet the following regulatory requirement:

#### **Authorization for Municipal Construction Activities**

**The development of a MCM for municipal construction activities is an optional measure and is an alternative to the MS4 operator seeking coverage under TPDES general permit TXR150000. Additionally, contractors working for the permittee are not required to obtain a separate authorization if they do not meet the definition of a construction site operator, as long as the permittee meets the status of construction site operator. Permittees that choose to develop this measure will be authorized to discharge storm water and certain non-storm water from construction activities where the permittee can meet the definition of construction site operator in Part I of this general permit. The authorization to discharge under this MCM is limited to the regulated area, such as the portion of the MS4 located within an urbanized area or the area designated by TCEQ as requiring coverage. However, an MS4 operator may also utilize this MCM over additional portions of their MS4 that are also in compliance with all of the MCMs listed in this general permit. This MCM must be developed as a part of the SWMP that is submitted with the NOI for permit coverage. If this MCM is developed after submitting the initial NOI, a NOC must be submitted notifying the executive director of this change, and identifying the geographical area or boundary where the activities will be conducted under the provisions of this general permit. Utilization of this MCM does not preclude a small MS4 from obtaining coverage under the TPDES Construction General Permit, TXR150000, or under an individual TPDES permit.**

**(a) The MCM must include:**

- (1) a description of how construction activities will generally be conducted by the permittee so as to take into consideration local conditions of weather, soils, and other site specific considerations;**
- (2) a description of the area that this MCM will address and where the permittee's construction activities are covered (e.g. within the boundary of the urbanized area, the corporate boundary, a special district boundary, an extra territorial jurisdiction, or other similar jurisdictional boundary); and**
- (3) either a description of how the permittee will supervise or maintain oversight over contractor activities to ensure that the SWP3 requirements are properly implemented at the construction site; or how the permittee will make certain that contractors have a separate authorization for storm water discharges.**
- (4) a general description of how a SWP3 shall be developed, according to Part VI.E. of the general permit, for each construction site.**

**Authorization for Municipal Construction Activities (cont.)**

**Part VI.E:**

**Operators of municipal construction activities that qualify for coverage under this general permit and that discharge storm water associated with construction activities that reach waters of the U.S. must:**

- 1. develop a SWP3 according to the provisions of this general permit that covers the entire site and begin implementation of that plan prior to commencing construction activities;**
- 2. post a signed copy of the notice contained in Attachment 1 of this general permit in a location at the construction site where it is readily available for viewing prior to commencing construction activities and maintain the notice in that location until completion of the construction activity and final stabilization of the site;**
- 3. ensure the project specifications allow or provide that adequate BMPs may be developed and modified as necessary to meet the requirements of this general permit and the SWP3;**
- 4. ensure all contractors are aware of the SWP3 requirements, are aware that municipal personnel are responsible for the day-to-day operations of the SWP3, and who to contact concerning SWP3 requirements; and**
- 5. ensure that the SWP3 identifies the municipal personnel responsible for implementation of control measures described in the plan.**

The following table lists BMPs that meet the requirements of MCM 7.

**Table 84: Authorization for Municipal Construction Activities BMPs**

Section	Optional MCM #7 - Authorization for Municipal Construction Activities Description of BMP	BMP* Type	IMPLEMENTATION SCHEDULE (YEAR)				
			1	2	3	4	5
5.7.1	Stormwater Pollution Prevention Plan (SWP3)	C	X	X	X	X	X
5.7.2	Contractor, Engineer, Architect Survey	C	X	X	X	X	X

*I - INDIVIDUAL BMP*

*C - COMMON BMP*

*S - SHARED BMP*

*\*see page 10 of this SWMP for explanation of the BMP Type*

*X – notes activity, see Section for details*

### 5.7.1 Storm Water Pollution Prevention Plan (SWP3)

The development of a MCM for municipal construction activities is an optional measure and is an alternative to the MS4 operator seeking coverage under TPDES general permit TXR150000. The objective of MCM #7 is to exempt the permittee from having to use TPDES GCP TXR150000 for each construction site owned by the permittee. This will save the local governments a considerable amount of revenue. Contractors working for the permittee will not be required to obtain a separate authorization and can use MCM #7 for authorization to discharge stormwater runoff into the MS4. The City will develop a comprehensive SWP3 to meet the requirements of this MCM.

