



CLEAN, FLOWING WATERS FOR WASHINGTON

The Center for
Environmental Law & Policy

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July 28, 2008

Mr. Slattery:

The Center for Environmental Law & Policy (CELP) is a public interest organization focused on protection of water resources in western Washington and the Columbia River watershed. Included in CELP's mission is the protection and restoration of instream flows at levels that promote and sustain natural fisheries. This letter is written on behalf of CELP and Wild Fish Conservancy of Duvall, Washington.

Wild Fish Conservancy (WFC) is a Washington based non-profit organization dedicated to the recovery and conservation of the region's wild-fish ecosystems. WFC promotes technically and socially responsible habitat, hatchery, and harvest management to better sustain the region's wild-fish heritage. WFC has been working with the local community to restore Icicle Creek since 1997. In 2005, WFC commenced a ten-year study of the aquatic ecology of Icicle Creek and other Wenatchee River basin streams.

In 2006 the Bureau of Reclamation convened a facilitated stakeholder process (Project Alternative Solutions Study or PASS process) by which they plan to provide solutions to the Leavenworth National Fish Hatchery's (LNFH) infrastructure needs (including water supply intake) and provide a blueprint for the dormant Icicle Creek Restoration Project. Wild Fish Conservancy is participating in the PASS process, and has found that, as discussions have moved forward, questions on the legal responsibilities and obligations of the LNFH continue to arise and must be answered so that PASS participants can properly analyze alternatives. Their participation in the PASS process notwithstanding, WFC believes that the LNFH must meet all state and federal legal obligations.

CELP and WFC are concerned about an illegal diversion of water by the LNFH from Icicle Creek, a tributary to the Wenatchee River, which depletes flows in Icicle Creek causing adverse effects to wild salmonids. Our concerns and the facts surrounding this diversion are set forth below. We are writing to request that the Department of Ecology Water Resources Program (1) make a determination that LNFH's diversion of water from Icicle Creek into the hatchery canal is

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unpermitted and therefore illegal and (2) issue an enforcement order directing LNFH to cease its illegal diversions. CELP and WFC are willing to work with Ecology and LNFH to find a legal solution to water supply issues at the hatchery, however, this solution cannot occur outside the requirements of the state water code.

Background

Icicle Creek originates in a particularly high and rugged portion of the Cascade Mountain range. It flows easterly to join the Wenatchee River near Leavenworth.¹ Extreme flows recorded in Icicle Creek vary from a minimum of 44 cubic feet per second (cfs) (11/30/1936) to a maximum of 11,600 cfs (5/28/1948) as measured at the USGS gauging station located above Snow Creek upstream of all the major diversions.² Mean annual flow is 628 cfs.³ Waters of Icicle Creek are diverted by the Icicle-Peshastin Irrigation District, other smaller irrigation systems, the Leavenworth National Fish Hatchery (LNFH) and the City of Leavenworth.⁴ It is LNFH's diversion during the low flow periods of the year that is particularly troubling. When water is diverted into the hatchery canal during low flow periods it can result in the near dewatering of the natural channel creating fish passage barriers and decreased habitat quality and quantity.

WFC has been active in Icicle Creek basin in mitigating the impact of the operations of LNFH on native fish populations. Of particular interest are the native bull trout, non-hatchery chinook, and steelhead. The diversion of water out of the natural channel coupled with the LNFH operations creates passage barriers for these species (leaving them unable to reach up-river habitat), damages redds and degrades habitat by exacerbating sedimentation and decreasing flow. WFC is concerned that LNFH is illegally diverting large amounts of water from the natural channel of Icicle Creek into an artificial canal for the purpose of groundwater recharge for LNFH's wells and for other purposes. This letter provides a summary of the surface and ground water rights held by LNFH as well as a legal summary of these rights. We conclude LNFH is illegally diverting water out of Icicle Creek in order to flush smolts, prompt adult fish return, flood control for nearby homes, and recharge the aquifer to support groundwater pumping for the benefit of the hatchery.

Leavenworth National Fish Hatchery

LNFH is located along Icicle Creek, a tributary of the Wenatchee River, approximately 30 miles above the Wenatchee's confluence with the Columbia River. It is about four miles south of Leavenworth, Washington. The LNFH was authorized by the Grand Coulee Fish Maintenance Project on April 3, 1937 and re-authorized by the Mitchell Act (52 Stat. 345) on May 11, 1938. The purpose of the project is to provide mitigation for the impact of Grand Coulee Dam on upstream migratory fish populations, which were decimated by construction of the dam. Construction of LNFH occurred between 1938 and 1940. LNFH raises both spring chinook and coho salmon, but the coho salmon are not released from the facility.⁵

¹ Marsha Berry and Judy Kelly, Wenatchee River Basin Instream Resources Protection Program, Dep't of Ecology, p. 9 (1982).

