What's an MS4?

Presented by: Peter Bennett

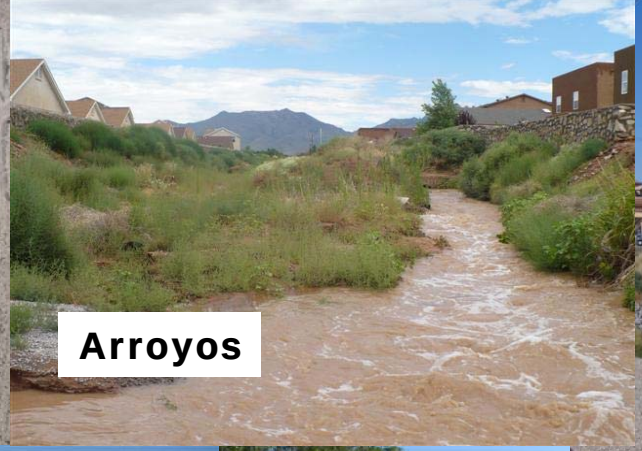
What's an MS4?

Municipal **S**eparate **S**torm **S**ewer **S**ystem

A conveyance or system of conveyances owned by a state, city, town, federal agency, or other public entity that discharges to waters of the U.S. and is:

- Designed or used for collecting or conveying stormwater
- Not a combined sewer
- Not part of a Publicly Owned Treatment Works (POTW)

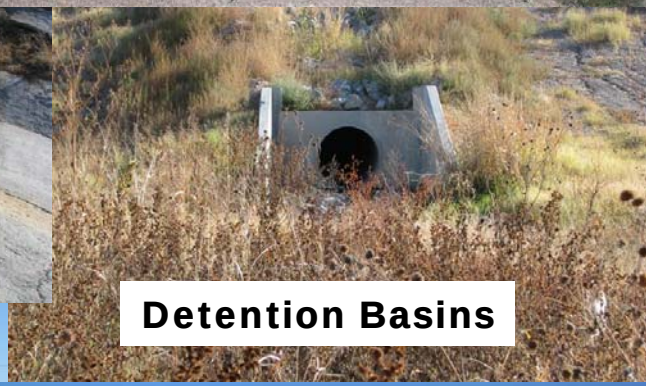
Drop Inlets


Arroyos

Culverts

Canals

Outfall Pipes


Detention Basins

Outfalls / Ditches

Spillways

Streets / Parking Lots

Stormwater Pollution Prevention

Regulatory History

1972: Clean Water Act (CWA) established to restore and maintain the chemical, physical, and biological integrity of the waters of the United States.

The National Pollutant Discharge Elimination System (NPDES) program was established to control point source discharges to the “Waters of the United States”

What is a SWMP?

SWMP – Stormwater Management Plan

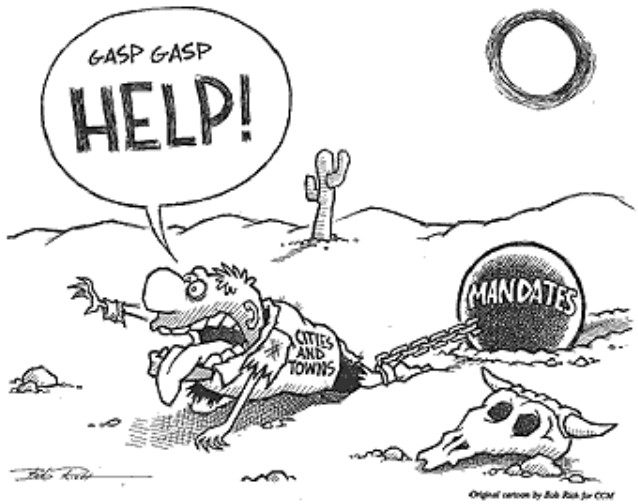
A program designed to reduce the discharge of pollutants to the maximum extent practicable (MEP) and effectively prohibit discharge of non-stormwater into the MS4.