The permittee will develop a general SWP3 to meet the requirements of MCM #7. The SWP3 will include the following:

- A site or project description.
- A description of the BMPs that will be used to minimize pollution in runoff that must identify the general timing or sequence for implementation.
- A description of permanent storm water controls.
- Other required controls and BMPs.
- Documentation of compliance with approved state and local plans.
- Maintenance requirements.
- Inspections of controls.
- Identification and implementation plan for appropriate pollution prevention measures for all eligible non-storm water components of the discharge, as listed in Part II.A.3 of General Construction Permit (GCP) TXR150000.
- The information required in Part III.B of GCP TXR150000.

The SWP3 will include:

(1) a description of how construction activities will generally be conducted by the permittee so as to take into consideration local conditions of weather, soils, and other site specific considerations.

- Soils Information will be required – SWP3 will show locations of unstable, or highly erodible soils as determined by the local County Soil Survey and/or soil tests. SWP3 will show location of any soil test borings on plan and any geotechnical studies will be provided. Other soils information such as permeability, perched water table, etc. may be included.
- SWP3 shall include a plan of action in case of inclement weather
- the SWP3 shall include site specific conditions such as: surface water locations, existing natural areas, special notes for critical areas, location of practices, site development, limits of grading and clearing, vicinity map, etc.
- Inspections will be conducted by city staff immediately after storm events greater than 0.5 inches of rain in a 24 hour period, or as required by the TPDES regulations.

(2) a description of the area that this MCM will address and where the permittee's construction activities are covered;

(3) how the permittee will make certain that contractors have a separate authorization for storm water discharges.

- The city will incorporate into its construction permitting process, a policy that will require evidence of submittal of a NOI and of payment of local, state and federal fees.
- The City SWP3 plan will require posting of site specific stormwater permit pursuant to TPDES regulations on site.
- The contractors SWP3 plans will be submitted to the City during the permitting process for review and compliance to the City’s SWMP.
- Guidance and training material will be made available to the contractors.

In general, the city will require every TPDES regulated site within its jurisdiction to develop a SWP3. The city will provide the following to assist the regulated community:

- Guidance documents.
- An SWP3 template that will be developed from existing TCEQ, EPA and industry models.
- A variety of templates may be developed to accommodate type of construction (residential, small construction, large construction, etc.)
- The SWP3 will go through a review process to assure compliance with local, state and federal requirements.
- The city will develop an implementation program that will include inspections, evaluation, assessment and modification of BMPs, and feedback opportunities.

**Table 85: Implementation Schedule – SWP3 BMPs**

Permit Period	Measurable Goal
Year 1	Develop SWP3 to include ordinances, inspection policy, enforcement, and planning review. Develop feedback program.
Years 2-5	Implement program. Evaluate feedback and update program.

**Table 86: BMP Responsibility – SWP3 BMPs**

Primary Department	Support Groups
City Public Works Dept.	LRGV TPDES Stormwater Task Force (LTSTF) Texas A&M University-Kingsville (TAMUK) South Texas Environmental Institute (STEI) Lower Rio Grande Development Council (LRGVDC) City Engineering Department City Planning Department

5.7.2 Contractor, Engineer, Architect Survey

The City will update its existing drainage design policy to include provisions for the implementation of proper erosion and sediment controls and waste management on applicable construction sites.

