

Appendix D-5

North Platte Basin Mapping Results

North Platte Basin Environmental and Recreational Nonconsumptive Focus Mapping

Background:

In 2005, Colorado's legislature established the Water for the 21st Century Act. This act established an Interbasin Compact Process that provides a permanent forum for broad-based water discussions in the state. It creates two new structures: 1) the Interbasin Compact Committee (IBCC), and 2) the Basin Roundtables. There are nine Basin Roundtables based on Colorado's eight major river basins and the Denver metro area (Figure 1-1).

As part of the IBCC, the Basin Roundtables are required to complete basinwide needs assessments. The needs assessments are to include:

- An assessment of consumptive water needs (municipal, industrial, and agricultural);
- An assessment of non-consumptive water needs (environmental and recreational);
- An assessment of available water supplies (surface and groundwater) and an analysis of any unappropriated waters; and
- Proposed projects or methods to meet any identified water needs and achieve water supply sustainability over time.



Figure 1-1 Colorado's Nine Basin Roundtables

The focus area mapping presented here within is part of the North Platte Basin Roundtable's assessment of nonconsumptive water needs. The development of the focus mapping for environmental and recreational features in the North Platte Basin was heavily dependent on Basin Roundtable NCNA subcommittee member participation. The following are members of the North Platte Basin NCNA subcommittee:

- Rick Wyatt
- Barbara Vasquez
- Hal Hagen
- Kent Crowder
- Ty Wattenberg

- Pete Conovitz
- Paula Belcher
- Ann Timberman

Environmental and recreational focus mapping was completed for the following purposes:

- The maps are intended to serve as a useful guide for water supply planning so that future conflicts over environmental and recreational needs can be avoided;
- The maps can assist in identifying environmental and recreational water needs status, such as where needs are being met, where additional future study may need to take place, or where implementation projects in the basin are needed;
- The maps can help basins plan for the water needs of species of special concern so that they do not become federally listed in the future; and
- The maps can provide opportunity for collaborative efforts for future multi-objective projects.

The mapping developed as part of this effort can serve as a tool as the North Platte Basin Roundtable completes their consumptive needs assessments and NCNAs and begins to identify multi-purpose projects to meet their needs. The NCNA process is not intended to create a water right for the environment and it is not the intent of the process to diminish, impair, or cause injury to existing absolute or conditional water rights.

Phase II of the NCNA process will include the following tasks:

- An examination of next steps for priority focus areas as directed by the Basin Roundtables;
- Flow evaluations as determined by the Basin Roundtables for focus areas as needed; and
- Basin Roundtable identification of projects and methods (both structural and nonstructural) to meet their identified nonconsumptive needs.

Methodology:

The North Platte Basin Roundtable chose to use stream and individual lake segments as the basis for their GIS tool development. This methodology uses the USGS National Hydrography Dataset (NHD) dataset that contains stream segment lines and lake/reservoir polygons as the standardizing hydrologic data type.

Some point data did not directly intersect stream line segments or lake polygons in many cases. A buffer was applied to the data points allowing the stream/lake segments that intersected this buffer to be selected. The North Platte Basin used a half mile buffer. The buffer distance was determined to be the most suitable distance in most cases for incorporating the majority of the SWSI Phase 2 Colorado Natural Heritage Program's (CNHP) riparian/wetland plant/plant

community data, as well as other point data such as River Otter sightings, whitewater parks, bald eagle nest locations, and amphibian locations. Some data points were not incorporated in the representative data layers when they were located at too great a distance from a river or lake segment.

Graduated colors were used to symbolize the subcategory count per river/lake segment while the subcategory numerical code was used to label the segments.

