# STORM WATER MANAGEMENT PLAN

## SAN JUAN COUNTY AND THE CITY OF AZTEC

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# Executive Summary

The Storm Water Management Plan[1] (SWMP) outlines the City of Aztec (COA) and San Juan County (SJC) 5 year program to comply with the Environmental protection Agency's (EPA) Phase II Storm Water Final Rule (64 FR 6872, 8Dec99) to improve storm water quality in accordance with the Clean Water Act of 1972. This program will serve to develop, implement, and enforce a storm water management program designed to reduce the discharge of pollutants to the maximum feasible extent possible. The EPA has identified six minimum control measures which must be specifically addressed within this plan. The City of Aztec and San Juan County must show measurable goals and improvements in these six minimum control areas. A record of these results and improvements will be the responsibility of each department. These six minimum control areas are listed below and outlined in the Table of Contents. These six control measures involve several departments within the City of Aztec and San Juan County Government. By following these six control measures the City of Aztec and San Juan County will benefit from significant reductions in pollutants being discharged. The pollutants most common to storm drain discharges include fecal coli form, yard waste, restaurant grease, oil, suspended solids, and sediment.

## Storm Water Management Plan: Six Minimum Control Measures

1. Public Involvement and Participation
2. Public Education and Outreach
3. Illicit Discharge Detection and Elimination (IDDE)
4. Construction Site Storm Water Runoff Control
5. Post-Construction Storm Water Management in New Development and Redevelopment
6. Pollution Prevention and Good Housekeeping for Municipal Operators

### Legal Authority

The COA and SJC will implement an ordinance providing the city and county with authority to control the quality of separate storm water discharge to it's storm drain system; these includes runoff discharge onto public rights-of-way. The authority addresses industrial, commercial, and municipal discharges. The COA and SJC have both the fiscal authority and legal resources to fully implement this Storm Water Management Plan (SWMP).

### Permit Coverage

The storm water management plan encompasses the urbanized areas within the COA and SJC covering approximately 44 square miles. The COA has a population of approximately 6,378 and SJC has a population of approximately 99,000. There are numerous storm drain outfalls discharging into the waters of the United States.

### Reporting Requirements

The COA and SJC will report annually during the first permit cycle. The report will include the status of compliance with the permit conditions; an assessment of the appropriateness of the BMP's (best management practice) selected and progress towards achieving the measurable goals for each of the six minimum control measures. This report will also summarize activities undertaken by the City and County during the reporting cycle, any changes to the plan or its measurable goals and, all relevant data obtained during the reporting period. Additionally, any changes made to BMP's or the measurable goals will be addressed.

## Certification

"I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gathered and evaluated the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, information submitted is, to the best of my knowledge, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations. Further, no department shall charge another department for costs incurred as assigned by this plan."

_____

DAVID P. KECK
Administrator of Public Works
San Juan County

STEVE CHRISTENSEN
Public Works Director
City of Aztec

# Part 1 Public Involvement and Participation

The COA and SJC public participation control measure has a large public component. Support by residents is crucial to the success of the Storm Water Management Program. The measure will involve all socio-economic groups. The public participation program is a key component of the public education measure. Broader public support in the development and decision making process will minimize potential legal challenges and maximize acceptance and cooperation.

### 1.1 **Volunteer Educators/Speakers**

Volunteer educators and speakers are encouraged to provide their expertise in the areas of storm water maintenance and pollution prevention. The COA and SJC also have the resources available at San Juan College in the fields of water and wildlife conservation, engineering and hydrology to help support our storm water infrastructure.

### 1.2 **Public Meetings/Community Outreach**

Public meetings will provide an opportunity to discuss various topics and provide input concerning appropriate storm water management policies and BMPs. Community cleanup events and activities will be City and County sponsored. A telephone hotline will be set up to aid enforcement authorities in the identification of polluters. Our program seeks to contact groups such as the City of Aztec Chamber of Commerce, Rotary Clubs, River Walk Groups, Rafting Groups, and the Boy and Girl Scouts.

### 1.3 **Recycling**

Recycling programs will be instituted to recycle yard waste, newspapers, cardboard, plastic, oil, and antifreeze. A recycling program that targets these materials will discourage improper disposal and should further reduce pollution of the river and our waterways.

