

4.8. Aesthetic/Visual Resources

4.8.1. Introduction

The scenic value of the Project area is considered high. Chakachamna Lake is within a steep-sided glacial valley over 1,000 feet in elevation. At the outlet of Chakachamna Lake, the channel is defined by bedrock cliffs along the south side and the Barrier Glacier moraine on the north side. Most of the proposed Project works would not be visible to the general public. This section provides a summary of the information readily available on aesthetic and visual resources in the Project area.

4.8.2. Existing Aesthetic/Visual Resource Conditions

The scenic value in the remote Project area is considered high, and the Project area is generally in a pristine state (Hatch Energy 2008). Chakachamna Lake is within a steep-sided glacial valley over 1,000 feet in elevation. According to the Kenai Area Plan, two townships immediately east of Lake Clark National Park and encompassing the western end of the lake have scenic values and potential for recreation and small scale tourism (ADNR 2001). The lake is partially dammed at the outlet by Barrier Glacier, which descends from over 10,000 feet on Mt. Spurr. The majority of the shoreline of Chakachamna Lake is composed of granite cliffs and steep hillside. Lake beaches are associated with alluvial fans at the tributary inputs (HDR 2009). Several tributaries on the south shore are still filled with glaciers, although all of these appear to have retreated from terminal moraines at lake level. The only glaciers to contribute to the north side of the lake descend directly from Mt. Spurr.

At the outlet of Chakachamna Lake, the channel is defined by bedrock cliffs along the south side and the Barrier Glacier moraine on the north side. Several boulder rapids occur along the Chakachamna River and form low-flow control sections (HDR 2009). The first set of rapids, approximately 0.8 miles downstream of the outlet, is just downstream of the narrows formed by Barrier Glacier. The next set of boulder rapids was noted approximately 5 miles downstream of the outlet, just below Crater Peak.

Seven miles downstream of the outlet, the Chakachamna River valley broadens significantly, from an average of less than 1,000 feet wide to over 3,000 feet wide. Noaukta Slough is the term used for the section of Chakachamna River that flows southwest to the McArthur River, beginning about 25 miles downstream of the lake outlet. Noaukta Slough is a broad, highly anastomosed, placid waterway that flows about 5 miles from the mainstem Chakachamna to McArthur River (HDR 2009).

The McArthur River begins at about 1,600 feet in elevation at the snout of McArthur Glacier and the upper seven miles of the river flow through a steep-sided canyon (HDR 2009). About 3 miles below the canyon mouth, the McArthur River joins an unnamed tributary from Blockade Glacier. Noaukta Slough enters the McArthur River 10 to 12 miles below Blockade Glacier.

Photographs of the Project area waters, Chakachamna Lake, and the Chakachatna and McArthur rivers, are presented in Figures 4.8-1 through 4.8-3.



Figure 4.8-1. Chakachamna Lake looking towards east end.



Figure 4.8-2. Chakachatna River.



Figure 4.8-3. McArthur River.

Most of the proposed Project works would not be visible to the general public. No dam is proposed; the proposed Project includes an 11 mile long headrace tunnel, an underground powerhouse, a tailrace tunnel, and a transmission line that would follow new or existing roads and transmission lines from the powerhouse to the substation (Hatch Energy 2008).

4.8.3. Potential Adverse Impacts

Potential impacts from the Project fall into a number of categories, from disturbances because of study activity and construction to hydrologic changes after Project operation begins. A discussion of impacts to aesthetic and visual resources by impact category follows in Table 4.8-3.

Table 4.8-3. Potential Impact Issues Related to Aesthetic/Visual Resources.

Aesthetic/Visual Resource Impact Issues Related to the Chakachamna Hydroelectric Project	
Impact Issue Category	Issue
Related to project impacts on the Chakachatna River	Reduced flow may affect the experience of the Chakachatna River as a visual resource
Related to project impacts on the McArthur River	Increased flow may affect the experience of the McArthur River as a visual resource

Proposed Project operations would decrease summer and fall flow within the Chakachatna River and increase flow to the McArthur River year-round. These changes in the flow of both the Chakachatna and McArthur rivers may affect the experience of the Chakachatna River as a visual resource. Additionally, aesthetic resources may be impacted by the Project's proposed

transmission line and road corridors. The extent of these potential impacts, and possible needs for mitigation, will be examined during the licensing process.

4.8.4. Proposed Protection, Mitigation, and Enhancement Measures

The extent of potential impacts, and possible needs for mitigation, will be examined during the licensing process.

4.9. Recreation and Land Use

4.9.1. Introduction

There are no existing, formal recreation facilities in the proposed Project area. Although the Project area is remote and sparsely populated, recreation activities have been increasing in the vicinity of Chakachamna Lake, primarily fly-in hunting, fishing, hiking, and kayaking. The lands around Chakachamna Lake support widely dispersed recreation. Recreational use of the Project area is generally concentrated on or near the coast but is increasing on Chakachamna Lake and the tributaries feeding into the lake (Bechtel, 1983). The extent of recreational use of the upper stretches of the Chakachamna and McArthur Rivers is less well known. Trading Bay State Game Refuge and Lake Clark National Park are regionally or nationally important recreation areas in the Project vicinity. The refuge provides opportunities for waterfowl hunting and wildlife and waterbird viewing. Outdoor activities at the Lake Clark National Park and Preserve include bird watching, camping/backpacking, day hiking, fishing, hunting, kayaking/canoeing, power boating, rafting, and wildlife viewing.

Land owners in the Project vicinity include federal, state, and borough agencies, native corporations, and private parties. Land use in the Project area and vicinity of the Project include timber harvesting, oil and gas extraction, mining claims, timber sales, agricultural leases, and subsistence.

This section provides a summary of the information readily available on recreation and land use in the Project area.

4.9.2. Existing Recreation Facilities

There are no existing, formal recreation facilities in the proposed Project area. Although the Project area is remote and sparsely populated, recreation activities have been increasing in the vicinity of Chakachamna Lake, primarily fly-in hunting, fishing, hiking, and kayaking (Bechtel, 1983). Future promotion and use of Lake Clark National Park could result in increased use of Chakachamna Lake (Bechtel, 1983). The lands around Chakachamna Lake support widely dispersed recreation, which requires extensive bushwhacking and hiking on glaciers or glacial moraines (ADNR 2001). According to the Kenai Area Plan, the Chakachamna Lake area has some potential to support a hut-to-hut loop or point-to-point trail system (2001).