

*Prepared for:*

City of Aztec  
201 West Chaco  
Aztec, New Mexico 87410

*and*

San Juan County  
305 South Oliver Drive  
Aztec, New Mexico 87410

NPDES Phase II Small MS4  
Annual Report 2018-2019

*for*

San Juan County  
and City of Aztec  
San Juan County, New Mexico  
January 20, 2020

*Prepared by:*

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# NPDES Phase II Small MS4 Annual Report 2018-2019

San Juan County and City of Aztec  
San Juan County, New Mexico

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## 1.0 General Information

Animas Environmental Services, LLC has completed this National Pollutant Discharge Elimination System (NPDES) Phase II Municipal Separate Storm Sewer System (MS4) General Permit Annual Report on behalf of the San Juan County and City of Aztec, located in northwest New Mexico.

<b>Municipality/Organization:</b>	San Juan County and City of Aztec
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<b>EPA NPDES Permit Number:</b>	NMR040000
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<b>Reporting Period:</b>	July 1, 2018 – June 30, 2019
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## *1.1 Executive Summary*

The Storm Water Management Plan outlines the City of Aztec (COA) and San Juan County (SJC) five-year program to comply with the U.S. Environmental Protection Agency (USEPA) Phase II Storm Water Final Rule (64 CFR 6872, 8 Dec 1999) to improve storm water quality in accordance with the Clean Water Act of 1972. This program also serves to develop, implement, and enforce a storm water management program designed to reduce the discharge of pollutants to the maximum feasible extent possible. The USEPA has identified six minimum control measures which must be specifically addressed within this plan. COA and SJC must show measurable goals and improvements in these six control areas, which are listed below and outlined in the report. Implementing these six control measures involves several departments within San Juan County and City of Aztec government. There are numerous outfalls located in the City and County which discharge into the Animas and San Juan Rivers, which are jurisdictional Waters of the United States. By following these six control measures, COA and SJC benefit from reductions in pollutants being discharged to these Waters. A record of these results and improvements will be the responsibility of each department.

Over the reporting period, July 1, 2018 through June 30, 2019, San Juan County and City of Aztec have been working with City of Farmington and New Mexico Department of Transportation (NMDOT) to develop and implement a Memorandum of Agreement (MOA) and associated cost sharing agreement as part of facilitating compliance with MS4 NPDES General Permit NMR040000.

## *1.2 Storm Water Management Plan: Six Minimum Control Measures*

1. Public Education and Outreach
2. Public Involvement and Participation
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 House Keeping for Municipal Operators

## *1.3 Permit Coverage Area*

The Storm Water Management Plan (SWMP) encompasses the urbanized areas within COA and SJC and covers approximately 44 square miles. The COA has a population of approximately 6,442, and SJC has a population of approximately 125,043 (U.S. Census Bureau 2019).

## 1.4 Reporting Requirements

The MS4 Annual Report includes the status of compliance with the permit conditions, an assessment of the appropriateness of the Best Management Practices (BMPs) selected, and progress towards achieving the measurable goals for each of the six minimum control measures. The report also summarizes activities undertaken by COA and SJC 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 BMPs or the measurable goals will be addressed.

## 1.5 Certifications

Contact Person: Nick Porell, San Juan County Public Works Director

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Telephone #: (505) 334-4520                      Email: nporell@sjcounty.net

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Mailing Address: 305 South Oliver Drive, Aztec, New Mexico 87410

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*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 gather and evaluate 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, the information submitted is, to the best of my knowledge and belief, 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.*

Signature (San Juan County):

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Printed Name: Nick Porell

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Title: Director of Public Works

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Date:

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Contact Person: Steve Mueller, Aztec City Manager

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Telephone #: (505) 334-7600

Email: SMueller@aztecnm.gov

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Mailing Address: 201 West Chaco, Aztec, New Mexico 87410

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*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 gather and evaluate 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, the information submitted is, to the best of my knowledge and belief, 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.*

Signature (City of Aztec):



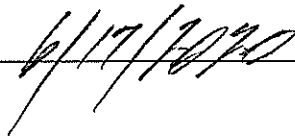
Printed Name: Steve Mueller

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Title: City Manager

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Date:





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## 2.0 Self-Assessment

COA and SJC have a SWMP in place which is used as a guide to improve storm water quality and implement compliance with the EPA Phase II Final Rule and the Clean Water Act of 1972.

The COA and SJC SWMP emphasizes Public Education and Outreach, and Public Involvement and Participation as control measures in storm water management. Public education and involvement are effective tools that reach across many socio- and economic boundaries, and the effect on public behavior can last indefinitely. The City and County stress these control measures in an effort to increase awareness and prevention, thereby reducing the number of storm water pollution incidents which may occur. Throughout the year, COA and SJC sponsor clean-up efforts and recycling programs, which receive high participation rates by the public and interest groups.

COA and SJC have a Storm Water Hotline (505-334-4560) to report spills, illicit discharges, and general comments or complaints from the public regarding storm water runoff. The Storm Water Hotline has been a useful resource, although the City and County would like to see more participation and reporting by the public.

Both COA and SJC require the approval of submitted construction plans and land use plans that comply with USEPA regulations for all construction projects at least one acre in size. One Notice of Intent (NOI) for Aztec construction storm water permits was filed with COA as owner/operator for construction sites during this permit period:

- Reservoir #1 Rehabilitation Project.

One NOI was filed with SJC as the owner/operator for construction sites during this permit period:

- Kirtland Schools Walk Path.

COA and SJC provide a good example regarding storm water management with regular inspections and maintenance of their vehicles, street sweeping, working with the Adult Detention Center in efforts to help clean up roadways and outfalls, and continuation of a sound Pesticide Management Plan, among other measures.

The City and County also provide a number of resources available for the public, such as access to the GeoHub interactive mapping website, the Storm Water Hotline, listings of solid waste dumping locations, recycling centers, and hosting hazardous waste collection days.

A “Clean Up San Juan” mobile app was launched in June 2018 to report illegal dumping. Between July 1, 2018 and June 30, 2019, SJC had 378 reports. A total of 155 sites have been cleaned up. SJC had 14 reports of illegal dumping to the Sheriff’s Office and COA had no reports.

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## 3.0 Summary of Minimum Control Measures

### 3.1 Public Education and Outreach

#### 3.1.1 Target Audiences

COA and SJC use a variety of methods to reach a diverse audience, such as utilizing mass media campaigns and a mix of resources to promote pollution awareness relevant to the SWMP. The industrial outreach program builds upon existing programs such as setting up a booth at the COA National Night Out, mailing out educational brochures, and recycling to target businesses and industries which significantly impact storm drains and/or conveyances.

#### 3.1.2 Education Materials and Strategies

The public education effort informs residents about COA and SJC recycling programs, including proper disposal of used motor oil, chemicals, solvents, and other hazardous household products. Citizen watch groups are encouraged to identify areas regarding storm water pollution. A Storm Water Hotline has been established to aid the community in reporting illicit discharge and potential spills, and a Clean Up San Juan mobile app has been launched to aid in reporting illegal dumping. COA maintains storm water webpages at <http://www.aztecnm.gov/stormwater/bmps.html>, <http://www.aztecnm.gov/stormwater/tips.html>, and [http://www.aztecnm.gov/stormwater/illicit\\_discharges.html](http://www.aztecnm.gov/stormwater/illicit_discharges.html). These strategies involve using various public service announcements, including multilingual posters, brochures, and flyers to help promote awareness in storm water pollution management.

#### 3.1.3 Pesticide Management/Community Awareness

An integrated Pest Management brochure for City and County residents to find alternatives for traditional pesticides has been offered. San Juan County Vector Control and New Mexico State University’s (NMSU’s) Extension services have been consulted to address urban pest management. A community education program teaches residents xeriscaping, non-chemical pest control, and removal of pests by non-chemical means. Lawn (and household) pesticide application brochures are available to City and County employees and residents through the existing Pesticide Awareness Program. Public notice is provided of the time and locations of pesticide application.

Table 1. Public Education and Outreach

<b>BMP ID #</b>	<b>BMP Description</b>	<b>Responsible Dept./ Person Name</b>	<b>Measurable Goals</b>	<b>Progress on Goal(s) – Permit Year 2018-2019</b>	<b>Planned Activities – Permit Year 2019-2020</b>
1.1	Public notice of upcoming meetings and event schedules	County Public Works	Submit notices to area newspapers and post on county website (sjcounty.net).	Public has been notified via newspaper articles, fliers, webpages, etc. of upcoming meetings and events.	Continue notifying public through various means of upcoming meetings and events.
1.2	Stencil drain program and mark outfalls	Public Works	Design and post Storm Drain Markers.	Storm Drain Marker conditions were monitored.	Storm drain markers will be replaced as needed Spring 2020 as weather improves.
1.3	Employee Guide on Storm Water	Public Works	Train all new City and County employees on preventing storm water pollution.	Any new employees were trained in 2018-2019 permit period for SJC and COA (Employee Training Guide).	Continue training new employees. Update the Guide as needed and improve tracking.
1.4	Storm Water Management Training of COA and SJC personnel	Public Works	Attend training programs and classes attend local interest group meetings.	COA departments received annual stormwater training.	Send COA/SJC representative to appropriate conferences, training classes, and group meetings. Attend upcoming USEPA MS4 workshops.
1.5	Education through displays at public events such as SJC Fair	Public Works	Set up booth with educational brochures and pamphlets. Submit social media posts.	Booth set up at COA National Night Out event in July 2018. Handed out brochures and pamphlets at COA City Hall, Animal Shelter, and Minium Park. See Appendix.	Submit social media posts regarding stormwater education.

