

VOLUME II

APPENDIX F

DETAILED PHYSICAL DESCRIPTION OF PROJECT RESERVOIRS AND LANDS

***THE CENTRAL NEBRASKA PUBLIC POWER AND IRRIGATION DISTRICT
FERC PROJECT NO. 1417***

PHYSICAL DESCRIPTION OF PROJECT LANDS AND WATERS

This Appendix F provides a detailed description of Project lands and waters. This Appendix F may be modified from time to time as may be appropriate to reflect changes in Project lands and waters.

LAKE MCCONAUGHY

Lake McConaughy, 21 miles long and up to 4 miles wide, is the largest of the lakes in the Project, with 30,500 surface acres and 76 miles of shoreline. (For comparison, Johnson Lake, the largest lake on the canal system, has 2,500 surface acres.) The Lake McConaughy area includes the most diverse physical terrain and land and recreation uses. (See Land and Shoreline Management Classification Map 1 in LSMP Appendix A.)

The western portion of Lake McConaughy is shallow, with the North Platte River moving in winding streams through a vast wetland area. The lake reaches its maximum depth of 135 feet near the control structure of Central's Project. The dam is three miles long and forms the eastern border of the lake. The east-west orientation of the lake, with wetlands on the west and the dam to the east, has focused development, lake access, and recreation areas to occur along the north and south shores.

Grassy sandhills dominate the north shore of Lake McConaughy. The grasses that cover the sand hills hold much of the sand in place. Fine white sand beaches are present along the shorelines. Cottonwood trees line sandy beach pockets along the shoreline. High steep clay bluffs border approximately five miles of the south shoreline, beginning at the dam. Wind and waves sculpted the bluffs into steep cliffs with unusual formations. As the bluffs gradually decrease in height, terrain becomes similar to that of the north shore, with sandy grassland, rocky outcrops, and occasional sand beaches

Lake McConaughy supports diverse land uses along the shoreline, including residential development, fully developed campgrounds, primitive camping, commercial marinas, and a wildlife management area, as shown on Management Classification Map 1 in LSMP Appendix A. One of the distinctive features of the north side of the lake is the railroad tracks that run parallel to the entire north shoreline of the lake. Road access to the north shore is via Highway 92, which also runs parallel to the lake, but the railroad tracks limit direct road access. Central's Right of Way generally extends to the railroad right-of-way, except in a few areas. There are private residential subdivisions in these areas. Three small cabin-lease areas lie within the Project Boundary on the north side of the lake. One is located adjacent to the wildlife management area on the west end of the lake, the second is near the middle of the lake, and the third occurs in the cove closest to the dam. The only other leased residential site within Central's Right of Way is located near the dam on the south side of the lake.

Central leases the remainder of its property around the lake to the NGPC. The NGPC manages these lands either for public recreation or for wildlife management. The recreation areas managed by NGPC on the north shore range from primitive camping sites with no amenities to fully developed campgrounds with paved camper pads, electric and water hook-ups, restroom/shower buildings with hot water, and facilities accessible to the disabled. On the south shore, there is a narrow band of land between the shoreline and Central's Right of Way. There is limited road access via Highway 26, which lies anywhere from two to five miles from the shoreline. Because of the narrow strip of available land and the lack of road access, NGPC provides fewer recreation facilities on the south shore of the lake.

NGPC subleases parcels of its leased recreation land to private concessions that operate public recreation-related businesses around the lake. There are five concessions on the lake: three on the north shore, and two the south shore.

The Project Works classification area at the eastern end of the lake, includes Kingsley Dam, the powerhouse, offices, maintenance buildings, emergency spillway and other structures necessary for Central's operations. Housing for Central employees is also

located in this area. Central leases concession space in its office building providing restaurant and meeting facilities.

LAKE OGALLALA

Lake Ogallala lies below Kingsley Dam. It was created when sand was pumped from the riverbed to form the downstream side of the Dam, (see Management Classification Map 2 in LSMP Appendix A). It covers 650 surface acres and has approximately four miles of shoreline within Central's Project boundary. Only the "western half" of the lake is within the Project. The eastern arm of the lake is part of the Nebraska Public Power District's FERC Project 1835. Because cold water drawn from the bottom of Lake McConaughy feeds Lake Ogallala, the lake has the reputation of being one of the finest trout fishing sites in Nebraska.

Central classifies the majority of the Lake Ogallala shoreline as Resource Protection. Central leases the remainder of its property to NGPC. An eagle-viewing center constructed by Central, just east of the Kingsley Hydroelectric plant, is a popular attraction from mid-December through February, since large numbers of bald eagles come to feed on fish in the open water flowing through the Kingsley generating facilities. A point of land extending into the lake on the eastern shore contains a small grove of trees used by bald eagles for perching and roosting. The area across from the point is a mature wetland. NGPC maintains the area and has added a fishing pier accessible to the disabled and a bridge at the north end of the lake, along with camping facilities and public boat ramps.

