



MEMORANDUM

Project No.: 120045

March 5, 2014

To: Larry Martin, Velikanje Halverson, PC

cc: Tony Jantzer, Icicle Peshastin Irrigation District

From: Joe Morrice, LHG
Associate Hydrogeologist

Ryan Brownlee, PE
Senior Water Resources Engineer

Re: **Review of Eight Mile Lake Storage Authority**

This memo presents results of review of public records related to Icicle Peshastin Irrigation District's (IPID) water storage authority at its Eight Mile Lake facility in Chelan County, Washington. This work was completed by Aspect Consulting, LLC (Aspect) on behalf of the Chelan County Department of Natural Resources.

Methodology and File Requests

Information, including land ownership, permits, easements, agreements, decisions, or other documents related to Eight Mile Lake, was requested from the following public agencies. The types of information provided by these agencies are summarized in the following sections.

Chelan County Auditor. Auditor's files were searched for recorded documents pertaining to IPID, Icicle Irrigation District (IID), or Peshastin Irrigation District (PID). Auditor File Numbers or recording numbers noted in other reviewed documents were also retrieved for review. Relevant files include a recorded copy of the Order issued by the Decrement of Natural Resources' (DNR) predecessor agency granting the IID the right to overflow the shoreline of Eight Mile Lake, a deed transferring IPID's interests in land adjacent to the lake to the United States Forest Service (USFS) and spelling out access and maintenance rights to IPID's facilities at the lake, and an easement termination agreement for those rights.

Chelan County Superior Court. Court filings, transcripts of court testimony, the Report of Referee, Supplemental Report of Referee, and Court Decree from the 1927 Icicle Creek water right adjudication were obtained from the court for review. The adjudication focused on the conflict between Icicle and Peshastin Irrigation Districts and the Snow Creek Irrigation District, and provided little specific information on Eight Mile Lake. However, the Supplemental Report of Referee and Court Decree recognized IID's storage water rights to Eight Mile Lake issued by the Department of Ecology's (Ecology) predecessor agency.

United States Forest Service. A Freedom of Information Act (FOIA) request was filed with the Wenatchee District of the USFS requesting any USFS easements, special use permits, or other



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agreements, decisions, or permits related to Eight Mile Lake and IPID. The USFS provided recorded copies of the deed transferring IPID's interests in land adjacent to the lake; this was the same deed as was obtained from the County Auditor. No other permits or authorizations were identified by USFS.

Bureau of Land Management. A FOIA request was filed with the Oregon State Office of the Bureau of Land Management (BLM) requesting any BLM easements, special use permits, or other agreements, decisions, or permits related to Eight Mile Lake and IPID. The BLM provided copies of the same deed conveying transferring IID's interests in land adjacent to the lake as was obtained from the County Auditor. The original land exchange agreement, terms of which are captured in the recorded deed, were also provided. No other permits or authorizations were identified by BLM.

Washington State Department of Ecology – Water Resources. A request for water right file information related to storage or diversion of water from Eight Mile Lake was filed with Ecology's Water Resources Program. Complete file information was received for Water Right Certificate 1228, including the application, public notice, water right permit, notices of construction, proof of appropriation, and the water right certificate. A set of oversized maps and drawings of dam construction were also provided; however, these were for IPID's Klonauqua Lake (Certificate 1227) rather than Eight Mile Lake. As discussed below follow-up requests to locate drawings for Eight Mile Lake in Ecology's files were unsuccessful, but agency-approved drawings of the lake shoreline and dam were located in IPID's files.

Washington State Department of Ecology – Dam Safety Office. A request for files related to Eight Mile Lake, including permit authority and inspections or correspondence history was filed with Ecology's Dam Safety office. Partial copies of blueprints of the dam construction and survey of the lake meander line and a memorandum documenting a 1995 safety reconnaissance inspection of the dam at Eight Mile Lake were provided. The memorandum noted that the actual dam construction differed from the proposed construction (e.g., the existence of only one dam rather than two dams). The copies of the dam construction and survey drawings are of poor quality, but appear to be identical to the 1931 drawings found in IPID's files (see below). Follow-up file requests to retrieve the original drawings and any additional file information included with the drawings were submitted to Ecology's Dam Safety Office and the Water Resources Program in the Central Regional Office and at Headquarters. Ecology could not locate the drawings or additional file information in either paper files or archived microfiche.

