

**City of Windcrest
Storm Water Management Program
Phase II MS4 Permit No. TXR040341**

City of Windcrest
8601 Midcown
Windcrest, Texas 78239

210-655-0022

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1.0 Public Education and Outreach

The Public Education and Outreach minimum measure consists of Best Management Practices (BMPs) that focus on the development of educational materials designed to inform the public about the impacts that storm water discharges have on local water bodies and the steps that the public can take to reduce pollutants in storm water runoff. The BMPs describe how individuals and households will be informed about the steps they can take to reduce storm water pollution; how individuals and groups will be informed on how to become involved in the storm water program; and the mechanisms that will be used to reach target audiences. The target audiences for the education program are specified in education-related BMPs described in the other minimum control measures. The target audiences were selected based on regulation requirements and based on the goal of educating the community about the impacts that storm water discharges have on local water bodies and the steps that the public can take to reduce pollutants in storm water runoff. The Public Education and Outreach program and BMPs, in combination, are expected to reach all of the constituents within the MS4's permitted boundary. The target pollutant sources are construction site runoff, impacts from new and re-development, illicit discharges and other pollutant sources as identified to be of local concern, ie. approved TMDL parameters. Evaluation of the success of this minimum measure will be through careful analysis of the measurable goals for each BMP included in this minimum measure. Measurable goals for each BMP were selected by formulating attainable goals for the various BMP implementation steps or tasks. The responsibility for implementation of this minimum measure is described with each BMP procedure.

Best Management Practices:

1. Storm Water Website: Develop, publish and maintain a link on the city's website devoted to storm water quality activities.

Implementation Tasks:

A. Create a section on the city's web page with contact information, and general pollution control information. (10/10/2008 12:00:00 AM)

B. Have information directed to the public on the web page. This information will detail ways to minimize household illicit discharges as well as reporting methods if discharges are observed. (10/10/2009 12:00:00 AM)

C. Have information directed to businesses in the city available on the web page. This information

will detail ways to minimize business illicit discharges and provide reporting methods if discharges are observed. (10/10/2009)

Measurable Goals:

Year 1 : Was the website link operational?

Year 1 : Was general contact and pollution control information posted on the website?

Year 2 : Was the business information added to the website?

Year 3-5: Was the website maintained and updated?

Responsible Party:

City Manager.

2. Use of Media: Use city news letter to educate the public

Implementation Tasks:

A. Create a column in the city news letter for the purpose of quarterly storm water education. (4th quarter 2008)

B. Have a guest columnist write one quarters column every year.. (2nd quarter 2009)

Measurable Goals:

Year 1 : Were the columns placed in the paper?

Year 2: Were the guest columnist published?

Year 2-5 : Were the columns and guest columns continued?

Responsible Party:

City Manager.

3. Storm Drain Stenciling: Stenciling the drain inlets advertising no dumping.

Implementation Tasks:

A. Apply the stencil image on 1/3 of the cities inlets. (12/10/2008 12:00:00 AM)

B. Apply stencils to second 1/3 of storm inlets. (12/10/2009 12:00:00 AM)

C. Apply stencils to third 1/3 of storm inlets. (12/10/2010 12:00:00 AM)

D. Maintain the images on the storm inlets. (12/10/2012 12:00:00 AM)

Measurable Goals:

Year 1 : Were stencils placed on 1/3 of the inlets?

Year 2 : Were stencils placed on second 1/3 of the storm inlets?

Year 3 : Were stencils placed on third 1/3 of the storm inlets?

Year 3-5: Were inspections and/or maintenance of the inlet stencils performed?

Responsible Party:

City Manager.

4. Lawn and Garden care: The encouragement of residents to take proper care of their lawns and gardens, helping filter out sediments after rainfall events.

