

# Banks Lake Resource Management Plan Grant County, Washington July 2001

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# ACRONYMS AND ABBREVIATIONS

ADA	Americans with Disabilities Act
ACHP	Advisory Council on Historic Preservation
AHS	Archaeological and Historical Services
AUM	Animal Unit Month
BMPs	Best Management Practices
CBP	Columbia Basin Project
CBWA	Columbia Basin Wildlife Area
CCT	Colville Confederated Tribes
CMP	Climbing Management Plan
CRMP	Cultural Resource Management Plan
CWA	Clean Water Act
DEIS	Draft Environmental Impact Statement
EA	Environmental Assessment
EIS	Environmental Impact Statement
EPA	US Environmental Protection Agency
FONSI	Finding of No Significant Impact
FWS	U.S. Fish and Wildlife Service
GCSD	Grant County Sheriffs' Department
GMA	Growth Management Act
GWMA	Ground Water Management Area
ITAs	Indian Trust Asset
LAC	Limits of Acceptable Change
LMA	Land Management Agency
MOA	Memorandum of Agreement
NEPA	National Environmental Policy Act
NMFS	National Marine Fisheries Service
NOI	Notice of Intent
NPS	National Park Service
NTMBs	Neotropical Migratory Birds
ORV	Off-road Vehicle
PUD	Planned Unit Development
PWC	Personal Water Craft
Reclamation	Bureau of Reclamation
RMP	Resource Management Plan
RV	Recreational Vehicle
SHPO	Washington State Historic Preservation Office
SPRC	Washington State Parks and Recreation Commission
STMA	Scattered Tracts Management Area
SRSP	Steamboat Rock State Park

TCP	Traditional Cultural Property
TES	Threatened, Endangered and Sensitive Species
UGA	Urban Growth Areas
WDFW	Washington Department of Fish and Wildlife
WDNR	Washington Department of Natural Resources
WDOE	Washington Department of Ecology
WIGWC	Washington State Interagency Ground Water Committee

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# **CHAPTER 1**

## **INTRODUCTION TO THE RESOURCE MANAGEMENT PLAN**

### **1.1 OVERVIEW**

This Resource Management Plan (RMP) was developed for the Banks Lake area, in Grant County, Washington, in response to the growing demand for recreational opportunities and visitor facilities while balancing resource protection and conservation objectives. The plan is designed to guide conservation, protection, and management of land and water resources under the jurisdiction of the Bureau of Reclamation (Reclamation). Developed by Reclamation to primarily receive and store irrigation water from the Columbia River for the Columbia Basin Irrigation Project, Banks Lake is managed to meet irrigation commitments, assure public safety, and protect property. Once these obligations have been fulfilled, Reclamation turns its attention to other resources like fish and wildlife and their habitats, cultural resources, recreational activities, and educational opportunities.

In 1953, under a memorandum of agreement (MOA), Reclamation transferred all the responsibilities dealing with fish and wildlife management to the Washington Department of Fish and Wildlife (WDFW), and the Washington State Parks and Recreation Commission (SPRC) conceded to manage recreation. The U.S. Fish and Wildlife Service (FWS) assisted Reclamation with the development of the RMP by preparing the Fish and Wildlife Coordination Act Report (CAR) for the Banks Lake management area; the CAR is in accordance with the provisions of the Fish and Wildlife Coordination Act (FWCA) (48 Stat. 401, as amended; 16 U.S.C. 661 et seq.). Reclamation supports the completion of this RMP for the Banks Lake management area to direct future management decisions.

### **1.2 AUTHORITY**

The National Environmental Policy Act (NEPA), established by Congress in 1969, provides a mandate and a framework for federal agencies to consider all reasonably foreseeable environmental effects of their actions; hence an Environmental Assessment (EA) on the Banks Lake management area was performed and completed. The document focused on issues and concerns identified by the public and resource agencies during the scoping process. Reclamation initiated the public involvement efforts by collecting information from the public and representatives from state and federal agencies through a series of workshops, interviews, and consultations. Responding to input from the public and the agencies' concerns, an Ad Hoc work group, Reclamation, WDFW, and SPRC developed integrated management policies and actions to ensure the use of Reclamation lands and waters at Banks Lake maintain, protect, and enhance natural resources.

The AD Hoc work group, consisting of a broad cross-section of resource, Tribal, and local agency personnel, addressed both the public and the agencies' concerns by identifying the goals and objectives of the RMP. The EA informed decision makers and the public of the impacts associated with each alternative. Based on the outcome of Reclamation's environmental decision process, the resulting RMP was developed for the preferred alternative. "To balance management agencies' and the public's long-term vision for Banks Lake by recognizing the need to protect the natural and cultural environment while supporting the overall recreational interests

of the visitors.” The EA was also used to determine a Finding of No Significant Impact (FONSI), and the management elements and objectives from the EA have been incorporated into the RMP. As approved and adapted by Reclamation, the RMP authorizes the coordination of adaptive management to ensure all future decisions in the planning area will include a multiple-use approach to natural resources.

### **1.3 APPLICABILITY**

The EA was completed for Banks Lake to analyze and discuss the environmental consequences associated with three management alternatives (plus the no action alternative). Reclamation study team and decision makers selected Alternative B - Natural Resource Conservation with Limited Development - as the preferred alternative. Therefore, the scope of this RMP will *only* discuss the establishment and integration of Alternative B into Banks Lake management area. The RMP captures the goals and objectives of the Alternative B and examines each resource individually across the entire management area rather than examining related resources found in predetermined sections of the management area. This technique is referred to as a broad-scale approach and is particularly effective in natural resource management (Haufler et al. 1996).

Four management actions remained constant in all the alternatives because of existing laws, regulatory requirements, or Reclamation policy. Consequently, they are also included in the preferred alternative; the understanding is as follows:

- 1) Continue to meet all contractual obligations of the 1968, contracts between the U.S. and Columbia Basin Project (CBP) irrigation districts.
- 2) Continue to operate Banks Lake in accordance with Reclamation law and the Columbia Basin Project Act dated March 10, 1943 (Chapter 14, 57 STAT, 14).
- 3) Continue to meet existing operational constraints placed on Banks Lake water surface elevations due to CBP contractual obligations, agreements with the Pacific Northwest Power Planning Council, fish flow requirements established under the Endangered Species Act, and pump-storage power generation requirements.
- 4) Continue to administer Reclamation lands and waters through an updated MOA between the United States and Washington State. Day-to-day resource and recreation management activities will continue to be provided by the SPRC and WDFW with oversight by Reclamation.

### **1.4 PURPOSE**

The purpose of this RMP is to provide management guidance and jurisdictional and administrative boundaries for the land and water resources at Banks Lake for a 10-year period. Management actions outlined by the RMP will be carried out as soon as the plan is accepted by Reclamation. Revisions to the plan should occur every 10 years, but no later than 15 years after the approval of the original plan. In the interim, the RMP will act as a “living document” that may be amended as needed by land managers and resource personnel with jurisdictional authority within the management area. Additionally, the RMP will provide direction for future proposed projects (while monitoring the progress of management prescriptions as they become implemented) in the Banks Lake management area.

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Changes to the EA may require supplementary NEPA analysis and subsequent public involvement. This scenario will require an addendum document to the original EA but will not require the preparation of a new EA. NEPA documents do not expire; the original EA will be supplemented with the more recent information. However, some management actions (outlined by the RMP) may require site-specific NEPA analysis, particularly with actions that require ground-disturbing activities. While these projects will be evaluated on a case-by-case basis, they will require a new NEPA document that pertains only to the management action(s) being proposed. The author should refer the readers back to the original EA for more information; this process is known as “tiering,” and it prevents the unnecessary duplication of documents. The authority to supplement the existing EA or tier to a new EA will be the responsibility WDFW and the SPRC with oversight from Reclamation.

## 1.5 PLAN STRUCTURE

The RMP is organized into thirteen chapters:

- 1 Introduction to the Banks Lake Resource Management Plan
- 2 Existing Resource Conditions at Banks Lake
- 3 Agency Coordination and Standards
- 4-10 Management Prescriptions for Each Resource Identified in the Plan
- 11 Mitigation Measures for the Desired Condition
- 12 Implementation of the Resource Management Plan
- 13 References

Subsections, corresponding with these chapters, can be located in the Table of Contents. Chapter 2, Existing Resource Conditions at Banks Lake, provides a general description of the management area’s existing natural, cultural, and visual resources. Chapters 4 through 10, specifically address each resource in the RMP including: (1) Natural Resources, (2) Cultural Resources, (3) Recreation, (4) Land Use and Administration, (5) Grazing Management, (6) Public Information/Awareness, and (7) Public Health and Safety. Chapters 4 through 10 outline the concerns, goals, and objectives for each resource by providing a protocol, or guideline, for the management agency to follow by describing the current management situation and establishing the expectations for the desired management condition in the management area. Chapter 11 presents the mitigation actions, or additional environmental commitments, made by Reclamation. Chapter 12 deals with the implementation of the RMP by outlining *how* the plan will be integrated into the management area; *when* it is expected to come into effect; and *who* will be responsible for managing, administrating, and monitoring the results.

## 1.6 MANAGEMENT AREA DESCRIPTION

One of the principal reservoirs of the Columbia Basin Project, Banks Lake occupies the basin floor of the Upper Grand Coulee Dam between the towns of Grand Coulee and Coulee City in central Washington. The lake is 27 miles long and encompasses an estimated 27,000-acre area at full pool; the reservoir’s elevation at full pool is 1570 feet (Figure 1.6-1). The management area focuses on an additional 17,000 acres of land around Banks Lake Reservoir.

Since the creation of Banks Lake in the early 1950s, the reservoir has been operated and maintained for the storage and delivery of irrigation water drawn from the Columbia River to the Columbia Basin Project lands. The water level fluctuates approximately 3 to 5 feet annually. The highest water levels usually occur in June, and the lowest water levels can be found in November. Eurasian Water Milfoil control and facility maintenance drawdowns, implemented on a 10 to 15 year cycle, require lowering the level of the lake approximately 20 to 25 feet during the winter.

At Dry Falls Dam, the main canal flows southward from the Banks Lake outlet to the northern portion of the project's irrigation area. Reclamation operates the reservoir within established constraints for surface water elevation to meet contractual obligations, assure public safety, and protect property; other resource needs are viewed as secondary within existing operational constraints.

The steep basalt and rhyolite cliffs of the Grand Coulee encompass the lake and limit human access and activities in the RMP management area, particularly on the west side of the reservoir. State Route (SR) 155 is the primary travel corridor along the reservoir's eastern shore between Coulee City and the south end of the lake and Electric City/Grand Coulee at the lake's north end. Local city and county roads also serve the Banks Lake area. Some shoreline areas are primarily accessed via the reservoir's primitive road network. These roads are generally unmaintained, two-track dirt roads that may require the use of high clearance four-wheel drive vehicles. Other shoreline areas can only be accessed by boat.

## **1.7 JURISDICTIONAL BOUNDARIES**

Reclamation lands in the RMP management area are managed by Washington State under a Memorandum of Agreement (MOA) expiring in 2003. Under the MOA, the SPRC and the WDFW are the principal state agencies responsible for essentially all Banks Lake land use activities. The State issues and administers all leases, licenses, permits, and concession contracts for the purpose of providing commodities and public services in the reservoir area. The Steamboat Rock State Park Recreational Area (SRSP), administered by the (SPRC), includes recreational sites and facilities both within the management area (Steamboat Rock State Park) and immediately adjacent to the management area (Northrup Canyon Natural Area). The Washington Department of Natural Resources (WDNR) maintains jurisdiction school endowment lands and administers Sunbanks Resort on Banks Lake.

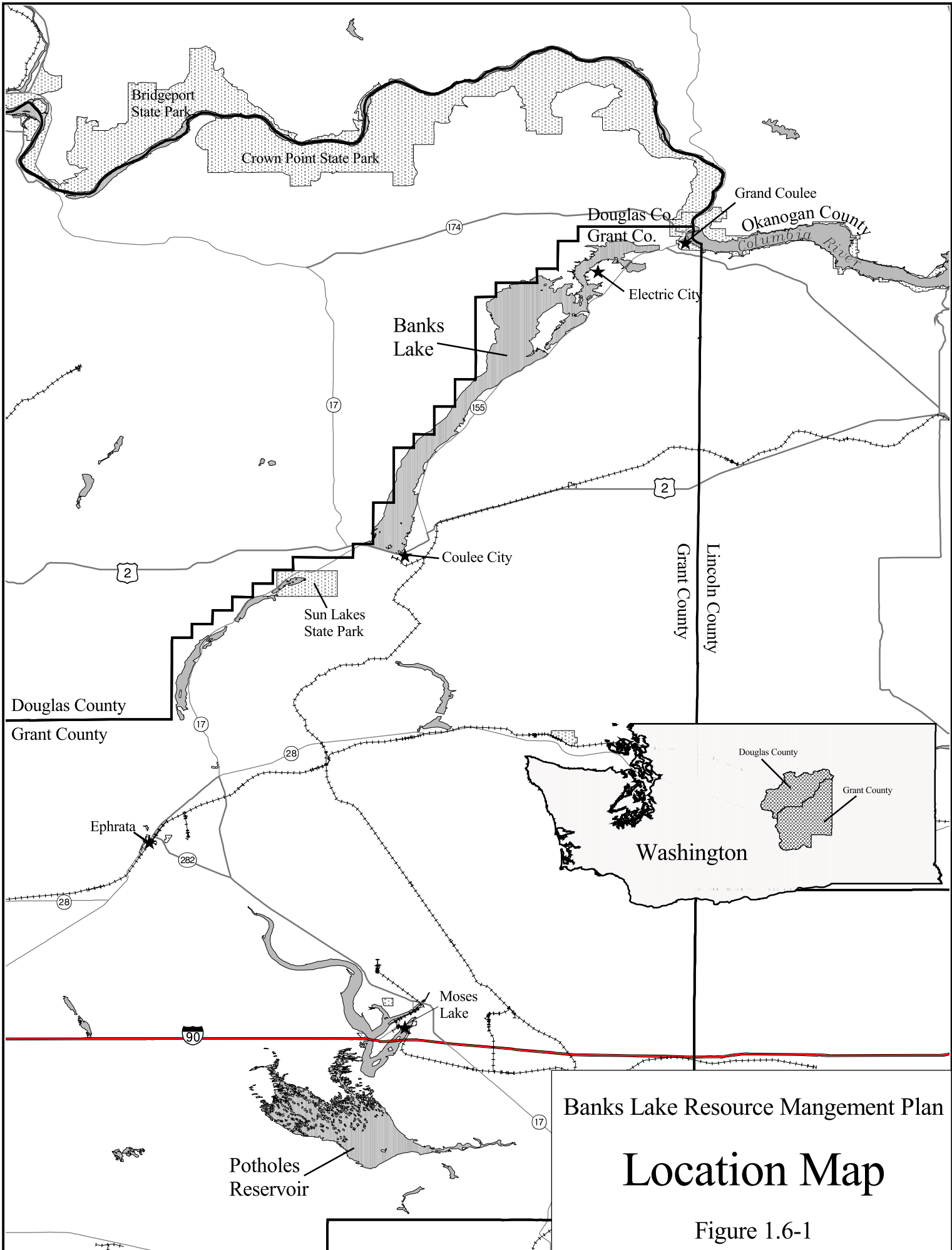
The Northrup Canyon Natural Area is managed as part of the Steamboat Rock State Park Recreation Area by the SPRC; however it lies outside of the management area, and therefore is outside the scope of the RMP. Management actions and decisions potentially affecting the Northrup Canyon Natural Area are not included or assessed in the RMP except where related to actions within the RMP boundary. All state agencies affiliated with the Banks Lake management area operate with oversight from Reclamation since the lands were appropriated to the Reclamation from Congress.

Banks Lake lies primarily in Grant County, but portions of the western shoreline extend into Douglas County. Grant County provides law enforcement services in the management area. To ensure proper operation and protection of the reservoir, Reclamation maintains primary jurisdiction over developments in Reclamation zone, which includes North Dam, Dry Falls Dam,

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and their appurtenant works. The National Park Service (NPS) and the (FWS) may review plans, as Reclamation deems appropriate.





Banks Lake Resource Mangement Plan

# Location Map

Figure 1.6-1

## **CHAPTER 2**

### **EXISTING RESOURCE CONDITIONS**

#### **2.1 ASSESSMENT OF THE NEED FOR CHANGE**

The Banks Lake management area has a rich diversity of natural resources and is recognized locally and regionally for its outstanding recreation opportunities. The reservoir's clear water and spectacular scenery attract over one-half million visitors each year to enjoy fishing, camping, swimming, boating, wildlife observation, and other recreational opportunities. There is an inherent need for a comprehensive management plan in the management area to conserve and protect the land and water resources so the public may continue to enjoy all the recreational opportunities available at Banks Lake.

Arid ecosystems, like the lands surrounding Banks Lake, tend to be more susceptible to human disturbance and require longer periods of time to recover than do wetter areas that receive more rainfall. Drier landscapes usually require restoration to expedite vegetative succession, but some disturbed areas never recover, even with restoration. Other factors influencing the fragility of the acreage around Banks Lake reservoir include precipitation events and erosion. While xeric landscapes receive little rainfall annually (< 12"/year) compared to other mesic areas, the precipitation events are characterized by short, intense thunderstorms when they occur. These storm bursts inevitably wash the soil into the reservoir, and water resources/quality begin to be effected. Arid landscapes are prone to erosion, and the soil loss is rapid following the disturbance. Consequently, land use effects water resources and visa versa. Proper land and water management practices will prevent or reduce potential environmental and resource-related problems. The implementation of a RMP for Banks Lake management area will only further contribute to the uniqueness of the area by providing a safe and beautiful place for people and natural resources to exist together.

#### **2.2 NATURAL RESOURCE SUMMARY**

This chapter summarizes existing resource conditions in the Banks Lake management area. Natural, cultural, and aesthetic resources are addressed followed by a general description of the local and regional management area relative to social and economic resources. The presence of hazardous and toxic materials of concern are also identified and described.

Banks Lake is the northernmost unit managed by the WDFW under the Columbia Basin Wildlife Area (CBWA) Management Plan. The CBWA includes eastern Washington lands within Grant, Adams, Franklin, and Douglas Counties. Most of the management units encompass lands developed as a result of Reclamation's Columbia Basin Project. The WDFW owns 43,000 acres fee title, leases some tracts from the WDNR, and has agreements for management of federal lands with the FWS, the U.S. Department of Energy (USDOE), the Bureau of Land Management (BLM), and Reclamation. The WDFW manages a total of 260,000 acres under the plan. To date, no specific CBWA management plan for the Banks Lake unit has been developed.

### **2.2.1 Climate**

The Cascade Range and the Rocky Mountains greatly influence the climate in the Columbia Basin and Banks Lake management area. The Rocky Mountains shield the Columbia Basin from the more severe winter storms moving southward across Canada, while the Cascade Range forms a barrier to the easterly movement of moist air from the Pacific Ocean (SCS, 1984). However, some air from each of these sources reaches the Columbia Basin and affects the climate at Banks Lake.

Due to Pacific high pressure systems from May through September, the recreation season is generally hot and dry. From late June until September, sunshine is abundant. Summer precipitation mainly occurs either as brief showers or as short, intense thunderstorms. Short periods of rainfall occur from July through September and average about 0.5 inches per month. Rain typically falls again in October, after the peak recreation season. This is followed by an Indian Summer with cool, sunny days and crisp, cold nights. In winter, the ground is often covered with snow. Mean monthly temperatures from November through April range between 29 and 50°F. However, Chinook winds, which blow downslope and are warm and dry, often melt and evaporate the snow (SCS, 1984). Spring comes late in March and is typically cool and wet.

Mean annual precipitation at Banks Lake is approximately 10.4 inches. The average annual snowfall is about 20 inches with the greatest snowfall occurring in December (averages 5.9 inches) and January (averages 7.9 inches). August and September are normally the driest months of the year; January, May, November, and December are normally the wettest.

The prevailing winds are from the southwest during summer with about six thunderstorms generally occurring during the season. Winds from the northwest typically are associated with winter storms. The water at Banks Lake can be extremely rough and dangerous within minutes of a storm's approach, requiring boaters to seek shoreline refuge as quickly as possible. This is less of a concern along the central portion of the reservoir which is more sheltered from adverse wind conditions.

Strong winds are usually aligned in the direction of major storm movements. Most major storm movements are from the west or southwest. The intensity and the direction of the wind is often determined by the surrounding terrain and coulee walls. As a rule, most winds come from the southwest and light winds, those less than 12 miles per hour, outnumber strong winds.

### **2.2.2 Air Quality**

The Banks Lake management area is under the jurisdiction of the Washington Department of Ecology's (WDOE) Eastern Regional Air Pollution Control Authority Office. Washington's air monitoring network measures ambient air quality near population centers in selected areas of the state; the closest monitoring sites to Banks Lake are Spokane to the east and Yakima to the southwest.

Air quality in the management area is very high (well below ambient air quality standards for criteria pollutants) due to the absence of nearby point sources, such as commercial and/or

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industrial facilities. Air pollutant sources which periodically occur in or near the management area include wildfires, campfires, prescribed burns, fugitive and/or agricultural windblown dust, and mobile emissions from motor vehicles, aircraft, trains, watercraft, and construction. These emissions are generally of short duration and have not resulted in pollution problems due to high dispersion rates found in the area.

Class I areas have the highest air quality classification and include all international parks, wilderness areas, memorial parks which exceed 5,000 acres, and all national parks which exceed 6,000 acres. Class I areas have land and resource use restrictions to prevent damage to visibility, plant, soil, and other resources. The closest Class I area to Banks Lake is the Spokane Indian Reservation to the east. WDOE's plans for protecting and improving visibility in Class I areas are contained in the air quality State Implementation Plan (SIP).

### **2.2.3 Geology**

Banks Lake is situated in the central portion of eastern Washington State within the Columbia Plateau physiographic province (Fenneman, 1931). The inception of the Columbia Plateau province occurred during the Miocene epoch with vast outpouring of basalt lavas, which created the Columbia River Basalt (CRB) formation. The lavas generally flowed westward into a structural and topographic basin, with some flows reaching the Pacific Ocean. The basalts are essentially horizontal, with minor amounts of interbedded Miocene sediments of various lithologies (USGS, 1989). The CRB formation extends over 500,000 square kilometers in Washington, Oregon, and Idaho and underlies virtually the entire region (USDA, 1973). Overlying the basalts are fluvial, glaciofluvial, and volcanoclastic sediments, and loess of Pliocene to Holocene age. The area has been dissected into many flat-bottomed coulees which have floors that merge with basins and plains to the west (Grolier and Bingham, 1978).

The Grand Coulee's ancestral channel was cut by the Columbia River when it was forced to flow across the lava field by the Okanogan ice lobe of the Vashon continental glacier. When flood waters cascaded down the steep southeast-facing slope of the Coulee monocline, the basalt fold eroded headward forming a typical recessional gorge. Erosion and cataract retreat continued in the upper Grand Coulee until the basalt flows at the coulee head were completely removed, exposing granitic rocks that form the upper coulee floor (U.S. Government Printing Office, 1973).

The Banks Lake management area is situated in the upper Grand Coulee - a box canyon with a nearly horizontal floor and 900 foot vertical basalt walls. Grand Ronde and other basalts older than Wanapum Basalt are found inside the coulee walls. Wanapum Basalts comprise the upland plateau surrounding the coulee walls.

### **2.2.4 Topography**

The landscape of the Banks Lake management area is varied. Rugged basalt coulee walls in the north and central portions of the management area open to the south. Elevations range from approximately 1600 feet (487 m) near Dry Falls Junction at the southern end of the management area to approximately 2300 feet (701 m) in Northrup Canyon. The management area can best

be described in three sections: (1) the north pool area; (2) the middle walled area; and (3) the south pool area.

The north pool area extends from North Dam south to the Steamboat Rock State Park peninsula. In general, the area is a large pool bordered by steep basalt cliffs containing several unique features. The two most striking features are Steamboat Rock and Northrup Canyon. Steamboat Rock is a 700 foot (213 m) basalt remnant of the cataclysmic flooding that created the Grand Coulee. Northrup Canyon is a narrow closed box canyon bounded by 700-foot-high basalt cliffs and walls. The canyon contains a mosaic of unique natural habitat types of high ecological value. Other north pool area features include Barker Canyon, Castle Rock, and several reservoir bays (Osborn Bay, Jones Bay, Kruks Bay, Old Devils Lake, Devils Punch Bowl, and Barker Cove).

The middle walled area is the most homogenous in the management area. This section extends from where the canyon becomes restricted below the Steamboat Rock peninsula south to where SR 155 exits the upper Grand Coulee (about 3 miles north of Dry Falls Dam). The area is bounded by 750-foot-high (230 m) basalt walls on either side of the reservoir. Aside from Bebe Springs, Martin Falls, and several intermittent waterfalls, there are no especially unique topographic features in the middle portion of the management area.

The south pool area extends from where SR 155 leaves the upper Grand Coulee south to Dry Falls Dam. The east side of the south pool area is characterized by open shrub-steppe and grassland plant communities, rolling hills, and agricultural croplands. The south pool's west side is characterized by 400 foot-high (120 m) basalt walls that open at Dry Falls Dam. Below Dry Falls Dam, basalt outcrops, lakes (Junction Lake, Coulee Lake, and Table Lake), and palustrine wetlands characterize the landscape.

The nearly vertical coulee walls which encompass most of the Banks Lake management area limit human access and activity. Access and travel is easiest on the east side of the reservoir via SR 155. Except in the north pool area (Barker Flat) or in the immediate vicinity of Dry Falls Dam, access to the reservoir's west side is essentially boat access only. Consequently, the majority of the land use and recreational activities occurring at Banks Lake are concentrated on the reservoir's east side, and, more specifically, at the reservoir's north and south ends.

### **2.2.5 Soils**

The most recent and comprehensive soils data available for the management area was obtained from the *Soil Survey of Grant County Washington* (SCS, 1984) and the *Soil Survey of Douglas County Washington* (SCS, 1981) prepared by the U.S. Department of Agriculture's Natural Resources and Conservation Service (NRCS), formerly the Soil Conservation Service (SCS). Revised soils data exist for Douglas County, but these data have not yet been released to the public (Bareither, 1998).

Banks Lake is primarily situated in the northwest corner of Grant County. The Grant/Douglas county line intersects the management area's western boundary at several locations. Soils in the RMP management area consist of three general soil groups; a total of five general soil map units in Grant County; and three general soil map units in Douglas County (see Table 2.1). Each of

the general soil map units identifies broad areas that have a distinctive pattern of soils, relief, drainage, and landscape. Table 2.1 also provides general soil unit description and characteristics for each of the Grant and Douglas county soil map units found in the Banks Lake management area.

**Table 2.1**  
**General Soil Map Units, Banks Lake, Washington**

<b>Grant County</b>
Soils on terraces, active dunes, and alluvial fans. Primarily found in the northern portion of Banks Lake from Steamboat Rock north to Grand Coulee.
Unit 6: Quincy: Very deep, somewhat excessively drained, nearly level to steep soils; on terraces and active dunes. Soils are fine sand throughout; formed in sand derived from mixed sources.
Unit 9: Farrell-Ellisforde: Very Deep, well drained, nearly level to strongly sloping soils; on terraces.
Soils on benches, terraces, hillsides, and ridgetops in areas of channeled scablands. Dominate soil types found across the entire management area.
Unit 13: Bakeoven-Roloff: Very shallow and moderately deep, well drained, nearly level to very steep soils, on, hillsides, benches, and ridgetops.
Unit 14: Bakeoven-Anders-Benco: Very shallow, moderately deep, and very deep, well drained, nearly level to very steep soils; on ridgetops, hillsides, benches, and terraces
Soils mainly on hills and ridgetops. Found in the extreme southwest corner of the management area north of Dry Falls Dam.
Unit 18: Zen-Lickskillet-Rails: Shallow, moderately deep, and very deep, well drained, nearly level to very steep soils; on hillsides and ridgetops.
<b>Douglas County</b>
Unit 2: Bakeoven-RockCreek-Lickskillet: Shallow, well drained, gently sloping to moderately steep soils; on basalt uplands and plateaus, mountain side slopes, and ridgetops.
Unit 5: Touhey-Heytou: Very deep and moderately deep, well drained, nearly level to moderately steep soils; on broad basalt plateaus.
Unit 7: Bakeoven-Touhey: Shallow and very deep, well drained, nearly level to steep soils; on basalt plateaus and uplands.

## 2.2.6 Water

### Surface Water Hydrology

The Columbia River is one of the world's largest rivers, draining a basin encompassing about 259,000 square miles in the northwestern United States and southwestern Canada. The river is characterized by heavy, sustained flows during the summer months with the peak flow usually occurring in mid-June. Most of the Columbia basin's water supply comes from the forested slopes of the Rocky Mountains in British Columbia, western Montana, and northern Idaho where snow and heavy rains result in prolonged summer river flows. Based on the 75-year period of record from 1915 through 1989, the average annual discharge of the Columbia River at Grand Coulee Dam was 80 million acre-feet with an average annual flow of 110,000 cubic feet per second (cfs).

The water supply stored at Banks Lake, one of the principal reservoirs of the Columbia Basin Project, is pumped 280 feet from Franklin D. Roosevelt (FDR) Lake by the Grand Coulee Pumping-Generating Plant. Extending southward from the Pumping-Generating Plant, the Project's irrigation works begins with the 1.8 mile-long Feeder Canal which carries water to Banks Lake - an equalizing and storage reservoir for the Project's irrigation system.

Banks Lake is operated and maintained for the storage and delivery of irrigation water to Columbia Basin Project lands; therefore the reservoir levels are fluctuated to meet the irrigation demands and pumping schedules of the Project. The United States reserves the right to vary the reservoir water level at such times to the extent deemed necessary or desirable.

Irrigation diversions made from Banks Lake to meet Columbia Basin Project requirements enter the Main Canal at the Dry Falls Dam headworks. The irrigation season typically extends from mid-March through October and reservoir releases are scheduled by the Columbia Basin Project Office. The lake is not used for flood control purposes since it has a very small, natural drainage area.

Irrigation water pumped from the Columbia River at FDR Lake enters Banks Lake through the Feeder Canal located near the left abutment of North Dam. Water from Banks Lake will flow through the Feeder Canal back into FDR Lake when the pump-generator units are used for electrical power generation. Variations in the operational rates of water supply inflows and outflows result in reservoir water level fluctuations. Banks Lake drawdowns generally begin with the commencement of the irrigation season.

There are no reservoir inflow forecasts made for Banks Lake since it is an offstream storage and equalizing reservoir with very little natural inflow. Under typical reservoir system operations, Banks Lake inflows generally begin in February or March, increase in April and May, peak in June or July, decline from July through October, and are essentially nonexistent from November through January. Over the 18-year (1980 to 1998) analysis period, Banks Lake inflows ranged on average from about 6,500 acre-feet in November up to about 475,000 acre-feet in July.

Policies for managing the water level at Banks Lake have changed several times since reservoir construction. The primary change in reservoir operations occurred in conjunction with the construction and subsequent operation of the Pumping-Generating Plant, which can deliver water

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to and from Banks Lake via the Feeder Canal. Two pump generators were installed in 1974, three in 1983, and one in 1984. Daily fluctuations in lake levels can range from 1.5 to 3 feet during power generation periods.

Weed control drawdowns have also been implemented in recent years. This control strategy typically draws and holds the lake level down about 20 to 25 feet during the winter ice season. This practice occurs on a 7 to 10 year facility maintenance cycle and is designed to eliminate the noxious weeds common to reservoir shoreline areas, particularly Eurasian watermilfoil.

### **Surface Water Quality**

Updated in November 1997, the surface water quality standards for Washington State are detailed and described in Chapter 173-201A of Washington's Administrative Code (WAC). The purpose of Chapter 173-201A is to "establish water quality standards for surface waters consistent with public health and public enjoyment thereof, and the propagation and protection of fish, shellfish, and wildlife" (WAC 173-201A-010). In conformance with present and potential uses of the state's surface waters and in consideration of natural water quality limitations and potential, beneficial use designations and applicable water quality criteria are established.

Washington State has classified its waters according to their beneficial uses and has established water quality criteria for each classification. Washington's surface water classifications are Class AA (extraordinary), Class A (excellent), Class B (good), Class C (fair), and Lake class. Surface water bodies are assigned classifications based on how closely they can be expected to meet the classification requirements for the water's intended uses. Compliance with Washington's surface water quality standards requires compliance with the water quality standards (Chapter 173-201A) and the sediment management standards (Chapter 173-204). The water quality criteria are shown either numerically or in the form of a narrative statement.

The water quality standards and beneficial use criteria applicable to Banks Lake are defined under the "Lake class" designation. Lakes are distinguished from riverine systems as being water bodies, including reservoirs, with a mean detention time greater than 15 days.

Lake class waters are expected to meet or exceed the requirements for water supply (domestic, industrial, agricultural), stock watering, fish and shellfish (salmon and fish migration, rearing, spawning and harvesting; and clam, mussel and crayfish rearing, spawning, and harvesting), wildlife habitat, recreation (primary contact recreation, sport fishing, boating, and aesthetic enjoyment), and commerce and navigation.

### **Ground Water Hydrology**

Ground water movement in the regional aquifer system is affected by the distribution of natural recharge and discharge, the geology of the basalts, the spatial distribution of hydraulic conductivity, recharge from water management practices, and prolonged irrigation pumping. The dominant pattern of ground water movement is from areas of higher land surface elevations toward major surface drainage features such as Banks Lake and Crab Creek; away from anticlinal



axes; and in the direction of the regional geologic dip. Ground water movement between formations is generally downward with upward flow from or within the Grande Ronde Basalt in the vicinity of the Columbia River, Crab Creek, and other major surface water bodies (USGS, 1989).

A thick sequence of Columbia River basalts of Miocene age forms the Columbia Plateau regional aquifer system found in eastern and central Washington, eastern Oregon, and a small part of Idaho. Extruded primarily from a system of northwest linear vents in northeast Oregon and southeast Washington, the basaltic lava eruptions occurred approximately 6 to 17 million years ago; while later lava eruptions flowed generally westward into a structural and topographic basin.

The basalts are essentially horizontal with minor amounts of interbedded Miocene sediments of various lithologies. Interbeds tend to be thicker and occur more commonly in successively younger basalt formations, largely reflecting the time interval over which the formations were placed and the magnitudes and extent of uplifts in and around the plateau (USGS, 1989). Individual basalt flows range in thickness from a few inches to more than 300 feet and generally average about 100 feet. The average total thickness of the Columbia River Basalt complex is about 2,500 feet.

The Yakima Basalt Subgroup of the Columbia River basalts includes the Wanapum and Grande Ronde Basalts, the geologic formations of primary interest in the RMP management area. The Grande Ronde Basalt, which makes up about 85 percent of the total basalt volume in the Columbia Plateau, is the lowermost formation in the subgroup and underlies most of the Banks Lake management area. This basalt is composed of as many as 130 individual lava flows, most of which are fine-grained.

A sedimentary interbed between the Grande Ronde Basalt and the overlying Wanapum Basalt occurs east of the Grand Coulee formation where Banks Lake is situated. Where present, the interbed averages about 25 feet in thickness and consists chiefly of claystone and siltstone (USGS, 1994). Above this interbed, the Wanapum Basalt generally contains about 33 individual flows, most of which are medium-grained.

The Columbia Plateau regional aquifer system is comprised of four aquifer units and three confining units. Within the Banks Lake management area, two aquifer units and two confining units are present. In descending order these units are the Wanapum unit, the Wanapum-Grande Ronde interbed (a confining unit), the Grande Ronde unit, and the Basement confining unit. Composed of rock materials older than the Grande Ronde basalts, the pre-basalt "basement" rocks (the Basement confining unit) define the base of the regional aquifer system.

The Wanapum aquifer unit averages about 400 feet in thickness just east of the Banks Lake management area but varies from a few feet where it pinches out against exposures of the Grande Ronde Basalt to more than 1,200 feet in the Horse Heaven Hills located south of the management area. Within the deeply incised upper Grand Coulee, where Banks Lake is situated, the thickness of the Grande Ronde unit averages about 1,000 feet and varies from a few feet where it pinches out against "basement" granitic rocks near Grand Coulee Dam to greater than 1,500 feet near the southern end of the management area. Where the Grande Ronde unit pinches out against the

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Basement confining unit in the upper northernmost portion of the management area, the regional aquifer is essentially absent or very thin.

Water entering the basalts flows horizontally and vertically through vesicles, joints, fractures, and the intraflow structures that create permeable zones. High permeabilities and horizontal ground water movement generally occurs in the interflow zones which consist of the rubbly and vesicular bases and tops of adjacent lava flows. The more dense, central portion of each lava flow typically have low permeabilities and vertical water movement characteristics (USGS, 1989). In addition, shearing and fracturing the basalt flows can create local areas with large permeabilities in joints and fractures. Displacement of individual flows along faults locally can provide fractured zones across basalt flows that can serve as conduits for vertical ground water flow (USGS, 1994).

Within the Banks Lake management area, horizontal ground water movement for the Wanapum unit is south/southwesterly towards Banks Lake and Crab Creek for the Grande Ronde unit. In addition, the movement of ground water is downward from or within the Wanapum unit and upward from or within the Grande Ronde unit in the vicinity of Banks Lake since this is a topographically low discharge area.

### **Ground Water Quality**

Updated in October 1990, the ground water quality standards for the State of Washington are detailed and described in the Washington's Administrative Code (WAC) Chapter 173-200. The purpose of Chapter 173-200 is to "establish ground water quality standards which, together with the state's technology-based treatment requirements, provide for the protection of the environment and human health, and protection of existing and future beneficial uses of ground waters" (WAC 173-200-010). The requirements and water quality standards outlined in Chapter 173-200 apply at all times to all ground waters.

The goal of the standards is to maintain high ground water quality and to protect existing and future beneficial uses through the reduction or elimination of contaminants discharged to the subsurface. The goal is achieved through three mechanisms:

- AKART (all known, available and reasonable methods of prevention, control, and treatment) - All wastes must be provided with AKART prior to entry into the state's waters, regardless of water quality.
- The anti-degradation policy which mandates protection of background water quality.
- The human health and welfare based standards which include numeric and narrative standards (see WDOE Publication No. 96-02, April 1996).

Washington ground waters are not classified, but are protected for all beneficial uses including domestic, stock watering, industrial, commercial, agricultural, irrigation, mining, fish and wildlife maintenance and enhancement, recreation, electric power generation, preservation of environmental and aesthetic values, and other uses (WAC 173-200-010). This protection requirement is reinforced by the state's ground water anti-degradation policy which provides that

existing and future beneficial uses be maintained and protected, and that degradation of ground water quality that would interfere with or become injurious to beneficial uses not be allowed (WAC 173-200-030). The policy also provides that whenever ground waters are of a higher quality than the criteria assigned for said waters, existing quality will be protected.

The primary control factor of ground water chemistry and quality in the basaltic aquifer units underlying the Banks Lake area is the reaction of water with the rocks that make up the units. As the rock materials dissolve, the chemical characteristics of the ground waters change, and the waters can be described by the relative amounts of specific dissolved materials.

In 1987, the United States Geological Service (USGS) released a report describing the water quality characteristics of the basalt units of the Columbia Plateau aquifer system. The report was based on data collected from 350 wells and 825 water samples taken during the 1982 to 1985 period. Generally, the report concluded that ground water quality in the basaltic units is of good quality and suitable for most beneficial uses.

## 2.2.7 Vegetation

### Communities

Native plant communities within the management area include a variety of arid and semi-arid shrub-steppe and mesic shrub habitats as well as scattered wetlands, riparian areas, and mature conifer/forest habitats. Grasslands are uncommon and are usually in the early successional phase of shrub-steppe. Shrub-steppe and mesic shrub communities dominate upland areas and the base of talus slopes and coulee walls. Shrub-steppe, riparian and mature conifer/forest communities dominate the ravines, rock outcrops and coulee walls found in the vicinity of Northrup Canyon and Osborn Bay. Riparian and wetland communities occur in association with perennial streams (e.g. Northrup Creek), coulee springs and seeps (e.g. Bebe Springs), in low-lying areas periodically flooded, and along the reservoir shoreline. Non-native (exotic) plant species are present in agricultural, residential and recreational areas.

Shrubs common to the management area include: big sagebrush (*Artemisia tridentata*), threetip sagebrush (*Artemisia tripartita*), stiff sagebrush (*Artemisia rigida*), rabbitbrush (*Chrysothamnus* spp.), bitterbrush (*Purshia tridentata*). Mesic shrub habitat, found at the base of talus slopes and in areas with run offs and seeps, include: common chokecherry (*Prunus virginianus*), snowberry (*Symphoricarpos albus*), mockorange (*Philadelphus lewisii*), currant (*Ribes* spp.), rose (*Rosa* spp.), blue elderberry (*Sambucus cerulea*), and serviceberry (*Amelanchier alnifolia*) (Franklin and Dryness, 1973. Common forbs (herbaceous perennials) include: lupine, buttercup, buckwheat (*Eriogonum* spp.), poison ivy, prickly lettuce (*Lactuca serriola*), yellow salsify (*Tragopogon dubius*), yarrow, goldenrod, mullein, thistle, silverweed (*Potentilla anserina*), and cinquefoil.