Washington State Department of Natural Resources. An Order authorizing IID to inundate lands at Eight Mile Lake was issued by the Washington State Commissioner of Public Lands, predecessor agency to the DNR. A request for file information related to Eight Mile Lake and the Order were requested from DNR. Information received from DNR included the petition (application) from IID to the State Land commissioner requesting the right to inundate shore lands of Cole Chuck Lake, Eight Mile Lake, and Klonauqua Lake; correspondence with IID; an engineer's report prepared by the state; and a copy of the Order.

IPID Files. IPID's files were reviewed for information related to Eight Mile Lake. Information identified included partial copies of the water right file, the Commissioner of Public Lands Order, and drawings of the dam structures and a 1930 survey map showing the lake meander line and a line 10 feet above normal high water, partial copies of which were also found in the Dam Safety

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Office files. The drawings and survey map are signed and stamped "Approved by Supervisor of Hydraulics" and dated January 14, 1931. This survey information has been overlaid on an aerial photograph of Eight Mile Lake and is provided in Figure 1.

Timeline of Eight Mile Lake Storage Authority

This section presents a timeline of IPID's development of and storage authority for Eight Mile Lake based on the documents review. The timeline is divided into the applications and permits authorizing storage at the lake, construction of storage facilities and perfection of the water rights, and later conveyance of lands adjacent to the lake to the USFS.

Applications and Permits

In August 1926, IID filed a water right application with the state Office of the Supervisor of Hydraulics, a predecessor agency to Ecology, requesting to divert water from Eight Mile Lake at a rate of 25 cfs, 2,000 acre-feet per year for seasonal (June 1st to October 1st) irrigation. The description of the diversion works on the application states "Channel cut at outlet of lake, 6 feet wide and control gate installed with wood structure." The public notice, published in October 1926, includes the Qi of 25 cfs, but does not specify the annual quantity. Permit Number 828, authorizing diversion of 25 cfs from Eight Mile Lake, was issued in January 1927.

In October 1926, IID petitioned the Commissioner of Public Lands to procure the shore and overflow rights of Eight Mile Lake, Klonauqua Lake, and Colechuck Lake in order to "raise the elevation of said lakes by five feet above their normal low water stage, and lower the lakes ten feet below their normal low water stage." The petition noted the need for the requested storage was due to inadequate flows in the Icicle River during summer months to meet PID's and IID's irrigation needs. The petition was assigned application number 12855.

A report from the state field engineer to the Commissioner of Public Lands noted that the overflow rights were requested so that lake levels could be "raised 5 feet above the normal low water stage and lowered 10 feet below said stage. The overflow rights include the right to raise water to necessary height and to cover state shore lands to the line of ordinary high water but the law makes no provision for this department to grant the right to lower a lake below its normal stage."

The State assessed a fee of \$207 to cover damages to state lands from overflow of the three lakes, which IID paid in October 1927. The Department of Public Lands then issued an Order dated October 26, 1927 which reads in part: "the right to overflow and perpetually inundate said lands [Eight Mile Lake, Klonauqua Lake, and Colechuck Lake] may be duly exercised in accordance with the terms of this order¹, the lands included being more particularly described as follows: The bed and shores of ... Eight Mile Lake." The height to which the lake could be raised or maintained was not specified in the Order. The Order was recorded with Chelan County in 1928.

In 1927, water rights to Icicle Creek and its tributaries were adjudicated in Chelan County Superior Court. The adjudication focused primarily on Snow Creek, with no testimony provided regarding

¹ No specific terms were spelled out in the Order. The Order references Section 102, Chapter 255 of the Session Laws of 1927. This Chapter and Section authorized the Commissioner of Public Lands to grant the right to "back and hold water" and overflow and inundate state shore lands for the purpose of constructing and operating works for the impoundment of water for irrigation and other uses.

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water use or development at Eight Mile Lake; however, the 1929 Court Decree affirmed IID's water right Permit Number 828 (along with similar permits for Klonaquia and Colechuck Lakes) in the amount of 25 cfs, 2,500 afy. The decree also notes that the water rights represented by the permits are "inchoate but may be perfected by compliance with provisions under which the permits were issued; that these rights for storage of water under said permits do not affect the water rights of any other claimant herein reported."