### 1.4 **Intern Programs**

Intern programs for Co-op students to work for the COA and SJC will be available. Programs such as this will give citizens first hand knowledge of their local pollution prevention programs.

### 1.5 **Measurable Goals**

Program year 1: Public Participation and Involvement
Program year 1: Public Notice of upcoming meetings and event schedules
Program year 2: Stencil drain program and mark outfalls implemented
Program year 3: Storm drain hotline in place
Program year 3: Establish acceptance program for handling, storage, and disposal of lead-acid batteries at recycling center. Document the amount of materials recycled
Program year 4: Public education through guest speakers
Program year 4: Establish volunteer groups (example: groups or adopt a Storm Drain)
Program year 4: Enhance existing Co-op programs

# Part 2 Public Education and Outreach

## 2.1 **Target Audiences**

The COA and SJC will use a variety of methods to reach a diverse audience. The City and County will utilize mass media campaigns and use a mix of resources to promote pollution awareness relevant to the SWMP. Our industrial outreach program will build up on existing programs such as IPP, HHW and, recycling to target businesses and industries which significantly impact storm drains (restaurants and garages) through grease and oil releases.

## 2.2 **Education Materials and Strategies**

The public education effort will inform residents about the COA and SJC recycling programs, including proper disposal of used motor oil, chemicals, solvents and other hazardous household products. Citizen Watch groups will be encouraged to identify areas regarding storm water pollution. A storm water hotline will be established to aid these groups in reporting illicit discharge and potential spills. Our local strategies will involve using various public service announcements, including multilingual posters, brochures and flyers to help promote awareness in storm water pollution management. The COA and SJC will work with schools in the area to identify and develop information about storm water quality and related topics that can be developed to school children to instill storm water management at an early age. Volunteer educators from the community and San Juan College will be encouraged to conduct workshops during the semi-annual forum. As an example, presentations could teach students about the water cycle, our watershed, the benefits of composting, and other topics related to storm water runoff.

## 2.3 **Measurable Goals**

Program year 1: Document all activities related to Public Education and Outreach
Program year 1: Establish calendar for meetings
Program year 2: Codes enforcement will establish a storm water hotline
Program year 2: Create PSA ads and brochures
Program year 2: Assess previously identified water quality problems that can be partially addressed through education.
Program year 3: Participate in community events and disseminate information
Program year 4: Provide information for class curriculums for public schools
Program year 5: Provide proper pesticide application video developed by the City and County to local applicators

# Part 3 Illicit Discharge Detection and Elimination

## 3.1 **Visual Inspection/Screening**

The illicit discharge detection measure will involve both City and County staff as well as local citizens. The COA and SJC will locate illicit discharge problem areas through visual inspections, public complaints, and visual screening and dry weather screening methods. The program will work to detect and eliminate illicit discharges. The COA and SJC will begin to catalog data pertinent to the NPDES program. The data will be available to interested parties. Visual inspection of storm drains will be integral in identifying those areas of the City and County that have frequent occurrences of illicit discharges.

## 3.2 **GIS Mapping**

A Geographic Information System (GIS) will be utilized by the COA and SJC to map the location of all storm sewer lines, outfalls, ponds, and other waters that receive storm water discharges. This information is made available through the City-and County network and Arcview GIS software. The COA and SJC maintains an accurate map of the storm drain system. Utilizing the Global Positioning System (GPS) survey equipment, all outfalls which discharge into a recognized water body will be accurately mapped. Thus, an accurate map of the various aspects of the storm water system (catch basins, pipes, culverts, and other storm water structures) can also be depicted.

## 3.3 **Correct Illicit Connections**

A “right of entry” ordinance will be enacted to allow City and County employees access on private property for inspection in locating potential sources of illicit industrial discharges. The enforcement actions that will be taken against those properties found to be in noncompliance, or that refuse to allow access to their facilities, are varied. They range from cease-and-desist orders, suspension of water or sewer service, criminal and civil penalties including, charging the owner of the property for the cost of abatement. Enforcement will begin with the inspection of select commercial business and light industrial businesses for illicit discharges and compliance to the City and County ordinances. They will begin inspections with businesses which have the highest potential to impair water quality such as, restaurants, gas stations cleaners, etc.