Implementation Tasks:

A. Advertise through the city news letter educating people on the importance of good lawn care, and the proper application of chemicals. (1st quarter 2009)

B. Create a yard of the month award for those who are maintaining there lawns in manner that limits chemical use and minimizes sediment transport.. (2nd quarter 2009)

C. Continue once yearly the lawn care article in the city news letter. (12/10/2010 12:00:00 AM)

Measurable Goals:

Year 1: No Action.

Year 2: Was the column placed in the city news letter?

Year 3: Was the yard of the month contest created on time and awarded monthly?

Year 3-5: Were the columns and awards performed on schedule?

Responsible Party:

City Manager.

2.0 Public Involvement

The Public Involvement/Participation minimum measure consists of Best Management Practices (BMPs) that focus on involving the local public in development and implementation of the SWMP. Compliance with State, Tribal, and local public notice requirements will facilitate involvement of the public in development, submittal (NOI and SWMP), and implementation of the public involvement/participation program. The BMPs describe the plan to actively involve the public in development and implementation of the SWMP and the types of public involvement activities

included in the program. The target audiences for the public involvement program are all groups that may have an interest in the particular BMPs in addition to all ethnic and economic groups and the general public located within the permitted boundary. Evaluation of the success of this minimum measure will be through careful analysis of the measurable goals for each BMP included in this minimum measure. Measurable goals for each BMP were selected by formulating attainable goals for the various BMP implementation steps or tasks. The responsibility for implementation of this minimum measure is described with each BMP procedure.

Best Management Practices:

1. Storm Drain Stenciling: Stenciling of storm water inlet structures with messages related to storm water quality issues.

Implementation Tasks:

- A. Identify target areas or streets to be included in the storm drain stenciling program. (10/10/2008 12:00:00 AM)
- B. Develop slogans, logos, and/or text for stenciling storm water inlet structures. (10/10/2009 12:00:00 AM)
- C. recruit private groups to participate in the storm drain stenciling program. (3/10/2010 12:00:00 AM)
- D. Maintain records of storm drain stenciling that will be performed in three phases. (3/10/2011 12:00:00 AM)

Measurable Goals:

Year 1: Were the Identified target areas to be included in the storm drain stenciling program located?

Year 2: Were the logos for stenciling storm water inlet structures developed within the time needed?

Year 3: Were the private groups to participate in the storm drain stenciling program contacted on time?

Year 4: Were the records keep every 1/3 phase of the stenciling program?

Responsible Party:

City Manager.

2. Reforestation Program: Having volunteers from the community plant trees and bushes along the greenbelt areas of the city.

Implementation Tasks:

- A. Create map with the city for locations were plantings may occur. (10/10/2008 12:00:00 AM)
- B. Create a planting schedule with the garden club with dates and locations where plantings will occur. (10/10/2009 AM)

C. Plant ten trees the third year.. (3/10/2009 12:00:00 AM)

Measurable Goals:

Year 1: Did the city create maps for the locations needed for proper planting?

Year 2: Were there times and dates on the schedule created for the garden club?

Year 3: Were the five trees planted on the third year?

Responsible Party:

City Manager.

3.0 Illicit Discharge Detection and Elimination

The Illicit Discharge Detection and Elimination minimum measure consists of Best Management Practices (BMPs) that focus on the detection and elimination of illicit discharges into the MS4. A storm sewer system map showing the location of all outfalls and the names and location of all receiving waters will be developed from existing mapping information, eg. MS4 CAD or GIS map bases or the US Census Bureau Tiger/Line 2000 maps. The BMPs describe map update procedures; the legal authority mechanism (to the extent allowable under State, Tribal or local law) which will be used to effectively prohibit illicit discharges; enforcement procedures and actions to ensure that the regulatory mechanism is implemented; the dry weather screening program and procedures for tracing and locating the source of an illicit discharge; procedures for locating priority areas; and procedures for removing the source of the illicit discharge. BMPs focusing on education and training of public employees, businesses, and the general public with regard to the hazards associated with illegal discharges and improper disposal of waste are described in the Public Education minimum measure. Evaluation of the success of this minimum measure will be through careful analysis of the measurable goals for each BMP included in this minimum measure. Measurable goals for each BMP were selected by formulating attainable goals for the various BMP implementation steps or tasks. The responsibility for implementation of this minimum measure is described with each BMP procedure.