Shrub-steppe plant communities are the climax upland habitat association present over most of the management area. Three types of shrub-steppe were identified, possibly dependent on soil depth and salinity. Overall, big sagebrush communities occur on deeper soils and are the predominant shrub-steppe association present. Dominant grasses and forbs occurring in this association include: bluebunch wheatgrass (*Agropyron spicatum*), needle-and-thread grass (*Stipa*

*comata*), quack grass (*Agropyron repens*), Basin wildrye (*Elymus cinereus*), bluegrass (*Poa* spp.), arrowleaf balsamroot (*Balsamorhiza sagittata*) and buckwheat (*Eriogonum* spp.). Also common are exotic species such as cheatgrass (*Bromus tectorum*) and Japanese brome (*Bromus japonicus*) (FWS, 1998). Many areas identified as grassland often more closely resembled weedy fields with several weedy forbs such as hoary cress (*Cardaria draba*), knapweed (*Centaurea* spp.), sweetclover (*Melilotus* spp.) and thistle (*Cirsium* spp.). These weedy grasslands primarily occur in transition areas from wetland/riparian to upland areas (FWS, 1998).

Stiff sagebrush is the dominant shrub on shallow and rocky soils. Grasses such as Sandberg's bluegrass and cheatgrass occur with forbs such as common yarrow (*Achillea millefolium*) and lupine (*Lupinus* spp.). Shrub-steppe communities on saline soils are dominated by greasewood (*Sarcobatus vermiculatus*), four-wing saltbush (*Atriplex canescens*), and inland saltgrass (*Distichlis stricta*) (FWS, 1998).

The Wyoming big sagebrush/bluebunch wheatgrass association is the most widespread. This association consists of four well-defined vegetative layers. The most prominent layer consists of various shrub species (principally big sagebrush) intermixed with a second layer comprised of a variety of perennial grasses (principally bluebunch wheatgrass). The third layer consists of low-lying perennial and annual grasses and forbs which are usually less than four inches in height (e.g. Sandberg's bluegrass, cheatgrass, and Idaho fescue). The fourth layer is made up of a thin, fragile microbiotic crust, also called a cryptogam, which occurs directly on the surface of the soil. Various crustose lichens, acrocarpus mosses, and liverwort species comprise this layer which has important influences on vegetation dynamics with regards to soil erosion, moisture retention, and nutrient cycling. A complete list of the plant species observed by the FWS is provided in Appendix B.

### **Noxious Weeds**

Noxious weeds are a common problem in the management area and generally invade and occupy sites that have been previously disturbed by fire, livestock grazing, motorized travel, and/or dispersed camping. In Washington, a weed is any plant species that is not native to the state. Weeds typically interfere with the maintenance of healthy and diverse ecosystems. Consequently, weed control is an integral part of resource management as non-natives can displace native plant species and are often of lower forage value to wildlife and difficult to extirpate once established. Other wildlife requisites, such as cover and nesting habitat, are also affected by the replacement of native plants by weedy species (see Appendix A).

Cheatgrass (*Bromus tectorum*), the most common weed found in the management area, has invaded many areas where native perennials have been overused and/or eliminated. There is little evidence that cheatgrass will relinquish a site once occupied due to its highly competitive ability. Other common noxious weeds include diffuse and spotted knapweed (*Centaurea diffusa* and *biebersteinii*, respectively), Canada thistle (*Cirsium arvense*), pepperweed (*Lepidium latifolium*), kochia (*Kochia scoparia*), Dalmation toadflax (*Linaria dalmatica* spp. *dalmatica*), Russian knapweed (*Acroptilon repens*) and purple loosestrife (*Lythrum salicaria*). Cheatgrass, knapweeds, and Canada thistle currently are the most prolific weeds present at Banks Lake.

The proliferation of these undesirable plants is controlled through the implementation of an integrated weed management program between Reclamation, Washington State, and the Noxious Weed Control Boards of Douglas and Grant counties. At Banks Lake, the WDFW is responsible for weed control. The main weed control activity currently is helicopter spraying of 2,4-D on Canada thistle.

Eurasian watermilfoil (*Myriophyllum spicatum*) is a rooted, submersed aquatic macrophyte of the plant family Haloragaceae native to Europe, Africa, and Asia. An aquatic weed first found in Banks Lake in 1977, it has no natural enemies in North America and often out competes native plants, forming dense mats which may cause problems in swimming, boating, fishing, navigation, and power generation. When detached and transported by waves or currents to shorelines, it decays and causes appearance and odor problems. Existing infestations are source points for infestation of other waters in eastern Washington (Bureau of Reclamation, 1989).

### 2.2.8 Fish

Many of the fish species present in Banks Lake were pumped in from FDR Lake on the Columbia River. The remainder of fish species originated in small lakes (that existed in the upper Grand Coulee) prior to inundation of Banks Lake and from the stocking programs carried out by state agencies. Unfortunately, no official records were made of the fish fauna previously found in these small lakes. Information from local fishermen indicated that before inundation, dense populations of largemouth bass (*Micropterus salmonides*) and pumpkinseed sunfish (*Lepomis gibbosus*) existed in the area (Thomas, 1978).

Shortly after inundation, a substantial population of largemouth bass developed as indicated by WDFW catch records from 1952 through 1954 (Nelson, 1954). Largemouth bass and sunfish dominated catches in these years and represented 64 and 32 percent of the catch, respectively (Nelson, 1954). Yellow perch (*Perca flavescens*), rainbow trout (*Oncorhynchus mykiss*), eastern brook trout (*Salvelinus fontinalis*), kokanee salmon (*Oncorhynchus nerka*), black crappie (*Pomoxis nigromaculatus*), burbot (*Lota lota*), and bull trout (*Salvelinus confluent*) were also identified in the 1952 to 1954 catches (Nelson, 1954 and Spence, 1965).

Irrigation water pumped from FDR Lake was the source of calkin salmon, burbot, bull trout, and possibly rainbow and eastern brook trout sampled in early 1950's creel surveys. Black crappie may have been an early illegal introduction (Duff, 1973). Only four bull trout were recorded in 1954 creel checks. With no available spawning habitat, bull trout never became established in the reservoir. Eastern brook trout also failed to establish a reproducing population and both species of carr disappeared from catch and gill net survey data.

A gill net and beach seine survey conducted in Banks Lake between 1973 and 1975, found the following additional species for which there are no records of introduction: peamouth chub (*Mylocheilus caurinus*), northern pikeminnow (*Ptychocheilus oregonensis*), carp (*Cyprinus carpio*), longnose sucker (*Catostomus catostomus*), largescale sucker (*Catostomus macrochirus*), bridgelip sucker (*Catostomus columbianus*), brown trout (*Salmo trutta*), mountain whitefish (*Prosopium williamsoni*), lake whitefish (*Coregonus clupeaformis*), brown bullhead (*Ictalurus nebulosis*), walleye (*Stizostedion vitreum*), bluegill sunfish (*Lepomis macrochirus*) and prickly sculpin (*Cottus asper*). Only one brown trout was sampled and suitable spawning habitat for the

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species does not exist in the system. With the exception of carr, brown trout and rainbow trout, all of the other fish present in pre-reservoir lakes or drafted from FDR Lake were able to establish reproducing populations to various degrees. Table 2.2 summarizes the past and present fish species found in Banks Lake.

**Table 2.2**  
**Past and Present Fish Species<sup>1</sup> Found in Banks Lake, Washington**

Common Name	Scientific Name	Present	WDFW Priority Species	Past
<b>Game Fish</b>				
<u>Salmonids</u>				
Rainbow Trout	<i>Oncorhynchus mykiss</i>	X	X	
Eastern Brook Trout	<i>Salvelinus fontinalis</i>			X
Brown Trout	<i>Salmo trutta</i>			X
Coho Salmon	<i>Oncorhynchus kisutch</i>			X
Chinook Salmon	<i>Oncorhynchus tshawytscha</i>			X
Calkin Salmon	<i>Oncorhynchus nerka</i>	X	X	
Bull Trout	<i>Salvelinus confluent</i>			X
Mountain Whitefish	<i>Prosopium williamsoni</i>	X		
Lake Whitefish	<i>Coregonus clupeaformis</i>	X		
<u>Catfish</u>				
Brown Bullhead	<i>Ictalurus nebulosis</i>	X		
Yellow Bullhead	<i>Ictalurus natalis</i>	X		
White Catfish	<i>Ictalurus catus</i>	X		
Channel Catfish	<i>Ictalurus punctatus</i>	X	X	
<u>Sunfish</u>				
Largemouth Bass	<i>Micropterus salmoides</i>	X	X	
Smallmouth Bass	<i>Micropterus dolomieu</i>	X	X	
Black Crappie	<i>Pomoxis nigromaculatus</i>	X		
Bluegill Sunfish	<i>Lepomis macrochirus</i>	X		
Pumpkinseed Sunfish	<i>Lepomis gibbosus</i>	X		
<u>Perch</u>				
Yellow Perch	<i>Perca flavescens</i>	X		
Walleye	<i>Stizostedion vitreum</i>	X	X	
<u>Cods</u>				
Burbot	<i>Lota lota</i>			X
<b>Nongame Fish</b>				
<u>Lampreys</u>				
Pacific lamprey	<i>Lampetra tridentata</i>	unconfirmed		
<u>Minnnows</u>				
Peamouth Chub	<i>Mylocheilus caurinus</i>	X		
Northern Pikeminnow	<i>Ptychocheilus oregonensis</i>	X		
Carp	<i>Cyprinus carpio</i>	X		
<u>Suckers</u>				
Longnose Sucker	<i>Catostomus catostomus</i>	X		
Largescale Sucker	<i>Catostomus macrochirus</i>	X		

**Table 2.2**  
**Past and Present Fish Species<sup>1</sup> Found in Banks Lake, Washington**

Common Name	Scientific Name	Present	WDFW Priority Species	Past
Bridgelip Sucker	<i>Catostomus columbianus</i>	X		
<u>Sculpins</u>				
Prickly Sculpin	<i>Cottus asper</i>	X		

Sources: Duff 1973, Foster 1998, Koth 1998, Nelson 1954, Spence 1965, Thomas 1978, and WDFW 1996

<sup>1</sup> Common and scientific names of fish are based on: Robins, C.R., Chairman, 1991; *A List of Common and Scientific Names of Fish from the United States and Canada*, 5<sup>th</sup> edition: American Fisheries Society (Committee on Names of Fish) Special Publication 20, Bethesda, Maryland.

### 2.2.9 Wildlife

This section provides a general overview of the wildlife species found at Banks Lake. The “Special Status Species” are identified here in bold type. Wildlife and raptor concentrations and occurrences at Banks Lake were identified by the FWS and WDFW.

#### Birds

A total of 150 species of birds were observed within the RMP management area during field surveys conducted by the FWS in 1997 and 1998. Only two additional species have been confirmed in Smith et al. (1997) and WDFW's Wildlife Heritage database. Breeding evidence was observed for 55 species, with a breeding record for one additional species, Clark's grebe (*Aechmiphorolis clarkii*) (Smith et al. 1997).

#### Raptors

Eleven raptor species were observed during eight raptor surveys conducted from December 23, 1997, to April 11, 1998. Two species which were expected to occur during these surveys, but not observed, include short-eared owl (*Asio flammeus*) and Cooper's hawk (*Accipiter cooperii*). Nocturnal species such as barn owl (*Tyto alba*) and western screech owl (*Otus asio*) are likely present, but were not observed during the daylight surveys.

#### Colonial-nesting Birds

Three islands at the southern end of Banks Lake have been used for nesting by colonial-nesting birds for several years. On June 26, 1998, the islands were surveyed to estimate colonial-nesting bird population numbers. The southernmost island, Gull Island, is located about 0.4 km (0.25 mi) north of Dry Falls Dam. This island had **great blue heron** and **black-crowned night-herons** were observed nesting in small trees and shrubs on the island. There were about 20 juvenile



great blue herons and 40 juvenile black-crowned night herons present. Approximately 1,500 California gulls (*Larus californicus*), adults and chicks, were also observed. The other two islands are about 2 miles north of the dam and separated by about 50 yards of open water. Numbers of adults and chicks present on these islands included approximately 1,000 California gulls, 3,000 ring-billed gulls, and 50 **caspian terns**.

### **Waterfowl**

Twenty-two waterfowl species were observed by the FWS. Breeding was confirmed for ten species, including **Canada geese**, green-winged teal (*Anas crecca*), mallard (*Anas platyrhynchos*), blue-winged teal (*Anas discors*), northern shoveler (*Anas clypeata*), cinnamon teal (*Anas cyanoptera*), gadwall (*Anas strepera*), redhead (*Aythya americana*), lesser scaup (*Aythya affinis*), and ruddy duck (*Oxyura jamaicensis*). Primary waterfowl use during the breeding season occurred below

Dry Falls Dam, in Devil's Punch Bowl, and in Osborn Bay. More scattered use was in the smaller bays and inlets on the main lake and other wetlands.

During the beginning of fall migration, several thousand mallards and northern pintails (*Anas acuta*) and several hundred Canada geese used the shoreline at the southeast end of Banks Lake. Waterfowl use was heaviest and contained the highest diversity of species throughout the field season in the various wetlands, ponds and lakes south of Dry Falls Dam.

Aerial winter counts have been conducted at Banks Lake by FWS and WDFW for many years. Since 1990, the average winter count was 4,600 ducks, geese, and swans. The highest count was nearly 20,000 birds and the lowest count was zero birds when the reservoir was 100 percent ice-covered.

### **Shorebirds**

Two surveys targeting fall migrating shorebirds revealed very low numbers. However, most of the expected species were observed (14 total). The majority of these were found at the wetlands and lake fringes below Dry Falls Dam. In other portions of the management area, shorebird use consisted almost exclusively of killdeer (*Charadrius vociferous*) and spotted sandpipers (*Actitis macularia*). The low numbers and diversity of shorebirds in the majority of the management area is probably due to limited mud, silt or sand substrates and relatively constant water levels.

### **Neotropical Migratory Birds (NTMB)**

Sixty-six species listed as neotropical migratory birds were observed during the FWS survey or otherwise documented within the management area. Neotropical migratory birds (NTMB) are species which breed in the United States and Canada and then migrate south to Mexico, Central or South America, or the Caribbean for the winter. They do not include waterfowl, shorebirds, or herons and egrets even though some species in these groups also winter south of the Mexico-United States border. There is widespread concern about the future of NTMBs (Andelman and

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Stock, 1994), because many of these species have experienced large population declines due to habitat destruction of breeding grounds, wintering areas, and along migration routes.

### **Mammals**

Forty-seven mammals were identified to occur or potentially occur within the management area (see Appendix D). Unlike the individual species of birds and raptors discussed in the overview, most wildlife species, thought to be found in the management area, are considered common and are not listed as “Special Status Species.” Consequently, the section addressing mammals is substantially shorter than the previously mentioned avian section. FWS personnel observed 16 species either directly or by sign during field work. Thirty-four species were documented as present within the management area. **Mule deer** regularly use the management area. Black bear (*Ursus americanus*) and cougar (*Felis concolor*) have been sighted, but were probably transients. However, a black bear road-kill was documented by the Washington Department of Game near Steamboat Rock in May, 1984 (FWS, 1998).

Muskrats (*Ondatra zibethicus*) and mink (*Mustela vison*) were commonly observed on the lake. Coyotes (*Canus latrans*) appeared to be common and were either sighted, heard, or observed by sign throughout the management area. Badgers (*Taxidea taxies*) are fairly secretive and were not observed directly but their diggings and tracks were found.

In June 1998, the FWS observed what was either a pygmy rabbit or a young Nuttall's cottontail (*Sylvilagus nuttallii*) near Osborn Bay. Further examination of the immediate area by FWS and WDFW biologists revealed burrows and scats that resembled that of pygmy rabbits. These findings prompted pygmy rabbit surveys. Follow-up surveys in September 1998, revealed more pygmy rabbit or young cottontail scat. The site was relatively small (4 to 6 hectares or 10 to 15 acres) and dominated by very large bitterbrush and big sagebrush with loose soils. Similar scat was also collected in the shrub-steppe south of Steamboat Rock; however, no burrows were located. No potential pygmy rabbit sign was found on the Million Dollar Mile shrub-steppe flat west of SR 155.

Some documented species found specifically, but not necessarily exclusively, in shrub-steppe habitat include: furbearers such as coyote, badger, and bobcat (*Lynx rufus*); small mammals such as sagebrush vole (*Lemmiscus curtatus*), northern pocket gopher (*Thomomys talpoides*), and deer mouse (*Peromyscus maniculatus*); and other mammals such as mule deer, Nuttall's cottontail, and porcupine (*Erethizon dorsatum*).

### **Amphibians and Reptiles**

Eleven species of amphibians and reptiles were documented within the management area, with seven of those found during 1998 surveys (see Appendix E). The Racer (*Coluber constrictor*) was the most common reptile encountered, with western rattlesnake (*Crotalus viridis*) the next most common species. Unidentified tadpoles were observed in a Northrup Canyon wetland. Surveying suitable habitat in the spring when frogs are calling, would likely have resulted in more amphibian species observed. The only documented record of the Columbia spotted frog (*Rana luteiventris*) is a historic sighting from 1937. The spotted frog, a Federal “Species of

Concern” and State candidate species, was collected east of Steamboat Rock at a stream which flows into Devil's Punch Bowl.

## **2.3 CULTURAL RESOURCES SUMMARY**

### **2.3.1 History**

Unlike many regions of North America, the cultural history of the Columbia Plateau has not been adequately documented. A general cultural sequence was developed, for the Banks Lake management area, based upon major changes; most of these changes were present in the previously identified chronologies for the area. This sequence has been divided into unnamed time periods based upon changes in projectile points styles. The use of projectile point types to develop chronological sequences is commonly practiced within the North American west (e.g. Baumhoff, 1959; Heizer, 1978; and O'Connell, 1967) where major architectural features and well developed pottery are generally absent. The principal sources for this sequence are Browman, 1960; Daugherty, 1962; Dumond, 1983; Leonhardy, 1970; Nelson, 1969; Rice, 1972; Salo, 1985; Stevens, 1997; Swanson, 1962; Toepel, 1980; and Warren, 1968.

The earliest period dates from 8000 B.C. to 6000 B.C. and is represented by large, lanceolate “Windust” projectile points. Other associated artifacts of this period include edge-ground cobbles, isolated fluted points and crescents, and occasional millingstones and handstones. This evidence suggests a nomadic hunting economy relying on the seasonal take of large game. Supplemental food resources could have included fish, small game, plants, and shellfish.

During the next period (6000 B.C. - 4000 B.C.) the same general economic focus is employed by the aboriginal inhabitants of the Columbia Plateau. The hunting of game, however, appears to be decreasing in importance with a subsequent increase in the utilization of riverine resources. The “Windust” points have been replaced by large, leaf-shaped “Cascade” projectile points. Other artifacts occurring during this period include edge-ground cobbles, oval knives, large scrapers, millingstones and handstones, and various antler and bone tools.

In the period between 4000 B.C. and 1500 B.C. the economic focus is more diversified than in the two previous periods. The gathering of both plant and shellfish resources dominate the seasonal activities like hunting and fishing. Large, side-notched projectile points of the “Northern”, “Bitterroot,” and “Cold Springs” series are the period markers. Other artifacts of this period include both millingstones and mortars with their associated counterparts, handstones and pestles, respectively.

The fourth period (1500 B.C. to A.D. 250) is a period of transformation for the inhabitants of the Columbia Plateau. Cultural influences from Canadian Plateau groups are making inroads into the region. A riverine economy based upon the utilization of anadromous fish is developing. Hunting and gathering still continue but at a much decreased level. A much greater inventory of artifacts occur at sites associated with this period including contracting or tanged-stemmed “Frenchman Springs” or “Rabbit Island” projectile points, microblades, notched net sinkers, hopper mortars, pestles, antler and bone wedges, stone celts and mauls, and bone hunting and fishing implements.

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By the fifth period (A.D. 250 to A.D. 1730) the riverine based economy predominates. Large, semi-permanent villages occur along the Columbia's floodplains and at the mouths of its major tributaries, but small, seasonal camps still exist and are located close to natural resources. A variety of small projectile points occur at this time including a tool kit containing tailed end scrapers, notched net sinkers, mauls, block and slab millingstones, shell beads, and bone harpoon heads.

The period from A.D. 1730 to A.D. 1810 is marked by the presence Euro-American manufactured items including glass and copper beads, guns, and various iron implements. The general pattern of reliance upon riverine resources continues; however, cultural influences from Plains groups appear. With the introduction of the horse, excursions to the Plains are made by mounted hunters in search of buffalo. The larger sedentary villages become trade centers in a regional exchange system, also made in part possible by the introduction of the horse. Artifacts of aboriginal origin include a variety of small projectile points, and notched and perforated net sinkers.

During the ethnohistoric period (A.D. 1770 - A.D. 1860), a general breakdown of pre-contact aboriginal lifeways occurs due to repeated interaction with Euro-Americans. While fishing remains the primary subsistence activity, hunting and gathering grow in importance, resulting in a return to a more generalized subsistence base. The artifact inventory resembles that of the previous period, but the presence of Euro-American trade goods continues to increase.

The final, reservation period (A.D. 1860 - present) represents the era in which aboriginal groups were coerced into adopting Euro-American lifeways (e.g. farming, ranching) resulting in the reduction or replacement of aboriginal subsistence practices. The period is marked by the nearly complete abandonment of aboriginal tools and subsequent adoption of Euro-American trade and consumer goods.

### **2.3.2 Traditional Cultural Properties**

Reclamation contracted with AHS and Camas Consulting to prepare an inventory of Traditional Cultural Properties (TCPs) in consultation with representatives of the CCT. Out of respect to the wishes of the CCT, the information on TCPs submitted to Reclamation is considered confidential. Several of the archaeological properties have been designated by the CCT as TCPs. Eighteen sites have been so designated - twelve are within the management area and six are adjacent to the management area. The twelve sites include one housepit site, four pictograph sites, one talus pit, two habitation or camp sites, one lithic scatter, and three inundated sites. The six sites outside the management area include one rockshelter, one housepit, three habitation or campsites, and one lithic scatter. Additional information on TCPs is on file with Reclamation (Moura, 1997).

### **2.3.3 Indian Trust Assets**

The United States government has a trust responsibility to protect and maintain rights reserved by or granted to American Indian tribes or individuals by treaties, statutes, and executive orders. Indian Trust Asset (ITA) identification involves consultation with potentially affected tribes,

Indian organizations or individuals, the Bureau of Indian Affairs, the Office of American Indian Trust, the Solicitor's Office, Reclamation's Native American Affairs Office, or the Regional Native American Affairs Coordinator. Under the Bureau of Reclamation's Indian Trust Asset Policy of 1993, the agency consults directly with tribes potentially affected by Reclamation undertakings to identify and analyze potential impacts to any assets. This consultation is documented in a NEPA compliance document, along with a statement of potential impacts to ITAs. This policy is designed to ensure that Reclamation complies with the Department of the Interior's Manual 512.2, Departmental Responsibilities for Indian Trust Assets, which identifies responsible parties and outlines consultation procedures.

Tribes holding ITAs in the Banks Lake area include the Yakima, Colville, Spokane, and Coeur d'Alene. In the Banks Lake area, water, wildlife and fish, as well as food and medicinal plants are protected as ITA, as are some religious sites and Traditional Cultural Properties. During the course of preparing the Banks Lake RMP, any activities which might affect these assets requires Reclamation to consult with the tribes, the Bureau of Indian Affairs, and other appropriate agencies to identify potentially affected ITAs, determine potential impacts to these assets, and provide recommendations for appropriate mitigation.

## **2.4 PALEONTOLOGICAL RESOURCE SUMMARY**

The Columbia Basin basalts in the vicinity of Banks Lake do not lend themselves to fossil preservation. Some invertebrates are occasionally reported in the area, but not with any frequency. Preserved plant species are present elsewhere in the Basin. One such site is Gingko Petrified Forest State Park. The park is located in Kittitas County near where I-90 crosses the Columbia River at Vantage, Washington, approximately 30 miles west of Potholes Reservoir.

## **2.5 AESTHETIC RESOURCE SUMMARY**

### **2.5.1 Visual**

The Banks Lake area has spectacular scenery, which is characterized primarily by the basalt cliffs, headwalls, and talus slopes of the upper Grand Coulee which encompasses most of the management area. The landscape is further enhanced by a vegetative mosaic of shrub-steppe, mesic shrub, upland forest, and riparian/wetland plant communities. There are scenic views and vistas from recreation areas along the lake shore and from SR 155 along the eastern shoreline. The basalt landforms, such as Steamboat Rock and Castle Rock, are dominant features and focal points for most views in the northern half of the reservoir area. According to the Banks Lake Recreation User Survey, which was performed for the EA, scenic quality is one of the attributes that attract visitors to the Banks Lake area.

As seen from the reservoir or the numerous recreation sites and areas along the shoreline, the landscape is largely undeveloped and is appears natural in most areas. The dominant visual elements over most of the management area are natural features such as water, basalt cliffs/coulee walls, granitic outcrops, and shrub-steppe plant communities. The majority of the

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respondents to the Banks Lake Recreation User Survey (refer to EA) prefer a natural, undeveloped landscape.

While most of the landscape is undeveloped, there is also clear evidence of human activity. Visual intrusions/enhancements include urban/residential areas (Coulee City, Electric City, and Grand Coulee); developed recreation areas; dispersed campsites; off-road vehicle use areas; highways, primary/secondary roads and jeep trails; an airport; gravel/material sites; electric transmission lines; residential subdivisions; croplands; and cultural sites. This combination of natural elements and cultural modifications provides a pleasing visual setting for most visitors.

### **2.5.2 Noise**

Noise is a term which refers to unwanted sound. Sound levels are measured in decibels (dB), a logarithmic scale based on the ratio of sound intensity to the intensity of barely audible sound at 1,000 cycles per second. Every 10 dB represents a tenfold increase in loudness. For example, a sound at 90 dB is 10 times louder than a 80 dB sound and 100 times louder than a 70 dB sound.

The range of frequencies to which humans respond is referred to as the “A” scale, and readings of loudness for this range are recorded as dB(A). Given a threshold of hearing at 0 dB(A), the decibel reading that would be recorded on a very still, quiet evening at a lake is approximately 40 dB(A). Background levels on a beach or other busy area tend to range from 50 to 60 dB(A) (Wagner, 1994). Sound levels in excess of 75 dB(A) become annoying to many people and are termed “noisy.” Constant exposure to sounds at 75 dB(A) or greater can cause damage to the human auditory system, but such constant exposure is uncommon under rural, recreational conditions (Lakeline, 1994).

The most sensitive noise receptors in the Banks Lake area are existing residential areas, campgrounds, and important wildlife areas. Ambient sound levels throughout most of the management area come from rural and residential land use. These ambient levels are affected by noise from vehicular traffic on nearby roads, powerboats and personal watercraft (jet skis) on the lake, overhead aircraft, and general recreational activities, all of which exert a greater influence during summer peak-use weekends. Noise from occasional snowmobile use increases ambient levels during the winter.

## **2.6 ECONOMIC AND SOCIAL RESOURCES SUMMARY**

Banks Lake and its associated wildlife and recreational resources lie principally in Grant County, Washington. Isolated, small portions of the northwestern and southwestern shoreline and a portion of the southern tip of Banks Lake lie within Douglas County. Because Grant County residents are the principal population affected by the human use of resources at Banks Lake, the socioeconomic setting delineates Grant County as the primary management area. Portions of the eastern border of neighboring Douglas County adjoin the lake, but no existing uses there generate significant socioeconomic benefits. The public generally must come to Grant County to make use of the resources available at Banks Lake.

As elsewhere in the Columbia Basin, the management area is surrounded by farming country, with the wheat-growing industry dominating the local social and economic setting. Water-oriented recreation on Banks Lake and other lakes in the region, however, has become an important component of the local and regional economy.

### 2.6.1 Economic Setting

Agriculture-related activities dominate the economic setting. Statistical data on economic activities in the management area are not readily available at the sub-county level, so they must be inferred from county-wide data. The composition of employment and personal income are good descriptors of an area's economy--where people work and where their earnings come from. Data from the U.S. Department of Commerce's Bureau of Economic Analysis (BEA) indicates the regional economy and structure. Table 2.3 presents the numbers of jobs in the principal economic sectors of Grant County for 1996, paired with the corresponding value of personal income by sector.

**Table 2.3**  
**Employment and Income Data for Grant County, 1996**

Sector	Employment <sup>1</sup>		Personal Income <sup>2</sup>	
	Jobs	% distrib.	\$ '000	% distrib.
Totals	34,907	100.0%	1,243,116	100.0%
Wage and salary workers	28,071	80.4%	649,416	52.2%
Proprietors	6,836	19.6%	175,361	14.1%
Farming occupations	6,446	18.5%	172,873	13.9%
Nonfarming occupations	28,461	81.5%	651,904	52.4%
Agric. services, forestry, fishing	1,750	5.0%	23,919	1.9%
Mining	0	0.0%	91	0.0%
Construction	1,495	4.3%	43,734	3.5%
Manufacturing	4,301	12.3%	135,226	10.9%
Transport., comm., public utilities	1,239	3.5%	36,998	3.0%
Wholesale trade	1,484	4.3%	42,796	3.4%
Retail trade	5,461	15.6%	82,365	6.6%
Finance, insurance, real estate	0	0.0%	8,872	0.7%
Services	5,683	16.3%	94,040	7.6%
Government	5,829	16.7%	174,863	14.1%
Plus:				
Dividends, interest and rent	-		226,991	18.3%
Transfer payments	-		265,160	21.3%
Less:				
<b>Pers. contrib. for social insurance</b>	-		(47,853)	-3.8%

Source: BEA REIS, 1998.

<sup>1</sup> Employment in full and part-time jobs

<sup>2</sup> Personal income in thousands of 1996 dollars

The data show that about 2/3 (66.3 percent) of Grant county's personal income comes from workers' and proprietors' earnings, with the balance coming from transfer payments (mainly Social Security) and earnings on capital. Per capita income (of all residents) was \$22,700 in 1996. Earnings per wage and salary worker in 1996 averaged \$23,135, while proprietors

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averaged \$25,653. Non-labor income is relatively high, reflecting a larger than average number of residents in retirement. Nearly 20 percent of the jobs in Grant county are in farming, plus another 5 percent in agricultural services-related jobs (including forestry and fishing). Average earnings per farm-related worker amounted to \$24,011. The government, services, retail trade and manufacturing sectors were the next largest in terms of jobs. Workers in manufacturing and government received somewhat higher earnings per job (\$31,441 and \$29,999, respectively), while those in services and retail trade had lower average annual earnings (\$16,548 and \$15,082, respectively) due to the latter sectors' typically low wage rates.

Public assistance programs benefit some of the residents in Grant County. In the fiscal year (FY) 1997, food stamps were provided to an average of 6,114 persons per month, which put Grant County as 22<sup>nd</sup> in the state in terms of percentage of county population covered. Aid for Dependent Children (AFDC) was provided to 3,906 cases (16<sup>th</sup> in statewide ranking) and disability payments went to 1,079 persons (also 16<sup>th</sup> place). The number of persons, in Grant County on general assistance was low, averaging 203 people per month. This average put the Grant County rating (in terms of a percentage of county population) at 25<sup>th</sup> in the state of Idaho (OFM, 1998).

Based on land use patterns and the level of tourism/visitation/recreation activities in the Banks Lake management area, it is evident the local economy is less diverse than the countywide pattern. Farming, services and government opportunities are the predominant employment sectors. Motel/hotel lodging services; fishing, hunting and recreational boating services; retail trade, government jobs related to local and tribal government and government enterprises; and hydropower activities account for most of the management area's non-farming income and employment. Other parts of the county have more manufacturing activities, notably food processing and chemical manufacturing in the Moses Lake area.

### **2.6.2 Recreation/Visitation**

The Banks Lake area is an important tourist attraction. Steamboat Rock State Park has over 500,000 visitors annually. Other attractions in the vicinity of Banks Lake (apart from the Grand Coulee Dam Visitor Arrival Center and Lake Roosevelt National Recreation Area) log between 7,650 and 45,715 visits each year (see Table 2.4). Cumulatively, the area's attractions (including Grand Coulee Dam and FDR Lake) registered over 2.6 million visitors in FY 1997, about the same as in the preceding years in the decade.<sup>1</sup> Table 2.4 breaks down the 1997 total.

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The Grand Coulee Dam Area Chamber of Commerce (GCDACC) reported a total of nearly 1.5 million visitors to the Lake Roosevelt National Recreation Area and approximately one-half million visitors to the Grand Coulee Dam Visitor Arrival Center in fiscal year 1997.

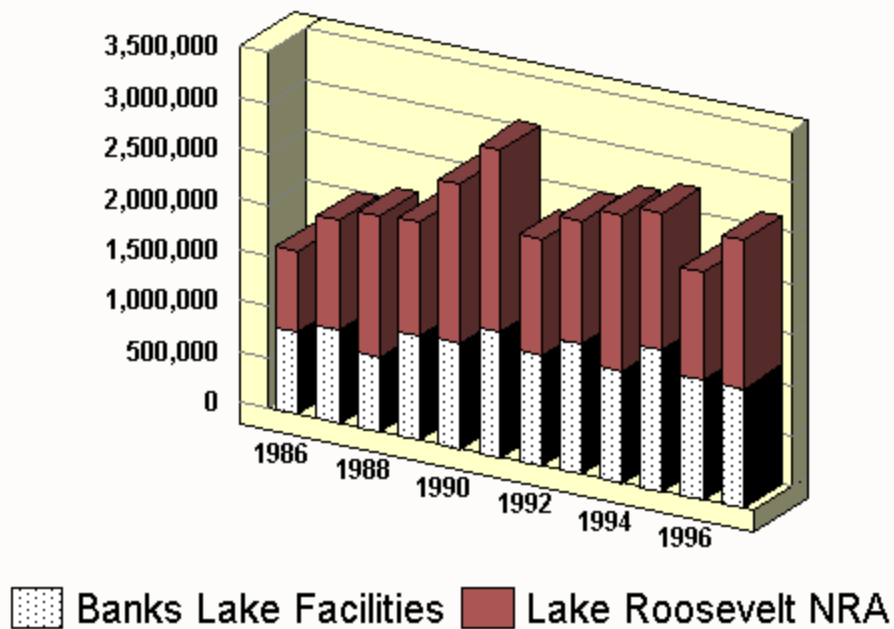


**Table 2.4**  
**Visitation to Grand Coulee/Banks Lake Area, FY 1997**

<b>Facility</b>	<b>Visitors</b>
Grand Coulee Dam Visitor Arrival Center	467,347
Lake Roosevelt-National Recreation Area	1,462,820
Steamboat Rock State Park	583,496
Crown Point Vista	45,715
Roosevelt Recreation Enterprises Houseboat Rentals	13,559
Coulee Playland Resort	20,000
Colville Tribal Museum	12,179
GCDAC Chamber of Commerce	13,231
Coulee Dam Visitors Center	7,650
Dry Falls Interpretive Center	17,542
<b>Total</b>	<b>2,643,539</b>

Source: GCDACC, 1998.

## Grand Coulee/Banks Lake Visitation 1986-1997



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The 1991, peak year had slightly more than 3 million cumulative visits to the region.<sup>2</sup>

The *Washington State 1991-1997p Travel Impacts and Visitor Volume* reported in 1996, travelers in Grant County spent \$104.2 million for accommodations, transportation, campground fees, food and drink, and miscellaneous recreation and amusement activities (WDCT&ED, 1998). These expenditures supported nearly 2,000 direct jobs in various visitation and tourism businesses with a payroll of almost \$20 million. This payroll supported additional secondary employment and income in the enterprises providing goods and services to the establishments and employees serving the visitors. Of the \$104.2 million total, \$8.97 million was spent for staying in public campgrounds, \$18.13 million was spent for private campgrounds, and \$33.31 million for motels, hotels, and Bed-and-Breakfasts. (WDCT&ED, 1998)

Some portion of this visitor spending went to Banks Lake area enterprises and attractions, but there are no data upon which to make a precise estimate of the split between Banks Lake area facilities and the rest of the county. However, the value is not insignificant in view of the extent of development of tourist-serving businesses and attractions in the area. The Grand Coulee Dam Area Chamber of Commerce lists six hotels and motels with a capacity for 170 guests; two bed-and-breakfasts (19 beds) and seven resorts/RV parks/campgrounds with a total of 650 sites; plus numerous parks and ample public utility services to serve visitors and residents (GCDACC, 1998). Steamboat Rock State Park generated nearly \$350,000 in campsite and boat launching fees for the state during FY 1997 to 1998 (Burnett, 1998).

### **2.6.3 Local Services and Utilities**

#### **Highways**

The Banks Lake area is served by several highways as well as local city and county roads. Running along the eastern shore between Grand Coulee and Electric City in the north and Coulee City at the south end of the lake, SR 155 is the principal thoroughfare serving the reservoir's eastern shoreline. Most of the land adjoining the western shoreline is privately owned and therefore not easily accessible to the public except by boat. This, coupled with the western shoreline's steep topography and basalt cliffs/coulee walls, restricts public vehicular access to essentially the Barker Canyon/Barker Flat and other northwestern reservoir areas.

#### **Electric Power**

Electric power has historically been abundant and relatively inexpensive in the management area. Electrical energy needs are provided by the Grant County Public Utility District (GCPUD), which owns and operates a system of substations, transmission and distribution lines, and associated general plant. Part of GCPUD's power comes from their Wanapum and Priest Rapids hydroelectric projects on the Columbia River, a portion from Grand Coulee Dam, and part from

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<sup>2</sup>

Visitation estimates based on traffic counters. The data for Steamboat Rock Park in 1996 are probably low due to some equipment failures during the year. (Kelton, 1998)

their 40-year contract interests in the 9.4 megawatt (MW) Quincy Chute Project and 6.5 MW Potholes East Canal Headworks Project. The electric system had gross operating revenues in 1995 of \$62.2 million.

About 75 percent of the retail customers are residential, of whom more than ½ are rural customers. The District's rates are among the lowest in the nation averaging slightly more than 2.06 cents per kWh in April 1997. The average cost of electricity for residential service in 1997 was 2.86 cents/kWh, and the average annual bill for such service was \$630 (Dames & Moore estimate based on GCPUD, 1998). Irrigation and industrial accounts consume the majority of supplied power. Major industrial users include food processing and chemical manufacturing establishments (GCPUD, 1998).

### **Water Supply and Wastewater Management**

Potable water is obtained from wells drawing on a deep aquifer located within the basalt layers of the region. Wells are registered with the Washington State Department of Health. Grant County Health District personnel describe the area's ground water as being of overall good quality. Periodic well monitoring is performed to ensure that the state ground water quality standards are being met (Barry, 1998).

Residents of the towns of Grand Coulee, Electric City, and Coulee City are served by public water supply systems. The towns also provide sewage collection and treatment. Rural residents use individual wells and septic systems for their water supply and wastewater disposal requirements (Barry, 1998). SPRC provides potable water and restroom facilities (e.g. flush or vault toilets) at park campgrounds and day use areas (Kelton, 1998). The WDFW provides vault toilets at the developed boat launch and campground areas they administer.

### **Solid Waste Management**

Solid wastes generated in the Banks Lake management area are generally disposed of in dumpsters situated in developed recreation areas and day use areas managed by the SPRC and WDFW. Under contract with franchised carriers, these solid wastes are collected and hauled to landfills in Grand Coulee and Ephrata, Washington (Barry, 1998).

Littering and trash dumping is not reportedly a problem in the Banks Lake region. At Banks Lake, however, recent inventories conducted by the FWS, WDFW, and Dames&Moore personnel (now URS Corporation) revealed the presence of trash dumps, litter, and garbage in or adjacent to many of the dispersed camping areas around the reservoir. Because the WDFW and SPRC do not have the personnel to adequately maintain these dispersed use areas, litter and trash problems often go undetected and local volunteers become responsible for remedying the situation (Kelton, 1998). Additional information on solid waste management is provided in the discussion on Public Industrial Refuse later in this chapter.

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### **Fire Protection**

Fire Protection in the Banks Lake area is provided by two of Grant County's fire districts - Electric City No. 14, which serves the northern end of the lake and Hartline No. 6, which serves the southern reservoir area. Volunteers comprise the staff, and the districts provide rescue and ambulance service. The districts are independent taxing jurisdictions levying property taxes for their funding (GCFD No. 14, 1998). The town of Coulee Dam has a fire insurance classification code of 5, while Electric City's is 6 (GCDACC, 1998).

### **Law Enforcement**

Police protection is provided by various entities in the Banks Lake area. Municipal police departments in Grand Coulee (which also serves Electric City) and Coulee City serve their residents, while the Grant County Sheriff's Department has jurisdiction over unincorporated areas and lakes, using personnel residing in the Grand Coulee/Electric City and Coulee City areas (Shay, 1998). State Patrol personnel police the state highway system, state park personnel provide law enforcement on SPRC administered lands, and the WDFW have state fish and wildlife law enforcement authority. State Park and WDFW law enforcement officials in the Banks Lake area can call on the State Patrol and the Sheriff's Department for support. There are, however, no mutual aid agreements among these law enforcement agencies and Reclamation at this time (Kelton, 1998).