MS4 Permit Requirements (40 CFR 122.32)

EPA NPDES General Permit Requirement for Phase II MS4 smaller municipalities with populations less than 100,000

Program requirements:

- ✓ Notice of Intent (NOI)
- ✓ Stormwater Management Plan
  (Six minimum control measures)
- ✓ Evaluation/assessment efforts and recordkeeping



MS4 Permit Requirements (Cont.)

General Permit

States which the EPA has permitting authority:

Alaska, Permit # ALR040001

Idaho, Permit # IDR040001

Massachusetts, Permit # MAR04100001

New Hampshire, Permit # NHR040000

New Mexico Permit # NMR04000

All other states have authorization to implement the NPDES Stormwater program.

Six Minimum Control Measures

1. Public education and outreach on stormwater impacts
2. Public participation and involvement
3. Illicit discharge detection and elimination
4. Construction site stormwater runoff control
5. Post-construction stormwater management in new development/redevelopment
6. Pollution prevention/good housekeeping for municipal operations

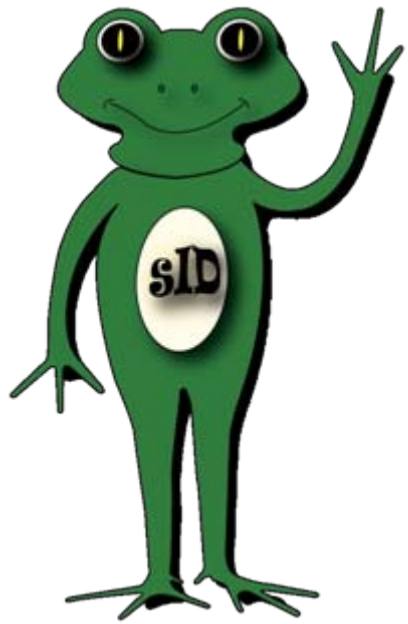
1. Public Education and Outreach

Implement a public outreach program by distributing educational materials about the impacts of stormwater discharges within our watershed.

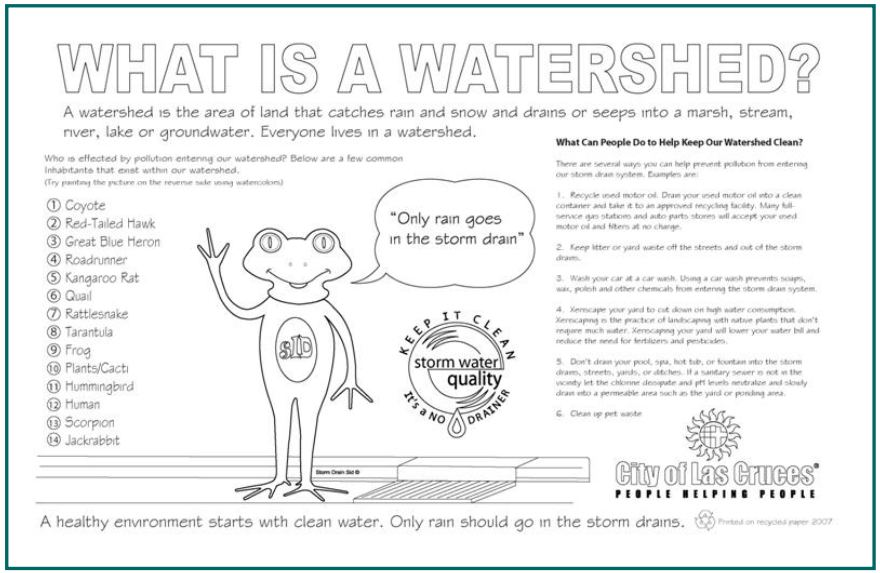
1. Public Education and Outreach (cont.)