² *Id.*

³ *Id.*

⁴ *Id.*

⁵ The coho are raised through an agreement with the Yakama Nation. LNFH raises the coho until they reach "eyed stage" after which they are shipped to another facility for the remainder of their development.

LNFH uses both ground and surface water, in combination, for raising fish throughout the year. LNFH holds one surface water right for 42 cfs and four groundwater rights that total 6,700 gpm (approximately 14.9 cfs). Surface water is diverted from Icicle Creek into an intake pipe approximately 1 ½ miles up-river from LNFH where it is discharged to a settling basin before being used in the raceway and tanks. The groundwater is withdrawn from seven wells spread throughout the facility. The majority of the water used by LNFH comes from surface water. Table 1 shows the relationship between the two sources over a three-year average (1999, 2002, and 2003).

Table 1⁶

Month	Icicle Creek (cfs)	Wells (cfs)
January	33.4	6.4
February	36.7	8.8
March	37.3	8.8
April	27.4	10.3
May	20.3	5.1
June	28.9	1.4
July	35.4	4.3
August	35.5	5.3
September	29.8	6.5
October	38.8	3.5
November	38.0	3.3
December	38.9	4.8

LNFH uses groundwater when surface water quantity or temperature is inadequate for fish rearing.⁷ However, the aquifer lacks adequate capacity to allow LNFH to pump its maximum quantities.⁸ The lack of available groundwater has led LNFH to artificially recharge the aquifer by diverting water into the (artificial) hatchery canal.

LNFH recharges the aquifer by illegally diverting water out of Icicle Creek and through the hatchery canal. As water runs through the canal it leaks into the aquifer. It is estimated that 92 percent of the water entering the aquifer comes from the artificial canal via the illegal Icicle Creek diversion.⁹

I. LNFH Water Rights

LNFH at one time held surface rights for large quantities of water. Indeed, two of its rights, Certificate Nos. 1823 and 1824, originally authorized a combined diversion of up to 500 cfs. The majority of this water was relinquished back to the state and is no longer available for use by LNFH.

⁶ Water Management Plan for Leavenworth National Fish Hatchery, Dec. 2004 (Montgomery Water Group).

⁷ Report of Phase 1 and Phase 2 Hydrogeologic Services, GeoEngineers p. 3 (Feb. 2, 1995). Groundwater is used to cool surface water in the summer and warm it in the winter.

⁸ *Id.* at 6.

⁹ GeoEngineers, p. 12

a. Surface Water Rights

In 1942, LNFH received two surface water rights (Certificates 1823 and 1824) for fish propagation purposes. LNFH’s surface water rights are junior, and therefore subject, to the adjudicated rights of several irrigation districts in the basin.¹⁰ Surface right No. 1823 authorized diversion of 300 cfs of water from the Wenatchee River to a discharge point just above LNFH. However, when it was discovered that water from the Wenatchee was unusable for hatchery purposes, the diversion works were abandoned and the water right was relinquished in 1984.¹¹

Surface right No. 1824 initially authorized a diversion of 200 cfs from Icicle Creek. However, in 1983 it was discovered that LNFH’s physical diversion could only accommodate approximately 42 cfs and the remaining 158 cfs of the right had never been used.¹² Ecology issued a superseding certificate in 1983 quantifying the right at a Qi of 41.7 cfs and confirming relinquishment of the unused 158 cfs. The sole point of diversion for this right is located at River Mile (RM) 4.5, which is 1 ½ miles upriver of LNFH and shared with Cascade Orchards Irrigation Company. Table 2 lists LNFH’s active surface water right. Table 3 lists LNFH surface water rights that have been relinquished.

