CRESCENT PROJECT

LIHI APPLICATION

ATTACHMENT #12

FACILITY DESCRIPTION

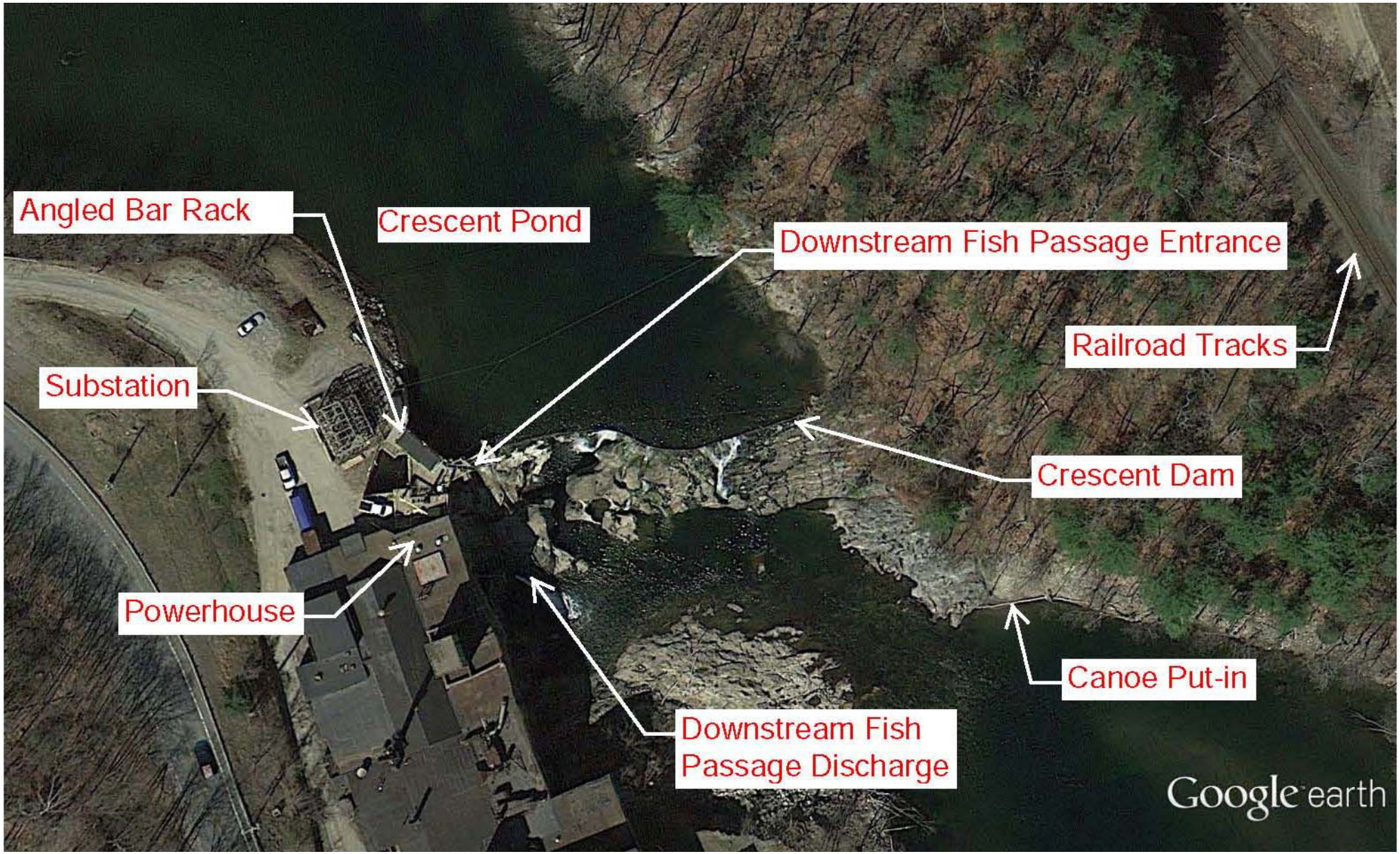
Facility Description:

The Crescent Project consists of: (a) a 250 wide 12 foot high masonry gravity dam with 3 foot high wooden flashboards; (b) a 3 acre impoundment; (c) an angled bar rack intake; (d) a downstream fish passage collection chamber and bypass pipe; (e) a trash sluice; (f) concrete inlet channel and forebay; (g) a single unit powerhouse with a total installed capacity of 1.5MW; (h) substation; (i) a canoe portage; and (j) appurtenant facilities. The project is adjacent to a non-project abandoned mill complex and bounded on the east (river left) by an active railway. The river immediately below the Project is bounded on both shores by exposed bedrock outcrops. The East bank further downstream of the Project consists of mixed ledge, gravel and sand outcrops.