Grant County has a relatively low incidence of serious crime. In 1995, a total of 3,618 offenses were reported throughout the county, of which 1,085 (30 percent) were Part I offenses (violent and property crimes: murder, rape, robbery, assault, burglary, larceny, auto theft, and arson) while the remaining 1,533 were Part II offenses (forgery, fraud, embezzlement, vandalism, weapons violations, sex offenses, drug and alcohol abuse violations, gambling, vagrancy, curfew violations, and runaways). For purposes of comparison, the 1995, statewide rate for serious (Part I) offenses was 5,909 offenses per 100,000 inhabitants while Grant County's was 1,713 per 100,000 inhabitants (FBI, 1997). Comparable data for Part II offenses were not available, but it is evident from Grant County's experience with Part I crimes that the county is a comparatively safe place.

### **Health and Medical Services**

Emergency medical services in the Banks Lake area are provided by the county fire districts in Electric City and Hartline. The Coulee Community Hospital (CCH) in Grand Coulee is the principal health care facility in the area. Providing general and acute care services, CCH has 48 licensed beds; 19 beds are for hospitalization, and 29 beds are for long-term nursing care. The hospital employs approximately 100 staff, of whom seven are senior and mid-level physicians and health care professionals. A clinic in Coulee City provides medical services at the southern end of Banks Lake, while the next nearest general hospital is in Ephrata (Lang, 1998). Regional health care is provided in Wenatchee, Moses Lake, and Spokane.

### **Public Schools**

The Banks Lake area is served by two public school districts, Grand Coulee Dam School District (SD) 301 and Coulee-Hartline SD 151. Eight other districts serve the rest of Grant County. Enrollment in FY 1996 to 1997 was 986 among the four schools comprising Grand Coulee Dam SD and 243 at Coulee-Hartline. Forty-five percent of the pupils in Grand Coulee Dam SD were classified as minority, including 413 Native Americans, six Asian or Pacific Islanders, five Blacks and 13 Hispanics, with the remaining 530 pupils White. In the Coulee-Hartline SD, the student body was almost totally White (248 of the 251 total enrollment) with one Native American and two Hispanics classified as minorities (OSPI, 1998).

Instructional staff in the Grand Coulee Dam SD numbered 49, yielding a pupil/teacher ratio of 19.6 to 1. The Coulee-Hartfield SD numbered 17 instructional staff, yielding a ratio of 14.8 pupils per teacher. At Grand Coulee, 39 percent of the pupils were receiving free or reduced cost lunches, and 11.3 percent were in Special Education. At Coulee-Hartline, the percentage receiving free or reduced cost lunches was 32, while 9.6 percent of the students were in Special Education (OSPI, 1998).

### **Fiscal Status**

Changes in recreational resource use in the Banks Lake area could affect the income government agencies receive from payments for public services and taxes. It is not possible, however, to make a strict accounting of the sources and uses of funds by public sector agencies and entities in the management area, partly because of the lack of specific localized data, and partly because the various federal, state, county and local municipal agencies and jurisdictions have different geographical areas of responsibility. Thus, there is no basis for identifying whose fiscal activities pertain precisely to a given locale.

Under a 1953 MOA between the United States and Washington State, the state assumed management responsibility within the RMP management area. The SPRC receives revenues and leasehold taxes for the leases, licenses, permits, and concession contracts they administer at Banks Lake. These revenues, however, are trivial to the economy and averaged about \$8,000 per year for the period between 1994 through 1997. Far more significant to the regional economy are direct visitor expenditures for locally-supplied goods and services plus the sales taxes generated by their sale.

At the local level, the municipalities of Grand Coulee, Electric City and Coulee City collect sales and property taxes and fees, and receive transfers from various state and federal programs to pay for their activities. The principal source of revenues relating to Banks Lake area visitation are sales taxes on the taxable retail purchases of visitors. These municipalities also impose a sales tax of 1.1 to 1.2 percent on top of the state's 6.5 percent levy and a 2 percent transient lodgings tax. Property taxes fund portions of city, county, school and other special district budgets (e.g. fire, hospital, mosquito control, port, and other districts), but in the aggregate, the assessed

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values of real and personal property upon which the taxes are levied are based on broader bases of value than visitors' travel expenditures.<sup>3</sup>

At the government level, Grant County is the principal fiscal entity with a portion of its budget funded by the county's share of sales and transient lodging taxes collected in unincorporated areas. In FY 1996 to 1997, the county had expenditures totaling \$43.25 million and revenues of \$42.24 million. Property tax revenues totaled \$9.08 million (22 percent) while retail sales and use taxes raised \$2.78 million (6.6 percent). The *Washington State 1991-1997p Travel Impacts and Visitor Volume* reported that 1996 travel-related spending generated \$960,000 in county taxes and \$6.31 million in state taxes (including the transient lodging tax which amounted to \$204,700) (WDCT&ED, 1998). Most of the county's budget is supported by intergovernmental transfers from state and federal programs (OFM, 1998).

## 2.7 HAZARDOUS AND TOXIC MATERIALS SUMMARY

Hazardous and toxic materials of primary concern in the Columbia Basin are the chemicals associated with agricultural practices (agricultural chemicals). Other hazardous and toxic materials of concern include total suspended particulates (TSPs), high levels of naturally occurring elements, fecal coliform bacteria, dissolved solids, and public and industrial refuse.

### 2.7.1 Agricultural Chemicals

Agriculture and related industries are the dominant economic activities on the Columbia Plateau. Agricultural chemicals currently in use on both irrigated and dryland farms adjacent to the management area include fertilizers, pesticides, herbicides, insecticides, fungicides, miticides, rodenticides, and other treatments. Aquatic herbicides are also used to control vegetation in and along the canal delivery system. Fertilizers entering surface waters affect nitrogen and phosphate nutrient loads.

Changes in the chemical quality of Columbia Plateau ground waters have been attributed to agricultural practices and activities. A report released by the Washington State Interagency Ground Water Committee (WIGWC) on "Nitrate Contamination of Ground Water in the Mid-Columbia Basin" indicated that approximately 20 percent of the domestic or public water supply wells analyzed had an average nitrate-nitrogen level above the state drinking water standard.

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Property taxes paid by businesses primarily involved in providing lodging and services for visitors account for some proportion of the total levies on property, but the shares cannot be broken out with the data that are readily available. It seems reasonable to believe, however, that it would take a very large and unlikely decline in visitor- and recreation-related business to have a material impact on the fiscal stability of the jurisdictions containing the Banks Lake area attractions. One measure of the assessed value of real and personal property in the management area would be that of the two Grant County school districts that encompass the communities and area bordering Banks Lake: in fiscal year 1996 to 1997 that amounted to \$120.15 million, which represented about four percent of the county's total assessed valuation of \$3.03 billion. (Grant County Auditor, 1998) Property tax levy rates in the incorporated communities in the management area ranged \$15.25-\$15.50 per \$1,000 assessed valuation in 1995 (GCDACC, 1998)

Consequently, a Ground Water Management Area was established in 1998 encompassing Grant, Adams, and Franklin counties. However, the ground water data gathered in the vicinity of Banks Lake indicates that nitrate-nitrogen contamination is not a public health concern at this time.

Commonly used pesticides typically have not been monitored in surface water or ground water in the Columbia Basin. However, Columbia River water and biota have been monitored for more persistent pesticides such as DDT and dieldrin, which are no longer used. Data indicate that over time, concentrations of these persistent chemicals are decreasing. Monitored pesticides, including currently used treflan, parathion, malathion, and thiodan are not typically found in the samples, indicating that these compounds are not being transported, are not persistent, and that their breakdown products are not subject to monitoring.

### **2.7.2 Fecal Coliform Bacteria and Dissolved Solids**

Fecal coliform bacteria and dissolved solids are often carried along with eroded soils and water runoff/percolation. In areas grazed by livestock, particularly where cattle have direct access to surface waters and springs, increased nutrient loads and bacterial organisms from excrement can affect water quality and human health. During Banks Lake field surveys, problems due to livestock grazing have been noted at Bebe Springs, in portions of the northern reservoir area grazed under permit BL-04, and in areas grazed by trespass livestock (i.e., Barker Flat). The presence of human and other animal wastes in dispersed camping areas around the reservoir was noted in some areas, but is not considered a significant public health hazard at this time due to its relative infrequency of occurrence.

### **2.7.3 Public and Industrial Refuse**

Public and industrial refuse generally is taken to local sanitary landfills operated by the counties, or to private landfills permitted by the WDOE to operate under the Environmental Protection Agency's (EPA) Resource Conservation and Recovery Act (RCRA) regulations for solid waste. Some industrial wastes require special disposal in permitted hazardous waste disposal facilities. However, none of the solid waste landfills located near the RMP management area are RCRA-permitted hazardous waste landfills. Solid waste landfills may accept small quantities of hazardous wastes, but the cumulative amount of these hazardous wastes is unknown.

Grant County operates a landfill south of Ephrata that accepts approximately 95 percent of the County's refuse. Another smaller landfill, the Delano Landfill, is located in Electric City. Existing monitoring wells can not demonstrate potential negative effects caused by the contents of these landfills. However, it is probable that they contain general farm waste materials, including empty pesticide containers.

Municipal solid waste collected from each of the Banks Lake neighboring communities (Electric City, Grand Coulee, and Coulee Dam) plus Elmer City, Wilbur, Creston, and Steamboat Rock State Park are taken to the Delano Landfill. Located off SR 155 south of the North Dam Rest Area, the landfill is within a mile of Banks Lake. However, it is unlikely that the landfill affects

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Banks Lake water quality due to its low elevation relative to Banks Lake. The Delano landfill does not accept hazardous waste.

#### **2.7.4 Other Sources of Potential Pollution**

Various land use agreements (i.e., leases, licenses, permits) with Reclamation, WDNR, WDFW and SPRC exist within or adjacent to the RMP management area (see Chapter 3, Section 3.3 “Land Use Agreements” for specific details). Under these agreements, the lessee, licensee or permittee is required to maintain a weed control program to prevent the spread or establishment of noxious weeds. Pesticides that are highly toxic to people, fish or wildlife are not allowed. Each entity is responsible for either taking the appropriate weed control measures or reimbursing the administering agency for any weed control costs incurred as a result of their failure to control weeds on the involved property.

According to information provided by the Grant County Noxious Weed Control Board, the RMP management area is monitored for weed control by the County, but treatment is administered by the WDFW and Reclamation. On occasion, subcontractors are contracted to conduct the County’s prescribed weed control measures. Generally, Reclamation is concerned with Eurasian watermilfoil control in the waters of Banks Lake.

The Dry Falls Mini-Mart is newly constructed and is reported to have double-walled steel USTs with the necessary safety mechanisms in place.

#### **2.7.5 Federal Regulatory Agency Databases**

Applicable regulatory agency documents and lists of known or potential hazardous waste sites, landfills, and properties or facilities currently under investigation for potential environmental violations were reviewed to identify properties or facilities that may have the potential to adversely affect environmental conditions in the management area. Unless otherwise noted, the search distance radius was two miles from the four sites selected for the VISTA database search - Coulee City, Grand Coulee, Steamboat Rock State Park, and Grand Coulee Dam Airstrip. Hazardous waste sites greater than 0.5 miles from Banks Lake are not expected to have a negative impact on the reservoir (Sherry Minnick, 1998).

The following EPA and agency documents and lists were reviewed by VISTA Environmental Solutions, Inc. (VISTA), of San Diego, California:

- *US EPA National Priorities List (NPL)*  
The NPL List includes those sites determined by the EPA to require priority remedial action, and those sites for which Superfund finances have been allotted.

There are no NPL sites listed on the VISTA database within two miles of the Banks Lake management area.

- *US EPA Corrective Action (CORRACTS) List*



The CORRACTS List is a compilation by EPA of the properties or facilities which EPA has issued a “corrective action order” pursuant to RCRA Section 3008 (h) when there has been a release of hazardous waste or constituents into the environment from a RCRA facility.

There are no CORRACTS sites listed on the VISTA database within two miles of the Banks Lake management area.

- *US EPA Comprehensive Environmental Response, Compensation and Liability Information System (CERCLIS) List*

The CERCLIS List is a compilation by EPA of the properties or facilities which EPA has investigated or is currently investigating for a release or threatened release of hazardous substances pursuant to the Comprehensive Environmental Response, Compensation and Liability Act of 1980 (Superfund Act).

Databases were searched to 1.5 miles. No CERCLIS sites were listed on the VISTA database within 1.5 miles of the Banks Lake management area.

- *US EPA Emergency Response Notification System (ERNS) List*

The ERNS List is a list compiled by EPA of the spills of potentially hazardous substances called in to the Coast Guard and other spill response centers across the US. Spill notifications included on this list have not necessarily been confirmed by EPA.

Databases were searched to 1.2 miles. No ERNS sites were listed on the VISTA database within 1.1 miles of the Banks Lake management area.

- *US EPA Resource Conservation and Recovery Act (RCRA) TSD List*

The EPA's RCRA program identifies and tracks hazardous waste from the point of generation to the point of disposal. The RCRA Facilities List is a compilation by EPA of reporting facilities that store, transport, treat or dispose of hazardous waste.

Databases were searched to 1.5 miles. No TSD facilities were listed on the VISTA database within 1.5 miles of the Banks Lake management area.

- *US EPA RCRA Generators or Notifiers List*

The EPA's RCRA Program identifies and tracks hazardous waste from the point of generation to the point of disposal. The RCRA Facilities List is a compilation by EPA of reporting facilities that generate hazardous waste.

Databases were searched to 1.1 miles. No large quantity RCRA generators of hazardous waste were listed on the VISTA database within 1.1 miles of the Banks Lake management area. The Coulee Co-Op (Cenex Gas Station), located off U.S. Highway 2, is within the RMP management area and listed as a small quantity generator.

### 2.7.6 State Regulatory Agency Databases

- *Washington Department of Ecology (WDOE) Listing of Underground Storage Tanks (USTs) Reported in Washington State.*

This listing is a compilation of site names and tank information for sites with USTs registered with WDOE.

Databases were searched to 1.1 miles. Six USTs were listed on the VISTA database within 1.1 miles of the management area(see Table 2.5). Four sites are located in Coulee City and two in Electric City.

Leakage from the USTs listed in Electric City potentially could enter Banks Lake as they are hydrogeologically up-gradient of the reservoir. The USTs listed in Coulee City are hydrogeologically down-gradient of Banks Lake and likely do not pose a hazard to the reservoir.

**Table 2.5**  
**Underground Storage Tanks Within or Near the**  
**Banks Lake Management area**

Site Name	Location
Coulee-Hartline School District	West Locust, Coulee City
Town of Coulee City (Fire Hall)	West Main, Coulee City
Fuller Auto Sales	Walnut, Coulee City
Frontier Corner	U.S. Highway. 2, Coulee City
Marshall French	Coulee Blvd., Electric City
Electric City Area HQ Site	Williams Street, Electric City

- *WDOE Leaking Underground Storage Tank (LUST) List*  
The LUST list is a compilation of sites with confirmed leaking underground storage tanks that have been reported to WDOE.

Databases were searched to 1.5 miles. Eight LUST sites were listed on the VISTA database within 1.5 miles of the management area(see Table 2.6). Five sites are located in or near Grand Coulee, one in Electric City, and two in or near Coulee City. In all cases, contamination is limited to soil and ground water not reported to be impacted.

Four Grand Coulee and Electric City sites are reported cleaned up, and four additional sites are being cleaned up. Contamination is limited to soil in all cases. The two Coulee City sites, Dry Falls Café/Mini-Mart and Major Oil Company, are located within the management area. The Major Oil site is reported cleaned up while the Dry Falls Mini-Mart cleanup is on-going.

- *Washington Active Solid Waste Landfills (SWLF)*  
This list is provided by the WDOE and is a compilation of solid waste facilities currently in operation.

Managed by the Regional Board of Mayors, the Delano landfill is located within 1 mile of the management area. The landfill accepts municipal solid waste from Electric City, Grand Coulee, Coulee Dam, Elmer City, and Steamboat Rock State Park. Ground water monitoring is conducted at the landfill as FDR Lake is down-gradient from the landfill site.

- *Washington Site Register (Toxics)*  
This list is provided by the WDOE and is a compilation of the state's Toxic Cleanup Program.

Located within the management area, the Dry Falls Café and Mini-Mart is listed on the state's toxics list. Dry Falls Café is included on the toxics register because of a LUST (Minnick, 1998).

**Table 2.6**  
**Leaking Underground Storage Tanks Within or Near the**  
**Banks Lake Management area**

<b>Site Name</b>	<b>Location</b>	<b>Media Affected</b>	<b>Status</b>
Flying J Grocery	Spokane Way, Grand Coulee	Soil	Reported Cleaned Up 08/15/91
Dam Site Building Center	A Street, Grand Coulee	Soil	Reported Cleaned Up 06/7/93
BPA Maintenance Facility	Grand Coulee Dam, Grand Coulee	Soil	Cleanup Started 09/25/91
Bureau of Reclamation	SR 155, Grand Coulee	Soil	Cleanup Started 08/28/89
Midway Mini-Mart	Midway, Grand Coulee	Soil	Cleanup Started 01/05/95
Electric City HQ Site	Williams Street, Electric City	Soil	Cleanup Started 07/01/94
Major Oil Company	U.S. Highway 2, Coulee City	Soil	Reported Cleaned Up 04/23/96
Dry Falls Café and Mini-Mart	Junction U.S. Highway 2 and SR 17, Coulee City	Soil	Cleanup Started 04/13/95

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## **CHAPTER 3**

### **AGENCY COORDINATION AND STANDARDS**

#### **3.1 EXISTING MANAGEMENT SITUATION**

A total of approximately 44,500 acres of Reclamation lands (17,100 acres) and waters (27,400 acres at full pool) define the Banks Lake management area. Although these lands and waters were transferred to the State of Washington for administration and management under a Memorandum of Agreement (MOA) with the United States, Reclamation maintains a basic interest in the uses authorized on them. Reclamation's continued interest and involvement insures that (1) nothing is done which conflicts with the primary purpose of the project and (2) the land receives proper use in accordance with appropriate land management principals and practices.

Reclamation's Ephrata Field Office is responsible for providing the oversight and approval of activities affecting Reclamation lands and waters at Banks Lake. The SPRC and WDFW, however, are the primary agencies responsible for administering and managing most of the day-to-day activities, which directly affect the RMP management area.

Of the 17,000 acres of Reclamation land within the management area, approximately 3,690 acres (22 percent), were withdrawn from the public domain and 13,410 acres (78 percent) were acquired in fee title for the construction and operation of Banks Lake. The following sections briefly describe the management agreements, land use agreements, and land use activities which directly affect the management area's present landscape and resources. Existing management plans, applicable state and local laws and ordinances, county comprehensive plans, and adjacent land uses are also identified and described.

##### **3.1.1 Fish and Wildlife Coordination Act Discussion**

In accordance with the Fish and Wildlife Coordination Act (46 Stat. 401, as amended, 16 U.S.C. 661 et seq.), the FWS provided a Planning Aid Memorandum documenting wildlife resources, habitat, and management concerns within the RMP management area (FWS, September 1998). A second Planning Aid Memorandum dated August 31, 1999, provided supplemental information from FWS surveys for bald eagles, peregrine falcons, pygmy rabbits, and Ute ladies'-tresses. A Draft Coordination Act Report was submitted to Reclamation on January 4, 2000, to assist in the development of the Banks Lake RMP (see Appendix E).

The Bureau of Reclamation has agreed to all of the recommendations outlined in the Coordination Act report except for the following:

- 1) Some of the current problems with management of lands within the management area, such as persistence of trespass grazing in some areas, is apparently due to financial constraints of management agencies. These environmental commitments will be funded and implemented by Reclamation.

- 2) At Barker Flats, the western ½ of the unit rather than the eastern ½ will be closed to dispersed camping to actually protect sensitive species and habitats. The western half of Barker Flats is a popular use area that has already been disturbed. Reclamation believes it is better management to protect undisturbed resources in the eastern half of the area by focusing use in an area that has already been disturbed.
- 3) A study to determine the reproductive success of western grebes in the management area will be initiated to help determine the level of management that will be applied to protect these birds. This will require action by the Washington Department of Fish and Wildlife.
- 4) Surveys for pygmy rabbits will be done in specific areas within the shrub-steppe communities which could be negatively affected by future actions. This will require action by the Washington Department of Fish and Wildlife.
- 5) Restrictions on the use of PWC during fish spawning seasons in certain areas could benefit several fish species. This will require action by the County Sheriff.
- 6) Impacts of the several fishing tournaments at Banks Lake on fisheries will be determined and tournaments modified or curtailed, if necessary. This will require action by Washington Department of Fish and Wildlife.
- 7) Both WDFW and WSPRC will finalize and implement management plans for the areas under their jurisdiction, regardless of the alternative pursued. While Reclamation agrees with this statement, it is outside of our authority.
- 8) We recommend the BOR consider stricter measures for protecting important fish and wildlife resources and environmentally sensitive areas. For example, some areas will benefit from no or very limited human use throughout most if not all of the year, rather than just a restriction on dispersed camping or motorized travel on roads. If species listed on the Endangered Species list are located in this area, or significant cultural resources are identified, additional restrictions will be implemented.

## **3.2 MANAGEMENT AGREEMENTS**

Since 1953, the State of Washington has managed the fish, wildlife, and recreational resources at Banks Lake under the terms of a 50-year MOA with the United States. As part of the state's management responsibility under the MOA, the state is responsible for the issuance and administration of leases, licenses, permits, and concession contracts for the purpose of providing commodities and public services in the reservoir area. Upon the termination of any such agreements, the state may issue and administer new agreements covering such uses upon their approval by Reclamation. The MOA also empowers the state, within the limits of its jurisdiction, to make and enforce rules and regulations for the use of the reservoir area as necessary to protect public health and safety; to protect plants, fish and wildlife; and to preserve the scenic, scientific, aesthetic, historic and archaeological resources of the area. The MOA expires in 2003.

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Currently, the WDFW is responsible for fish and wildlife resource management activities, the issuance of grazing and agricultural leases, and the maintenance of six “Sportsman Access” boat launch sites. Similarly, the SPRC manages the Steamboat Rock State Park Recreation Area which includes Northrup Canyon, and administers commercial and public park lease agreements and associated concession agreements. Under separate public park lease agreements with the SPRC, Coulee City and Electric City each have issued sublease or concession agreements for various facilities and services provided at these public parks.

Immediately adjacent to the management area, the WDNR administers the Sunbanks Resort commercial lease, several agricultural leases, and cooperates with the SPRC to manage Northrup Canyon’s Castle Rock Natural Area Preserve. The Grant County Sheriffs’ Department (GCSD) cooperates with other authorized law enforcement officials (i.e., State Patrol, WDFW, State Parks, etc.) to enforce the various laws, regulations, and ordinances applicable at Banks Lake.

In order to insure proper operation and protection of the reservoir, Reclamation retains primary jurisdiction over developments within the Reclamation Zone. The Reclamation Zone includes all lands on which North Dam and Dry Falls Dam and their appurtenant works are situated, and that portion of the reservoir area generally lying within a strip 200 feet in horizontal width above the reservoir’s normal high water elevation contour line of 1,570 feet. Such jurisdiction is maintained by Reclamation for the purpose of insuring proper operation and protection of the reservoir. All developments and actions within the Reclamation Zone must be approved by Reclamation.

Under the MOA, the state is required to prepare and submit development plans to Reclamation, as well as to the National Park Service and the U.S. Fish and Wildlife Service as Reclamation deems necessary. This consultation is intended to ensure the highest public benefit through the development and maintenance of the recreational, wildlife, and fisheries potentials available from Reclamation lands and waters.

Two separate MOA’s also exist between the WDFW (formerly the Washington Department of Game) and the SPRC regarding Banks Lake administration. As shown on Figure 3.1-1 the 1974 agreement delineated the Steamboat Rock State Park peninsula into three management zones (Zone A: “Game Management Zone”, Zone B: “State Parks Management Zone”, and Zone C: “Joint Management Zone”) to clarify administrative oversight and management responsibilities between the two agencies. Similarly, a separate 1985 MOA further delineated and defined additional “Lead Agency” management zones and responsibilities around the lake. Each lead agency is to provide administrative oversight and control within their respective management zones and to give the other state agency the opportunity to review and comment on lead agency actions. Actions in any management zone are subject to Reclamation approval.

### 3.3 LAND USE AGREEMENTS

Most land use activities are authorized by specific land use agreements with either the SPRC, WDFW, or Reclamation (see Table 3.1). The primary authorization instrument used by the SPRC is a lease agreement, whereas the WDFW administers a grazing permit and agricultural lease program. Subleases and concession agreements are generally used by lease holders (lessees) to authorize second party activities and services on leased lands. No special use permits are currently authorized in the management area.

**Table 3.1**  
**Existing Land Use Agreements Within the Banks Lake Area**

Site	Lessee/ Permittee	Agreement	Administrating Agency	Activity	Issue Date	Expiration Date
Steamboat Rock State Park (Chimes Concession)	Yvonne George	Concession	SPRC	Provide food, beverage, and grocery sales; recreation equipment rentals and sales	6/2/95	12/31/99
Grand Coulee Dam Airstrip	Grant Co. Port District No. 7	Lease	SPRC	Construct, operate and maintain a public airstrip	9/5/67	12/31/00
	Individual Fliers	Lease	Grant Co. Port District. No. 7	Hangar rentals for the storage and maintenance of aircraft	12/14/87	12/31/00
Electric City Public Park	Town of Electric City	Public Park Lease	SPRC	Construct, operate and maintain a public park	1/154	12/31/00
	Coulee Playland / Hal Rauch	Concession	Electric City	Operate a campground, marina, food and beverage service, and boating and fishing supply service	1/1/84	12/31/00
Coulee City Community Park	Coulee City	Public Park Lease	Reclamation	Construct, operate, and maintain a public park	10/15/73	12/31/00
	Grant Co. Port District No. 4	Sublease	Coulee City	Operate and maintain a breakwater system and marina	6/3/92	12/31/00
Dry Falls Café and Minimart	Nolan Fuller	Lease	SPRC	Construct a gas station, motel and restaurant	1/1/78	6/30/02
T25N, R28E S34, NE1/4 NW1/4SE1/4	Clifford and Bonnie Hamilton	Lease	SPRC	Bare land	1/10/96	12/31/00
Various Right-of-Way Easements	Grant County PUD No. 2, Pacific NW Bell, Grant County	Permanent Easements	Reclamation	Construct, operate and maintain utility lines, sub-stations, and public roads	Various	Perpetual
Steamboat Rock State Park - Game Management Zone	Wayne Rice	Agricultural Lease	WDFW	Provide dryland winter wheat and summer fallow for wildlife cover	3/1/98	12/31/02

**Table 3.1**  
**Existing Land Use Agreements Within the Banks Lake Area**

Site	Lessee/ Permittee	Agreement	Administrating Agency	Activity	Issue Date	Expiration Date
T26N R28E portions of S12, 13 & 14 T28N R29E portions of S12, 13, 23, 24, 25 & 26 T28N R30E portions of S3, 4, 5, 7, 8, 9, 10, 18 & 30	William McLean	Grazing Permit BL-04	WDFW	Livestock grazing	1/1/95	12/31/00
T25N R28E portions of S2, 11 & 14 above the coulee rim	Theodore Dormaier	Grazing Permit BL-03	WDFW	Livestock grazing	1/1/96	12/31/00
T26N R28E portions of S24 east of SR 155 T26N R29E portions of S18 & 19 east of SR 155	W. Keith Behne	Grazing Permit BL-02	WDFW	Livestock grazing	1/1/96	12/31/00
Between the breakwater jetties north of Dry Falls Dam	Coulee City Chamber of Commerce	License	Reclamation	Construct, operate and maintain a fish rearing facility		
Near Electric City		License	Reclamation	Construct, operate and maintain a fish rearing facility		

Table 3.2 summarizes the three 5-year grazing permits administered by the WDFW at Banks Lake and the specific areas currently authorized for grazing. Under each permit, the following general conditions apply:

- WDFW reserves the right to alter and change the provisions of the grazing use plan to include reduction in acres of pasture available and number of AUMs authorized when WDFW determines that such changes are required to benefit fish or wildlife management or public hunting and other recreational uses.
- WDFW reserves the right to cancel the permit in the event the area authorized for grazing in the permit is included in a land use plan determined by WDFW to be a higher and better use. Such cancellation will be in writing, will state the reason for cancellation, and notice will be at least 90 days before cancellation.



- All permit lands will remain open to the public for hunting, fishing, and other recreational uses at all times.
- The terms and conditions of a renewed permit are subject to change in land area, grazing management, AUM allotment, and fees. If it is found that permit renewal is in the best interest of WDFW, the permittee will be provided the option of meeting the highest bid made at public auction.

**Table 3.2**  
**Banks Lake Grazing Permits Administered by the**  
**Washington Department of Fish and Wildlife**

Permittee	William McLean	Theodore Dormaier	W. Keith Behne
Permit No.	BL-04	BL-03	BL-02
Total Acreage (acres)	3,610 <sup>1</sup>	220	180
AUM <sup>2</sup> Allocations	320 AUMs	26 AUMs	30 AUMs
Term: 5 seasons Commence: Terminate:	January 1, 1995 December 31, 1999	January 1, 1996 December 31, 2000	January 1, 1996 December 31, 2000
Number of Pastures	Four (3 pasture rotation; 4 <sup>th</sup> pasture used in conjunction with permittee's private land)	None (used in conjunction with permittee's unfenced private land)	None (used in conjunction with permittee's unfenced private land)
Forage Utilization	Not to exceed 40 percent	Not to exceed 40 percent	Not to exceed 40 percent
Season of Use	April 15 - October 15	Year-round	Year-round

<sup>1</sup> Of the 3,610 acres authorized for livestock grazing, 964 acres are too steep and rocky for cattle to use.

<sup>2</sup> Animal-Unit-Month (AUM): The amount of forage required to sustain a cow and calf, or their equivalent (e.g., 5 sheep), for one month.

## 3.4 OTHER LAND USES

### 3.4.1 Steamboat Rock State Park Recreation Area

Operated and maintained by the SPRC, the Steamboat Rock State Park Recreation Area encompasses about 9.5 miles of the lake's eastern shoreline. The Recreation Area includes Steamboat Rock State Park located on the 2,060-acre peninsula, the Steamboat Rock Rest Area and Boat Launch, the Jones Bay Campgrounds, the Osborn Bay SW Campground and Boat Launch, and the Northrup Canyon Natural Area and Castle Rock Natural Area Preserve located just east of the management area boundary. Recreation facilities provided by the SPRC include campsites, picnic sites, a swimming beach, hiking trails, boat launch lanes, fish cleaning stations, comfort stations, access roads, and other support facilities and amenities. A detailed discussion of recreation resources, use and access is provided in Section 3.14, "Recreation and Access."

### 3.4.2 Boat Launch Sites

Within the “Lead Agency” zones established under the September 1974 and May 1985 MOAs, the WDFW is responsible for the operation and maintenance of six boat launch sites, and the SPRC is responsible for three boat launch sites at Banks Lake (see Table 3.3 ). Operation and maintenance responsibilities for the other boat launches located on the reservoir (Sunbanks Resort, Coulee Playland, and Coulee City Community Park) are the responsibility of the respective lessee or concessionaire.

**Table 3.3  
Boat Launch Sites and Operation and Maintenance Responsibilities**

<p><b>Washington State Parks and Recreation Commission</b> Osborn Bay Southwest Campground and Boat Launch Steamboat Rock State Park Day Use Area Steamboat Rock Rest Area and Boat Launch</p>
<p><b>Washington Department of Fish and Wildlife</b> Osborn Bay Southeast Boat Launch Dry Falls Boat Launch Dry Falls Campground and Boat Launch Barker Flat Campground and Boat Launch<sup>1</sup> Million \$ Mile North Boat Launch Million \$ Mile South Day Use Area and Boat Launch</p>
<p><b>Sunbanks Resort Lessee</b> Sunbanks Resort</p>
<p><b>Coulee Playland Concessionaire</b> Coulee Playland</p>
<p><b>Coulee City</b> Coulee City Community Park</p>

<sup>1</sup> No operation and maintenance activities are currently performed by the Washington Department of Fish and Wildlife.

### 3.4.3 Equalizing Reservoir Game Reserve

In 1964, the “Equalizing Reservoir Game Reserve” was established at Banks Lake by the State Game Commission (WAC 232-16-140). Managed by the WDFW, the Reserve encompasses about 1,520 acres of Reclamation land and water. Within the boundaries of the reserve, it is unlawful to hunt game animals, game birds, or to trap fur-bearing animals.

### 3.4.4 Gravel and Material Sites

There are 14 gravel sites within or near the Banks Lake management area. Of the nine sites within the management area, eight sites are inactive and one site (Material Site 1) is actively used for material extraction. Of the five sites located outside the management area, only one site (Material Site 2) is actively used for material storage.

Abandoned, unreclaimed gravel/material sites are a resource concern. Improperly or non-reclaimed material sites can: (1) increase wind-borne dust; (2) promote the establishment of noxious weeds; (3) increase soil erosion and sediment-laden runoff; (4) encourage improper disposal of domestic solid waste; and (5) encourage unauthorized off-road vehicle use (i.e., Material Site 11 in Osborn Bay E) (Powell, 1999).

### **3.5 EXISTING LAND MANAGEMENT PLANS**

A number of specific land management plans have been developed by federal, state, and local agencies to assist in the management of land use activities and resources within or near the Banks Lake management area. Existing management plans affecting the Banks Lake area are identified and summarized below.

#### **3.5.1 Columbia Basin Wildlife Area Management Plan**

State-wide, the WDFW manages more than 840,000 acres to preserve, protect and perpetuate Washington's diverse wildlife and wildlife habitats, and to maximize the recreational and aesthetic benefits of wildlife for all citizens (WDFW, 1997). The Columbia Basin Wildlife Area (CBWA) is one of the Department's public holdings and incorporates many scattered tracts of land developed as a result of Reclamation's CBP. Encompassing over 260,000 acres, the CBWA is managed by the Department either through ownership or by agreements with other and federal agencies. Banks Lake is one of the sixteen management units within the CBWA.

Because of changing habitats and changes in public expectations and priorities, the Columbia Basin Wildlife Area Management Plan was drafted in June 1997. However, no specific wildlife management proposals or activities were developed for the Banks Lake unit.

#### **3.5.2 Grant County Comprehensive Plan**

The Grant County Comprehensive Plan sets guidelines and criteria for the preservation of the county's agricultural land, its recreational and scenic potential, the total environment, and the health and welfare of its citizens. As conditions change or the need arises, the Grant County Planning Commission can amend the Comprehensive Plan to keep it current with changing conditions. Recently, the Plan underwent major revisions to incorporate the Urban Growth Areas concept required by the Washington state's Growth Management Act. The updated Grant County Comprehensive Plan was adopted in June 1999.

The Comprehensive Plan emphasizes the preservation of all farmland which can be economically utilized in the production of agricultural commodities. To preserve prime agricultural lands, the ongoing expansion of local municipalities is to be channeled into the least productive agricultural lands within the area. Recognizing that some property is not suitable for agricultural use, such property, when distant from municipalities is best to preserve as open space areas for recreational purposes. The scattering of individual residences within agricultural areas is to be discouraged.

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Specific objectives outlined in the Grant County Comprehensive Plan include:

- Preserve the county’s agricultural land.
- Maintain low population densities in residential areas except in specific areas which are Planned Unit Developments (PUDs) or communities which have or will receive their utilities from a municipality.
- Preserve open space areas for recreational purposes.
- Limit commercial uses to those which cannot be provided by nearby communities.
- Avoid leap-frog development. Because a parcel of land within an agricultural area is unproductive or irregular, it will not be sufficient grounds for approval of residential development.

Seven major land use categories including residential, commercial/industrial, dryland agriculture, irrigated agriculture, orchard, rangeland, vacant/unimproved (includes parks and open space) were used in preparing the Comprehensive Plan. The land use designations identified in the Comprehensive Plan show Reclamation lands as “open space.”

Adjacent to these lands, three of Grant County’s fifteen cities (incorporated areas) - Coulee City, Electric City, and Grand Coulee - are established urban growth areas (UGAs). An UGA defines where developments will be directed and supported with urban public facilities and services, such as sanitary sewer systems, domestic water supply systems, street lighting, fire and police protection services, etc. If the County’s economic base is to be enhanced and its rural character preserved, the lion’s share of future growth must take place within and around these UGAs (Grant County Comprehensive Plan DEIS, March 1999). The 100-acre parcel being considered for disposal by Reclamation is within Coulee City’s UGA.

### **3.5.3 Grant County Shorelines Management Master Program**

In accordance with Washington’s Shoreline Management Act of 1971 (Chapter 90.58 RCW), the Grant County Planning Department and Citizens Advisory Committee for Shorelines Management prepared the “Grant County Shorelines Management Master Program,” dated June 1975. Banks Lake is listed as a shoreline of state-wide significance (WAC 173-20-290). Under this designation, preferences to uses are to be given in the following order:

- Recognize and protect the state-wide interest over local interest
- Preserve the natural character of the shoreline
- Result in long-term over short-term benefit
- Protect the resources and ecology of the shoreline

- Increase public access to publicly owned shoreline areas
- Increase public recreational shoreline opportunities
- Provide for any other element as defined in RCW 90.58.100 deemed appropriate or necessary

Environment designations are used as a system of categorizing shoreline areas according to management objectives and the character of the shoreline. Table 3.4 summarizes the Grant County Shorelines Master Program environments applicable to the Banks Lake management area. Within each designated environment, the primary planning objective is as follows.

Conservancy Objective: Protect, conserve, and manage existing natural resources and valuable historic and cultural areas in order to insure a continues flow of recreational benefits to the public. The conservancy environment is intended to maintain their existing character. Preferred uses are those which are nonconsumptive of the area's physical and biological resources.

**Steamboat Rock Bald Eagle Nest Territory Management Plan:** In 1991, the SPRC and WDFW cooperatively developed and adapted the conservation measures described in the *Steamboat Rock Bald Eagle Nest Territory Management Plan*. The management plan created site-specific management procedures to maintain a productive eagle nest territory and integrated management interests and goals of the land managers (WDFW, 1991). The plan emphasized the preservation of nesting, roosting, and foraging habitats in the Steamboat Rock bald eagle nesting territory at Banks Lake. The territory, covered by the plan, includes Sections 35 and 36 in T28N R29E and Sections 1 and 2 in T27N R29E.

**Castle Rock Natural Area Preserve Management Plan:** The 680 acre Castle Rock Natural Area Preserve lies adjacent to the RMP management area in Northrup Canyon and is part of the Steamboat Rock State Park Recreation Area, administered by the SPRC. In 1989, the SPRC and the WDNR jointly prepared the *Draft Castle Rock Natural Area Preserve Management Plan* to protect natural features of scientific or educational significance. Although never formally adapted, the preserve is managed under the policies and management guidelines outlined in the 1989 draft plan.

**Douglas County Comprehensive Pan:** This comprehensive plan was adapted in 1995. Lands in Douglas County, adjacent to the management area, are designated for dryland agriculture. Douglas County policies regarding land use, service centers, and recreational districts were considered in the RMP.

**Spokane Resource Management Plan:** In 1987, the Spokane District of the Bureau of Land Management (BLM) prepared the Spokane RMP to more effectively manage public lands in the district. The Spokane RMP designated the Scattered Tracts Management Area (STMA) for those public lands in the district, which are intermingled with private lands or managed by other federal or state agencies. BLM lands located near Banks Lake are in the STMA. Approximately 40 BLM scattered tracts are located within two miles of the Banks Lake management area. The

directives and policies outlined for these STMA lands were incorporated into the RMP to improve public agency and management efficiencies at Banks Lake.

**Ground Water Management Area (GWMA):** In 1998, under recommendation of the Washington State Interagency Ground Water Committee (WIGWC), a GWMA was established encompassing Grant, Adams, and Franklin counties. The state (in cooperation with the county health districts) monitors nitrate levels in public water supplies including those at Banks Lake. Based on observed nitrate levels, additional agricultural “Best Management Practices” throughout the GWMA may be prescribed.

**Federal Columbia River System Operations Biological Opinion:** The National Marine Fisheries Service (NMFS) prepared a *Biological Opinion* for threatened and endangered species found within the Columbia Basin (NMFS/WDFW, 2000). The RMP followed the measures outlined in the opinion

Rural Objective: Restrict intensive development along undeveloped shorelines, provide a buffer between suburban areas, and maintain open spaces and opportunities for recreational uses. This environment is intended for those areas having a high capability to support recreational development.