Dam Construction and Perfection of Water Rights

Based on the Notices of construction contained in Ecology's water right files, IID began construction of the dam at Eight Mile Lake in July 1927 and completed construction in October 1929. The Notice of beginning of Construction, filed in 1927, indicated clearing and excavation work began in July 1927. This notice repeated that the requested water right was for 25 cfs, 2,000 afy, but pre-dates the Court Decree affirming 25 cfs, 2,500 afy.

The notice of Completion of Construction, filed in 1939, notes "work completed providing gravity draw down of Lake of 25 feet." A Proof of Appropriation was filed by IID in 1939, stating all water was put to beneficial use in 1930. The Proof of Appropriation noted:

"Cut was made 25 feet deep in outlet channel, creosoted wood stave pipe 30 inches in diameter with standard reservoir cast iron gate installed. Gate thoroughly embedded in concrete and concrete cut-off wall placed in channel approximately 50 feet down the stream from control gate.

The lake has a natural outlet channel some 30 feet below normal high water and due to difficulty in securing water tightness in formation of slide responsible for the lake dam was not constructed to height first intended, the District preferring to use water pumping equipment for securing full appropriation of water during period of extreme drought."

A drawing of the dam structures was found in IPID's files and also in Ecology's Dam Safety files. The drawing details differ from the description on the Proof of Appropriation and the current structure at Eight Mile Lake and it is unclear if the drawing is of the proposed dam, is an as-built, and/or the extent to which the dam has been modified since original construction. For example, the drawing shows two dams – the main impoundment dam and a second dam incorporating the spillway structure – however, at the time of the 1995 Ecology inspection there was no second dam and the spillway was incorporated into the main impoundment dam. Additionally, the drawing indicates 36-inch diameter reinforced concrete pipe or stone conduit discharge pipeline, rather than creosoted wood stave pipe listed in the Proof of Appropriation.

The undated drawing also shows water impounded to ten feet above high water line of the lake. This is consistent with the Supervisor of Hydraulics-approved survey map found in IPID's files, which shows the lake meander line and a survey line ten feet above high water (see Figure 1). However, given the description in the Proof of Appropriation that the dam was not constructed to the height intended, it is possible that the actual impoundment level was something less than the ten feet above high water line shown on the drawings.

Water right Certificate 1228 was issued to IID in August 1939 authorizing use of 25 cfs from Eight Mile Lake; no annual quantity or storage volume was specified.

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Conveyance of Lands to USFS and Retention of Rights to Operate Storage

Based on recorded deeds in the Auditor's files, and information provided by USFS and BLM, IPID and the USFS agreed to a land exchange, finalized in 1990, the USFS received title to IPID's interest in lands adjacent to Eight Mile Lake. Lands at Eight Mile Lake conveyed to USFS are described as Section 5, Lots 1 and 2 of Township 23 N, Range 16 EWM and Section 33, Lot 1 of Township 24 N, Range 16 EWM. These descriptions correspond to an approximately 40 acre square parcel at the lake outlet and dam structure and an approximately 80 acre rectangular parcel along the south shore of the lake. IPID retained several rights to the land, including:

"a nonexclusive, perpetual easement across, through, along, and upon the property described herein for the purposes of maintenance, repair, operation, modification, upgrading and replacement of all facilities presently located in or upon the property described herein, together with a nonexclusive right of ingress to and egress from all such facilities for all such purposes, in accordance with Rules and Regulations of the Secretary of Agriculture, 36 CFR 251.17 and 251.18, attached hereto and made a part hereof, in such manner as not unreasonably to interfere with its use by the United States, its authorized users or assigns, or cause substantial injury thereto.

The Grantor [IPID] may exercise the rights hereunder by any means reasonable for the purposes described, including but not limited to the use of motorized transportation and equipment, or aircraft. These rights include the right to regulate water level of all facilities located upon the property described herein. In performing maintenance, repair, operation, modification, upgrading and replacement of facilities located in or upon the property described herein, the Grantor will not without prior written consent of the Forest Service, which consent shall not unreasonably be withheld, materially increase the size or scope of the facilities."

The recorded deed further recognized that IPID's reserved their rights under water right certificate 1228 and the Order granted by the Commissioner of Public Lands.