Table 2 Active Surface Right

Date Issued or modified	Certificate Number	Location of Diversion	Beneficial Use	CFS	Acre Ft./Year
01/13/1984 Priority date of 3/26/1942	Superseding Cert. 1824	200 feet north and 700 feet west of the east quarter corner of Section 27 from Icicle Creek.	To be used continuously for fish propagation	42	None Listed

Table 3 Relinquished Surface Rights

Date Relinquished	Certificate Number	Location of Diversion	Beneficial Use	CFS	Acre Ft./Year
01/13/1984	1824	<p>Icicle Creek (two diversions)</p> <p>1. Icicle Pipe Line “wood stave pipe & concrete wing dam.” -Structures are: Dam 1 & a 6900 ft. long pipe. -Located at: 760 ft. Northwest of East quarter corner of Sec. 27, being SE ¼ of NE ¼ of Sec. 27.</p> <p>2. Diversion holding pool channel “historic channel modified with concrete, metal, and wood dams with regulating gates” -Structures are: Dams #2-5 (see map below) -Located at: 1240 ft. South of North quarter corner of</p>	<p>Hatchery and holding pond supply</p> <p>The propagation of fish to maintain the run of salmon which will be disturbed by virtue of the development of the Columbia Basin Project, and the erection of Grand Coulee Dam, and is incidental thereto. The use of said waters is a non-consumptive use not affecting appropriators below Leavenworth Hatchery.</p>	158	

¹⁰ *State v. Icicle Irrigation District*, No. 8252 (Chelan County Ct. filed Oct. 28, 1929); *aff’d State v. Icicle Irrigation District*, 159 Wash. 524, 294 P. 245 (1930).

¹¹ Relinquishment of Certificate of Water Right #1823 (Nov. 7, 1983)

¹² Superseding Certificate #1824.

01/13/1984	1823	Sec. 26. Wenatchee River 1. Diversion Channel "2 mile concrete channel from the Wenatchee at the lower end of Tumwater Canyon, to holding ponds" - Structures are: concrete & earthen canal - Located at: from SW1/4 of Section 11 to center of SE 1/4 of Sec 23, then extension to holding pond in center of N 1/4 of Sec. 26.	To be used continuously for fish propagation.	300 (200 April to October with 100 on stand-by).	
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b. Ground Water Rights

The hatchery maintains four groundwater rights: Claim Nos. 012008 and 012009, and Certificate Nos. 3103-A and G4-27115. Claims 012008 and 012009 were amended to replace wells 2 and 3 with new wells (2a and 3a). Claim 012009 and Certificates 3103-A and G4-27115 were also amended to allow for the drilling of observation wells. In sum, the hatchery holds rights to 6,700 GPM instantaneous, and a maximum of 7,477 acre feet per year from seven wells. Like surface water, these rights are junior to rights held by irrigation districts within the basin.¹³

Table 4 **Groundwater Rights**

Date Issued or modified	Certificate Number	Location of Withdrawal and Depth	Beneficial Use	GPM	Acre Ft./ Year
08/1/1939	Claim 012008	Well #3 (replaced by 3a) Construction: Source: shallow aquifer	For fish cultural purposes and all related use thereto in the operation of the Leavenworth National Fish Hatchery	700	570
		Depth: 98 feet			
06/1/1940	Claim 012009	Well #2 (replaced by 2a) Source: shallow aquifer	For fish cultural purposes and all related use thereto in the operation of the Leavenworth National Fish Hatchery	900	730
		Depth: 203 feet			
10/10/1957	3103-A	Well #1 Source: shallow aquifer	For fish cultural purposes	1,200	1,120
		Depth: 80 feet			
10/20/1980	G4-27115	Four Wells: #4, #5, #6, #7 Source: 4 and 7 are shallow aquifer, 5 is deep aquifer, 6 is both shallow and deep aquifer.	To be used continuously for non-consumptive fish propagation.	3,900	5,257
		#4 Depth: 237 feet #5 Depth: 279 feet #6 Depth: 170 feet #7 Depth: 110 feet			