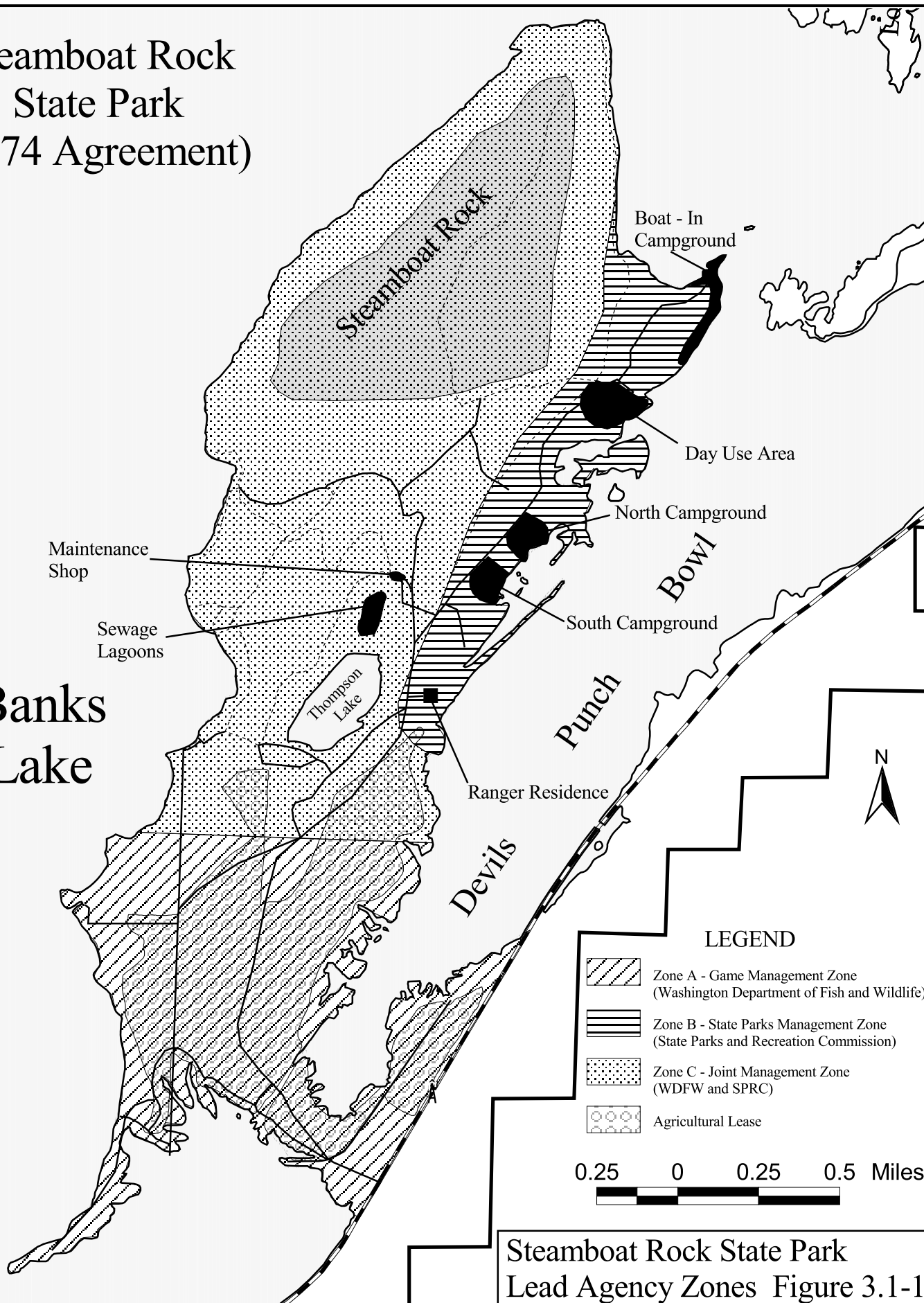
Suburban Objective: Insure optimum utilization of shorelines within suburban areas by providing for intensive public use and by managing development so that it enhances and maintains a multiplicity of shoreline uses.

**Table 3.4**  
**Grant County Shorelines Master Program Environments at Banks Lake**





<b>Environment</b>	<b>Shoreline Location</b>	<b>Reasoning</b>
Conservancy	Banks Lake: all except Coulee City Park, Electric City Park, and Steamboat Rock State Park	Federal ownership; physical features and lack of development
Conservancy	Coulee Lake	Federal ownership and lack of development
Conservancy	Table Lake	Federal ownership and lack of development
Conservancy	Junction Lake	Federal ownership and lack of development
Rural	Coulee City Community Park	Existing park and recreational facilities
Rural	Steamboat Rock State Park	Existing and proposed State Park facilities
Suburban	Electric City Park (Coulee Playland)	Existing development

Source: Shorelines Master Program for Grant County, June 1975.

# Steamboat Rock State Park (1974 Agreement)



## LEGEND

-  Zone A - Game Management Zone (Washington Department of Fish and Wildlife)
-  Zone B - State Parks Management Zone (State Parks and Recreation Commission)
-  Zone C - Joint Management Zone (WDFW and SPRC)
-  Agricultural Lease



Steamboat Rock State Park  
Lead Agency Zones Figure 3.1-1

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## **CHAPTER 4 MANAGEMENT PRESCRIPTIONS FOR NATURAL RESOURCES**

### **4.1 OVERVIEW**

The Natural Resource chapter balances the management agencies' and the public's long-term vision for the Banks Lake area by recognizing the need to protect the natural environment while supporting the overall recreational interests of the visitors.

The Desired Condition for Banks Lake, referred to as Alternative B in the EA, was chosen to address the long-term needs of the public and Banks Lake management agencies by supporting the natural, cultural, and recreational resources of the area. Specific management goals outlined in the RMP were developed in response to concerns identified during the EA scoping process and based on information from the EA resource inventory. The following chapter summarizes the existing *natural* resource management situation, lists the *natural* resource goals for Banks Lake under the Desired Condition, and describes the management actions needed to reach those goals.

### **4.2 EXISTING NATURAL RESOURCE MANAGEMENT SITUATION**

As previously mentioned, the SPRC and the WDFW manage the Banks Lake area with oversight by Reclamation's Ephrata, Washington, field office. These agencies manage land use, recreation, and fish and wildlife resources under existing federal and state laws, policies and land use agreements including those defined in Chapter 3 of this plan, Agency Coordination and Standards. Currently, the SPRC and WDFW are conducting the following natural resource management activities in the Banks Lake area:

#### **Wildlife Habitat**

- 1) Managing vegetation and habitat to maintain wildlife populations at current or enhanced levels.

#### **Fisheries**

- 1) Current management actions for fisheries have not been identified.

#### **Water Quality**

- 1) Monitoring water quality.



### Water Level Fluctuation/Reservoir Operations

- 1) In conjunction with facility maintenance drawdown operations every 10 to 15 years, water milfoil control will occur when problems associated with dense milfoil mats become prominent. Operations concerning the reservoir are not in the scope of the RMP.

## 4.3 DESIRED CONDITION

The following management actions were developed to achieve the Desired Condition for *Natural* resources in the Banks Lake area and are meant as additions to existing resource management activities. Tables 4.1 through 4.4 summarize the *Natural* resource goals and management actions necessary to implement them (see Figure 4.3-1 through Figure 4.3-4 Natural Resources).

**Table 4.1**  
**Natural Resource Management Goals and Actions for Wildlife Habitat**

RMP Wildlife Habitat Goals	Management Actions
<p><b>Protect and enhance federal and state “Special Status Species” listed as threatened, endangered, sensitive, or of special concern.</b></p>	<p><b>*Conduct Surveys</b> - Before initiating development actions, conduct site-specific surveys focusing on endangered, threatened, and sensitive plants, wildlife, and their habitats.</p> <ul style="list-style-type: none"> <li>- Coordinate with the FWS, Washington Natural Heritage Program, WDNR, and BLM to exchange information on the status of local rare plant distributions (particularly in areas north and northeast of Castle Rock and north of Fordair).</li> </ul> <p><b>Locate Bald Eagle Nests</b> - Identify and protect any bald eagle nest sites (and potential nesting areas). Prepare stipulations for existing nest sites and establish buffer to protect birds.</p> <p><b>*Develop Peregrine Falcon Management Plan</b> - Develop a Peregrine Falcon Management Plan for the area east of Million Dollar Mile day/use boat launch area and the southwest agricultural lease area.</p> <p><b>Modify Steamboat Rock Bald Eagle Management Plan</b> - Modify the 1991 Bald Eagle Territory Management Plan (between WDFW, SPRC, and Reclamation) to reflect the changes resulting from this RMP.</p>

\*Management actions that are included in response to existing laws, regulatory requirements, management agreements, or Reclamation policy.

**Table 4.1**  
**Natural Resource Management Goals and Actions for Wildlife Habitat**

<b>RMP Wildlife Habitat Goals</b>	<b>Management Actions</b>
<p><b>Restore, conserve, protect, and enhance native plant communities that are an important component of wildlife habitat (such as riparian and wetland areas, shrub-steppe communities, and cliffs, caves, and talus slopes).</b></p>	<p><b>*Seek Funding</b> - Seek funding to survey and accurately delineate the vegetation/habitat types found throughout the Banks Lake management area.</p> <p><b>*Control Weeds</b> - Emphasize weed control efforts in areas with high wildlife habitat value and potential for native species reestablishment (see Grazing Management - Weed Control).</p> <ul style="list-style-type: none"> <li>- Allow limited use of spot herbicide applications to kill small patches of Eurasian water milfoil to maintain open water for water fowl resting and feeding.</li> <li>- Allow pesticide application to kill patches of purple loostrife that are colonizing wetlands and reducing/eliminating wildlife habitat. Prior to application, evaluate the effects of pesticides on leopard frogs (SSC).</li> </ul> <p><b>Encourage Supplemental Seeding and Planting Efforts</b> - Plant native species beneficial to wildlife; mixtures, densities, and location will be determined by the WDFW (see Grazing Management - Weed Control).</p> <ul style="list-style-type: none"> <li>- Replant native dune species to promote dune stabilization where necessary.</li> <li>- Support private initiatives and volunteer efforts to plant riparian vegetation (e.g. conifers, deciduous trees, and shrubs) along exposed shoreline where erosion is considered slight or moderate but not heavy.</li> <li>- Plant additional roost trees for bald eagles where suitable tree species area lacking.</li> <li>- Retain and renew the existing 360-acre agricultural lease (north of Dry Falls campground on the boundary of Douglas and Grant County, in the area southwest of Devils Punchbowl, and on the land southwest of Electric City) to provide cover and food for wildlife.</li> </ul> <p><b>Remediate areas</b> - Remediate areas damaged by land use activities like vehicular access or dispersed camping.</p> <p><b>Modify Grazing Leases</b> - Modify grazing leases to benefit wildlife in areas where deemed necessary (see Grazing Management - Grazing).</p> <p><small>*Management actions that are included in response to existing laws, regulatory requirements, management agreements, or Reclamation</small></p>

**Table 4.1**  
**Natural Resource Management Goals and Actions for Wildlife Habitat**

<b>RMP Wildlife Habitat Goals</b>	<b>Management Actions</b>
<p><b>Maintain, protect, and enhance wildlife diversity, populations, and habitats.</b></p>	<p><b>*Enhance Fish/Wildlife Habitats</b> - Use the best available science to enhance fish and wildlife habitats that are not in conflict with boating and public safety.</p> <p><b>Post Signs</b> - Post signs to discourage recreational use on birds nesting islands from March 1 to June 30 and to discourage the use of Barker Cove, Old Devils Lake, Goose Island, and Lover’s Lane from November 1 through April 15 (see Recreation - Resource Protection and Enhancement). Post signs to discourage foot traffic and prevent further deterioration of the sand dunes and associated plant communities found in the SPRC.</p> <p><b>Seasonal Closures</b> - The WDFW will determine if seasonal closures were necessary in areas where minimizing human disturbance will protect roosting/wintering bald eagles, colonial birds, and waterfowl nesting areas (see Recreation - Resource Protection and Enhancement).</p> <ul style="list-style-type: none"> <li>- Depending on the species present, seasonally close dispersed campsites located in “high value” riparian/wetland areas in Barker Flats from November 1 to June 30.</li> <li>- Seasonally close Osborn Bay E road (from March 1 to May 29) but prohibit dispersed camping in this area year-round to reduce disturbance to wintering/nesting bald eagles.</li> <li>- Post signs to discourage foot traffic and prevent further deterioration of the sand dunes and associated plant communities found in the SPRC.</li> </ul> <p><b>Terminate Use</b> - Terminate use (where necessary), in areas where remediation will not be possible without abstinence. Eliminate roads and discourage trails through wetlands, meadows, and other sensitive wildlife habitats.</p> <p>*Management actions that are included in response to existing laws, regulatory requirements, management agreements, or Reclamation policy.</p>

**Table 4.1**  
**Natural Resource Management Goals and Actions for Wildlife Habitat**

<b>RMP Wildlife Habitat Goals</b>	<b>Management Actions</b>
<b>Determine the success of the management action, reevaluate how well the action met the goal, determine the success of management action.</b>	<b>Monitor and Evaluate</b> - Physically monitor the initiative; if necessary, adjust the specific methods and techniques employed when project is not meeting the RMP goal. Follow up with spatial monitoring using GIS to manage the natural resource database and assist in management decisions by conducting a GIS update, across the management area, at least every 10 years. The inventory will begin with an account of all mammal and avian attributes mapped in 1998, including waterfowl, colonial nesting birds, long-eared owls, bald eagle perch and roosting trees, and threatened and endangered species locations.

\*Management actions that are included in response to existing laws, regulatory requirements, management agreements, or Reclamation policy.

**Table 4.2**  
**Natural Resource Management Goals and Actions for Fisheries**

<b>RMP Fishery Goals</b>	<b>Management Actions</b>
<b>Protect and enhance federal and state “Special Status Species” listed as threatened, endangered, sensitive, or of special concern.</b>	<b>Control Shoreline Access</b> - Control shoreline access detrimental to wildlife habitat throughout Banks Lake management area. Traditional fishing access will be maintained, designated, and perhaps formalized with constructed trails to prevent habitat destruction.
<b>Protect and enhance fish populations.</b>	<b>*Enhance Fish/Wildlife Habitats</b> - Use the best available science to enhance fish and wildlife habitats that are not in conflict with boating and public safety. Management goals and actions for fisheries have not been identified.
<b>Maintain a diversity of fish species and angling opportunities.</b>	<b>*Control Weeds</b> - Emphasize weed control efforts in areas with high wildlife habitat value and potential for native species reestablishment (see Grazing Management - Weed Control). <ul style="list-style-type: none"> <li>- Allow limited use of spot herbicide applications to kill small patches of Eurasian water milfoil to maintain open water for water fowl resting and feeding.</li> </ul>
<b>Determine the success of the management action, reevaluate how well the action met the goal, determine the success of management action.</b>	<b>Monitor and Evaluate</b> - Physically monitor the initiative; if necessary, adjust the specific methods and techniques employed when project is not meeting the RMP goal. Follow up with spatial monitoring using GIS to manage the natural resource database and assist in management decisions by conducting a GIS update, across the management area, at least every 10 years.

\*Management actions that are included in response to existing laws, regulatory requirements, management agreements, or Reclamation policy.

**Table 4.3**  
**Natural Resource Management Goals and Actions for Water Quality**

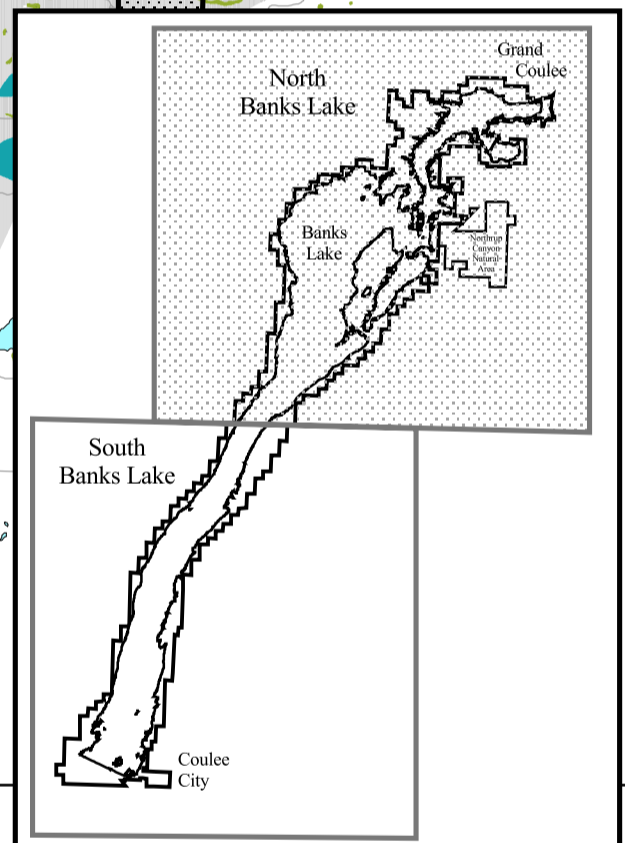
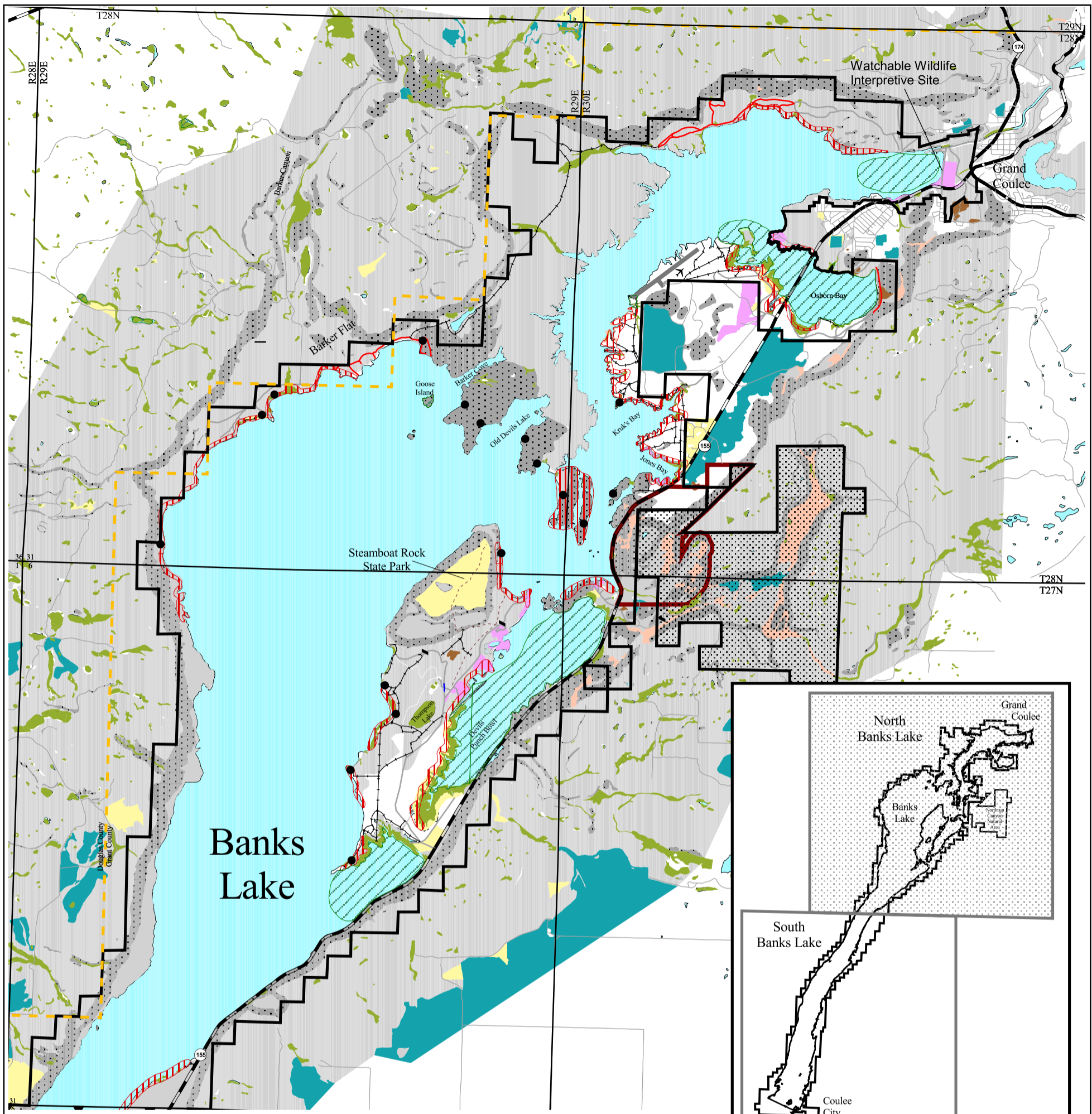
RMP Water Quality Goals	Management Actions
<p><b>Maintain, protect, and enhance reservoir water quality for water supply (e.g. domestic, industrial, and agricultural), fish production and consumption, recreation, and other beneficial uses.</b></p>	<p><b>*Initiate Monitoring Program</b> - Initiate a routine reservoir water quality monitoring program and maintain a water quality database for routine water quality parameters (such as pH, alkalinity, nitrates, phosphates, etc.).</p> <p><b>*Prioritize Clean Water Act Actions</b> - Plan and prioritize future Clean Water Act (CWA) actions for CBP waters. Coordinate the following actions with an Oversight Panel consisting of Reclamation, WDOE, EPA, and CBP Irrigation District representatives.</p> <ul style="list-style-type: none"> <li>- Develop appropriate water quality standards for Banks Lake.</li> <li>- Identify current and future water quality monitoring needs and determine which of these are appropriate for federal, state, or local implementation.</li> <li>- Develop water quality management plans for those waters identified in Section IV D of the CWA.</li> </ul>
<p><b>Determine the success of the management action, reevaluate how well the action met the goal, determine the success of management action.</b></p>	<p><b>*Monitor and Evaluate</b> - Conduct a semi-annual review of reservoir water quality data through an Oversight Panel, and as necessary, modify the water quality monitoring methods and data requirements. Follow up with spatial monitoring using GIS to manage the natural resource database and assist in management decisions by conducting a GIS update, across the management area, at least every 10 years.</p>

\*Management actions that are included in response to existing laws, regulatory requirements, management agreements, or Reclamation policy.

**Table 4.4**  
**Natural Resource Management Goals and Actions for Water Level Fluctuation**

<b>RMP Water Level Fluctuation Goals</b>	<b>Management Actions</b>
<b>Minimize erosion along the shoreline.</b>	<p><b>Conduct an Inventory</b> - Conduct an integrated erosion inventory and control program to identify and prioritize eroded areas, unstable land forms, and areas susceptible to soil erosion and compaction.</p> <p><b>Implement Measures</b> - Implement shoreline control measures with an emphasis on protecting cultural resources and public facilities in developed recreation areas. Specific erosion control measures will be site-specific basis and likely include the construction of retaining walls, the placement of rock revetments or gabions, vegetative plantings, or other measures to reduce the process of shoreline retreat (see Grazing Management - Grazing).</p>
<b>Determine the success of the management action, reevaluate how well the action met the goal, determine the success of management action.</b>	<p><b>Monitor and Evaluate</b> - Monitor and evaluate the success of soil conservation and shoreline erosion control projects; if necessary, adjust the specific methods and techniques employed when project is not meeting the RMP goal. Follow up with spatial monitoring using GIS to manage the natural resource database and assist in management decisions by conducting a GIS update, across the management area, at least every 10 years.</p>

\*Management actions that are included in response to existing laws, regulatory requirements, management agreements, or Reclamation policy.



- Cover Type**
- Wetland/riparian
  - Gravel/borrow pits
  - Sagebrush/Steppe
  - Grassland
  - Woodland
  - Agricultural
  - Rock
  - DRA
  - Prime Farmland  
*Based on Soil Survey*
  - Islands
  - Lakes
  - Project Area
  - Northrup Canyon

- Bald Eagle - Regular Large Concentration
- Waterfowl Breeding Area
- Bald Eagle Perch
- County
- Township & Range
- Airstrip
- Roads**
- Highway
- Primary/Secondary Roads (Open)
- Secondary Roads (Closed)
- Seasonal Road Closure (11/1 - 4/15)
- Trails
- Gates

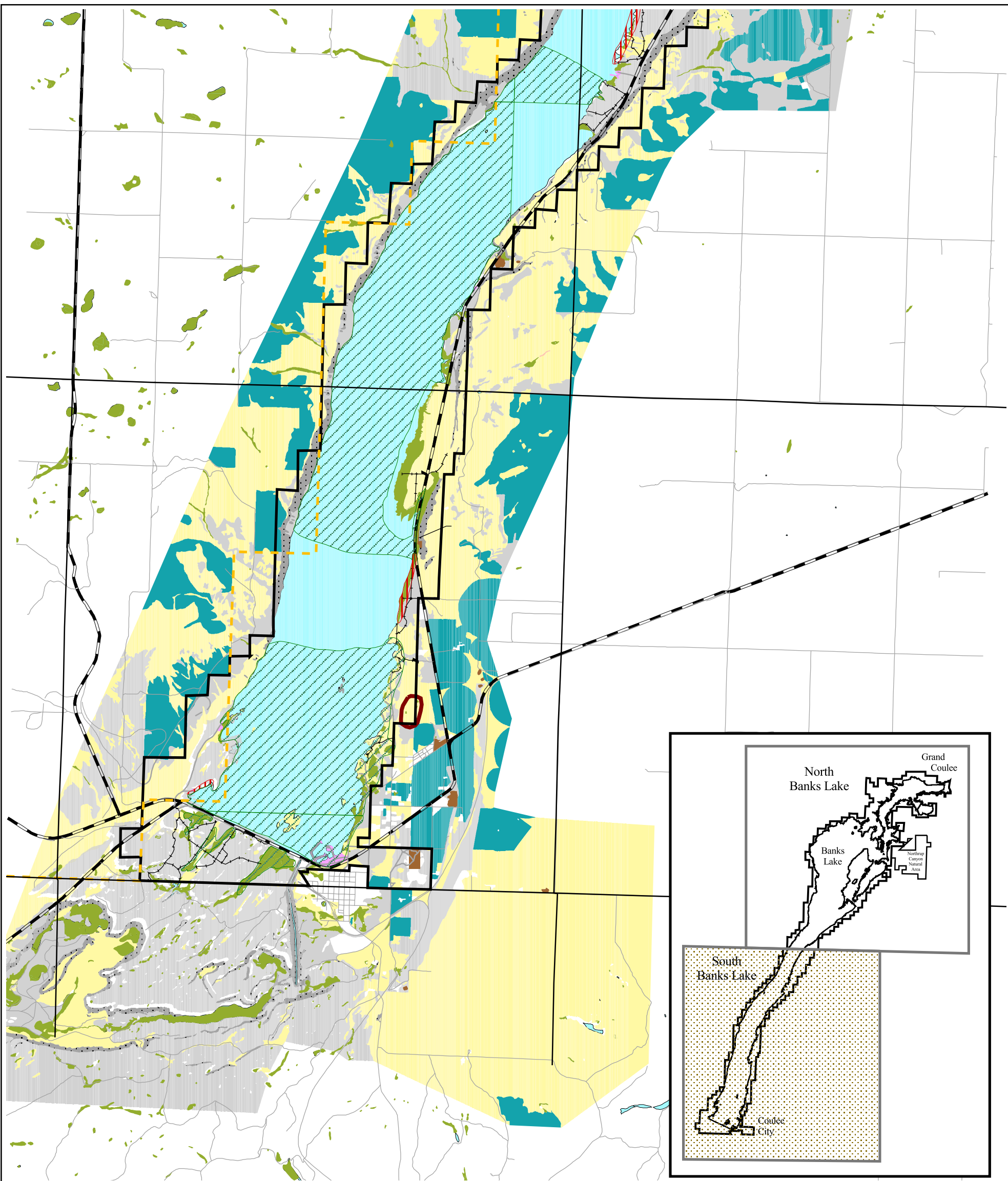
# Natural Resources With Raptor Locations North Banks Lake









## Banks Lake Resource Management Plan













Natural Resources  
Raptor Locations, RMP Figure 4.3-1





**Cover Type**

-  Wetland/riparian
-  Gravel/borrow pits
-  Sagebrush/Steppe
-  Grassland
-  Woodland
-  Agricultural
-  Rock
-  DRA
-  Prime Farmland *Based on Soil Survey*
-  Islands
-  Lakes
-  Project Area
-  Northrup Canyon

-  Bald Eagle - Regular
-  Large Concentration
-  Waterfowl Breeding Area
-  Bald Eagle Perch
-  County
-  Township & Range
- Roads**
-  Highway
-  Primary/Secondary Roads (Open)
-  Secondary Roads (Closed)
-  Seasonal Road Closure (11/1 - 4/15)
-  Trails
-  Gates

# Natural Resources With Raptor Locations South Banks Lake

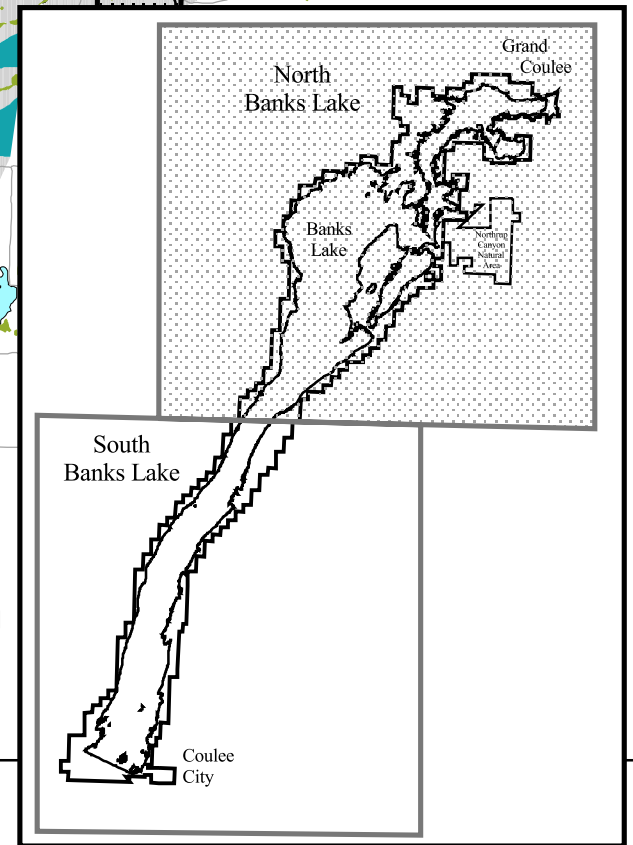
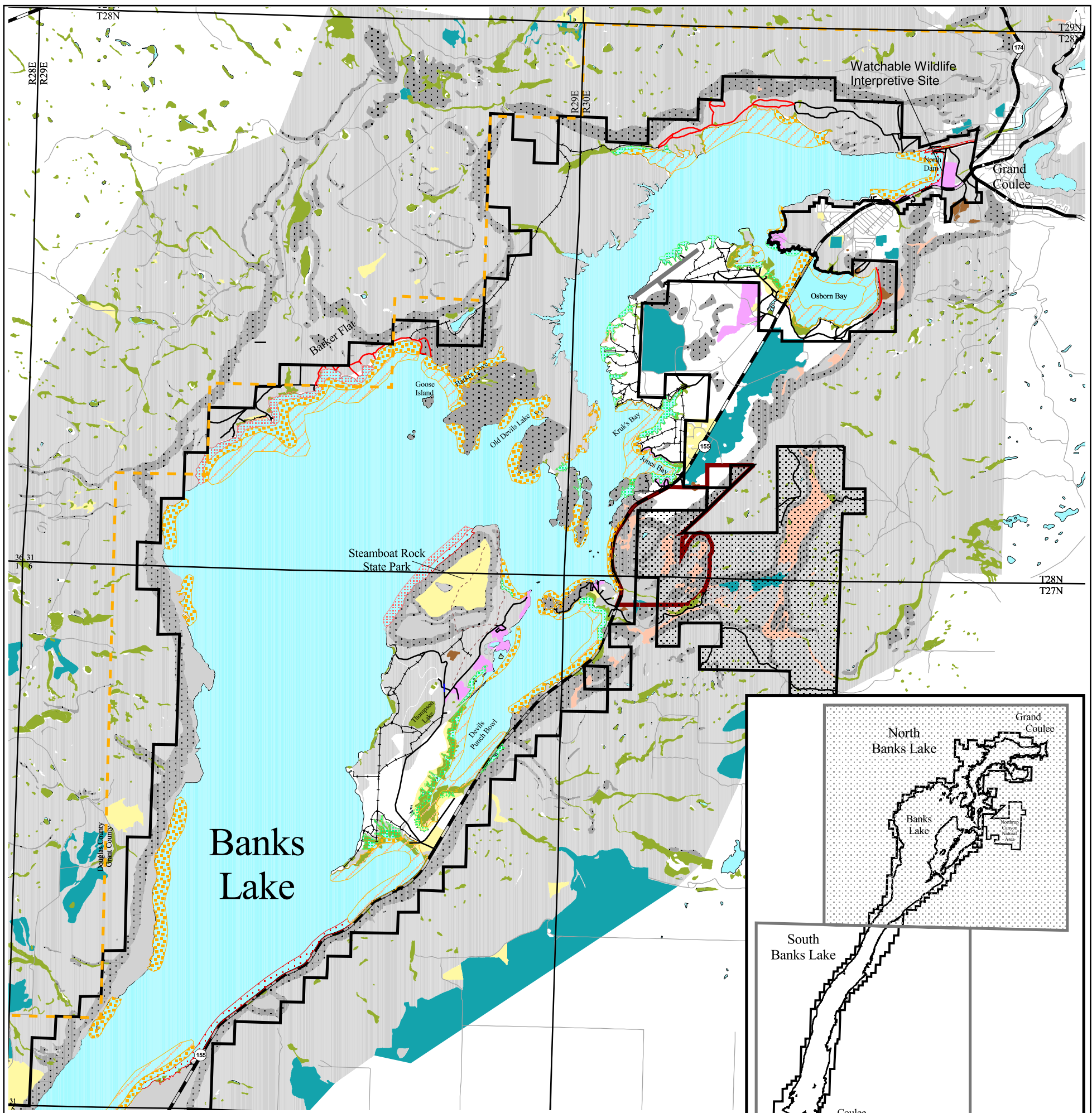


0 1 2 Miles



**Banks Lake  
Resource Management Plan**

Natural Resources  
Raptor Locations, RMP Figure 4.3-2



**Cover Type**

- Wetland/riparian
- Gravel/borrow pits
- Sagebrush/Steppe
- Grassland
- Woodland
- Agricultural
- Rock
- DRA
- Prime Farmland *Based on Soil Survey*

**Fish Spawning**

- Kokanee
- Kokanee Con.
- Lg. Mouth Bass
- Sm. Mouth Bass
- Sun fish, Crappi
- Walleye

Islands

- Lakes
- Project Area
- Northrup Canyon

**Roads**

- Highway
- Closed
- Open
- Trails
- Seasonally Closed
- Primary and Secondary Roads
- Airstrip
- County Boundaries
- Township & Range

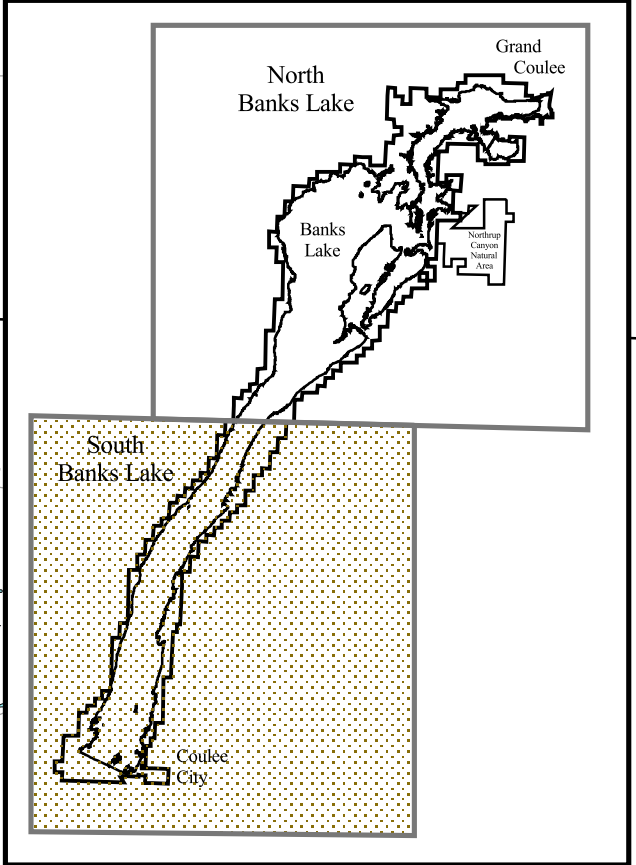
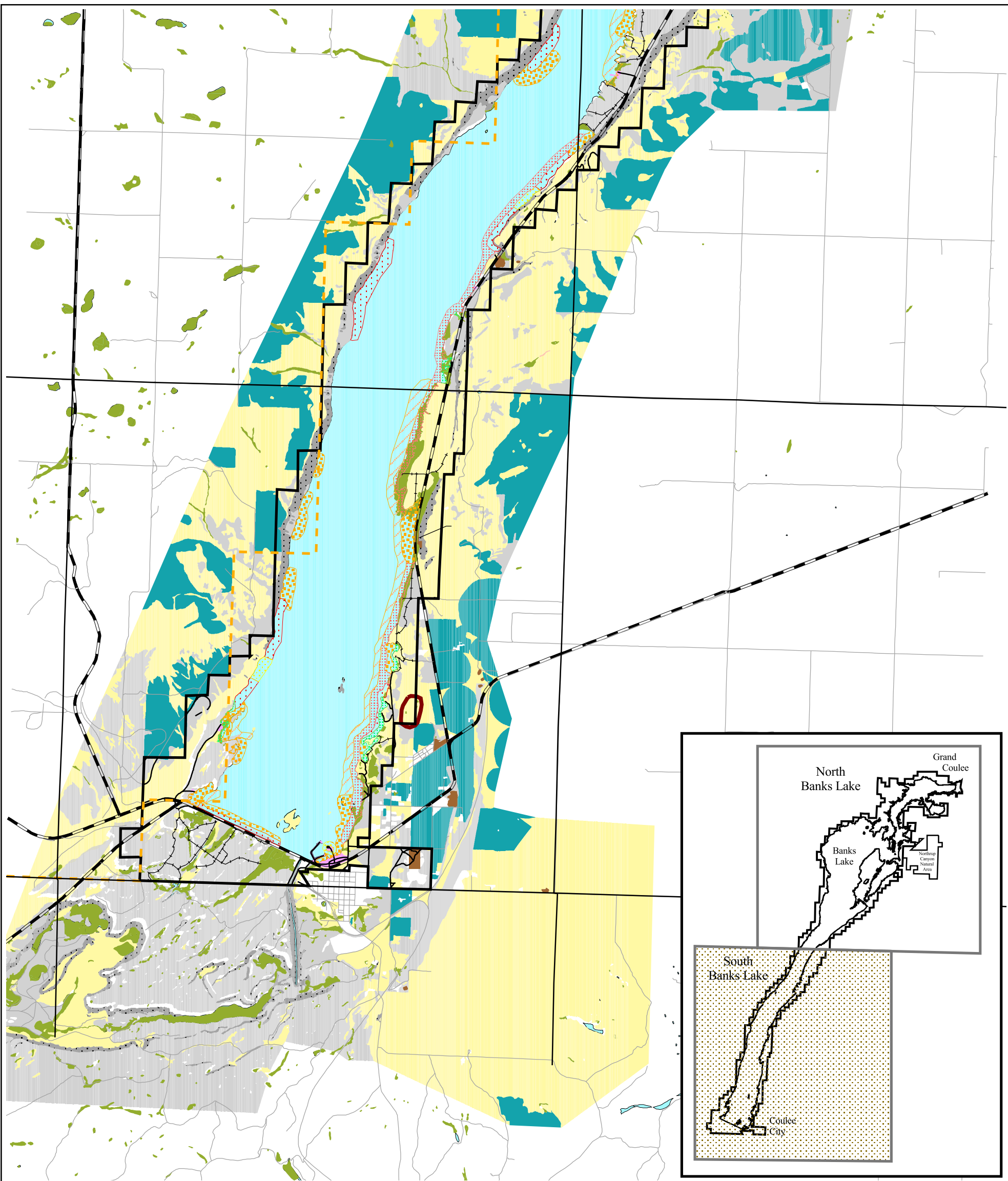
## Natural Resources With Fish Spawning Areas North Banks Lake



### Banks Lake Resource Management Plan



Natural Resources  
Fish Spawning, RMP Figure 4.3-3



Cover Type

- Wetland/riparian
- Gravel/borrow pits
- Sagebrush/Steppe
- Grassland
- Woodland
- Agricultural
- Rock
- DRA
- Prime Farmland *Based on Soil Survey*
- Islands
- Lakes
- Project Area
- County Boundaries
- Township & Range

Fish Spawning

- Kokanee
- Kokanee Con.
- Lg. Mouth Bass
- Sm. Mouth Bass
- Sun fish, Crappi
- Walleye

Roads

- Highway
- Closed
- Open
- Trails
- Seasonally Closed
- Primary and Secondary Roads

## Natural Resources With Fish Spawning Areas South Banks Lake



0 1 2 Miles



### Banks Lake Resource Management Plan

Natural Resources Fish Spawning, RMP Figure 4.3-4

## **CHAPTER 5 MANAGEMENT PRESCRIPTIONS FOR CULTURAL RESOURCES**

### **5.1 OVERVIEW**

Protecting cultural resources from an increase in recreational activity (without developing integrated management policies and actions to protect these sites) is a priority in the Banks Lake management area.

The Desired Condition for Banks Lake, referred to as Alternative B in the EA, was chosen to address the long-term needs of the public and Banks Lake management agencies by supporting the natural, cultural, and recreational resources of the area. Specific management goals outlined in the RMP were developed in response to concerns identified during the EA scoping process and based on information from the EA resource inventory. The following chapter summarizes the existing cultural resource management situation, lists the cultural resource goals for Banks Lake under the Desired Condition, and describes the management actions needed to reach those goals.