<b>BMP ID #</b>	<b>BMP Description</b>	<b>Responsible Dept./ Person Name</b>	<b>Measurable Goals</b>	<b>Progress on Goal(s) – Permit Year 2018-2019</b>	<b>Planned Activities – Permit Year 2019-2020</b>
1.6	Floodplain Management Education	Public Works	Hand out Floodplain Management Brochure to City and County residents. Education of personnel.	COA Flood zones mapped. San Juan County Floodplain map available at <a href="http://data-sjcounty.opendata.arcgis.com">http://data-sjcounty.opendata.arcgis.com</a> . Brochures made available at county offices and sent annually with electric utility bills. See Appendix.	Continue educating public on flood management and safety.
1.7	Hazardous Products Education	Public Works	Hand out Safer Alternatives to Hazardous Products Brochure at County Fair.	Extras saved and handed out at other educational outreach programs. See Appendix.	Continue educating public on haz. products and disposal methods.
1.8	Storm Water Newspaper Articles and/or Web Page Announcements	Public Works	Announcements notifying public of COA and SJC Storm Water Program, Storm Water Hotline, Hazardous Waste Disposal locations and dates, etc.	COA storm water websites ( <a href="http://www.aztecnm.gov/bmps.html">http://www.aztecnm.gov/bmps.html</a> , <a href="http://www.aztecnm.gov/stormwater/tips.html">http://www.aztecnm.gov/stormwater/tips.html</a> , <a href="http://www.aztecnm.gov/stormwater/illicit_discharges.html">http://www.aztecnm.gov/stormwater/illicit_discharges.html</a> ) updated.	Submit newspaper articles as needed. Update storm water pages for SJC and for COA.
1.9	Storm Water Flow Chart	Public Works	Education through the use of a SWMP Flow Chart.	Evaluate if a SWMP Flow Chart would be useful and what it all would entail <i>(temporarily on hold while pursuing MS4 collaborative group for next MS4 permit)</i> .	Design SWMP Flow Chart if deemed useful for new employees and COA/SJC residents, once collaborative group confirmed.
1.10	Pesticide Management Plan	Public Works	Inform/educate residents of pesticide management and offer alternative methods to controlling pests/weeds.	Brochures and pamphlets are made available to public through the SJC Pesticide Awareness Program. Notice is provided of mosquito spraying times and locations.	Continue educating the public through the Pesticide Awareness Program.

## **3.2 Public Involvement and Participation**

The COA and SJC public participation control measure has a large public component and involves all socio-economic groups. Support by residents is crucial to the success of the SWMP. Broader public support in the development and decision-making process minimizes potential legal challenges and maximizes acceptance and cooperation.

### **3.2.1 Volunteer Educators/Speakers**

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

### **3.2.2 Public Meetings/Community Outreach**

Public meetings present an opportunity to discuss various topics and provide input concerning appropriate storm water management policies and BMPs. Community clean-up events and activities are City and County sponsored. A telephone hotline has been set up to aid enforcement authorities in the identification of polluters. The program seeks to contact groups such as the City of Aztec Chamber of Commerce, Rotary Clubs, River Walk groups, rafting groups, Glade Recreation Area users, and the Boy and Girl Scouts.

### **3.2.3 Recycling**

Recycling programs have been instituted to recycle yard waste, newspapers, cardboard, plastic, oils, and antifreeze. A recycling program that targets these materials encourages proper disposal and should further reduce pollution of the river and waterways. COA opened a single stream Recycle Center in July 2017, open six days per week. San Juan County offers single stream recycling at all 12 of its solid waste convenience stations. Allowable materials are presented on the County's web page (<https://www.sjcounty.net/90-uncategorized/483-recyclable-materials-list>). Recycling locations and hours are listed at <https://www.sjcounty.net/departments/hthruz/public-works/solid-waste>.

A swapping center could be used for residents to drop off unused items, such as paint or scrap metal parts, which other residents may be able to use. The feasibility of a swapping center may be re-evaluated in the near future. These efforts will help reduce the amount of usable materials that end up in landfills, as well as provide an affordable alternative disposal method for residents.

Table 2. Public Involvement and Participation

<b>BMP ID #</b>	<b>BMP Description</b>	<b>Responsible Dept./ Person Name</b>	<b>Measurable Goals</b>	<b>Progress on Goal(s) – Permit Year 2018-2019</b>	<b>Planned Activities – Permit Year 2019-2020</b>
2.1	Hazardous Waste Collection	Public Works	Set dates and locations for hazardous waste collection.	Hazardous Waste Collection days: Held one day each in spring and fall. Hazardous waste pamphlets provided.	Schedule Hazardous Waste Collection days for fall 2019 and spring 2020.
2.2	Storm Water Hotline	Public Works	Establish Storm Water Hotline to report spills and illicit discharges.	Storm Water Hotline at (505) 334-4560 successfully operating.	Keep Storm Water Hotline available to public. Increase advertisement of hotline and encourage reporting.
2.3	Reporting Illegal Dumping	Public Works	Establish hotline to report illegal dumping activities.	Hotline to report illegal dumping activities in the County or City Municipalities at (505) 334-6622 successfully operating.	Increase public awareness of City and County Ordinances regarding illegal dumping. Encourage reporting illegal dumping activities.
2.4	Community Clean-Up Days and Free Dump Day	Public Works	Community clean-up days for curbside pickup, freon removal, tree branch/limb recycling, and dump convenience center. Services are free to county residents.	Free Dump Days held Oct. 2018 and April 2019. Regular open dumpster is available to public at COA Recycle Center.	Schedule clean-up days for spring 2020.

<i><b>BMP ID #</b></i>	<i><b>BMP Description</b></i>	<i><b>Responsible Dept./ Person Name</b></i>	<i><b>Measurable Goals</b></i>	<i><b>Progress on Goal(s) – Permit Year 2018-2019</b></i>	<i><b>Planned Activities – Permit Year 2019-2020</b></i>
2.5	County Adult Detention Facility and other roadside and yard waste cleanup programs	Public Works	Inmates of the Adult Detention Facility assist in roadside and yard cleanup of trash and debris.	<b>156 tons</b> of trash removed, totaling <b>6,960</b> man-hours utilized.	Continue working with the County Adult Detention Facility and encouraging volunteer hours from the inmates.
2.6	National Public Lands Day	Public Works and U.S. Department of the Interior	Clean up illegally dumped trash in the BLM Glade Run Recreation Area.	Not held in 2018; however, <b>35 tons</b> of trash were picked up on other days.	Continue to host National Public Lands Day and encourage additional volunteers.
2.7	Animal Waste Collection	COA Parks Department	Provide dog waste bag stations.	Dog waste bag stations are located in all Aztec city parks.	Stock stations as needed.

### **3.3 *Illicit Discharge and Detection Elimination***

#### **3.3.1 Visual Inspection/Screening**

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

#### **3.3.2 Geographic Information System (GIS) Mapping**

GIS is utilized by COA and SJC to map the location of all storm sewer drain lines, ponds, and other waters that receive storm water discharges. This information is made available through the City and County network and ArcGIS software. All outfalls which discharge into a recognized water body are accurately mapped using Global Positioning Systems (GPS) survey equipment. 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. This enables the City and County to accurately locate sources of illicit discharges and the affected downstream waterways. SJC also hosts a GeoPortal page (<https://webmaps.sjcounty.net/portal/home/>), which presents interactive web maps displaying educational tools such as land use plans, waterways, floodplains, and SJC road statuses.

As SJC and COA work on collaborative plans for integrated and cooperative sampling as the next small MS4 Permit is finalized, there are tentative plans to include analytical sampling for caffeine in select samples to help identify areas where there may be illicit discharge issues (and it help distinguish between human and animal impacts). Additionally, sampling results may also be incorporated into the GIS database maintained by the San Juan Watershed Group (<http://www.sanjuanswcd.com>).

#### **3.3.3 Correct Illicit Discharges**

If illicit discharges are discovered, reported, or suspected, the City and County address each discharge on a case by case basis, where an educational method to approaching illicit dischargers is first used to help prevent future non-compliance by that person or persons. The City and County will submit a written letter, call, or personally talk to the individuals, with an emphasis on educating them about their actions' impacts to waterways, wildlife, and property value. In the event of re-occurring or illicit discharges with notable consequences, proper authorities are notified, and legal action is taken in accordance with applicable ordinances.



#### **3.3.4 Documentation**

Because COA and SJC are currently working with other collaborative members in the urbanized area in shifting the sampling focus from an outfall-based program to a watershed-based program, no sampling data was collected during the permit period with regards to potential illicit discharges.

Table 3. Illicit Discharge Detection and Elimination

<b>BMP ID #</b>	<b>BMP Description</b>	<b>Responsible Dept./Person Name</b>	<b>Measurable Goals</b>	<b>Progress on Goal(s) – Permit Year 2018-2019</b>	<b>Planned Activities – Permit Year 2019-2020</b>
3.1	Storm Water Hotline	Public Works	Increase participation of Storm Water Hotline.	Storm Water Hotline established and advertised in local papers, pamphlets, fairs, and educational outreach programs.	Continue advertising hotline. Encourage reporting of illicit dumping and spills.
3.2	Visual inspections and monitoring	Public Works	Locate and report illicit discharges, illegal dumping, and spills.	Clean Up San Juan mobile app reported 378 illegal dumping incidents and 155 have since been cleaned. SJC Sheriff's Office had 14 reported incidents. COA had 0 incidents.	Continue tracking and educating offenders. Continue promoting the use of the Storm Water Hotline for reporting illegal dumping and discharges. Monitor for illicit discharges during pond cleanup.
3.3	Storm drains, outfalls, and problematic areas monitoring	Public Works, AES	Visual inspection of storm drains and potential problematic areas.	COA visually inspects and monitors on a yearly basis. SJC visually inspects and monitors on a quarterly basis.	COA will inspect and monitor annually or as needed. SJC will inspect and monitor every quarter.
3.4	City Ordinance on discharges and illegal dumping	Public Works	Update County or City Ordinances on prohibition of illicit discharges.	No ordinances currently under consideration.	No ordinances currently under consideration.

<b><i>BMP ID #</i></b>	<b><i>BMP Description</i></b>	<b><i>Responsible Dept./Person Name</i></b>	<b><i>Measurable Goals</i></b>	<b><i>Progress on Goal(s) – Permit Year 2018-2019</i></b>	<b><i>Planned Activities – Permit Year 2019-2020</i></b>
3.5	Roadside Trash Cleanup	Public Works	Clean up trash from roadside and known dump sites	Approximately 156 tons of trash were collected representing approximately 6,960 man-hours using County crews and inmate labor. A total of 34.7 tons of trash were removed during various public land cleanups.	Continue roadside cleanup activities—may become restricted, as inmate labor has become limited due to pre-trial release of non-violent inmates. Explore partnerships with other non-profit groups who may want to participate in cleanup activities (i.e. scouts and other groups).

### **3.4 Construction Site Storm Water Runoff Control**

#### **3.4.1 Site Plan Review**

COA and SJC recognize that construction sites can deposit a significant amount of sediment in a short period of time. The Phase II Rule, according to 40 CFR 122.34(b)(4) (U.S. Government Printing Office 2019) and the NPDES Construction General Permit (CGP) requires the City and County to develop and enforce a storm water management program to address storm water runoff from construction sites one acre or greater in area. COA currently requires the approval of submitted construction plans and a land use plan that complies with USEPA regulations. In 2010, the County adopted Ordinance 9 – Construction Code Ordinance, which adopts the codes adopted by Construction Industries Division (Title 14 NMAC); however, the County current does not have a regulatory mechanism to conduct site plan review prior to construction.