**Table 87: Implementation Schedule – Contractor, Engineer, and Architect Survey**

Permit Period	Measurable Goal
Year 1	Develop Survey
Years 2-5	Submit an annual Survey to regulated community

**Table 88: BMP Responsibility – Contractor, Engineer, Architect Survey**

Primary Department	Support Groups
Public Works	LTSTF STEI

## **APPENDIX F**

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(No Permits)**

## **APPENDIX J**

BMP BY REGULATORY REQUIREMENT

BMP ID	BMP Description	Regulatory Minimum Control Measure
5.1.1	Utility Inserts and/or Mailouts	III.a.1 Public Education (a)(1) residents (a)(2) visitors (a)(4) businesses (a)(5) commercial/industrial (b) Documentation
5.1.2	Website	III.A.1. Public Education (a)(1) Residents (a)(2) Visitors (a)(3) Public service employees (a)(4) Businesses (a)(5) Commercial/Industrial (a)(6) Construction Site Personnel (b) Documentation  III.A.2. Public Involvement/ Participation
5.1.3	Classroom Presentations	III.A.1. Public Education (a)(1) Residents (b) Documentation

BMP BY REGULATORY REQUIREMENT

BMP ID	BMP Description	Regulatory Minimum Control Measure
5.1.4	Stenciling	III.A.1. Public Education (a)(1) Residents (a)(2) Visitors (a)(3) Public service employees (a)(4) Businesses (a)(5) Commercial/Industrial (a)(6) Construction Site Personnel (b) Documentation III.A.2. Public Involvement/ Participation III.A.3. Illicit Discharges (a) illicit discharges
5.1.5	Brochures and Videos	III.A.1. Public Education (a)(1) Residents (a)(2) Visitors (a)(3) Public service employees (a)(4) Businesses (a)(5) Commercial/Industrial (a)(6) Construction Site Personnel (b) Documentation

BMP ID	BMP Description	Regulatory Minimum Control Measure
5.1.6	Signage	III.A.1. Public Education (a)(1) Residents (a)(2) Visitors (a)(3) Public service employees (b) Documentation
5.1.7	Community Outreach	III.A.1. Public Education (a)(1) Residents (a)(2) Visitors a)(3) Public service employees (a)(4) Businesses (a)(5) Commercial/industrial facilities (b) Documentation  III.A.2. Public Involvement/ Participation

BMP BY REGULATORY REQUIREMENT

BMP ID	BMP Description	Regulatory Minimum Control Measure
5.1.8	Arroyo Colorado Watershed Protection Plan (ACWP BMP)	<p>III.A.1. Public Education                      (a)(1) Residents                      (a)(2) Visitors                      (a)(3) Public service employees                      (a)(4) Businesses                      (a)(5) Commercial/Industrial                      (a)(6) Construction Site Personnel                      (b) Documentation</p> <p>III.A.2. Public Involvement/                      Participation</p>
5.1.8	Education –General Watershed Protection Plan (non-ACWP BMP)	<p>III.A.1. Public Education                      (a)(1) Residents                      (a)(2) Visitors                      (a)(3) Public service employees                      (a)(4) Businesses                      (a)(5) Commercial/Industrial                      (a)(6) Construction Site Personnel                      (b) Documentation</p> <p>III.A.2. Public Involvement/                      Participation</p>

BMP BY REGULATORY REQUIREMENT

BMP ID	BMP Description	Regulatory Minimum Control Measure
5.2.1	Public Meetings	III.A.1. Public Education (a)(1) Residents (a)(2) Visitors (a)(3) Public service employees (a)(4) Businesses (a)(5) Commercial/Industrial (a)(6) Construction Site Personnel (b) Documentation III.A.2. Public Involvement/ Participation
5.2.2	Stenciling	III.A.1. Public Education (a)(1) Residents (a)(2) Visitors (a)(3) Public service employees (a)(4) Businesses (a)(5) Commercial/Industrial (a)(6) Construction Site Personnel (b) Documentation  III.A.2. Public Involvement/ Participation  III.A.3. Illicit Discharges (a) illicit discharges
5.2.3	Citizen Advisory Committee	III.A.2. Public Involvement/ Participation