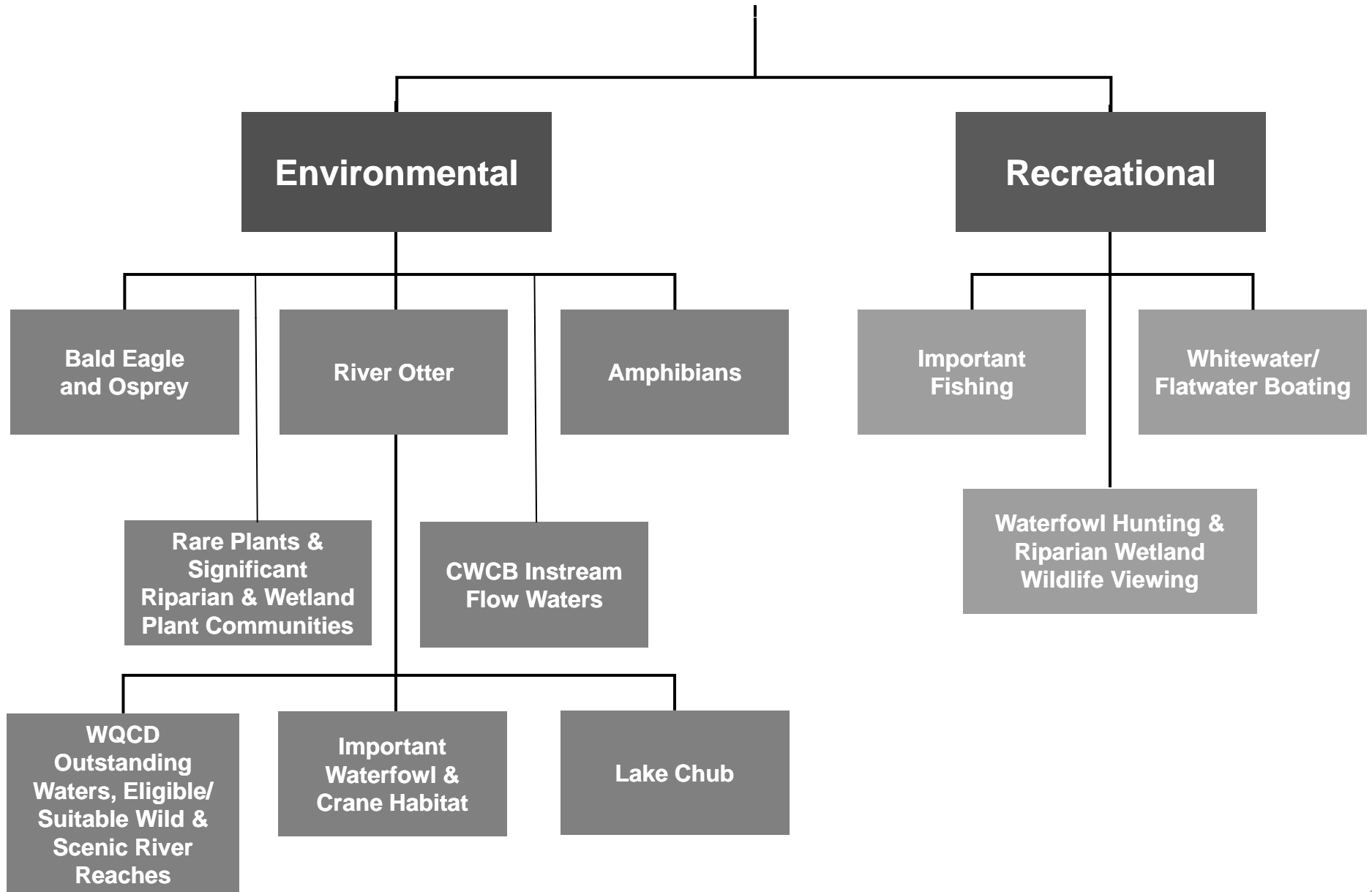
Results:

Although eleven subcategories were used for the North Platte Basin mapping, the greatest number of overlap was six, meaning six different subcategories were present within the same segment. Segments with five or six subcategories present are highlighted in red on the map. The highest concentrations of subcategories are located on the following segments: the Big Creek Lakes, a portion of the North Fork Michigan River, and a segment of the Illinois River south of Walden.

