Rio Grande Canalization
Conceptual Restoration Project

United States Section,
International Boundary and Water Commission

Daniel Borunda
December 15, 2009
Restoration Plan

- 30 Restoration sites developed by Corps
- Total estimated cost of $5,159,363.00
- Projects located throughout the 105-mile Flood Control Project (from below Percha to American Diversion Dam)
- Record of Decision signed June 4, 2009 commits to implementation
Implementation

- 10-year implementation period
  - Phase 1 – Year 1-5 studies and pilot projects
  - Phase 2 – Year 6-10 complete implementation
- Grazing Leases – Phased out
- Adaptive Management will guide the implementation of environmental measures
## Subreach 1 - Percha to Hatch Siphon

<table>
<thead>
<tr>
<th>Site Number</th>
<th>Site Name</th>
<th>River Mile and Bank</th>
<th>Acres</th>
<th>Target Riparian habitat(s)</th>
<th>Restoration Cost</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Trujillo</td>
<td>103 W</td>
<td>14.0</td>
<td>Dense riparian shrubs (SWWF)</td>
<td>$115,225</td>
</tr>
<tr>
<td>2</td>
<td>Jaralosa</td>
<td>94.9 E</td>
<td>4.5</td>
<td>Open riparian woodland</td>
<td>$157,350</td>
</tr>
<tr>
<td>3</td>
<td>Yeso Arroyo</td>
<td>94 W</td>
<td>10.6</td>
<td>Aquatic Habitat</td>
<td>$5,165</td>
</tr>
<tr>
<td>4</td>
<td>Yeso East</td>
<td>93.7 E</td>
<td>9.7</td>
<td>Open riparian woodland</td>
<td>$171,610</td>
</tr>
<tr>
<td>5</td>
<td>Yeso West</td>
<td>93.5 W</td>
<td>2.5</td>
<td>Aquatic Habitat</td>
<td>$12,260</td>
</tr>
<tr>
<td>6</td>
<td>Crow Canyon A</td>
<td>92 E</td>
<td>90.0</td>
<td>Riparian savanna &amp; shrubland</td>
<td>$213,925</td>
</tr>
<tr>
<td>7</td>
<td>Crow Canyon B</td>
<td>90.5 E</td>
<td>25.6</td>
<td>Dense riparian shrubs (SWWF) &amp; meadow</td>
<td>$69,980</td>
</tr>
</tbody>
</table>
Yeso East and West

Yeso East is a 9.7-acre, shallow depression (likely a former channel meander) through the center of the site.
Crow Canyon Sites

Crow Canyon A1 and A2 total 90 acres; Target habitat riparian savanna and shrubland.

Significant improvement in habitat quality would be realized by the cessation of mowing.
<table>
<thead>
<tr>
<th>Site Number</th>
<th>Site Name</th>
<th>River Mile and Bank</th>
<th>Acres</th>
<th>Target Habitat</th>
<th>Restoration Cost</th>
</tr>
</thead>
<tbody>
<tr>
<td>8</td>
<td>Placitas Arroyo</td>
<td>85 W</td>
<td>21.8</td>
<td>Aquatic Habitat</td>
<td>$4,010</td>
</tr>
<tr>
<td>9</td>
<td>Rincon Siphon</td>
<td>82.5 E</td>
<td>16.3</td>
<td>Dense Riparian Shrubs (SWWF)</td>
<td>$193,225</td>
</tr>
<tr>
<td>10</td>
<td>Angostura Arroyo</td>
<td>80 W</td>
<td>15.4</td>
<td>Aquatic Habitat</td>
<td>$5,100</td>
</tr>
<tr>
<td>11</td>
<td>Lack Property (Private)</td>
<td>71.5 E</td>
<td>51.0</td>
<td>Dense riparian shrubs (SWWF)</td>
<td>$831,905</td>
</tr>
</tbody>
</table>
Rincon Siphon