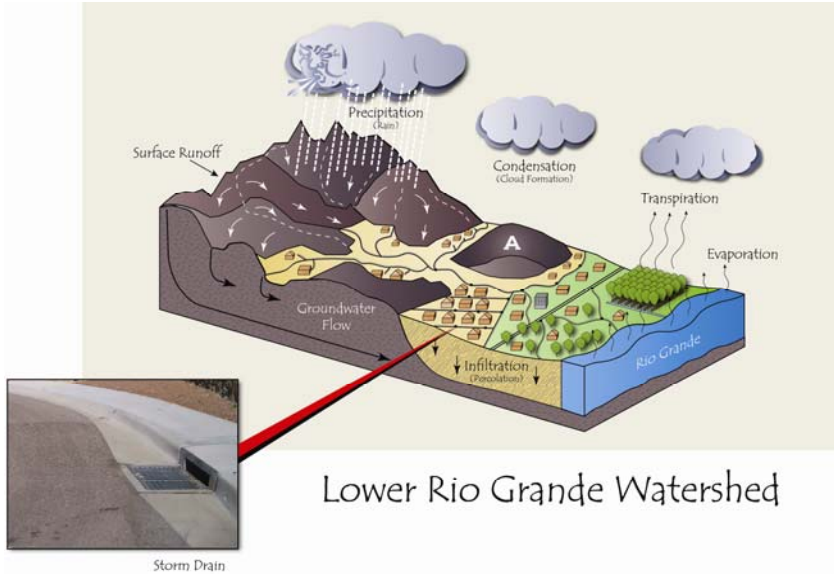
Examples:

- Classroom Education
- Community Events (Earth Day, State Fair, Science fairs etc.)
- Construction General Permit Education
- Public Service Announcements
- Pesticide Management
- Billboards/Outreach Campaigns