### **5.2 EXISTING CULTURAL RESOURCE MANAGEMENT SITUATION**

As previously mentioned, the SPRC and the WDFW manage the Banks Lake area with oversight by Reclamation's Ephrata, Washington, field office. These agencies manage land use, recreation, and fish and wildlife resources under existing federal and state laws, policies and land use agreements including those defined in Chapter 3 of this plan, Agency Coordination and Standards. Currently, the SPRC and WDFW are conducting the following cultural resource management activities in the Banks Lake area:

#### **Cultural**

- 1) Complete a CRMP for Reclamation lands which outlines specific actions and methods to protect cultural resources. Native Americans with interests at Banks Lake will provide input to CRMP preparation and implementation.
- 2) Determine whether cultural resource sites are present on involved lands when leases for grazing, agriculture, recreation, or other actions involving federal lands are under consideration for issuance or renewal. If National Register eligible or unevaluated sites are present, Reclamation will determine if the lessee's use could affect those sites. If damage could occur or is occurring, Reclamation will work with the SPRC or WDFW to alter the lease to exclude use of the site or include conditions that will avoid or reduce damage.
- 3) Initiate actions to protect or remove human burials as soon as possible if they are reported to be exposed or endangered by reservoir operations, natural erosion, or land use activities

(e.g. talus slope material sites). Unless the burials are clearly Euro-American in origin, Native Americans with interests at Banks Lake will be notified prior to action and involved in selecting and implementing the management option.

- 4) Initiate cultural resource investigations and consultations if future developments are proposed in areas not previously surveyed. If cultural resources are present in a proposed development area, avoid disturbing the site, or, if avoidance is not possible, avoid or minimize the adverse effect(s) with appropriate management or mitigative actions. Management actions will be defined in a Memorandum of Agreement with the Washington State Historic Preservation Office (SHPO) and the Advisory Council on Historic Preservation (the Advisory Council). Native Americans with interests at Banks Lake will be consulted, as appropriate, to identify, protect, or mitigate effects to sacred or traditional cultural properties.
- 5) Implement a public education program to reduce accidental damage or vandalism of cultural resources, and to promote cultural resource protection.

### **5.3 DESIRED CONDITION**

The following management actions were developed to achieve the Desired Condition for *Cultural* resources in the Banks Lake area and are meant as additions existing resource management activities. Table 5.1 summarizes the *Cultural* resource goals and management actions necessary to implement them.

**Table 5.1  
Cultural Management Goals and Actions**

<b>RMP Cultural Resource Goals</b>	<b>Management Actions</b>
<b>Preserve, protect, and manage cultural resources and Indian Trust Assets in accordance with Federal and state laws, regulations, guidelines, and executive orders.</b>	<p><b>*Conduct Surveys</b> - Conduct Class III surveys and prepare a Cultural Resource Management Plan (CRMP) throughout the Banks Lake Management area.</p> <p><b>*Coordinate with Native Americans</b> - Coordinate with Native Americans retaining interests at Banks Lake to manage cultural resources and prepare the CRMP for the management area.</p> <p><b>Prohibit Talus Slope Material Use</b> - Prohibit talus slope material use for road construction and/or maintenance unless necessary cultural and natural resource inventory, review, and consultation requirements are met (for the 14 identified sites on the east side of the lake) and approval is received from Reclamation.</p>
<b>Protect and enhance tribal importance.</b>	<b>Seek Funding</b> - Seek funds for programmatic site management including preparation of the CRMP, test excavation of sites being damaged by on-going land use or operations, and stabilization or other management actions for affected sites that are eligible for the National Register.
<b>Determine the success of the management action, reevaluate how well the action met the goal, determine the success of management action.</b>	<b>Monitor and Evaluate</b> - Monitor and evaluate the success of the management action; if necessary, adjust the specific methods and techniques employed when an initiative is not meeting the RMP goal. Follow up with spatial monitoring using GIS to manage the natural resource database and assist in management decisions by conducting a GIS update, across the management area, at least every 10 years.

\*Management actions that are included in response to existing laws, regulatory requirements, management agreements, or Reclamation policy.

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## **CHAPTER 6 MANAGEMENT PRESCRIPTIONS FOR RECREATION RESOURCES**

### **6.1 OVERVIEW**

A balanced mix of developed recreational areas and “designated” dispersed camping areas will be provided to accommodate the demand for recreation facilities and sites, and to direct use to specific areas environmentally suited for public use. Human activities will be focused within environmentally suitable areas to minimize resource disturbances and potential adverse environmental effects. Overall, the number and extent of dispersed camping areas remaining motor vehicle accessible will be fewer with the desired condition than the Current Management Situation because more of the primitive road network will remain permanently or seasonally closed for motorized travel (i.e. 59.9 miles compared to 73.0 miles).

The Desired Condition for Banks Lake, referred to as Alternative B in the EA, was chosen to address the long-term needs of the public and Banks Lake management agencies by supporting the natural, cultural, and recreational resources of the area. Specific management goals outlined in the RMP were developed in response to concerns identified during the EA scoping process and based on information from the EA resource inventory. The following chapter summarizes the existing recreation resource management situation, lists the recreation resource goals for Banks Lake under the Desired Condition, and describes the management actions needed to reach those goals.

### **6.2 EXISTING RECREATION RESOURCE MANAGEMENT SITUATION**

As previously mentioned, the SPRC and the WDFW manage the Banks Lake area with oversight by Reclamation’s Ephrata, Washington, field office. These agencies manage land use, recreation, and fish and wildlife resources under existing federal and state laws, policies and land use agreements including those defined in Chapter 3 of this plan, Agency Coordination and Standards.

The Banks Lake RMP, will incorporate a joint management zone at Steamboat Rock which will be divided between Parks and WDFW; the east side of Osborn Bay will remain with WDFW until either funding is available for Parks to assume management, or until the needs of the resources dictate that more intensive management is required.

Recreation management responsibilities and public hunting opportunities within the “Game Management Zone” (Zone A) will be retained under WDFW administration.



Other “Lead Agency Zones” and administrative responsibilities will remain unchanged except for the transfer of concession contract administration on WDFW administered lands from the SPRC to Reclamation

The SPRC and the WDFW will remain administering and managing the Banks Lake management area with oversight provided by the Ephrata Field Office of the Bureau of Reclamation.

The control of motor vehicle/ORV travel and dispersed camping in environmentally sensitive or unsuitable areas is an issue of great concern because of the fragility of desert ecosystems. Although dispersed, unstructured activities will continue at Banks Lake under the desired condition, and dispersed “drive-in” camping opportunities will be reduced by permanently closing 13 miles and seasonally closing 8.6 miles of the primitive/secondary road system to motorized use. Currently, the SPRC and WDFW are conducting the following resource management activities in the Banks Lake area:

### **Visuals**

- 1) No management action is currently in place for visual resources.

### **Recreation**

#### *Recreation Sites and Improvements:*

- 1) Maintain and operate existing recreation sites and facilities at current levels. When increased recreation demand warrants new sites and/or facilities, facility expansion within existing recreation areas will receive priority over new site development on a case-by-case basis. Future development proposals will be based on public facility needs, recreation demand, and environmental protection requirements.

#### *Resource Protection and Enhancement:*

- 1) Dispersed, unstructured activities will continue to typify most public recreation use outside the state park or on lands leased for developed recreation (e.g. Coulee Playland, Coulee City Community Park). Under the Current Management Situation, future recreational activities are expected to be managed by Reclamation, SPRC, and/or WDFW.

#### *Dispersed Camping:*

- 1) Allow dispersed camping in all areas which are not under an agricultural lease or easement and would not damage cultural or natural resources. Active management of dispersed recreation sites will not occur unless periodic monitoring indicates a need for such management in the future. A policy of “pack-in/pack-out” will continue in all dispersed (undeveloped) and primitive (minimally developed) camping areas.

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*Developed Recreation Areas:*

- 1) Provide for the future expansion of recreation facilities and services within Steamboat Rock State Park (SRSP). Current SPRC plans include the development of two group campgrounds, a hiking trail system, and a parking area just south of Steamboat Rock.

*Both Dispersed Camping and Developed Recreation Areas:*

- 1) Each group camp will provide between 50-75 pull-through or back-in campsites, half of which will accommodate RVs with utility hookups. Associated amenities and services such as restrooms, showers, potable water, parking, pathways, shade trees, and centralized trash collection will also be provided. Hiking trails and a vehicle parking area are also featured to complement the visitor experience and provide easy access to the peninsula's western shoreline. The park's conceptual plan will use a portion of the existing primitive road system found in the central peninsula area for the trail and primary access road system envisioned. Site development is expected to occur when the demand on existing state park facilities warrants the proposed park expansion, and sufficient capital improvement funds are budgeted and available for construction.

**Motorized Travel**

*No Motorized Access:*

- 1) If substantial resource damage is found, areas and roads currently not posted will be signed to reflect closure. Fencing and other physical barriers will be used if signs prove to be ineffective.
- 2) To the extent authorized by law, prescribe appropriate penalties for violation of regulations pertaining to areas closed to motorized travel and establish procedures for enforcement. Reclamation will work with and enter into cooperative agreements with federal, state, and/or county law enforcement officials to enforce these regulations. Self-regulation and voluntary compliance among recreational users will be encouraged.

*Managed/Limited Motorized Access:*

- 1) Retain the 80-acre ORV use area designation (including the ORV track) currently authorized south and east of the Grand Coulee Dam airstrip. The area will remain open for ORV riding and other day use activities.
- 2) Specific to ORV use, Executive Orders 11644 and 11989 established policies and procedures to ensure that the use of ORVs will not result in adverse environmental impact or cause irreversible damage to existing resources. If substantial damage to land, soil, water, wildlife, wildlife habitat, archeological, historic or vegetative resources is found, affected areas and trails are to be immediately closed to ORV use or appropriate controls established to prevent further deterioration of the environment. No area, road or trail can be reopened until the adverse effects have been eliminated and measures have been implemented to prevent recurrence.

- 3) Close roads (seasonally or permanently) in environmentally sensitive areas or where adverse environmental impacts have occurred. Reclamation policy is to ensure that the use of motor vehicles on Reclamation lands will be controlled and directed so as to protect the land resource, promote the safety of all users, and minimize land use and user conflicts. Reclamation lands are closed to motorized travel except for areas, roads or trails designated “open” for such use. Currently, about 73 miles of primitive/secondary road are open to motorized travel within the management area.

#### **Other Recreation-Related Actions**

- 1) Hunting will be allowed on all Reclamation lands consistent with existing State and local regulations, and seasons established by the State Game Commission.
- 2) Rock and ice climbing will be permitted in appropriate areas during the nonbreeding season for raptors.
- 3) Provide a second ranger residence on the Steamboat Rock peninsula. This additional residence will be located near the existing state park residence facility.
- 4) Support the development of a fishing jetty and fishing pier for persons with disabilities at North Dam Park and SRSP, respectively.

### **6.3 DESIRED CONDITION**

The following management actions were developed to achieve the Desired Condition for *Recreation* resources in the Banks Lake area and are meant as additions to the existing resource management activities. Table 6.1 through 6.8 summarize the *Recreation* resource goals and management actions necessary to implement them (see Figures 6.1-1 through 6.3-8 Recreation Resources).

**Table 6.1  
Recreation Resource Management Goals and Actions for Visuals**

<b>RMP Visual Resource Goals</b>	<b>Management Actions</b>
<p><b>Preserve, protect, and enhance the primitive nature and beauty of reservoir area. Maintain Existing Scenic Values (Figure 6.3-1)*</b>  <b>A = Distinctive Scenery</b>  <b>B = Typical or Common</b>  <b>C = Indistinctive</b>  <small>*ISA Classification</small></p>	<p><b>Develop Criteria</b> - Develop criteria for the appearance of structures and preservation of the natural landscape throughout the management area. These criteria will be applied in the planning, design, and construction of all new facilities and in the maintenance or modification of all existing facilities.</p> <p><b>Stricter Leases</b> - For all leases with facilities located on-site, include provisions in the lease which require that colors and building materials are compatible with the landscape throughout the management area(see Land Use and Administration -Land Development).</p> <p><b>Inform Public</b> - Promote “pack-in/pack-out” waste management in visitor brochures located in the Visitor Information Center an on signs posted throughout the management area(see Public Information/Awareness - Public Information/Awareness).</p> <p><b>Remove trash dumps</b> - Remove trash dumps located in FWS Units 7, 8, 9, 14, 17 and 18 (FWS, 1998) (see Public Health and Safety - Management and Infrastructure).</p>
<p><b>Determine the success of the management action, reevaluate how well the action met the goal, determine the success of management action.</b></p>	<p><b>Monitor and Evaluate</b> - Monitor and evaluate the success of the management action; if necessary, adjust the specific methods and techniques employed when an initiative is not meeting the RMP goal. Follow up with spatial monitoring using GIS to manage the natural resource database and assist in management decisions by conducting a GIS update, across the management area, at least every 10 years.</p>

\*Management actions that are included in response to existing laws, regulatory requirements, management agreements, or Reclamation policy.

**Table 6.2  
Recreation Resource Management Goals and Actions for  
Recreation Sites and Improvements**

<b>RMP Recreation Sites and Improvement Goals</b>	<b>Management Actions</b>
<p><b>Provide a diverse range of recreation opportunities and services consistent with public use trends.</b></p>	<p><b>Focus Recreation Use</b> - Focus recreation use by designating and managing specific areas environmentally suited for public use. Recreation will be limited or discouraged in areas with environmental sensitivities or specific resource constraints. Motor vehicle access may be provided, or sites may be designated for boat-in/walk-in or non-motorized access only (see Recreation - Motorized Travel).</p> <p><b>Boat Parking</b> - Provide a 20-30 space boat moorage dock at SRSP's North Campground.</p> <p><b>Boat Camping Areas</b> - Designate and manage three boat-in camping areas. Two boat-in areas (one in Barker Flats and the other north of Devils Lake) will have no campsite improvements or site amenities (i.e., portable toilets), and the third (located south of the Million \$ Mile North Boat Launch) will include the installation of fire rings/grills to delineate individual campsites. Trash will be managed under a "pack-in/pack-out" policy (see Recreation - Dispersed Camping).</p> <p><b>Facility Improvements</b> - Improving facilities at any site will be determined based on current and desired use, anticipated needs, compatibility with surrounding uses, recreational opportunities present, site carrying capacity, and degree of environmental impacts.</p> <ul style="list-style-type: none"> <li>- Provide portable toilets on a seasonal basis in high use dispersed camping areas where human wastes pose a public health concern throughout the management area.</li> <li>- Install a permanent vault toilet and provide centralized trash collection at the Osborn Bay SE Boat Launch.</li> <li>- The existing WDFW launch site will become a "fee area" managed by the SPRC (see Public Health and Safety - Budget).</li> </ul>

**Table 6.2**  
**Recreation Resource Management Goals and Actions for**  
**Recreation Sites and Improvements**

<b>RMP Recreation Sites and Improvement Goals</b>	<b>Management Actions</b>
<p><b>Determine the success of the management action, reevaluate how well the action met the goal, determine the success of management action.</b></p>	<p><b>Monitor and Evaluate</b> - Monitor and evaluate the success of the management action; if necessary, adjust the specific methods and techniques employed when an initiative is not meeting the RMP goal. Follow up with spatial monitoring using GIS to manage the natural resource database and assist in management decisions by conducting a GIS update, across the management area, at least every 10 years.</p>

\*Management actions that are included in response to existing laws, regulatory requirements, management agreements, or Reclamation policy.

**Table 6.3**  
**Recreation Resource Management Goals and Actions**  
**for Resource Protection and Enhancement**

<b>RMP Resource Protection and Enhancement Goals</b>	<b>Management Actions</b>
<p><b>Discourage/Control Use Areas, which are the areas where public use would be discouraged due to sensitive cultural or natural resource values.</b></p>	<p><b>Identify Areas</b> - Identify land areas where attention to resource protection is needed or desired. Road closures, dispersed camping restrictions, fencing to restrict vehicular or livestock access, or other actions may be used to curtail existing or impending causes of damage to soil, water, vegetation, wildlife, scenic or cultural resources. In general, these resource management actions aim to protect/conserv e existing resource values or restrict use so that resources can recover from previous damage or overuse.</p> <p><b>Post Signs</b> - Localized signage will be installed to inform the public of why a seasonal closure or other restriction is needed or desirable (see Natural Resources - Wildlife Habitat).</p> <ul style="list-style-type: none"> <li>- Post signs to seasonally discourage/control use of bird nesting islands and to discourage/control use of the Eagle Rock, Lover’s Lane, Old Devils Lake, Goose Island, and Barker Cove area.</li> <li>- Close Osborn Bay SE to dispersed camping.</li> </ul>
<p><b>Determine the success of the management action, reevaluate how well the action met the goal, determine the success of management action.</b></p>	<p><b>Monitor and Evaluate</b> - When “Limits of Acceptable Change” monitoring reveals unacceptable resource conditions, management actions will be prescribed to correct them. As problems are found with the existing management direction, alternative actions will be explored for resolving the problems and revising the management direction. This direction is dynamic, incorporating an ongoing process of implementation, monitoring, evaluation, and revision if needed. Follow up with spatial monitoring using GIS to manage the natural resource database and assist in management decisions by conducting a GIS update, across the management area, at least every 10 years.</p>

\*Management actions that are included in response to existing laws, regulatory requirements, management agreements, or Reclamation policy.

**Table 6.4  
Recreation Resource Management Goals and Actions  
for Dispersed Camping**

<b>RMP Dispersed Camping Area Goals</b>	<b>Management Actions</b>
<p><b>Protect and enhance recreational importance and visitor experience.</b></p>	<p><b>*Control or Eliminate</b> - Control or eliminate dispersed camping in environmentally sensitive or unsuitable areas through appropriate facility improvements, vehicle access restrictions, seasonal use restrictions, or closure.</p> <ul style="list-style-type: none"> <li>- Close Osborn Bay E to dispersed camping and manage for day use recreation.</li> <li>- The area east of the WDFW boat launch will be closed to dispersed camping and managed for day use only until the need for additional campsites warrants the development of a primitive campground at this location.</li> <li>- The Coulee lake area will be closed to camping but open for other recreational activities (i.e., hunting, fishing, hiking, wildlife observation, star viewing, and non-motorized boating).</li> </ul> <p><b>Inform Public</b> - Areas specifically designated and managed for dispersed camping will be identified as such in visitor brochures and on recreation signs/map displays installed at Banks Lake (see Public Information/Awareness - Public Information/Awareness). No campsite improvements will be developed and sanitation facilities (i.e., seasonal portable toilets or permanent vault toilets) will be provided only where human wastes pose a public health concern.</p> <p><b>Provide Facilities</b> - Limited facility improvements will be installed at individual campsites and sanitation facilities will be provided, where human waste poses a health concern, in high use dispersed camping areas.</p> <ul style="list-style-type: none"> <li>- Fire rings and grills.</li> <li>- Seasonal portable toilets or permanent vault toilets.</li> <li>- Trash will generally be managed under a pack-in/pack-out policy.</li> </ul> <p><b>Additional Dispersed Camping Sites</b> - Provide a primitive camping area near the Osborn Bay SE boat launch when the demand for primitive campsites warrants future development by the SPRC. The recreation site will be developed and managed as a SPRC fee area.</p> <p>Designate and manage seven dispersed camping areas. No</p>



**Table 6.4**  
**Recreation Resource Management Goals and Actions**  
**for Dispersed Camping**

<b>RMP Dispersed Camping Area Goals</b>	<b>Management Actions</b>
	<p>campsite improvements will be made here, but portable toilets will be seasonally provided in high use dispersed camping areas to meet human waste disposal needs (see Figures 6.3-3 and 6.3-4).</p> <p><b>Adapt Limits</b> - Unless otherwise posted, adopt and enforce a 15-day camping stay limit outside developed recreation areas throughout the management area.</p> <p><b>Trash Policy</b> - A policy of “pack-in/pack-out” will continue in all dispersed (undeveloped) areas throughout the management area.</p>
<p><b>Determine the success of the management action, reevaluate how well the action met the goal, determine the success of management action.</b></p>	<p><b>Monitor and Evaluate</b> - Active management of dispersed recreation sites will not occur unless “Limits of Acceptable Change” (LAC) monitoring indicates a need to adjust recreation site management. When LAC monitoring reveals impact/action thresholds have been exceeded, corrective management actions will be explored and prescribed. The LAC process is dynamic, incorporating monitoring, evaluation, revision and implementation as needed. Opportunities for public review and comment will be provided prior to adopting and implementing any management changes affecting public use. Follow up with spatial monitoring using GIS to manage the natural resource database and assist in management decisions by conducting a GIS update, across the management area, at least every 10 years.</p>

\*Management actions that are included in response to existing laws, regulatory requirements, management agreements, or Reclamation policy.

**Table 6-5  
Recreation Resource Management Goals and Actions  
for Developed Recreation**

<b>RMP Developed Recreation Areas Goals</b>	<b>Management Actions</b>
<p><b>Protect and enhance recreational importance and visitor experience.</b></p>	<p><b>Provide/Upgrade Facilities</b> - Facility design will be more complex and refined, and moderate to heavy site modification will be required for construction.</p> <ul style="list-style-type: none"> <li>- Facilities will be provided for user comfort and convenience (i.e., restrooms, potable water, utility hookups, shade trees, etc).</li> <li>- Individual campsites will generally feature picnic tables, fire rings, pedestal grills, tent pads, RV hookups, and vehicle parking; and centralized trash collection will be provided here.</li> </ul> <p><b>Adapt Limits</b> - Unless otherwise posted, a 10-day stay limit is enforced within the developed recreation areas.</p>
<p><b>Determine the success of the management action, reevaluate how well the action met the goal, determine the success of management action.</b></p>	<p><b>Monitor and Evaluate</b> - When “Limits of Acceptable Change” monitoring reveals unacceptable resource conditions, management actions will be prescribed to correct them. As problems are found with the existing management direction, alternative actions will be explored for resolving the problems and revising the management direction. This direction is dynamic, incorporating an ongoing process of implementation, monitoring, evaluation, and revision if needed. Follow up with spatial monitoring using GIS to manage the natural resource database and assist in management decisions by conducting a GIS update, across the management area, at least every 10 years.</p>

\*Management actions that are included in response to existing laws, regulatory requirements, management agreements, or Reclamation policy.

**Table 6.6**  
**Recreation Resource Management Goals and Actions**  
**for No Motorized Access**

<b>RMP No Motorized Access Goals</b>	<b>Management Actions</b>
<p><b>Ensure compatibility between motor vehicle traffic and natural/cultural resource protection, land use compatibility/suitability conflicts, and public safety concerns.</b></p>	<p><b>Area Closure</b> - Close the Kruk's Bay/Airport Bay area to motor vehicle travel using signs, road gates, and/or fencing. Construct a parking area, permanent vault toilet, and trail head at the Kruk's Bay informal boat launch to provide public access and sanitation needs. The area will be managed by the SPRC for walk-in/non-motorized day use recreation.</p> <p><b>Post Signs</b> - Fencing, gates, signs or other access control features may be required. Restoration/rehabilitation actions will be initiated in severely damaged areas (see Natural Resources - Wildlife Habitat).</p> <p><b>Road Access</b> - Road access generally will be limited to maintenance operations (see Public Health and Safety - Public Access).</p>
<p><b>Limit or eliminate motorized travel or recreation activity on soils sensitive to compaction, have a high soil erosion potential rating, and/or exhibit existing accelerated erosion problems.</b></p>	<p><b>Road Closure</b> - Areas/roads will be permanently closed to motor vehicle travel but non-motorized access will still be permitted.</p> <ul style="list-style-type: none"> <li>- Close 13 miles of primitive (dirt) road, throughout the management area, to motor vehicle travel. (see Figures 6.1-1 through 6.3-8).</li> </ul>
<p><b>Determine the success of the management action, reevaluate how well the action met the goal, determine the success of management action.</b></p>	<p><b>Monitor and Evaluate</b> - Monitor and evaluate the success of the management action; if necessary, adjust the specific methods and techniques employed when an initiative is not meeting the RMP goal. Follow up with spatial monitoring using GIS to manage the natural resource database and assist in management decisions by conducting a GIS update, across the management area, at least every 10 years.</p>

\*Management actions that are included in response to existing laws, regulatory requirements, management agreements, or Reclamation policy.

**Table 6.7  
Recreation Resource Management Goals and Actions  
for Managed/Limited Access**

<b>RMP Managed/Limited Motorized Access Goals</b>	<b>Management Actions</b>
<p><b>Ensure compatibility between motor vehicle traffic and natural/cultural resource protection, land use compatibility/suitability conflicts, and public safety concerns.</b></p>	<p><b>Road Improvements</b> - Maintain 59.9 miles of primitive road to discourage random off-road vehicle travel throughout the management area. At three locations (see Figures 6.1-1 through 6.3-8), minor road improvements totaling about 14.6 miles will be made (i.e., grading and/or the placement of gravel) to improve motor vehicle access and to reduce soil erosion and public safety concerns.</p> <p><b>Area Closure</b> - Close the Kruk's Bay/Airport Bay area to motor vehicle travel using signs, road gates, and/or fencing. Construct a parking area, permanent vault toilet, and trail head at the Kruk's Bay informal boat launch to provide public access and sanitation needs. The area will be managed by the SPRC for walk-in/non-motorized day use recreation. Install signs, road gates, and/or fencing as needed to seasonally or permanently close roads.</p> <p><b>Day Use Parking</b> - Informal parking/staging areas will be provided as needed to accommodate access for wildlife viewing, hunting, fishing, horseback riding, or other recreation pursuits.</p> <p><b>Post Signs</b> - Motor vehicle access routes will be designated and signed. Restoration/rehabilitation actions will be initiated in severely damaged areas.</p> <p><b>Road Access</b> - Road access generally will be limited to maintenance operations (see Public Health and Safety - Public Access).</p>

**Table 6.7  
Recreation Resource Management Goals and Actions  
for Managed/Limited Access**

<b>RMP Managed/Limited Motorized Access Goals</b>	<b>Management Actions</b>
<p><b>Limit or eliminate motorized travel or recreation activity on soils sensitive to compaction, have a high soil erosion potential rating, and/or exhibit existing accelerated erosion problems.</b></p>	<p><b>Road Closure</b> - In areas where substantial environmental damage previously occurred but continued vehicle access is desirable, selective road/trail closures and/or minor road improvements will occur.</p> <ul style="list-style-type: none"> <li>- Seasonally close to motorized travel vehicular access in the vicinity of Barker Flat, north Banks Lake, and Osborn Bay E, which is a total of about 8.6 miles of the primitive road network (see Figures 6.1-1 through 6.3-8) for road closure locations and periods).</li> <li>- Close (seasonally or permanently) and improve those portions of the primitive road system located on unsuitable soils and/or slopes (see Natural Resources-Wildlife Habitat).</li> <li>- Seasonally close the Osborn Bay E road and prohibit dispersed camping year-round to help reduce disturbances to wintering/nesting bald eagles and riparian/upland wildlife. The seasonal road closure will extend from March 1 - May 29. (see Natural Resources - Wildlife Habitat).</li> </ul> <p><b>Reduce ORV Use</b> - Reduce the existing 130-acre ORV use area (east of the airport) to 60 acres (including the ORV track), and keep the area open for ORV riding and other day use activities.</p>
<p><b>Determine the success of the management action, reevaluate how well the action met the goal, determine the success of management action.</b></p>	<p><b>Monitor and Evaluate</b> - Monitor and evaluate the success of the management action; if necessary, adjust the specific methods and techniques employed when an initiative is not meeting the RMP goal. Follow up with spatial monitoring using GIS to manage the natural resource database and assist in management decisions by conducting a GIS update, across the management area, at least every 10 years.</p>

\*Management actions that are included in response to existing laws, regulatory requirements, management agreements, or Reclamation policy.

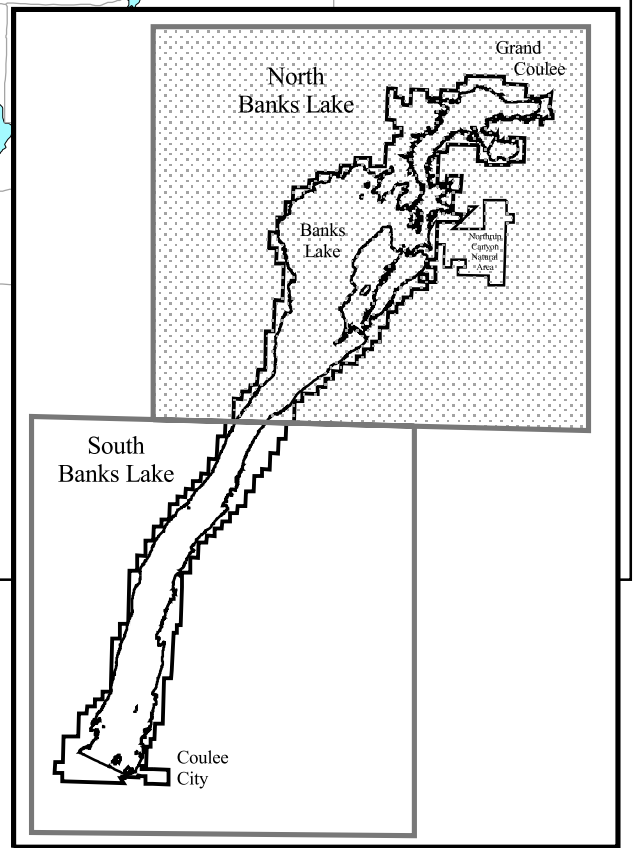
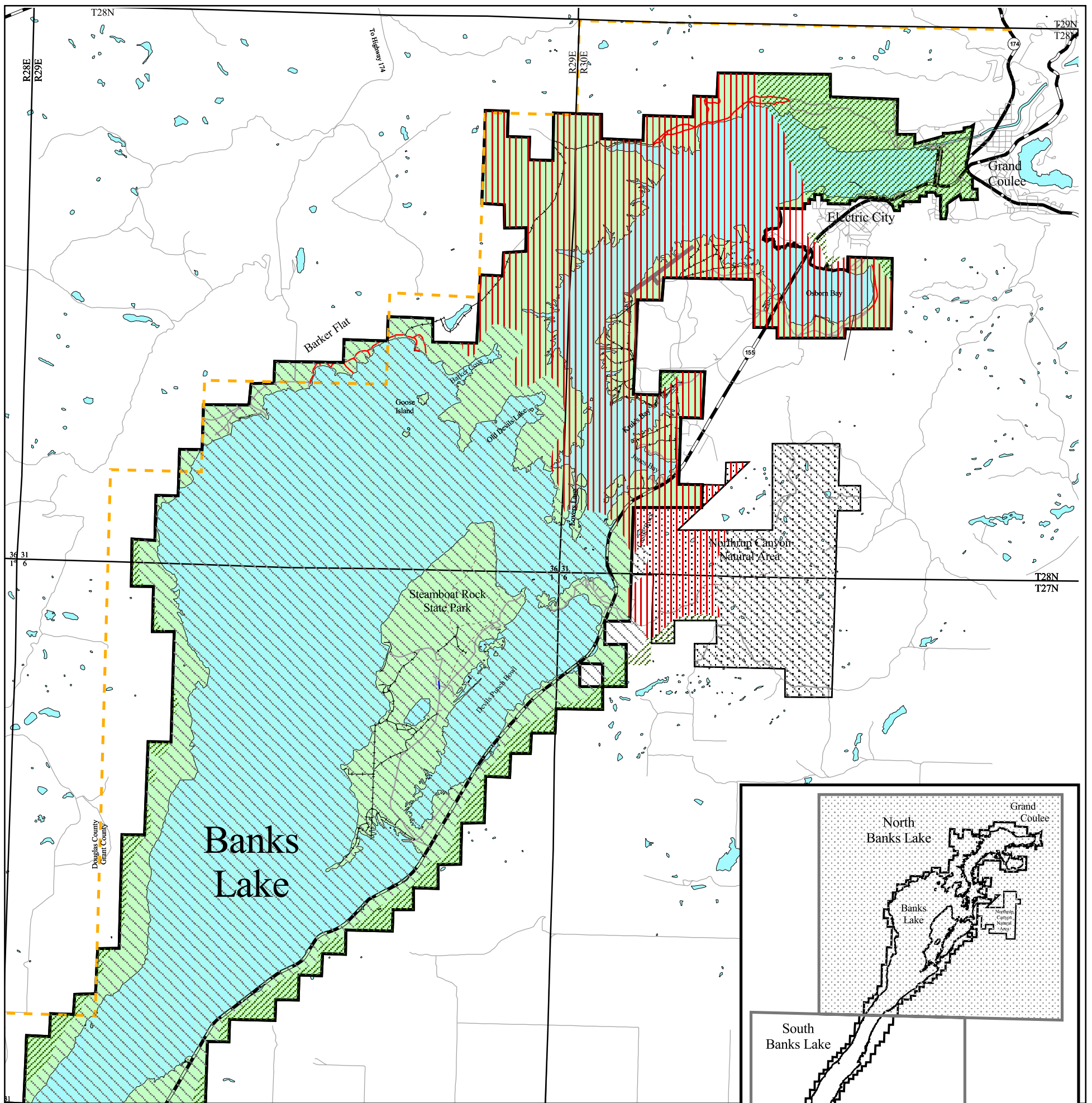
**Table 6.8  
Recreation Resource Management Goals and Actions  
for Other Recreational-Related Activities**

<b>RMP Other Recreational-Related Goals</b>	<b>Management Actions</b>
<p><b>Protect and enhance recreational importance and visitor experience.</b></p>	<p><b>*Develop a Climbing Management Plan</b> - Develop a Climbing Management Plan (CMP) in coordination with climbers, the SPRC, WDFW, FWS, Reclamation, and other interested parties. Wildlife closures are to be specifically addressed in the CMP to protect federal and state listed species (i.e., bald eagles and peregrine falcons). At a minimum the following areas will be specifically addressed (see Natural Resources - Wildlife Habitat):</p> <ul style="list-style-type: none"> <li>- To protect wintering bald eagles manage rock climbing/rappelling on Steamboat Rock and within the Eagle Rock, Lover's Lane, Old Devils Lake and Barker Cove area.</li> <li>- Also manage rock climbing/rappelling in T26N R28E S24 and T25N R28E S16 to protect peregrine falcon nesting (see Figure 6.3-6 and Figure 6.3-7).</li> </ul> <p><b>Maintenance Needs</b> - Provide a fenced parking area and permanent vault toilet below Dry Falls Dam. Vehicular access from Highway 17 will lead to the parking area with motor vehicle travel on the primitive road system accessing Junction Lake, Table Lake and Coulee Lake discontinued except for administrative and irrigation district use (see Public Health and Safety - Public Access).</p> <ul style="list-style-type: none"> <li>- Road gates, fencing, and signs will be installed as needed.</li> </ul> <p><b>Day Use Parking</b> - Vehicle parking and walk-in/non-motorized access will be available at the graveled parking area near Junction Lake and at the watchable wildlife interpretive site turnout on Dry Falls Dam near Coulee Lake; consequently, public access will be available from either end of the area (see Public Health and Safety - Public Access).</p> <p><b>Eliminate Camping Area</b> - The Coulee lake area will be closed to camping but open for other recreational activities (i.e., hunting, fishing, hiking, wildlife observation, star viewing, and non-motorized boating).</p>

**Table 6.8**  
**Recreation Resource Management Goals and Actions**  
**for Other Recreational-Related Activities**

<b>RMP Other Recreational-Related Goals</b>	<b>Management Actions</b>
	<p><b>Develop a New Swimming Area</b> - Develop a new swimming area within Coulee City Community Park. The new swimming area will be sited and delineated with buoys at the north end of the park.</p> <p><b>Install Picnic Tables</b> - Install picnic tables at the Million \$ Mile South Day Use Area and Boat Launch.</p>
<p><b>Determine the success of the management action, reevaluate how well the action met the goal, determine the success of management action.</b></p>	<p><b>Monitor and Evaluate</b> - Monitor and evaluate the success of the management action; if necessary, adjust the specific methods and techniques employed when an initiative is not meeting the RMP goal. Follow up with spatial monitoring using GIS to manage the natural resource database and assist in management decisions by conducting a GIS update, across the management area, at least every 10 years.</p>

\*Management actions that are included in response to existing laws, regulatory requirements, management agreements, or Reclamation policy.