Best Management Practices:

1. Illicit Discharge Employee Training: Educate permittee personnel on the identification of illicit discharges and procedures for reporting observations to outfall inspection personnel.

Implementation Tasks:

A. Develop a list of personnel to be educated on the identification and reporting of illicit discharges. (10/10/2008 12:00:00 AM)

B. Develop training materials, internal reporting forms, and reporting procedures including who will receive reports on illicit discharges. (3/10/2009 12:00:00 AM)

C. Develop a schedule for conducting training of identified personnel. (3/10/2009 12:00:00 AM)

D. Conduct yearly training. (10/10/2009 12:00:00 AM)

Measurable Goals:

Year 1: Were personnel to be trained identified?

Year 2: Was training conducted for identified personnel in accordance with the identified schedule?

Year 2: Were training materials, internal reporting forms, and reporting procedures created, including who will receive reports on illicit discharges?

Year 2: Was a schedule developed for conducting training for employees on illicit discharges?

Responsible Party:

City Manager.

2. Procedures to Address Illegal Dumping:

Implementation Tasks:

A. Develop a list of locally occurring non-storm water discharges that may be observed by the public. (10/10/2008 12:00:00 AM)

B. Develop or identify a hotline phone number for the reporting of potential illicit discharges by the public. (10/10/2008 12:00:00 AM)

C. Develop internal procedures for receiving hotline phone calls. (12/10/2010 12:00:00AM)

C. Conduct appropriate public education activities (website & newsletter) designed to inform the public of the hotline and types of potential discharges to report. (12/10/2009 12:00:00 AM)

Measurable Goals:

Year 1: Was a list of locally occurring non-storm water discharges created to be observed by the public?

Year 1: Was there a hotline created for the public to report any illegal dumping?

Year 2: Was the illicit discharge public education material for distribution to inform the public of the hotline and types of potential discharges to report.

Year 3: Was the internal reporting forms to track reported discharges, investigation of public reports, and corrective actions associated with the elimination of illicit discharges reported by the public.

Responsible Party:

City Manager.

3. Hazardous Materials Disposal Opportunities: The city will have a site available for the public to dump any hazardous chemicals once a year, located in the public works department

Implementation Tasks:

A. Contact an agency(s) and identify potential roles of the agency(s) in assisting the MS4 in eliminating illicit discharges. (10/10/2008 12:00:00 AM)

B. Develop interagency agreement(s) that address the following:- Information transfer between the agency(s)- Roles of each agency in elimination of illicit discharges- Time lines for actions to occur upon reporting of illicit discharge presence- Procedures for reporting the elimination activities undertaken by the agency(s)- Procedures for augmentation of the agreement (3/10/2009 12:00:00 AM)

C. Conduct periodic interagency meetings as necessary to maintain agreement responsibilities and make any appropriate changes. (3/10/2009 12:00:00 AM)

Measurable Goals:

Year 1: Was an agency(s) contacted for the potential role in assisting the small ms4 in eliminating illicit discharges?

Year 2: Was a list of local agencies developed that may need to be involved in the illicit discharge elimination process?

Year 3: Were there periodic interagency meetings conducted to maintain agreement responsibilities and make any appropriate changes?

Responsible Party:

City Manager.

