

Who We Are

- The U.S. Fish and Wildlife Service is the principal federal agency responsible for conserving, protecting and enhancing fish, wildlife and plants and their habitats for the continuing benefit of the American people.
- The Service operates 595 national wildlife refuges, 69 national fish hatcheries, and over 80 ecological services field stations, including the:
 - US Fish & Wildlife Service, New Mexico Ecological Services Field Office, 2105 Osuna Road NE, Albuquerque, New Mexico 87113
 - Phone: 505-346-2525 or 800-299-0196; Email: R2FWE_AL@fws.gov
 - Website: <http://www.fws.gov/southwest/es/NewMexico/>
- The Service administers the Endangered Species Act, enforces federal wildlife laws, manages migratory bird populations, restores nationally significant fisheries and wetlands, and conserves and restores wildlife habitat.

Why We Are Here

The General Permit issued by Region 6 USEPA – authorizes small municipal storm water sewer (MS4) discharges and pollutants into waters that may contain threatened or endangered species or their critical habitat from 2007 until 2012.

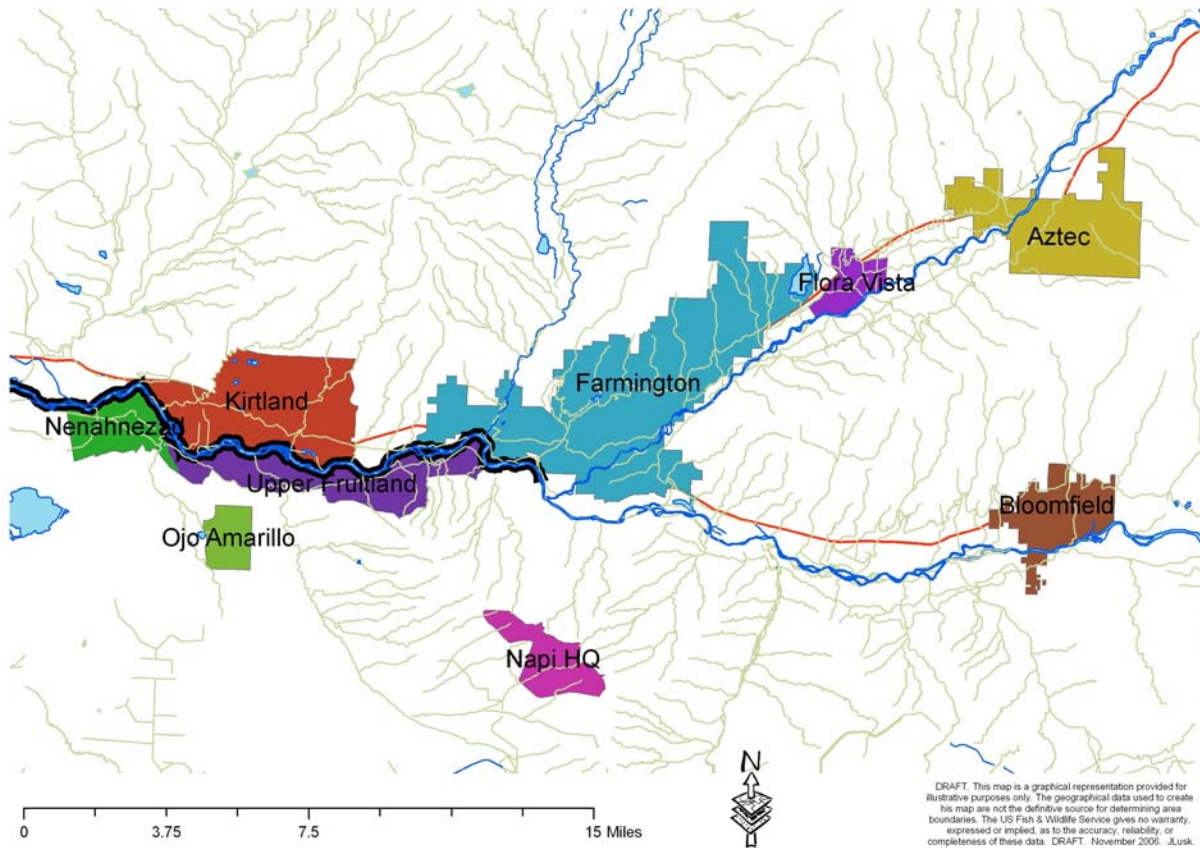
- Under the General Permit, Operators are subject to a variety of conditions and requirements, including a storm water management plan (SWMP), etc.
- Region 6 USEPA has designated MS4 Operators as their non-Federal representatives for the purposes of conducting the Endangered Species Act (ESA) consultation with the U.S. Fish and Wildlife Service, provided agencies are notified in writing.
- MS4 Operators are eligible for the General Permit, except if the storm water or its pollutants may jeopardize endangered or threatened species or harm their designated critical habitat. The Service uses a consultation process with Federal agencies in order to answer these questions (more on this later).

