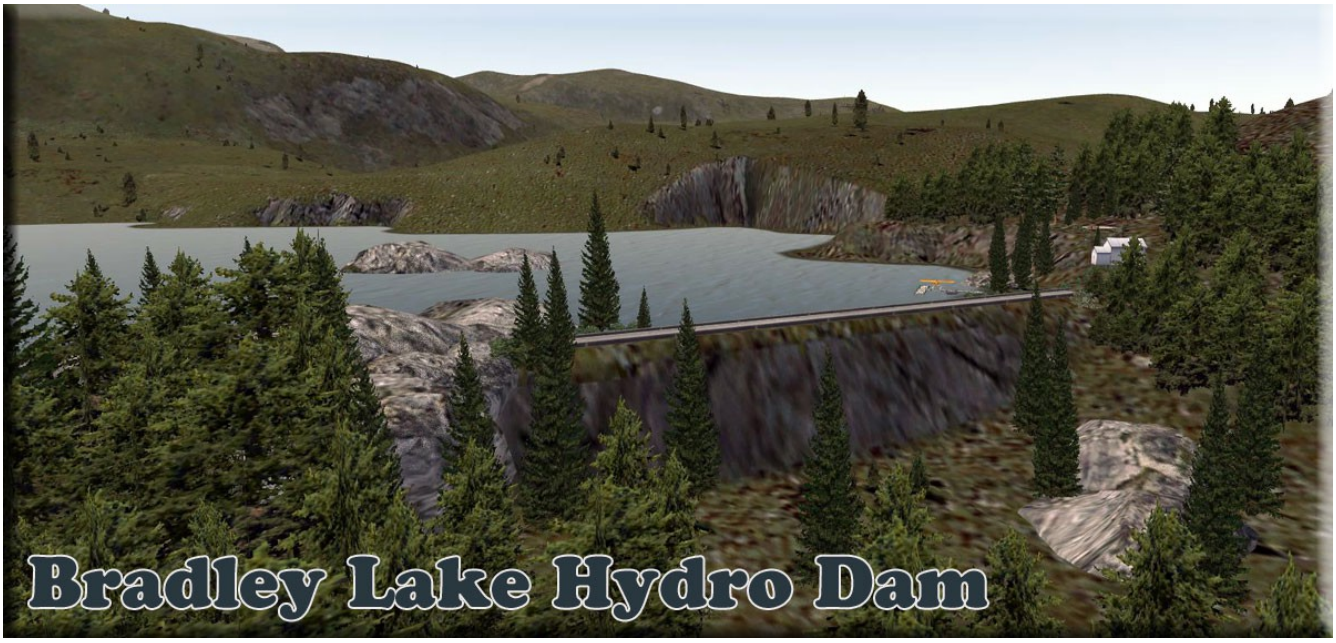
Bradley Lake Hydro



Synopsis

The Bradley Lake Hydroelectric Project exemplifies the responsible development of a natural resource in an environmentally sensitive area. It demonstrates that quality engineering makes it possible to protect the environment while developing our resources.

The project provides clean, low cost power to nearly three-quarters of Alaska's population and will help stabilize power rates for decades. In addition to the economic benefits of this renewable resource, the project provides recreational opportunities and public access to a wilderness area.