Conclusions Regarding Water Storage Authority at Eight Mile Lake

Based on the above timeline and file review we draw the following conclusions regarding IPID's storage authority at Eight Mile Lake:

- Authority to inundate the shoreline of Eight Mile Lake for water storage was granted by a DNR predecessor agency. At a minimum the authority is to impound water and raise the water level to 5 feet above normal low lake level. This agency could not grant authority to draw down the lake to below normal low lake level.
- The original water right application and Notice of Beginning of Construction filed with Ecology's predecessor agency request instantaneous and annual quantities of 25 cfs, 2,000 afy. However, these pre-date the Court Decree resulting from the adjudication of water rights that affirmed a permit for Eight Mile Lake of 25 cfs, 2,500 afy. The adjudication Court Decree supersedes any prior filings or decisions and defines the limits of the water right permit, subject to subsequent proof of appropriation and certification of the right.

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- The water right certificate issued by Ecology authorizes use of 25 cfs from Eight Mile Lake, but is silent regarding annual quantity. Lacking any indication to the contrary, the 2,500 afy specific in the Court Decree should hold as the maximum authorized storage volume.
- Inherent in the Ecology-predecessor agency approvals is the right to drawdown the lake to provide the authorized 25 cfs, 2,500 afy. Construction notices filed with the Proof of Appropriation indicate the dam and diversion were constructed to allow 25 feet of gravity drawdown.
- The storage authority may be limited to the achievable storage of the dam as originally constructed and on which the water right was certificated, up to the court-affirmed annual quantity of 2,500 afy, unless there is a compelling argument that partial relinquishment or abandonment is raised. There are exceptions that may cover a period of less than peak use or storage, which are fact-based inquiries that we have not evaluated yet. In order to understand relinquishment risk, we suggest that there first be a marrying of the authority analysis completed herein with the bathymetric survey completed by Gravity Consultants, supplemented by IPID operating history to the extent it is known or can be retrieved from IPID records.
- Under terms of the land exchange with USFS, IPID retains easement rights to the property containing the dam structure for the purposes of maintenance, repair, operation, modification, upgrading and replacement of all facilities. As shown on Figure 1 the easement lands include the dam and part of the southern shoreline, but do not cover the entirety of the lake. IPID clearly retains rights to modify the dam structure, but the lack of easement rights to the rest of the lake raises uncertainty about the authority to increase lake storage. Plans to materially increase the size or scope of storage facilities would require the consent of USFS, as outlined in the land exchange agreement.

Limitations

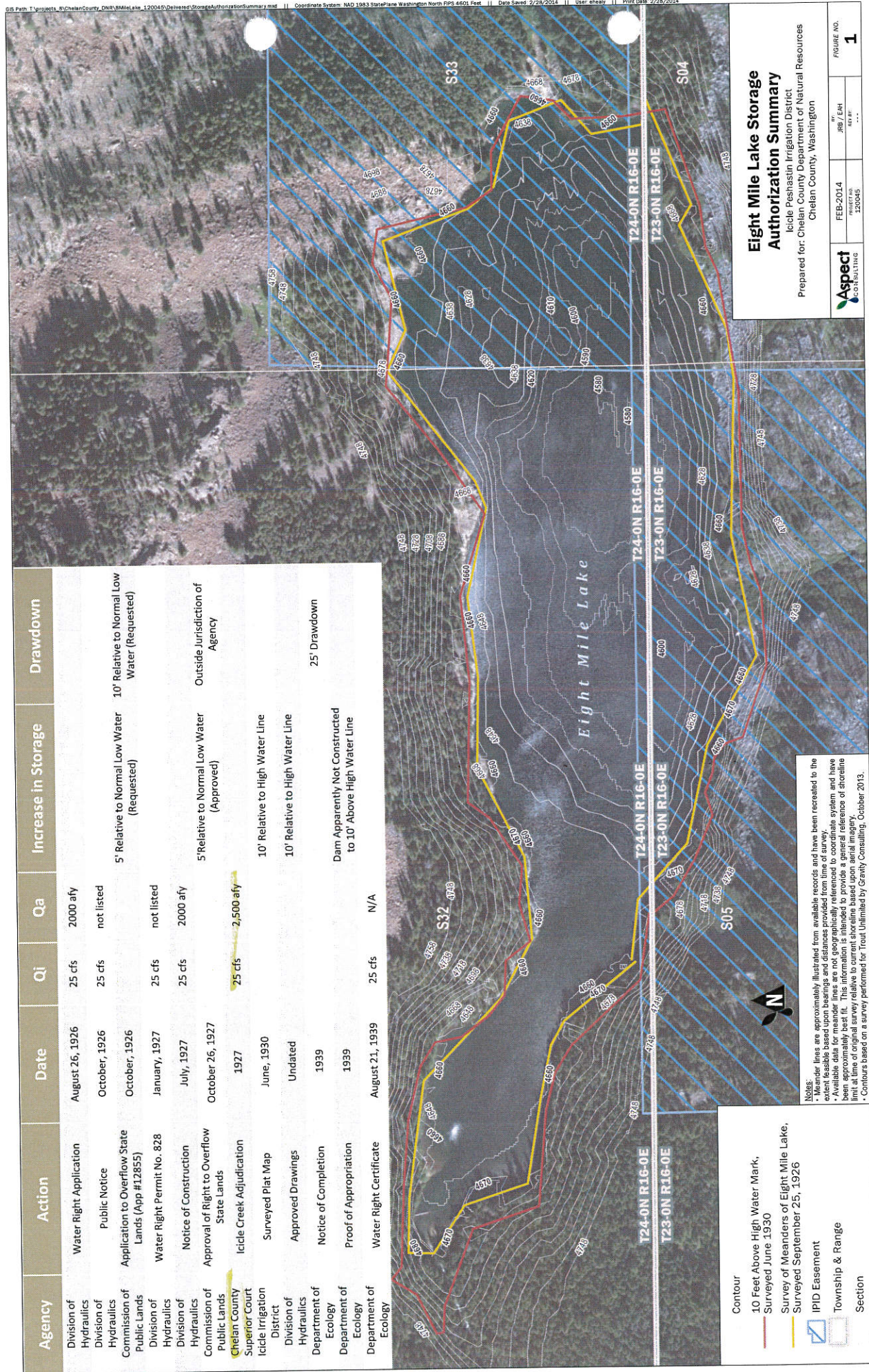
Work for this project was performed for the Chelan County Department of Natural Resources (Client), and this memorandum was prepared in accordance with generally accepted professional practices for the nature and conditions of work completed in the same or similar localities, at the time the work was performed. This memorandum does not represent a legal opinion. No other warranty, expressed or implied, is made.