THE SUPPLY CANAL SYSTEM

Central's Diversion Dam is located below the confluence of the North Platte and South Platte Rivers and east of the town of North Platte in Lincoln County, approximately 50 miles downstream of Lake McConaughy. The Diversion Dam diverts Platte River flow into the 75-mile long Supply Canal, which flows east through Lincoln, Dawson, and Gosper Counties providing surface water irrigation to Lincoln, Dawson, Gosper, Phelps, and Kearney Counties. The Supply Canal incorporates 27 dams and impoundments and

three 18-Megawatt hydroelectric power plants (Jeffrey, Johnson No. 1, and Johnson No. 2). The Supply Canal is monitored and repaired as needed throughout the system.

Central allows public access to the banks and waters of the Supply Canal system for fishing and wakeless boating. Bridges cross the Supply Canal; several are associated with county and state roads, and the others provide access for landowners on both sides of the canal or to Central's canal maintenance road.

Lincoln County

There are nine lakes on this stretch of canal between the diversion dam and Jeffrey Reservoir. The lakes differ only in size and accessibility. This part of the Plan will focus only on those lakes with surface areas greater than 20 acres and which are publicly accessible by land. Land-based activities such as nature photography, hiking, hunting, and picnicking are more common due to the size and steep slopes of the banks.

Boxelder Canyon Lake has 22 surface acres, with adjacent road access. (See Management Classification Map 3 in LSMP Appendix A) Except for the area adjacent to the road access, steep banks surround the remainder of the lake. Central has leased lands adjacent to the lake and inside the Project boundary to the NGPC for a wildlife management area.

Cottonwood Canyon Lake has 33 surface acres and direct road access from Highway S56A (see Management Classification Map 4 in LSMP Appendix A). Central provides one gravel public-access boat ramp at the lake. There are two agricultural leases within Central's Project boundary in this area.

Snell Canyon Lake has 53 surface acres (see Management Classification Map 6 in LSMP Appendix A). This lake is long and narrow, and the steep banks forming the shoreline make access difficult.

Jeffrey Reservoir, with 575 surface acres and 25 miles of shoreline, is the westernmost impoundment along the Supply Canal in Lincoln County with residential development (see Management Classification Map 8 in LSMP Appendix A). This reservoir is long, with numerous fingers and steep hillsides rising from the shoreline. The northern end of the reservoir has been subject to deposition from the eroded shorelines, as well as sedimentation from the Supply Canal as the water slows upon entering this lake.

The Project Works area, on the north end of the lake, incorporates the dam and powerhouse area, a permanent boat dock facility, several small residences and lodge Central uses for conferences and meetings. South of this area, the NGPC leases an area of shoreline that has a boat ramp, a pit toilet, and primitive camping. The remainder of the shoreline land use around the shore is either residential or undeveloped.

Jeffrey Reservoir's residential development is located at the northwest corner adjacent to the dam and along much of the southeastern shore. This area is accessible by Highway L56D and county roads. The shoreline on the west is almost inaccessible due to steep bluffs rising from the shoreline and lack of roads.

Dawson County

Dams built across the north ends of the canyons created the series of canyon lakes in Dawson County. These lakes vary in size, accessibility, and facilities. While there are ten lakes on this stretch of canal, this report will focus on Hiles Canyon Lake, the Midway Lakes, and Gallagher Canyon Lake. The smaller lakes in this chain have no facilities. As with most of the lands and waters within Central's Right of Way, these lakes are open for public recreational use, although access may be only on foot or by canoe.

Hiles Canyon Lake has 19 surface areas and is easily accessible by Hwy 47, which parallels this long, narrow lake (see Management Classification Map 9 in LSMP Appendix A).

The Midway Lakes may be considered six lakes, although only West Midway Lake, Central Midway Lake and East Midway Lake are labeled on Management Classification Maps 10 & 11 in LSMP Appendix A. (Central, Recreation Resources and Facilities, 1991).

West Midway Lake, with 116 surface acres, is very shallow and used mostly for hunting, fishing, and more passive types of recreation. Access to this property is limited, as the only unimproved road, access is through private property.

Central Midway is the largest of these lakes, with 341 surface acres and convenient road access to several sections of the lake. There are two leased residential developments inside the Project boundary. The adjacent property owner leases some trailers on the private property near the northwest corner of the lake. Recently, individual homes have been built near the shore on private land that abuts Central's Right of Way.