## 3.4 **Documentation**

The COA and SJC will begin to catalog data pertinent to the NPDES program. The data will be available to interested parties. The Storm Water Program Manager will request that private industrial facilities and wastewater treatment systems in the area submit their sampling and monitoring results. This data may be includes in the GIS for reference. If future sampling in receiving water bodies shows elevated levels of a particular pollutant then the City and County can use the GIS resource to focus its investigation on possible sources of illicit discharge.

### 3.5 **Measurable Goals**

Program year 1: Document all activities related to IDDE
Program year 1: Locate illicit connections
Program year 1: Document the number of citizen complaints
Program year 2: Commercial/industrial inspections
Program year 2: “Right of entry” ordinance enforced
Program year 2: Inspector training
Program year 4: Maintain current storm drain system/outfall inspections
Program year 4: Promote recycling for household hazardous waste
Program year 4: Outfall mapping updated
Program year 5: Document any dry weather flows found

# Part 4 Construction Site Storm Water Runoff Control

### 4.1 **Site Plan Review**

The COA and SJC recognizes that construction sites can deposit a significant amount of sediments in a short period of time. The Phase II Rule requires the City and County to develop and enforce a storm water management program. The City and County will adopt an ordinance focusing on erosion and sediment control of construction pollutants in its storm water runoff. The ordinance will require that land disturbance of one or more acres submit an Erosion Control Plan. It requires developers to submit a plan that contains measures to reduce soil erosion and contain sediments that have already eroded. The City and County currently requires the approval of submitted construction plans prior to ground being broken and will now require erosion control measures for all construction, including residential. If construction commences prior to the approval of the site plans, heavy fines may be levied

### 4.2 **Inspections/Violations**

The COA and SJC dedicate staff for plan review and inspection. Once a plan is reviewed and approved by the city, the staff’s job would be to ensure that the Erosion Control Plan is followed. A checklist will be completed periodically for every construction permit. An ordinance will require the developer to install and maintain those specified measures and practices agreed to in the plan. Sites may be inspected for compliance and if found lacking in any required area, an inspector may issue a permit violation stop work order, fine, or other measure to ensure compliance.

### 4.3 **Erosion Awareness**

Area-wide measures will be instituted to reduce impervious cover. The COA and SJC will adopt smart growth initiatives to promote open space and native landscaping. The City and County will not pay for infrastructure development in native areas.

### 4.4 **Measurable Goals**

Program year 1: Document all activities related to Construction Site Runoff
Program year 1: Construction site ordinance in place
Program year 1: Procedures for information submitted by the public in place
Program year 2: Training for City and County staff (inspectors and plan reviewers) and construction operators.
Program year 2: Area wide measures instituted to reduce impervious cover
Program year 2: Permit fees established to fund plan review and inspections
Program year 3: Document the number of inadequate construction sites reported by inspectors
Program year 3: List the number of stop work orders given
Program year 4: Document the number of enforcement actions taken
Program year 5: Document the number of BMP information brochures given to construction operators, and the number of operators attending training sessions.
Program year 5: Document the amount of naturally vegetated land area that is preserved
Program year 5: Improved clarity and reduced sedimentation levels in local water Bodies

# Part 5 Post-Construction Storm Water Management in New Development and Redevelopment

### 5.1 **Post-Construction Runoff Control**

The COA and SJC proposes to address the Post-Construction Runoff Measure with structural and non-structural BMPs. The controls seek to reduce the amount of impervious cover, by increasing natural land set-asides for conservation and to use pervious areas for more effective storm water management. The COA and SJC will look at ways to reduce the amount of runoff in new subdivisions. One such way may be to re-evaluation the drainage standards to encourage regional ponds and parks. This will provide additional pervious area and native flora and fauna. The net increase of scenic features will positively impact the neighborhood's aesthetic and increase residential property values.

### 5.2 **Non-Structural BMPs**

Open space will be managed by the COA and SJC. Some may be privately maintained or managed by the Public Works Department, as defined by the drainage standards. A legal entity will be established to be responsible for both the natural and recreational open space. Stream buffer guidance will be encouraged by the Public Works Department staff such that all riparian stream areas are restored with native vegetation. The zone will be 100'-150' wide on both sides of the bank. The buffer includes the 100-year flood plain delineation and is governed by the Flood Plain Manager for COA and SJC.