This site consists of two parcels, 4.5 and 11.8 acres in size that could potentially be inundated by the target restoration releases.
Angostura Arroyo Site

Improved in-channel aquatic habitat.
## Subreach 3 - Head of Seldon Canyon to Leasburg Diversion Dam

<table>
<thead>
<tr>
<th>Site Number</th>
<th>Site Name</th>
<th>River Mile and Bank</th>
<th>Acres</th>
<th>Target Habitat</th>
<th>Restoration Cost</th>
</tr>
</thead>
<tbody>
<tr>
<td>13</td>
<td>Broad Canyon Ranch Middle</td>
<td>67 W</td>
<td>13.8</td>
<td>Saltgrass Meadow</td>
<td>$64,500</td>
</tr>
<tr>
<td></td>
<td>(NMSP)</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>14</td>
<td>Broad Canyon Ranch South South</td>
<td>66.8 W</td>
<td>20.6</td>
<td>Saltgrass Meadow</td>
<td>$80,420</td>
</tr>
<tr>
<td></td>
<td>(NMSP)</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>15</td>
<td>Seldon Point Bar</td>
<td>66 E</td>
<td>6.9</td>
<td>Dense riparian Shrubs (SWWF)</td>
<td>$201,345</td>
</tr>
<tr>
<td></td>
<td>(Private)</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>16</td>
<td>Bailey Point Bar</td>
<td>64 E</td>
<td>16.6</td>
<td>Dense riparian Shrubs (SWWF)</td>
<td>$229,570</td>
</tr>
<tr>
<td></td>
<td>(Private)</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Site Number</td>
<td>Site Name</td>
<td>River Mile and Bank</td>
<td>Acres</td>
<td>Target Habitat</td>
<td>Restoration Cost</td>
</tr>
<tr>
<td>-------------</td>
<td>----------------------</td>
<td>---------------------</td>
<td>-------</td>
<td>-------------------------------------------------------</td>
<td>------------------</td>
</tr>
<tr>
<td>17</td>
<td>Shalem Colony</td>
<td>50.5 E</td>
<td>14.2</td>
<td>Screwbean mesquite &amp; Riparian grassland</td>
<td>$5,000</td>
</tr>
<tr>
<td>18</td>
<td>Leasburg Extension</td>
<td>47.8 E</td>
<td>4.1</td>
<td>Dense Riparian Shrubs (SWWF)</td>
<td>$117,600</td>
</tr>
</tbody>
</table>
Shalem Colony Site

As per June 2009 ROD, this 14.2 acre site will be made a permanent no-mow zone.
### Subreach 5 - Picacho Bridge to Mesilla Diversion Dam

<table>
<thead>
<tr>
<th>Site Number</th>
<th>Site Name</th>
<th>River Mile and Bank</th>
<th>Acres</th>
<th>Target Habitat</th>
<th>Restoration Cost</th>
</tr>
</thead>
<tbody>
<tr>
<td>19</td>
<td>Clark Lateral</td>
<td>43.5 E</td>
<td>6.0</td>
<td>Dense Riparian Shrubs (SWWF)</td>
<td>$147,335</td>
</tr>
<tr>
<td>20</td>
<td>Mesilla Valley Bosque Park</td>
<td>41.5 W</td>
<td>31.8</td>
<td>Riparian forest, shrubland, meadow &amp; grassland</td>
<td>$112,710</td>
</tr>
<tr>
<td>21</td>
<td>Mesilla East</td>
<td>41 E</td>
<td>15.8</td>
<td>Dense Riparian Shrubs (SWWF)</td>
<td>$486,370</td>
</tr>
</tbody>
</table>
Clark Lateral

A check dam and turnout within the Clark Lateral outfall channel would facilitate water delivery to a 6-acre cell, and surface flow would return to the wastewater outflow channel.