East Midway Lake, as shown on Management Classification Map 11 in LSMP Appendix A, appears as two lakes connected by a short span of canal. The western lake is approximately 82 surface acres, and the smaller, adjacent lake contains 22 surface acres. The western lake has one small area of leased residential cabins that are located within the Project boundary on the north edge of the lake. The high steep slopes of the lakeside areas constrain development.

Gallagher Canyon Lake has 182 surface acres of water and 15 miles of jagged shoreline, including one mile-long arm (see Management Classification Map 12 in LSMP Appendix A). The NGPC has leased land within Central's Project boundary for recreational access. This area is forested with evergreen and cottonwood trees and features primitive camping sites, a boat ramp, grills, toilets, and playground equipment. Fishing and canoeing are popular activities. Even though the lake is fairly large, due to its shallow water and narrow channels it is designated for wakeless boating only.

Plum Creek Canyon Lake has 252 surface acres, and while it has steep banks, they are not as high as those found on the Midway Lakes (see Management Classification Map 13 in LSMP Appendix A). Popular with water skiers, Plum Creek provides diverse water-related recreational opportunities for the general public.

The NGPC leases a small wildlife management area on the south shore and provides a boat ramp. Residential homes are scattered around the reservoir. Homes occur on private property and on Central owned lands, both within and outside the Project boundary. Central permits boating access for the leased homes. Homes on adjacent property of Plum Creek Canyon Lake are allowed water access subject to the Permitting Procedures. In many cases, property owners have constructed boathouses, boat docks, and/or steps down the banks to the water.

Johnson Lake is the largest lake along the Supply Canal, with 2,500 surface acres, and it is the only lake in the system that lies within two counties (see Management Classification Map 14 in LSMP Appendix A). The northern half of Johnson Lake is located in Dawson County, while the southern half of the lake and the canal are located in Gosper County.

Due to its location near Interstate 80, and its proximity to larger towns, such as Lexington, Cozad, Gothenburg, Holdrege, and Kearney, Johnson Lake has experienced intense residential development and has been "built out" for the past couple of decades. While the majority of residential homes around the lake are located on land leased from Central. There are three areas in the northwestern portion of the lake where homes occupy private property outside Central's Right of Way. Overall, residential development occupies the majority of the land adjacent to the Lake.

The NGPC leases two recreation areas from Central on Johnson Lake. Anglers and boaters use the NGPC recreation area on the western inlet canal heavily for fishing and boat access. The site includes handicapped fishing access. One side

of the inlet has improved campsites and restrooms, while the other side provides primitive camping. The second NGPC recreation site is located in the southeast end of the lake. This site has an extensive campground with excellent facilities, including restrooms and shower buildings, electric hook-ups, and access to the facilities for the handicapped. A swimming beach is near the campground at the southeast end of the lake, and is marked off with buoys during the summer months. Six recreation concessions on the Lake all have leases with Central. They include full service marinas, watercraft rentals, camping, gas, cabin rentals, R. V. hookups, and restaurant services.

Central designates the remaining areas around the lake as Project Works. The Project Works areas include the dam on the south end of the lake, and the canal channels on the east and west sides of the Lake. The Johnson Hydro 1 Powerhouse is located in the outlet canal to the east of the Lake. A golf course leases land within the Project boundary on the downstream side of the dam. Agricultural leases, a meeting facility lease, emergency medical services lease and an airstrip lease, for an agricultural spraying service, are also within the Project boundary.

Central has applied the RPC to one area on Johnson Lake and to part of the outlet canal area near Johnson Lake because of use by bald eagles and migratory waterfowl. The first site is the island in the southwestern portion of the lake, which has a few trees surrounded by shallow water. The second site is below the J-1 powerhouse east of the Johnson Lake outlet.

Gosper County

The Phillips and Little Knapple Lakes are small canyon lakes in Gosper County created by dams at the northern ends of the canyons (see Management Classification Maps 15-17 in LSMP Appendix A). This area of the canal system is predominantly used for hunting, fishing and other land and water-based recreational activities.

Phillips Lake is located just a short distance east of Johnson Lake below the J-1 powerhouse and is relatively small, with 32 surface acres (see Management Classification Map 15 in LSMP Appendix A).

East Phillips Lake has a surface area of 142 acres, with three long arms that reach south, away from the main body of the lake (see Management Classification Map 16 in LSMP Appendix A). The NGPC has leased land within Central's Right of Way at this lake for public access. This 13-acre public access site provides a boat ramp, primitive camping sites, and water for use by visitors.

Little Knapple Lake, the small water body above the J-2 powerhouse is the last lake inside the Project boundary before the Supply Canal returns to the Platte River (see Management Classification Map 17 in LSMP Appendix A).