### 5.3 **Structural BMPs**

Structural BMPs include the use of dry-ponds which will principally be used in the urban environment. This technology has the benefit of being retrofitted in the developed portions of the City and County.

### 5.4 **Measurable Goals**

Program year 1: Document all activities related to Post-Construction Runoff Control
Program year 1: Strategies developed that include both structural and non-structural BMPs
Program year 1: Stream buffer zone documents created
Program year 2: Ordinance or other regulatory mechanism in place for alternative pavers.
Program year 2: Storm water quality grants pursued
Program year 3: Urban water quality project developed/implemented
Program year 3: Porous pavement investigations
Program year 3: Document the reduction of impervious surfaces associated with new and redevelopment projects
Program year 3: Evaluation of the effectiveness of ponding systems
Program year 4: Document the number of stream miles modified and vegetated
Program year 4: Document the amount of acreage preserved as buffers
Program year 5: Document changes in water quality as a result of runoff leaving buffer Zones

# Part 6 Pollution Prevention and Good Housekeeping for Municipal Operators

### 6.1 **Municipal Maintenance**

The COA and SJC Pollution Prevention/Good Housekeeping Measure for municipal operations program goal is to reduce pollutant runoff from City and County operations. The vehicle maintenance program requires that all City-and County owned vehicles be regularly inspected to eliminate the amount of oil, grease, and fluid leaks. Street sweeping will be performed on all city streets at a frequency based on the most traveled streets and busy intersections being cleaned more often then lesser traveled ones. Outfalls will be regularly inspected and follow a standardized checklist. Trouble outfalls will be inspected and maintained after every storm event. The COA and SJC will continue to use vacuum-equipped street cleaners for all streets cleaning.

## 6.2 **Pesticide Management/Community Awareness**

An integrated Pest Management brochure for City and County residents to find alternatives for traditional chemical pesticides will be offered. San Juan County Vector Control and the New Mexico State University's Extension services will be consulted to address urban pest management. A community education program will teach residents xeriscaping, non-chemical pest control, and removal of pest by non chemical means. Lawn pesticide (and household) application brochures will be available to City employees, County employees and County residents through the existing Pesticide Awareness Program.

## 6.3 **Measurable Goals**

Program year 1: Document all activities related to Pollution Prevention/Good Housekeeping
Program year 1: Identify potentially hazardous materials, their characteristics and use
Program year 1: Street sweeping and outfall cleaning initiated
Program year 2: Records kept identifying quantity, receipt date, service life, users and disposal routes for containerized material storage
Program year 2: Storm drains with high pollutant loadings will be inspected and cleaned when necessary after every storm event.
Program year 3: City and County Pesticide Program enhanced with an emphasis on storm water quality
Program year 3: The assigning/hiring of additional staff to monitor municipal operations
Program year 3: Document the number of IPM brochures distributed to citizens
Program year 4: All municipal pesticide/herbicide applicators will be certified
Program year 4: List the number of outfalls cleaned and the amount of trash removed
Program year 5: Document the number of miles of street cleaned and the amount of trash removed from streets.
Program year 5: Document the reduction in pesticides and herbicides

## Acronyms[2]

BMP Best Management Practice
CFR Code of Federal Regulations
CGP Construction General Permit
COA City of Aztec
DMR Discharge Monitoring Report
EPA U.S. Environmental Protection Agency
GIS Geographic Information System
HHW Household Hazardous Waste
IPP Industrial Preparedness Program
MS4 Municipal Separate Storm Sewer System
MSGP Multi-Sector General Permit
NEC No Exposure Certification
NMDOT New Mexico Department of Transportation
NMED New Mexico Environment Department
NMSU New Mexico State University
NOAA National Oceanic and Atmospheric Administration
NOI Notice of Intent
NOT Notice of Termination
NPDES National Pollutant Discharge Elimination System
NRC National Response Center
NRCS Natural Resources Conservation Service
OSHA Occupational Safety and Health Administration
RQ Reportable Quality
SJC San Juan County
SCP Sediment Control Plan
SIC Standard Industrial Classification
SWPPP Storm Water Pollution Prevention Plan
T&E Threatened and Endangered Species
TESCP Temporary Erosion and Sediment Control Plan (equivalent to SCP)
TMDL Total Maximum Daily Load
USGS U.S. Geological Survey

[2] Acronyms page is meant for reference only. Not all acronyms listed here are found in this document.