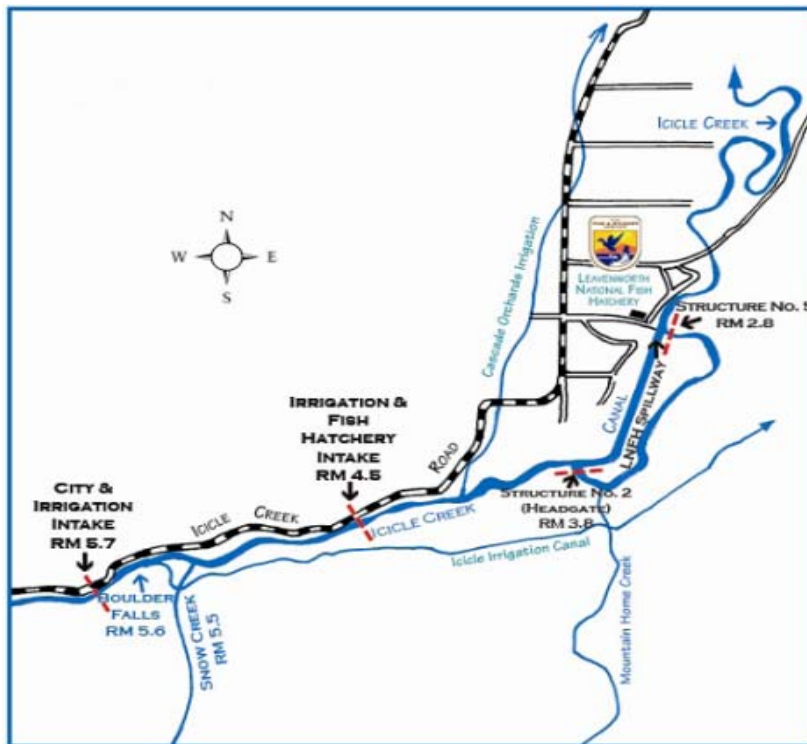
¹³ *State v. Icicle Irrigation District*, No. 8252 (Chelan County Ct. filed Oct. 28, 1929); *aff'd State v. Icicle Irrigation District*, 159 Wash. 524, 294 P. 245 (1930).

c. Reservoir Right

Reservoir Certificate No. 1825 allows LNFH to dam Snow Creek to create a reservoir, referred to here as “Snow Lake,” above the hatchery. The reservoir right is for 16,000 acre-feet with a priority date of 1942. The Icicle Irrigation District and Peshastin Irrigation District (the Districts) hold senior rights to water that were impaired by creation of the new reservoir. LNFH agreed to provide 750 AFY, at a rate not to exceed 30 cfs, from the reservoir to the Districts in exchange for their agreement to give up rights to 1,000 AFY of Snow and Nada Lake storage.¹⁴

The reservoir right is restricted to the months of “July through October inclusive” and its purpose is for “supplementing supply for hatchery and holding pools.” The “holding pools” referred to in this permit were those originally created in the natural channel of Icicle Creek. The average annual release of water from Snow Lake between August and October for the years 1994-2002 was 4,140 acre-feet.¹⁵

Diagram 1



II. Legal analysis

a. The Diversion of Water from Icicle Creek into the Artificial Canal for Aquifer Recharge Requires a Water Right, Which LNFH Does Not Have

¹⁴ Contract between United States of America and Icicle and Peshastin Irrigation Districts, Symbol #-r-1383, in 309 Chelan County Auditor 162 (1941).

¹⁵ *Supra*, note 5 p. 7.

Under Washington's Surface Water Code, a water user may not divert water from a stream and put it to beneficial use without a permit.¹⁶ However, this is what is occurring at the LNFH head-gate dam, where water is diverted for the purpose of recharging wells operated by LNFH.

The LNFH canal was originally designed to divert water away from the natural channel of Icicle Creek in order to prevent high water from damaging the instream holding pools. In 1979 LNFH decided against using the natural channel for holding pools and switched to off-channel hatchery pools.

LNFH holds just one surface water right, Superseding Certificate 1824, for 41.7 cfs. The authorized point of diversion for this right is "200 feet north and 700 feet west of the east quarter corner of Section 27."¹⁷ This point of diversion describes the location of the diversion structure where LNFH currently diverts water into a pipeline where it is conveyed to the Hatchery. The pipeline is capable of carrying no more than 42 cfs.

The original application and permit listed a second point of diversion: "Diversion Holding-pool channel 1240 feet south of the north quarter corner of Section 26, T.24N., R.17E., W.M., being within the SW1/4NE1/4 of Section 26, T.24N, R.17E., W.M., County of Chelan."¹⁸ The "holding-pool channel" is described as "the natural Icicle Creek channel modified by three concrete and steel dams which create deep holding pools for adult salmon."¹⁹

In the early 1980's, having discovered that LNFH had stopped using the natural channel for its holding pools, Ecology issued a superseding certificate reducing the amount of water authorized for diversion under the right. The superseding certificate states, "The undersigned has used a maximum of 42 cubic feet per second from Icicle Creek and at no time has used more than that." Furthermore, the superseding certificate only lists the pipeline intake as the authorized point of diversion for this right.