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Attachments:

Figure 1 – Icicle Peshastin Irrigation District, Eight Mile Lake Storage Authorization Summary

V:\120045 Chelan County\Deliverables\Eight Mile Lake Review\Eight Mile Lake Document Review (3-5-14).docx



Agency	Action	Date	Qi	Qa	Increase in Storage	Drawdown
Division of Hydraulics	Water Right Application	August 26, 1926	25 cfs	2000 afy		
Division of Hydraulics	Public Notice	October, 1926	25 cfs	not listed		
Commission of Public Lands	Application to Overflow State Lands (App #12855)	October, 1926			5' Relative to Normal Low Water (Requested)	10' Relative to Normal Low Water (Requested)
Division of Hydraulics	Water Right Permit No. 828	January, 1927	25 cfs	not listed		
Division of Hydraulics	Notice of Construction	July, 1927	25 cfs	2000 afy		
Commission of Public Lands	Approval of Right to Overflow State Lands	October 26, 1927			5' Relative to Normal Low Water (Approved)	Outside Jurisdiction of Agency
Chelan County Superior Court	Idicle Creek Adjudication	1927	25 cfs	2,500 afy		
Idicle Irrigation District	Surveyed Plat Map	June, 1930			10' Relative to High Water Line	
Division of Hydraulics	Approved Drawings	Undated			10' Relative to High Water Line	
Department of Ecology	Notice of Completion	1939				25' Drawdown
Department of Ecology	Proof of Appropriation	1939			Dam Apparently Not Constructed to 10' Above High Water Line	
Department of Ecology	Water Right Certificate	August 21, 1939	25 cfs	N/A		

Eight Mile Lake Storage Authorization Summary
 Idicle Peshastin Irrigation District
 Prepared for: Chelan County Department of Natural Resources
 Chelan County, Washington

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ASPECT CONSULTING							

Notes:

- Meander lines are approximately illustrated from available records and have been recreated to the extent feasible based upon bearings and distances provided from time of survey, and have been approximately used for the purpose of determining the general reference of shoreline relative to current shoreline based upon aerial imagery.
- Contours based on a survey performed for Trout Unlimited by Gravity Consulting, October 2013.

Contour
 10 Feet Above High Water Mark,
 Surveyed June 1930
 Survey of Meanders of Eight Mile Lake,
 Surveyed September 25, 1926
 IPID Easement
 Township & Range
 Section