STATE OF WASHINGTON
DEPARTMENT OF ECOLOGY

AMENDED TEMPORARY PERMIT*

TO APPROPRIATE PUBLIC WATERS OF THE STATE OF WASHINGTON

☐ Surface Water (Issued in accordance with the provisions of Chapter 117, Laws of Washington for 1917, and amendments thereto, and the rules and regulations of the Department of Ecology.)

☒ Ground Water (Issued in accordance with the provisions of Chapter 263, Laws of Washington for 1945, and amendments thereto, and the rules and regulations of the Department of Ecology.)

PRIORITY DATE	APPLICATION NUMBER	PERMIT NUMBER	CERTIFICATE NUMBER
June 3, 2002	G1-28135		

NAME
City of Everett % Heather Griffin, PE, Utilities Engineer

ADDRESS (STREET)	(CITY)	(STATE)	(ZIP CODE)
3200 Cedar Street	Everett	Washington	98201

PUBLIC WATERS TO BE APPROPRIATED

SOURCE
The source shall be designated as Well #1 and Well #2 (PW-1 & PW-2, respectively). This amended temporary permit supersedes any previously issued temporary permit to augment stream flow in North Creek.

TRIBUTARY OF (IF SURFACE WATERS)

MAXIMUM CUBIC FEET PER SECOND	MAXIMUM GALLONS PER MINUTE (gpm)	MAXIMUM ACRE FEET (ac-ft) PER USE PERIOD (May 1 – September 15)
	Well #1: 59 gpm; Well #2: 300 gpm	220

TYPE OF USE, QUANTITIES, PERIOD OF USE

- Fish Enhancement
- Period of use shall *only* occur between May 1st and November 15th of each year during the pendency of the application review.

LOCATION OF DIVERSION/WITHDRAWAL

APPROXIMATE LOCATION OF DIVERSIONS--WITHDRAWALS

Well #1: 2550 feet north and 1145 feet east of the southwest corner of Section 30, T28N, R05E.
Well #2: 1,380 feet north and 780 feet east of the SW corner of section 19-TWP 28N-R5E.

LOCATED WITHIN (SMALLEST LEGAL SUBDIVISION)	SECTION	TOWNSHIP N.	RANGE, (E. OR W.) W.M.	W.R.I.A.	COUNTY
Well #1: NW 1/4, SW 1/4	30	28N	05E	8	Snohomish
Well #2: NW 1/4, SW 1/4	19	28N	05E		

RECORDED PLATTED PROPERTY

LOT	BLOCK	OF (GIVE NAME OF PLAT OR ADDITION)

LEGAL DESCRIPTION OF PROPERTY ON WHICH WATER IS TO BE USED

That portion of North Creek, tributary to the Sammamish River, located in the NE¼ of NW¼ of SW¼ of Section 30, Township 28 North, Range 5 East.

Situated in the county of Snohomish, state of Washington.

REPORT

BACKGROUND

Ground Water Application #:	G1-28135
Applicant Name:	City of Everett
Priority Date:	June 3, 2002
Application Source:	Well Field
Purpose of Use:	Fish Enhancement
Period of Use:	Seasonal; May 1st through November 15th
Notice of Publication:	The Herald; July 29th and August 5th, 2002 Re-Published on September 8th and 15th, 2003
Protests:	None received during the statutory 30-day protest period.
SEPA:	Exempt

On June 3, 2002, the City of Everett filed an application with the Department of Ecology to appropriate water from a well field in the amount of 2100 gpm for fish enhancement. Groundwater pumped from the well field is proposed to augment stream flows in North Creek during the summer and early fall months. The goal of the project is to enhance salmonid-rearing habitat in North Creek and alleviate water quality issues by augmenting the stream during periods of low-flow. Drilling, testing, and withdrawal authorization data throughout the history of the project are summarized in Table 1. This ongoing project is scheduled to increase production from the well field until the instantaneous rate of withdrawal for which the City of Everett applied is attained. Thus, this temporary permit is intended to be updated and revised after each successfully completed, tested, and developed well is brought online.