The water used in the holding pools did not need a right to *divert* the water into the natural channel, but it did need a right to protect this right against subsequent appropriations from Icicle Creek. However, when LNFH stopped using the natural channel for fish propagation it did not seek to change the place of use from the natural channel to the artificial canal. Since LNFH stopped using the holding pools in the natural channel, Ecology properly eliminated the head-gate "diversion/place of use" from the certificate and limited LNFH's surface water diversion to 42 cfs with a point of diversion 1 1/2 miles up-river.

In the 1990's, LNFH began diverting water out of the natural channel and into the artificial canal for aquifer recharge purposes without filing for a new water right. Currently, LNFH is using the head-gate dam to divert water into the artificial canal for several beneficial uses.²⁰ Water is diverted for flood control (to protect nearby home owners) and aquifer recharge. In the spring, water is diverted to flush smolts and May through July water is diverted to attract adult hatchery-raised fish to the fish ladder. These diversions are occurring without authorization from Ecology.

¹⁶ RCW 90.03.250 (2007).

¹⁷ Superseding Certificate 1824 (January 5th, 1984).

¹⁸ Application No. 5671 and Permit 3537

¹⁹ *Id.*

²⁰ Leavenworth National Fish Hatchery Tier II Water Quality Analysis, p. 8. (April 30, 2008)

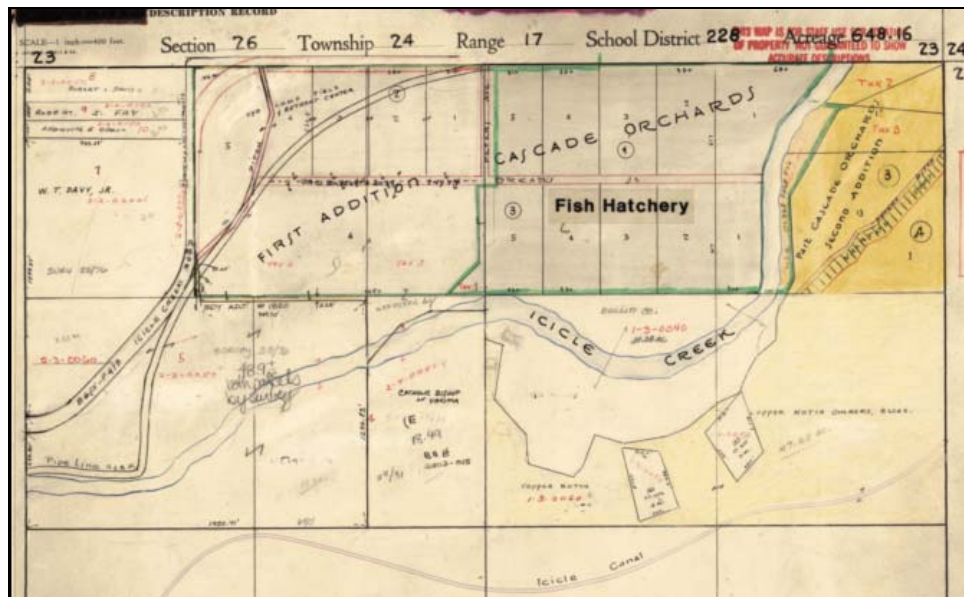
LNFH does not hold a water right authorizing a diversion out of Icicle Creek at the head-gate dam for any purpose.

The use of water for aquifer recharge, flood control, and fish flushing and attracting purposes are beneficial uses and require a water right. The diversion at the headgate dam is for beneficial uses of water with respect to Icicle Creek. LNFH is illegally diverting water from Icicle Creek at the head-gate dam for these purposes.

b. The Artificial Canal, Constructed in the early 1940s, is Not Part of the Natural Icicle Creek and Ecology does Not have the Authority to Reclassify it

It is undisputed that LNFH constructed the approximately 4000-foot long canal during the late 1930s or early 1940s. Prior to the construction of the artificial canal, Icicle Creek flowed entirely through the natural channel. Maps predating the construction of LNFH do not indicate Icicle Creek naturally flowed through the area now occupied by the artificial canal (See Diagram 2).

Diagram 2



Chelan County Plat map predating LNFH construction.

However, since at least 2001 USFWS has stated that the artificial canal is the “actual” Icicle Creek and that the natural channel of Icicle Creek is either a subcomponent of the natural system or no longer part of the natural system, and they assert that Ecology has “informally” given them this interpretation on more than one occasion. The apparent justification for this determination is the language in the original certificate for water right No. 1824. As discussed above, this certificate originally contained two points of diversion; one up-river of the hatchery where the current diversion under this right occurs and another at the present location of Dam 2. USFWS and possibly Ecology interpret the fact that the Dam 2 diversion was included in the original permit as intent to reclassify the artificial canal as the “natural” Icicle Creek. This is a spurious interpretation.