How Do We Find Information

- We provide county-wide lists of endangered and threatened species (and others) on our website at:
<http://www.fws.gov/southwest/es/newmexico/SBC.cfm>
- Critical Habitat mapping is available at our website:
<http://criticalhabitat.fws.gov/>
- Additional information can be found on our websites:
http://ecos.fws.gov/ecos_public/index.do
<http://www.fws.gov/angered/>
<http://www.fws.gov/angered/pubs/index.html>

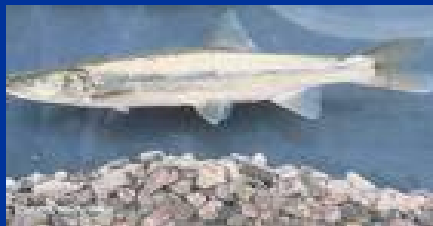
Are there Endangered Species in Northwest New Mexico ?

Municipalities along the San Juan River

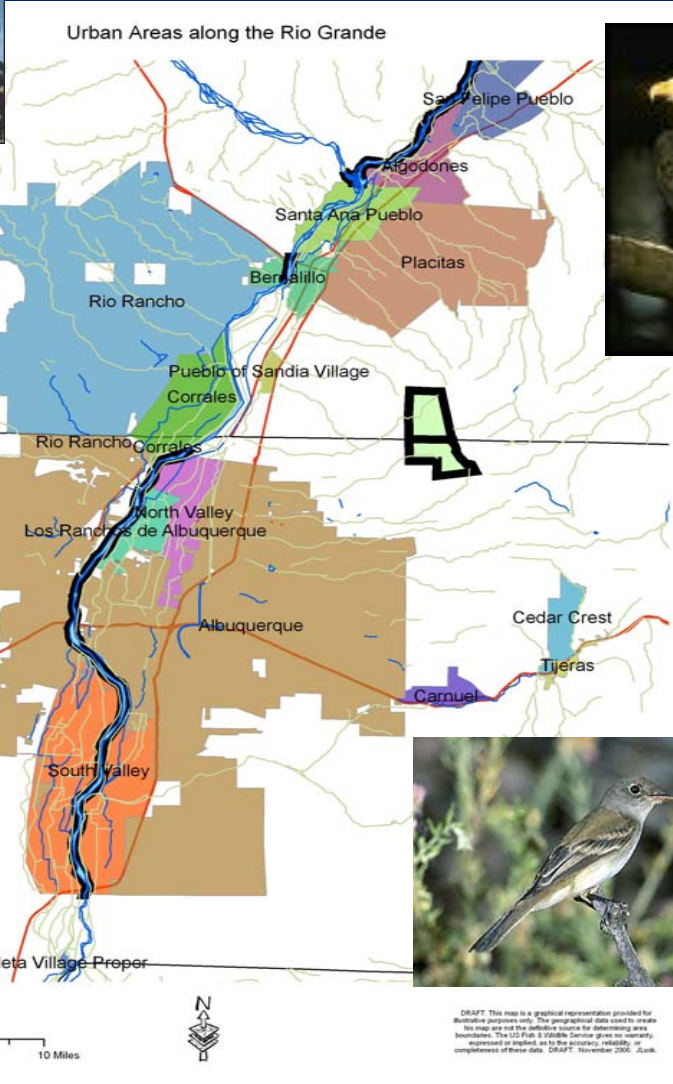


Federally-Listed Species

- Bald Eagle
- Colorado Pikeminnow and its Critical Habitat
- Razorback Sucker and its Critical Habitat
- SW Willow flycatcher
- Mesa Verde Cactus



Are there Endangered Species in North-central New Mexico ?



