

To: Chehalis Basin Partnership-City of Centralia
From: Jerry Louthain
Date: June 30, 2008
Subject: Interim Milestone 3.1 - Clarifying Water Rights and Uses

Background

The work plan associated with this Interim Milestone identified the following work to be performed:

- A. Implement a pilot water right mapping project for the Skookumchuck River Basin within the Chehalis Basin
 - Mapping to include point of diversion (POD) for surface water or point of withdrawal (POW) for ground water, quantity, and type of use, for existing surface and ground water certificates, permits and pending applications.
- B. Develop a scope of services for an assessment of all the registered water right claims in the Chehalis Basin.

A. Pilot Water Right Mapping Project-Skookumchuck River Basin

Work Performed

As an element of implementing **DIP Strategy #3** and **Interim Milestone 3.1**, the following work was performed under this task:

- Obtained records from the Department of Ecology (Ecology) database on all existing ground and surface water rights and pending applications in WRIA 23-Upper Chehalis
- Selected records from Ecology's database that were identified as having a POD/POW located within the Skookumchuck basin, based on their location by Section, Township, and Range. (For records near the basin boundary, the work included reviewing maps/drawings or other information in the water right file and comparing to topography maps to determine if the POD/POW was located within the basin.)
- Assigned a unique ID number for each record
- Prepared an Excel spreadsheet listing all records of water rights and water right applications with pertinent information from each record
- Made copies from Ecology's files of water right certificates and applications and maps for each record located within the Skookumchuck basin to estimate the specific location of the

POD/POW and place of use for each of the water rights and the POD/POW for each application

- Plotted the location of the POD/POW and place of use for each water right and the POD/POW for each water right application, referenced by their unique ID number, on a base map of the Skookumchuck basin

Two primary products were developed under this task: a base map of the Skookumchuck River Basin (Attachment 1) and an Excel spreadsheet (Attachment 2). The attached base map shows the ID Number, the POD/POW and the place of use for each water right and the POD/POW for each water right application. A key to the column headings and data on the spreadsheet are included as part of the attachment. The spreadsheet showed the following attributes of each of the water rights and applications:

- ID Number
- Water right/application file number
- Water right holder/applicant
- Priority date (date application for water right was filed)
- Purpose of use (irrigation, municipal supply, domestic, industrial, etc)
- Instantaneous quantities (Qi) in cubic feet per second (cfs) for surface water and gallons per minute (gpm) for ground water
- Annual quantities (Qa) in acre-feet per year (afy)
- Number of irrigated acres
- Section, Township, and Range of POD/POW
- Source (stream name or Well)

The spreadsheet also included a summary showing totals for the number of surface and ground water rights and pending applications, the total authorized instantaneous and annual quantities, and the total authorized irrigated acres.

Below is the spreadsheet summary table.

Totals	Docs	Qi (cfs)	Qi (gpm)	Qa (afy)	Irrigated Acres
Certificates					
Surface	72	197.17	n/a	2,164.83	1,102.21
Reservoir	5	n/a	n/a	35,415.50	15.00
Ground	53	n/a	14,031.00	12,321.10	459.00
Permits					
Surface	2	54.02	n/a	39,100.50	0.00
All Permits and Certificates					
	132	251.19	14,031.00	89,001.93	1,576.21
Applications					
Surface	1	26.00	n/a	n/a	n/a
Ground	4		1,280.00	n/a	n/a
All Applications					
	5	26.00	1,280.00	n/a	n/a

The quantities shown in this table deserve some clarification in order to fully understand the potential impacts of the water rights that have been issued in the Skookumchuck Basin.

Reservoir Water Rights

The numbers shown in the table are much greater than what the true impacts are to the actual water use in this basin; this is primarily due to the existence of the Skookumchuck Dam and Reservoir and the associated water uses with this stored water in the reservoir. In particular, the totals shown for annual quantity (Qa) for Reservoir in this table represents the total amount of water that is authorized to be stored under the five reservoir storage rights in the basin. The largest of these rights are associated with the Skookumchuck Reservoir storage and power production. The largest one of these reservoir rights is for 35,000 acre-feet per year of storage for Skookumchuck Reservoir. This right is for hydropower associated with the dam and reservoir and is a non-consumptive water right, so there is no actual depletion of flow in the Skookumchuck River by this amount.

Non-consumptive Surface Water Rights

In addition to this large Reservoir storage right associated with the Skookumchuck Dam and Reservoir, a surface water right with a Qi of 140 cfs was issued to Pacific Power and Light for hydropower generation. This water right is also a non-consumptive water right and does not deplete any flow in the Skookumchuck River.

Two other large surface water rights with a Qi of 20 cfs and 10 cfs are held by the Washington Department of Fish and Wildlife for fish propagation, and these rights are also largely non-consumptive. It should be noted that the attached spreadsheet shows that none of these large non-consumptive water rights have an annual quantity (Qa) shown, which confirms that they are non-consumptive water rights.