1. Public Education and Outreach (cont.)





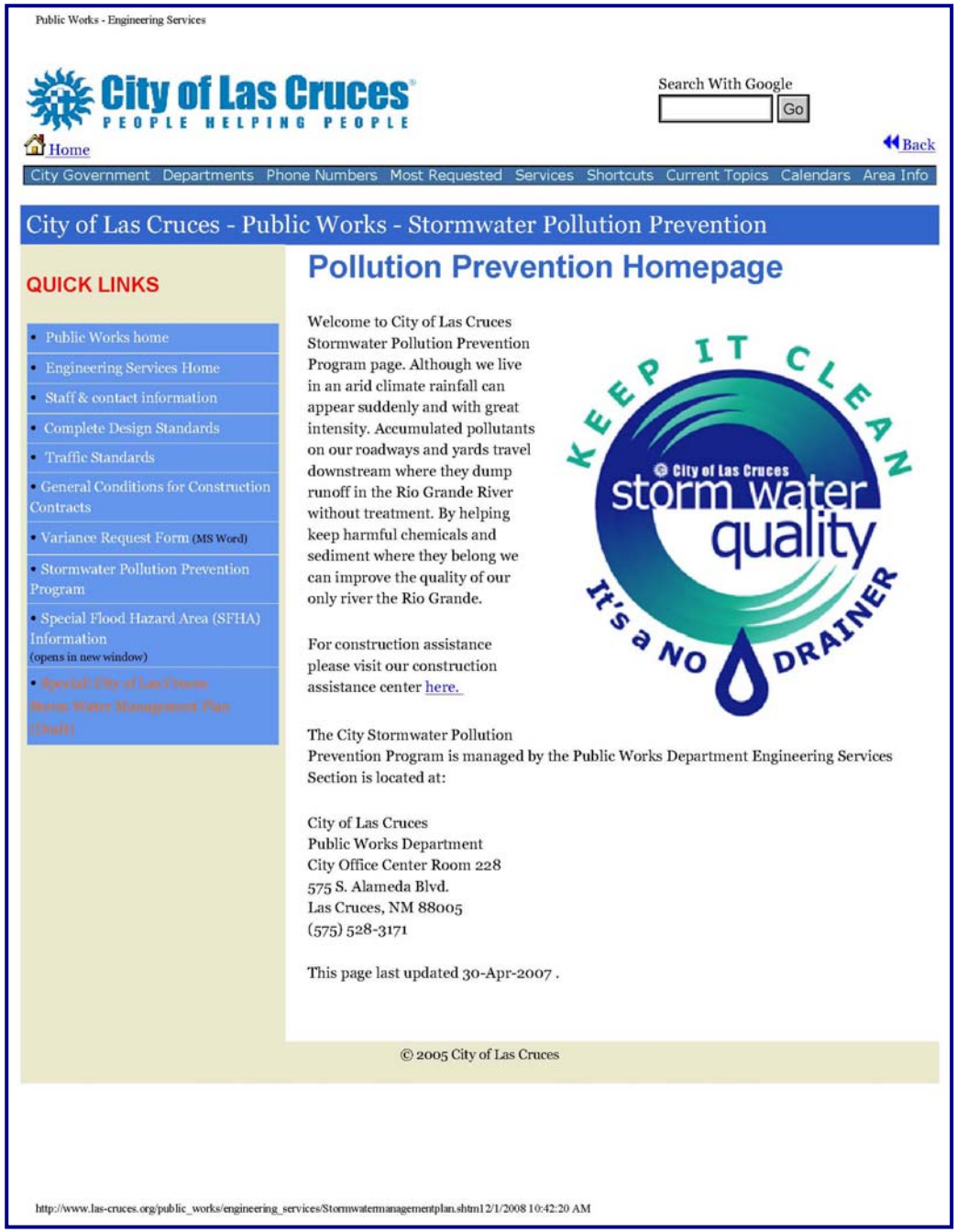
2. Public Involvement/Participation

- Encourage public involvement and participation in the development and implementation of the Stormwater Management Plan. (SWMP)

- Involve the public in identifying the problems and solutions to stormwater pollution.

Examples:

- Great American Cleanup
- Trek for Trash/Toss no Mas
- Neighborhood and watershed group involvement
- Adopt a Highway
- Keep Las Cruces Beautiful
- Website



Public Works - Engineering Services

City of Las Cruces
PEOPLE HELPING PEOPLE

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City Government | Departments | Phone Numbers | Most Requested | Services | Shortcuts | Current Topics | Calendars | Area Info

City of Las Cruces - Public Works - Stormwater Pollution Prevention

QUICK LINKS

- Public Works home
- Engineering Services Home
- Staff & contact information
- Complete Design Standards
- Traffic Standards
- General Conditions for Construction Contracts
- Variance Request Form (MS Word)
- Stormwater Pollution Prevention Program
- Special Flood Hazard Area (SFHA) Information (opens in new window)
- Special: City of Las Cruces Storm Water Management Plan (Draft)

Pollution Prevention Homepage

Welcome to City of Las Cruces Stormwater Pollution Prevention Program page. Although we live in an arid climate rainfall can appear suddenly and with great intensity. Accumulated pollutants on our roadways and yards travel downstream where they dump runoff in the Rio Grande River without treatment. By helping keep harmful chemicals and sediment where they belong we can improve the quality of our only river the Rio Grande.

KEEP IT CLEAN
City of Las Cruces
storm water quality
It's a NO DRAINER

For construction assistance please visit our construction assistance center here.

The City Stormwater Pollution Prevention Program is managed by the Public Works Department Engineering Services Section is located at:

City of Las Cruces
Public Works Department
City Office Center Room 228
575 S. Alameda Blvd.
Las Cruces, NM 88005
(575) 528-3171

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http://www.las-cruces.org/public_works/engineering_services/Stormwatermanagementplan.shtm12/1/2008 10:42:20 AM

2. Public Involvement/Participation (cont.)

Example: Stormwater Pollution Prevention homepage where the public can access relevant information such as the Stormwater Management Plan and Annual Reports.

The city's new stormwater webpage will include a public comment entry for areas of concern or for reporting illicit discharges and violations of the stormwater ordinance.

3. Illicit Discharge Detection & Elimination

- Develop, implement, and enforce a program to detect and eliminate illicit discharges into the small MS4.
- Develop a storm sewer system map, showing the locations of all stormwater infrastructure including outfalls, inlets, laterals, streets and structural BMPs.
- Visual inspections of stormwater infrastructure
- Adopt ordinances and regulatory measures prohibiting non-stormwater discharges to the MS4.

City of Las Cruces
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Storm Drain Evaluation/Maintenance Field Form

Date/Time Field Nov 26, 2008 **Address/location:** Motel Blvd.