#### **3.4.2 Erosion Awareness**

COA is adopting smart growth initiatives, such as Low Impact Development (LID) designs, xeriscaping, and rain gardens, to promote open space and native landscaping to help reduce erosion.

#### **3.4.3 Non-Structural BMPs**

Non-structural BMPs for storm water runoff from construction sites implemented by COA and SJC include: education and awareness to construction personnel, minimizing disturbance to native soil and vegetation, establishing buffers along streams and waterways, minimizing disturbances of high slope areas, and encouraging sheet flow to vegetated areas. Stream buffer guidance will be encouraged by the Public Works Department staff such that riparian stream areas are restored with native vegetation. The zone will be 100 to 150 feet wide on both sides of the bank. The buffer includes the 100-year floodplain delineation and is governed by the Flood Plain Manager for COA and SJC. To reduce severe flood-related erosion losses, no permanent structures shall be placed in the setback area, a distance equal to 60 times the average annual long-term recession rate at a site. COA and SJC will determine whether proposed site alterations and improvements will be reasonably safe from flood-related erosion and will not cause flood-related erosion hazards.

#### **3.4.4 Structural BMPs**

Structural BMPs encouraged by COA and SJC include: check dams, geotextile silt fences, berms, and sediment basins. Native seeds are often incorporated into berms to help stabilize the structure and reduce runoff. This technology has the benefit of being retrofitted in the developed portions of the City and County.

Table 4. Construction Site Storm Water Runoff Control

<b>BMP ID #</b>	<b>BMP Description</b>	<b>Responsible Dept./Person Name</b>	<b>Measurable Goals</b>	<b>Progress on Goal(s) – Permit Year 2018-2019</b>	<b>Planned Activities – Permit Year 2019-2020</b>
4.1	Documentation of construction activities one acre or greater in size	Public Works	Record construction activities which result in construction site runoff. Train City and County staff (inspectors and plan reviewers) and construction operators.	Tracked all construction activity related to storm water runoff. Documented sites with inadequate BMPs. Educating construction workers and responsible parties on storm water runoff management. COA filed one NOI for construction projects (Reservoir #1 Rehabilitation Project), and SJC filed two construction NOIs (Lee Acres Fire Station No. 2 and Road 350/390 Intersection project).	Continue to document construction site compliance as needed and continue educating construction personnel. Training for new requirements under the 2017 Construction General Permit.
4.2	Storm Water Management Plan	Public Works	Construction sites greater than one acre must submit a SWPPP.	SWPPPs were prepared and followed, and CGP coverage was obtained prior to construction for applicable sites.	Continue enforcing SWPPP compliance. Revise ordinances as needed.
4.3	Education and Implementation of Structural and Non-Structural BMPs	Public Works, Engineering	Educate and encourage construction personnel and contractors to implement BMPs aimed at reducing storm water runoff and erosion.	Observed BMPs and storm water management practices for construction sites.	Continue with education and encouragement of BMP installation and practices. Partner with City of Farmington and SJC for any new training.

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

#### 3.5.1 Post-Construction Runoff Control

COA and SJC address post-construction storm water runoff with structural and non-structural BMPs. The controls seek to reduce the amount of impervious cover by increasing natural land and vegetation, and to utilize pervious areas for more effective storm water management. The City and County encourage regional ponds and parks, which provide additional pervious areas and native flora and fauna. The net increase of scenic features will positively impact neighborhood aesthetics and increase residential property values.

Table 5. Post-Construction Storm Water Management  
in New Development and Redevelopment

<b>BMP ID #</b>	<b>BMP Description</b>	<b>Responsible Dept./ Person Name</b>	<b>Measurable Goals</b>	<b>Progress on Goal(s) – Permit Year 2018-2019</b>	<b>Planned Activities – Permit Year 2019-2020</b>
5.1	Education and Awareness	Public Works	Visit post-construction sites and ensure compliance of existing ordinances.	Visited recent post-construction sites. Inspected to ensure compliance with ordinances.	Continue to visit post-construction sites on an as-needed basis or when compliance issues arise.
5.2	Education and Implementation of Structural and Non-Structural BMPs	Public Works, Engineering	Educate and encourage implementation of BMPs aimed at reducing storm water runoff and erosion.	Continued to implement BMPs into plans and designs.	Continue with education and encouragement of BMP installation and practices. Offer more CGP training.
5.3	Post-Construction Training	Public Works, Engineering	Attend trainings and seminars on post-construction storm water.	Individual continuing education.	Continue attending educational classes and workshops.

### ***3.6 Pollution Prevention and Good Housekeeping in Municipal Operations***

#### **3.6.1 Municipal Maintenance**

The COA and SJC Pollution Prevention and Good Housekeeping in Municipal Operations Program goals are to reduce pollutant runoff from City and County operations. A 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 is performed on all city streets at a frequency based on the most traveled streets and busiest intersections. All street cleaning is performed using vacuum-equipped sweepers. Outfalls are regularly inspected and analyzed according to a standardized checklist. Trouble outfalls are inspected and maintained after every storm event.

#### **3.6.2 Pesticide General Permit for San Juan County**

San Juan County was covered under the Pesticide General Permit during the reporting period and re-applied for coverage in November 2016. Coverage is valid through October 31, 2021. All COA Parks Department personnel are certified herbicide and pesticide applicators. All equipment used for application is cleaned in a wash bay and all products are stored in a controlled access area.

#### **3.6.3 City-Wide Clean-Up Days**

City-wide clean-up days are held twice a year (April and October) throughout the area for community residents to help clean roadways, side streets, yards, parking lots, ditches, and parks.

Table 6. Pollution Prevention and Good Housekeeping in Municipal Operations

<b>BMP ID #</b>	<b>BMP Description</b>	<b>Responsible Dept./ Person Name</b>	<b>Measurable Goals</b>	<b>Progress on Goal(s) – Permit Year 2018-2019</b>	<b>Planned Activities – Permit Year 2019-2020</b>
6.1	Municipal Maintenance	Public Works	Inspect and maintain City and County vehicles. Sweep streets on a regular basis; sweeping more often on the most traveled and busiest streets. Inspect and maintain outfalls.	Government-owned vehicles are regularly inspected and maintained. 44.1 miles of paved roads are swept in COA, and 2.3 miles of gravel/dirt roads are treated with MgCl <sub>2</sub> for erosion treatment. Sweeper dirt is disposed of at Bondad landfill. 225 miles of paved roads are swept in SJC. Storm drains and outfalls are regularly inspected and maintained.	Continue inspections and maintenance operations. Continue street sweeping on a regular basis, increase frequency as needed.
6.2	Municipal – Pesticide Permit	SJC Public Works	Follow Pesticide Management Plan; complete required reporting.	Submitted required reports.	Submit required Annual Reports.
6.3	City-Wide Cleanup Days	Public Works	Hold city-wide public cleanup days.	Spring and Fall clean-up days held annually.	Public cleanup days are scheduled on a semi-annual basis.



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## 4.0 Storm Water Inspections

During development of the SWMP, there were initially 12 identified outfall locations within COA and the urbanized areas of San Juan County. Both Aztec and San Juan County have conducted their own periodic inspections of outfalls of concern during this reporting period.

### 4.1 Storm Water Runoff Observations, Sampling and Laboratory Analyses

During development of the MOA with COF and NMDOT, a review of outfall locations was made, and several possible changes to the inspection and sampling strategy have been discussed, as the emphasis has changed from an outfall emphasis to a watershed-based focus. Preliminarily, improved monitoring locations could include:

1. From Animas River, upstream of UA boundary in Aztec;
2. From Animas River, upstream of its confluence with San Juan River;
3. From San Juan River, upstream of its confluence with Animas;
4. From La Plata River, upstream of the UA boundary in Farmington;
5. From San Juan River, just below (downstream) of confluence with Animas River;
6. From La Plata River, upstream of its confluence with San Juan River;
7. From San Juan River, just below (downstream) of confluence with La Plata River;
8. From San Juan River, just below (downstream) of the UA boundary west of Farmington/Kirtland; and
9. From San Juan River, upstream of UA boundary in Farmington.

Additionally, consideration will also be made of the irrigation systems/canals that are present within the San Juan, Animas and La Plata watersheds and that exist within the Urbanized Area. Aztec and San Juan County are working with COF and NMDOT to develop a preliminary sampling approach. The Final MS4 Permit may still have some additional modifications, and the sampling plan will be modified accordingly.

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## 5.0 Summary

### 5.1 Public Outreach and Education

COA and SJC have used a number of outreach tools and mass media campaigns to educate the public on storm water management. Examples of such control measures include setting up booths at the County Fair, mailing out educational brochures and fliers, and submitting storm water related articles to the local newspapers. Storm drain markers, which have been placed throughout the City and County to inform the public which drains flow directly to nearby rivers or waterways, are checked and replaced as needed. A Pesticide Management

Plan is utilized to educate the public on proper spraying methods as well as alternative methods to controlling weeds and insects.

### *5.2 Training, Conferences, and Continued Collaboration with other MS4 Entities*

COA and SJC personnel have attended and will continue attending training sessions, meetings, and conferences on storm water. New employees to the City or County are educated by their peers and through reading the Employee Guide on Storm Water.

COA and SJC continue to work with COF, NMDOT, and the NMED Surface Water Quality Bureau (SWQB) in developing a collaborative agreement to meet permit requirements. Additionally, the San Juan Watershed Group and the San Juan Soil and Water Conservation District have also been helpful in offering assistance. During the reporting period, cooperative MS4 meetings are held once per month.

### *5.3 Public Involvement and Participation*

The City and County sponsor recycling programs several times a year to collect chemicals and hazardous household wastes, a city-wide clean-up twice per year, and the set-up of dumpster in the Glade Recreational Area two to three times per year. Citizen watch groups and general members of the public are encouraged to report spills or illicit discharges through the use of the Storm Water Hotline.

With the help of the SJC Adult Detention Center, COA and SJC were able to collect 156 tons of road-side trash and debris, which was taken to the landfill. An additional 34.7 tons were removed on various public lands cleanups, and 226 total tons were removed during October 2018 and April 2019 Free Dump Days. The City routinely sweeps 44.1 miles of paved roads and treats 2.3 miles of gravel/dirt roads with magnesium chloride dust control, while the County sweeps 225 miles of paved roads. Government vehicle operated are regularly inspected and maintained to prevent fluid leaks.

### *5.4 Construction and Post-Construction*

Construction sites equal to or greater than one acre in size are required to submit a storm water management plan in accordance to EPA regulations and City and County ordinances. The City and County encourage and educate proper installation and maintenance of structural and non-structural BMPs for construction and post-construction sites. LID implementation, xeriscaping, and preservation of natural land and vegetation are also encouraged by COA and SJC.