These 3 large non-consumptive surface water rights of 140, 20, and 10 cfs total 170 cfs that can for all practical purposes be considered as being deducted from the total Qi of 197.17 cfs allocated for surface water rights shown in the table.

In addition, there is one other large surface water right shown in the spreadsheet that has never been used, and likely will never be used. This is a surface water right for 11.1 cfs held by the City of Bucoda. The City of Bucoda also has a surface water right for 1 cfs, which they also likely have not used.

By subtracting these three large non-consumptive water rights and the two Bucoda water rights, for a collective total Qi of 182.1 cfs from the total Qi of 197.17 cfs for surface water rights, this effectively means there could only be a maximum of approximately 15 cfs allocated for consumptive use surface water certificates in the Skookumchuck basin.

For comparison purposes, the lowest average monthly flow for the Skookumchuck River at the USGS gage near Bucoda for the approximately 30 years of record is 79 cfs. This gage is located

approximately 3.3 miles downstream of Bucoda and about one half mile downstream of the Trans Alta diversion described below.

There is one other large surface water right in the basin that is still in Permit status, and that right is for a total Qi of 54 cfs and a Qa of 39,100 afy, which is held by Trans Alta for power generation at the Centralia Steam Plant. This is considered as a consumptive water right since water is pumped from the Skookumchuck River to the Steam Plant. It should be noted, however, that this right actually results in additional flow for several miles of the Skookumchuck River from the Skookumchuck Dam downstream to the Trans Alta pumping plant, which is located about three miles downstream of Bucoda. Additional water is released from the Skookumchuck Dam into the Skookumchuck River, to offset the amount of water that is pumped out of the river for the power plant at a location approximately 15 river miles downstream of the dam.

Ground Water Rights

All the ground water rights shown in the table can be considered as consumptive uses, so there is no category of water rights that need to be addressed as special cases as was done above for reservoir and surface water rights.

One thing that should be pointed out is that of the total Qi of 14,031 gpm and Qa of 12,321 afy in ground water rights, the City of Centralia has a total of 7,600 gpm and 9,986 afy for municipal supply. In addition, the Town of Bucoda has 500 gpm and 157 afy for municipal supply.

Subtracting these amounts for municipal uses, the ground water right totals for other uses in the basin are 5,931 gpm and 2,178 afy.

Irrigated Acres

The table shows a total for all water rights for irrigation in the basin of approximately 1,576 acres, with approximately 70% of the irrigated acres from surface water rights. There are no exceptionally large single water rights for irrigation in the basin, with the largest irrigation water right being for 120 acres. The majority of the larger irrigation water rights range from 10 to 50 acres.

B. Develop Scope of Services for Assessment of Water Right Claims in the Chehalis Basin

As an element of implementing **DIP Strategy #3** and **Interim Milestone 3.1**, work performed under this task consisted of developing a detailed scope of services for an assessment of all the registered water right claims in the Chehalis Basin, by considering the following general work elements:

- Request records from Ecology database of all registered water right claims located in the Chehalis Basin, based on Township, Section and Range
- Request copies from Ecology of all the state-registered surface and ground water claims in the Chehalis Basin (WRIA Nos. 22 and 23)

- Consider all surface water claims with claimed first use dates of 1917 (date of enactment of the State Surface Water Code, Chapter 90.03 RCW) or earlier, as potentially valid claims
- Consider all ground water claims with claimed first use dates of 1945 (date of enactment of the State Ground Water Code, Chapter 90.44 RCW) or earlier, as potentially valid claims
- Consider all ground water claims for domestic supply or other exempt ground water uses of less than 5,000 gallons per day as potentially valid claims
- Review information relating to quantities, dates of first water use, purpose of use, and irrigated acres for all claims to be considered as potentially valid claims
- Prepare separate summaries of all potentially valid claims in WRIA Nos. 22 and 23

Background - Water Right Claims and Registration Process

In the 1960's, the Washington State Legislature realized the need to document water use and water rights established prior to the enactment of the 1917 Surface Water Code and prior to the 1945 enactment of the Ground Water Code. These water rights are considered as *vested rights*. A vested right is a water right that is established through beneficial use of water prior to the date of the enactment of a water code which requires state approval for establishing a water right. A water right claim for a vested right is a statement of beneficial use of water that began either prior to 1917 for surface water or prior to 1945 for ground water. In 1967 the Claims Registration Act was passed to record the amount and location of these vested rights. Water right claims were to be prepared and submitted by these categories of water users for filing with the Department of Ecology during the period of time from 1967 to June 30, 1974.