# Notice of Intent (NOI)
## NPDES Phase II General Permit
## For Storm Water Discharges from an MS4
## Municipal Storm Sewer System

**Permittee**

City of Aztec
303 South Ash
Aztec, NM 87410
(505) 334-7660 (Public Works-Engineering Services)

**Entity**

Municipality

**Urbanized Area**

Located within the City of Aztec, NM Urbanized area as defined
In www.epa.gov web site. It is located entirely within the boundaries of
San Juan County, NM. (See attached map)

**Receiving Waters**

Animas River and San Juan River

**Status**

Not located on any Indian Country Lands

**Entities Covered by this Permit**

This permit covers The City of Aztec and San Juan County, no other entities will be responsible for implementing any portion of this plan.

**BMPs and Measurable Goals**

Please refer to the attached Storm Water Management Plan.

**Impact Certification**

The City of Aztec has no known discharges which affect any threatened or endangered species, critical habitats, historic properties, or marine fisheries.

**Certification**

I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gathered and evaluated the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, information submitted is, to the best of my knowledge, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

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**STEVE CHRISTENSEN**
**Director of Public Works, City of Aztec**

# Notice of Intent (NOI)
## NPDES Phase II General Permit
## For Storm Water Discharges from an MS4
## Municipal Storm Sewer System

**Permittee**

San Juan County
305 South Oliver Drive
Aztec, NM 87410
(505) 334-4500 (Public Works Department)

**Entity**

County

**Urbanized Area**

Located within San Juan County, NM Urbanized area as defined
In www.epa.gov web site. It is located entirely within the boundaries of
San Juan County, NM. (See attached map)

**Receiving Waters**

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**DAVID KECK**
**Public Works Administrator, San Juan County**

# Glossary

**Best Management Practices (BMPs):** Management measures or practices used to protect air, soil, or water quality or reduce the potential for pollution associated with storm water runoff. BMPs may be a structural device or non-structural practice, including processes, land use alternatives, activities, or physical structures.

**Multi-Sector General Permit (MSGP**): An umbrella permit given to a state under which certain Standard Industrial Classification (SIC) industries may be granted a permit to discharge storm water by notifying EPA of their intent to do so, in compliance with the regulatory provisions of the General Permit.

**Municipal Separate Storm Sewer System (MS4):** A conveyance or system of conveyances (including roads with drainage systems and municipal streets) that is "owned or operated by a state, city, town, borough, county, parish, district, association, or other public body which is designed or used for collecting or conveying storm water.

**National Pollutant Discharge Elimination System (NPDES**): The national program for administering and regulating sections 307, 318, 402, and 405 of the Clean Water Act. A storm water permit issued under NPDES is authorized by the EPA to discharge storm water under certain specified conditions. The NPDES General permit provides those specified conditions for construction.

**Non-Exposure Certification (NEC):** A permit exemption for certain outfalls or pollutant constituents, granted to facilities that can demonstrate no discharge or absence of particular constituents through monitoring.

**Notice of Intent (NOI)**: A formal notice to the EPA that, under the NPDES General Permit, a storm water discharge will take place. The NOI provides information on the permittee, location of discharge, and the type of discharge. It also certifies that the permittee will comply with certain specified conditions as outlined in the General Permit.

**Notice of Termination (NOT**): A formal notice to the EPA that a specific site permitted under the NPDES Program is no longer discharging storm water.

**Storm Water Pollution Prevention Plan (SWPPP)**: A plan consisting of site maps, construction/contractor activities that could cause pollutants in the storm water, and a description of measures or practices to control those pollutants.

**Sediment Control Plan**: The formal compilation of required erosion and sediment sediment-control activities prepared for a specific site and project.

**Temporary Erosion and Sediment Control Plan (TESCP)**: Equivalent to SCP (i.e., the formal compilation of required erosion and sediment-control activities prepared for a specific site and project.

# References

**United States Environmental Protection Agency (NPDES)**
http://cfpub.epa.gov/npdes/
**New Mexico Department of Game and Fish**
http://www.wildlife.state.nm.us/index.html