## 5.5 Storm Water Inspections and Monitoring

Storm water outfalls were inspected throughout the year to ensure they were in good operating condition and to help identify impending structural failures, maintenance needs, and water quality issues of the storm drain system. SJC and COA will continue routine inspections and sampling events to ensure BMPs are met and they are in good operating condition.

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## 6.0 References

Aztec, San Juan County and City of. *Storm Water Management Plan*. Storm Water Management Plan, Aztec: San Juan County and City of Aztec, 2014.

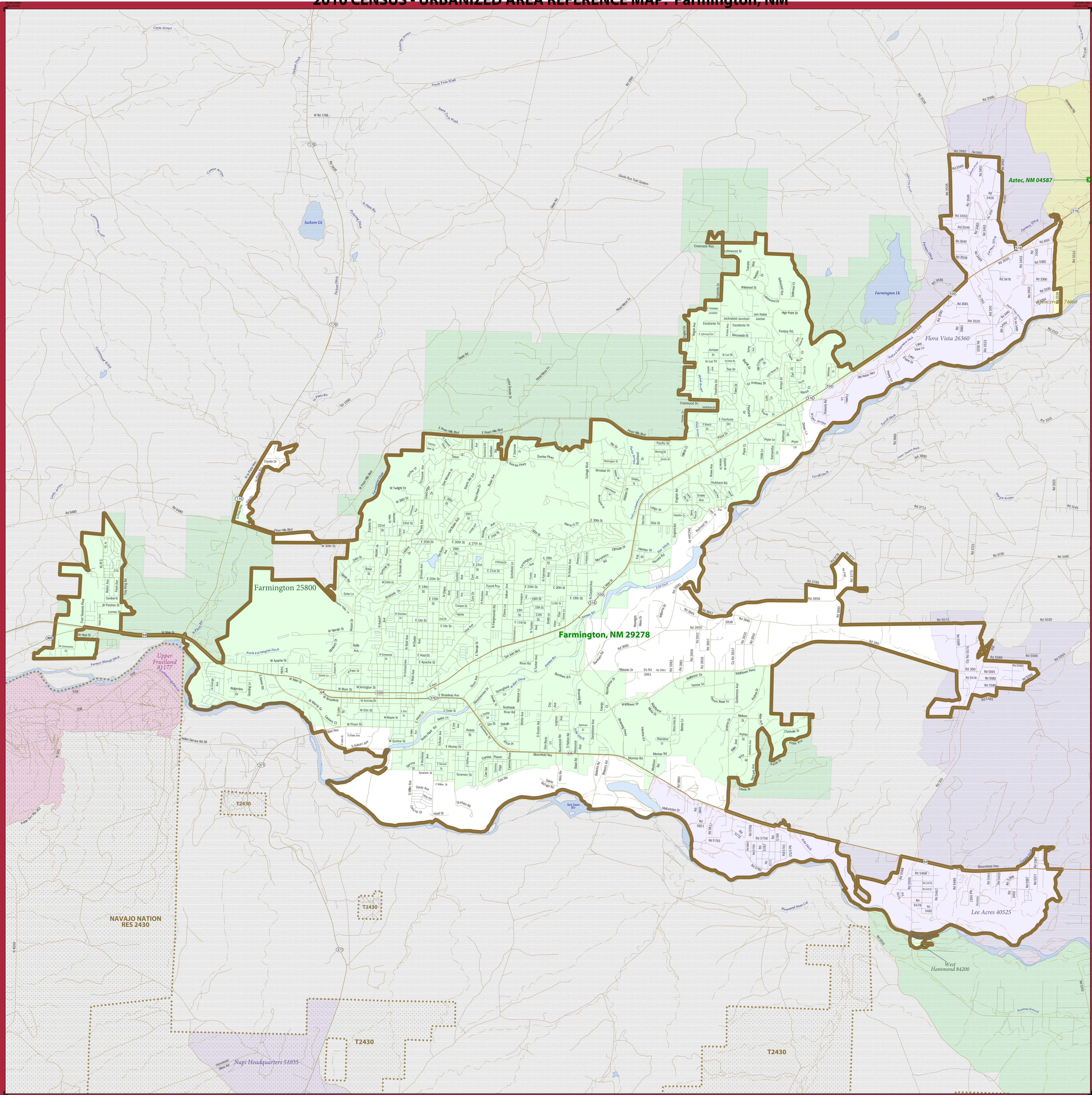
U.S. Census Bureau. *State and County Quickfacts*. 2019.  
<https://www.census.gov/quickfacts/fact/table/US/PST045218> (accessed November 25, 2019).

U.S. Government Printing Office. *Electronic Code of Federal Regulations*. November 2019.  
[http://www.ecfr.gov/cgi-bin/text-idx?tpl=/ecfrbrowse/Title40/40cfr122\\_main\\_02.tpl](http://www.ecfr.gov/cgi-bin/text-idx?tpl=/ecfrbrowse/Title40/40cfr122_main_02.tpl) (accessed November 25, 2019).

## Figures



2010 CENSUS - URBANIZED AREA REFERENCE MAP: Farmington, NM



SYMBOL DESCRIPTION	
International	-----
Federal American Indian Reservation	.....
Off-Reservation Trust Land	.....
Urbanized Area	.....
Urban Cluster	.....
State (or statistically equivalent entity)	-----
County (or statistically equivalent entity)	-----
Minor Civil Division (MCD) <sup>1,2</sup>	-----
Consolidated City	.....
Incorporated Place <sup>1,3</sup>	.....
Census Designated Place (CDP) <sup>2</sup>	.....

LEGEND	
SYMBOL	LABEL STYLE
-----	CANADA
.....	L'ANSE RES 1880
.....	T1880
.....	Dover, DE 24580
.....	Toole, VT 88057
-----	NEW YORK 36
-----	ERIE 029
-----	Bristol town 07485
.....	MILFORD 47500
.....	Davis 18100
.....	Incline Village 35100

DESCRIPTION	SYMBOL	DESCRIPTION	SYMBOL
Interstate		Water Body	
U.S. Highway		Military	
State Highway		Outside Subject Area	
Other Road			
Railroad			
Perennial Stream			
Intermittent Stream			

Where international, state, county, and/or MCD boundaries coincide, the map shows the boundary symbol for only the highest-ranking of these boundaries.

1 A \* following an MCD name denotes a false MCD. A \*\* following a place name indicates that a false MCD exists with the same name and FIPS code as the place; the false MCD label is not shown.

2 MCD boundaries are shown in the following states in which some or all MCDs function as general-purpose governmental units: Connecticut, Illinois, Indiana, Kansas, Maine, Massachusetts, Michigan, Minnesota, Missouri, Nebraska, New Hampshire, New Jersey, New York, North Dakota, Ohio, Pennsylvania, Rhode Island, South Dakota, Vermont, and Wisconsin. (Note that Illinois and Nebraska have some counties covered by nongovernmental precincts and Missouri has most counties covered by nongovernmental townships.)

3 Place label color corresponds to the place fill color.  
Label colors: Davis Davis Davis Davis Davis

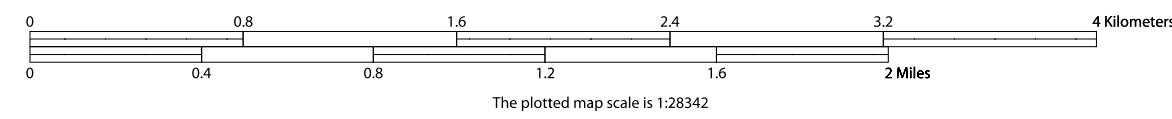
SUBJECT AREA COUNTIES ON MAP SHEET  
35045 San Juan

OFF-RESERVATION TRUST LAND NAMES  
T2430 Navajo Nation

All legal boundaries and names are as of January 1, 2010. Urban areas are based on results from the 2010 Decennial Census. The boundaries shown on this map are for Census Bureau statistical data collection and tabulation purposes only; their depiction and designation for statistical purposes does not constitute a determination of jurisdictional authority or rights of ownership or entitlement.

Geographic Vintage: 2010 Census (reference date: January 1, 2010)  
Data Source: U.S. Census Bureau's MAF/TIGER database (TAB10)  
Map Created by: Geography Division: March 08, 2012

Projection: Albers Equal Area Conic  
Datum: NAD 83  
Spheroid: GRS 80  
1st Standard Parallel: 32 16 36  
2nd Standard Parallel: 36 03 20  
Central Meridian: -106 01 31  
Latitude of Projection's Origin: 31 19 55  
False Easting: 0  
False Northing: 0