Visual Class

- A - Distinctive
- B - Typical
- C - Indistinctive

County Boundaries

- Township & Range
- Dams

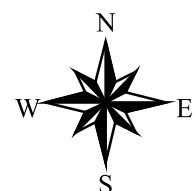
Project Area

Northrup Canyon Area

Roads

- Highway
- Primary/Secondary Roads (Open)
- Secondary Roads (Closed)
- Seasonal Road Closure (11/1 - 4/15)
- Trails
- Airstrip

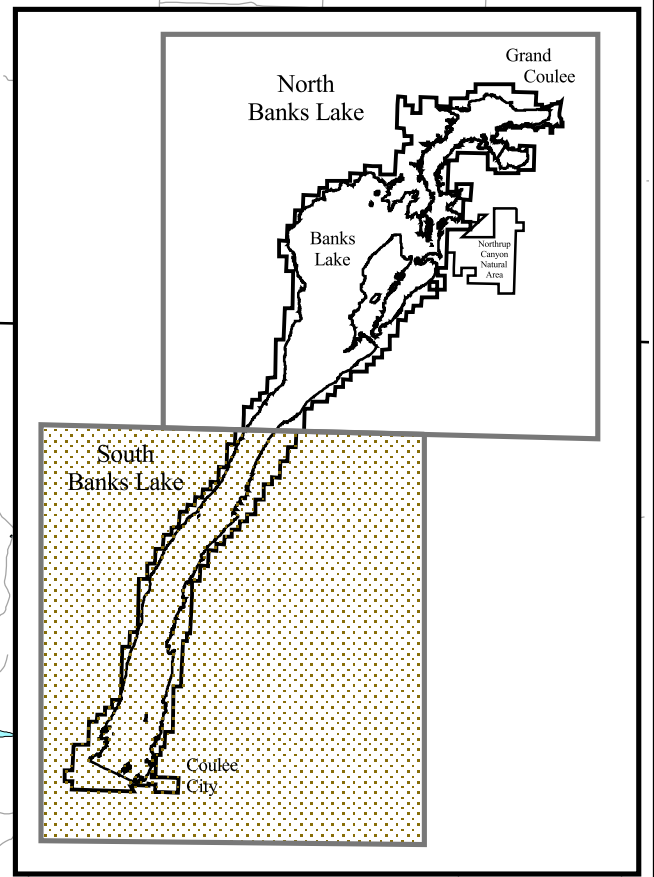
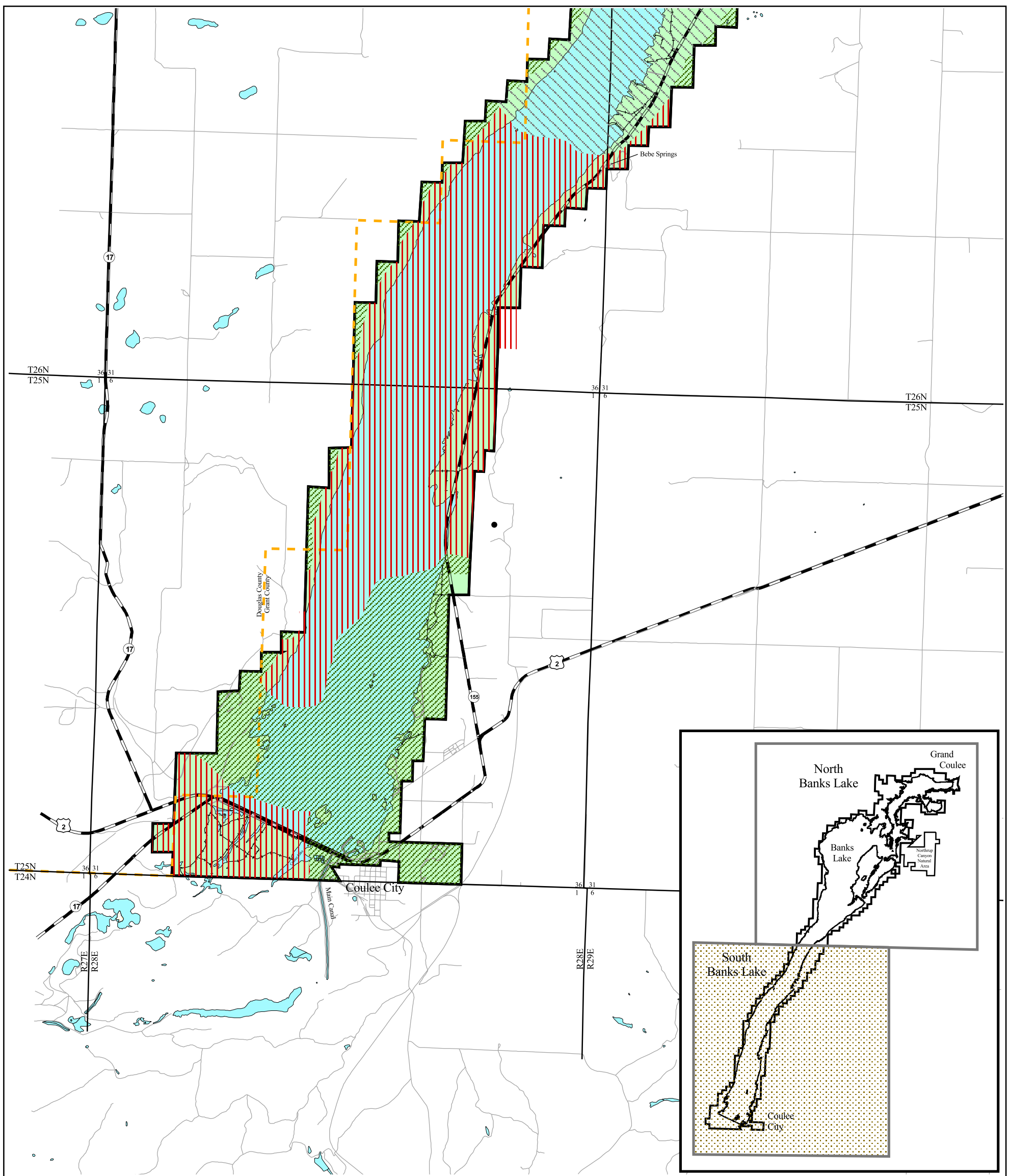
## Visual Resources North Banks Lake






## Banks Lake Resource Management Plan
















Visual Class

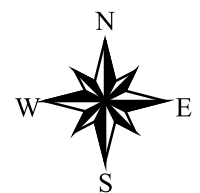
-  A - Distinctive
-  B - Typical
-  C - Indistinctive

-  County Boundaries
-  Township & Range
-  Dams
-  Project Area

Roads

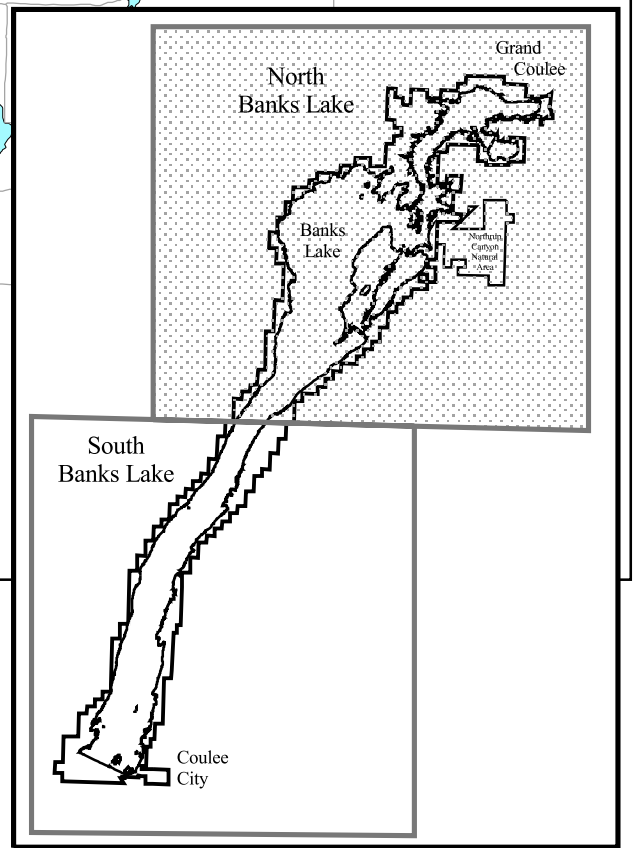
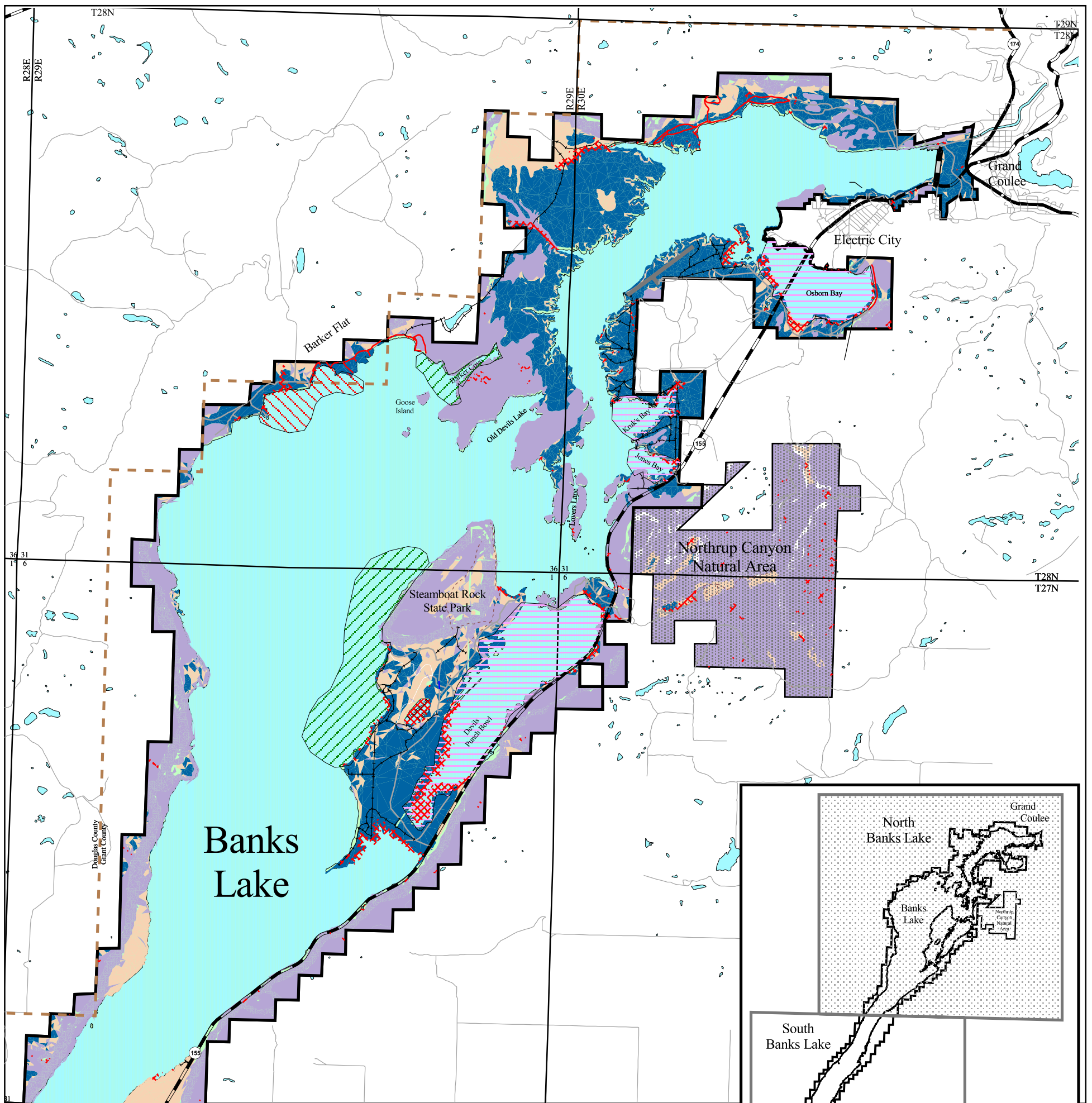
-  Highway
-  Primary/Secondary Roads (Open)
-  Secondary Roads (Closed)
-  Seasonal Road Closure (11/1 - 4/15)
-  Trails

## Visual Resources South Banks Lake



## Banks Lake Resource Management Plan

0 1 2 Miles



Suitability/Constraints

- Low (Severe Limitations)
- Moderate (Moderate Limitations)
- High (Slight Limitations)

- Islands
- Lakes
- Wetlands

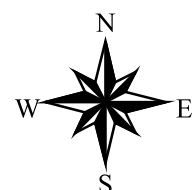
Fishing Areas

- Large Mouth Bass
- Small Mouth Bass
- Walleye

- County Boundaries
- Township & Range
- Dams

- Project Area
- Northrup Canyon Area
- Highway
- Primary/Secondary Roads (Open)
- Secondary Roads (Closed)
- Seasonal Road Closure (11/1 - 4/15)
- Trails
- Airstrip

Developed Recreation Suitability/Constraints North Banks Lake

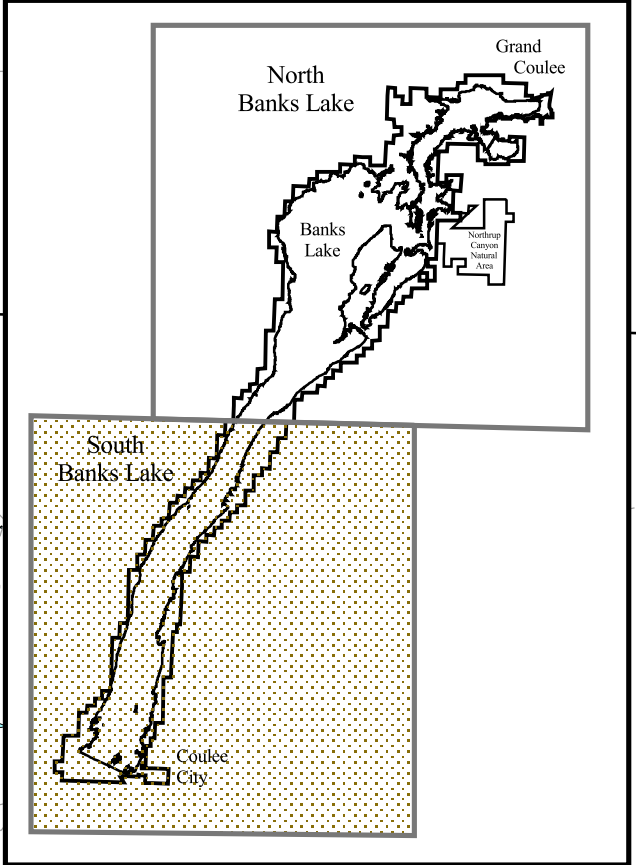
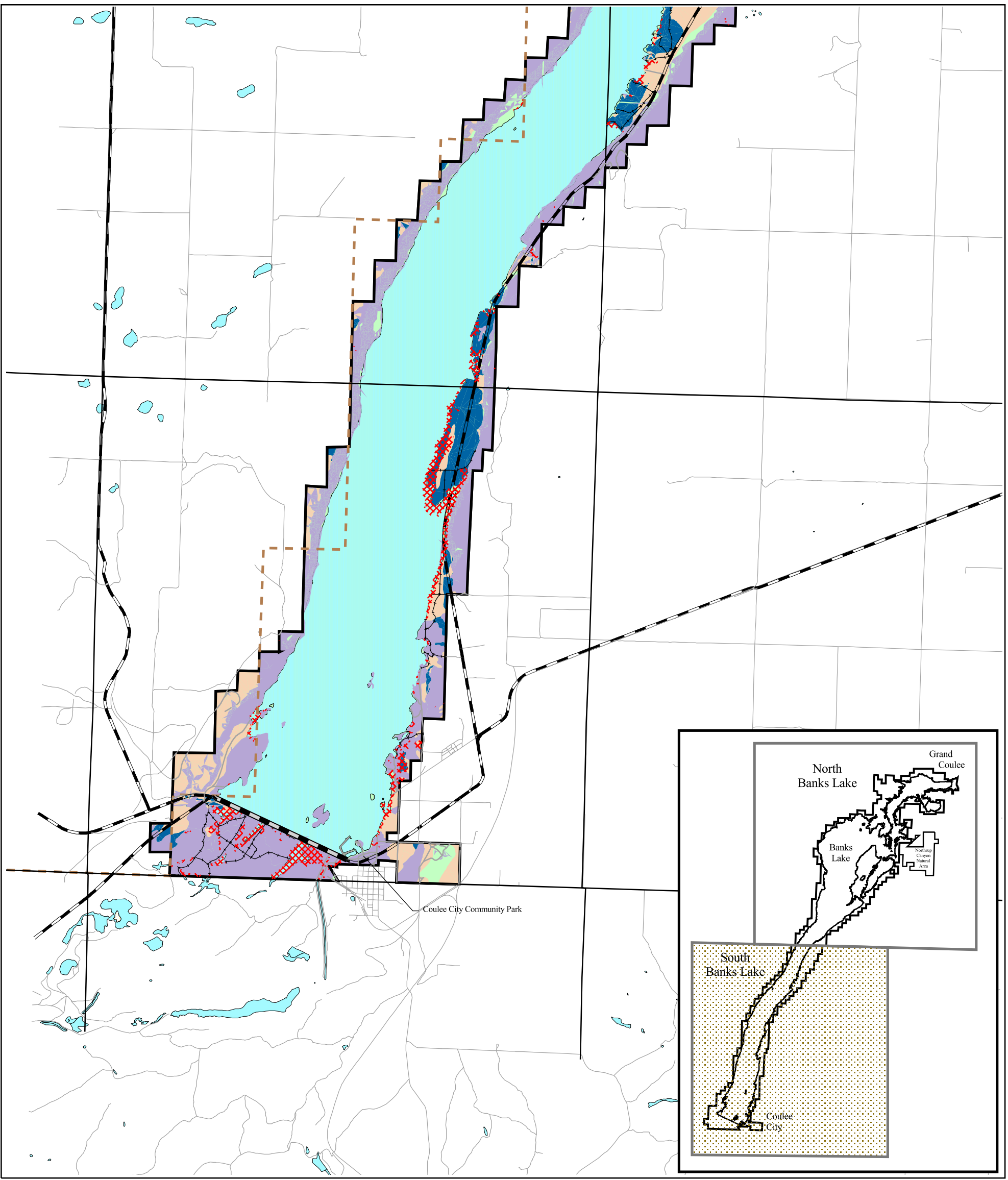


Banks Lake Resource Management Plan



Developed Recreation Suitability, RMP Figure 6.3-3





Suitability/Constraints

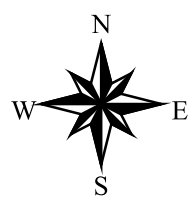
- Low (Severe Limitations)
- Moderate (Moderate Limitations)
- High (Slight Limitations)
- Islands
- Lakes
- Wetlands

Fishing Areas

- Large Mouth Bass
- Small Mouth Bass
- Walleye

- County Boundaries
- Township & Range
- Dams
- Highway
- Primary/Secondary Roads (Open)
- Secondary Roads (Closed)
- Seasonal Road Closure (11/1 - 4/15)
- Project Area

Developed Recreation Suitability/Constraints South Banks Lake



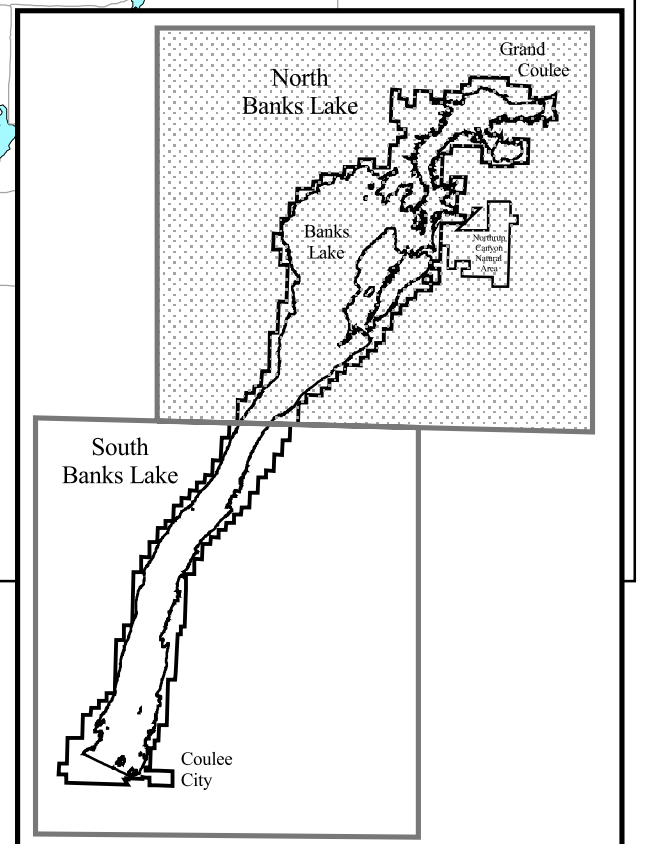
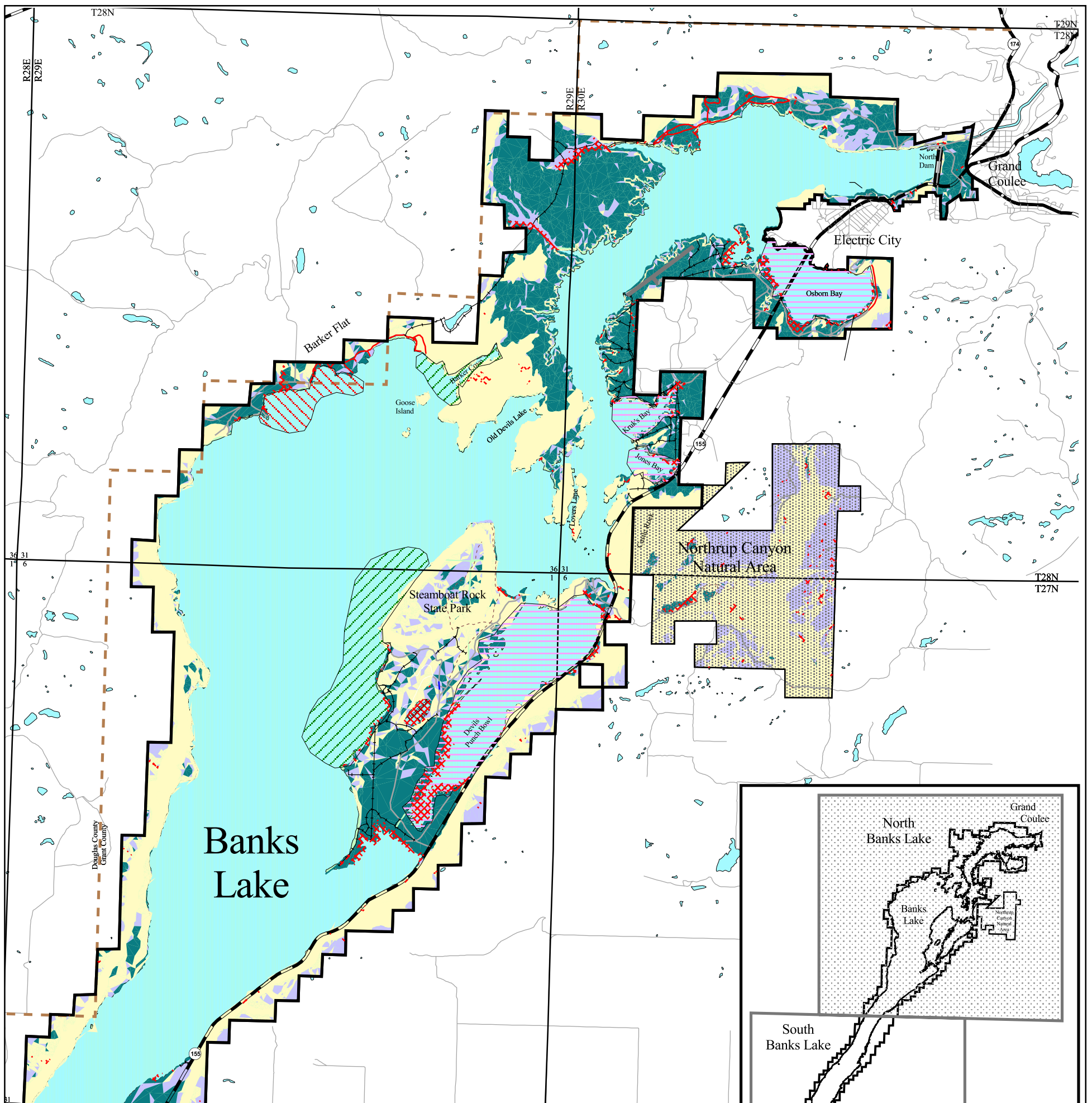
0 1 2 Miles



Banks Lake Resource Management Plan



Developed Recreation Suitability, RMP Figure 6.3-4



**Suitability/Constraints**

- Low (Severe Limitations)
- Moderate (Moderate Limitations)
- High (Slight Limitations)
- Islands
- Lakes
- Wetlands

**Roads**

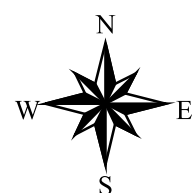
- Highway
- Primary/Secondary Roads (Open)
- Secondary Roads (Closed)
- Seasonal Road Closure (11/1 - 4/15)
- Trails

**Fishing Areas**

- Large Mouth Bass
- Small Mouth Bass
- Walleye

- County Boundaries
- Township & Range
- Dams
- Airstrip
- Project Area
- Northrup Canyon Area

**Dispersed Recreation Suitability/Constraints North Banks Lake**

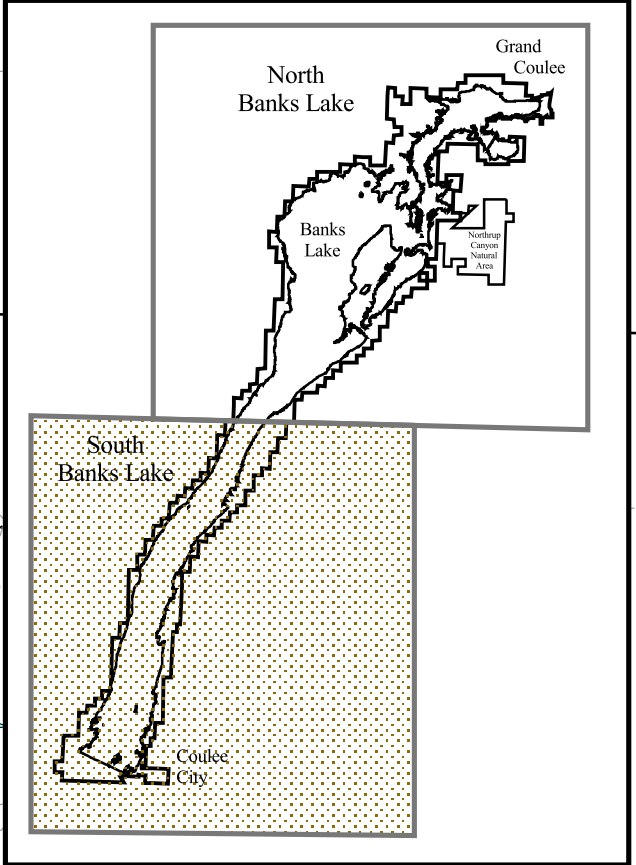
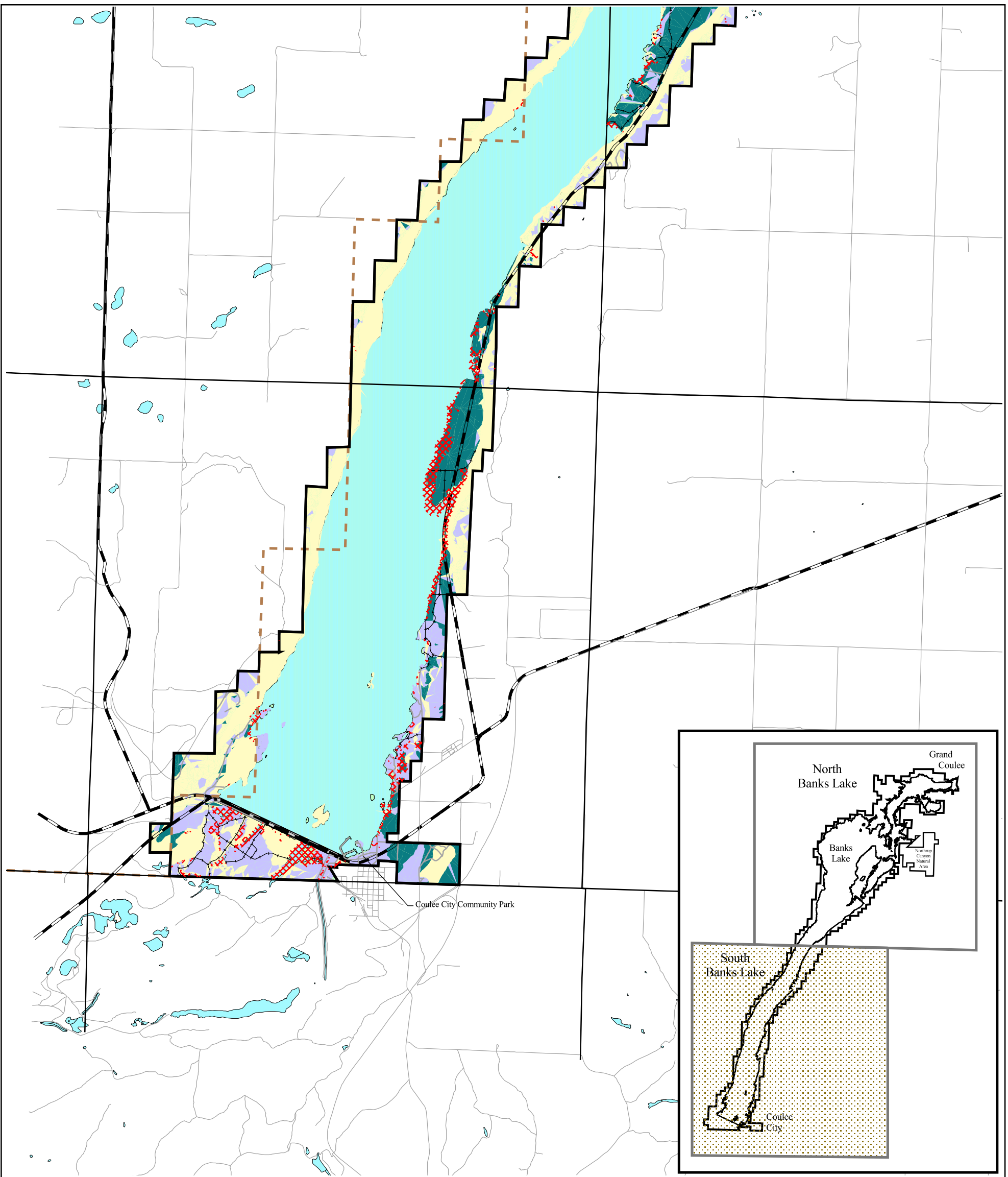


**Banks Lake Resource Management Plan**



Dispersed Recreation Suitability, RMP Figure 6.3-5



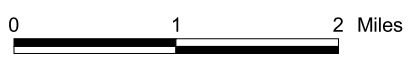
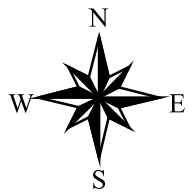


Dispersed Recreation Suitability, RMP Figure 6.3-6

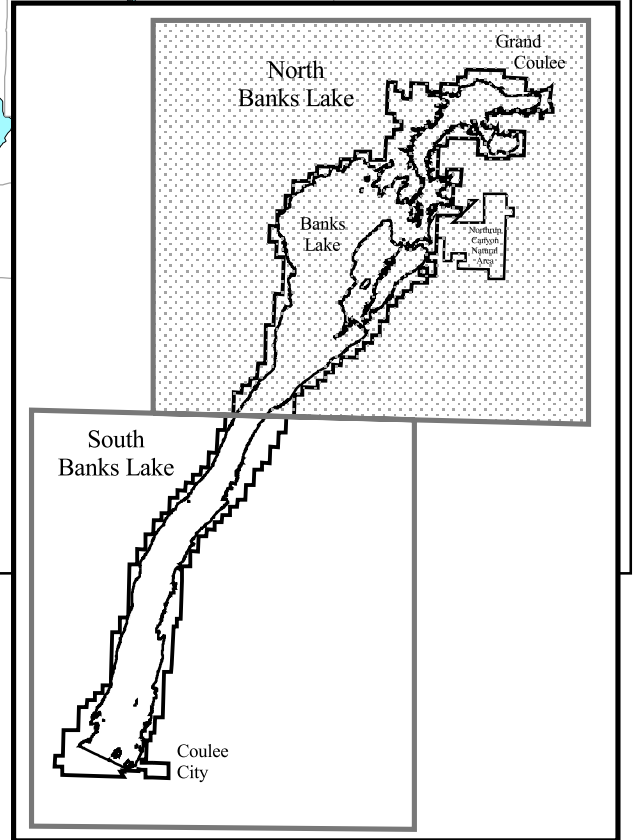
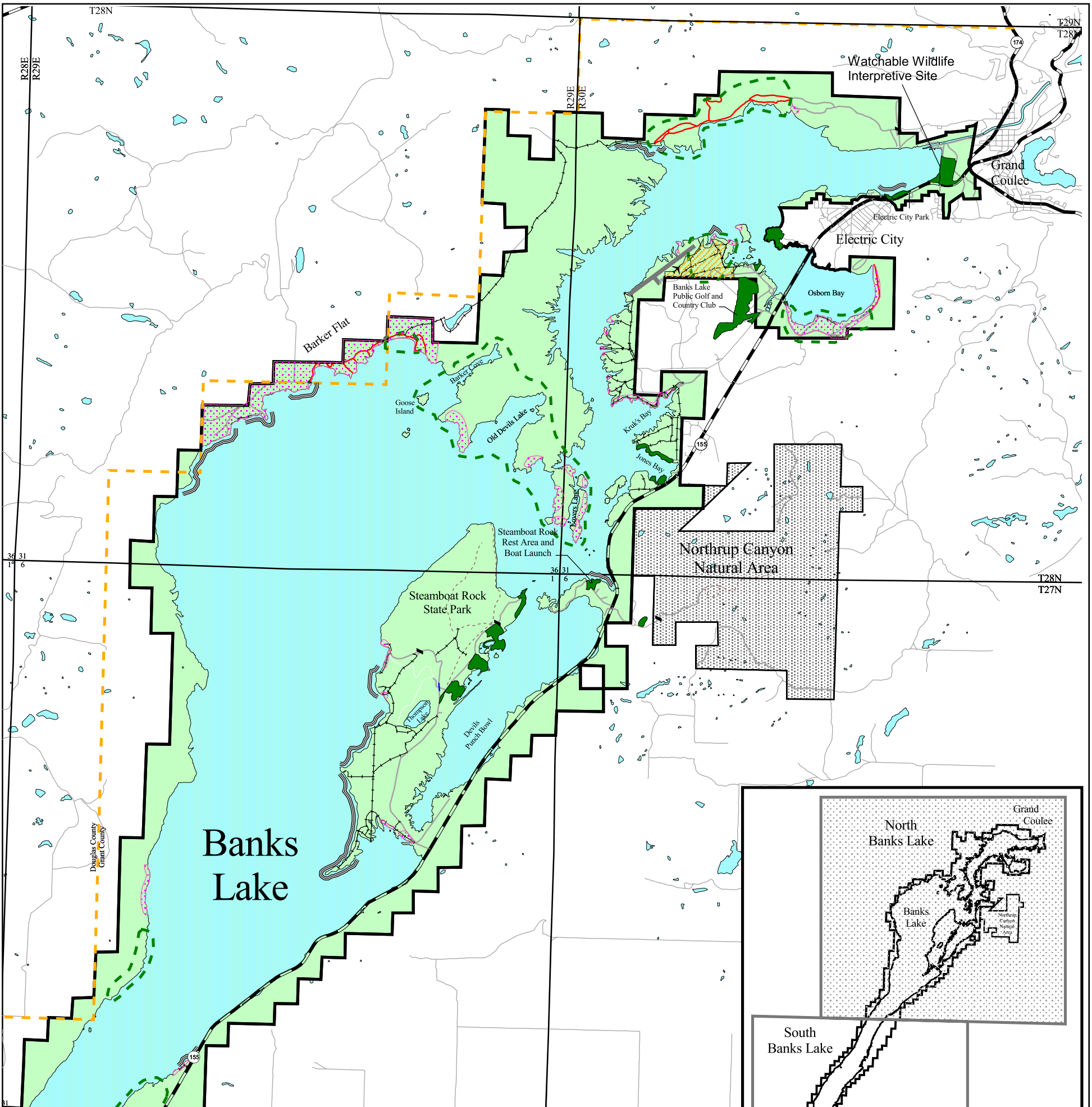
- Highway
- Primary/Secondary Roads (Open)
- Secondary Roads (Closed)
- Seasonal Road Closure (11/1 - 4/15)
- Trails
- Fishing Areas**
- Large Mouth Bass
- Small Mouth Bass
- Walleye
- Project Area

- Suitability/Constraints**
- Low (Severe Limitations)
- Moderate (Moderate Limitations)
- High (Slight Limitations)
- Islands
- Lakes
- Wetlands
- County Boundaries
- Township & Range
- Dams

**Dispersed Recreation Suitability/Constraints South Banks Lake**

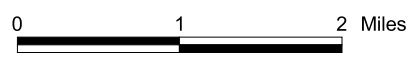
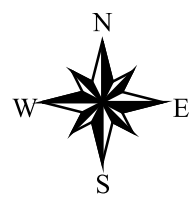


**Banks Lake Resource Management Plan**



- |                            |                                     |
|----------------------------|-------------------------------------|
| Islands                    | Roads                               |
| Lakes                      | Highway                             |
| Developed Recreation Areas | Primary/Secondary Roads (Open)      |
| Dispersed Camping Areas    | Secondary Roads (Closed)            |
| ORV Area                   | Seasonal Road Closure (11/1 - 4/15) |
| Boat-in Camping Areas      | Trails                              |
| County Boundaries          | Airstrip                            |
| Township & Range           | Shoreline Erosion Areas             |
|                            | Project Area                        |
|                            | Northrup Canyon Area                |
|                            | Gates                               |

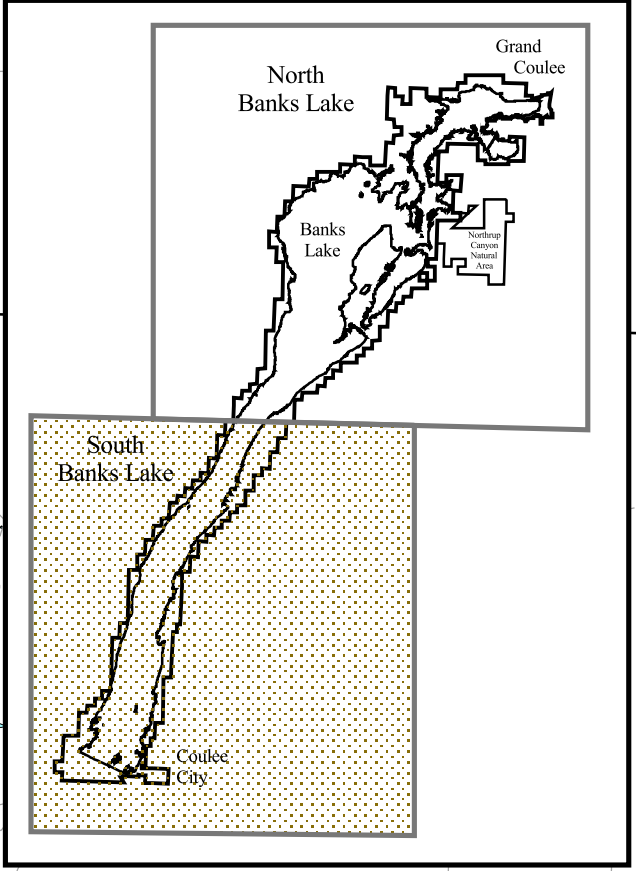
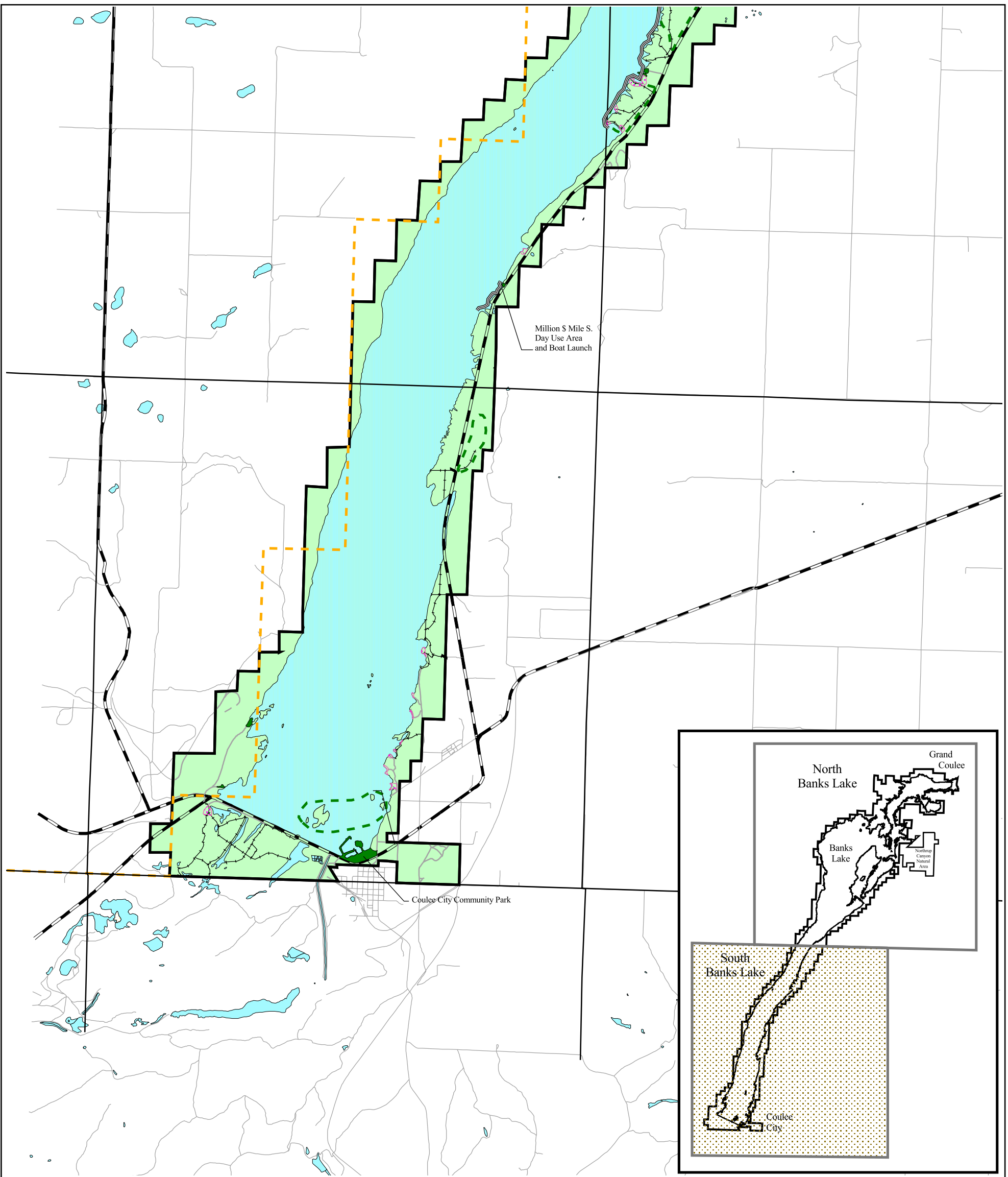
## Camping Opportunities North Banks Lake



## Banks Lake Resource Management Plan

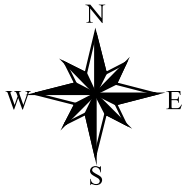
Camping Opportunities  
RMP  
Figure 6.3-7





- |                            |                                     |
|----------------------------|-------------------------------------|
| Islands                    | Highway                             |
| Lakes                      | Primary/Secondary Roads (Open)      |
| Developed Recreation Areas | Secondary Roads (Closed)            |
| Dispersed Camping Areas    | Seasonal Road Closure (11/1 - 4/15) |
| ORV Area                   | Trails                              |
| Boat-in Camping Areas      | Shoreline Erosion Areas             |
| County Boundaries          | Project Area                        |
| Township & Range           | Gates                               |

## Camping Opportunities South Banks Lake



## Banks Lake Resource Management Plan



Camping Opportunities  
RMP  
Figure 6.3-8



## **CHAPTER 7 MANAGEMENT PRESCRIPTIONS FOR LAND USE AND ADMINISTRATION**

### **7.1 OVERVIEW**

The concession contract administration will be limited by the SPRC to the SPRC administered lands and transfer concession contract administration on WDFW administered lands to Reclamation. Reclamation will continue to provide general management oversight throughout the reservoir area and retain primary jurisdiction over Reclamation Zone. SPRC will continue to manage contracts for Dry Falls Café and the Coulee City Park. All concessions will be managed in accordance with current Reclamation Policy. Area-wide fish and wildlife management and regulatory responsibilities will remain with the WDFW since they are mandated by the state legislature to manage these resources for the benefit of Washington's citizens. The following summarizes the management activities and actions expected to occur in the foreseeable future without a comprehensive RMP for Banks Lake.

The Desired Condition for Banks Lake, referred to as Alternative B in the EA, was chosen to address the long-term needs of the public and Banks Lake management agencies by supporting the natural, cultural, and recreational resources of the area. Specific management goals outlined in the RMP were developed in response to concerns identified during the EA scoping process and based on information from the EA resource inventory. The following chapter summarizes the existing recreation resource management situation, lists the recreation resource goals for Banks Lake under the Desired Condition, and describes the management actions needed to reach those goals.

### **7.2 EXISTING LAND USE MANAGEMENT SITUATION**

As previously mentioned, the SPRC and the WDFW manage the Banks Lake area with oversight by Reclamation's Ephrata, Washington, field office. These agencies manage land use, recreation, and fish and wildlife resources under existing federal and state laws, policies and land use agreements including those defined in Chapter 3 of this plan, Agency Coordination and Standards. Currently, the SPRC and WDFW are conducting the following resource management activities in the Banks Lake area:

#### **Land Development**

- 1) Retain the existing 360-acre agricultural lease and "Game Management Zone" under WDFW administration (see Figure 7.2-1 and Figure 7.2-2).
- 2) Recommend the revocation of 360 acres of Reclamation withdrawn land located immediately adjacent to the RMP management area boundary to BLM: T27N, R29E, S13, W1/2SE1/4, E1/2SW1/4, SW1/4SW1/4, W12NE1/4, NE1/4NE1/4, and SE1/4NW1/4.