The canoe portage extends from the east (river left) impoundment shore near the boat barrier along the eastern embankment to the tailrace pool area. The access at the bypassed reach serves as both a put-in site for canoeists and an access point for bank fishing.

Project Operation

The project is operated in an run-of-river mode. The project is manned during normal business hours and unmanned during the nighttime hours. Generally, the operator reviews the status of three upstream USGS stations for river flow verification, and reviews the status of the downstream fish passage facilities and trashracks. Project operation is automated (both on and off) with alarm dial out during any unusual occurrences (e.g. station trip, low level alarm). Units automatically cycle between the maximum 700 cfs unit hydraulic capacity down to the minimum hydraulic capacity of 165 cfs. When in operation (generally between April 1 through July 1 and from October 15 to ice-in) 20 cfs is released through the downstream passage system. The SCADA records all pertinent information on generation and water levels and this info is available upon request.



Crescent Aerial View

Photo 12A: Crescent Impoundment

Photo 12B: Crescent Dam

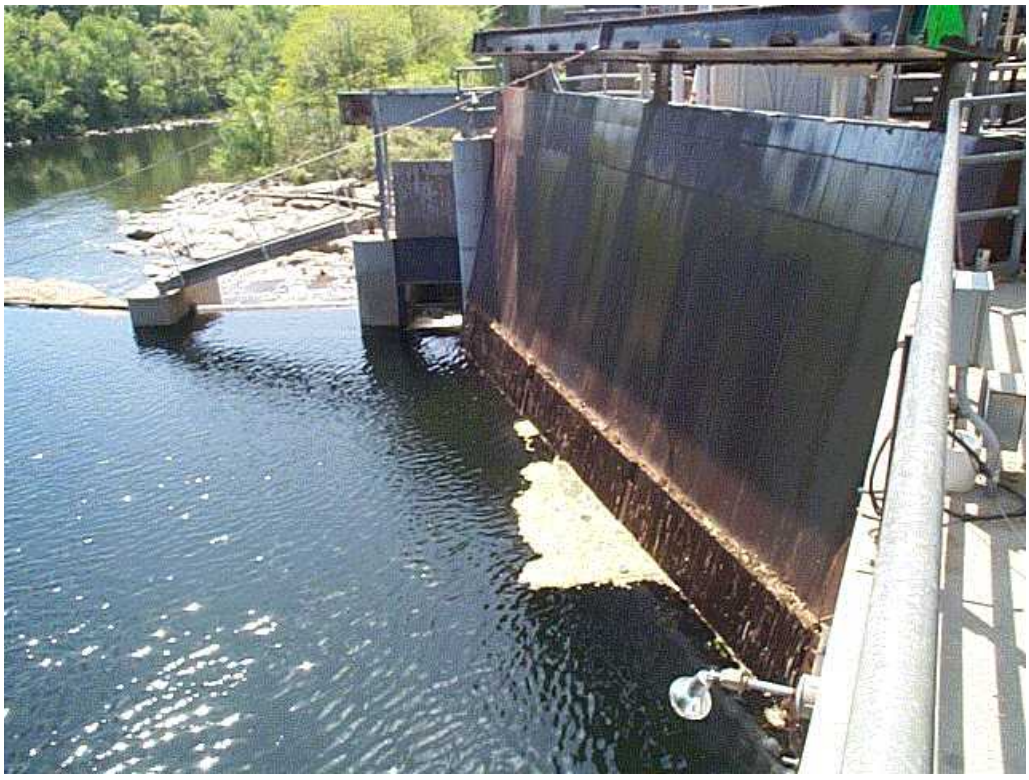


Photo 12C: Angled Bar Rack Intake, Downstream Fish Passage Entrance

Photo 12D: Downstream Fish Passage Entrance and Trash Sluice

Photo 12E: Forebay and Intake Area (substation on left)