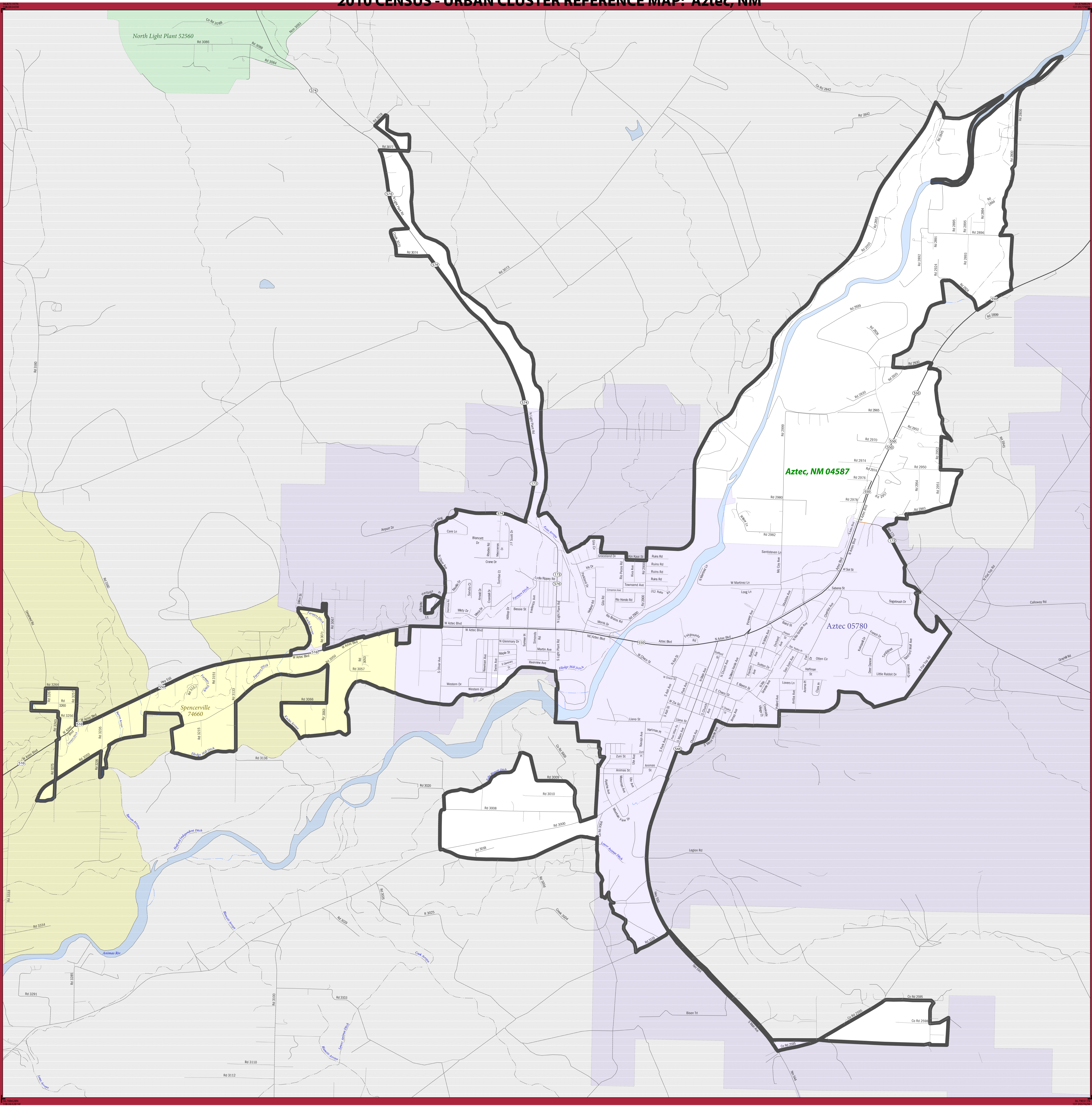


PARENT SHEET 1  
Total Sheets: 1  
Index Sheets: 0  
Parent Sheets: 1

UA NAME: Farmington, NM  
UA CODE: 29278  
ENTITY TYPE: Urbanized Area (UA)  
ST: New Mexico (35)



2010 CENSUS - URBAN CLUSTER REFERENCE MAP: Aztec, NM



LEGEND	
SYMBOL DESCRIPTION	LABEL STYLE
International	CANADA
Federal American Indian Reservation	L'ANSE RES 1880
Off-Reservation Trust Land	T1880
Urbanized Area	Dover, DE 24580
Urban Cluster	Tooele, VT 88057
State (or statistically equivalent entity)	NEW YORK 36
County (or statistically equivalent entity)	ERIE 029
Minor Civil Division (MCD) <sup>1,2</sup>	Bristol town 07485
Consolidated City	MILFORD 47500
Incorporated Place <sup>1,3</sup>	Davis 18100
Census Designated Place (CDP) <sup>1</sup>	Incline Village 35100

DESCRIPTION	SYMBOL	DESCRIPTION	SYMBOL
Interstate		Water Body	
U.S. Highway		Military	
State Highway		Outside Subject Area	
Other Road			
Railroad			
Perennial Stream			
Intermittent Stream			

Where international, state, county, and/or MCD boundaries coincide, the map shows the boundary symbol for only the highest-ranking of these boundaries.

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3 Place label color corresponds to the place fill color.  
Label colors: Davis Davis Davis Davis Davis

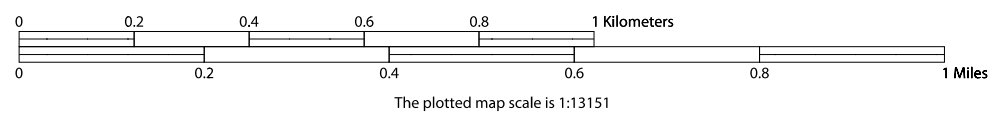
SUBJECT AREA COUNTIES ON MAP SHEET  
35045 San Juan

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Geographic Vintage: 2010 Census (reference date: January 1, 2010)  
Data Source: U.S. Census Bureau's MAF/TIGER database (TAB10)  
Map Created by: Geography Division: March 08, 2012

U.S. DEPARTMENT OF COMMERCE Economics and Statistics Administration U.S. Census Bureau

Projection: Albers Equal Area Conic  
Datum: NAD83  
Spheroid: GRS 80  
1st Standard Parallel: 32 16 36  
2nd Standard Parallel: 36 03 20  
Central Meridian: -106 01 31  
Latitude of Projection's Origin: 31 19 55  
False Easting: 0  
False Northing: 0

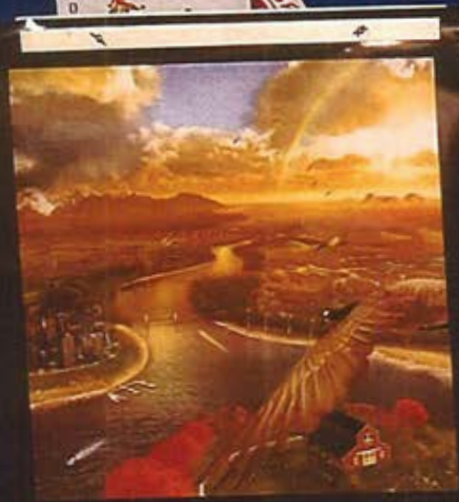


PARENT SHEET 1  
Total Sheets: 1  
Index Sheets: 0  
Parent Sheets: 1

UC NAME: Aztec, NM  
UC CODE: 04587  
ENTITY TYPE: Urban Cluster (UC)  
ST: New Mexico (35)



## Appendix A



NRCS

The Water Cycle:  
Nature's Recycling System



**SAN JUAN**  
SOIL & WATER  
CONSERVATION DISTRICT



*San Juan*  
*Soil and Water Conservation District*



## When It Rains, It Drains

Polluted storm water runoff can have many adverse effects on plants, fish, animals, and people.

Sediment can cloud the water and make it difficult or impossible for aquatic plants to grow. Sediment also can destroy aquatic habitats

Excess nutrients can cause algae blooms. When algae die, they sink to the bottom and decompose in a process that removes oxygen from the water. Fish and other aquatic organisms can't exist in water with low dissolved oxygen levels.

Bacteria and other pathogens can wash into swimming areas and create health hazards, often making closures necessary.

Debris—plastic bags, six-pack rings, bottles, and cigarette butts—washed into water bodies can choke, suffocate, or disable aquatic life like ducks, fish, turtles, and birds.

Household hazardous wastes like insecticides, pesticides, paint, solvents, used motor oil, and other auto fluids can poison aquatic life. Land animals and people can become sick or die from eating diseased fish and ingesting polluted water.

Polluted storm water often affects drinking water sources. This, in turn, can affect human health and increase drinking water treatment costs.

**Our Water. Our Future.**



**Ours to Protect**

## 10 Things You Can Do To Prevent Storm Water Runoff Pollution

1. Use fertilizers sparingly and sweep up driveways, sidewalks, and gutters
2. Never dump anything down storm drains or in streams
3. Vegetate bare spots in your yard
4. Compost your yard waste
5. Use least toxic pesticides, follow labels, and learn how to prevent pest problems
6. Direct downspouts away from paved surfaces; consider a rain garden to capture runoff
7. Take your car to the car wash instead of washing it in the driveway
8. Check your car for leaks and recycle your motor oil
9. Pick up after your pet
10. Have your septic tank pumped and system inspected regularly

**Report Illegal Dumping**

**Storm Water Hotline:**

**Tel: 505-334-4560**



## City of Aztec and San Juan County Storm Water Sense

*New Mexico monsoon season typically starts in early July. During a rain, the storm water runs over drives, streets, lawns and parking lots collecting trash, chemicals, dirt and other pollutants and will flow into the ditches, arroyos and storm water system in the City of Aztec and San Juan County. This runoff is untreated and flows directly into the rivers. The City has about 10 discharge points to the Animas River via the storm water collection system used to collect rainwater and runoff. This system is regulated by the US EPA under the Phase II rule of the National Pollutant Discharge and Elimination System. The City of Aztec and San Juan County have worked together and implemented a Storm Water Management Program and needs your help to keep our waters clean for our continued use.*





### 10 Things You Can Do to "Stamp" Out Stormwater Runoff Pollution

- Don't sweep yard and pet waste into the street.
- Never dump anything down storm drains or in streams
- Plant bare spots in
  - your yard with grass or flowers
- Compost your yard waste
- Use safer alternatives to get
  - rid of pests and learn how to prevent pest problems
- Direct downspouts away from
  - paved surfaces; consider a rain garden to capture runoff
- Have mom and dad
  - take the car to the car wash instead of washing it in the driveway
- Pick up after your pet
- Clean Water is everybodys business!

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**...and May the  
Force  
Be With You!**

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Be With You!**

**...and May the  
Force  
Be With You!**





## HISTORY OF FLOODING IN

### SAN JUAN COUNTY

Floods in San Juan County result from general rainstorms, snowmelt, and rain from cloudburst storms. General rain floods have been the cause of severe damage along the Animas and La Plata Rivers and have usually occurred during the months of September and October. This type of flood results from prolonged heavy rainfall over tributary areas and is characterized by high peak flows of moderate duration.

Major rain floods occurred on the La Plata River in 1904 and 1909. On the Animas and San Juan Rivers, Spring snowmelt flooding occurred in 1884 and rain flooding in 1909. During the latter part of June 1927, melting snow augmented by general rain over the San Juan River basin created the highest flows and most widespread flood on the La Plata, Animas, and San Juan Rivers since the flood of October, 1911, which is counted as the historic basis for the 1% annual chance flood, also known as the 100-year flood.

More recent floods include: 1995 and 2005 on the Animas River due to high Spring run-off; 2006 flash floods on the La Plata Highway (NM 170); 2008 thru 2014, flash flooding occurred in the area of Blanco; and in 2008 and 2011 flash flooding occurred on Sullivan Road in Bloomfield. In 2009, a flash flood event occurred near the Colorado border on NM 170. Six inches of water were reported to be flowing over the roadway and approximately two inches of pea size hail fell in less than 20 minutes.

Flash flooding events throughout San Juan County have continued to cause damage to infrastructure and private property. A major flash flooding event in 2013 deposited several feet of sediment for residents to dig out from under and dispose of.



## HOW DO I KNOW IF MY PROPERTY IS IN THE FLOODPLAIN?

Call the San Juan County Floodplain Management Office (505) 334-4719

go to

[www.sjcoem.com](http://www.sjcoem.com)

or

Visit the FEMA Map Store:

<http://msc.fema.gov/portal>

## TIPS TO AVOID FLOOD DAMAGE



The main electric panel board (electric fuses or circuit breakers) should be at least 12" above the projected flood elevation for your home.



