A companion document to the San Luis Valley Regional Habitat Conservation Plan

Prepared for the Rio Grande Water Conservation District and the State of Colorado Department of Natural Resources

Prepared by ERO Resources Corp.

April 2013
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Attachment – HCP Habitat Maps

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SAN LUIS VALLEY HABITAT CONSERVATION PLAN
IMPLEMENTATION HANDBOOK

APRIL 2013

Introduction
The riparian communities along the Rio Grande, Conejos River, and smaller tributaries in the San Luis Valley (Valley) provide habitat for two bird species listed under the Endangered Species Act (ESA): the endangered southwestern willow flycatcher (flycatcher) and the candidate yellow-billed cuckoo – referred to as the “covered species.” In 2012 the Rio Grande Water Conservation District (District) completed the San Luis Valley Regional Habitat Conservation Plan (HCP) in partnership with the six counties of the San Luis Valley floor, principal municipalities, the State of Colorado, and the U.S. Fish and Wildlife Service (Service). The purpose of the HCP is to provide for the long-term conservation of the covered species and their habitat while providing regulatory protection to the ongoing and routine agriculture, infrastructure, and conservation activities that are critical to the social and economic well-being of the Valley.

An HCP is a community-based plan to conserve endangered species habitat while allowing private land use and management to continue. Without a regional HCP, individual landowners could be regulated under the ESA on a case-by-case basis. A completed HCP is necessary to receive an Incidental Take Permit, which authorizes impacts to ESA-listed species and their habitat, provided certain conditions and assurances are met. The HCP was completed in 2012, and is being implemented under an Implementing Agreement between the participants and the Service, and Incidental Take Permits held by each participant.

About this Document
This Implementation Handbook is intended to provide a ready reference for the HCP Administrator, steering committee members, and others who are involved in long-term implementation. Compared to the full HCP document, this handbook provides a general summary of background information while focusing more on the details of implementation commitments and procedures. Readers are encouraged to refer back to the full, final HCP (approved November 2012) to resolve questions not addressed by this handbook.

Other HCP Documents
Several inter-related planning and approval documents were completed as part of the HCP development process:

- **Final San Luis Valley Regional Habitat Conservation Plan** – The Final HCP details the purpose of the HCP, background on the species, their habitat in the Valley, the covered activities and detailed assumptions to calculate impacts, implementation and mitigation commitments, monitoring and adaptive management, funding projections and assurances, and consistency with ESA requirements and the flycatcher recovery plan.

- **Implementing Agreement** – The final Implementing Agreement details the implementation commitments and assurances of the HCP, and is signed by all 12 permittees and the U.S. Fish and Wildlife Service.

- **Incidental Take Permits** – Each permittee received an Incidental Take Permit issued by the U.S. Fish and Wildlife Service based on the final approved HCP.
• **Environmental Assessment** – The Environmental Assessment describes alternatives considered, along with the direct, indirect, and cumulative effects of the HCP and other alternatives on human and environmental resources within the Valley to satisfy the requirements of the National Environmental Policy Act. This process culminated with a Finding of No Significant Impact by the Service.

• **County Enabling Resolutions** - Per the requirements of the HCP and Implementing Agreement, each county permittee adopted a resolution that authorizes HCP implementation, clarifies incidental take coverage, and provides direction for landowners and county staff in managing impacts that are not covered by the HCP.

• **Steering Committee Charter and Bylaws** – These documents outline the purpose, representation, authorities, and procedures of the HCP Steering Committee.

• **Habitat Quality Index Monitoring** – The Habitat Quality Index (HQI) is the basis for monitoring and adaptive management implementation. While the HQI specifics may be modified over time to reflect changes in habitat, technology, and preferred methodologies, the overall level of detail and approach should be maintained through the life of the HCP.

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**What is an HCP?**

The federal Endangered Species Act of 1973 (ESA) prohibits any person or entity from “taking” a listed threatened or endangered species. Take is defined as “to harass, harm, pursue, hunt, shoot, wound, kill, trap, capture, or collect, or to attempt to engage in any such conduct.” This definition also includes “significant habitat modification” that could impair essential behavioral patterns such as breeding, feeding, or sheltering (16 U.S.C. § 1531(18)). The ESA can be used to restrict activities on public or private lands that could result in take of an ESA listed species. The U.S. Fish and Wildlife Service is the agency responsible for enforcing the ESA.

A Habitat Conservation Plan (HCP) allows landowners/jurisdictions to take a listed species or its habitat if the taking is “incidental to, and not the purpose of...an otherwise lawful activity.” Individuals or government entities may develop an HCP in order to obtain an Incidental Take Permit, which authorizes activities to continue without the threat of additional ESA regulation.

HCPs are required to describe the following:

1. Activities to be covered
2. Impacts of the covered activities
3. Measures to minimize or mitigate the impacts
4. Monitoring to ensure effectiveness of mitigation
5. Funding and other assurances to ensure implementation
HCP Background

Goals of the HCP
The following goals provide the philosophical background for the HCP and a basis for its implementation. These goals and more specific objectives are described in the HCP.

**Incidental Take Coverage** – Allow landowners and units of government to conduct routine agricultural, infrastructure, and conservation activities unencumbered by concerns about ESA liability.

**Species Conservation** – Protect the habitat for the covered species in a manner that contributes to long-term recovery of those species.

**Riparian Habitat Conservation** – Provide a framework for and contribute to the long-term conservation and management of riparian habitat, beyond what is necessary for mitigation.

**Landowner and Community Outreach** – Provide landowners with the tools and information to manage and protect riparian habitat on private lands on balance with economic and land management needs.

**Inter-Agency Coordination** – Work closely with other federal, state, and local agencies to protect and enhance core habitat and buffer habitat areas and provide additional resources to riparian habitat conservation.

Scope of the HCP

**Covered Species**
- Southwestern willow flycatcher – listed as endangered
- Yellow-billed cuckoo – candidate for listing

**Geographic Area Covered**
- San Luis Valley floor within Alamosa, Conejos, Costilla, Rio Grande, Mineral and Saguache counties
- The HCP boundary is consistent with the U.S. Forest Service Boundary in most places, or county lines. The Forest Service boundary was chosen because it is a locatable property boundary that demarcates the limit of lower-elevation lands with mixed ownership (private, State, and BLM).
- Incorporated areas within Alamosa, Monte Vista, Del Norte, and South Fork, which have portions of the Rio Grande riparian corridor within their municipal boundaries, and/or have public infrastructure interests related to the Rio Grande corridor.
- Other incorporated cities and towns are excluded from HCP coverage, since no habitat for the covered species exists within their incorporated municipal boundaries.

**Time Period Covered**
- 30 years, extending from the date a permit is issued.
HCP Permittees

- Rio Grande Water Conservation District
- State of Colorado, Department of Natural Resources
- Alamosa County
- Conejos County
- Costilla County
- Rio Grande County
- Mineral County
- Saguache County
- City of Alamosa
- City of Monte Vista
- Town of Del Norte
- Town of South Fork

The Counties and municipalities seek coverage for their activities and the activities of their citizens. State of Colorado Department of Natural Resources coverage includes the activities of Colorado Parks and Wildlife, Division of Water Resources, Colorado State Land Board, and other DNR divisions. While each entity shares the responsibility of implementing and enforcing the provisions contained within the HCP, the Rio Grande Water Conservation District plays a central role in coordinating HCP administration.

Activities Covered

<table>
<thead>
<tr>
<th>Routine Agriculture</th>
<th>Community Infrastructure</th>
<th>Riparian Conservation and Restoration</th>
</tr>
</thead>
<tbody>
<tr>
<td>Common agricultural and irrigation management activities that are conducted by farmers, ranchers, and water managers as part of the Valley’s longstanding agricultural economy:</td>
<td>Common activities and facilities that are conducted or maintained by public and private entities to support the health, safety, economic capacity, mobility, and overall livability of the Valley:</td>
<td>Common activities that are conducted by public and private entities to improve the structure, function, and value of riparian habitat in the Valley:</td>
</tr>
<tr>
<td>- Grazing</td>
<td>- Vegetation removal from floodways</td>
<td>- Channel shaping and stabilization</td>
</tr>
<tr>
<td>- Fence construction and maintenance</td>
<td>- Levee construction and maintenance</td>
<td>- Habitat creation and restoration</td>
</tr>
<tr>
<td>- Ditch clearing and maintenance</td>
<td>- Sediment removal</td>
<td>- Weed management</td>
</tr>
<tr>
<td>- Water facility maintenance</td>
<td>- Infrastructure construction</td>
<td>- Wetland creation and management</td>
</tr>
<tr>
<td>- New small-scale water facility construction</td>
<td>- Infrastructure maintenance</td>
<td></td>
</tr>
<tr>
<td>- Water management and administration</td>
<td>- Road and bridge maintenance</td>
<td></td>
</tr>
</tbody>
</table>

Specific covered activities and their anticipated impacts are summarized below under Covered Activities, and are described in detail in Section 3.0 of the HCP. Most of these activities have been conducted by residents of the Valley for more than a century and are very important to the ongoing agricultural economy and overall economic sustainability in the Valley.
**Activities Not Covered by the HCP**
The following types of activities are *not* covered by the HCP:

- Development-related activities
- Construction of large-scale water projects or impoundments
- Construction or maintenance of sanitation or industrial water impoundments
- Highway construction
- Activities conducted, funded, or authorized by federal agencies (see below)

**Federal Activities not Covered by the HCP**
Under Section 7 of the ESA, federal agencies are required to consult with the Service if any action that is authorized, funded, or carried out by a federal agency has the potential to impact an ESA-listed species or its habitat. Non-federal entities or landowners are subject to this Section 7 consultation when activities they conduct are permitted, approved, or funded by a federal agency. Examples of activities that may create this type of “federal nexus” and therefore may require a Section 7 consultation are those requiring Clean Water Act (CWA) Section 404 permits, NRCS assistance programs, federal grazing permits, or U.S. Department of Transportation funding.

**Relationship to Critical Habitat Designation**
On January 3, 2013 the U.S. Fish and Wildlife Service issued a final critical habitat rule for the southwestern willow flycatcher. The Service designated critical habitat throughout six states, including portions of the Rio Grande and Conejos River in the San Luis Valley that lie within federal lands managed by the Bureau of Land Management and the Service.

All private and state lands within the San Luis Valley were excluded from critical habitat designation as a result of the HCP and private conservation initiatives. It is also important to consider the following:

- The HCP and critical habitat are separate designations, arising from separate processes and with separate requirements.
- The HCP provides incidental take coverage for non-federal activities on non-federal lands.
- Critical habitat requires consultation with the Service for federal actions or federally authorized/funded actions on federal lands that have been designated as critical habitat.
- Listed species and their habitat are protected by the ESA whether or not they are in an area designated as critical habitat.
- Critical habitat does not expand the Service’s authority over non-federal activities or those on private land, or change the incidental take coverage or assurances provided by the HCP.

Critical habitat designation, and its relationship to the HCP, has been a source of concern and confusion in the Valley. While the implications of this designation on federal land management or permitting decisions have yet to be determined, it does not diminish the importance or function of the HCP, or the protection the HCP provides, for landowners and local governments.
Covered Species and Habitat

Covered Species

Southwestern Willow Flycatcher
The southwestern willow flycatcher (*Empidonax traillii extimus*) was listed as endangered on March 29, 1995. The flycatcher also is listed as endangered by the State of Colorado. The flycatcher breeding season is from May 1 through August 15.

Critical habitat for the flycatcher was initially designated in Arizona, California, and New Mexico in 1997, and has since been adjusted, appealed, and re-designated. Most recently, a final critical habitat rule was issued in January 2013, excluding most of the habitat in the San Luis Valley covered by the HCP except for federal lands along the Rio Grande and Conejos Rivers. *See the text box on the previous page for more detail*.

Yellow-billed Cuckoo
In 1998, a petition was filed with the Service to list the western subspecies of yellow-billed cuckoo (*Coccyzus americanus occidentalis*) as a threatened subspecies or a distinct population segment. In 2001, the Service noted that listing was warranted as a distinct vertebrate population segment west of the Continental Divide, but precluded the listing due to higher priority listing actions (66 FR 38611, July 25, 2001). At the time of the completion of the HCP, *C.a. occidentalis* was not federally protected, but was considered a species of special concern by the State of Colorado.

What about Other Riparian Species?
What other current or potential Endangered Species Act (ESA) – listed species have been considered or may be suggested for inclusion in this HCP?

Bald eagle: The bald eagle was originally included in the HCP. In 2007 it was de-listed from the ESA as a result of conservation successes, and is still protected by the Migratory Bird Treaty Act and the Bald and Golden Eagle Protection Act.

The New Mexico meadow jumping mouse: The New Mexico meadow jumping mouse is a candidate species under the ESA. It uses moist, streamside, dense riparian/wetland vegetation up to an elevation of about 8,000 feet. No New Mexico jumping mice have been found in the San Luis Valley to date. Proposed listing and proposed critical habitat is expected in 2013 with final listing and designation of critical habitat in 2014.

Northern leopard frog: The northern leopard frog prefers the banks and shallow portions of marshes, wet meadows, ponds, lakes, and streams particularly where rooted aquatic vegetation is present. A candidate species in 2009, the Service in 2011 found that listing the northern leopard frog is not warranted at this time (76 FR 61896).

Rio Grande cutthroat trout: The Rio Grande cutthroat trout was determined to be a candidate for ESA listing in 2009. The species is known to occur in several higher-elevation mountain streams in the Rio Grande basin and are primarily on federal land.

Rio Grande silvery minnow: The Rio Grande silvery minnow was listed as federally endangered in 1994 and critical habitat was designated in 2003. The species currently persists in the Rio Grande in New Mexico, between Cochiti Dam and Elephant Butte Reservoir. Neither the minnow nor its critical habitat exist in the San Luis Valley.

Rio Grande sucker: The Rio Grande sucker is not listed under the ESA. It is a state listed endangered species restricted to the San Luis Valley and the Rio Grande Basin in Hot Creek and McIntire Springs.

Rio Grande chub: The Rio Grande chub is not listed under the ESA. It is a Colorado Species of special concern, restricted to small to moderate streams in the Rio Grande Basin.
Riparian Habitat

The HCP focuses on woody riparian habitat that provides the primary nesting substrate for the flycatcher and cuckoo. Riparian habitat in the Valley generally consists of a mosaic of woody trees and shrubs, wetlands, grasslands, and open water. The woody canopy includes stands of sandbar willow, peachleaf willow, crack willow, and broadleaf and narrowleaf cottonwood.

In addition to woody trees and shrubs, the riparian corridors in the Valley typically include wetlands and open water that are associated with irrigation and old oxbows, as well as wet meadows and grasslands that are often supported by irrigation and are used for pasture. These ancillary habitat areas are generally found within the 100-year floodplain of major streams and rivers.

The HCP does not address all wetland and riparian habitat types in the Valley. Outside of the woody riparian habitat areas that are the focus of the HCP, numerous areas throughout the Valley (such as the Monte Vista NWR and the wetlands in the Closed Basin) are renowned for their diverse open water, emergent wetland, and wet meadow habitat types. These areas, however, do not typically provide habitat for the covered species.

Riparian Habitat Mapping

For the purposes of the HCP, the existing woody willow and cottonwood components of riparian habitat was mapped along key drainages. Mapping the native woody riparian vegetation serves as an index to the overall riparian habitat that includes the associated wet meadow, slow-moving water, and herbaceous understory that are important components of the covered species’ habitat. The riparian habitat mapping is focused exclusively on the woody willow and cottonwood areas along streams and rivers that are known to have the greatest potential to support nesting habitat for the covered species, and are the primary interest of the HCP. The mapping does not include the adjacent wetland or open water components of the 100-year floodplain that provide foraging habitat for the covered species. For this reason, the woody riparian mapping is intended to be an indicator for the primary habitat needs of the covered species and is the quantitative baseline for the HCP. The woody riparian habitat mapping provides the basis for all of the habitat acreages and most of the impact estimates described in the HCP.

The riparian habitat mapping is intended to be an indicator of the general riparian system, and is not intended to specifically define the limits of what is and what is not habitat, and should not be used for site-specific regulatory purposes (see text box on following page for site-specific habitat guidelines).

Floodplain Mapping

The 100-year floodplain is included on many HCP maps to provide a frame of

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Habitat Mapping Methods

Baseline riparian habitat mapping was developed in 2005 and expanded in 2009 and 2011, based on aerial photography and field verification. In 2009, it was updated with current aerial imagery to reconcile any changes in habitat that may have occurred since the previous mapping. This repeat mapping resulted in a 0.6 percent increase in habitat, most of which was attributed to mapping errors (omitting several peripheral patches) rather than actual habitat changes. Besides ensuring the accuracy of the riparian mapping data, this exercise also demonstrated the overall stability of the riparian system and its resilience to drought and the ongoing impacts of the covered activities.

The Monitoring and Adaptive Management section of the HCP requires that riparian habitat mapping is updated every 10 years to identify landscape-scale changes and trends, revisit impact assumptions, and subsequent mitigation requirements. It is anticipated that the methods will change due to advances in remote sensing and mapping technologies.
reference for the habitat mapping. While most of the woody riparian habitat is within the 100-year floodplain, a relatively small proportion of the designated floodplain areas contain sufficient nesting habitat for the covered species.

Table 1. Riparian habitat mapping elements.

<table>
<thead>
<tr>
<th>Map Element</th>
<th>Area (acres)</th>
</tr>
</thead>
<tbody>
<tr>
<td>HCP plan area</td>
<td>2,904,639</td>
</tr>
<tr>
<td>100-year floodplain</td>
<td>101,247</td>
</tr>
<tr>
<td>Total riparian mapping</td>
<td>15,128</td>
</tr>
<tr>
<td>Willow-dominated habitat</td>
<td>5,109 (34%)</td>
</tr>
<tr>
<td>Cottonwood-dominated habitat</td>
<td>10,019 (66%)</td>
</tr>
</tbody>
</table>

Riparian Habitat Mapping by County

<table>
<thead>
<tr>
<th>County</th>
<th>Area (acres)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Alamosa County</td>
<td>1,811</td>
</tr>
<tr>
<td>Conejos County</td>
<td>6,461</td>
</tr>
<tr>
<td>Costilla County</td>
<td>1,679</td>
</tr>
<tr>
<td>Rio Grande County</td>
<td>3,963</td>
</tr>
<tr>
<td>Mineral County</td>
<td>487</td>
</tr>
<tr>
<td>Saguache County</td>
<td>727</td>
</tr>
<tr>
<td>Total</td>
<td>15,128</td>
</tr>
</tbody>
</table>

Site-Specific Habitat Guidelines

The HCP requires that local governments track and report permanent habitat impacts resulting from covered infrastructure construction. A common question is – what is, and is not, considered habitat?

Habitat for the covered species meets all of the following criteria:

1. Deciduous shrub vegetation
2. Average patch height greater than 5 feet
3. Patch width greater than 30 feet
4. Estimated canopy cover greater than 60%
5. Total patch size greater than 0.25 acre

Potential impact areas that do not meet these criteria are not considered to be habitat for the covered species, and do not need to be reported or mitigated.

A “patch” is a single cluster or grouping of small clusters of vegetation. Distinct patches are separated by a break in vegetation of 100 feet or more.
Riparian Habitat Examples
The following photos provide examples of woody riparian habitat in the San Luis Valley.

*Rio Grande above Alamosa*
*Alamosa National Wildlife Refuge*

*McIntire-Simpson Property*
*Conejos River*

*Roadside ditches (marginal habitat)*
*Pasture edges (marginal habitat)*
Covered Activities and Impacts

The HCP provides ESA coverage for a specific set of historical, existing, and ongoing agricultural and infrastructure activities. These covered activities and their impacts are summarized below and are described in detail in Section 3.0 of the HCP.

Routine Agriculture

- **Grazing** – Includes grazing of livestock on irrigated and non-irrigated pastures. Impacts assume that affected areas have previously been impacted, and will persist in their present state unless grazing is removed or increased. Impact estimations are based on habitat within mapped pasture areas, with increases consistent with projected industry trends.

- **Fence Construction and Maintenance** – Includes removal of willows to allow for fence installation or maintenance, which typically regenerates quickly. Impacts are infrequent and are assumed to be negligible.

- **Ditch Clearing and Maintenance** – Includes clearing of willows and cottonwoods from existing ditches and canals to ensure proper function. Assumed to occur every 5 to 10 years, with impact widths of between 8 and 20 feet from the edge of the ditch. Impacts were determined based on this frequency and width of clearing, and assumes that all ditches within the 100-year floodplain support riparian vegetation.

- **Water Facility Maintenance and Operations** – Includes disturbance impacts resulting from the maintenance of water wells, stream gages, and diversion structures. Impacts were based on the number of such facilities within the 100-year floodplain, and the frequency of access to those facilities.

- **New Water Facility Construction** – Includes installation of new facilities such as headgates and monitoring equipment, based on anticipated or recommended projects in long-term plans. Impacts assume a temporary footprint of between 500 and 8,000 square feet of habitat per project. (Note that many of these projects are subject to CWA Section 404 wetland permits, and therefore would not require incidental take coverage through the HCP).

- **Water Diversions, Reservoir Operations, and Flow Management** – Includes non-federal reservoir operations, water diversions, ground water pumping and management of water resources in compliance with state law and the Rio Grande Compact. The impacts of water management are expected to fluctuate over time; as some habitat areas are lost, others are gained. The overall impacts of these activities on riparian habitat are considered negligible.

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**Seasonal Timing of Activities**

The breeding season for the flycatcher is May 1 through August 15. Land managers and local governments are strongly encouraged to conduct activities that disturb habitat outside of the breeding season. This will minimize the actual impacts to the species’ contribute to their recovery, and support the long-term success of the HCP.

However, it should be clear that the covered activities are allowed to occur at any time. This allows land managers to conduct activities without hesitation at the time they are necessary. The impact calculations, mitigation commitments, and incidental take permits are calculated assuming that they occur within the breeding season.
Community Infrastructure

- **Vegetation Removal from the Floodway** – Includes clearing of up to 4 acres of native riparian vegetation per lineal mile of river each year to allow for floodway maintenance by local governments. Impacts would be up to 14 acres per year.

- **Levee Improvement and Maintenance** – Includes non-federal levee upgrades and maintenance by local governments. Impacts were based on anticipated minor and major levee repairs and improvements, up to about 0.02 acres per year.

- **Sediment Removal and Spoils Disposal** – Includes the removal of sediment from the Rio Grande floodway to improve flood conveyance. The impacts were considered negligible.

- **Infrastructure Construction** – Includes construction of public infrastructure including (but not limited to) roads and bridges, water or sewer lines. Does not include private infrastructure, or activities requiring a CWA Section 404 wetland permit. Permanent impacts would be up to 0.9 acres per year.

- **Infrastructure Maintenance** – Includes access to and maintenance of public infrastructure such as roads and bridges or water and sewer lines. Does not include activities requiring a CWA Section 404 wetland permit. The impacts were considered negligible.

Riparian Conservation and Restoration

- **Habitat Creation, Restoration, and Protection** – Includes fencing to manage livestock, planting native vegetation, or river restoration work. Does not include activities requiring a CWA Section 404 wetland permit. The impacts were considered negligible.

- **Weed Management** – Includes non-chemical methods to control or minimize invasive or noxious weeds, including salt cedar. Does not include herbicide use, which is covered through a separate regulatory process. The impacts were considered negligible.

- **Wetland Creation and Management** – Includes the installation of wetland vegetation, and their removal for habitat maintenance purposes. Does not include activities requiring a CWA Section 404 wetland permit. The impacts were considered negligible.

Impact Contingencies

Several of the covered activities occur on an ad hoc basis and have impacts that are exceedingly small and/or are impossible to quantify. These activities with negligible impacts, however, still have the potential to result in localized impacts to the covered species. Therefore, an additional contingency pool of 18 acres is mitigated to account for negligible impacts.
Impact Summary
The impacts of the covered activities were quantified for the HCP based on GIS mapping and information about the typical impacts of common management practices. For each activity, a range of estimated impacts was calculated to account for variables and uncertainty. A summary of impacts is provided in Table 2.

The following notes and assumptions are important to understanding the impact calculations:

- The total impact from the covered activities to be mitigated is 304.2 acres over 30-year permit term (270 in annual temporary impacts + 34.2 estimated permanent impacts).
- Due to the temporary, rotating nature of the impacts and subsequent regeneration of impacted areas, most of the estimated annual impacts of the covered activities are temporary and do not accumulate over multiple years (i.e., the temporary impacts are not additive over the life of the HCP).
- While the impact analysis found a range of potential temporary impacts in any given year (between 37 and 270 acres), the Permittees will mitigate at the high end of the range.

While many of the impacts are believed to occur to habitat patches that are too small to support the covered species (0.25 acre for the flycatcher); those impacts are still counted and mitigated by the HCP.

Rotating Matrix Concept
A key dynamic influencing this HCP is the “rotating matrix” of impacts that result from most of the covered activities. The localized, small, individual impacts of each activity are scattered among hundreds of landowners and thousands of acres of habitat each year. In subsequent years, vegetation in impacted areas regenerates as other localized areas are impacted. In addition, some new habitat areas develop due to expansion and succession. On balance, the vast majority of the habitat remains intact and undisturbed. This pattern of impacts and regeneration has been in place for over 100 years, and will continue into the future.

Table 2. Summary of impacts.

<table>
<thead>
<tr>
<th>Covered Activity Type</th>
<th>Annual Temporary Impacts (acres/year)</th>
<th>Permanent Impacts (acres/year)</th>
<th>Maximum Permanent Impacts over 30 years (acres)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Routine Agriculture</td>
<td>33 - 247</td>
<td>0 – 0.24</td>
<td>7.2</td>
</tr>
<tr>
<td>Community Infrastructure</td>
<td>4 - 21</td>
<td>0 – 0.9</td>
<td>27</td>
</tr>
<tr>
<td>Conservation and Restoration</td>
<td>0 – 2</td>
<td>None</td>
<td>None</td>
</tr>
<tr>
<td>Maximum Total Impact</td>
<td>270</td>
<td>1.1</td>
<td>34.2</td>
</tr>
<tr>
<td>Percent of Habitat</td>
<td>1.8%</td>
<td>0.01%</td>
<td>0.2%</td>
</tr>
</tbody>
</table>

* Based on 15,128 acres of riparian habitat on state and private lands mapped for the HCP.

A summary of HCP implementation commitments is provided in Table 3 (following page).
<table>
<thead>
<tr>
<th>Topic</th>
<th>Tool</th>
<th>Purpose</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Impact Mitigation</strong></td>
<td>- Conservation easements</td>
<td>Mitigate the impacts of the covered activities through the conservation and enhancement of high quality habitat areas.</td>
</tr>
<tr>
<td></td>
<td>- Habitat restoration/enhancement</td>
<td></td>
</tr>
<tr>
<td></td>
<td>- Habitat management agreements</td>
<td></td>
</tr>
<tr>
<td><strong>Core Habitat Conservation</strong></td>
<td>- Federal lands management</td>
<td>Ensure that federal and state lands that currently support the covered species continue to provide a foundation of Core Habitat.</td>
</tr>
<tr>
<td></td>
<td>- SWA habitat management</td>
<td></td>
</tr>
<tr>
<td><strong>Education and Outreach</strong></td>
<td>- Landowner notification</td>
<td>Reduce long-term riparian habitat impacts by providing technical information, and showing the benefits of the HCP and overall habitat conservation.</td>
</tr>
<tr>
<td></td>
<td>- Community outreach</td>
<td></td>
</tr>
<tr>
<td></td>
<td>- Staff education</td>
<td></td>
</tr>
<tr>
<td><strong>HCP Administration</strong></td>
<td>- District staff support</td>
<td>Facilitate efficient and effective HCP implementation, and foster conservation partnerships.</td>
</tr>
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<td><strong>Monitoring and Adaptive Management</strong></td>
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<td>Monitor the suitability of mitigation lands, confirm the accuracy and effectiveness of the HCP and its assumptions, and respond to problems and uncertainties.</td>
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HCP Mitigation Tools

This section describes the general approach and the specific tools available to reach and maintain the mitigation commitments in the HCP. Recognizing that implementation is a dynamic process, the HCP provides a wide variety of mitigation tools that can be used to satisfy the mitigation commitments.

Impact Mitigation Approach

The cornerstone of HCP implementation is mitigation of the habitat impacts that occur due to the covered activities. This mitigation approach emphasizes on-the-ground conservation and enhancement of a sufficient number of acres of riparian habitat at a specified level of habitat quality. HCP mitigation is based on the following approach:

- The District will maintain sufficient mitigation credits to offset the impacts of the covered activities.
- Mitigation credits to offset temporary impacts will be secured within five years of HCP implementation (permanent impacts will be tracked and mitigated annually).
- Mitigation credits obtained on private lands are on a voluntary basis, at the discretion of the landowner, as executed through a Landowner Cooperative Agreement.
- Efforts to locate and secure mitigation lands will be conducted by the District (including the HCP Administrator) with the assistance of other Permittees.
- The cost of locating, securing, monitoring, and maintaining mitigation lands will be based on the availability of suitable mitigation land and willing landowners.
- To encourage federal-non-federal partnerships, mitigation credits may be obtained through federal conservation programs at a level that is proportional to the non-federal contribution.
- Funding required to implement the mitigation commitments can vary widely, depending on the number, type, size, and quality of mitigation lands that are established.
- It is expected that some individual mitigation parcels may come and go during the 30-year term of the HCP (due to localized habitat degradation or terminated landowner agreements), and will be replaced by additional mitigation acres in other locations.
- While most of the impacts occur in marginal habitat areas, mitigation tools will be focused on core habitat and buffer habitat areas, which provides an added conservation benefit for the covered species.
Conceptual Mitigation Approach
This diagram illustrates a general approach to HCP mitigation. Individual mitigation credits (acres) are obtained from different sites, based on the presence of suitable habitat at those sites. The total number of mitigation credits must be greater than the mitigation need (based on impacts) for the HCP to function properly.

| Mitigation Site A | 125 acres |
| Mitigation Site B | 65 acres  |
| Mitigation Site C | 45 acres  |
| Mitigation Site D | 60 acres  |
| Total Mitigation Credits | 295 acres |
| Total Mitigation Need | 270 acres |
| Balance | + 25 acres |

Conservation Easements
The District and other Permittees will work with individual landowners and land trusts to identify private lands that are protected by existing or potential conservation easements as mitigation opportunities.

Conservation Easement Eligibility Criteria
1. Easement Suitability. Conservation easements vary widely depending on the easement holder, funding sources, and particular land use and management restrictions that are written into the easement. For this reason, a variety of easement types may be eligible for mitigation.

High quality habitat areas that are currently protected by a conservation easement are eligible for potential inclusion in the HCP mitigation program if they meet all of the following minimum criteria:

- Provides long-term protection from development.
- Identifies and documents conservation values or conservation purposes that include the protection of a relatively natural habitat of fish, wildlife, or plants; or similar ecosystem (per 26 USC § 170(h)(1)); or more specifically, riparian habitat or wildlife habitat.
- Restricts, precludes, or manages activities that would impair riparian habitat.
• Has a demonstrated connection to HCP implementation or flycatcher conservation through grant funding requests, easement documents, or other means.
• Allows access for habitat quality monitoring.

2. Landowner Cooperative Agreement. Enrollment of conservation easements in the HCP mitigation program will be executed through a Cooperative Agreement between the landowner and the District (described below). This agreement is not intended to be included as part of the Deed of Conservation Easement, which is negotiated between the landowner and a land trust. Instead, it is a separate overlay agreement between the District and the landowner that is negotiated and executed in partnership with the easement holder.

3. Additional Provisions. Potential HCP mitigation lands under conservation easement that do not demonstrate a strong enough commitment to habitat protection, HCP implementation, or covered species conservation can be strengthened through additional habitat management provisions. These provisions would be added to the Cooperative Agreement (below) on a voluntary basis, and would be monitored by the District. Habitat management provisions that are sufficient to protect or improve riparian habitat would be developed on a case-by-case basis by District staff and the landowner, with input from the steering committee.

4. Federally-funded Easements. Easements that are primarily funded or held by a federal agency (such as the NRCS or the Service) may be eligible for limited HCP mitigation credit, proportional to the non-federal contribution to the easement (e.g., state or local funding contributions or landowner donations). The eligibility and conditions of including federally-funded easements is described in greater detail below under Federal Programs.

5. Habitat Monitoring. While the protections of the conservation easement make a parcel eligible for HCP mitigation, the true value of the parcel is in the quality of the protected habitat. Mitigation credits will be determined through field monitoring and mapping. Ongoing habitat quality monitoring will ensure that mitigation lands are of sufficient quality (based on overall conditions and comparison to reference sites).

Easements that were put in place during development of the HCP (2004-2012) may be suitable for HCP mitigation if they are located on non-federal lands in the plan area, have been purchased with funds from the District and/or the State of Colorado, and have documents related to them stating they have been purchased, at least in part, to support HCP implementation.
Landowner Cooperative Agreements
Private lands that contain high quality riparian habitat, are subject to the protections of a conservation easement or are being restored or enhanced, can be enrolled in the HCP mitigation program through a cooperative agreement. The cooperative agreement includes the following provisions:

1. Validates the landowner’s participation in the HCP mitigation program
2. Allows periodic access by the District or their representative for habitat monitoring, and by the Service for monitoring review
3. Acknowledges the voluntary nature of the landowner’s participation
4. Contains standard liability, notification, and severability conditions
5. Additional habitat management provisions, if needed

A sample landowner cooperative agreement is provided in Appendix B of the HCP.

HCP-Specific Easement Acquisition
The District, other Permittees, and HCP implementation partners may also pursue conservation easements (either donated or acquired) that are specifically drafted to address and provide HCP mitigation. Besides the criteria described above, such a conservation easement also would include more specific language about habitat for the covered species and its direct relationship to the HCP, as well as more-specific habitat management and conservation provisions. A separate cooperative agreement would not be necessary.

It may be in the interest of the Permittees to secure an HCP-specific conservation easement and have most or all of the HCP mitigation credits on a single property, which would simplify and reduce the cost of long-term monitoring and management. While the cost of an HCP-specific easement may be higher due to additional requirements, it could be an attractive option as particular conservation and funding opportunities arise or as mitigation needs change.

Habitat Management Agreements
Private lands that are not protected through a conservation easement are eligible for HCP mitigation through a habitat management agreement. This agreement would document the landowner’s commitment to habitat management provisions that support and protect the covered species. The riparian habitat that is subject to the agreement would be monitored every three years to ensure that minimum standards are being maintained. Mitigation credit would be based on the area of riparian habitat that is subject to the management agreement, and would be valid for as long as the management agreement is in place and monitoring demonstrates that sufficient habitat quality is maintained.

A sample habitat management agreement is provided in Appendix C of the HCP.
Habitat Restoration and Enhancement

The efforts of the state, local governments, private landowners, and federal agencies to actively restore and enhance riparian habitat on their land also can be used for mitigation, subject to the provisions described below. Examples of efforts that could qualify for mitigation may include fencing to manage livestock, planting or transplanting native riparian vegetation, or in-channel grading or structures to improve bank habitat. The primary benefits of these efforts to the covered species are improving the quality of riparian habitat in a project area, and increasing the amount of available riparian habitat.

Enhancement and Protection of Mitigation Lands

Projects to restore, manage, enhance, or protect riparian habitat on mitigation lands may be used (or desired) to ensure that sufficient habitat quality and area within the mitigation site (and subsequent mitigation credits) is maintained. If restoration efforts expand the amount of woody riparian habitat within the easement area, the value of that easement for mitigation (in terms of additional mitigation credits) may be increased accordingly.

Federal Programs and Partnerships

Several federal conservation programs are being implemented in the Valley:

- The Natural Resources Conservation Service (NRCS), provides funding, technical expertise, and other resources to many successful habitat conservation and enhancement efforts in the Valley. The NRCS is an important partner in riparian habitat conservation, management, and enhancement efforts; and frequently completes conservation projects in collaboration with state and local agencies, private conservation organizations, and individual landowners.

- The Service’s Land Protection Plans for the Sangre de Cristo Conservation Area and the San Luis Valley Conservation Area seek to use purchase land or conservation easements from willing landowners to protect wildlife habitat and movement corridors in the Valley.

Due to concerns about the use of federal funding to support HCP mitigation, federally funded conservation easements or restoration and enhancement efforts are not eligible for full

Mitigation Guidelines for Restoration and Enhancement Projects

Mitigation credits for riparian habitat restoration and enhancement efforts are subject to the following general provisions:

- **Project Area** – Mitigation credits are on a per-acre basis, based on the project area boundaries.

- **Success Criteria** – HCP mitigation credits may not be taken until monitoring can demonstrate the preliminary success of the effort, no sooner than two years after the project initiation.

- **Ratios** – Projects that show and maintain indications of success will be eligible for HCP mitigation at a 0.75:1 ratio (except for federal programs as described below).

- **Long-term Monitoring** – Projects that are included in the HCP mitigation program must be monitored every three years to track long-term success and trends.

- **Projects on Federal Lands** – Projects on federal lands (such as Alamosa NWR or the BLM’s McIntire-Simpson property) may be counted toward HCP mitigation, only if non-federal funds are used.

- **Projects on State Lands** – Projects on state lands may be counted toward HCP mitigation.

- **Projects on Private Lands** – Projects on private lands may be included through a Landowner Cooperative Agreement.
mitigation credit. Instead, they may be used for mitigation credit at a ratio that is proportional to the non-federal contribution. This allows the District and the other Permittees to continue to develop creative partnerships between federal agencies, state and local agencies, conservation and community organizations, and private landowners to leverage funds and resources for the benefit of the covered species.

The following guidelines should be considered when integrating federal programs and partnerships:

- Mitigation credits are limited to the non-federal proportion of the project funding. Typical non-federal contributions include, but are not limited to, CPW, GOCO, or private grants, state or local matching funds, private contributions, and landowner donations.
- Federal programs may be used to maintain or enhance and size or quality of habitat in HCP mitigation sites, but the federal projects would not count for additional mitigation.
- Non-federal funding to enhance habitat on federal lands may be used for HCP mitigation only if they are in addition to projects already planned/funded by the managing agency, and are on federal lands under a protective management designation or agreement.

In any case, the use of private lands in the HCP mitigation program would still be at the discretion of the landowner, as executed through a Landowner Cooperative Agreement.

**Core Habitat Conservation**

Core habitat for the covered species is defined as public lands that are protected from development, are managed to support wildlife habitat, and are known to support the covered species. These are primarily the Alamosa National Wildlife Refuge, the BLM’s McIntire-Simpson property, and several State Wildlife Areas. As federal agencies, the Service’s National Wildlife Refuge division and the BLM are not eligible for incidental take coverage under the HCP and, therefore, cannot participate as formal Permittees. As an agency under the DNR, CPW is a Permittee and a formal partner in HCP development and implementation. As such, CPW commits to maintaining the current extent and quality of riparian habitat on SWAs, consistent with current CPW policies and management practices.

As part of the implementation process, the Permittees will work with these agencies to ensure long-term conservation of these areas and to coordinate on habitat management and monitoring techniques. These efforts will be coordinated through the steering committee and may be documented in Intergovernmental Agreements or similar agreements.
Monitoring

Monitoring Approach
The District and other Permittees will monitor compliance with the HCP, and the effectiveness of mitigation measures. The monitoring approach for the HCP will focus on the following general parameters:

1. Valley-wide (macro) habitat quantity mapping
2. Parcel-specific (micro) habitat quality evaluation
3. Core habitat monitoring
4. Species occurrence monitoring

Valley-Wide Habitat Mapping
Riparian habitat mapping will be updated every 10 years based on aerial photo-interpretation, or the most reasonably current and affordable mapping or remote sensing technology. Repeat macro-habitat mapping will be used to identify the quantity of woody riparian habitat with the HCP boundary, long-term habitat trends, and changes to impact assumptions and calculations. Changes in habitat extent and characteristics will be evaluated and compared within a range of +/- 10 percent of the baseline.

Parcel-Specific Habitat Monitoring
The cornerstone of the HCP mitigation approach is the conservation and enhancement of a sufficient number of acres of riparian habitat at a specified level of habitat quality. A key component of this approach is monitoring mitigation lands to ensure that sufficient habitat quality is maintained.

Microhabitat monitoring will be conducted on mitigation lands to quantify and evaluate the quantity and quality of habitat. Microhabitat monitoring consists of the following:

1. Parcel- or area-specific vegetation mapping based on the National Vegetation Classification System or other comparable system
2. Habitat sampling to determine stand structure, cover, density, and species composition
3. Encroachment of invasive plant species
4. Photo documentation of typical habitat conditions from defined locations

Habitat sampling measurements will be incorporated into a Habitat Quality Index (HQI) to determine the function and value (i.e., quality) of the habitat in providing the life requisites of covered species, as described in recovery plans or scientific literature. Habitat monitoring of all mitigation lands will be conducted on a rotating basis once every three years, and compared with baseline data and selected reference areas (see below). Habitat quality on mitigation lands is considered compliant with the HCP if the HQI value is equal or greater than baseline or the reference area; whichever is lower.

An initial HQI worksheet, based on similar systems used to evaluate riparian habitat values by NRCS and CPW in the Valley, is provided in Appendix G to the HCP. The HQI will be evaluated after the initial monitoring of mitigation and reference lands (within five years), and will be revised as necessary by the steering committee to ensure its effectiveness.
Core Habitat Monitoring

A key part of the habitat-based monitoring is the establishment of reference sites on federal and state lands that are known, or are believed, to support the covered species (referred to in the HCP as “core habitat”). These reference areas will:

- Establish a baseline of habitat condition on lands that are managed to support native wildlife, including the covered species, and have been documented to provide habitat;
- Track long-term changes in habitat composition in core habitat areas on federal and state lands;
- Track the effectiveness of habitat management and restoration efforts on federal and state lands;
- Facilitate implementation of micro-habitat monitoring protocol consistently across federal, state, and mitigation lands; and
- Provide a point of reference from which to compare habitat quality on mitigation lands.

The reference sites are valuable in determining the suitability of potential or existing mitigation lands. As habitat conditions and quality change over time, these sites will help determine whether habitat variability (positive or negative changes) on mitigation lands is consistent with variability on federal and state lands. The reference sites also will be valuable in identifying regional circumstances that are outside the control of the Permittees, and that are more appropriately addressed under Changed Circumstances.

Reference sites in different parts of the Valley will help account for variation in hydrological and habitat characteristics in different geographic areas (e.g., Rio Grande, Conejos River, and Closed Basin); and to ensure that mitigation lands in any part of the Valley have a “local” reference point with similar characteristics. Proposed locations for reference sites include:

1. Rio Grande corridor west of Alamosa (State Wildlife Area)
2. Rio Grande corridor south of Alamosa (Alamosa NWR)
3. Conejos River (BLM land and/or State Wildlife Area)
4. Saguache County (location to be determined)
5. Costilla County (location to be determined)

Core habitat monitoring methods are consistent with parcel-specific habitat monitoring (described above).

Restoration Monitoring

Habitat restoration or enhancement efforts may be used to increase the size or improve the quality of mitigation lands, and also may be used individually for mitigation, once preliminary success can be demonstrated. In either case, the HQI monitoring described above will be used to evaluate the quality of the restored areas and their suitability for mitigation. The success of restoration will be determined by documenting that the restored habitat is progressing towards habitat characteristics needed to support covered species (suitability). Success will be determined by achieving an HQI value greater than ¾ the HQI value of the appropriate reference area.
Species Occurrence Monitoring

The District, with guidance from the steering committee, will coordinate species-specific monitoring actions for the flycatcher and cuckoo. The objectives of species-specific surveys are to conduct habitat occupancy surveys (presence/absence) in suitable habitat for flycatchers and cuckoos.

Southwestern Willow Flycatcher

Flycatcher surveys will be conducted within core habitat areas and on mitigation lands once every three years as follows:

- General surveys within core habitat areas will be conducted by federal and state agencies responsible for managing those public lands following the most current flycatcher survey protocol approved by the Service. Under the 2010 survey protocol (Sogge et al. 2010), general surveys would consist of three surveys—one in each of three survey periods: May 15 – 31; June 1 – 24; and June 25 – July 17.

- Surveys on private mitigation lands will consist of a single callback survey conducted by the District in June or July during habitat monitoring.

Reports summarizing the findings of the surveys on both public and private lands will be submitted to the District and HCP administrator by the end of the calendar year. The reports will include survey locations identified by Township, Range, ¼ Section, or UTMgs for both positive and negative surveys. Positive surveys will be reported to the Service and District within 24 hours of detection. The District will maintain a file with copies of the survey reports, and will summarize the results of the surveys in a brief table to be included in the annual report to the Service.

Western Yellow-billed Cuckoo

Surveys for cuckoos will be conducted simultaneously with flycatcher surveys described above. The surveys will follow the most current cuckoo survey protocol approved or accepted by the Service. The reporting of survey findings will be the same as described above.

Monitoring Evaluation

Implementation of monitoring and evaluation in the first six years is detailed in the sidebar to the right. If monitoring in subsequent years indicates that a mitigation area does not meet suitability guidelines, one or more of the following adaptive management procedures will be initiated:

Monitoring Start-up and Early Evaluation

**Years 1-3:**

Early in the HCP implementation process, the District and Permittees should focus on the following:

- securing mitigation sites
- establishing reference sites on state and federal land
- collecting HQI data on both mitigation and reference sites

The first round of monitoring data for each location (reference sites and mitigation lands) will be used to establish baseline conditions for monitoring. This first round of monitoring data also will provide the first opportunity to comprehensively evaluate HQI results and develop guidelines for habitat quality levels that are suitable for mitigation (based on overall conditions and a comparison to reference sites).

**Years 4-6:**

The results of monitoring will be reviewed annually by the steering committee. This is intended to account for two full rounds of parcel-specific monitoring.

**After Year 6:**

The results of monitoring will be reviewed every three years by the steering committee.
• Increase monitoring to determine the cause of the habitat decline, and potential remedies.
• Work with landowners to implement management or restoration measures to improve habitat quality (e.g., fencing, irrigation changes, planting, or others).
• Remove the parcel/area from the mitigation pool and substitute with another parcel of sufficient size and quality.
• Retain the parcel/area in the mitigation pool, but at a reduced credit value (with the credit shortfall replaced by another parcel).

Management or restoration measures to improve habitat quality on mitigation lands will be reevaluated after three years. If, after three years, habitat conditions have failed to improve, the area will no longer be eligible for mitigation credit and will be replaced by additional mitigation lands. (Any such area may become reenrolled as mitigation land at a later date if it is demonstrated that habitat quality standards have been achieved.)

Evaluation of Impact Assumptions
The District will update Valley-wide riparian habitat mapping every 10 years. Over time, it is expected that the acreage of woody riparian habitat in the Valley will expand or contract as a result of climate conditions, restoration and enhancement efforts, or changes in water management and agricultural practices. After updated habitat mapping is completed, the District also will revisit assumptions and data used to estimate the impacts of the covered activities. Voluntary reporting of the covered activities as part of the community outreach process will contribute to this effort, providing indication of the nature, size, and frequency of the covered activities in practice. If this evaluation of new information demonstrates that the habitat acres in the Valley or impact assumptions have changed (resulting in greater or fewer impacts), the mitigation requirements for the HCP will be adjusted accordingly (see sidebar).

Minor vs. Major Impact Changes based on 10-Year Evaluations
After the 10-year Valley-wide habitat mapping and evaluation, both the amount of riparian habitat and the level of impacts from the covered activities are expected to change. A threshold of 15% from the current impact estimates will be used to determine minor versus major changes to the HCP.

15% Threshold for Action:
The 15% threshold is intended to distinguish normal fluctuations in the covered activities (less than 15 percent change), from larger changes in the nature and impacts of those activities (greater than 15 percent change). Using the current impact estimate of 270 acres of temporary impacts per year, a 15 percent change would constitute an additional 40.5 acres of habitat impacts (out of 15,128 total acres).

Minor Changes:
Minor (less than 15 percent) changes in impacts and mitigation requirements resulting from this evaluation will be considered a minor modification to the HCP, and will be handled without amending the ITPs.

Major Changes:
A “major” change is defined as an increase in estimated impacts and mitigation requirements greater than or equal to 15 percent of those reported in the HCP. If major changes are necessary, the Permittees will work with the Service to determine the appropriate amendment process.

Reductions in Impacts:
Decreases in impacts and mitigation requirements resulting from this evaluation will be considered a minor modification, regardless of the size of the reduction. This is because the impacts would be within the range of impacts documented in the HCP, and it also provides an incentive to reduce impacts over time through outreach and education efforts and voluntary conservation and enhancement of riparian habitat.
HCP Administration
The Permittees have committed to the following measures to implement and administer the HCP in an effective and efficient manner.

District Staff Support
The District, on behalf of the other Permittees, has committed to an appropriate level of staffing, up to one half-time employee, for the following HCP implementation tasks:

- Track ongoing permanent impacts
- Identify and track mitigation acres
- Negotiate and secure landowner cooperative agreements, management agreements, or HCP-specific easement language
- Coordinate habitat quality monitoring on mitigation lands and reference sites
- Coordinate Valley-wide habitat mapping (every 10 years)
- Coordinate and implement education and outreach efforts
- Coordinate habitat enhancement activities as needed on mitigation lands to achieve and maintain mitigation commitments
- Coordinate the HCP Steering Committee
- Coordinate with county Land Use Administrators to provide information to landowners regarding procedures for impacts beyond the scope of the HCP
- Work with the other Permittees, federal agencies, and other partners to coordinate voluntary conservation efforts and to secure necessary funding
- Prepare annual HCP report for submission to the Service
- Develop an annual work plan based on recommendations from the steering committee
- Serve as a point of contact for agencies, landowners, and the general public
- Other tasks, as needed

The specific implementation tasks and staffing needs are expected to change during the course of HCP implementation. While the first several years require a high degree of coordination, the HCP is anticipated to have relatively few requirements over the long term. For these reasons, the District and other Permittees commit to the effective administration of the HCP rather than a fixed level of staffing. (However, for planning purposes, the District anticipates funding a \( \frac{1}{2} \) full-time equivalent (FTE) for the first 10 years of HCP implementation, and the equivalent of a \( \frac{1}{4} \) FTE thereafter).

County HCP Enabling Language
Each county has adopted a resolution or other appropriate legal mechanism under their existing land use regulatory powers that provides the authority to enable HCP implementation. Adoption of the basic legal mechanism is necessary for each county to provide ITP protections to landowners under its jurisdiction.

Steering Committee
A steering committee, consisting of HCP Permittees, land management agencies, stakeholder organizations, and the general public, provides a forum that includes resource experts, stakeholder interests, community leaders, and decision makers where habitat conservation,
management, and monitoring information can be shared to improve the effectiveness of HCP implementation.

The steering committee is anticipated to meet two times per year (spring and fall), and may schedule additional meetings or field trips on an as-needed basis. The steering committee will play an advisory role, and will not have direct implementation responsibility. The primary purpose of the steering committee will be to act on behalf of the Permittees in reviewing monitoring data, evaluate the suitability of potential and actual mitigation lands, evaluate long-term habitat trends, and recommend an annual work plan that ensures that HCP mitigation commitments are satisfied.

**Annual Work Plan**

The District will develop an annual work plan based on recommendations from the steering committee. The work plan will outline implementation commitments and priorities for the following year, considering the following:

- Existing and mitigation parcels and projects
- Potential mitigation opportunities
- Short- and long-term monitoring results
- Proposed adaptive management strategies
- Education and outreach opportunities
- Partnership opportunities
- Other factors, as necessary

**Annual Reporting**

The District and other Permittees will prepare and submit an annual report to the Service. The report is anticipated to include the following:

- Summary of key tasks identified and implemented in the work plan
- Description of mitigation lands added (or removed), and the mechanisms by which those areas are eligible for mitigation (e.g., conservation easement, habitat restoration)
- Summary of the current impact totals and mitigation credits
- Summary of habitat and species monitoring efforts and findings
- Description of outreach and education contacts
- Identification of upcoming issues and opportunities
- Description of implementation priorities for the following year

The annual report will be developed by District staff, with input from staff from other Permittee entities and steering committee members. The final report for each calendar year will be submitted to the Service by March 1 of the following year.

The annual monitoring report will include the following:

1. An estimated quantification of take (in habitat acres) resulting from covered activities, based estimated temporary impacts (from the HCP) and actual permanent impacts reported.
2. A summary of habitat monitoring studies to track the extent and condition of habitat.
3. A summary of the results of mitigation site monitoring based on HQI and photo points.
4. A summary of the results of general flycatcher and cuckoo presence within core habitat areas and private mitigation lands, and a discussion of implications for covered species.
5. A summary of the District’s education and outreach efforts within the past year.
6. A summary table of county enabling resolution compliance, infractions, corrective actions implemented, and results.
7. After the first year, a summary of the adaptive management recommendations made by the steering committee, and a discussion of whether or how these recommendations were implemented by the District.

**Education and Outreach**

The District will actively work with landowners, local communities, private and public utilities, and other stakeholders to provide them with the information and tools to develop an understanding of the HCP and its benefits among landowners and the community, reduce the long-term impacts of covered and non-covered activities on riparian habitat, and solidify support for HCP mitigation programs. These measures will include specific efforts to notify landowners of their coverage under this HCP to reduce the impacts of specific activities, and general community outreach and education commitments.

A variety of potential community outreach and education methods are described in detail in Appendix D of the HCP. These methods include:

- Written documents and materials;
- Presentations to community organizations;
- Informal meetings with landowners;
- Organized field trips;
- Agency staff trainings/presentations;
- Landowner recognition;
- Education programs; and
- Outreach partnerships with existing entities (i.e., Adams State College, Alamosa NWR, Colorado State University Extension Service, and SLV Ecosystem Council).

At various stages of HCP implementation, the District will conduct several outreach contacts each year. An outreach “contact” is defined as a formal or informal presentation, or the distribution of written materials, to outside organizations or the public in a manner that reaches more than 10 people in a single event. Education and outreach contacts will be coordinated by the District and the HCP Steering Committee.

The frequency of contacts will be greatest within the first five years of HCP implementation when it will be important to gain community support for the HCP and mitigation efforts. After the fifth year of HCP implementation, the outreach and education commitments will be less intensive as the efforts transition from implementation start-up to long-term management. The targets for education and outreach efforts to be conducted by the District are:

- HCP years 1 – 5: six contacts per year
- HCP years 5 – 10: four contacts per year
- HCP years 10 – 30: two contacts per year
The District and other Permittees recognize that certain changes or developments, positive or negative, may warrant additional education and outreach contacts. As such, they are dedicated to whatever level of education and outreach that is appropriate to achieve effective HCP implementation.

**Covered Activity Reporting**
As part of the community outreach process, individual landowners are encouraged to voluntarily track and report the covered activities that they undertake over time (e.g., length of ditches cleared, fences repaired, grazing activity). Reported data will be tracked by geographical area (e.g., stream reach) rather than individual landowners or properties. This information will be provided to the District on a voluntary basis, and will not be used to evaluate, influence, or regulate individual land management practices. Instead, it will be used to track the overall, long-term trends of the covered activities and will assist in evaluating the effectiveness of the HCP at 10-year intervals.

**Landowner Notification**
Within the first six months of HCP completion and ITP issuance, the District and Counties will use a variety of methods to notify landowners in the Valley about the HCP. The purposes of the landowner notification are to:

1. Announce the completion of the HCP
2. Notify landowners about their coverage under the HCP
3. Educate landowners about riparian habitat conservation (including benefits and available assistance programs)
4. Encourage landowners to contact the District with any questions

A similar notification effort will be conducted at least every 10 years during HCP implementation. Repeat landowner notification efforts may be warranted on a more frequent basis (five-year intervals) if there are substantial changes to the HCP, the conservation status of the covered species, overall riparian habitat conditions, the covered activities, or general economic conditions in the Valley.

**Notification Methods**
Several methods will be used to provide HCP notification to landowners:

- **Notification Letter**: A notification letter will be sent to key landowners who are most likely to conduct the covered activities and own land that contains high quality riparian habitat. “Key” landowners are those whose property falls partially or entirely within the designated 100-year floodplain, and are outside of incorporated town or city limits. Each County is responsible for mailings to their respective “key” landowners.

- **General Notification**: Landowners outside of the 100-year floodplain will be notified through a variety of public venues, including the Valley Courier newspaper; letters to the Farm Bureau, Cattleman’s Association, local water districts, local conservation districts, land trusts, and other community organizations; District, county, and municipal websites; and other appropriate public venues.

- **Local Government Agencies**: County and municipal planning and public works departments will be provided information about the HCP so they can assist in landowner notification and outreach, facilitate HCP implementation, and provide information to landowners whose activities are *not* covered by the HCP.
Certification of Coverage
The District will, upon request, provide any eligible landowner with a document that certifies they are covered by the HCP when they conduct the covered activities. Eligibility is based on the physical location of the property within the HCP plan area. The certification document identifies the covered activities and describe the general terms of the HCP. Upon request from a landowner, certification documents are generated on an as-needed basis.

Table 4. Additional voluntary conservation measures.

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<th>Topic</th>
<th>Tool</th>
<th>Purpose</th>
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| Additional County Land Use Policies | § Guidance for landowners or developers  
§ Guidance for county planning staff | Reduce the impacts of development and other non-covered activities, and promote overall riparian habitat protection (beyond the enabling language necessary for HCP implementation). |
| Conservation Support and Coordination | § Encourage partnerships with landowners and habitat enhancement programs  
§ Encourage additional private land conservation  
§ Coordinate partnerships with land trusts to focus habitat protections on buffer habitat areas  
§ Coordinate HCP implementation with the Rio Grande Natural Area | Support and facilitate synergistic and long-term relationships between HCP implementation and other conservation efforts, and provide partnerships for future conservation funding. |
Summary of Implementation Responsibilities

Implementation of the HCP is a collaborative effort between the Permittees and other implementation partners. Specific implementation responsibilities for each entity are summarized below.

**U.S. Fish and Wildlife Service**
- Participate in the HCP Steering Committee
- Provide technical assistance in the implementation, monitoring, adaptive management of the HCP, and participate in revisions and amendments as needed

**Rio Grande Water Conservation District**
- Oversee HCP implementation
- Provide staff support for HCP implementation
- Track impacts and identify mitigation credits
- Negotiate and secure landowner cooperative agreements, management agreements, or HCP-specific easement language
- Coordinate habitat quality monitoring on private mitigation lands and reference sites
- Coordinate Valley-wide habitat mapping (every 10 years)
- Coordinate habitat enhancement activities as needed on mitigation lands to achieve and maintain mitigation commitments
- Coordinate the HCP Steering Committee
- Coordinate and implement education and outreach efforts
- Coordinate with county Land Use Administrators on notification procedures and information regarding remedies for impacts beyond the scope of the HCP
- Work with other Permittees, federal agencies, and other partners to coordinate voluntary conservation efforts and secure necessary funding
- Prepare annual HCP report for submission to the Service
- Serve as a point of contact for agencies, landowners, and the general public
- Develop an annual work plan based on recommendations from the steering committee
- Other tasks, as needed

**State of Colorado Department of Natural Resources**
- Survey covered species on state lands at least once every three years
- Conduct habitat quality monitoring on state lands
- Participate in the HCP Steering Committee

**Counties**
*Alamosa, Conejos, Costilla, Mineral, Rio Grande, and Saguache*
- Adopt an appropriate legal mechanism to enable HCP implementation
- Compile and mail landowner notification letters (every 10 years)
- Report County-permitted activities with permanent impacts
- Provide HCP information and guidance to landowners
Municipalities
*Alamosa, Monte Vista, Del Norte, and South Fork*
- Report municipal activities with permanent impacts
- Report floodway clearing in excess of 4 acres/year

Landowners
- No requirements
Changes and Modifications to the HCP

Changed Circumstances

The ESA’s implementing regulations define “changed circumstances” as “changes in circumstances affecting a species or geographical area covered by a conservation plan or agreement that can reasonably be anticipated by plan or agreement developers and the Service and that can be planned for” (50 CFR § 17.3).

In developing the HCP, the Permittees and the Service identified the potential “changed circumstances” that can reasonably be anticipated to affect the covered species and plan area, and have agreed upon the Permittees’ responsibility to address such changed circumstances should they occur during the term of the HCP. The reasonably anticipated changed circumstances, and the Permittees’ obligations connected thereto, are as follows:

1. **Habitat loss from floods, prolonged drought, fire, or other naturally occurring events or processes** - If an affected parcel is no longer eligible for mitigation credit due to habitat loss, the Permittees would identify and secure replacement mitigation acres.

2. **Habitat loss due to long-term climate change** - If the Permittees are unable to satisfy their ITP commitments due to habitat or hydrological changes resulting from climate change, the Permittees would be allowed to amend the HCP.

3. **Habitat loss or changes from invasive species** - Localized habitat loss from typical invasive species would be handled as described above under item 1: habitat loss.

4. **Habitat loss from development or other non-covered activities** - Activities not covered by the HCP and would be subject to individual compliance and enforcement under the ESA. Such enforcement would not require additional measures by the Permittees.

5. **Small changes in habitat or impact assumptions** - If changes to habitat mapping or impact calculations are documented to be up to 15 percent greater than the impact values reported in the HCP, no additional measures by the Permittees are required. If such changes exceed 15 percent, an amendment to the HCP and ITPs may be required.

6. **Downlisting or delisting of covered species due to recovery efforts** - No additional measures by the Permittees are required.

7. **Critical habitat designation for species covered by the HCP (including potential future changes or amendments to the ESA critical habitat provisions)** - No additional measures by the Permittees are required.

8. **Future listing of a nonlisted covered species** - Should the cuckoo become listed under the ESA, take authorization of this species on the permits would immediately become effective.

9. **New Listing of Additional Riparian Species** - In the event that another riparian species is listed in the Valley, the following options are available: a) amend the HCP to include the new species; b) develop a separate HCP or other ESA compliance mechanism; or c) individuals and entities could comply with the ESA on a case-by-case basis.

10. **Withdrawal by local units of government** - No additional commitments would be required of the Permittees unless it is necessary to mitigate for the take of covered species that occurred pursuant to the terms of the ITP before its withdrawal, as
determined by the Service in collaboration with the Permittees. If needed, the Permittees would be allowed to amend the HCP.

11. **Withdrawal by one or more of the Counties** - If one or more of the Counties declines ITP coverage, the remaining Permittees would be permitted to adjust habitat mapping, impact projections, and mitigation requirements accordingly. The non-participating County would be responsible for any necessary ESA compliance, including individual mitigation for incidental take. If needed, the remaining Permittees would be allowed to amend the HCP.

12. **Withdrawal by the State** - No additional commitments would be required of the Permittees unless it is necessary to mitigate for the take of covered species that occurred pursuant to the terms of the ITP before its withdrawal, as determined by the Service in collaboration with the Permittees. If the other Permittees determine they are unable or unwilling to fulfill the State’s commitments, the Permittees will work with the Service to amend or revoke the HCP and ITPs.

13. **Withdrawal or elimination of the Rio Grande Water Conservation District** – If the other Permittees determine they are unable or unwilling to fulfill the District’s commitments, the Permittees will work with the Service to amend or revoke the HCP and ITPs.

**Unforeseen Circumstances**

In the event that significant “unforeseen circumstances”\(^1\) occur during the life of the permits, adjustments to the HCP may be proposed by either the Permittees or the Service to address those circumstances.

**Withdrawal of Participation**

At any time during the term of the HCP and ITPs, a Permittee may choose to discontinue its participation in the HCP as to: a) one or more of the covered species; b) a portion of the permit coverage area; and/or c) one or more of the permitted/covered activities. Withdrawal or non-participation by one or more of the Permittees will be considered a “changed circumstance” as described in the previous section.

ESA compliance for covered activities that have been implemented pursuant to the mitigation measures in the HCP shall continue and be unaffected by any subsequent termination of the HCP provided there are no outstanding mitigation requirements associated with those activities. Withdrawal of one or more of the Counties or local jurisdictions from the HCP will not affect the validity of the HCP as to the other participating entities.

**Technical Revisions**

Technical revisions to the HCP may include corrections of typographic, grammatical, and similar editing errors; correction of any maps or figures to eliminate errors; or other revisions to the HCP that do not diminish the level or means of mitigation, or increase the impacts to the covered species or their habitats. Such technical revisions would not materially alter the terms of the Section 10(a)(1)(B) permits. Upon the written request of the Permittees, the Service will

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\(^1\) “Unforeseen circumstances” are defined as “changes in circumstances affecting a species or geographic area covered by a conservation plan that could not reasonably have been anticipated by plan developers and the Service at the time of the conservation plan’s negotiation and development, and that result in a substantial and adverse change in the status of the covered species” (50 CFR § 17.3).
approve technical revisions to the HCP if such revisions do not increase allowable impacts, diminish the level of mitigation, or otherwise conflict with the primary purposes of the HCP.

**Minor Modifications**

Minor modifications to the HCP can be accomplished without amending the associated Section 10(a)(1)(B) permits. The circumstances under which minor modifications to the HCP may be needed include, but are not limited to:

- Changes in riparian habitat mapping due to expansion or contraction of habitat area over time, expanded mapping efforts, or improved mapping technology;
- Changes in riparian habitat mapping resulting from an improved understanding of habitat quality, dynamics, or value to the covered species that is gained through implementation of monitoring efforts;
- Minor changes in the county enabling language;
- Minor changes in landowner agreements; and
- Changes in land ownership of mitigation parcels/areas.

To the extent those and other minor modifications do not adversely affect the covered species in a manner significantly and quantifiably different from that analyzed in the HCP, and associated biological opinion, permit findings, and NEPA documents, the Service shall approve such modifications and no change in the permits shall be required.

When the Permittees determine that minor modification to the HCP is required, supporting documentation will be prepared and submitted to the Service. The documentation will include a description of the reason for the minor modification, and an assessment of its environmental effects. The proposed minor modification also will detail any proposed changes to the avoidance, minimization, mitigation, and monitoring measures to ensure that the affected species will be appropriately protected. Within 60 days of the Service’s receipt of the notice of the proposed modification, the Service shall notify the Permittees in writing if it determines the proposal will require an amendment to the permits. Otherwise, the Service shall promptly approve the modification. Minor modifications will be documented in the HCP annual report submitted to the Service.

**Major Modifications and Amendments**

All major modifications and amendments to the Section 10(a)(1)(B) permits proposed by the Permittees shall be approved by the Service in accordance with applicable laws and regulatory requirements. A major modification and/or amendment to the permits may require additional ESA Section 7 and/or NEPA analysis and public review. The circumstances under which an amendment to the HCP and ITPs may occur include, but are not limited to:

- Additions of species to be covered by the HCP and/or ITPs;
- Changes in the geographical area covered by the HCP;
- Changes in the anticipated or actual levels of take authorized by the ITPs;
- Changes in the participation in the HCP by the Permittees;
- Revocation of an enabling land use language that provides the authority to enable HCP implementation by a Permittee;
• Major (greater than or equal to 15 percent) increases in impact assumptions and mitigation requirements;

• Documentation of significant unforeseen circumstances that alter the context of the HCP; and

• Renewal of the ITPs.
HCP Implementation Checklist
This checklist is intended to provide the HCP Administrator, Permittees, the steering committee, and others with a quick reference of tasks to be completed on a routine basis.

HCP Start-Up (Years 1-5)
- Landowner notification
- Establish HCP Steering Committee
- Secure mitigation credits (within first 5 years)
- Outreach and education contacts (6x/year in first 5 years)

Annual Requirements
- Steering committee meetings (2+)
- Review monitoring data (first 6 years)
- Annual Report
- Work Plan
- Report and track permanent impacts
- Report floodway clearing
- Outreach and education contacts (4x years 6-10; 2x years 11-30)

Every 3 Years
- Monitoring mitigation parcels (rotating schedule)
- Monitoring reference sites (rotating schedule)
- Species surveys on state/federal lands
- Review monitoring data (after first 6 years)

Every 10 Years
- Valley-wide habitat mapping
- Impact evaluation
- Landowner notification
- HCP/permit extension or termination (at year 30)
ATTACHMENT – HCP HABITAT MAPS
San Luis Valley HCP

- **Woody Riparian Habitat**
- **State and Federal Lands**
- **100-year Floodplain**
- **HCP Boundary**

**Figure 5**
Riparian Habitat

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