BMP BY REGULATORY REQUIREMENT

<b>BMP ID</b>	<b>BMP Description</b>	<b>Regulatory Minimum Control Measure</b>
5.2.4	Hotline	III.A.2. Public Involvement/ Participation III.A.3. Illicit Discharge Detection and Elimination (a)(1) Detection

BMP BY REGULATORY REQUIREMENT

BMP ID	BMP Description	Regulatory Minimum Control Measure
5.3.1	Mapping	III.A.3. Illicit Discharge Detection and Elimination (c) storm sewer map
5.3.2	IDD&E Ordinance	III.A.3. Illicit Discharge Detection and Elimination (a) illicit discharges (b) non-storm water discharges
5.3.3	Business Education	III.A.1. Public Education (a)(3) public service employees (a)(4) Businesses (a)(5) Commercial/industrial facilities (b) Documentation  III.A.3. Illicit Discharge Detection and Elimination (a) illicit discharges (b) non-storm water discharges

BMP BY REGULATORY REQUIREMENT

BMP ID	BMP Description	Regulatory Minimum Control Measure
5.3.4	General Ordinances	III.A.3. Illicit Discharge Detection and Elimination (a) illicit discharges (b) non-storm water discharges
5.3.5	Low Impact Development and Smart Growth	III.A.1. Public Education (a)(3) Public service employees (a)(4) Businesses (a)(5) Commercial/Industrial (a)(6) Construction Site Personnel (b) Documentation  III.A.3. Illicit Discharge Detection and Elimination (a) illicit discharges (b) non-storm water discharges
5.3.6	Illicit Discharge Inspections	III.A.1. Public Education (a)(3) public service employees (a)(4) Businesses (a)(5) Commercial/industrial facilities (b) Documentation III.A.3. Illicit Discharge Detection and Elimination (a) illicit discharges (b) non-storm water discharges

BMP BY REGULATORY REQUIREMENT

BMP ID	BMP Description	Regulatory Minimum Control Measure
5.3.7	Business Site Inspections	III.A.3. Illicit Discharge Detection and Elimination (a) illicit discharges (b) non-storm water discharges
5.3.8	Household Hazardous Waste	III.A.2. Public Involvement/ Participation  III.A.3. Illicit Discharge Detection and Elimination (a)(2) Elimination

BMP BY REGULATORY REQUIREMENT

BMP ID	BMP Description	Regulatory Minimum Control Measure
5.4.1	Erosion Control Ordinance	III.A.4. Construction Site Storm Water Runoff Control (a) ordinance (b) contractor requirements
5.4.2	Construction Site Plan Review	III.A.4. Construction Site Storm Water Runoff Control (c)(3) site inspection and enforcement
5.4.3	Site Inspection and Policy Enforcement	III.A.4. Construction Site Storm Water Runoff Control (c)(3) site inspection and enforcement

BMP BY REGULATORY REQUIREMENT

BMP ID	BMP Description	Regulatory Minimum Control Measure
5.4.4	Contractor Certification	<p>III.A.1. Public Education (a)(6) Construction site personnel (b) Documentation</p> <p>III.A.4. Construction Site Storm Water Runoff Control (b) construction site Requirements</p> <p>III.A.5. Post-Construction Storm Water Management in New and Redevelopment (a) structural and non-structuralBMPs (c) long-term BMP maintenance</p>
5.4.5	Construction Site Waste Management	<p>III.A.3. Illicit Discharge Detection and Elimination (a)(2) Elimination</p> <p>III.A.4. Construction Site Storm Water Runoff Control (b)(2) waste control (c)(3) site inspection and enforcement</p>
5.4.6	Development of BMP Menus	<p>III.A.4. Construction Site Storm Water Runoff Control (c)(3) site inspection and enforcement</p>