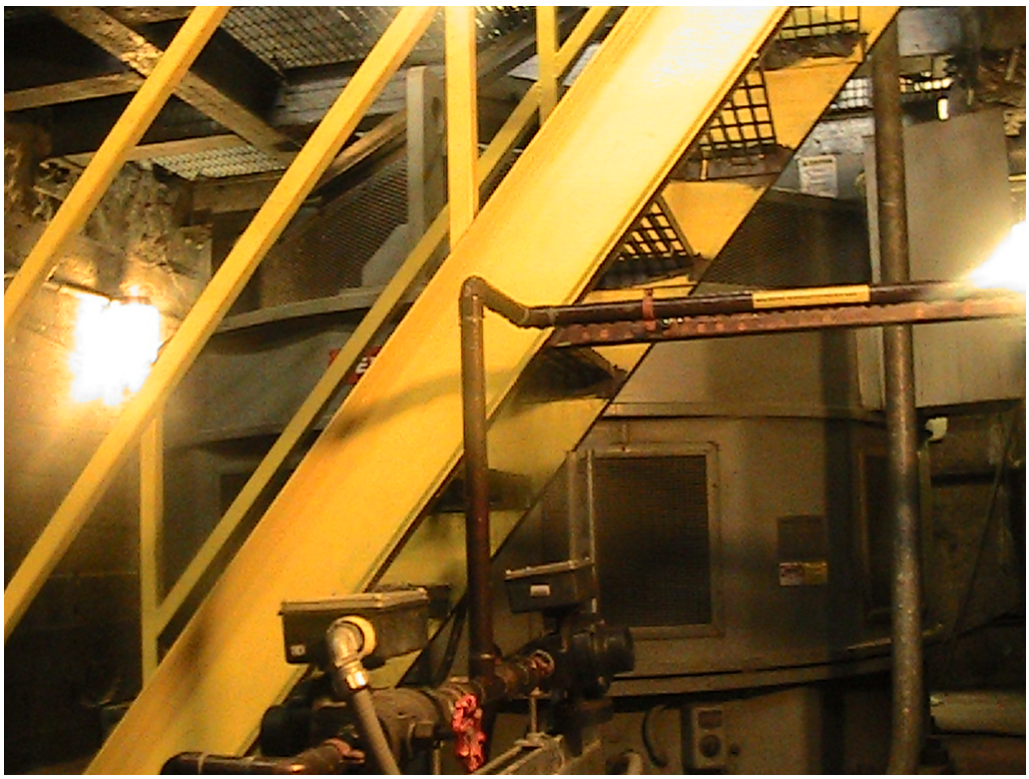


Photo 12F: Typical Unit

Photo 12G: Downstream Fish Bypass Pipe

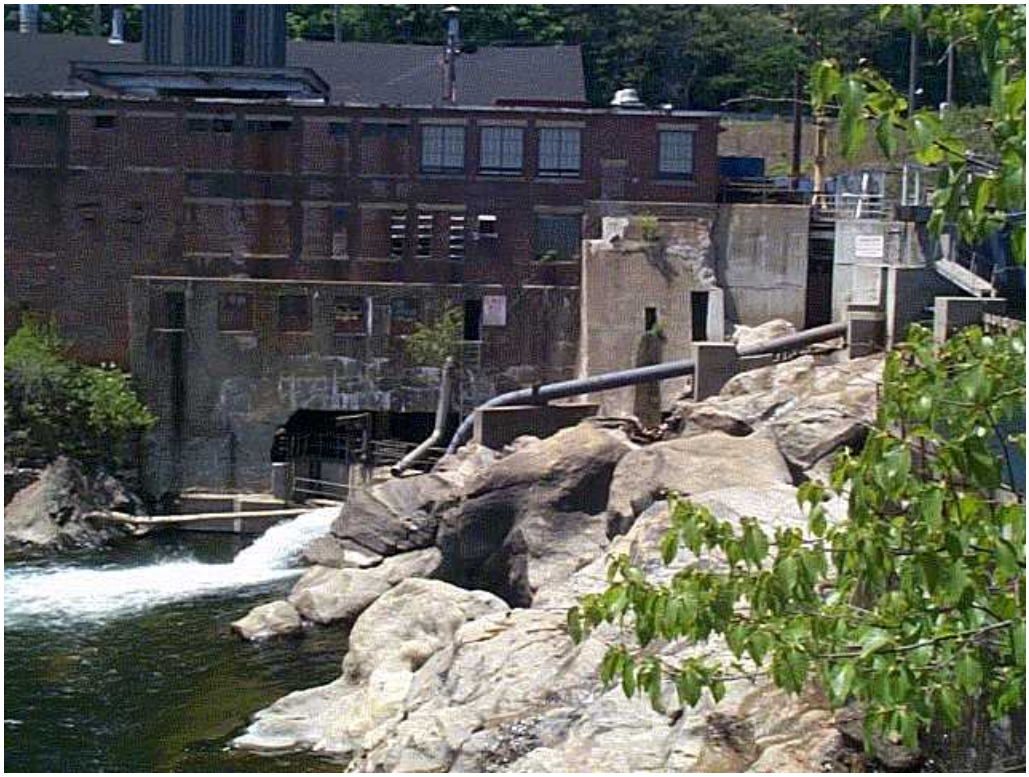


Photo 12H: Crescent Powerhouse with Downstream Fish Bypass in Foreground

Photo 12I: Crescent Tailrace

Photo 12J: Tailrace Pool Area