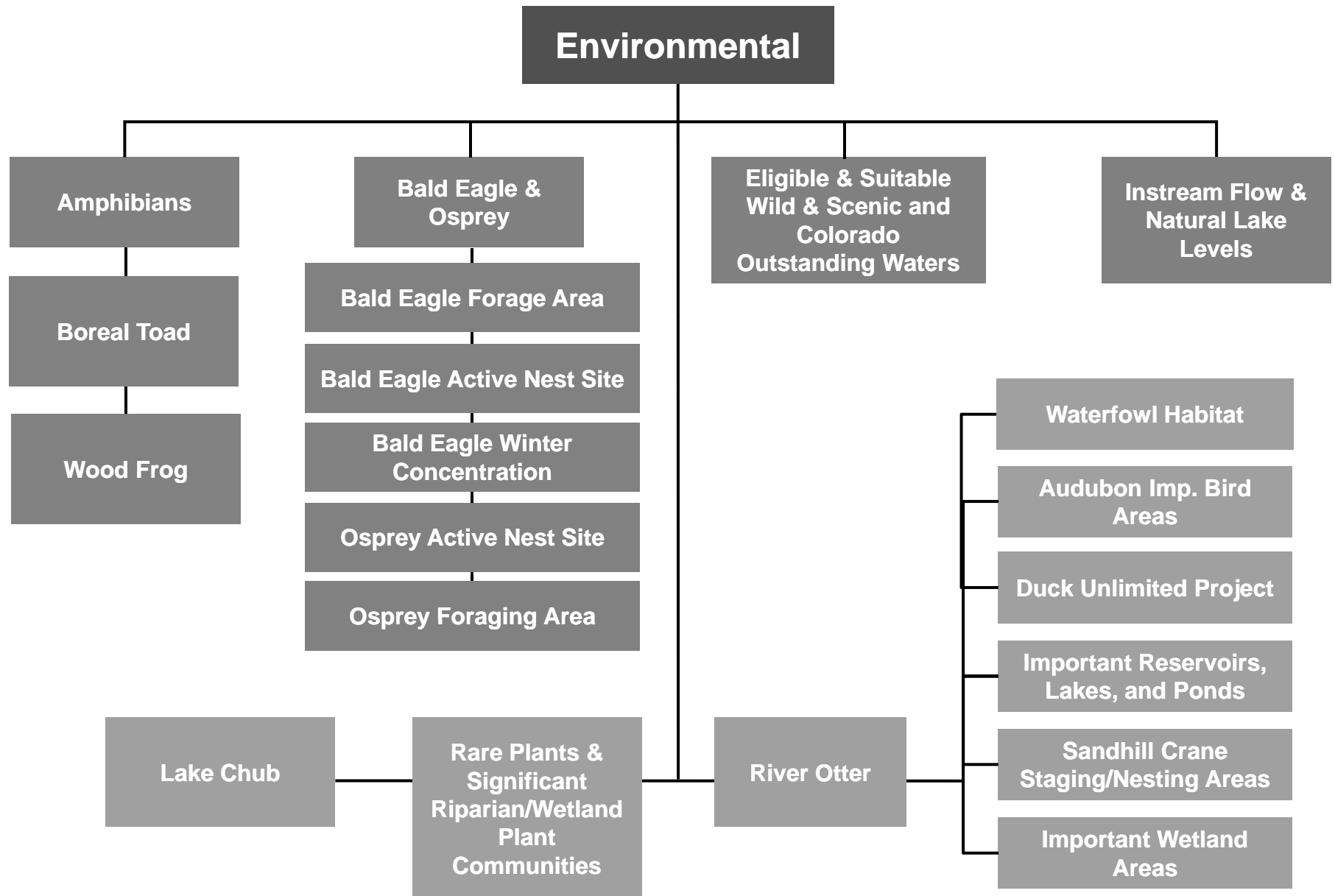
The following mapping information for the North Platte Basin is contained in the remainder of this Appendix:

- Environmental and Recreational Attribute Categorization for the North Platte Basin
- Data Sources for North Platte Basin NCNA Focus Mapping
- North Platte Basin Environmental and Recreational NCNA Focus Map
- The North Platte Basin Power Point Presentation for NCNA Mapping