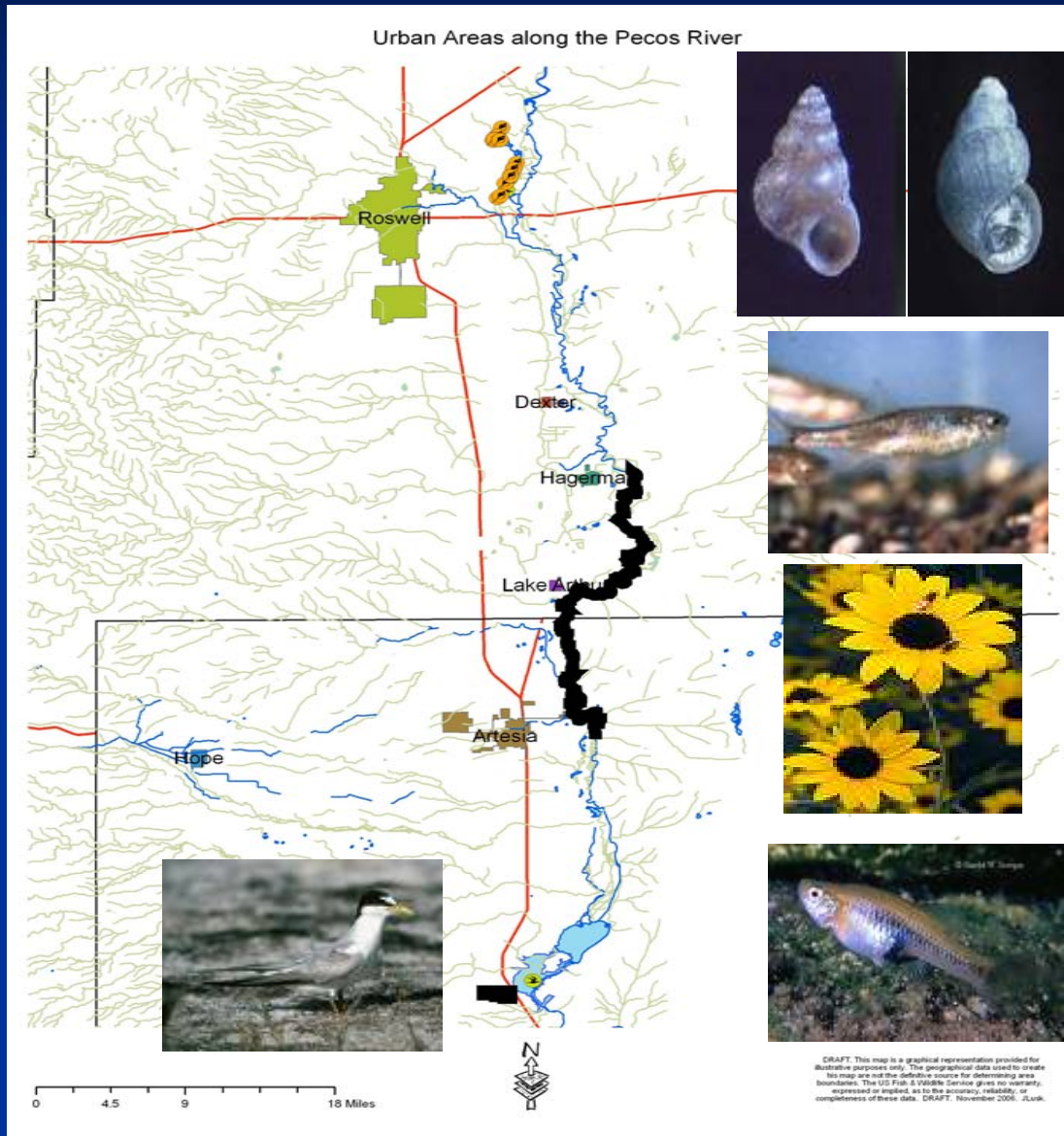
- Federally-Listed Species
- Bald Eagle
- Rio Grande Silvery Minnow and its Critical Habitat
- SW Willow flycatcher and its Critical Habitat

Urban Areas

- Bernalillo County unincorporated areas (North & South Valleys)
- Corrales
- Isleta Village
- Los Ranchos de Albuquerque
- Rio Rancho
- Santa Ana Pueblo



Are there Endangered Species in Southeast New Mexico ?