Table 1. Permit History for G1-28135

Document[1]	Issue Date	Subject Well(s)	Q_i (gpm)	Q_a (ac-ft)	Applicable Reference
App	6/3/2002[2]	Well Field	2100	1,270	GeoEngineers, 11/07/2004. Hydrogeologic Services--Flow Augmentation Site Evaluation Everett, WA
PP	10/3/2002	PW-1			
TP	12/31/2003	PW-1	80	48.8	City of Everett Utilities Division, 12/2005. North Creek Monitoring Report
PP	8/27/2004	PW-2			Lindsay, Charles S., 3/23/2005. Letter to Dan Mathias; Re: PW-2 Well Installation and Testing
TP	current	PW-1, PW-2	359	129	
PP	current	PW-3			

Notes:

1) PP = Preliminary Permit; TP = Temporary Permit; APP = Application

2) Priority Date

Under the authority of RCW 90.03.250, the Department of Ecology may issue a temporary permit for the beneficial appropriation of water if the applicant has demonstrated an imminent threat to public health and safety, or an economic emergency caused by unforeseen natural events; and/or a high degree of public interest. The issuance of the initial preliminary permits to drill and test wells and the subsequent issuance of temporary permits to authorize withdrawal at each well brought online to date of said permit issuance shall be understood to represent Phases I, II, III, etc. of the North Creek Augmentation project. This amended temporary permit to withdraw water from Well #1 and Well #2 represents the final step of Phase II.

INVESTIGATION

In considering this application, my investigation included, but was not limited to research and/or review of:

- The State Water Code
- Water Right Administration Policies and Procedures
- Application for Water Right Permit G1-28135
- Topographic and local area maps
- Records of water rights in the vicinity
- GeoEngineers, 2003. Hydrogeologic Assessment—North Creek Stream Flow Augmentation Project, Everett, Washington
- GeoEngineers, 11/07/2004. Hydrogeologic Services--Flow Augmentation Site Evaluation Everett, WA
- Correspondence with Dan Mathias (City of Everett), Charles S. Lindsay
- Permits on file with Washington State Department of Ecology, Northwest Regional Office, Bellevue, WA.

State Water Code

Chapters 90.03 and 90.44 RCW authorize the appropriation of public water for beneficial use and describe the process for obtaining water rights including the process to amend or change existing rights. Laws specifically governing the water right permitting process are RCW 90.03.250 through 90.03.340 and RCW 90.44.060. Changes or amendments to these rights are covered under RCW 90.03.380 and RCW 90.44.100. Temporary permits are addressed in 90.03.250.

FINDINGS

In accordance with state law, the following considerations must be addressed prior to the issuance of a temporary permit:

- Water Availability
- Impairment to Existing Rights
- Beneficial Use of Water
- Public Interest

Water Availability

As summarized in Table 2, the maximum available drawdown is evidence the wells can support the pumping rates for their prescribed purpose. The working head at the wells is likely sufficient to accommodate fluctuations in groundwater level due to various climatic swings. It should be noted the pump rates authorized by this temporary permit are somewhat less than those rates at which the wells were tested, thereby providing more evidence of the wells capability to support its rated withdrawal.

Table 2. Pump Test Historical Data

Date	Well	Q_i (gpm)	Duration	SWL (bgs)[1]	PWL (bgs)[2]	Screen Elev. (bgs)[3]	Maximum Drawdown	Recovery[4]
11/14/2002	PW-1	59	24 hours	33.49	51.0	70	17.5	33.81 / 28.7
12/1/2004	PW-2	300	24 hours	93	140	148	47	<94 / .45

Notes:

1) Static water level before pumping began below ground surface (feet)
2) Pumping water level after stabilization (change of less than 0.1 inches / hour) below ground surface (feet)
3) Datum represents distance (bgs-feet) to the top of the screened interval
4) Water level elevation (bgs-feet) / time since test end in hours

Water levels recorded in monitoring wells during the pump tests show drawdown of one foot and 0.4 feet a distance of 30 feet and 150 feet from Well #1, respectively. The only wells of record within one mile of Well #2 are in the Interstate 5 right-of-way and either decommissioned or inaccessible. Thus, there are no monitoring well data as part of the Well #2 pump test.