- 3) Continue SPRC concession contract administration on SPRC administered lands at Banks Lake.

### Land Administration

- 1) The “Lead Agency Zones” and management responsibilities currently in effect will be shared equally by the lead agencies on the SRSP peninsula (see Figure 3.1-1).
- 2) Support the SPRC lease of 20 acres to Grant County Port District No. 7 for the expansion of the Banks Lake Public Golf Course. This action is currently in progress.

## 7.3 DESIRED CONDITION

The following management actions were developed to achieve the Desired Condition for *Land Use and Administration* resources in the Banks Lake area and are meant as additions to the existing resource management activities. Tables 7.1 and 7.2 summarize the *Land Use and Administration* resource goals and management actions necessary to implement them (see Figures 7.2-1 and 7.2-2 Land Use and Administration).

**Table 7.1**  
**Land Use and Administration Management Goals and**  
**Actions for Land Development**

<b>RMP Land Development Goals</b>	<b>Management Actions</b>
<p><b>Ensure the responsible/reasonable management of land development around Banks Lake.</b></p>	<p>*Support Land Use Agreements - Support land use agreements (i.e., leases, licenses, permits, etc.) renewals for:</p> <ul style="list-style-type: none"> <li>- Dry Falls Café and Mini-Mart (managed under new rules)</li> <li>- Coulee City Community Park (lease from Reclamation)</li> <li>- Coulee City Community Park Marina (separate lease from Coulee City)</li> <li>- Coulee City/Electric City Fish Rearing Pens</li> <li>- Cliff Hamilton</li> <li>- Chimes Concession (managed under new rules)from SPRC</li> <li>- Coulee Playland (managed under new rules) from Reclamation</li> <li>- Coulee Dam Airstrip</li> <li>- Prohibit third party land use agreements.</li> <li>- Expansion of the Golf Course to facilitate growth.</li> </ul>

**Table 7.1**  
**Land Use and Administration Management Goals and**  
**Actions for Land Development**

<b>RMP Land Development Goals</b>	<b>Management Actions</b>
	<p style="text-align: center;">Acreage will be determined and assessed at the time of the expansion.</p> <p><b>*Issuing Leases</b> - All leases will be issued by BOR, SPRC, or WDFW except that Port District Number Seven will retain authority to issue subleases at the Grand Coulee Dam Airstrip.</p> <ul style="list-style-type: none"> <li>- Maintain Port District No. 7 authority to issue subleases at Grand Coulee Dam Airstrip.</li> <li>- Coulee City the authority to lease City Marina</li> </ul> <p><b>*Insure Concession Contracts</b> - For all commercial activities on Reclamation lands, insure all new or renewed concession contracts issued by the State are consistent with the directives and standards outlined in Reclamation's concessions management policy for non-federal managers (as directed in Reclamation Manual LND 04-02). The State is required to receive a fair market return of revenue under this policy.</p> <p><b>*Support Concession</b> - Support the establishment of a food and beverage concession at Coulee City Community Park. Reclamation will manage the Coulee City Park proposed concession unless the city develops a concession policy prepared and issued in accordance with Reclamation's concessions management policy (as directed in Reclamation Manual LND 04-02).</p> <p><b>Limit Concession</b> - Limit concession contract administration by the SPRC to SPRC administered lands. All concession contract administration on WDFW will be handled by Reclamation.</p> <p><b>*Prohibit Dock Construction</b> - Prohibit the construction/installation of any privately-owned docks.</p> <p><b>Enhance Community Growth</b> - Dispose 100 acres of Reclamation acquired land near Coulee City to enhance community growth. The land parcel recommended for disposal is located in T25N, R28E, Section 34 and includes the E1/2SE1/4 and E1/2NW1/4SE1/4. Land will be disposed</p>

**Table 7.1**  
**Land Use and Administration Management Goals and**  
**Actions for Land Development**

<b>RMP Land Development Goals</b>	<b>Management Actions</b>
	of by Reclamation or GSA under existing laws.
<b>Minimize potential adverse effects by focusing land use and human activities to suitable areas if possible.</b>	<p><b>*Prohibit Waste Sites</b> - Prohibit the following land use activities:</p> <ul style="list-style-type: none"> <li>- New public or private waste disposal sites</li> <li>- Storage or disposal of hazardous waste</li> </ul> <p><b>*Close Shooting Range</b> - Close the informal shooting range located at Osborn Bay East. This action is needed to comply with existing Reclamation policy (no shooting ranges on Reclamation land unless constructed to National Rifle Association specifications), and to minimize human disturbance and potential mortalities to nearby nesting bald eagles.</p>
<b>Determine the success of the management action, reevaluate how well the action met the goal, determine the success of management action.</b>	<b>Monitor and Evaluate</b> - Monitor and evaluate the success of the management action; if necessary, adjust the specific methods and techniques employed when an initiative is not meeting the RMP goal. Follow up with spatial monitoring using GIS to manage the natural resource database and assist in management decisions by conducting a GIS update, across the management area, at least every 10 years.

\*Management actions that are included in response to existing laws, regulatory requirements, management agreements, or Reclamation policy.

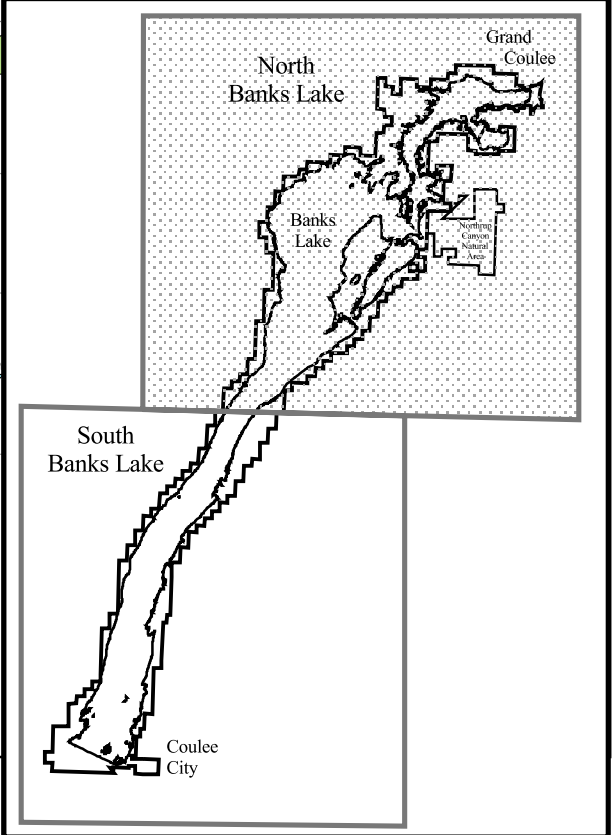
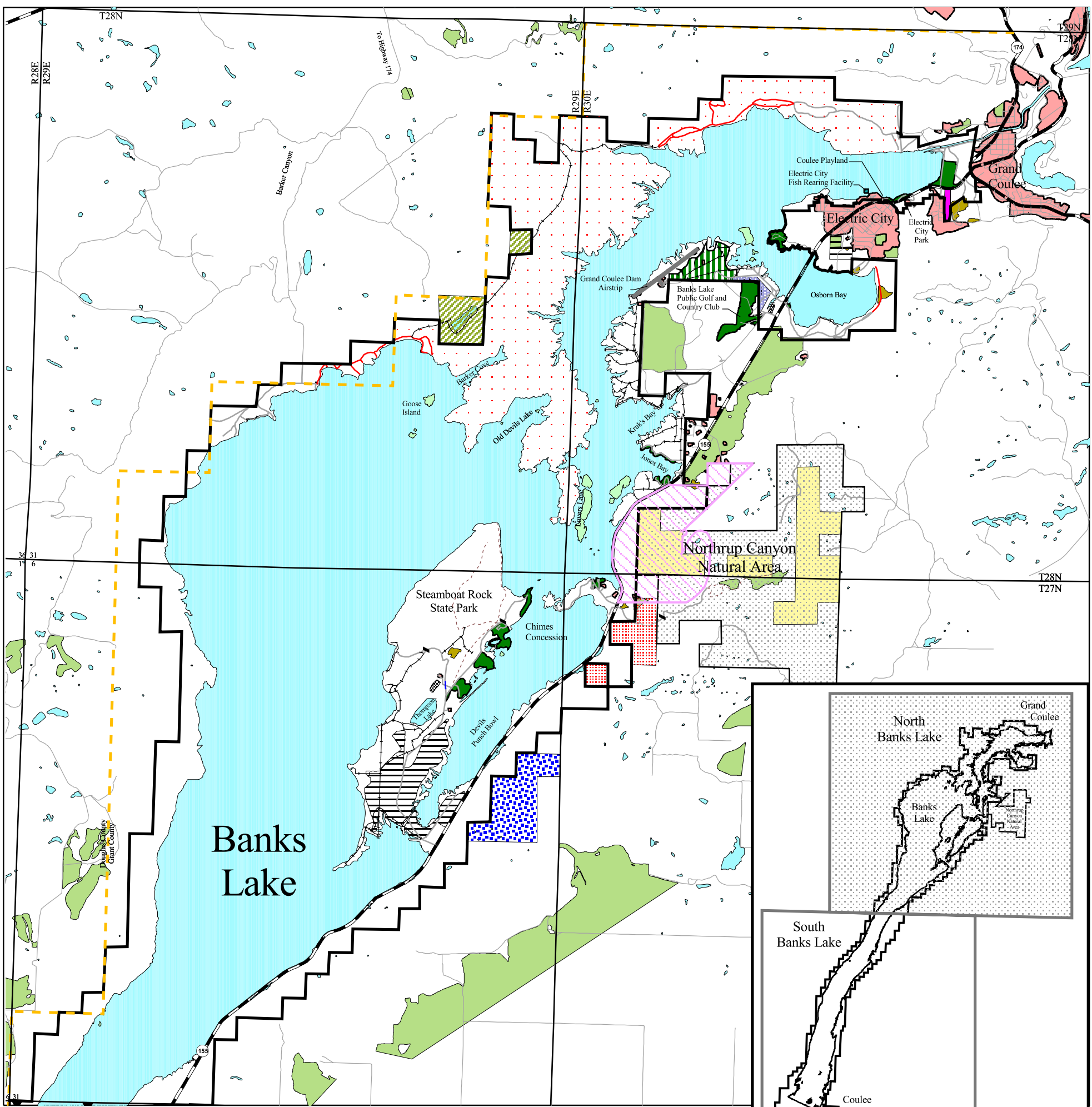
**Table 7.2**  
**Land Use and Administration Management Goals and Actions for**  
**Land Administration**

<b>RMP Land Administration Goals</b>	<b>Management Actions</b>
<p><b>Develop the partnerships and management agreements needed to implement the Banks Lake RMP.</b></p>	<p><b>*Correct Land Ownership</b> - Correct the land status discrepancies identified during the land ownership inventory review.</p> <p><b>*Operate Banks Lake in Accordance with the Law</b> - Continue to operate Banks Lake in accordance with Reclamation law and the Columbia Basin Project Act dated March 10, 1943 (Chapter 14, 57 STAT, 14).</p> <ul style="list-style-type: none"> <li>- Continue to meet all contractual obligations of the 1968, contracts between the U.S. and Columbia Basin Project (CBP) irrigation districts.</li> <li>- Continue to meet existing operational constraints placed on Banks Lake water surface elevations due to CBP contractual obligations, agreements with the Pacific Northwest Power Planning Council, fish flow requirements established under the Endangered Species Act, and pump-storage power generation requirements.</li> <li>- Continue to administer Reclamation lands and waters through an updated MOA between the United States and the State of Washington. Day-to-day resource and recreation management activities will continue to be provided by the SPRC, Coulee City, and WDFW with oversight by Reclamation.</li> </ul> <p><b>*Amend MOAs</b> - Amend land use agreements (MOAs) between key (lead) agencies to reflect current agency management/jurisdictional authorities (“Lead Agency Zones”).</p> <p><b>Combine Management Zones</b> - Combine the existing “Joint Management Zone” and “State Parks Management Zone” (as established in the 1974 MOA between the SPRC and WDFW for the administration of SRSP) into a single “State Parks Management Zone.” Modify existing and future MOAs and “Lead Agency Zone” drawings/exhibits between the SPRC and WDFW, accordingly (see Figure 3.1-1).</p> <p><b>Transfer Management Responsibilities</b> - Transfer Osborn</p>

**Table 7.2**  
**Land Use and Administration Management Goals and Actions for**  
**Land Administration**

<b>RMP Land Administration Goals</b>	<b>Management Actions</b>
	Bay SE and Osborn Bay E recreation management responsibilities from the WDFW to the SPRC. Modify existing and future MOAs and “Lead Agency Zone” drawings/exhibits between the SPRC and WDFW, accordingly or where required by law.
<b>Explore land status/tenure adjustments to enhance land use, land pattern, and resource management efficiencies.</b>	*Transfer Landfill - Transfer the 15-acre Delano Landfill site to Grant County. <b>Withdraw 200 acres of BLM land</b> - Coordinate and work with the BLM to withdraw 200 acres of public land to improve land resource management efficiency at Banks Lake. The two land parcels recommended for withdrawal are located in T28N, R29E and consist of (1) a 160-acre tract encompassing the NE1/4 of Section 23, and (2) a 40-acre tract encompassing the SE1/4NW1/4 of Section 13.
<b>Minimize land use conflicts and incompatibilities.</b>	* <b>Ensure Land Use Activities and Plans are Consistent</b> - Ensure land use activities and plans are consistent to the extent practicable with Grant and Douglas County planning efforts. * <b>Remove the Houseboat</b> - Remove the houseboat moored in Osborn Bay (T28N R30E S15). Houseboats are not permitted in any environment under the Grant County Shorelines Management Master Program dated June, 1975.
<b>Determine the success of the management action, reevaluate how well the action met the goal, determine the success of management action.</b>	<b>Monitor and Evaluate</b> - Monitor and evaluate the success of the management action; if necessary, adjust the specific methods and techniques employed when an initiative is not meeting the RMP goal. Follow up with spatial monitoring using GIS to manage the natural resource database and assist in management decisions by conducting a GIS update, across the management area, at least every 10 years.

\*Management actions that are included in response to existing laws, regulatory requirements, management agreements, or Reclamation policy.



**Land Use**

- Ag Lease
- Urban/Commercial/Residential
- Developed Recreation Area
- Agriculture
- ORV Use Area
- Fish Rearing
- State Game Reserve
- BLM Rec/Public Purposes Lease
- Gravel/Material Sites
- Sewage Lagoons
- Islands
- Lakes
- Project Area
- Northrup Canyon
- Castle Rock Natural Area Preserve

**Land Administration**

- Correct Land Status Discrepancies
- Dispose to Enhance Community Growth
- Relinquish to BLM
- Transfer Delano Landfill to Grant Co.
- Withdraw from BLM
- Golf Course Expansion (Lease to Grant Co.)
- Cancel Grazing Permit
- County Boundaries
- Township & Range
- Highway
- Primary/Secondary Roads (Open)
- Secondary Roads (Closed)
- Seasonal Road Closure (11/1 - 4/15)
- Trails
- Gates

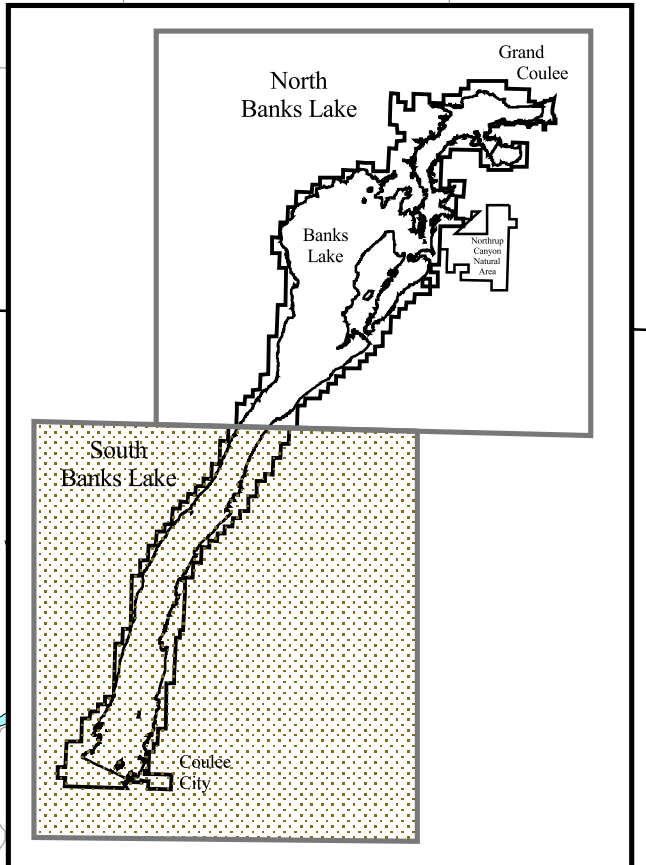
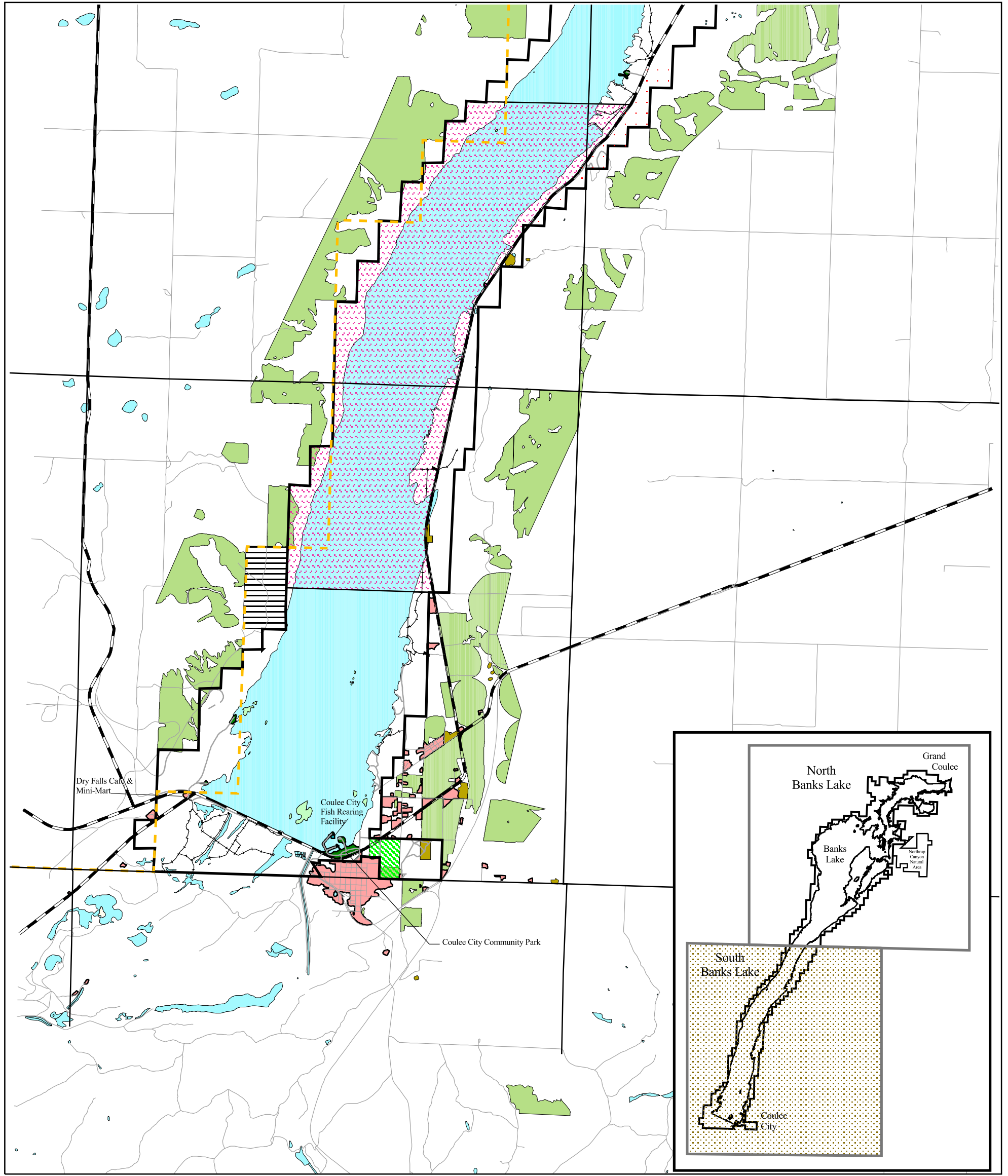
**Management Prescriptions  
for Land Use and  
Land Administration  
North Banks Lake**



**Banks Lake  
Resource Management Plan**



Land Development  
Land Administration, RMP Figure 7.2-1







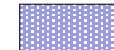

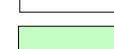



Land Development  
Land Administration, RMP Figure 7.2-2








**Land Use**

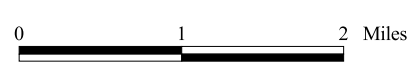
-  Ag Lease
-  Urban/Commercial/Residential
-  Developed Recreation Area
-  Agriculture
-  ORV Use Area
-  Fish Rearing
-  State Game Reserve
-  BLM Rec/Public Purposes Lease
-  Gravel/Material Sites
-  Sewage Lagoons
-  Castle Rock Natural Area Preserve

**Land Administration**

-  Correct Land Status Discrepancies
-  Dispose to Enhance Community Growth
-  Relinquish to BLM
-  Transfer Delano Landfill to Grant Co.
-  Withdraw from BLM
-  Golf Course Expansion (Lease to Grant Co.)
-  Cancel Grazing Permit
-  Islands
-  Lakes
-  Project Area

**Management Prescriptions  
for Land Use and  
Land Administration  
South Banks Lake**

-  County Boundaries
-  Township & Range
-  Highway
-  Primary/Secondary Roads (Open)
-  Secondary Roads (Closed)
-  Seasonal Road Closure (11/1 - 4/15)
-  Gates



## **CHAPTER 8 MANAGEMENT PRESCRIPTIONS FOR GRAZING MANAGEMENT**

### **8.1 OVERVIEW**

The Desired Condition for Banks Lake, referred to as Alternative B in the EA, was chosen to address the long-term needs of the public and Banks Lake management agencies by supporting the natural, cultural, and recreational resources of the area. Specific management goals outlined in the RMP were developed in response to concerns identified during the EA scoping process and based on information from the EA resource inventory. The following chapter summarizes the existing grazing resource management situation, lists the grazing resource goals for Banks Lake under the Desired Condition, and describes the management actions needed to reach those goals.

### **8.2 EXISTING GRAZING MANAGEMENT SITUATION**

As previously mentioned, the SPRC and the WDFW manage the Banks Lake area with oversight by Reclamation's Ephrata, Washington, field office. These agencies manage land use, recreation, and fish and wildlife resources under existing federal and state laws, policies and land use agreements including those defined in Chapter 3 of this plan, Agency Coordination and Standards. Currently, the WDFW is conducting the following grazing resource management activities in the Banks Lake area:

#### **Grazing**

- 1) Allow existing grazing permit renewal (BL-02, -03, and -04) by the WDFW provided the lands are grazed in a manner which maintain their productivity. Reclamation reserves the right to request WDFW termination of any permit at the end of any year if such termination is desirable to comply with other federal programs or resource needs.
- 2) Conduct annual monitoring of livestock grazing permit areas and modify permit conditions and Grazing Plans accordingly.
- 3) WDFW reserves the right to alter and change the provisions of the permit's "Grazing Plan" to include reduction in acres of pasture available and number of animal unit months authorized when such changes are required to benefit fish or wildlife management, public hunting, or other recreational uses.
- 4) WDFW reserves the right to cancel a permit in the event the area described in the permit is included in a land use plan determined to be a higher and better use.



**Weed Control**

- 1) Work cooperatively with the Noxious Weed Control Board of Grant County in identifying and prioritizing areas where noxious weed control is necessary.
- 2) Control Eurasian water milfoil in coordination with the Noxious Weed Control Board of Grant County, irrigation district and WDFW representatives, and other interested parties.

**8.3 DESIRED CONDITION**

The following management actions were developed to achieve the Desired Condition for *Grazing Management* resources in the Banks Lake area and are meant as additions to the existing resource management activities. Table 8.1 through 8.2 summarize the *Grazing Management* resource goals and management actions necessary to implement them (see Figures 8.3-1 and 8.3-2 *Grazing Management*).

**Table 8.1  
Grazing Resource Management Goals and Actions for Grazing**

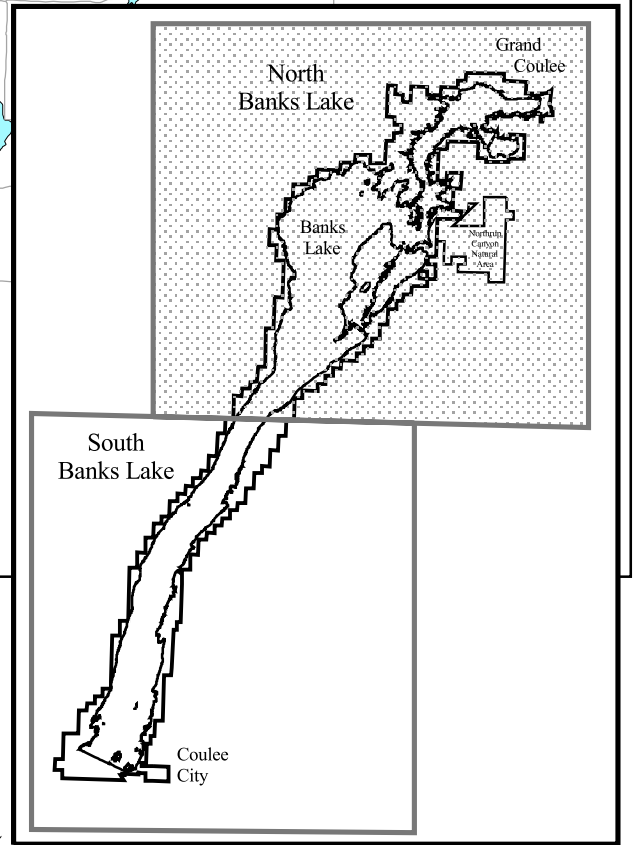
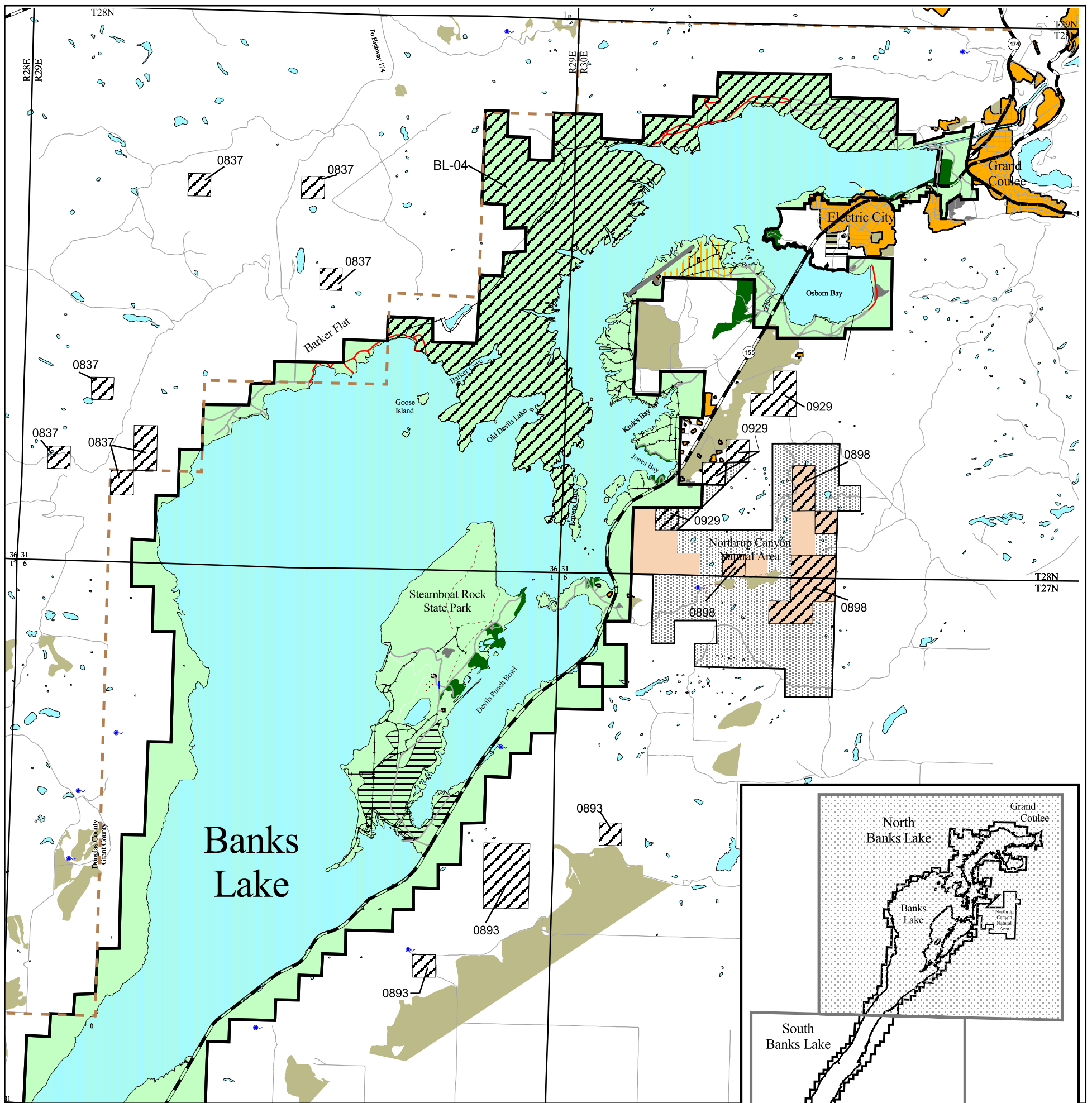
RMP Grazing Goals	Management Actions
<p><b>Minimize soil erosion and reservoir sedimentation to maintain or improve water quality and riparian protection.</b></p>	<p><b>Remove Livestock from Certain Areas</b> - Install fencing along perennial streams and spring/seep areas to prevent cattle from grazing in wetland areas and along stream riparian corridors (see Natural Resources - Wildlife Habitat).</p> <ul style="list-style-type: none"> <li>- Coulee, Table</li> <li>- Junction Lakes</li> <li>- Plots 7-1 and 7-2 in FWS Unit 7, North Banks Lake</li> <li>- Bebe Springs; cancel grazing permit BL-02 and fence to prevent trespass cattle entry to Bebe Springs (see Figure 8.3-1 through 8.3-2 Grazing Management). Grazing permit BL-03 and 04 will continue.</li> </ul> <p><b>Adjust Grazing Management Practices</b> - Adjust livestock grazing management, where necessary, to maintain or enhance habitat for special status plant and animal species. This may include development of livestock enclosures, or restricted use pastures where grazing systems cannot otherwise be adjusted to accommodate the habitat requirements of a special status species.</p> <ul style="list-style-type: none"> <li>- Ensure that animal unit month (AUM) allocations, season-of-use authorizations, and other Grazing Plan stipulations included in new or renewed permits maintain or improve native rangeland species and attain composition, density, foliar cover and vigor appropriate to site potential and wildlife management objectives.</li> <li>- Ensure new or renewed grazing leases stipulate a minimum of two growing seasons rest from livestock grazing following fires.</li> </ul>
<p><b>Determine the success of the management action, reevaluate how well the action met the goal, determine the success of management action.</b></p>	<p><b>Monitor and Evaluate</b> - Annually monitor the effect of the livestock grazing lease program on native rangeland species, plant composition, density, foliar cover and vigor appropriate to site potential and wildlife management objectives. Modify permitted season(s)-of-use, AUM allocations, and/or pasture/rest rotations accordingly. Follow up with spatial monitoring using GIS to manage the natural resource database and assist in management decisions by conducting a GIS update, across the management area, at least every 10 years.</p>


\*Management actions that are included in response to existing laws, regulatory requirements, management agreements, or Reclamation policy.

**Table 8.2  
Grazing Resource Management Goals and Actions for Weed Control**

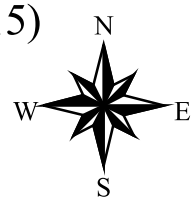
RMP Weed Control Goals	Management Actions
<p><b>Control or eradicate noxious weeds and ensure the safe application of herbicides so water quality is not compromised.</b></p>	<p><b>Conduct Riparian Plantings</b> - Conduct riparian plantings in shoreline areas where erosion is not a problem or has been alleviated/controlled by structural measures and/or modifications in reservoir operations (see Natural Resources - Wildlife Habitat).</p> <p><b>Rehabilitate Closed Roads</b> - Rehabilitate closed roads and other disturbed areas.</p> <p><b>Control Eurasian Watermilfoil</b> - Eurasian watermilfoil control (see Natural Resources - Wildlife Habitat):</p> <ul style="list-style-type: none"> <li>- Manipulate reservoir water levels when problems associated with dense watermilfoil mats become prominent; conduct necessary water level manipulation in conjunction with facility maintenance needs (generally a 10-year cycle).</li> <li>- Use spot herbicide application to kill small patches affecting public boat ramps, courtesy docks, and swimming areas.</li> </ul>
<p><b>Determine the success of the management action, reevaluate how well the action met the goal, determine the success of management action.</b></p>	<p><b>Monitor and Evaluate</b> - Monitor and evaluate the success of the management action; if necessary, adjust the specific methods and techniques employed when an initiative is not meeting the RMP goal. Follow up with spatial monitoring using GIS to manage the natural resource database and assist in management decisions by conducting a GIS update, across the management area, at least every 10 years.</p>

\*Management actions that are included in response to existing laws, regulatory requirements, management agreements, or Reclamation policy.



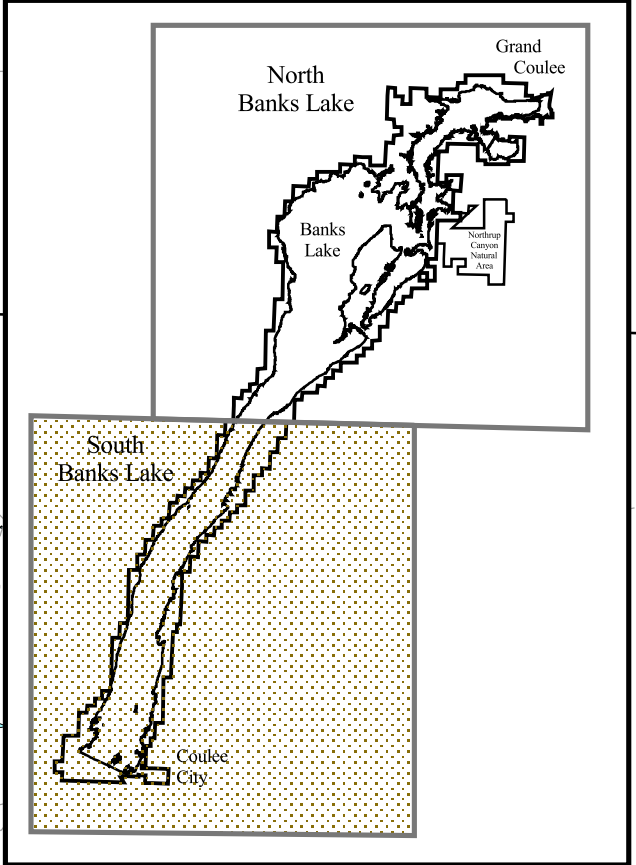
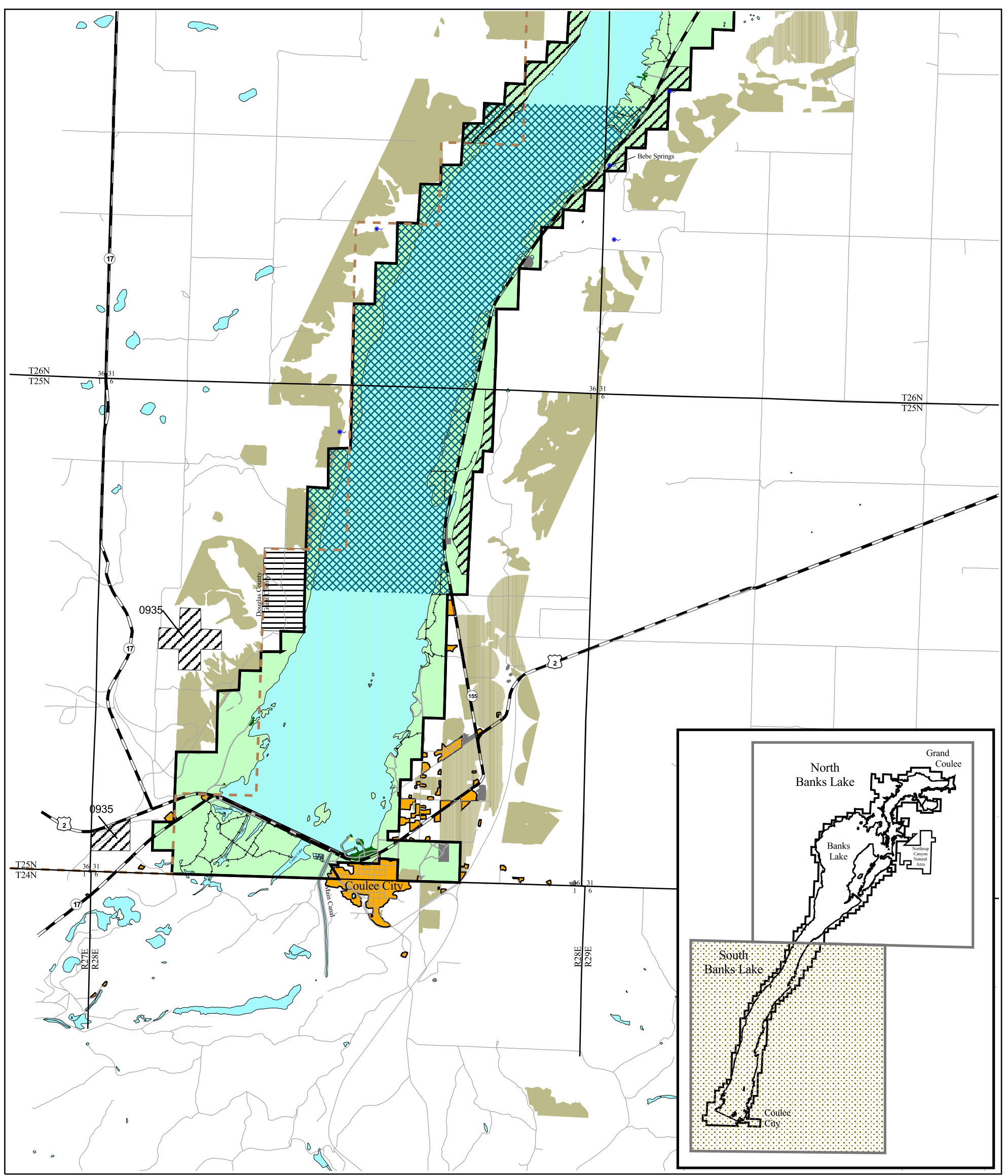
-  Grazing Leases/Permits
-  Ag Lease
-  Urban/Commercial/Residential
-  Developed Recreation Area
-  Agriculture
-  ORV Use Area
-  Fish Rearing
-  State Game Reserve
-  BLM Rec/Public Purpose Lease
-  Gravel/Material Sites
-  Sewage Lagoons
-  County Boundaries
-  Township & Range
-  Dams
-  Project Area
-  Northrup Canyon Area
-  Springs
- Roads**
-  Highway
-  Primary/Secondary Roads (Open)
-  Secondary Roads (Closed)
-  Seasonal Road Closure (11/1 - 4/15)
-  Trails
-  Airstrip

## Grazing Management North Banks Lake



## Banks Lake Resource Management Plan

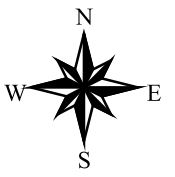
0 1 2 Miles



- Grazing Leases/Permits
- Ag Lease
- Urban/Commercial/Residential
- Developed Recreation Area
- Agriculture
- ORV Use Area
- Fish Rearing
- State Game Reserve
- BLM Rec/Public Purpose Lease
- Gravel/Material Sites
- Sewage Lagoons
- Northrup Canyon Area

- Roads**
- Highway
- Primary/Secondary Roads (Open)
- Secondary Roads (Closed)
- Seasonal Road Closure (11/1 - 4/15)
- Trails
- Airstrip
- County Boundaries
- Township & Range
- Dams
- Project Area
- Springs

## Grazing Management South Banks Lake



## Banks Lake Resource Management Plan

Grazing Management  
RMP  
Figure 8.3-2

## **CHAPTER 9 MANAGEMENT PRESCRIPTIONS FOR PUBLIC INFORMATION/AWARENESS**

### **9.1 OVERVIEW**

The Desired Condition for Banks Lake, referred to as Alternative B in the EA, was chosen to address the long-term needs of the public and Banks Lake management agencies by supporting the natural, cultural, and recreational resources of the area. Specific management goals outlined in the RMP were developed in response to concerns identified during the EA scoping process and based on information from the EA resource inventory. The following chapter summarizes the existing Public Information/Awareness management situation, lists the Public Information/Awareness goals for Banks Lake under the Desired Condition, and describes the management actions needed to reach those goals.

