

EXECUTIVE SUMMARY

Summit County contains a diverse array of wetlands which support a wide variety of plants, animals, and plant communities. At least 10 plants, 4 birds, 1 fish, 1 amphibian, 2 mammals, and 24 major wetland/riparian plant communities from the Colorado Natural Heritage Program's (CNHP's) list of rare and imperiled plants, animals, and plant communities are known to occur in or are associated with Summit County wetlands. In addition to their biological significance, these wetlands perform many functions that provide value to the residents of the county and the communities down river. Summit County wetlands maintain water quality, provide wildlife habitat, provide recreational opportunities, and add to the aesthetic quality of the county.

In 1996, CNHP received funding to inventory wetland areas within Summit County jurisdiction excluding federal and state lands. The funding for this project was provided by the U.S. Environmental Protection Agency to the Colorado Department of Natural Resources, which selects projects and administers funding. The purpose of the funding is to provide local planners, resource managers, and citizens with information on the status and value of their riparian and wetland areas.

This report presents the results of a comprehensive wetland survey designed to better understand the types of wetlands which occur in Summit County, along with their distribution and their natural heritage value. In 1996, Summit County hired White Horse Associates and Natural Resource Consulting to map wetland vegetation types on private lands using aerial photography. Thirteen mapping units were derived from the vegetation types. Mylar overlays which delineated each mapping unit type were produced for the 7.5 minute quadrangles covering Summit County. CNHP selected a representative number of the mapping units, within a range of elevations and locations, to survey during the 1997 field season. Each mapping unit was then characterized in terms of plant associations, hydrology, and wetland class. CHNP initially identified 85 wetlands which merited inventory. A low-altitude flight over the county and roadside assessments allowed CNHP to prioritize the number of sites that required actual on-site inventory. Wetlands heavily impacted by roads, buildings, weeds, agriculture, or grazing were eliminated from the inventory.

A function and value assessment was conducted to provide finer details for each mapping unit. The function and value assessment is based on Cooper (1988), which employs a modified version of the methodology known as Wetland Evaluation Technique (WET) (Adamus et al. 1991). This technique is a broad-brush approach to wetland evaluation, and is based on information derived from predictors of wetland functions which can be gathered relatively quickly. It can be used to compare ratings of a wetland for future uses in management and planning.

There were a total of 38 function and value assessments performed at 34 locations on private lands within Summit County. Twenty six of those wetlands performed three or more functions

to a high degree, seven wetlands performed at least one function highly, and five wetlands did not perform any functions to a high degree.

Twenty one wetland and riparian sites are profiled in this report. Three of these sites support breeding occurrences for the globally imperiled southern Rocky Mountain boreal toad (*Bufo boreas boreas*). These sites also represent the best examples of 24 wetland and riparian communities observed on private lands. CNHP believes these sites include those wetlands that most merit conservation efforts, while emphasizing that protecting only these sites will, in no way, adequately protect all the values associated with Summit County wetlands. Additionally, 12 areas of local significance have been identified based on the local importance of their functions and values within Summit County.

Recommendations for a comprehensive approach to wetland conservation in Summit County are presented. Rapid growth throughout much of the county continues to pose a threat to wetlands through encroachment, fragmentation, altered hydrology, and weed introduction. Historically, one of the most profound impacts on Colorado's wetlands have been changes in hydrology imposed by reservoirs, diversion, irrigation ditches, canals, and ground water pumping. As water becomes an increasingly valuable commodity in north central Colorado, more changes of this type are anticipated.

In addition to providing important information for Summit County, this inventory will advance efforts to evaluate and manage wetlands on state and regional levels. Wetland plant community information gathered during this project is being assimilated into *A Preliminary Vegetation Classification of the Western United States* (Bourgeron and Engelking 1994) currently being compiled and updated by The Nature Conservancy and the Colorado Natural Heritage Program. Policy makers, land use planners, and resource managers can use information in the classification to make informed decisions governing the use and conservation of natural heritage resources.

Information from this effort will also be used to enhance the development of a program for hydrogeomorphic (HGM) wetland function assessment. This report can be used to help identify wetland subclasses in the area, and to better characterize the range of variation within a subclass. Several of the sites profiled in this report have the potential for use as reference sites, or to be part of the reference standard.