Elevate all electric outlets, switches, light sockets, baseboard heaters, electric service lines, and wiring at least 12" above the projected flood elevation for your home.



Build a floodwall around large appliances or elevate on masonry or pressure-treated lumber.



Furnaces and water heaters can be placed on masonry blocks or concrete, moved inside a floodwall, or moved to a higher floor.



Outside air conditioning compressors, heat pumps or package units, can be placed on a base of masonry, concrete, or pressure treated lumber.



Fuel tanks can float or be rolled by the force of water during a flood. Tanks must be securely anchored to cement slabs. Vents and fill line openings should be above projected flood levels.



To prevent flood waters from entering the sewer system and forcing sewage into your home, install an interior or exterior backflow valve.



Build drainage systems or levees around your property.



Seal openings such as low windows.



Construct exterior floodwalls around basement doors and window wells.

## ELEVATE OR RELOCATE STRUCTURES OUT OF THE FLOODPLAIN

### FACT:

MOST CARS CAN BE SWEEPED AWAY BY 18-24 INCHES OF MOVING WATER.

**\*\*THIS INCLUDES TRUCKS AND SUVs\*\***

## SAN JUAN COUNTY PERMIT REQUIREMENTS FOR NEW CONSTRUCTION, SUBSTANTIAL IMPROVEMENTS, AND MANUFACTURED HOME PLACEMENT IN FLOOD HAZARD AREAS

### Structures in an area where the Base Flood Elevation has been established—Zone AE:

1. Lowest floor will be at least one foot above the Base Flood Elevation.
2. An Elevation Certificate must be submitted and a Floodplain Permit obtained before project begins.

*It is suggested that elevation be confirmed prior to framing.*

3. A final Elevation Certificate will be required prior to final inspection of the structure.

### Structures in an area where the Base Flood Elevation has not been established—Zone A:

1. Lowest floor will be at least three feet above the Highest Adjacent Grade to the structure walls.
2. An Elevation Certificate must be submitted and a Floodplain Permit obtained before project begins.

*It is suggested that elevation be confirmed prior to framing.*

3. A final Elevation Certificate will be required prior to final inspection of the structure.

### WHAT IS AN ELEVATION CERTIFICATE?

FEMA Form 81-31 Elevation Certificate is used to provide elevation information necessary to ensure compliance with floodplain ordinances, to determine the proper insurance premium rate, and to support a Letter of Map Amendment or Revision (LOMA-LOMR).

## ANYONE CAN GET FLOOD INSURANCE

Even if you don't live in a special flood hazard area or you are renting, you can still get flood insurance.



# RESOURCES AND CONTACTS

## LOCAL FLOODPLAIN RESOURCES

San Juan County Floodplain Management	505-334-7700 505-334-4719
City of Aztec Planning and Zoning	505-334-7605
City of Bloomfield Planning and Zoning	505-632-6319
City of Farmington Engineer's Office	505-599-1306



## SAN JUAN COUNTY COMMUNITY DEVELOPMENT

### CODE COMPLIANCE

For information regarding the San Juan County Cleanup Program or the land use ordinances, please contact the Code Compliance Officer at 505-333-3130 or 505-334-4552.

### RURAL ADDRESS/ E9-1-1 UPDATE

All residents should complete an E9-1-1 addressing update. Accurate addressing is vital to the Emergency 9-1-1 system. Verification of a physical address for emergency services is required before building permits can be issued or new electrical service obtained. All new addresses that will access a County Maintained Road or a State or US Highway must have a permit for construction of the driveway within the Right-of-Way before an E9-1-1 address may be issued.

To obtain or verify your E9-1-1 address, contact us at (505)334-4314/334-4713 rural.addressing@sjcounty.net

### DIVISION OF LAND. MANUFACTURED HOME/RV PARKS

For information on divisions of land, Manufactured Home Parks, or RV Parks in the unincorporated areas of San Juan County please contact us at 505-334-4248.

### BUILDING PERMITS/ INSPECTIONS

For building permits and information on building codes in the unincorporated areas of San Juan County and the Cities of Aztec and Bloomfield contact us at 505-334-4313 or on line at

<http://www.sjcounty.net/departments/atrug/community/building>

## OTHER FLOOD RESOURCES

### **FEMA—National Flood Insurance Program**

[www.fema.gov](http://www.fema.gov)  
[www.floodsmart.gov](http://www.floodsmart.gov)  
[www.ready.gov](http://www.ready.gov)

### **Turn Around Don't Drown—NOAA**

<http://tadd.weather.gov>  
[www.stormready.noaa.gov](http://www.stormready.noaa.gov)

### Flood Vent Suppliers

### **USA FOUNDATION FLOOD AIR VENTS**

[www.usafloodairvents.com](http://www.usafloodairvents.com)

### SMART VENT

[www.smartvent.com](http://www.smartvent.com)

## **NEW MEXICO FLOODPLAIN MANAGERS**

### **FLOOD AWARENESS CALENDAR**

### **CONTEST**

[www.nmfma.org](http://www.nmfma.org) for more information:

All schools or civic organizations are eligible to enter artwork from children 3rd grade thru 6th grade. Prizes will be awarded to the top three submissions, but all chosen submissions will be awarded a calendar.

Entries are due in September. For full details and contact information: [www.nmfma.org](http://www.nmfma.org)



## **FACT:**

**HOMEOWNERS INSURANCE DOES NOT COVER  
OUTSIDE FLOODING**

# FLOODS



# HAPPEN!



**San Juan County...**  
**Building a Stronger Community**





# City of Aztec/City of Farmington/San Juan County

## Safer Alternatives to Hazardous Products

### Cleaning Alternatives

#### All purpose cleaners

- Vinegar and Salt  
Mix together for a good surface cleaner.
- Baking soda  
Dissolve 4 tablespoons baking soda in 1 quart warm water. Or use baking soda on a damp sponge. Baking soda will clean and deodorize all kitchen and bathroom surfaces.

#### Cleaner

- Soap  
Regular cleaning with plain soap and hot water will kill some bacteria.
- Keep Dry  
Mold, Mildew and Bacteria cannot live without dampness.
- Borax<sup>\*</sup>  
Borax has long been recognized for its cleaning and deodorizing properties. Mix  $\frac{1}{2}$  cup Borax into 1 gallon hot water and clean with this solution.

#### Drain Cleaner

- Prevention  
To avoid clogging drains, use a drain strainer to trap food particles and hair; Collect grease in cans rather than pouring it down the drain; pour a kettle of boiling water down the drain weekly to melt fat that may be building up in the drain.
- Baking Soda and Vinegar  
Put  $\frac{1}{2}$  cup baking soda and  $\frac{1}{2}$  cup white vinegar down your drain and cover the drain. Let set for a few minutes and then pour a kettle of boiling water down the drain to flush it.

#### Furniture Polish

- Olive Oil and Vinegar  
Mix 3 parts oil to 1 part vinegar. Apply and polish with a clean, soft cloth.
- Olive Oil and Lemon Juice  
Mix 2 parts oil and 1 part lemon juice. Apply and polish with a soft cloth.
- Water Spots  
To remove water marks on furniture, rub gently with toothpaste on a damp cloth.

## Lime and Mineral Deposits Remover

- Vinegar

Hard lime deposits around faucets can be softened for easy removal by covering the deposits with vinegar soaked paper towels. Leave the paper towels on for about an hour before cleaning. Makes chrome clean and shiny. To remove deposits which may be clogging metal showerheads, combine  $\frac{1}{2}$  cup white vinegar and 1 quart water. Completely submerge the showerhead and boil for 15 minutes. If you have a plastic showerhead, combine 1 pint white vinegar and 1 pint hot water. Completely submerge the showerhead and soak for about 1 hour.

## Pest Removal Alternatives

### Ants

- Flour and Borax\*

Mix 1 cup flour and 2 cups Borax in a quart jar. Punch holes in the jar lid and sprinkle contents around the house foundation. Keep Borax out of reach of children and pets.

- Pennyroyal\*, Spearmint, Southernwood and Tansey

Growing these plants around the border of your home will deter and the aphids they carry.

### Fleas

- Vacuum

Vacuum, remove the vacuum bag, seal it, and dispose of it immediately (outside your home).

- Vinegar

A ratio of 1 teaspoon to 1 quart of water (per 40lbs. of pet weight) in their drinking water helps keep your pet free of fleas and ticks.

### Roaches

- Boric Acid\*

Commercial roach formulas containing boric acid are available. Apply these according to directions for effective elimination of roaches.

- Borax\* and Flour

Mix  $\frac{1}{2}$  cups Borax and  $\frac{1}{4}$  cup flour and fill jar. Punch hole in jar lid and sprinkle contents along the baseboards and doorsills.



## Some Other Safer Alternatives

- . Aerosols-Use pump type or non-aerosol products.
- . Art Supplies-Purchase water-based paints or inks. They should not contain lead or toxic materials.
- . Batteries-Rechargeable batteries are a cost effective alternative to disposable batteries.
- . Chemical Fertilizers-Composting yard clippings and food scraps is an option. Manure (in measured amounts) is another alternative to chemical fertilizers.
- . Gasoline-Not driving at all is the best way to reduce gasoline use. Purchasing a super Efficient hybrid electric vehicle is the next best alternative. Carpooling, walking, bicycling, and public transportation are other viable options.
- . Motor Oil-Use refined motor oil. Doing so will spur the market for recycled motor oil and decrease reliance on new oil supplies.
- . Pesticides-Keeping homes and gardens tidy reduces the food supply for insect pests, averting the need for chemical pesticides.

**\*Ingredients marked with the asterisk (\*) are safer alternatives but not non-toxic. Keep these out of reach of children and pets, and exercise caution while while using them.**

Read more about safer alternatives to hazardous products at the [Environmental Health Coalition](#) website

This information brought to you by the City of Aztec Storm Water Management Team, City of Farmington Storm Water Team, San Juan County Storm Water Team and the US EPA. For more information call (505) 334-7663 and check out our website at [www.aztecnm.gov](http://www.aztecnm.gov).

To report spills, abandoned waste, clogged storm drains, any situation that may pollute storm drains, local waterways and beaches, request flood zone information and other storm water educational materials call the Storm Water Hotline at (505) 334-4560

## Frequently asked questions

**Q.** *Are the chemicals used hazardous to my health?*

A. The chemicals used to kill mosquitoes (adult or larvae) have been tested rigorously and are approved for use by the U.S. EPA and the NM DOA. Also the rate of adulticides used are applied at Ultra Low Volume.

**Q.** *How long does the mosquito spray last?*

A. Adult mosquito sprays are effective for only 24 hours or less. Spraying does not prevent mosquitos from reentering the area.

