Riparian Area and Upper Watershed Condition
Riparian Areas

- Influences groundwater/surface water relationships
- Provides filters to improve water quality
- Provides habitat for diverse flora and fauna
Relationship to E-Flows

Uplands

- Source of highest snowpack and rainfall
- Stand density conditions may influence supply
- Complicated ground water/surface water interactions
- Land management influences water quality
Healthy Vegetative Communities → E-flows

- Understand
- Assess
- Treat
- Monitor
Handbook of Wetland Vegetation Communities of New Mexico

Volume I: Classification and Community Descriptions

Esteban Muldavin, Paula Durkin, Mike Bradley, Mary Stuever and Patricia Mehlhop
New Mexico Natural Heritage Program, Biology Department
University of New Mexico, Albuquerque, New Mexico 87131
2000

- Classification of wetland plant community types (135)
  - Forested wetlands (61)
  - Scrub-shrub wetlands (38)
  - Emergent or herbaceous wetlands (36)
- Descriptions include:
  - Geographic locations
  - Species composition
  - Hydrologic and soil characteristics
  - Ecological Dynamics
  - Conservation Status
State Assessment and Strategy

- Large landscape perspective
- Wall to wall, all jurisdictions approach
- Utilizes existing data
- Strengthen collaborative relationships
- Leverage federal, state and private money
Eight GIS Layers

- Forest Health
- Fragmentation
- Development Potential (Risk)
- Water Quality & Supply
- Fish & Wildlife (Biodiversity)
- Wildfire Risk
- Economic Potential (Development)
- Green Infrastructure

Water Quality and Supply
Models developed using multi-agency technical teams

Gathered existing databases

Identified data gaps

Best judgment/professional knowledge on how to use
The intent of the water quality & supply data layer is to emphasize landscapes that impact long-term watershed function in supplying sustainable public water supplies.
Water Quality & Supply

Water Quality & Supply Priority
- Low – Low risk and low value
- Low/Medium
- Medium
- Medium/High
- High - High risk and high value
<table>
<thead>
<tr>
<th>Rank</th>
<th>Data Gap Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>High</td>
<td>Statewide Wetlands Data Layer</td>
</tr>
<tr>
<td>High</td>
<td>Pollutant Source Identification for Impaired Reaches</td>
</tr>
<tr>
<td>High</td>
<td>WEPP model for Erosion Risk</td>
</tr>
<tr>
<td>High</td>
<td>Impairment Data for Ephemeral and Intermittent Reaches.</td>
</tr>
<tr>
<td>High</td>
<td>Surface Water Flow Trends over Time</td>
</tr>
<tr>
<td>High</td>
<td>Statewide Water Balance</td>
</tr>
<tr>
<td>High</td>
<td>Refined Cover Data Attributed with %Cover and Condition of Vegetation.</td>
</tr>
<tr>
<td>Medium</td>
<td>Statewide Grazing Layer</td>
</tr>
<tr>
<td>Medium</td>
<td>Ecological Site Description Crosswalk to Existing Landcover Types</td>
</tr>
<tr>
<td>Medium</td>
<td>Statewide Data on Gaining and Losing Reaches</td>
</tr>
<tr>
<td>Medium</td>
<td>Completion of a WRASTIC model for Surface Water Vulnerability</td>
</tr>
<tr>
<td>Medium</td>
<td>Statewide Parcel Data Attributed with County Zoning</td>
</tr>
<tr>
<td>Medium</td>
<td>Road Densities for Impervious Areas</td>
</tr>
</tbody>
</table>
The intent of this layer is to identify areas that provide habitat for plants and animals, including, but not limited to, threatened and endangered species.

Fish & Wildlife Priority

- Low - Least important habitat
- Low/Medium
- Medium
- Medium/High
- High - Most important habitat

T&E Potential Habitat

- TNC Fish Atlas
- TNC Cons Areas
- CWCS Key Areas
- WGA Corridors

Rare Plant Occurrence

Wildlife Occurrence
Example from Forestry’s Approach

- multiple priority maps based on state adapted national themes
- utilizing HUC12 summaries
- can take a similar approach to prioritizing priority areas for E-flows

www.allaboutwatersheds.org