BMP BY REGULATORY REQUIREMENT

BMP ID	BMP Description	Regulatory Minimum Control Measure
5.5.1	Post-Construction Ordinance	III.A.1. Public Education (a)(1) Residents (a)(4) Businesses (a)(6) Construction Site Personnel III.A.5. Post-Construction Storm Water Management (b) ordinance (c) long-term operation and maintenance of BMPs
5.5.2	Drainage Design Policy	III.A.1. Public Education (a)(1) Residents (a)(4) Businesses (a)(6) Construction Site Personnel III.A.5. Post-Construction Storm Water Management (b) ordinance (c) long-term operation and maintenance of BMPs
5.5.3	BMP Inspection and Maintenance	III.A.4. Construction Site Storm Water Runoff Control (c)(3) site inspection and enforcement
5.5.4	Land Use	III.A.5. Post-Construction Storm Water Management (a) appropriate use of structural/non-structural BMPs

BMP BY REGULATORY REQUIREMENT

BMP ID	BMP Description	Regulatory Minimum Control Measure
5.6.1	Stormwater Sewer System O&M	III.A.6. Pollution Prevention/Good Housekeeping (a)(4) storm water system maintenance
5.6.2	Street Sweeping	III.A.6. Pollution Prevention/Good Housekeeping (a)(2) street, road, or highway maintenance (a)(6) municipal parking lots (d) disposal of waste
5.6.3	City Employee Training Program	III.A.1. Public Education (a)(3) Public service employees (b) Documentation  III.A.6. Pollution Prevention/Good Housekeeping (b) training program (e) municipal operations

BMP BY REGULATORY REQUIREMENT

BMP ID	BMP Description	Regulatory Minimum Control Measure
5.6.4	O&M Certification and Standard Operating Procedure Program	<p>III.A.1. Public Education (a)(3) Public service employees (b) Documentation</p> <p>III.A.6. Pollution Prevention/Good Housekeeping (a)(1) park and open space maintenance (a)(2) street, road, or highway maintenance (a)(3) fleet and building maintenance (a)(4) storm water system maintenance (a)(5) new construction and land disturbances (a)(6) municipal parking lots (a)(7) vehicle and equipment maintenance and storage yards (a)(8) waste transfer stations (a)(9) salt/sand storage locations (b) training (e) municipal operations and industrial activities</p>
5.6.5	Site Visits	<p>III.A.6. Pollution Prevention/Good Housekeeping (a) good housekeeping and BMPs (c) structural BMP control (e) municipal operations</p>

BMP BY REGULATORY REQUIREMENT

BMP ID	BMP Description	Regulatory Minimum Control Measure
5.6.6	Stormwater System O&M	III.A.6. Pollution Prevention/Good Housekeeping (a)(4) storm water system
5.6.7	Pesticides, Herbicide and Fertilizer Management	III.A.6. Pollution Prevention/Good Housekeeping (a)(1) park and open space maintenance (a)(2) street, road, or highway maintenance (a)(3) fleet and building maintenance (a)(4) storm water system maintenance (a)(5) new construction and land disturbances (a)(6) municipal parking lots (a)(7) vehicle and equipment maintenance and storage yards (a)(8) waste transfer stations (a)(9) salt/sand storage locations (b) training

BMP BY REGULATORY REQUIREMENT

<b>BMP ID</b>	<b>BMP Description</b>	<b>Regulatory Minimum Control Measure</b>
5.6.8	Collection and Disposal of Stormwater Waste	III.A.6. Pollution Prevention/Good Housekeeping (d) disposal of waste

BMP BY REGULATORY REQUIREMENT

<b>BMP ID</b>	<b>BMP Description</b>	<b>Regulatory Minimum Control Measure</b>
5.7.1	Stormwater Pollution Prevention Plan (SWP3)	III.A.7. Authorization for Municipal Construction Activities
5.7.2	Contractor, Engineer, Architect Survey	III.A.7. Authorization for Municipal Construction Activities