**Q.** *Can I get the AIDS virus from mosquitoes?*

A. Information provided by CDC, NM Department of Health and researches have shown no evidence the AIDS virus is transmitted by mosquitoes. Mosquitoes do not inject blood while feeding. Also if any HIV infected blood is consumed by the mosquito, it is digested and not passed on.

**Q.** *Do bug zappers work?*

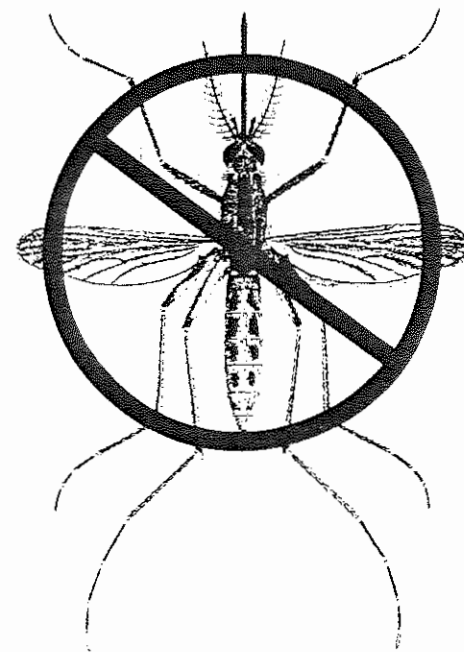
A. No. Zappers do a good job of ATTRACTING insects to your home. Once the mosquitoes are in your yard they are more attracted to the carbon dioxide exhaled by people and pets. The zapper actually ends up killing thousands of beneficial insects that don't bother people and very few mosquitoes. (Those tiny black specs that you never noticed in the tray are mostly parasitic wasps.)

**Q.** *What is B.T.I.? (*Bacillus thuringiensis* var. *israelensis*)*

A. B.T.I. is a biological larvicide that kills only mosquito larvae (and blackfly larvae) when they feed on it.

VECTOR CONTROL DEPARTMENT

## MOSQUITO CONTROL in San Juan County and the City of Farmington



San Juan County Vector Control  
334-6775  
City of Farmington  
599-1264

*"please don't feed the mosquitoes"*



## MOSQUITO FACTS

There are over 44 different kinds of mosquitoes in San Juan County

Only female mosquitoes bite and spread diseases.

She uses blood for reproduction.

One feeding can produce 200 mosquitoes.

Some species lay eggs on drying mud that can remain dormant for up to 5 years.

Mosquitoes have four distinct life cycles: egg, larvae, pupae and adult. The first three cycles occur in water.

Some can fly up to ten miles for a blood meal.

Some prefer feeding on livestock or animals.

Female mosquitoes can transmit diseases such as:

- Malaria
- Yellow Fever
- Encephalitis
- Dog Heart Worm
- Dengue

## WHAT YOU CAN DO!

Use insect repellent while outdoors

Properly screen windows and doors.

Remove weeds and brush that provide resting places for adult mosquitoes.

Burn Citronella candles to repel mosquitoes.

Grade or fill areas where water stands.

Remove standing water from places such as:

- Tires
- Pools
- Flower Pots
- Tin Cans ( a 1-lb coffee can will produce up to 800 mosquitoes.)

*or virtually anything that holds water.*

Change water in bird baths and small swimming pools every 4 days.

Control irrigation water and run off.

*Report problems to vector control technicians.*

## OTHER HELPFUL THINGS.

### Biological Control Methods

Bats (one bat can eat 600 mosquitoes per hour)

Swallows

Martins

Night Hawks

Dragonflies

Frogs and Toads



### For larvae control:

Stock Gambusia (mosquito fish) in ponds and decorative pools.

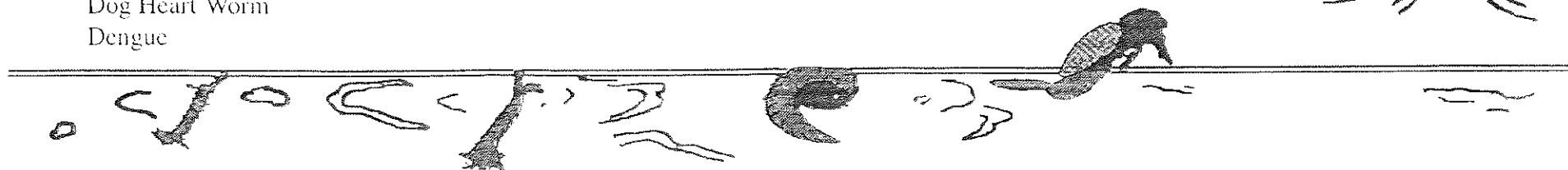
Mayflies

Tadpoles

Diving Beetles.

*These are natural predators of mosquitoes!*

*For more information call you local vector control department.*



**Fight the Bite!**



New Mexico Department of Health  
Office of Epidemiology  
1190 St. Francis Drive  
Santa Fe, NM 87502

## WEST NILE VIRUS, MOSQUITOES AND YOUR FAMILY



NEW MEXICO  
DEPARTMENT OF  
**HEALTH**

## IMPORTANT FACTS

### What is West Nile Virus (WNV)?

WNV is a virus that can cause disease in people, birds, horses and sometimes other animals. WNV is spread by mosquito bites.

### How do people get infected with WNV?

By being bitten by mosquitoes that are carrying the virus. Mosquitoes become infected by feeding on birds that have the virus in their blood. Once a mosquito is infected with the virus it can transmit the virus to humans, birds, horses or other animals through a bite.

### Can you get WNV directly from people, birds or other animals?

WNV is NOT spread from person-to-person by touching or kissing a person who is infected with the virus. There is no evidence that a person can get WNV by touching a dead bird or other animal. However, for general sanitary reasons you should wear gloves or use a shovel when handling any sick or dead animals.

### I've gotten a mosquito bite. Should I be tested for WNV?

No, only a small percent of mosquitoes carry WNV. See a doctor if you develop the symptoms below.

### What are the symptoms of WNV?

Most people bitten by an infected mosquito do not develop any symptoms. When symptoms do occur, they usually appear about 3 to 14 days after being bitten. The disease may be mild or serious. Mild illness includes fever, headache and body aches. In a small number of cases, particularly among the elderly, the disease can affect the central nervous system causing high fever, stiff neck, muscle weakness, disorientation, brain inflammation (encephalitis), coma and rarely, death.

### Is there a treatment for WNV?

There is no specific treatment for WNV. Most people with mild illness recover in a few days. In more severe cases, patients are treated with supportive therapy, which can include hospitalization, intravenous fluids and respiratory support.

For more information on West Nile Virus call the Office of Epidemiology at 505-827-0006



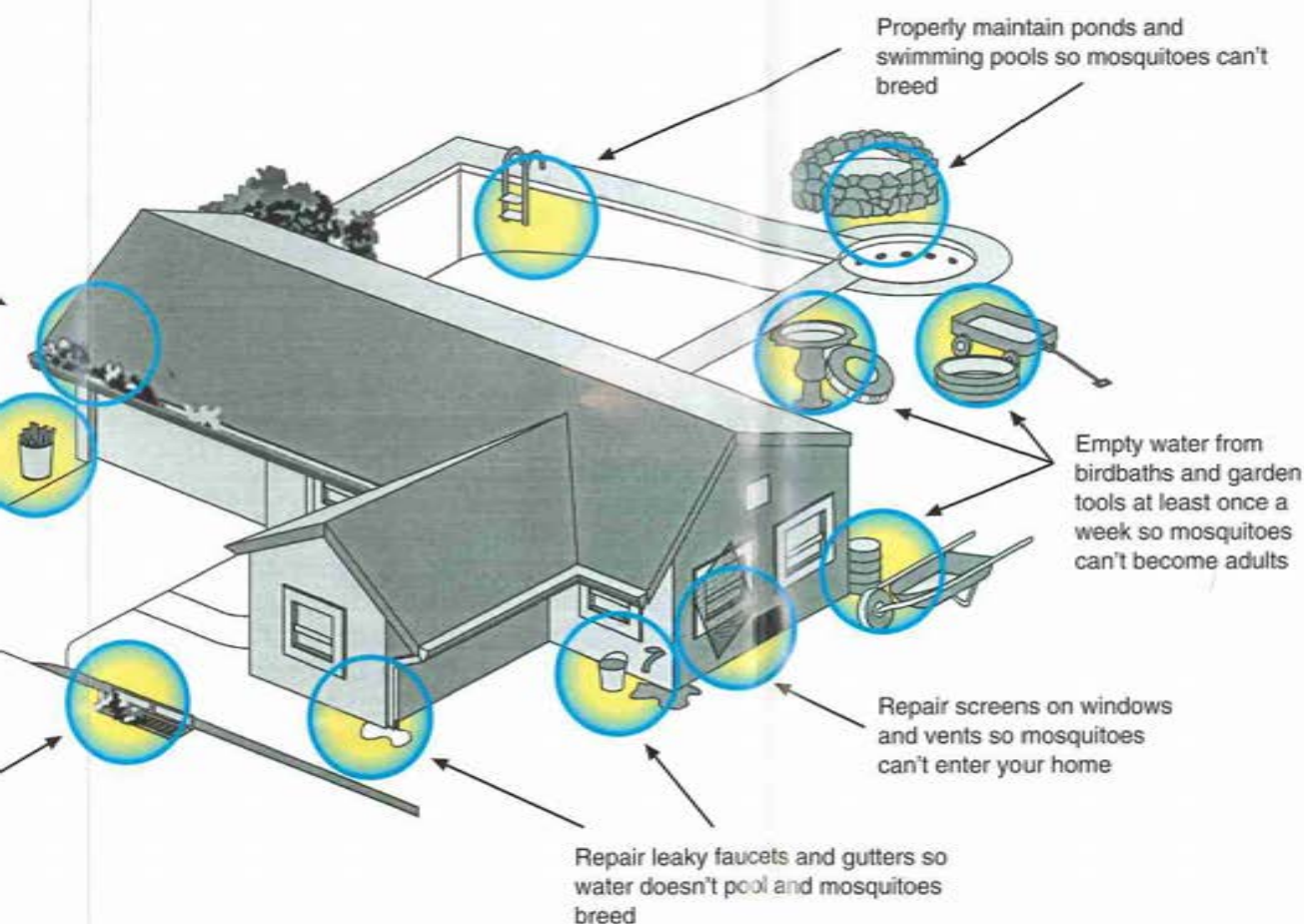
## TECT YOUR HOME, YOUR FAMILY, AND YOURSELF

and dusk when mosquitoes are most active. This is very important for the elderly and small

ants and long sleeves) and apply insect repellent when outside. Be sure to use insect  
o label directions.

ws have tight fitting screens that are in good repair so mosquitoes can't get inside.

ng by eliminating standing water around your home.