Ecology lacks authority to unilaterally determine the “naturalness” of watercourses within the state. Ecology cannot make a determination that the LNFH artificial canal is now Icicle Creek; particularly given that this decision is based on vague language found in a water right issued almost 70 years ago. Washington case law indicates that determinations of what constitutes a “natural” watercourse are either a matter of law or fact to be determined through the courts.²¹

The designation of the hatchery’s artificial canal as a natural water course appears to be an attempt to avoid the requirements of the state water code. The fallacy of this approach is evident in the problem at hand. Without requiring a water right for the diversion into the hatchery canal, there has been no determination of impacts on other water users or the public interest, including the need to maintain instream flows to protect native fisheries.

Moreover, the informal nature of the purported determination that the artificial hatchery canal comprises part or all of the natural system also makes it suspect. For many years several interested parties have inquired to Ecology as to why no water right is required for the diversion into the artificial canal. We can find no documents or orders that address, describe and/or justify the alleged change in what Ecology staff have informally described as the change in the natural system. A decision to re-define the natural channel of a stream system is a serious matter. Lack of documentation indicates arbitrary action by the agency.

c. Waste

Assuming, for the sake of argument, LNFH may legally divert some amount of water out of the natural channel and into the artificial canal, it still may not do so in an inefficient manner. LNFH has *no right* to divert water from Icicle Creek into the artificial canal, but if it did, it could be challenged as wasteful and contrary to beneficial use requirements. LNFH holds water rights for “fish propagation” and “fish cultural purposes.”²² Its groundwater rights total 6,700 gpm, which is equivalent to 14.9 cfs, but the local aquifer is incapable of sustaining this level of pumping. The water simply is not available in the quantities allocated under LNFH’s groundwater rights. To augment groundwater, LNFH diverts water, without a permit, into the artificial canal during low flow periods in order to recharge the aquifer, and its wells. The hydraulic continuity between surface and groundwater is high in this area and the artificial canal leaks a significant amount of the diverted flows into the aquifer. This leakage allows the aquifer to recharge and allows LNFH to pump the maximum quantities under its groundwater rights.

To accomplish aquifer recharge, LNFH diverts far more than it pumps. During winter it is estimated that LNFH diverts an average of 200 cfs into the artificial canal in order to fully utilize its wells. This diversion severely limits fish passage in the natural channel of Icicle Creek due to low water levels. Therefore, even acting under the assumption that LNFH has some right to divert water into the canal it must limit the diversion to only that which is reasonably efficient to meet its purpose of use on the water right.

²¹ See, *King County v. Boeing Co.*, 62 Wn.2d 545, 550, 384 P.2d 122, 126 (1963); *Tierney v. Yakima County*, 136 Wn. 481, 483-4, 239 P. 248, 249 (1925) (question of fact); *Wilber v. Western Properties*, 14 Wn. App. 169, 172, 540 P.2d 470, 473 (1975) (question of law).

²² See, Tables 2 and 4.

Again, this argument is secondary. The facts show that LNFH is diverting water out of Icicle Creek at the head-gate dam for several beneficial uses. It has no legal right to do so and is therefore in violation of the Water Code.

III. Conclusion

Washington's Surface Water Code requires a permit for the diversion and beneficial use of water. LNFH currently has two diversions from Icicle Creek. However, only one of these diversions is legally authorized. LNFH holds one surface water right for 42 cfs with a point of diversion 1 ½ miles up-river from the facility. This right is authorized via Certificate No. 1824. A second diversion exists at the head-gate dam. LNFH manipulates this diversion to take water out of Icicle Creek and convey it into the artificial canal in order to recharge the aquifer from which groundwater withdrawals are made. LNFH holds no claim, permit, or certificate authorizing diversion of Icicle Creek at the head-gate dam for aquifer recharge or any other purpose. Therefore, this diversion is illegal under the Water Code.

CELP and WFC would appreciate meeting with you to discuss LNFH water rights in relation to their operation of the head-gate dam and instream flow needs in Icicle Creek. We will contact you soon, or feel free to contact Patrick Williams at 206-547-5047 to arrange a meeting. Thank you for your consideration.

Sincerely,

Rachael Paschal Osborn

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Susan Adams, Washington Water Trust