The application states a request for 1,270 ac-ft at a pumping rate of 2,100 gpm per use period for stream flow augmentation. However, at a pumping rate of 2,100 gpm 24 hours per day for each day of the use period, the maximum amount of water produced from the well field is approximately 715 ac-ft. The volume of water currently allocated to the project coincides with the percentage of the final pumping rate represented by the current pumping capacity. A pumping rate of 359 gpm is 17% of 2,100 gpm, thus the volume of water allocated for the project is 17% of 715 ac-ft; 122 ac-ft.

Impairment of Other Rights

There are no existing water rights within a one mile radius of the point of withdrawal. Also, the nearest reported exempt well is located approximately 2,500 feet from the subject well. Based on this distance and the reported drawdown at distance from Well #1, impairment to vicinity water rights and exempt withdrawals is unlikely.

As per WAC Chapter 173-508, North Creek has been a CLOSED stream since 1979. All diversions of water from the Lake Washington drainage system are closed to further consumptive appropriations in order to support the uses described in WAC 173-508-020. Consumptive groundwater withdrawals found to be in hydraulic continuity with a closed or regulated stream are also subject to the instream flows and closures established in WAC 173-508. However, under WAC 173-508-070, future water rights for non-consumptive uses may still be granted.

The City of Everett is proposing to withdraw groundwater from the Intercity Aquifer (Qva) and discharge the water directly into North Creek. At the project site location, the creek bed and the Intercity Aquifer are separated by a layer of glacial till; however, the aquifer appears to provide discharge to North Creek roughly 2,500 feet downstream of the project site (GeoEngineers, 2003). At this location, the till is absent and the aquifer intersects the ground surface; hence, defining hydraulic continuity between the Intercity Aquifer (source) and North Creek (point of discharge).

Because the source and point of discharge are considered hydraulically connected, withdrawing water from the aquifer and discharging it directly to the stream is considered a non-consumptive use of water. The operation does not diminish the source or impair future water use.

Beneficial Use

Fish enhancement is considered a beneficial use under RCW 90.54.020(1).

Public Interest

Factors considered in determining whether this use of water is in the public interest include but were not limited to: consideration given to exempt wells; existing water right certificates, applications, and claims; potential impacts to the aquifer subject to withdrawal as it pertains to drawdown and water quality (e.g. sea-water intrusion); beneficial use of water as a resource defined in this report. No detriment to the public interest could be identified during the investigation of the subject application. Available data show existing wells in the area are not expected to be impaired by the anticipated operation of the subject well.

Provisions

This AMENDED TEMPORARY PERMIT becomes effective immediately and will remain in effect until **December 31, 2011,** unless sooner revoked by the Department of Ecology.

This request is approved for an amended temporary permit, subject to the provisions and conditions listed below:

1. **Water Use**. An approved measuring device shall be installed and maintained for each diversion/withdrawal of the sources identified by this water right in accordance with the rule "Requirements for Measuring and Reporting Water Use," Chapter 173-173 WAC.

   Water use data shall be recorded weekly during the operation of the wells. The maximum annual instantaneous rate of withdrawal and the annual total volume shall be submitted to Ecology by January 31st of each following year.

   The following information shall be included with each submittal of water use data: owner, contact name if different, mailing address, daytime phone number, Permit/Certificate/Claim No., source names, volumes including units, Department of Health WFI water system number and source number(s) (for public drinking water systems), and well tag numbers (for ground water withdrawals). In the future, Ecology may require additional parameters to be reported or more frequent reporting. Ecology prefers web based data entry, but does accept hard copies. Ecology will provide forms and electronic data entry information.

   Chapter 173-173 WAC describes the requirements for data accuracy, device installation and operation, and information reporting. It also allows a water user to petition Ecology for modifications to some of the requirements. Installation, operation and maintenance requirements are contained in the document entitled "Water Measurement Device Installation and Operation Requirements".