Target habitat: dense riparian shrubs (4.5 acres) and riparian forest (1.5 acres).
<table>
<thead>
<tr>
<th>Site Number</th>
<th>Site Name</th>
<th>River Mile and Bank</th>
<th>Acres</th>
<th>Target Habitat</th>
<th>Restoration Cost</th>
</tr>
</thead>
<tbody>
<tr>
<td>22</td>
<td>Berino West</td>
<td>25.5 W</td>
<td>10.3</td>
<td>Dense Riparian Shrubs (SWWF)</td>
<td>$282,720</td>
</tr>
<tr>
<td>23</td>
<td>Berino East</td>
<td>24.5 E</td>
<td>9.5</td>
<td>Dense Riparian Shrubs (SWWF) &amp; forest</td>
<td>$221,035</td>
</tr>
<tr>
<td>24</td>
<td>Vinton A</td>
<td>17 W</td>
<td>14.7</td>
<td>Riparian Forest</td>
<td>$171,228</td>
</tr>
<tr>
<td>25</td>
<td>Vinton B</td>
<td>16 W</td>
<td>20.0</td>
<td>Riparian Woodland</td>
<td>$201,500</td>
</tr>
</tbody>
</table>
The 14.7-acre Vinton A site is on the west bank of the river upstream from the Vinton Bridge.

This site was selected for the potential to over bank flood based on the FLO-2D model.
## Subreach 7 – Vinton Bridge to American Diversion Dam

<table>
<thead>
<tr>
<th>Site Number</th>
<th>Site Name</th>
<th>River Mile and Bank</th>
<th>Acres</th>
<th>Target Habitat</th>
<th>Restoration Cost</th>
</tr>
</thead>
<tbody>
<tr>
<td>26</td>
<td>Valley Creek</td>
<td>9 W</td>
<td>22.0</td>
<td>Riparian Woodland</td>
<td>$179,150</td>
</tr>
<tr>
<td>27</td>
<td>Nemexas Siphon</td>
<td>7 W</td>
<td>16.7</td>
<td>Dense riparian shrubs (SWWF)</td>
<td>$276,690</td>
</tr>
<tr>
<td>28</td>
<td>Country Club East</td>
<td>6.8 E</td>
<td>29.0</td>
<td>Riparian forest and woodland</td>
<td>$330,815</td>
</tr>
<tr>
<td>29</td>
<td>Sunland Park</td>
<td>4 E</td>
<td>28.8</td>
<td>Riparian woodland</td>
<td>$236,570</td>
</tr>
<tr>
<td>30</td>
<td>Anapra Bridge</td>
<td>3 E</td>
<td>11.0</td>
<td>Open riparian woodland</td>
<td>$35,050</td>
</tr>
</tbody>
</table>
The site is vegetated by a dense stand of the saltcedar, one of the largest stands found along the river downstream from Selden Canton. Several mature cottonwoods are present and coyote willow occurs in small patches, mixed with saltcedar. Site has great potential for SWWF habitat as they migrate north.
Stakeholder Input

- Meetings with key stakeholders conducted October 23rd and October 29, 2009
- Purpose was to prioritize the sites for Phase 1 Implementation
- American Recovery and Reinvestment Act of 2009 – USIBWC committed 1.5 million
- Need to implement some of the projects by September 2010
Current Status

- Identified projects by subreach
- Ecological benefit
- Cluster projects for each of the 7 subreaches
- Workgroup members have differing priorities and recommendations
- Additional data gathering activities required:
  - SWWF surveys before dense salt cedar removal
  - Water rights framework for those sites requiring additional water rights
Status Cont’d

- Different Options for Implementation
  - Public private partnership (USFWS/NFWF)
  - Interagency agreements
  - USIBWC Environmental Services IDIQ Consultants
- Potentially **ALL** are viable options during the 10-year implementation phase
QUESTIONS?

Conceptual Restoration Plan:
www.ibwc.gov/Organization/Environmental/canalization_esis.html

Record of Decision:
www.ibwc.gov/Files/ROD_River_Mgmt_Alt_RGCP.pdf