In addition to the requirement for filing water right claims for vested water rights, users of exempt ground water withdrawals were also encouraged to file claims during this 1967-1974 time period so that they could establish priority dates for their exempt water uses as water rights. Ground water withdrawals that are exempt from the Ground Water Code include:

- Use of up to 5,000 gallons per day for a single home or groups of homes
- Use of up to 5,000 gallons per day for industrial purposes
- Livestock watering (no limitation on gallons per day)
- Watering a non-commercial lawn or garden one-half acre or less in size (no limitation on gallons per day)

Other water users which were not required to file a claim included:

- Individuals served water through any public water supplier such as a water district, municipality, etc
- Persons who had a valid water right permit or certificate
- Persons who had obtained a water right by a Court Decree through an adjudication process
- Non-consumptive uses of water, such as boating, swimming, or other aesthetic uses, with no physical diversion or impoundment of water

■ Owners of livestock that drank directly from a surface water source

During this 1967-1974 time period, approximately 160,000 water right claims were filed statewide with Ecology. Ecology did not do any evaluation of these claims and all claims filed with the \$2 registration fee were registered by Ecology.

Since this initial open period for filing water right claims, the legislature has reopened the Claims Registry three times. The subsequent 1979 and 1985 openings were very small efforts with little public notice. The most recent opening that occurred from September 1997 through June 1998 was a larger effort with a longer open period than the 1979 and 1985 openings and as a result, more claims were filed than during the two prior openings. None of these three subsequent openings resulted in many claims as compared to the initial open period. Statewide, there are roughly 169,000 water right claims on record.

During the 1997-1998 open period, claims were only to be submitted for those water uses claimed to be initiated prior to the dates of the surface and ground water codes and that were not filed during prior open periods. Exempt ground water users were not eligible to file claims during this open period. In fact, Ecology made a cursory evaluation of claims filed during this period and the only claims that were registered were those that showed a date of initial water use prior to the date of the applicable surface or ground water code. Claims that did not meet the required criteria for filing during this time period were stamped as Rejected by Ecology and were not registered, and the claimant was informed of this by letter. These claims are shown as Inactive in Ecology's database.

A water right claim remains in a claim status until an adjudication of all the water rights/water uses occurs in the basin. If a water right claim is upheld during the adjudication process, then a Certificate of Adjudicated Water Right would be issued for the amount of water confirmed through the adjudication process.

Since there are very few adjudications performed in the State and they are very time consuming, it is very likely that it would be many years before an adjudication would occur in the Chehalis Basin. It is also possible that an adjudication may never occur here.

The results of the work described in the attached scope of services is a means that the Chehalis Basin Partnership could utilize as an initial approximation of the amount of surface water and ground water that has the potential of being used within the Chehalis Basin, based on the approximately 8,500 water right claims that have been filed within WRIAs 22 and 23.

Since the work described in the attached scope of services only addresses water right claims, the Chehalis Basin Partnership would also need to have an evaluation done of amount of actual water use occurring from all the existing state-issued water rights within WRIAs 22 and 23, to get an estimate of the total actual water use within the Chehalis Basin.

Work Performed in Developing a Scope of Services

The initial work effort performed to develop this scope of services was to request a printout from Ecology of all the water right claims for WRIA Nos. 22 and 23, which were filed with Ecology

over the multiple open periods for filing water right claims. A total of 3,152 water right claims are shown in Ecology's database for WRIA 22 and a total of 5,416 for WRIA 23, for a total of 8,568 water right claims in the Chehalis Basin. A high percentage of these claims were filed during the initial open period from 1967-1974.

These claims are identified in Ecology's database as Document Type of "Claim L", "Claim S", and "Claim", and Status as "Active or Inactive". "Claim L" and "Claim S" claims were filed during the initial open period and are all shown as "Active". "Claim L" means that the claim was filed on a "Long Form" and "Claim S" was filed on a "Short Form". The "Long Form" was a claim form developed by Ecology that was intended to be used for vested rights and requested additional information than the "Short Form" which was intended to be only used for exempt ground water uses. Since there was no evaluation of these claims by Ecology, all of these "Claim L" and "Claim S" claims are shown as "Active".

Those claims identified by Document Type as "Claim" in Ecology's database are claims that were filed during the open periods after the initial open period, and these claims are shown in the database as "Active" or "Inactive". "Active" claims were those that met the Ecology requirements for filing claims during the open period and were registered by Ecology. "Inactive" claims were those that did not meet Ecology requirements and were rejected by Ecology, however these claims are still included in Ecology's database and are included in the 8,568 claims in the Chehalis Basin.

A scope of services (Attachment 3) was developed for an assessment of all the registered water right claims in the Chehalis Basin addressing the work elements described in the Scope of Work for this project.

Attachment 1: Base map showing locations of water rights and applications

Attachment 2: Spreadsheet showing attributes of water rights and applications

Attachment 3: Scope of Work for Assessment of Water Right Claims- Chehalis Basin