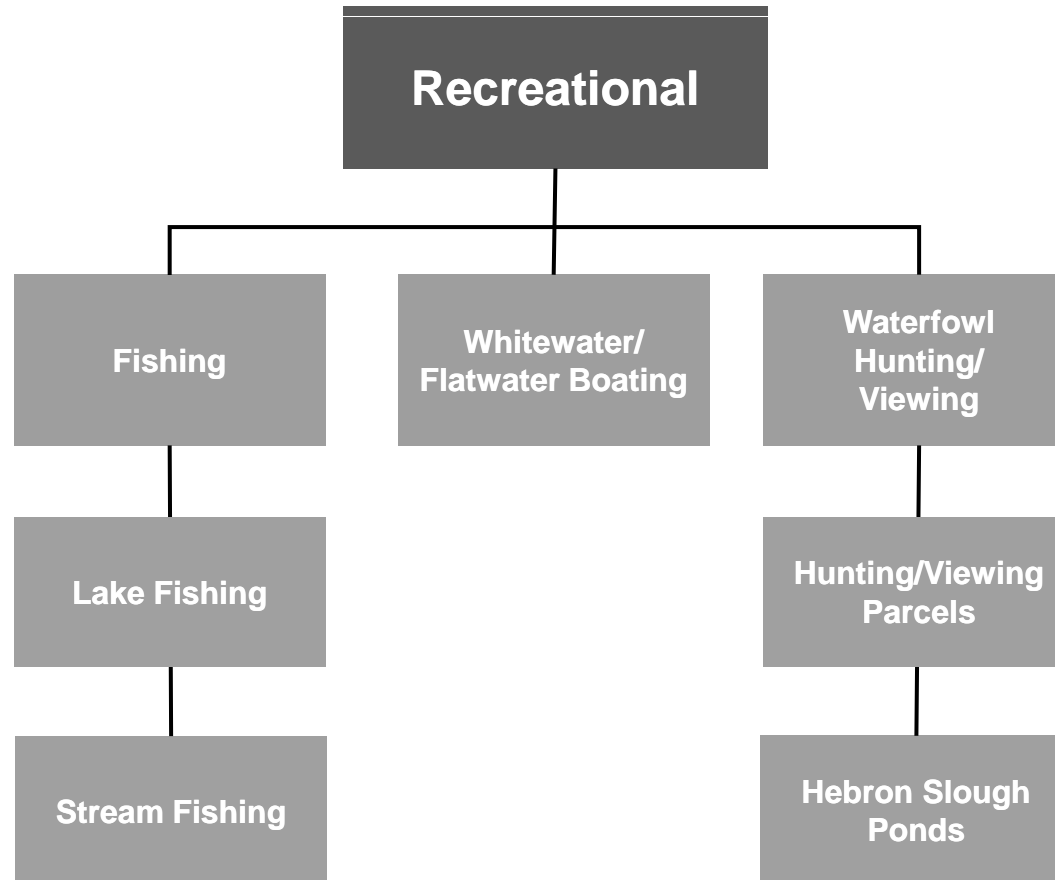
North Platte Categorization

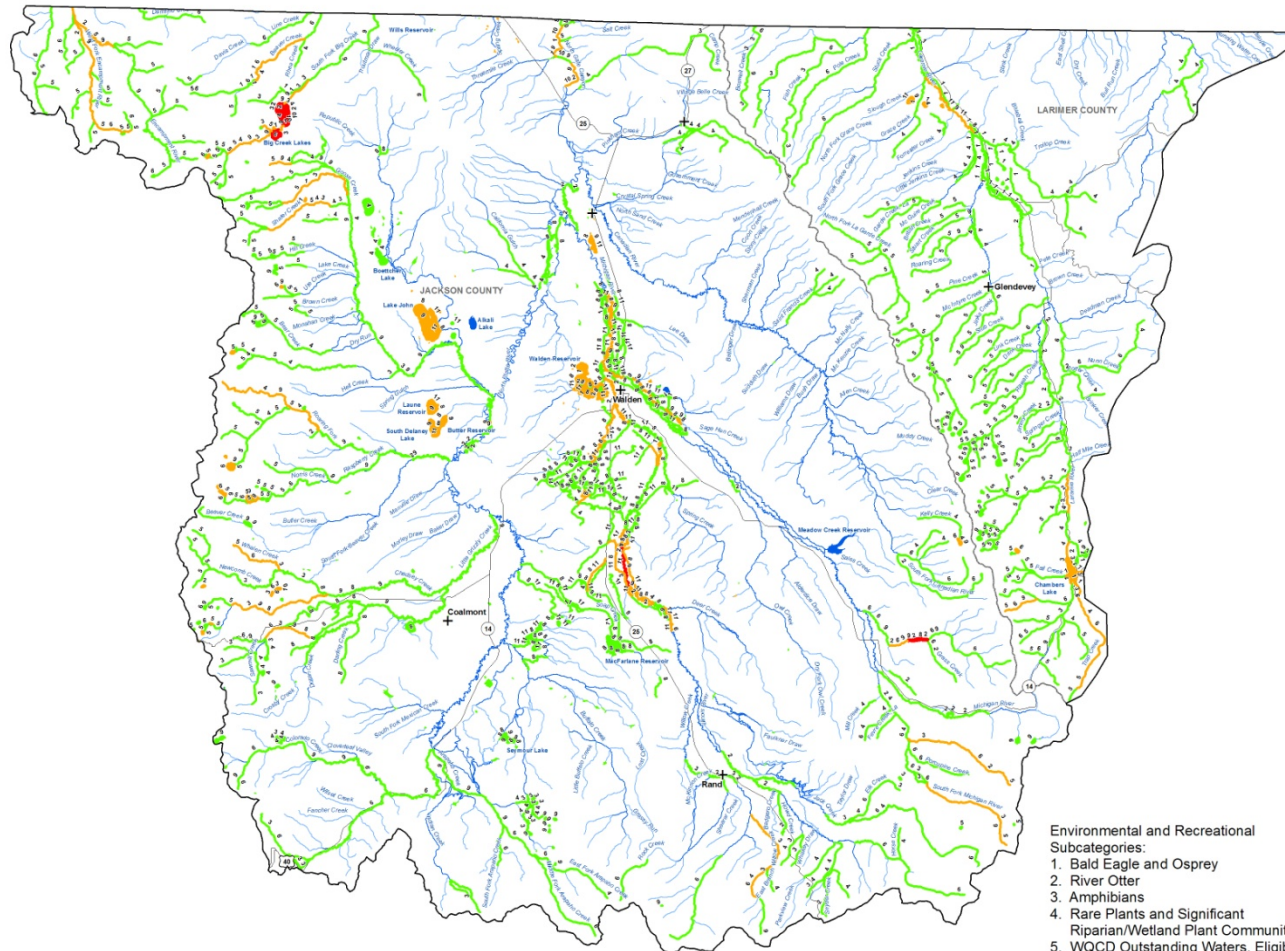


North Platte Categorization



North Platte Categorization





- Legend**
- Environmental and Recreational Subcategory Count by Stream Segment**
- 1 - 2
 - 3 - 4
 - 5; 6
 - Roads
 - Rivers and Streams
 - Lakes and Reservoirs
 - + Cities and Towns
 - County Boundary



1 inch = 2 miles

- Environmental and Recreational Subcategories:**
1. Bald Eagle and Osprey
 2. River Otter
 3. Amphibians
 4. Rare Plants and Significant Riparian/Wetland Plant Communities
 5. WQCD Outstanding Waters, Eligible/Suitable Wild and Scenic River Reaches
 6. CWCB Instream Flow Waters
 7. Lake Chub
 8. Important Waterfowl and Crane Habitat
 9. Important Fishing
 10. Whitewater and Floatwater Boating
 11. Waterfowl Hunting and Riparian/Wetland Wildlife Viewing

Figure 3-5
North Platte Basin
Nonconsumptive Needs Assessment
Environmental and Recreational
Subcategory Count per
Stream Segment



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Refer to Appendix B of the NCNA Mapping Report for a complete list of data sources and Appendix D of the Mapping Report for other basin-specific mapping information.

North Platte Basin GIS Data and Sources**SWSI 2 Shapefile****Data Source**

Boreal Toad Known Breeding Sites	CDOW
Lake Chub	CDOW
Rare Riparian/Wetland-Dependent Plants	CNHP
Significant Riparian/Wetland Plant Communities	CNHP
Instream Flow Streams	CWCB
Natural Lake Level Lakes	CWCB
Audubon Important Bird Areas	National Audubon Society
Gold Medal Lakes	CDOW

Additional Data Layers**Data Source**

Additional Boreal Toad (Stream and Lake Locations)	CDOW List of Streams and Lakes provided by Ken Kehmeier