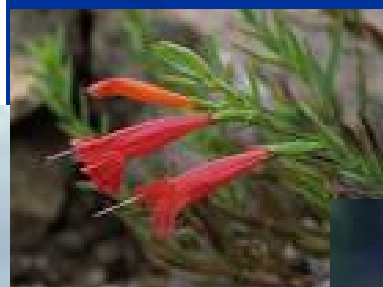
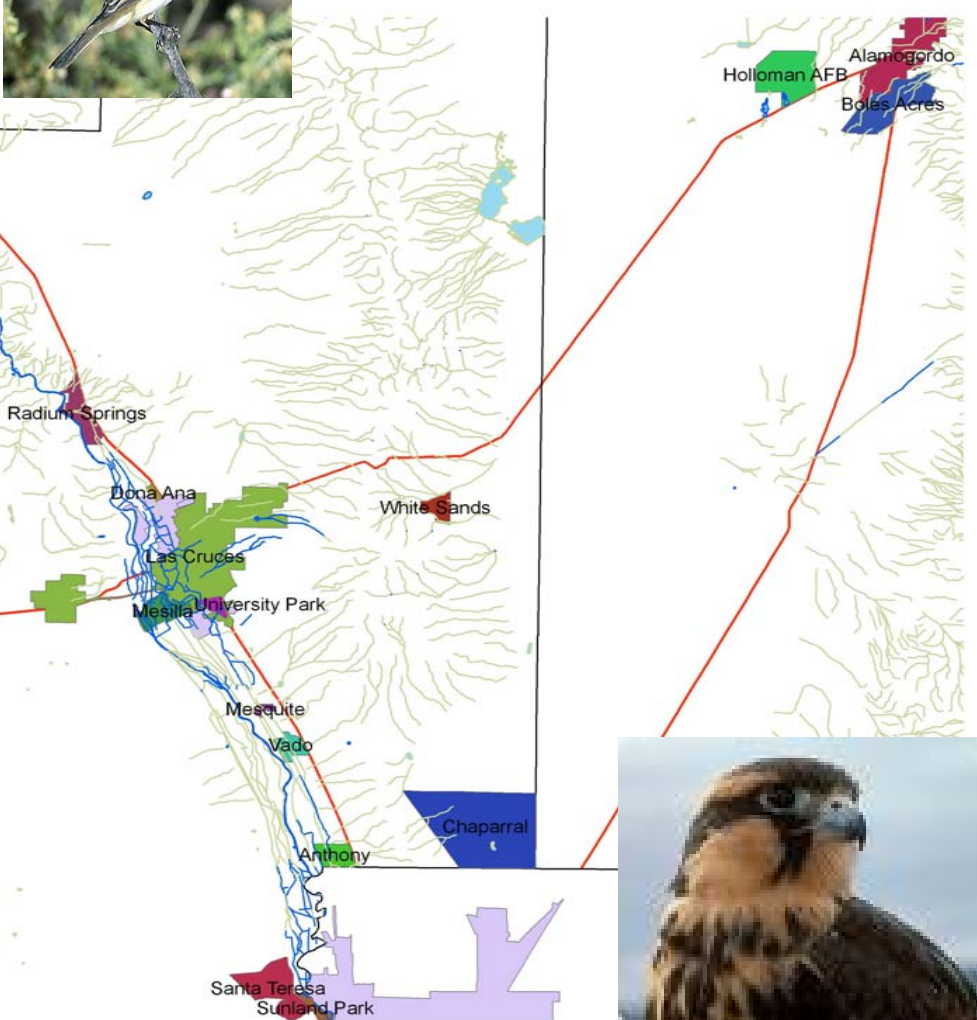
Urban Areas
Artesia
Dexter
Roswell

Federally-Listed Species
Pecos Bluntnose Shiner
Pecos Sunflower
Pecos Assimineia
Interior Least Tern
Pecos Gambusia
Roswell Springsnail

Are there Endangered Species in South-Central New Mexico ?



Urban Areas in South-Central NM

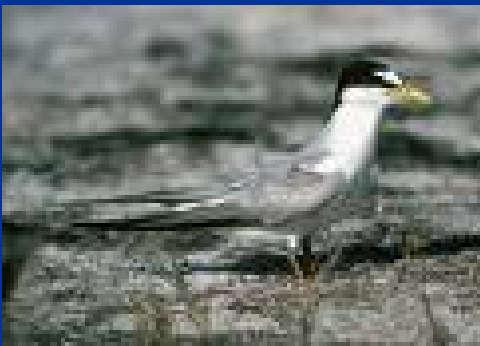


Urban Areas

- Alamogordo
- Anthony
- Dona Ana
- Dona Ana County
- Las Cruces
- Otero County
- Santa Teresa
- Sunland Park

DRAFT: This map is a graphical representation provided for illustrative purposes only. The geographical data used to create this map are not the definitive source for determining area boundaries. The US Fish & Wildlife Service gives no warranty, expressed or implied, as to the accuracy, reliability, or completeness of these data. DRAFT: November 2006. J.Lak.