Inspector(s): Peter Bennett **Form completed by:** PB

Latitude: 32 17'47.35710"N **Longitude:** 106 49'11.37513"W **GPS:** SD112610A_1.cor

Storm Drain Description Municipal outfall pipe N. of Transfer Station off Motel Blvd./Amador Blvd.

Dimensions: 72 **Observation:** **Pollutants:** Other

Dry weather flow?/Illicit discharges: ☐ Yes ☒ No **Violation:** ☐ Yes ☐ No

(If a violation is discovered refer to the storm water ordinance # 2146)

Type of maintenence required: ☒ Remove Trash/Debris ☐ Clean-out ☐ Requires Scheduled maint. ☐ Replace

Photos:

Place photo

Place photo

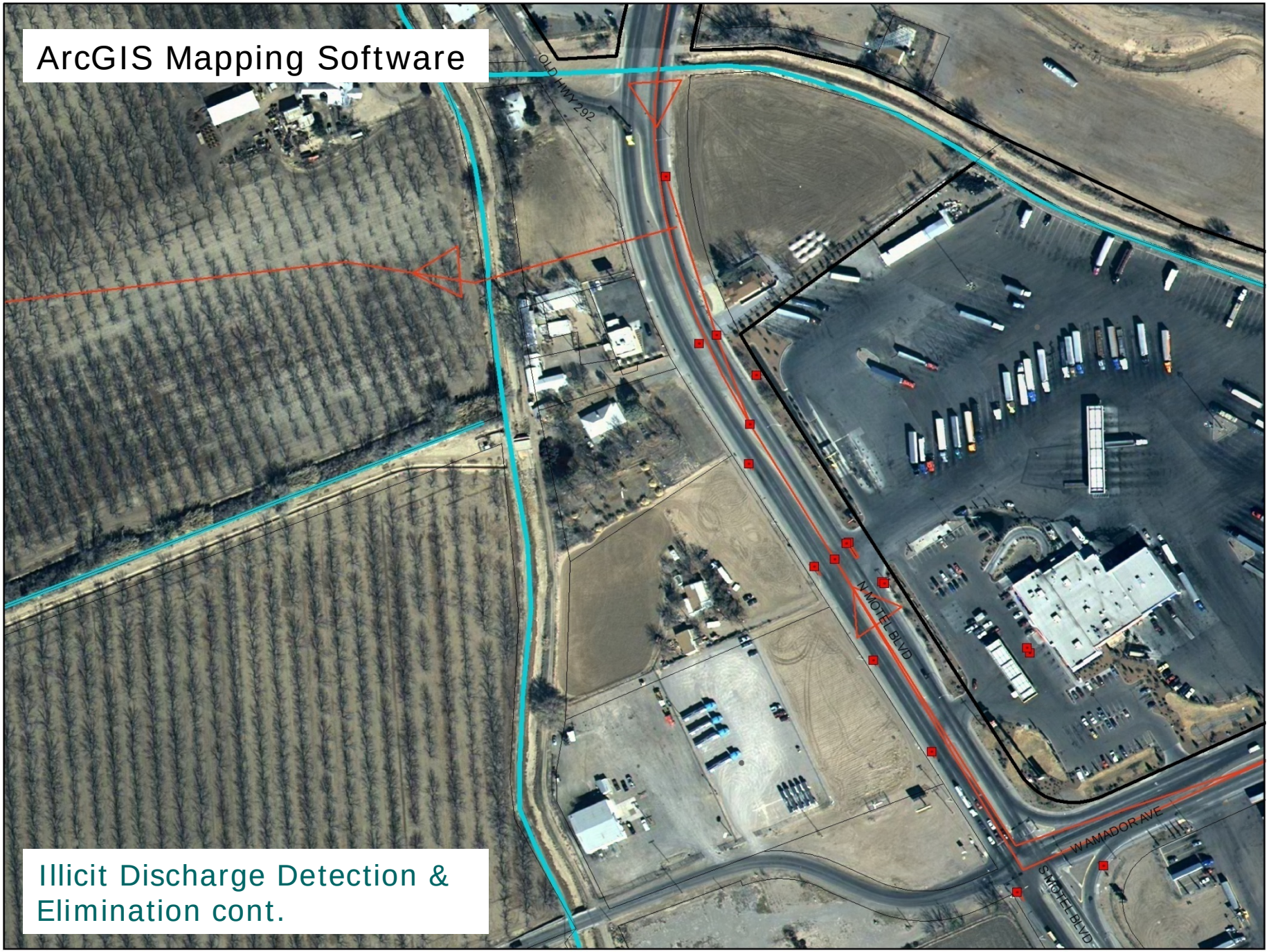
Place photo

Print Form

Field form for storm drain inspections and field observations.

Illicit Discharge Detection & Elimination cont.

ArcGIS Mapping Software



Illicit Discharge Detection & Elimination cont.

4. Construction Site Stormwater Runoff Control

- Develop, implement and enforce an erosion and sediment control program for construction activities that disturb 1 or more acres of land.
- Site plan reviews/erosion control plans
- Site inspections/enforcement

What is a SWPPP?

SWPPP – Stormwater Pollution Prevention Plan

A SWPPP is a site-specific, written document that:

- Assesses existing and proposed conditions
- Identifies potential sources of stormwater pollution at the construction site.
- Describes and identifies Best Management Practices (BMPs) to reduce pollutants and the volume of stormwater leaving the construction site.
- Identifies procedures the operator will implement to comply with the terms and conditions of a Construction General Permit (CGP)
- Is a narrative describing the timing and installation of BMPs from project start to finish.

5. Post-Construction Stormwater Management in New Development/Redevelopment

- Design Standards
- Arroyo Preservation/Open Space
- Low Impact Development (LID)
- Capital Improvements
- 2040 Regional Planning Project