Wood Frog	CDOW Herp database
Additional Wood Frog (Coordinate Locations)	USFS. Digitized from XY coordinate locations provided See Documents
Additional Wood Frog (Stream and Lake Locations)	CDOW List of Streams and Lakes provided by Ken Kehmeier
Bald Eagle Active Nestsites	CDOW (NDIS)
Bald Eagle Winter Concentration	CDOW (NDIS)
Additional Bald Eagle Foraging Area	USFWS. Data point marked on map provided by biologist at ANWR See Documents
Osprey Active Nestsites	CDOW (NDIS)
Osprey Foraging Area	CDOW (NDIS)
River Otter Sightings (confirmed, probable, and likely)	CDOW Shapefile provided by Pete Conovitz CDOW
Colorado Outstanding Waters	Digitized from list produced by WQCD
Encampment River Eligible/Suitable Wild and Scenic	http://www.fs.fed.us/r2/mbr/projects/forestplans/mb/eis_apps/final_eis_app_e_wsrivers.pdf http://www.fs.fed.us/r2/mbr/projects/forestplans/mb/eis_apps/final_eis_app_e_wsrivers.pdf
Red Canyon and Roaring Fork Eligible Wild and Scenic	Digitized from map provided by Liz Schnakenberg: lschnackentberg@fs.fed.us
Stream/River Fishing	CDOW (Ken Kehmeier, Pete Conovitz) NCNA Committee Members and Public Input
Lake/Reservoir Fishing	CDOW (Ken Kehmeier, Pete Conovitz) NCNA Committee Members and Public Input
Whitewater Boating (Northgate Canyon)	NCNA Committee Members
Flatwater Motorized and Non-Motorized Boating	CO State Parks Boatable Waters List, NCNA Committee Members
Ducks Unlimited Project Areas	Ducks Unlimited
Sandhill Crane Staging Areas	CDOW (Shapefile provided by Liza Rossi)
Important Waterfowl Habitat (Reservoirs, Lakes, Ponds and Wetlands)	Digitized from list provided by NCNA committee members