Few Listed Species near these Urban Areas



Municipalities

Anthony

Agua Fria

Clovis

Deming

Dona Ana

Gallup

Hobbs

Las Cruces

Las Vegas

Santa Fe

Santa Teresa

Silver City

Sunland Park

Tesuque



Steps of an Endangered Species Act Section 7 Consultation

- **Obtain a Species List**
 - <http://www.fws.gov/southwest/es/newmexico/SBC.cfm>
- **Prepare a Biological Assessment or Biological Evaluation (180 days)**
- **Initiation Package**
- **Service's Response**
 - **Concurrence or Non-Concurrence (30 days)**
 - **Biological Opinion (135 days)**

Effects to Analyze

- What are the Beneficial Effects?
- What are the Direct Effects?
- What are the Indirect Effects?
- What are the Effects of Interrelated and/or Interdependent Activities?

Effects Analysis Considerations:

- Proximity of the action to listed species
- Listed species exposure potential
 - Distribution of species habitat and use (over space and time)
 - Distribution of stressors (over space and time)
- Also consider timing, duration, frequency, intensity, nature and severity of effects

Effects Analyses Examples

In habitat-based analysis, consider a species' response to changes like:

- Reductions in habitat quantity and quality
- Reductions in a needed resource
- Landscape fragmentation and barriers to movement
- Disruption of ecological processes that maintain a particular resource
- Changes in habitat conditions that benefit competitors

Biological Assessment Contents

Description of Listed Species/Critical Habitat

Project Description

Effects Analysis

Action Area Description

Other Information

Effects Determinations

Three Determinations for Listed Species

1. "No effect" determination – no further consultation required
2. Request FWS concurrence with an "may affect, is not likely to adversely affect" determination
3. Request formal consultation with FWS on a "may affect, is likely to adversely affect" determination

Determinations for designated critical habitat, proposed species and proposed critical habitat may also be necessary.

See Handouts for More Information:

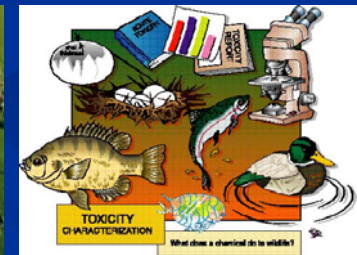
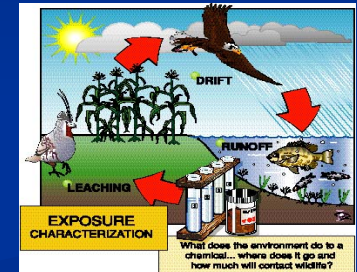
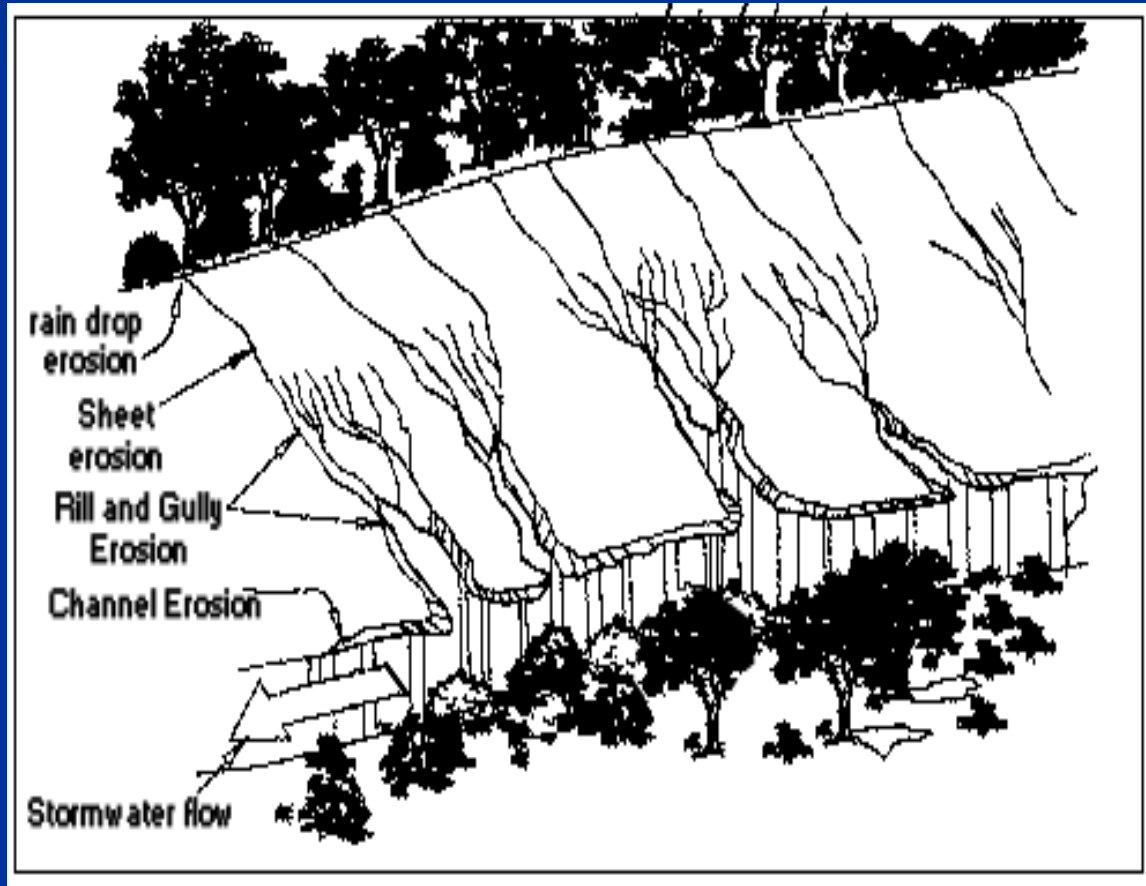
“Suggested Contents for Biological Evaluations and Biological Assessments”