6. Pollution Prevention/Good Housekeeping for Municipal Operations

Practice what you preach!

Pollution Prevention/Good Housekeeping for Municipal Operations (cont.)

- Municipal Operations; City fleet/vehicle maintenance
- Outfall Maintenance; (Stormwater outfalls, street sweeping, stormwater structural BMP cleaning & maintenance.)
- Hazard Communication; (MSDS, chemical handling, spill remediation, etc.)
- Municipal Employee Training
- Municipally-Owned Industrial Facility Inventory and Map (Landfills, quarries, airports, transfer stations, concrete/asphalt batch plants, etc.)

Status of our SWMP

The City is currently revising our SWMP for several key reasons.

- To include a Monitoring Assessment Plan that corresponds to the approved TMDL that was released on June 11, 2007.
- In response to deficiencies as noted in the EPA SWMP Technical Review.
- BMPs and implementation schedules are being refined to be more comprehensive.

Questions?

Show some style, scoop up the pile.
KEEP IT CLEAN
City of Las Cruces
storm water
quality
It's a NO DRAINER
City of Las Cruces
PEOPLE HELPING PEOPLE
Public Works, Engineering Services

Acronyms

NPDES National Pollutant Discharge Elimination System

Phase II MS4 Municipal Separate Storm Sewer

SWMP (Stormwater Management Plan)

SWPPP (Stormwater Pollution Prevention Plan)

BMP (Best Management Practice)

TMDL (Total Maximum Daily Load)

WLA (Wasteload Allocation)

MEP (Maximum Extent Practicable)

NOI (Notice of Intent)

NOT (Notice of Termination)

POTW (Publicly Owned Treatment Works)

LID (Low Impact Development)

GIS (Geographic Information Systems)

Stormwater Pollution Prevention

Stormwater Links:

http://cfpub.epa.gov/npdes/

http://cfpub.epa.gov/npdes/stormwater/authorizationstatus.cfm

http://www.epa.gov/region6/6wq/npdes/sw/sms4/index.htm

http://www.cicacenter.org/

http://www.stormwaterusa.com/stormwater_ccis.html

http://cfpub.epa.gov/npdes/stormwater/enoi.cfm

http://www.epa.gov/owow/tmdl/