### **9.2 EXISTING PUBLIC INFORMATION/AWARENESS MANAGEMENT SITUATION**

As previously mentioned, the SPRC and the WDFW manage the Banks Lake area with oversight by Reclamation's Ephrata, Washington, field office. These agencies manage land use, recreation, and fish and wildlife resources under existing federal and state laws, policies and land use agreements including those defined in Chapter 3 of this plan, Agency Coordination and Standards. Currently, the SPRC and WDFW are conducting the following cultural resource management activities in the Banks Lake area:

#### **Public Information/Awareness**

- 1) Provide managed access, turnouts, signage, and/or interpretive displays to enhance "Watchable Wildlife" viewing opportunities at the following three locations.
  - Dry Falls Dam
  - North Dam
  - Near Million \$ Mile South Day-Use Area and Boat Launch

### **9.3 DESIRED CONDITION**

The following management actions were developed to achieve the Desired Condition for Public Information/Awareness resources in the Banks Lake area and are meant as additions to the existing resource management activities. Table 9.1 summarize the Public Information/Awareness resource goals and management actions necessary to implement them.

**Table 9.1**  
**Public Information/Awareness Management**  
**Goals and Actions for Public Information/Awareness**

<b>RMP Public Information/Awareness Goals</b>	<b>Management Actions</b>
<p><b>Provide appropriate information and educational materials to increase public awareness of recreational opportunities, use restrictions, safety concerns, and natural and cultural resources.</b></p>	<p><b>Emphasize Public Education</b> - While demands on recreational uses will continue to increase, public education will likely lead to less user conflicts, a decrease in the destruction of wildlife and riparian habitats, and an increase in safety standards (see Recreation Resources - Recreation).</p> <p><b>Develop “Watchable Wildlife” sites</b> - Develop “Watchable Wildlife” sites in concert with the statewide Watchable Wildlife Program administered by the Washington Department of Transportation and WDFW (see Recreation - Other Recreational-Related Activities).</p> <p><b>Trash Policy</b> - Promote “pack-in/pack-out” waste management in visitor brochures located in the Visitor Information Center and post signs throughout the management area(see Recreation - Dispersed Camping).</p> <p><b>Develop Interpretive Program</b> - Develop a public education and interpretive program, in the Northrup Canyon Natural Area, to increase the public’s awareness of Banks Lake natural resources, management problems and concerns, and the area’s high desert environment and fragility. The interpretive program envisioned will focus on the area’s unique plant communities, geology, wildlife, and historic/cultural features.</p> <p><b>Post Signs</b> - Install signs and provide information (i.e., pamphlets, maps, and displays) to advise visitors of recreation opportunities, management policies, regulations/restrictions, road closures, etc. in the management area.</p> <p><b>Provide Signs</b> - Provide signs to all developed and “designated” dispersed recreation areas at key road intersections, and illustrate available access routes on public information maps (see Recreation - Dispersed Camping and Developed Recreation).</p> <p><b>Develop a Visitor Guide/Map</b> - Develop an overall visitor guide/map for the Banks Lake area. The guide will be a useful tool to direct visitors to designated boat-in camping areas, dispersed camping areas, developed recreation area facilities and services, points of interest, etc.</p> <ul style="list-style-type: none"> <li>- Provide information on motorized travel restrictions (i.e., permanent and seasonal road closures) and other</li> </ul>

**Table 9.1**  
**Public Information/Awareness Management**  
**Goals and Actions for Public Information/Awareness**

<b>RMP Public Information/Awareness Goals</b>	<b>Management Actions</b>
	applicable regulations; and guidance on the proper disposal of human wastes, pack-in/pack-out, fire use, and camping etiquette.
<b>Determine the success of the management action, reevaluate how well the action met the goal, determine the success of management action.</b>	<b>Monitor and Evaluate</b> - Monitor and evaluate the success of the management action; if necessary, adjust the specific methods and techniques employed when an initiative is not meeting the RMP goal. Follow up with spatial monitoring using GIS to manage the natural resource database and assist in management decisions by conducting a GIS update, across the management area, at least every 10 years.

\*Management actions that are included in response to existing laws, regulatory requirements, management agreements, or Reclamation policy.



# **CHAPTER 10 MANAGEMENT PRESCRIPTIONS FOR PUBLIC HEALTH AND SAFETY**

## **10.1 OVERVIEW**

The Desired Condition for Banks Lake, referred to as Alternative B in the EA, was chosen to address the long-term needs of the public and Banks Lake management agencies by supporting the natural, cultural, and recreational resources of the area. Specific management goals outlined in the RMP were developed in response to concerns identified during the EA scoping process and based on information from the EA resource inventory. The following chapter summarizes the existing recreation resource management situation, lists the recreation resource goals for Banks Lake under the Desired Condition, and describes the management actions needed to reach those goals.

## **10.2 EXISTING PUBLIC INFORMATION/AWARENESS MANAGEMENT SITUATION**

As previously mentioned, the SPRC and the WDFW manage the Banks Lake area with oversight by Reclamation's Ephrata, Washington, field office. These agencies manage land use, recreation, and fish and wildlife resources under existing federal and state laws, policies and land use agreements including those defined in Chapter 3 of this plan, Agency Coordination and Standards:

### **Management and Infrastructure**

- 1) Provide "minimum basic" sanitation facilities (i.e., seasonal portable toilets or permanent vault toilets) where human wastes pose a public health concern (see Recreation Resources - Resource Protection and Enhancement).

### **Budget**

- 1) Current budget requirements have not been identified.

### **Public Access**

- 1) Provide accessible facilities for persons with disabilities in all new developments or redevelopments as required by section 504 of the Architectural Barriers Act.
  - Continue to provide a fishing pier for persons with disabilities in Coulee City Community Park.
  - Work with volunteer groups to provide an accessible fishing jetty at North Park.
- 2) Control or eliminate dispersed camping in environmentally sensitive areas with appropriate site improvements, access, and/or seasonal restrictions.

### 10.3 DESIRED CONDITION

The following management actions were developed to achieve the Desired Condition for *Public Health and Safety* resources in the Banks Lake area and are meant as additions to the existing resource management activities. Table 10.1 through 10.3 summarize the *Public Health and Safety* resource goals and management actions necessary to implement them.

**Table 10.1**  
**Public Health and Safety Management Goals and Actions**  
**for Management and Infrastructure**

<b>RMP Management and Infrastructure Goals</b>	<b>Management Actions</b>
<p><b>Develop, clarify, and/or formalize appropriate regulations and/or use restrictions. Ensure the protection of the public, public resource values, and facilities.</b></p>	<p><b>*Encourage Volunteer Programs</b> - Encourage volunteer programs to accomplish resource management objectives (see Natural Resource - Wildlife Habitat).</p> <p><b>Identify Boat-In Camping Areas</b> - Specifically designate and manage boat-in camping areas and identified these areas in visitor brochures and on recreation signs/map displays installed at Banks Lake (see Recreation Resources - Dispersed Camping Areas).</p> <p><b>Manage Existing Material Sites</b> - Manage existing material sites for long-term use by government agencies and state/local road departments.</p> <p><b>Avoid New Material Sites</b> - Avoid the establishment of new material sites unless no other feasible alternative exists to meet the identified material need or use (see Natural Resources - Cultural).</p> <p><b>*Submitting Environmental Reports</b> - Because Reclamation is responsible for compliance with the NEPA, prior to any action which will modify the environment, the State will submit environmental reports as directed by Reclamation. No modification of the environment will be authorized without written approval from Reclamation.</p> <p><b>Remove Trash Dumps</b> - Remove trash dumps located in FWS Units 7, 8, 9, 14, 17, and 18 (see Recreation - Visuals).</p>
<p><b>Determine the success of the management action, reevaluate how well the action met the goal, determine the success of management action.</b></p>	<p><b>Monitor and Evaluate</b> - Monitor and evaluate the success of the management action; if necessary, adjust the specific methods and techniques employed when an initiative is not meeting the RMP goal. Follow up with spatial monitoring using GIS to manage the natural resource database and assist in management decisions by conducting a GIS update, across the management area, at least every 10 years.</p>

\*Management actions that are included in response to existing laws, regulatory requirements, management agreements, or Reclamation policy.

**Table 10.2**  
**Public Health and Safety Management**  
**Goals and Actions for the RMP Budget**

RMP Budget Goals	Management Actions
<p><b>To secure adequate funding so the RMP can be implemented.</b></p>	<p><b>*Implement a User Fee</b> - Identify and implement a fee structure, within current legal constraints, to generate additional revenues for SPRC and WDFW operation, maintenance, and management functions (see Recreation - Recreation Sites and Improvements).</p> <p><b>Improve Facilities</b> - Install a permanent vault toilet and provide centralized trash collection at the Osborn Bay SE Boat Launch when use dictates the need. The existing WDFW launch site will become a “fee area” managed by the SPRC. East of the boat launch, the area will be closed to dispersed camping and managed for day use only until the need for additional campsites warrants the development of a primitive campground at this location (see Recreation Resources - Recreation Sites and Improvements).</p> <p><b>*Seek Funding</b> - Seek funding to survey and accurately delineate the vegetation/habitat types found at Banks Lake (see Natural Resources - Wildlife Habitat).</p>
<p><b>Determine the success of the management action, reevaluate how well the action met the goal, determine the success of management action.</b></p>	<p><b>Monitor and Evaluate</b> - Monitor and evaluate the success of the management action; if necessary, adjust the specific methods and techniques employed when an initiative is not meeting the RMP goal. Follow up with spatial monitoring using GIS to manage the natural resource database and assist in management decisions by conducting a GIS update, across the management area, at least every 10 years.</p>

\*Management actions that are included in response to existing laws, regulatory requirements, management agreements, or Reclamation policy.

**Table 10.3**  
**Public Health and Safety Management**  
**Goals and Actions for Public Access**

<b>RMP Public Access Goals</b>	<b>Management Actions</b>
<b>Provide appropriate and safe access to Reclamation lands.</b>	<b>Discourage Trespassing</b> - Identify and abate unauthorized uses/trespass violations on Reclamation lands. Based on regular surveillance of lands and resources where a high probability of unauthorized uses exist (e.g. adjacent to private croplands), detect, confirm and abate, either by authorization or termination, all unauthorized uses or trespass violations.
<b>Determine the success of the management action, reevaluate how well the action met the goal, determine the success of management action.</b>	<b>Monitor and Evaluate</b> - Monitor and evaluate the success of the management action; if necessary, adjust the specific methods and techniques employed when an initiative is not meeting the RMP goal. Follow up with spatial monitoring using GIS to manage the natural resource database and assist in management decisions by conducting a GIS update, across the management area, at least every 10 years.

\*Management actions that are included in response to existing laws, regulatory requirements, management agreements, or Reclamation policy.

## **CHAPTER 11 ENVIRONMENTAL COMMITMENTS**

### **11.1 MITIGATION MEASURES FOR THE DESIRED CONDITION**

In addition to the management actions described in Chapters 4-10, the following mitigation actions are also considered to be commitments being made by Reclamation. These commitments are denoted by a ■ symbol. Other specific mitigation measures were recommended by USFWS in the CAR, which was prepared in July 2000; they are depicted with a □ symbol.

#### **Management Actions for Agency Coordination**

- Both WDFW and SPRC will finalize and implement management plans for the areas under their jurisdiction for management actions.
- Before transferring lands from Reclamation to private entities, determine important habitat types and protect them with an easement or eliminate them from the transfer.
- When dealing with the construction of various projects, the responsible state agency will receive additional review and evaluation from the USFWS under the Fish and Wildlife Coordination Act.

#### **Management Actions for Air Quality**

- Standard measures will be required of contractors to reduce dust from construction operations.
- Burning materials will be permitted only when atmospheric conditions are considered favorable by appropriate state or local air pollution or fire authorities.
- Where open burning is permitted, burn piles will be constructed to reduce smoke.

#### **Management Actions for Soil and Water**

- Several procedures will be used as necessary to prevent and minimize erosion and siltation during construction and during the period needed to reestablish permanent vegetative cover on disturbed sites. Clearing schedules will be arranged to minimize the exposure of soils. Final erosion control and site restoration measures will be initiated as soon as an area is no longer needed for construction, stockpiling, or access.
- Short-term effects such as increased land or shoreline erosion in or near recreation sites will be minimized by adhering to Best Management Practices (BMPs) during construction. These BMPs will help minimize erosion and prevent sediment-laden runoff from leaving the construction site. Strict adherence to BMPs will control and reduce adverse construction- and operation-related soil effects. Fill placement and sediment removal operations below the reservoir high water line will occur when the reservoir pool is at its lowest elevation.

- The two perennial streams, entering from the northwest, will be added to the wetland/riparian areas, which will be closed to grazing.
- Water quality will be protected by avoiding construction activities during wet periods of the year and through the use of proper construction techniques and procedures to keep silt out of Banks Lake and other drainages.
- Standard mitigation measures will be required of contractors during facility construction operations. Construction specifications will require construction activities to be performed by methods that prevent the entrance or accidental spillage of contaminants and other objectionable pollutants into surface waters. Excavated materials will not be stockpiled or deposited near or on shorelines, streambanks, wetlands, or other watercourse perimeters where they could be washed away by high water or storm runoff, or encroach upon any sensitive areas.
- Construction activities below the reservoir high water line (i.e., boat ramp construction or improvements) will be scheduled when the reservoir is at its lowest elevation (typically from November through January) to minimize turbidity caused by lake sediment disturbances. Construction specifications will also require riprap and other materials used for shoreline erosion control or jetties to be free of contaminants and not contribute to reservoir turbidity.
- The potential for petroleum product spills and water quality contamination due to the two boat fueling stations will be minimized by adhering to AST safety program requirements. Safety requirements for SPRC's AST program include: providing overfill and fuel level indicators; protection from auto impact and excessive solar insolation; adequate support structure with retainment to guard against bank slippage; providing mechanisms to guard against back-siphonage or spillage as a result of damage or dispenser switch malfunction; and locking mechanisms to all caps, openings and ports to prevent unauthorized use.
- Only EPA registered herbicides authorized for water application and with known low toxicities to fish and wildlife will be authorized for use. Herbicides that are highly toxic to people, fish or wildlife will be prohibited. This will apply to the Eurasian water milfoil control program proposed near boat ramps, courtesy docks, and public swimming areas as well as to noxious weed control program. Such a provision will be required in all new or renewed land use agreements issued by Reclamation, the SPRC or WDFW.

#### **Management Actions for Vegetation**

- Some mitigation actions for various adverse impacts (existing and potential future impacts) will include restoration of native vegetation in certain places in the management area (e.g. native bunchgrasses and forbs in shrub-steppe and riparian areas and along shorelines).
- Ensure a complement of mature cottonwoods are maintained along the Banks Lake shoreline and conditions are sufficient to provide for long-term

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propagation and growth to ensure the presence of future mature cottonwoods.

- Conduct additional surveys for Ute ladies'-tresses on any potential construction sites located along the two perennial streams which enter Banks Lake from the northwest or any springs or seeps in the management area.
- Continue to update the GIS vegetation map to account for changes in the habitat types over time.
- The use of native species or non-invasive species will be used whenever possible for revegetation efforts to maximize the potential to restore revegetated areas to high quality habitat beneficial to wildlife.
- In conjunction with the 100-acre land disposal proposed near Coulee City, the wetland area near the substation and a sufficient buffer (a minimum 100-foot buffer around the wetland perimeter) will be retained under Reclamation jurisdiction. The centrally located 0.3-acre wetland will be protected and preserved under Washington State law, the Grant County Comprehensive Plan, and the Growth Management Act which require local jurisdictions to designate and adopt development regulations that protect wetlands.
- Construction specifications will require contractors to preserve the natural landscape and prevent any unnecessary destruction, scarring, or defacing of the natural surroundings in the work vicinity. All trees, shrubs and other vegetation will be preserved and protected from construction operations and equipment except where clearing operations are required for permanent structures, approved roads, or excavation operations. All maintenance yards, field offices, and staging areas will be arranged to preserve trees and vegetation to the maximum practicable extent, and all disturbed areas will be reclaimed.
- Critical environmental areas (i.e., stream corridors, wetlands, riparian areas, Ute ladies'-tresses orchid habitat, and steep slopes) will not be used for construction equipment or material storage or stockpiling; construction staging or maintenance; or temporary access roads. Damage to critical area vegetation will be strictly prohibited or limited only to areas required for construction activities when no other alternative exists.
- Upon the completion of construction, any land disturbed but not permanently occupied by new facilities will be graded to provide proper drainage and blend with the natural contours of the land, covered with topsoil stripped from construction areas, and revegetated with plants native to the area and beneficial to wildlife. Native plantings will be required outside the developed footprints established for the SRSP campground, Coulee City, and golf course expansion projects.
- The final recommended composition of plant species, seeding rates, and planting dates will be determined in consultation with the WDFW and FWS (where applicable or appropriate). The species to be used in site restoration and revegetation will be matched for soil drainage, climate, shading,

resistance to erosion (slope of site), and vegetation management goals. Disturbed wetlands and riparian areas will be revegetated with wetland and riparian species.

- Uplands will be revegetated to the native vegetative community appropriate for the site's soil type, topographic position, and elevation. Trees and shrubs appropriate for site conditions and surrounding vegetation types also will be included in the reclamation plant list for uplands.

#### **Management Actions for Fisheries**

- Where possible, restrict the use of personal water craft (PWC) during fish spawning seasons.
- Determine the impact of fishing tournaments on fish populations at Banks Lake and modify the event if necessary.
- During final project layout and design, site-specific erosion and sediment control measures will be identified and incorporated into the project's construction specifications, reducing sediment delivery to the lake. Construction sites will be revegetated and riparian areas near shorelines will be planted with trees and shrubs to provide shade and habitat for fish and near-shore wildlife. Projects built below the reservoir high water line will be constructed when the reservoir pool is at its lowest elevation to avoid damage to fish spawning and rearing habitat caused by the release of sediment into the lake or increases in turbidity.
- Short-term effects such as increased shoreline erosion in or near construction sites will be minimized by adhering to Best Management Practices (BMPs) during project construction. During final layout and site design, measures to minimize asphalt surface runoff and the potential for pollutants (e.g. oil) entering the lake will also be identified and incorporated into the design.
- Herbicides used for the control of Eurasian water milfoil and purple loosestrife will be selected for their low toxicity to aquatic wildlife and fish.
- Additional studies will be conducted to determine fishing tournament impacts at Banks Lake. Based on study findings, the tournament venue will be modified or curtailed as necessary.

#### **Management Actions for Wildlife**

- Initiate a study to determine the reproductive success of the western grebes in the management area to determine the level of management required to protect these birds.
- Survey for pygmy rabbits in the shrub-steppe communities and collect baseline data on population dynamics.
- Establish speed restrictions or seasonally close sensitive areas during the nesting and rearing season in the Devils Punch Bowl for migratory bird species.



- Ensure the Climbing Management Plan (CMP) provides protection for wildlife species (i.e. raptors) by guiding climbing activities away from important nesting areas during the spring and early summer.
- In conjunction with the 100-acre land disposal proposed near Coulee City, the wetland area near the substation and a sufficient buffer (a minimum of 100-feet will be required around the wetland perimeter) will be retained under Reclamation jurisdiction. The centrally located 0.3-acre wetland will be protected and preserved under Washington State law and the Grant County Comprehensive Plan which specifically requires the protection of wetlands and their ecological values.
- Standards will be developed for determining grazing management changes, monitoring protocols, and schedules.
- A wildfire management plan will be developed.
- Reclamation will require that WDFW and SPRC develop and implement specific wildlife management plans for the areas under their jurisdiction.
- Reclamation will coordinate closely with the SPRC and BLM to ensure potential impacts to Northrup Canyon resources from RMP implementation are either avoided or minimized.
- Actions, such as the construction of recreation facilities, will receive additional review and evaluation from the FWS.
- Any new construction will be scheduled to avoid impacts during critical wildlife periods (e.g. wintering, nesting and/or breeding, hibernation, or juvenile dispersal periods).
- Areas of native plant cover will not be used as staging areas for construction activities. All areas disturbed by construction activities will be reseeded using a native seed mixture beneficial to wildlife.

#### **Management Actions for Recreation**

- At Barker Flats, the western half of the unit (rather than the eastern half) will be closed to dispersed camping to protect sensitive species and habitats.
- Manage human activities closely to reduce the risk of fire in areas where fire is not part of the natural process.
- Give the higher value shrub-steppe habitats special designation and long-term protection by eliminating motorized travel in the 130-acre ORV area. This area will be reduced to 80-acres.

#### **Management Actions for ITAs**

- Reclamation will work with the affected Tribal governments if specific ITAs are identified.

#### **Management Actions for Noise**

- During project-specific construction activities, contractors will be required to comply with applicable federal, state, and local laws and regulations

concerning the prevention and control of noise emissions. Contractors will be required to use reasonable available methods and devices to control, prevent, and reduce noise emissions including no construction restriction from dusk to dawn in consideration of the sensitivity of state park campground users and/or nearby residents.

## **CHAPTER 12**

### **RESOURCE MANAGEMENT PLAN IMPLEMENTATION**

#### **12.1 ACCURACY**

This RMP will provide long-term management direction for land and water resources in the Banks Lake Management area for the next 10 to 15 years. In the interim, the RMP will be reviewed, amended, and updated as needed to ensure the plan remains current and continues to fulfill its intended purpose over the next decade. Modifications to the RMP will reflect changing conditions, new research and information, and budget constraints. The remainder of this chapter explains *how* Banks Lake will move from the “Current Management Situation” to the “Desired Condition”; *when* the plan will come into effect; and *who* will be responsible for managing and monitoring the results. The RMP will authorize the coordination of adaptive management to ensure all future decisions in the planning area will include a multiple-use approach to natural resources by making sure the goals of the RMP always reflect the management actions being implemented from the Desired Condition.

#### **12.2 IMPLEMENTATION**

Execution of the RMP requires a transformation from the Current Management Situation to the Desired Condition over the next 10 to 15 years; successful implementation will require *action*. Together, land managers and resource specialists will pursue the Management Actions listed in the Desired Condition when the RMP is accepted and adopted by Reclamation. During the implementation process, the Banks Lake management area will be driven by existing federal, state, and local laws, in addition to administrative and agencies policies, regulations, and guidelines. Site-specific environmental compliance will be accomplished prior to initiating any ground disturbing activities. The process will be *observable* and the outcome will yield *visible* results, as each management recommendation (for every resource) is accomplished. Since resources are not limited to physical and administrative boundaries, implementation of the RMP will require cooperation and coordination from regulatory agencies with oversight from Reclamation (see Jurisdictional Boundaries). Commitment to working towards the Desired Condition is needed if the RMP is to be successful.

#### **12.3 BUDGET CONSIDERATIONS**

Adequate funding is necessary to fulfill and maintain all the obligations of the RMP. Since budget constraints may limit the number and types of management actions occurring in a given year, it is critical to schedule, prioritize, and plan projects for the following fiscal year. If a management activity within a specific project is not adequately included in the RMP and will have an environmental effect, then the activity will be evaluated using the NEPA process. These smaller NEPA analyses will be subjected to public involvement and tiered to the EIS and the RMP as a supplemental environmental report. Whereas, management actions adequately covered in the RMP, which are not considered environmentally significant, will warrant a

categorical exclusion and will not require additional environmental analysis. The NEPA process will be incorporated in the budget of any management action requiring further environmental analysis. The availability of funding for a monitoring program, following the implementation of management actions requiring an EA or an EIS, will also be considered (see Monitoring).

## **12.4 DATABASE MANAGEMENT**

In addition to the EA and FONSI, the RMP will be linked to a corresponding GIS (Geographic Information Systems) resource database; where each resource will have its own stand-alone attributes (e.g. point, line, or polygon). Specifically, the GIS natural resource database will be designed to provide individual coverage for each resource, or type of data and will be overseen by Reclamation. Being a powerful management tool, a GIS resource database has many purposes and is efficiently capable of the following tasks: 1) managing past and present resource data in a uniform manner, 2) assisting in resource data inventory to be shared across agencies, 3) providing the base line for modeling past resource trends or future predictions, 4) managing and tracking resource funds, 5) identifying spatial problems and their solutions using an overlay of multiple resources, 6) supporting policy decisions regarding resources, and 7) short and long term resource monitoring (see Monitoring Section 11.5). The information contained in the database will also expand and contract with the RMP as the management needs change over time. It is expected some management priorities will decrease after the implementation of the RMP while other issues may become a greater concern as a result of an extenuating circumstance, or circumstances. For instance, the number of visitors drastically increases or decreases; a species becomes listed or delisted; degradation in water quality; and so on. Therefore, it is imperative the RMP and the database evolve together so land managers can continue to determine the effectiveness of a proposed project, implement additional projects, or revamp existing projects. Reclamation will oversee the database and ensure it serves the goals of the RMP.

## **12.5 MONITORING**

A monitoring program will be initiated directly after implementation of the management actions and the additional environmental commitments to inform Reclamation and the public of the progress being completed. Monitoring can also determine the effectiveness of a mitigation strategy, particularly when the outcome of a specific action is unknown. Similar to the RMP, the monitoring program will be broken down by resource, so a comparison of conditions is possible. This type of evaluation is used as a control, or standard, to examine the difference between the previous condition and the Current Management Situation by determining the following criteria.

- 1) Are the management actions concerned with the project meeting planned goals and objectives of the RMP?
- 2) Are existing and emerging public issues and management concerns being addressed?

- 3) Are the costs of implementing the RMP as predicted?
- 4) Are the RMP's standards (e.g. management plans and biological opinions) being followed?
- 5) Are the effects of implementing the RMP occurring as predicted?
- 6) Are the activities on nearby lands, managed by other agencies, being affected differently than what was expected?
- 7) If there is a need to revise or correct the RMP?

### 12.5.1 Feedback Loop

Being perhaps the most important component of the RMP, the monitoring program will be incorporated into the project design and funding requirements for the management actions and the additional environmental commitments requiring follow up environmental analysis (see Budget). Projects and/or additional environmental commitments will not be implemented if they cannot be monitored. Because agencies are funded on an annual basis, it is unlikely projects will continue to receive funding for long-term monitoring. This shortcoming undermines the purpose of monitoring and can result in indiscriminate resource management that is financially wasteful. Monitoring programs may require adjustments to the management action to fulfill the purpose and need of the project; these recommendations, known as a feed-back loop, include the following course of actions.

- 1) No action needed; monitoring reflects goals, objectives, and standards being achieved as predicted.
- 2) Adjust management action and reimplement to the area; adjust EA or EIS accordingly with an amendment.
- 3) Revise the project schedule.
- 4) Initiate revision of the RMP.

## 12.6 ASSESSMENT

An effective monitoring program will be quantitative and able to measure the *extent* and the *direction* the management activity has on a resource. The assessment process will be objective to ensure the data collected is meaningful and actually tracks the effects of an action over time. An interdisciplinary team of resource specialists is particularly helpful when determining the management objective, the criteria, the issues, and the indicators needed to evaluate the effects of a management action on a given resource. The following is a hypothetical exercise to demonstrate the various aforementioned components of monitoring.

### 12.6.1 Scenario

For example, in the Natural Resource section (under the heading Management Actions for Wildlife Habitat), one such action states, “to enhance fish and wildlife habitats where the potential exists.” The previous statement is the management *objective*. However, predetermined management *criteria* are required to determine if the *objective* has been met or not, after implementation of a given management action. Additionally, the *criteria* will be measurable (e.g. must maintain 5 trees per acre, at least 40 feet tall, in areas within 100 feet of the reservoir where the potential exists). An example of non-measurable criteria will be to increase the number of tall trees adjacent to the reservoir. Whereas, the *issue*, being immeasurable, is what is being effected by the management action. In this exercise, the *issue* will be a specific fish and/or wildlife species (representing a group of species) found in a given habitat type. The issue is not simply trees, wildlife, or fish because that will imply an examination of all trees, all wildlife, and all fish. The term *issue* refers to the specific resource being effected and does not have to be biotic (e.g. water issues, cultural issues, safety issues, etc.). *Issue* selection of specific species can be motivated by a number of factors including environmental policy concerning the species status or its popularity (Kellert 1984). Conversely, *indicators* are measurable attributes that directly or indirectly relate back to how the *issue*, or species, is responding to the management activity.

The criteria are met by directly measuring the number and height of trees, but how this management action actually affects fish and wildlife habitat is unknown without monitoring the indirect variables. Some specific examples of indirect indicators for this scenario include (but are not excluded to):

- 1) Is the population abundance of selected fish and wildlife issue species increasing or decreasing in the surrounding habitat attempting to be enhanced by a management action?
  - a) Indicator: Population Abundance
  - b) Issue: Fish Species X and Raptor Species Y
- 2) Is the water temperature conducive for the issue aquatic species (assuming the species requires shade provided by the neighboring trees)?
  - a) Indicator: Temperature
  - b) Issue: Water
- 3) Are the selected species using the habitat for its intended management purpose (e.g. breeding)?
  - Are the numbers of spawning sites for fish species X increasing or decreasing?
  - Are the numbers of nests for raptor species Y increasing or decreasing?
    - a) Indicator: Number of Sites for fish species X and nests for raptor species Y
    - b) Issue: Land Use for Species X and Y

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Data collected using combinations of direct and indirect indicators (before and after the activity) is needed to determine the *extent* the management activity has on a resource. Understanding *direction* through monitoring can determine if the action is positively affecting the resource, negatively affecting the resource, or having no effect at all. A protocol will be developed for sampling techniques used for monitoring purposes (Friend et. al 1994). This method will consider factors such as: frequency, timing, and repeatability of sampling.

The assessment process (i.e. determining the management objectives, the criteria, the issues, and the indicators) will be applied before implementation, during the design phase of the NEPA process, prior to initiating EAs and EISs. The very same approach is also necessary, after implementation, during the monitoring stage. The purpose of this application in planning is two fold: (1) it will help clarify preliminary NEPA course of action and (2) it will result in productive resource management in the final phase. Whether pre- or post processing, land managers can now rely on the feedback loop to determine if further action is necessary, or if the management initiatives have achieved their intended purpose (see Feedback Loop) (Shipley Group 2000).

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## CHAPTER 13 LIST OF PREPARERS

This is the list of individuals who either provided information and/or wrote sections of the RMP for Banks Lake.

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Jonathan Beck	M.S. Biology B.S. Wildlife and Fisheries Assistant Biologist URS Corp. - 3 years Biological Resources Management - 8 years	Biological Resources Coordinator
Carrie King	B.S. Biology Vegetation URS Corp. - 1 year Biological Resource Management - 3 years	Vegetation, Coordination of Document Preparation.
Dautis Pearson	B.A. Biology Senior Planner/Office Manager URS Corp. - 2 years Land Management Planning USDA FS - 6 years NEPA/ESA Coordinator USDA FS - 6 years	Project Coordinator Socioeconomics
Tamara Shapiro	M.S. Landscape Architecture B.S. English Planner URS Corp. - 3 years	Visual Resources Land Use/Review
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Mark DeLeone	Bureau of Reclamation	Cultural Resources
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**RECLAMATION**

<b>Name</b>	<b>Qualifications</b>	<b>Activity</b>
Lola Sept	Bureau of Reclamation	Regional Office NEPA Guidance
Dave Kaumheimer	Bureau of Reclamation	Area Office NEPA Coordination
Jim Blanchard	Bureau of Reclamation	RMP Activity Manager

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## **Appendix A**

### **Environmental Commitments**

In addition to the management actions described as part of the alternatives, the following mitigation actions are considered to be commitments being made by the Bureau of Reclamation.

#### **Air Quality**

- Standard measures would be required of contractors to reduce dust from construction operations
- Burning materials would be permitted only when atmospheric conditions are considered favorable by appropriate state or local air pollution or fire authorities.
- Where open burning is permitted, burn piles would be constructed to reduce smoke.

#### **Soil and Water**

- Several procedures would be used as necessary to prevent and minimize erosion and siltation during construction and during the period needed to reestablish permanent vegetative cover on disturbed sites. Clearing schedules would be arranged to minimize the practical exposure of soils. Final erosion control and site restoration measures would be initiated as soon as an area is no longer needed for construction, stockpiling, or access.
- Short-term effects such as increased land or shoreline erosion in or near recreation sites would be minimized by adhering to Best Management Practices (BMPs) during construction. These BMPs would help minimize erosion and prevent sediment-laden runoff from leaving the construction site. Strict adherence to BMPs would control and reduce adverse construction- and operation-related soil effects. Fill placement and sediment removal operations below the reservoir high water line would occur when the reservoir pool is at its lowest elevation.
- Water quality would be protected by avoiding construction activities during wet periods of the year and through the use of proper construction techniques and procedures to keep silt out of Banks Lake and other drainages.
- Standard mitigation measures would be required of contractors during facility construction operations. Construction specifications would require construction activities to be performed by methods that prevent the entrance or accidental spillage of

contaminants and other objectionable pollutants into surface waters. Excavated materials would not be stockpiled or deposited near or on shorelines, streambanks, wetlands, or other watercourse perimeters where they could be washed away by high water or storm runoff, or encroach upon any sensitive areas.

- Construction activities below the reservoir high water line (i.e., boat ramp construction or improvements) would be scheduled when the reservoir is at its lowest elevation (typically from November through January) to minimize turbidity caused by lake sediment disturbances. Construction specifications would also require riprap and other materials used for shoreline erosion control or jetties to be free of contaminants and not contribute to reservoir turbidity.
- The potential for petroleum product spills and water quality contamination due to the two boat fueling stations proposed under Alternative D would be minimized by adhering to AST safety program requirements. Safety requirements for SPRC's AST program include: providing overfill and fuel level indicators; protection from auto impact and excessive solar insolation; adequate support structure with retainment to guard against bank slippage; providing mechanisms to guard against back-siphonage or spillage as a result of damage or dispenser switch malfunction; and locking mechanisms to all caps, openings and ports to prevent unauthorized use.
- Only EPA registered herbicides authorized for water application and with known low toxicities to fish and wildlife would be authorized for use. Herbicides that are highly toxic to people, fish or wildlife would be prohibited. This would apply to the Eurasian water milfoil control program proposed near boat ramps, courtesy docks, and public swimming areas as well as to noxious weed control program. Such a provision would be required in all new or renewed land use agreements issued by Reclamation, the SPRC or WDFW.

## **Vegetation**

- The use of native species or non-invasive species would be used whenever possible for revegetation efforts to maximize the potential to restore revegetated areas to high quality habitat beneficial to wildlife.
- In conjunction with the 100-acre land disposal proposed near Coulee City, the wetland area near the substation and a sufficient buffer (a minimum 100-foot buffer around the wetland perimeter) would be retained under Reclamation jurisdiction. The centrally located 0.3-acre wetland would be protected and preserved under Washington State



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law, the Grant County Comprehensive Plan, and the Growth Management Act which require local jurisdictions to designate and adopt development regulations that protect wetlands.

- Construction specifications would require contractors to preserve the natural landscape and prevent any unnecessary destruction, scarring, or defacing of the natural surroundings in the work vicinity. All trees, shrubs and other vegetation would be preserved and protected from construction operations and equipment except where clearing operations are required for permanent structures, approved roads, or excavation operations. All maintenance yards, field offices, and staging areas would be arranged to preserve trees and vegetation to the maximum practicable extent, and all disturbed areas would be reclaimed.
- Critical environmental areas (i.e., stream corridors, wetlands, riparian areas, Ute ladies'-tresses orchid habitat, and steep slopes) would not be used for construction equipment or material storage or stockpiling; construction staging or maintenance; or temporary access roads. Damage to critical area vegetation would be strictly prohibited or limited only to areas required for construction activities when no other alternative exists.
- Upon the completion of construction, any land disturbed but not permanently occupied by new facilities would be graded to provide proper drainage and blend with the natural contours of the land, covered with topsoil stripped from construction areas, and revegetated with plants native to the area and beneficial to wildlife. Native plantings would be required outside the developed footprints established for the SRSP campground and golf course expansion projects.
- The final recommended composition of plant species, seeding rates, and planting dates would be determined in consultation with the WDFW and FWS (where applicable or appropriate). The species to be used in site restoration and revegetation would be matched for soil drainage, climate, shading, resistance to erosion (slope of site), and vegetation management goals. Disturbed wetlands and riparian areas would be revegetated with wetland and riparian species.
- Uplands would be revegetated to the native vegetative community appropriate for the site's soil type, topographic position, and elevation. Trees and shrubs appropriate for site conditions and surrounding vegetation types also would be included in the reclamation plant list for uplands.

## **Fisheries**

- During project final layout and design, site-specific erosion and sediment control measures would be identified and incorporated into the project's construction specifications, reducing sediment delivery to the lake. Construction sites would be revegetated and riparian areas near shorelines would be planted with trees and shrubs to provide shade and habitat for fish and near-shore wildlife. Projects built below the reservoir high water line would be timed for construction to occur when the reservoir pool is at its lowest elevation to avoid damage to fish spawning and rearing habitat caused by the release of sediment into the lake or increases in turbidity.
- Short-term effects such as increased shoreline erosion in or near construction sites would be minimized by adhering to Best Management Practices (BMPs) during project construction. During final layout and site design, measures to minimize asphalt surface runoff and the potential for pollutants (e.g., oil) entering the lake would also be identified and incorporated into the design.
- Herbicides used for the control of Eurasian water milfoil and purple loosestrife would be selected for their low toxicity to aquatic wildlife and fish.
- Additional studies would be conducted to determine fishing tournament impacts at Banks Lake. Based on study findings, the tournament venue would be modified or curtailed as necessary.

## **Wildlife**

- In conjunction with the 100-acre land disposal proposed near Coulee City, the wetland area near the substation and a sufficient buffer (a minimum of 100-feet would be required around the wetland perimeter) would be retained under Reclamation jurisdiction. The centrally located 0.3-acre wetland would be protected and preserved under Washington State law and the Grant County Comprehensive Plan which specifically require the protection of wetlands and their ecological values.
- Standards would be developed for determining grazing management changes, monitoring protocols, and schedules.
- A wildfire management plan would be developed

- Reclamation would require that WDFW and SPRC develop and implement specific wildlife management plans for the areas under their jurisdiction.
- Reclamation would coordinate closely with the SPRC and BLM to ensure potential impacts to Northrup Canyon resources from RMP implementation are either avoided or minimized.
- Actions, such as the construction of recreation facilities, would receive additional review and evaluation from the FWS.
- Any new construction would be scheduled to avoid impacts during critical wildlife periods (e.g., wintering, nesting and/or breeding, hibernation, or juvenile dispersal periods).
- Areas of native plant cover would not be used as staging areas for construction activities. All areas disturbed by construction activities would be reseeded using a native seed mixture beneficial to wildlife.

### **ITAs**

- Reclamation will work with the affected Tribal governments if specific ITAs are identified.

### **Noise**

- During project-specific construction activities, contractors would be required to comply with applicable federal, state, and local laws and regulations concerning the prevention and control of noise emissions. Contractors would be required to use reasonable available methods and devices to control, prevent, and reduce noise emissions including no construction restriction from dusk to dawn in consideration of the sensitivity of state park campground users and/or nearby residents.

**Appendix B**  
**Coordination Act Report**



# United States Department of the Interior

FISH AND WILDLIFE SERVICE

*Eastern Washington Ecological Services Field Office*

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March 5, 2001

## MEMORANDUM

To: William D. Gray, Deputy Area Manager  
Bureau of Reclamation, Ephrata, WA

From: Mark Miller, Supervisor, U. S. Fish and Wildlife Service,  
Eastern Washington Ecological Services Office, Ephrata, WA

Subject: Section 7 Consultation for Proposed Resource Management Plans (RMP's) for  
Potholes Reservoir and Banks Lake - Columbia Basin Project  
FWS reference: 01-I-E0199

This is in regards to your memorandum of February 20, 2000, which we received in our office on February 28, 2001. You requested U. S. Fish and Wildlife Service (Service) concurrence with your determination that the Bureau of Reclamation's (Reclamation) Potholes Reservoir and Banks Lake RMPs "may affect, but are not likely to adversely affect" bald eagles. Your letter stated that the draft Environmental Impact Statements (EIS) for those two projects, which we received from Reclamation earlier, serve as the Biological Assessments (BA) for activities proposed by Reclamation. We note in the draft EIS's, that Reclamation would consult with the Service in the future for each of the individual development actions that may occur if the RMP is implemented. The Service does concur with your determinations of affect for the bald eagle from the proposed RMPs as currently described in the EISs.

This concludes informal consultation for species under the purview of the Service pursuant to Section 7 of the Endangered Species Act of 1973, as amended (Act). This project should be re-analyzed if new information reveals effects of the action that may affect listed species or critical habitat in a manner or to an extent not considered in this consultation; if the action is subsequently modified in a manner that causes an effect to the listed species or critical habitat that was not considered in this consultation; and/or, if a new species is listed or critical habitat is designated that may be affected by this project.

Should you have any additional questions regarding endangered species or your responsibilities under the Act, please contact Don Haley at (509) 754-8580.

Supervisor

CC: USFWS, Spokane, (Susan Martin)