4.0 Construction Site Runoff

The Construction Site Runoff minimum measure consists of Best Management Practices (BMP's) that focus on the reduction of pollutants in any storm water runoff to the MS4 from construction activities that result in a land disturbance of greater than or equal to one acre. Reduction of storm water discharges from construction activity disturbing less than one acre will be considered if it is part of a larger common plan of development or sale that would disturb one acre or more. The BMPs describe the legal authority mechanism (to the extent allowable under State, Tribal or local law) which will be used to require erosion and sediment controls; enforcement procedures and actions to ensure compliance; requirements for construction site operators to implement appropriate erosion and sediment control BMPs; requirements for construction site operators to control waste such as discarded building materials, concrete truck washout, chemicals, litter and sanitary waste at the construction site; procedures for site plan review which incorporate the consideration of potential water quality impacts; procedures for receipt and consideration of information submitted by the public; and procedures for site inspection and enforcement of control measures. Evaluation of the success of this minimum measure will be through careful analysis of the measurable goals for each BMP included in this minimum measure. Measurable goals for each BMP were selected by formulating attainable goals for the various BMP implementation steps or tasks. The responsibility for implementation of this minimum measure is described with each BMP procedure.

Best Management Practices:

1. Construction Site Inspection: Conduct inspections of local construction sites that discharge storm water to determine compliance with local construction storm water regulations.

Implementation Tasks:

A. Develop internal procedures for tracking new and on-going construction activities. (10/10/2008 12:00:00 AM)

B. Create a ordinance defining illegal activities and providing enforcement authority. (10/10/2008 12:00:00 AM)

C. Inspect qualifying construction sites using appropriate inspection procedures and forms to ensure compliance with local storm water regulations. (10/10/2009 12:00:00 AM)

D. Issue enforcement actions to owners and operators of local construction sites that are not in compliance with local construction storm water regulations. (3/10/2009 12:00:00 AM)

E. Maintain records of construction site inspections, enforcement actions, and corrective actions performed by local construction site owners and operators. (3/10/2010 12:00:00 AM)

Measurable Goals:

Year 1: Were the internal procedures performed for tracking on-going construction activities?

Year1: Was the ordinance for illegal activities on construction sites created?

Year 2: Were the local construction sites inspected using proper procedures?

Year 2: Were there any actions taken on any construction sites that were not in compliance with the storm water regulations and if there were how many?

Year 3: Were the inspection records keep up to date?

Responsible Party:

City Manager.

2. Hire staff: By hiring staff the city will be able review construction activities and report any violations.

Implementation Tasks:

A. Employ or subcontract staff for the inspections that will be performed at the construction site location. (10/10/2008 12:00:00 AM)

B. The inspection or engineering department will review all plains from designated construction sites. (12/10/2009 12:00:00 AM)

C. The inspection department will perform weekly inspections on all active construction sites in

the ms4. (12/10/2009 12:00:00 AM)

Measurable Goals:

Year 1: Was there an inspection or engineering company hired?

Year 2: Did the inspection or engineering firm review all construction plans that were involved with the small ms4.

Year 2: Was there weekly inspections performed at all active construction sites in the ms4?

Responsible Party:

City Manager.

3. Construction Site Waste Management: By requiring all construction sites to follow waste management there will be less illicit discharges and pollutants in the ms4.

Implementation Tasks:

A. Review permittee construction project planning and design criteria to determine changes needed to comply with local, state, and/or federal construction storm water regulations. (10/10/2008 12:00:00 AM)

B. Prepare and distribute construction design and permitting guidelines to the local construction community (contractors, developers, engineers, architects) and involved permittee personnel. (12/10/2009 12:00:00 AM)

C. Develop documents (Notice Of Intent (NOI), Storm Water Pollution Prevention Plans (SWP3's), inspection forms) required for obtaining state and/or federal construction storm water permits applicable to permittee owned and operated construction sites. (12/10/2009 12:00:00 AM)

Measurable Goals:

Year 1: Develop documents required for obtaining state and/or federal construction storm water permits applicable to permittee owned and operated construction sites.

Year 1: Review permittee owned construction project, planning, and design criteria to determine changes needed to comply with local, state, and/or federal construction storm water regulations.

Year 2: Prepare construction design and permitting guidelines to the local construction community and involved permittee personnel.

Year 3: Distribute construction design and permitting guidelines to the local construction community and involved permittee personnel.

Responsible Party:

City Manager.