This house picture was originally created by the New York State Department of Health

## Using Insect Repellents Safely

For the longest lasting protection from mosquito bites, use insect repellent products with no more than 20-30 percent DEET for adults and less than 10 percent for children aged 2 years to 12 years.

If you choose not to use DEET, products containing soybean oil or eucalyptus oil have been found to be effective, but must be applied more often because they do not repel mosquitoes for as long as DEET\*.

In a recent study\*, products containing citronella or Skin-So-Soft® were NOT shown to be as effective, lasting on average about 20 minutes or less.

Only adults should apply repellent on children.

Only apply repellent to exposed skin and clothing. Do not use repellent under clothing.

Do not apply repellent over cuts, wounds, sunburn or irritated skin.

Spray repellent on your hands in order to apply it to your face. Don't apply repellent to your eyes or mouth.

Wash off repellent daily and reapply as needed.

\*New England Journal of Medicine, July 4, 2002

## Appendix B

## RE: MS4 Annual Report questions

Bogedain.Alex <abogedain@sjcounty.net>

Mon 1/20/2020 7:31 AM

To: David Reese <dreese@animasenvironmental.com>

Cc: Nick Porell - P.E. <nporell@sjcounty.net>; Scott A. Martin, P.E., PLS <scott.martin@sjcounty.net>

Good Morning David,

....

*From 7/1/18 to 6/30/19:*

*How many reports of illegal dumping occurred?*

**"Clean Up San Juan" mobile app launched June 2018, 378 reports and 155 cleaned  
14 reports to the Sherriff's Office**

*How many construction stormwater permit Notices of Intent (NOIs) listing SJC as the owner or operator have there been? If any, provide names of project(s).*

**Lee Acres Fire Station No. 2** [This NOI was field in 2017-2018 period..]

**Road 350 / 390 intersection project** [This NOI was field in 2017-2018 period..]

**Kirtland Walk Path Project**

*Any stormwater-specific training of county employees?*

**Scott Martin, County Engineer, and Alex Bogedain, Engineering Technician, attended Stormwater Qualified Person Training attended on September 19, 2019**

*Any details on public education of stormwater issues (such as a booth at county fair, brochures, newspaper ads)?*

**None**

*Any details on floodplain management education (proper use/development of flood zones)?*

**San Juan County Office of Emergency Management flood education brochure sent in the Farmington Electric Utility Service July bill**

*How much trash was removed due to County Adult Detention Facility roadside and yard waste cleanup program? If available—how many man hours?*

**156.08 tons, 6960 inmate man hours**

*How many miles of paved roads are swept in the County (236 before)?*

**225**

*On National Public Lands Day, if it was devoted to trash cleanup, how much trash was removed?*

**Did not participate (no coordination with BLM)**

**OTHER**

**Free Dump Day 10/20/18 – 51.34 tons**

**Free Dump Day 4/6/19 – 174.8 tons**

**Cleanups on Public Lands Nov 2018 to May 2019 – 34.69 tons**

Thank You,  
Alex

Alex Bogedain  
Engineering Technician I  
Public Works  
Office: (505) 334-4574  
[abogedain@sjcounty.net](mailto:abogedain@sjcounty.net)



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**From:** Nick Porell - P.E. <[nporell@sjcounty.net](mailto:nporell@sjcounty.net)>  
**Sent:** Wednesday, December 4, 2019 10:08 AM  
**To:** Bogedain.Alex <[abogedain@sjcounty.net](mailto:abogedain@sjcounty.net)>  
**Subject:** FW: MS4 Annual Report quesons

Alex. Please work to get these quesons ans wered.

Nick Porell - P.E.  
Public Works Director  
Public Works  
Office: 505-334-4530  
Mobile: 505-386-8232  
[nporell@sjcounty.net](mailto:nporell@sjcounty.net)



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**From:** David Reese <[dreese@animasenvironmental.com](mailto:dreese@animasenvironmental.com)>  
**Sent:** Wednesday, December 4, 2019 10:07 AM  
**To:** Nick Porell - P.E. <[nporell@sjcounty.net](mailto:nporell@sjcounty.net)>

**Cc:** Elizabeth McNally <[emcnally@animasenvironmental.com](mailto:emcnally@animasenvironmental.com)>; Karen Lupton <[klupton@animasenvironmental.com](mailto:klupton@animasenvironmental.com)>

**Subject:** MS4 Annual Report quesons

Dear Nick Porell,

We are working on compleng the NPDE S Phase II Small MS4 Annual Report for the City of Aztec and San Juan County. The following are quesons tha t will allow us to complete the current report. Please complete. I have also contacted Aztec with similar quesons.

*From 7/1/17 to 6/30/19:*

*How many reports of illegal dumping occurred?*

*How many construction stormwater permit Notices of Intent (NOIs) listing SJC as the owner or operator have there been? If any, provide names of project(s).*

*Any stormwater-specific training of county employees?*

*Any details on public education of stormwater issues (such as a booth at county fair, brochures, newspaper ads)?*

*Any details on floodplain management education (proper use/development of flood zones)?*

*How much trash was removed due to County Adult Detention Facility roadside and yard waste cleanup program? If available—how many man hours?*

*How many miles of paved roads are swept in the County (236 before)?*

*On National Public Lands Day, if it was devoted to trash cleanup, how much trash was removed?*

Thanks for your help,

David Reese

Environmental Sciens t

Animas Environmental Services

624 E Comanche St., Farmington, NM 87401

(505) 564-2281



**Re: MS4 Annual Report questions**

Laurie Martinez <lmartinez@aztecnm.gov>

Mon 1/6/2020 2:55 PM

To: David Reese <dreese@animasenvironmental.com>

Hi David,

The Holidays are over and I hope I can give you some answers to your quesons....

1. We have had no reports of illegal dumping in Aztec City Limits
2. We have had two construcon s tormwater permits issued:
  - a. Reservoir #1 Rehabilitaon Pr oject
  - b. Sanitary Sewer *[This NOI was filed in 2017-2018 period.]*
3. We have two Industrial stormwater permits right now...City of Aztec Waste Water Plant and City of Aztec Municipal Airport.
4. Each department has an annual training for stormwater educaon..I will scan the sign in sheet for the trainings and send to you
5. For public educaon we have pamphlets located in City Hall (After the Storm), (Scoop the Poop) located at the Animal Shelter and City Hall and Minium Park Kiosk.  
We have also done a booth with Public Works at the Naonal Nigh t Out event in July. I will send pictures.
6. We have two CFM on staff with the City: Steven Saavedra, City Planner and Steve Morse, City Engineer. I believe we have Zone AE mapped...if that means anything but I will invesg ate further.
7. The City maintains 36.7 miles of paved road with regular sweeping. We have 2.3 miles of gravel/dirt roads that we maintain with grading and mag chloride treatment for dust and erosion and we also sweep 7.4 miles of State Hwy that is inside the city limits. All of our sweeper dirt is stock piled at the PW yard and then hauled to the Bondad landfill as needed.

I hope this will help and I will connue t o get any further informaon y ou need. Do you think the pictures will help?

Laurie Martinez  
GIS Tech  
City of Aztec  
201 W Chaco  
Aztec, NM 87410

lmartinez@aztecnm.gov  
505.334.7663

---

**From:** David Reese <dreese@animasenvironmental.com>

**Sent:** Wednesday, December 4, 2019 10:03 AM

**To:** Laurie Marne z <Imarne z@aztecnm.gov>

**Cc:** Elizabeth McNally <emcnally@animasenvironmental.com>; Karen Lupton

<klupton@animasenvironmental.com>

**Subject:** MS4 Annual Report quesons

Dear Laurie Marne z,

We are working on compleng the NPDE S Phase II Small MS4 Annual Report for COA and SJC. The following are quesons tha t will allow us to complete the current report. Please complete. I will also contact the county with similar quesons.

From 7/1/17 to 6/30/19:

*How many reports of illegal dumping occurred?*

*How many construcon s tormwater permit Noc es of Intent (NOIs) lisng C OA as the owner or operator have there been? If any, provide names of project(s).*

*Any stormwater-specific training of city employees?*

*Any details on public educaon of s tormwater issues (such as a booth at county fair, brochures, newspaper ads)?*

*Any details on floodplain management educaon (proper use/de velopment of flood zones)?*

*How many miles of paved roads are swept in the City (43.6 before)?*

Thanks for your help,

David Reese

Environmental Sciens t

Animas Environmental Services

624 E Comanche St., Farmington, NM 87401

(505) 564-2281

## Appendix C

# Storm Water Monitoring Form

## Wet Weather and Sampling

Animas Environmental Services, LLC

\*\*\*To be completed quarterly & filed with SWPPP

<http://www.animasenvironmental.com>

Tel. (505) 564-2281 Fax (505) 324-2022

Project: Storm Water Quarterly Monitoring  
Client: \_\_\_\_\_  
Location: \_\_\_\_\_  
Inspector: \_\_\_\_\_  
Inspector's Title: \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

Project No.: \_\_\_\_\_  
Date: \_\_\_\_\_  
Time: \_\_\_\_\_  
Weather: \_\_\_\_\_  
Air Temperature: \_\_\_\_\_  
Amount of Rainfall (in): \_\_\_\_\_  
\_\_\_\_\_

OUTFALL Location:	Condition	Storm Water Accumulation? (Y/N)	Recent Spill (Y/N)	Notes & Actions Taken

1. Is there visible standing water at outfall location? If no, go to next question.

Check all that apply:

- |  |   |   |
|--|---|---|
| <input type="checkbox"/> Colored Water | <input type="checkbox"/> Murky            | <input type="checkbox"/> Stains                           |
| <input type="checkbox"/> Odor          | <input type="checkbox"/> Floating Objects | <input type="checkbox"/> Notable Difference in Plant Life |
| <input type="checkbox"/> Oily Sheen    | <input type="checkbox"/> Sludge Present   | <u>Comments/Notes:</u><br>_____<br>_____                  |
| <input type="checkbox"/> Clear Water   | <input type="checkbox"/> Suds             |   |

2. If no visible standing water at outfall location, check all that apply:

- |   |   |
|---|---|
| <input type="checkbox"/> Sludge Present | <input type="checkbox"/> Notable Difference in Plant Life |
| <input type="checkbox"/> Stains         |   |

Comments/Notes:  
\_\_\_\_\_  
\_\_\_\_\_

3. Describe any storm water flows and estimate flow rate:

4. Describe storm water samples collected, if any:

5. Describe any corrective actions to be taken:

6. Additional Notes and Water Quality Data:

Temp: DO: pH: Cond: ORP:

7. Next Inspection Scheduled for: