

## APPENDIX G: COLORADO'S WETLANDS

### Colorado's Wetlands

In Colorado, wetland acreage is estimated to be 1.5% (approximately 1 million acres) of total surface land area. Wetlands (and other aquatic habitats) are an important outdoor recreation resource because they provide opportunities for wildlife-based recreation (e.g., hunting, fishing and wildlife viewing) and water-based recreation (e.g., boating and swimming). Wetlands are particularly significant to wildlife as they sustain a high level of biological diversity of plant and animal species, including habitat for waterfowl that are important for hunting recreation, as well as habitat for species that are imperiled and the focus of recovery efforts. In Colorado, 125 species (26% of our birds, amphibians, reptiles and mammals) are wetland dependent. Of these, 42 species are categorized as rare and imperiled by the Colorado Natural History Program (CNHP). Many other species are not considered wetland-dependent but use wetlands for some portion of their life cycle. In addition, wetlands improve water quality, assist with flood control and contribute to groundwater recharge.

Since the state was first settled, over half of Colorado's wetlands have vanished with habitat loss and degradation continuing to be a concern. As identified by [Colorado's 2015 State Wildlife Action Plan](#) revision, the threats to wetlands include: residential development; fragmentation from roads, trails and oil/gas development; altered native vegetation (i.e., grazing intensity and/or conversion to pasture grass); altered hydrological regime (flow and water temperatures); invasive plants; lack of water due to drought and exacerbated by climate change; agriculture/forestry effluents (i.e., fertilizer, herbicide and pesticide runoff); gravel mining; and channelization.

In Colorado, the Wetland Wildlife Conservation Program (WWCP), which is administered through Colorado Parks and

Wildlife (CPW), conserves wetland and riparian habitats and their ecological functions for the benefit of wildlife by planning and delivering conservation actions on a landscape scale.

WWCP facilitates voluntary, incentive-based conservation and management of priority wildlife species whose populations depend on wetlands or riparian areas in Colorado. This may be accomplished through protection of these habitats by easements or acquisition, or strategies that protect wetland functions and values such as habitat restoration, enhancement and creation actions including vegetation manipulation and water management.

In July 2011, the Terrestrial Habitat Conservation Program of CPW completed a wetlands priority plan for [Statewide Strategies for Wetland and Riparian Conservation](#) (The Wetland Strategic Plan). This plan includes information at length on the needs, premises, planning approach and strategies and priorities for wetland conservation in Colorado. The plan's Vision Statement is: "Through coordinated landscape-scale conservation actions, Colorado Parks and Wildlife and its partners will ensure that Colorado's wetland and riparian habitat is sufficient to support self-sustaining populations of desired wildlife species and to provide wildlife-associated recreation for future generations."

WWCP uses the following 10 major river basins as planning units for wetland and riparian conservation: South Platte, Republican, Upper Arkansas, North Platte, White-Yampa-Green, Colorado Headwaters, Gunnison, Dolores, Rio Grande Headwaters and San Juan. Planning units of this scale are large enough to represent landscapes, yet small enough to facilitate developing manageable wetland mapping and assessment projects for the entire basin (except for the two largest basins – South Platte and Upper Arkansas). Further, the basin boundaries are largely consistent with the spatial



**Two Sandhill cranes fly over a wetlands near Great Sand Dunes National Park.**

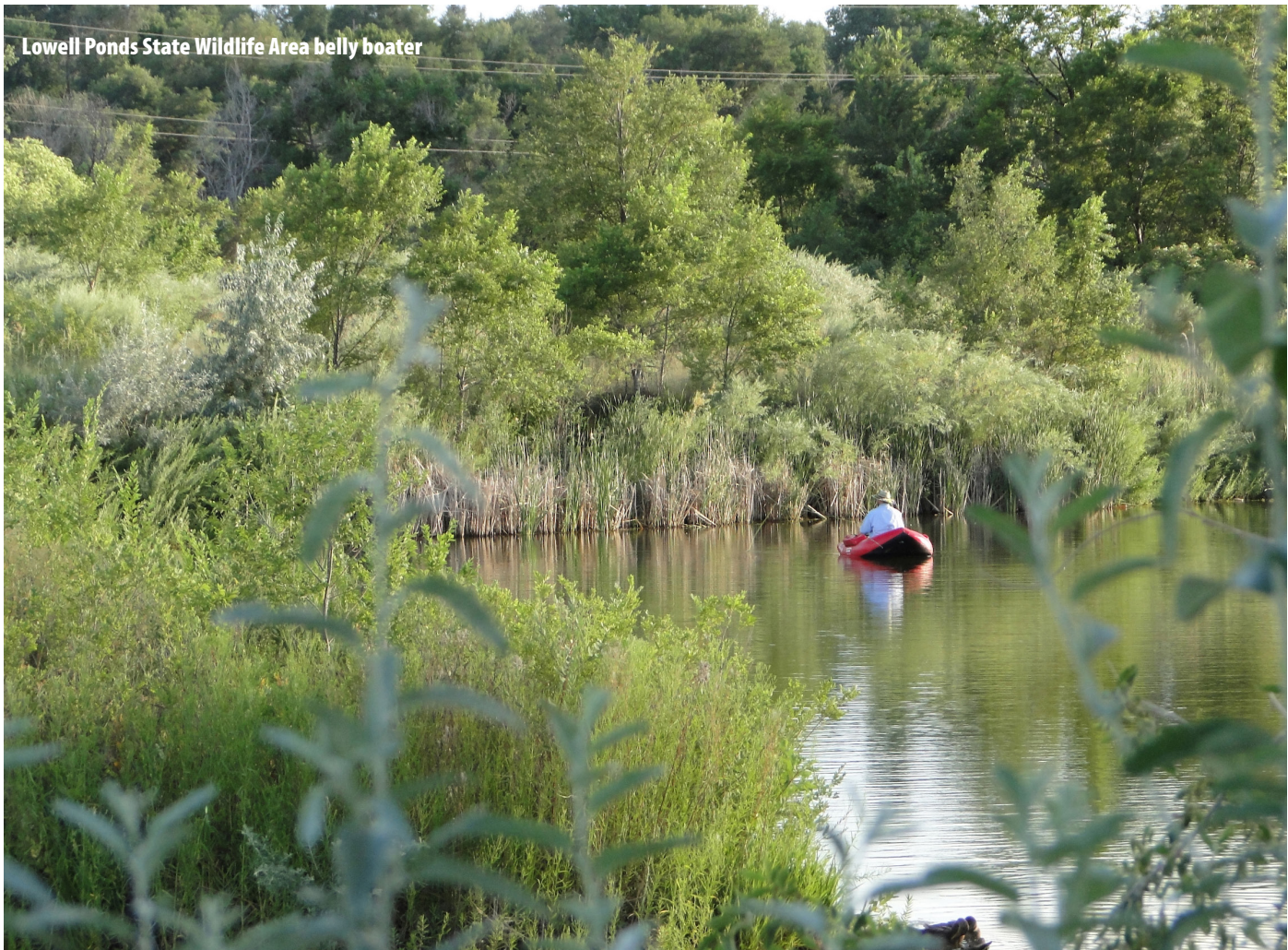
scale at which wetland conservation partnerships have coalesced into Focus Area Committees (FACs). FACs function independently from each other and have been valuable to WWCP in developing projects for funding consideration, leveraging WWCP funds to secure other funds for wetland conservation, serving as a local source for knowledge (on wetland quantity, quality, threats, opportunities for conservation, recreational significance), providing a forum for wetlands conservation discussion and implementation of on the ground projects.

Key WWCP partners include:

- **Bird Conservancy of the Rockies:** Bird Conservancy's private lands biologists have worked to revegetate riparian areas, remove invasive species, create marshes, direct Farm Bill funds for wetlands to Colorado, chair Wetland Focus Area Committees and co-chair with WWCP a state conservation partnership project through Intermountain West Joint Venture.
- **Colorado Natural Areas Program:** This statewide program recognizes and works to conserve locations that have one or more unique natural features including, wetland and riparian habitats, important to Colorado. Natural areas are found on both public and private lands, and are officially designated through voluntary conserva-

tion agreements with landowners.

- **Colorado Natural Heritage Program:** Focusing on Colorado's rare and threatened species and plant communities, the Colorado Natural Heritage Program has taken a lead role in wetlands-related research. The program developed a Wetland Program Plan in 2010 to guide strategies related to building comprehensive wetland information including the types of wetlands that occur in Colorado, digital maps of wetland resources, assessment protocols and identifying and tracking wetlands of high biodiversity significance.
- **U.S. Army Corps of Engineers (COE):** In most situations that involve potential impacts to wetlands, the U.S. Army Corps of Engineers has legal authority under Section 404 of the federal Clean Water Act to issue permits and enforce regulations. The wetland permitting process typically requires an assessment to determine:
  - whether the area in question qualifies as a wetland under the Clean Water Act;
  - whether the proposed impact or activity requires a permit; and
  - if so, what type of permit is required, the extent of review, and the need for off-setting mitigation.



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- **U.S. Environmental Protection Agency (EPA):** As part of its strategy to protect the nation's water resources, the EPA partners with other government agencies, nonprofit organizations and citizens to actively preserve, monitor and assess wetland resources. The EPA promotes a Watershed Protection Approach to wetland preservation by encouraging integrated planning and management at the watershed scale. EPA grants and programs have supported watershed improvement efforts throughout Colorado, including recent condition assessments and monitoring along the North Platte River and efforts to mitigate urban impacts on the South Platte River watershed.
- **U.S. Fish and Wildlife Service (FWS):** The FWS is the principal federal agency providing public information on the status and extent of wetlands across the country. One of the primary programs of the FWS related to wetlands is the National Wetland Inventory (NWI), which provides data for wetland protection and management, climate change analyses, emergency planning and recovery, and wildlife management and conservation. The focus on the program has been on two fronts: 1) map or digital database preparation and delivery to the public,

and 2) projecting and reporting on national wetland trends using a probability-based sampling design. Since its inception in 1974, the NWI has produced digital data for approximately 81% of the country, 89 % for the continental US. The Colorado Partners for Fish and Wildlife Program is a FWS program that began in 1988. In addition to CPW, Great Outdoors Colorado (lottery proceeds), Ducks Unlimited, The Nature Conservancy, Natural Resources Conservation Service, local Water and Soil Conservation Districts, and approximately 1,400 landowners have combined to restore and protect wetland, upland and riparian habitat.

To determine priorities for wetland acquisition and other protection measures WWCP needs to advance science-based decision making for wetland protection. Over the past ten years, CNHP and CPW have partnered with NWI to increase the availability of digital spatial data for wetlands from less than 15% coverage of the state to 100% coverage. In 2015, NWI rolled out new requirements for wetland mapping to align with recent revisions to the NWI wetland mapping classification and made changes to wetland data across the country, including Colorado. CNHP analyzed the



**Junco Lake Campground beaver dam, Fraser, CO**

changes and identified additional modifications that would greatly improve the accuracy of NWI data in Colorado. This includes updating water regimes to match the NWI new standard, cleaning up old codes to be more consistent across the state, and reassigning codes for certain types that have been shown to be inaccurate through large scale accuracy assessment analyses.

CNHP is finalizing modifications to the existing NWI mapping data to produce the first “State of Colorado’s Wetlands” report. The report will be available in early 2019 and contain written summaries of wetland mapping at the state, river basin and county level, along with maps, figures and tables to illustrate important results. The information will also be available as interactive data on CNHP’s Colorado Wetland Information Center and as a PDF

on CPW’s website. In 2019 CNHP will complete habitat quality summaries and fact sheets for parts of Colorado as well as a report of the current state of past wetland enhancement projects. CNHP is also updating their Colorado Wetland Information Center (CWIC) - <http://www.cnhp.colostate.edu/cwic/>.



Lowell Ponds State Wildlife Area cattails