5.0 Post-Construction Site Runoff

The Post-Construction Storm Water Management minimum measure consists of Best Management Practices (BMP's) that focus on the prevention or minimization of water quality impacts from new development and redevelopment projects that disturb greater than or equal to one acre, including projects less than one acre that are part of a larger common plan of development or sale that discharge into the small MS4. The BMPs describe structural and/or non-structural practices; the legal authority mechanism (to the extent allowable under State, Tribal or local law) which will be used to address post-construction runoff from new development and redevelopment projects; and procedures to ensure long term operation and maintenance of BMPs. BMPs focusing on education programs for developers and the general public with regard to project designs that minimize water quality impacts are described in the Public Education minimum measure. Evaluation of the success of this minimum measure will be through careful analysis of the measurable goals for each BMP included in this minimum measure. Measurable goals for each BMP were selected by formulating attainable goals for the various BMP implementation steps or tasks. The responsibility for implementation of this minimum measure is described with each BMP procedure.

Best Management Practices:

1. New Development and Re-development Plans Review: Systematically review development and re-development plans to ensure compliance with local post-construction runoff regulations

Implementation Tasks:

- A. Develop a process to obtain development construction plans for review to determine compliance with local post-construction runoff regulations. (10/10/2008 12:00:00 AM)
- B. Develop internal tracking and plan review procedures to ensure developer feedback and developer appeal. (12/10/2009 12:00:00 AM)
- C. Educate the local development community on the local development plans review process. (12/10/2009 12:00:00 AM)
- D. Implement the development plans review process. (12/10/2010 12:00:00 AM)

Measurable Goals:

Year 1: Was there a process created to obtain development construction plans?

Year 2: Were there procedures created for developer feedback and appeal?

Year 3: Was the local development community notified on the local development plans review process?

Year 4: Was the development plans review process implemented?

Responsible Party:

City Manager.

2. Development Project Inspection Procedures: Develop inspection forms and procedures for new development and re-development project inspections based on the local post-construction runoff regulations.

Implementation Tasks:

A. Develop draft inspection forms and procedures necessary to inspect local new and re-development projects in order to ensure compliance with local post-construction runoff regulations and approved plans. (10/10/2008 12:00:00 AM)

B. Provide the local development community with an opportunity to comment on the draft inspection forms and procedures. (12/10/2009 12:00:00 AM)

C. Provide appropriate notification to the local development community on the final inspection forms and procedures. (12/10/2009 12:00:00 AM)

Measurable Goals:

Year 1: Was there an inspection form created for the post-construction site runoff regulations?

Year 2: Produce the final version of the local development project inspection forms and procedures.

Responsible Party:

City Manager.

3. New Development and Re-development Project Inspection: Inspect local new development and re-development projects to ensure conformance to approved plans and local post-construction runoff regulations.

Implementation Tasks:

A. Develop internal tracking procedures for tracking development projects that are under construction and that have been completed. (10/10/2008 12:00:00 AM)

B. Inspect qualifying development project sites using adopted inspection forms and procedures to ensure conformance with local post-construction runoff regulations. (12/10/2009 12:00:00 AM)

C. Issue enforcement actions to owners or operators of local development projects that are not in compliance with local post-construction runoff regulations. (12/10/2009 12:00:00 AM)

Measurable Goals:

Year 1: Was there a list of local development projects that qualify for inspection under local post-construction runoff regulations?

Year 2: Was there actions enforced to owners or operators of local development projects that are not in compliance with local post-construction runoff regulations?

Year 2: Inspect qualifying development project sites using adopted inspection forms and procedures to ensure conformance with local post-construction runoff regulations?

Responsible Party:

City Manager.