“Outline Example for a Biological Assessment or Biological Evaluation”

There will also be 2 Biological Assessment workshops during January 22-27, 2007, here in Albuquerque, NM – information on handouts

How might Storm Water Discharges Affect Federally-Listed Species

“Hydrology, Habitat, Nutrients and Toxicity”

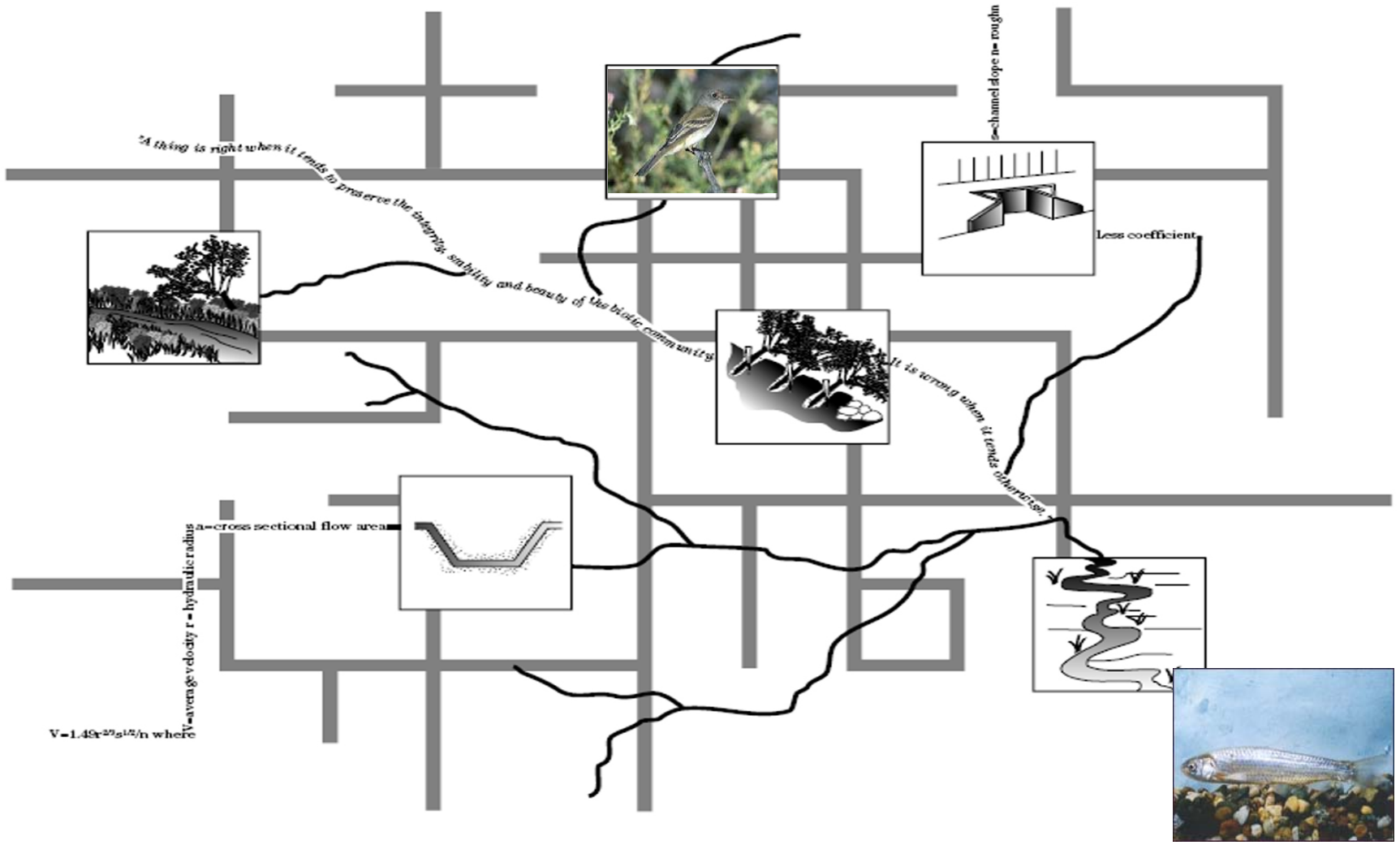


How Can A Storm Water Management Plan Address Listed Species ?

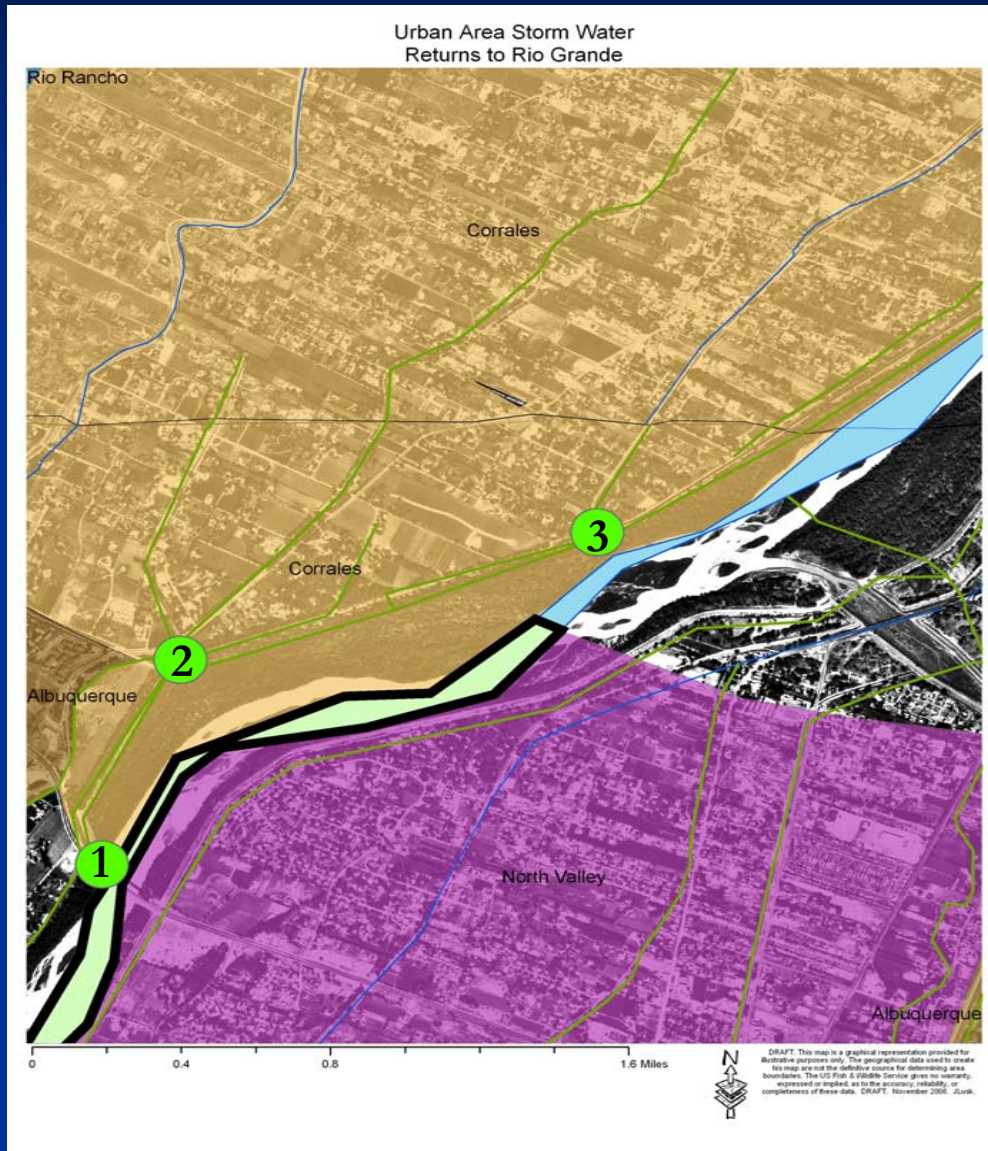
- Many of the components of a Storm Water Management Plan can address Endangered Species concerns, e.g. pollution prevention, outreach.
- Some components that may benefit listed species (M. A. P. M. M.)
 - Map existing Green Zones in storm water system.
 - Assess these areas for listed species and habitats.
 - Protect areas occupied or potentially occupied by species from storm water impacts.
 - Monitor storm water impacts and Manage for best results.