   Department of Ecology personnel, upon presentation of proper credentials, shall have access at reasonable times, to the records of water use that are kept to meet the above conditions, and to inspect at reasonable times any measuring device used to meet the above conditions.

2. **Water Level Monitoring**. In order to protect the resource, water levels shall be measured weekly in MW-1, MW-2, and production wells Well #1 and Well #2 during their operation. When the wells are not in operation, static water level (SWL) measurements shall be recorded monthly in MW-1 and MW-2 and both production wells. Monthly SWL measurements during non-operational periods are required to evaluate recharge to the aquifer during the winter/spring months. Each production well and pertinent monitoring wells shall be added to the list of those wells monitored throughout the year as they are brought online for production during the use period (May 1 – September 15).

   Installation and maintenance of an access port on each well as described in Ground Water Bulletin No. 1 is required. An air-line and gauge may be installed in addition to the access port.

3. **Stream Flow Monitoring**. Stream flow gauging in North Creek shall be maintained weekly at those locations previously adopted for this purpose just upstream of the discharge structure and at a location approximately 1,500 feet downstream of the discharge structure during the operation of the well. An additional stream gauging location shall be added and monitored weekly between 124th St. NE and 112th St. NE, and north of Monitoring Site #1. When the wells are not in operation, stream flow shall be monitored weekly at a location 1,500 feet downstream of the discharge structure. Monthly stream flow measurements during non-operational periods are required to evaluate seasonal variations of flow. All stream flow measurements shall be estimated using a Swoffer instrument or similar current velocity model. Stream gauge sites capable of measuring stream flow (i.e. where flow is sufficient) shall be added as production wells are brought online for production during the use period (May 1 – September 15).

4. **Hydraulic Project Approval**. This amended temporary permit is issued subject to Washington Department of Fish and Wildlife screening criteria as outlined in a hydraulic project approval. Please contact the Department of Fish and Wildlife, 600 Capital Way North, Olympia, Washington, 98501-1091, Attention: Habitat Management Division, (360) 902-2661, to obtain specified requirements for your project.

5. **Water Quality**. Water pumped from the wells shall be naturally aerated to increase the dissolved oxygen (DO) content to a level of 8 mg/L prior to discharging into North Creek. Temperature and DO monitoring shall be maintained monthly at those locations previously adopted for this purpose at a location upstream of the discharge structure and also at a location 10-20 feet downstream of the discharge structure. An additional water quality location shall be added and monitored monthly between 124th St. NE and 112th St. NE, and north of Monitoring Site #1.

6. **Impairment.** If senior water right holders, including those with rights to surface water bodies and wells exempt from permitting under RCW 90.44.050, are adversely affected by the actions granted under this amended temporary permit, it shall be the responsibility of the permit holder to mitigate and/or alter or cease withdrawal of water. The Department of Ecology retains the right to order the city to cease withdrawal during drought conditions.

7. **Recovery of Aquifer**. If water level monitoring suggests that winter/spring groundwater levels are not fully recovering from the seasonal operation of the production wells, withdrawals from the wells shall be reduced or terminated, so as to allow for the complete recovery of aquifer water levels.

8. **Effectiveness**. If stream flow monitoring suggests that augmentation of water flow in North Creek is unnecessary or that augmentation is not improving flow conditions, this amended temporary permit shall be canceled.

The granting of this Amended Temporary Permit shall not be construed, by inference or otherwise, that a standard permit will ultimately be approved. If the applicant fails to comply with the conditions of this Amended Temporary Permit, it and the associated water right application may be revoked.

CONCLUSIONS

In accordance with chapters 90.03 and 90.44 RCW, I find there is water available for this beneficial appropriation from the source in question and that the appropriation as authorized will not impair existing rights or be detrimental to the public interest. Therefore, an amended temporary permit should be issued, subject to the above-indicated provisions.

REPORT BY: _____ DATE: 01/15/2010

Noel S. Philip, LG, LHG
Hydrogeologist
Washington State Department of Ecology