6.0 Good Housekeeping / Pollution Prevention

The Pollution Prevention / Good Housekeeping minimum measure consists of Best Management Practices (BMP's) that focus on training and on the prevention or reduction of pollutant runoff from municipal operations. The BMPs describe the use of available training materials available from the EPA, your State, Tribe or other organizations; specific municipal operations that are impacted by the proposed operation and maintenance programs (BMPs); a list of municipally-owned industrial facilities which require other storm water discharge permits; maintenance activities, schedules and long term inspection procedures for controls to reduce floatables and other pollutants; controls for reducing or eliminating the discharge of pollutants from streets, roads, highways, municipal parking lots, maintenance and storage yards, waste transfer stations fleet or maintenance shops with outdoor storage areas, and salt/sand storage locations and snow disposal areas; procedures for the proper disposal of waste removed from the MS4 and municipal operations, including dredge spoil, accumulated sediments, floatables and other debris; and procedures to ensure that new flood management projects are assessed for impacts on water quality and existing projects are assessed for incorporation of additional water quality protection devices or practices. Evaluation of the success of this minimum measure will be through careful analysis of the measurable goals for each BMP included in this minimum measure. Measurable goals for each BMP were selected by formulating attainable goals for the various BMP implementation steps or tasks. The responsibility for implementation of this minimum measure is described with each BMP procedure.

Best Management Practices:

1. Street Sweeping: Sweeping of streets and roadways in order to reduce the amount of sediment and associated pollutants discharged to the MS4 from roadways.

Implementation Tasks:

A. Identify the type of roadways that can be swept to remove sediment and other pollutants from the gutters, i.e. roadways with curb and gutter design. (10/10/2008 12:00:00 AM)

B. Schedule and Implement Street sweeping of identified roadways. (12/10/2009 12:00:00 AM)

C. Determine average quantity of material removed per distance unit using curb or lane miles, and determine if adjustments in the street sweeping schedule could provide optimized pollutant removal. (12/10/2009 12:00:00 AM)

D. Adjust sweeping schedules according to program assessment on an annual basis. (10/10/2010 12:00:00 AM)

Measurable Goals:

Year 1: Were roadways identified that can be swept to remove sediment and other pollutants from the gutters?

Year 2: Was a schedule created for the for chosen roadways?

Year 2: Was average quantity of material determined that would be removed per distance unit using curb or lane miles?

Year 3: Implement street sweeping in accordance with the identified schedule?

Responsible Party:

City Manager.

2. Parking Lot Sweeping: Sweeping of permittee owned and operated parking areas in order to reduce the discharge of sediment, oil and grease, and litter.

Implementation Tasks:

A. Develop an inventory of permittee owned and operated parking areas including consideration of the following:- Area of parking lots in surface measure- Parking capacities- Type of vehicles that are parked at the lot (10/10/2008 12:00:00 AM)

B. Determine average quantity of materials removed per area unit at each location, e.g. cubic yards per area unit. (12/10/2009 12:00:00 AM)

C. Determine target average volumes per area based on the following factors.- Equipment design specifications- Data analysis- Budget constraints (12/10/2009 12:00:00 AM)

measurable Goals:

Year 1: Was an inventory of permittee created for operated parking areas?

Year 2: Was the average quantity of materials for each location determined?

Year 2: Was the target average created on the basis of equipment design, Data analysis, and budget constrains?

Responsible Party:

Mayor

3. Landscaping and Lawn Care: Reduce the discharge of landscaping and lawn care waste from permittee owned facilities through better mowing and landscaping maintenance practices.

Implementation Tasks:

A. Develop an inventory of landscaping and lawn care areas that are owned by the permittee. (10/10/2008 12:00:00 AM)

B. Use all herbicides, pesticides, and fertilizers in accordance with manufacturers' instructions for application rates and quantities. (12/10/2009 12:00:00 AM)

C. Evaluate methods for containing and/or composting trimmings and grass clippings. (12/10/2010 12:00:00 AM)

Measurable Goals:

Year 1: Was an inventory developed for all permittee owned landscaping and lawn care areas?

Year 2: Was the use of all herbicides, pesticides, and fertilizers used according to the manufactures instructions?

Year 3: Were methods taken for containing composting trimmings and other vegetation debris?

Responsible Party:

City Manager.