Map Existing Green Areas in System

Appropriate selection and application of streambank or shoreline protection measures should vary in response to specific objectives and site conditions (Aldo Leopold)



Assess these areas for listed species



Hypothetical Scenario

- Outfall Number 1 empties into occupied Rio Grande silvery minnow and flycatcher habitat
- Outfall Number 2 empties into suitable flycatcher habitat
- Outfall Number 3 empties into unoccupied ditch habitat

Storm Water Management Planning, Pollution Prevention, and Habitat Improvements at Outfall No. 1 may best benefit listed species and should be protected.

Protect areas occupied by Endangered species from storm water impacts

- Working hypothesis: As the proximity of storm waters discharges from nonpoint sources decreases, the likelihood for impacts increase.
- Storm Water Management Planning can focus protection on listed species and their habitat.
 - Buffer using Low Impact Development techniques
 - Increase pollution prevention outreach in watershed
 - Less hardscape, more bio-swales, riparian vegetation

Monitor storm water impacts and Manage for best results

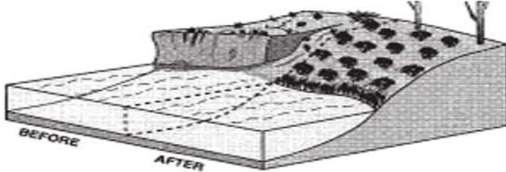
- Which storm water impacts affect endangered species habitat – erosion, changes in hydrology, fertilizers, organic materials, debris, pesticides, petroleum products, concrete, detergents, etc.
- In watersheds affected by erosion are vegetative stabilization and bioswale techniques available? Healthy vegetation prevents soil erosion, slows, infiltrates and cleans water, also sustains wildlife habitats.

Outfall Management Techniques

- Work with others, e.g., NRCS or USACE for engineering or native seed sources.
- In the Middle Rio Grande Valley, consider the habitat restoration designs identified by the City of Albuquerque and ESA Collaborative Program
See: <http://www.usbr.gov/uc/albuq/index.html> and
<http://www.usbr.gov/uc/albuq/envdocs/ea/minnorRefugia/index.html>

STREAMBANK TREATMENT

BANK SHAPING AND PLANTING



Regrading streambanks to a stable slope, placing topsoil and other materials needed for sustaining plant growth, and selecting, installing and establishing appropriate plant species.

Applications and Effectiveness

- Most successful on streambanks where moderate erosion and channel migration are anticipated.
- Reinforcement at the toe of the embankment is often needed.
- Enhances conditions for colonization of native species.
- Used in conjunction with other protective practices where flow velocities exceed the tolerance range for available plants, and where erosion occurs below base flows.
- Streambank soil materials, probable groundwater fluctuation, and bank loading conditions are factors for determining appropriate slope conditions.
- Slope stability analyses are recommended.

Questions?

- U.S. Fish & Wildlife Service

New Mexico Ecological Services Field Office

2105 Osuna Road NE

Albuquerque, New Mexico 87113

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