

Hydropower Project Summary

BLACKSMITH FORK RIVER, UT

HYRUM HYDROELECTRIC PROJECT (P-946)



Photo: Google Maps Street View

This summary was produced by the

Hydropower Reform Coalition

and

River Management Society

BLACKSMITH FORK RIVER, UTAH

HYRUM HYDROELECTRIC PROJECT (P-946)

DESCRIPTION:

The City of Hyrum owns and operates the project, which was originally constructed in 1931. The project is located in the Blacksmith Fork Canyon within the Wasatch Cache National Forest and is operated in run-of-river mode.

A. SUMMARY

1. License application filed: April 28, 2006
2. License Issued: August 1, 2008
3. License expiration: March 31, 2036
4. Waterway: Blacksmith Form River
5. Capacity: 0.40 MW (400 kW)
6. Licensee: City of Hyrum, Utah
7. Licensee Address: City of Hyrum
83 West Main
Hyrum, UT 84319
8. Counties: Cache
9. Project area: The project occupies 17.14 acres of federal lands within the Wasatch Cache National Forest, administered by the U.S. Forest Service (Forest Service). The diversion dam, intake structure, and most of the penstock are located on lands managed by the Wasatch Cache National Forest.
10. Project Facilities:
 - a. Hyrum dam:
 - a 260 foot-long dam consisting of a 15-foot-high, 70-foot-long earth-fill concrete core embankment to the north; a 14-foot-high, 65-foot-long concrete spillway section; and a 15-foot-high, 125- foot-long earth-fill concrete core embankment to the south,
 - a 37-acre-foot de-silting reservoir (forebay);
 - a 26-foot-wide, 39-foot-long, 20-foot-high brick powerhouse containing a 400-kW Leffel horizontal shaft scroll case turbine;
 - a 60-foot-long, 2.4-kilovolt (kV) underground transmission line and;
 - appurtenant facilities.

As proposed by Hyrum City, the average annual generation of the project is approximately 2,836,000 kilowatt hours (kWh).

B. IMPORTANT PROVISIONS AND REQUIREMENTS IN LICENSE

1. Instream Flows [Reference: Forest Service Terms and Conditions (Appendix A)]
Under the conditions placed by the Forest Service, the City is required to provide the following flows:

Timeframe	Required Flows
<i>Mar 1 – Aug 31</i>	
If natural mean daily flow \geq 73 cfs	36 cfs
If natural mean daily flow $<$ 73 cfs for a period of three or more consecutive days	18 cfs
If natural mean daily flow $<$ 55 cfs for a period of three or more consecutive days	9 cfs
<i>Sept 1 – Feb 28/29</i>	
If natural mean daily flow \geq 73 cfs	18 cfs
If natural mean daily flow $<$ 55 cfs for a period of three or more consecutive days	9 cfs

Per the license, the minimum streamflows may be temporarily modified, not to exceed 24 hours, if required by equipment malfunction or operating emergencies reasonably beyond the control of the Licensee. If the streamflow is modified, the City is required to provide notice to FERC and the Forest Service as soon as possible, but no later than 10 days after such modification. The City is also required to install and monitor flows in the bypass section to ensure compliance with the flow requirements.

If an effective fish passage facility is constructed past the diversion dam, the Forest Service can modify the minimum bypass flow requirement to the level as necessary. The long term changes to the instream flow may only be implemented after the license is amended by the Commission upon an amendment application by the City.

2. Resource Management Plans [Reference: License Article 401 and US Forest Service Terms and Conditions (Appendix A)]
The license requires the City of Hyrum to prepare a number of plans to protect and enhance recreation, cultural, and natural resources at the project. These plans should be prepared in consultation with U.S. Fish and Wildlife Service (FWS) and Utah Division of Wildlife Resources and be approved by Forest Service before filing with FERC.

- i. Recreation Management Plan, due on March 1, 2007, should include a general description of recreation site on national forest lands and identify needed or potential site improvements, such as trails, fishing access, revegetation areas etc.

- ii. Heritage Resource Protection plan needs to be prepared only if potential cultural and historical items are reported or discovered in the project area.
- iii. Vegetation Management Plan should be prepared and filed before FERC at least 90 days before any ground-disturbing activity. Among other things, the plan should identify and prioritize areas to be re-vegetated, list the species to be used for re-vegetation, identify methods for prevention and control of noxious weed, and develop a monitoring plan to evaluate the effectiveness of re-vegetation.
- iv. Sediment and Erosion Control Measures Plan should be prepared and filed before FERC at least 90 days before any ground-disturbing activity or sediment-producing activity. The plan should include measures to control erosion, stream sedimentation, dust, soil mass movement and any sediment removal plans associated with the operation and maintenance of the hydropower project.
- v. Sensitive Species Management Plan should be prepared and filed before FERC at least 90 days before any ground-disturbing activity. The plan should develop procedures to minimize adverse effects to sensitive species.

3. Aviation Protection [Reference: License Article 404]

If any raptor is found dead or injured in the vicinity of the substation, the City is required to leave the carcasses onsite and report that to the U.S. Fish and Wildlife Service (FWS) and the Utah Division of Wildlife Resources (Utah DWR) within 24 hours of discovery of a raptor carcass.

C. MAP

There are two convenient ways to become familiar with this project on the Hydropower Reform Coalition website, www.hydroreform.org.

- Go directly to the project page <http://www.hydroreform.org/projects/hyrum-p-946>
- To understand the geographical context of the project, visit the *On Your River* section of the site. This link (<http://www.hydroreform.org/on-your-river/West>) will take you to the section for rivers in the West, including Utah. Zoom in to the City of Hyrum, north of Salt Lake City. The project is a few miles east of the city.