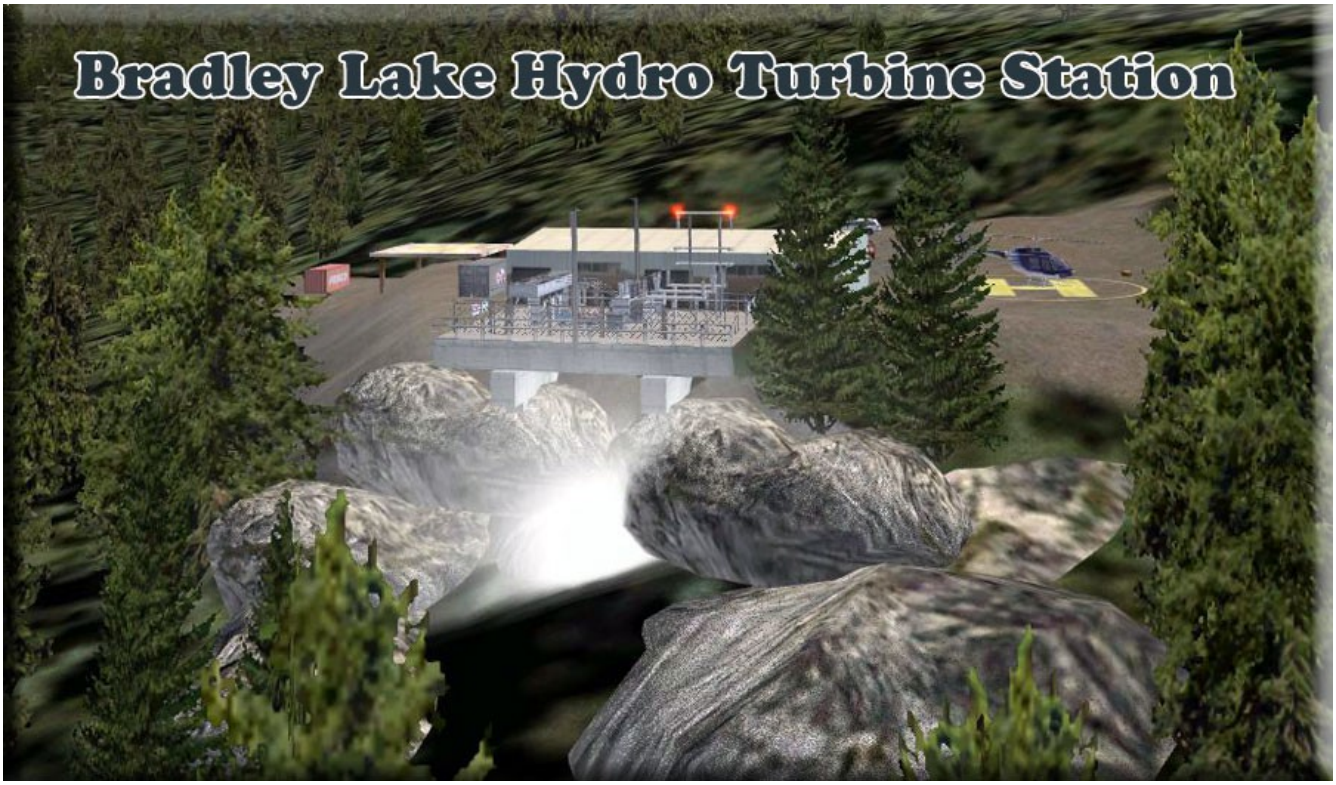
Construction in the remote, subartic, seismatically active and sensitive environment required resourceful planning and design. Utility and public cooridination groups were created to provide input on project design. Extensive modeling, numerous environmental studies and a geotechnical interpretive report were developed. Optional tunnel, configurations, use of on-site materials, and the use of an open cut intake channel helped reduce project costs and expedite construction.

Pioneering efforts in the relocation of nesting eagles prevented potential delays during initial construction. State of the art designs for the dam facing, powerhouse substation and transmission line foundations were used to cope with Alaska's harsh winter climate. Additional design features facilitated winter construction and provide future expansion capabilities.

… the above from the Synopsis http://akenergyinventory.org/hyd/SSH-1983-0336.pdf . If you look at this synopsis, you will see a picture of the actual facility.

How it works …

Bradley Lake is "man made". The dam on the opposite side of the lake from the glacier traps the glacier runoff. The outfall from the lake goes through a tunnel to the "outfall station" on the other side of the mountain, between the lake and the ocean. The hydraulic turbines are in the outfall building. The "head" pressure from the drop from the lake level to the outfall level gives the "pressure" needed to turn the turbines.



From Wikipedia ….

The Bradley Lake hydroelectric project was constructed by the Alaska Power Authority on the Kenai Peninsula near Homer, Alaska. The Alaska legislature appropriated $168 million for what was estimated to be a $245 million project. The project, which cost over $300 million (including reserve fund balances, of $479 million 2007 dollars), went into commercial operation in 1991. The project includes a concrete-faced and rock-filled gravity dam, 610 foot long, 125 foot high, and a 3.5-mile power tunnel and steel-lined penstock. The project transmits power to the state's main grid via two parallel 20-mile transmission lines. Homer Electric Association under contract with AEA now operates the project. Bradley Lake serves Alaska's Railbelt from Homer to Fairbanks as well as the Delta Junction area.

From RTMM …

This was a simple scenery to put in and is done in conjunction with the Halibut Cove Scenery Package. This gives a person a "destination" to seek from the Halibut Cove facilities. It is located exactly where the real dam exists. Below the dam, on the nearby shore, you will find the Bradley Lake Hydro Airstrip (0AK7). It consists of a tarmac road with hangers. This was used during the construction and is still used for maintenance.

You can land near the dam on Bradley Lake with a float plane. There is a seaplane dock where you may park to look around the area.

Installation …

Download the zip file from RTMM's Scenery page under "B". Put the folder into your FSX library and activate it.

Doug Linn
RTMM

Dam Scenery Location:
Lat: N59 45.31
Lon: W150 51.17
Alt: 1199 feet

Turbine Station (Outfall)
Lat: N59 46.78
Lon: W150 55.94
Alt: 337 Feet