STATE OF WASHINGTON
DEPARTMENT OF ECOLOGY

REPORT OF EXAMINATION
Change of Diversion
WRTS File # CS3-*20723

PRIORITY DATE	CLAIM NO.	PERMIT NO.	CERTIFICATE NO.
January 29, 1968		15367	11123

NAME
Shirley A. Hindman

ADDRESS/STREET	CITY/STATE	ZIP CODE
PO Box 200	Touchet, Washington	99360

PUBLIC WATERS TO BE APPROPRIATED

SOURCE

DENIED

TRIBUTARY OF (IF SURFACE WATERS)

MAXIMUM CUBIC FEET PER SECOND (cfs)	MAXIMUM GALLONS PER MINUTE (gpm)	MAXIMUM ACRE FEET PER YEAR (ac-ft/yr)

QUANTITY, TYPE OF USE, PERIOD OF USE

DENIED

LOCATION OF DIVERSION/WITHDRAWAL

APPROXIMATE LOCATION OF DIVERSION--WITHDRAWAL

SOURCE	PARCEL	LATITUDE	LONGITUDE	QTR/QTR	SECTION	TOWNSHIP	RANGE

LEGAL DESCRIPTION OF PROPERTY ON WHICH WATER IS TO BE USED
[Attachment 1 shows location of the authorized place of use and point(s) of diversion or withdrawal]

DESCRIPTION OF PROPOSED WORKS

DEVELOPMENT SCHEDULE

BEGIN PROJECT BY THIS DATE	COMPLETE PROJECT BY THIS DATE	WATER PUT TO FULL USE BY THIS DATE

DRAFT

PROVISIONS

N/A

FINDINGS OF FACT AND ORDER

Upon reviewing the investigator's report, I find all facts relevant and material to the subject application have been thoroughly investigated.

Therefore, I ORDER denial of the requested change in point of diversion under Change Application No. 11123.

You have a right to appeal this action to the Pollution Control Hearing Board (PCHB) within 30 days of the date of receipt of this document. The appeal process is governed by Chapter 43.21B RCW and Chapter 371-08 WAC. "Date of receipt" is defined in RCW 43.21B.001(2).

To appeal, you must do the following within 30 days of the date of receipt of this document:

- File your appeal and a copy of this document with the PCHB (see addresses below). Filing means actual receipt by the PCHB during regular business hours.
- Serve a copy of your appeal and this document on Ecology in paper form - by mail or in person. (See addresses below.) Email is not accepted.

You must also comply with other applicable requirements in Chapter 43.21B RCW and Chapter 371-08 WAC.

Street Addresses	Mailing Addresses
Department of Ecology Attn: Appeals Processing Desk 300 Desmond Drive SE Lacey, WA 98503 Pollution Control Hearings Board 1111 Israel Road SW Suite 301 Tumwater , WA 98501	Department of Ecology Attn: Appeals Processing Desk PO Box 47608 Olympia, WA 98504-7608 Pollution Control Hearings Board PO Box 40903 Olympia, WA 98504-0903

Please also send a copy of your appeal to:

Mr. Keith L. Stoffel
Department of Ecology
Eastern Regional Office
4601 North Monroe Street
Spokane, WA 99205-1295

For additional information visit the Environmental Hearings Office Website: http://www.eho.wa.gov . To find laws and agency rules visit the Washington State Legislature Website: http://www1.leg.wa.gov/CodeReviser .

Signed at Spokane, Washington, this day of 2011.

Keith L. Stoffel, Section Manager
Water Resources Program
Eastern Region Office

BACKGROUND

Description and Purpose of Proposed Change

An application for change/transfer was submitted by Shirley Hindman of Touchet, Washington, to Ecology on October 6, 2003. Shirley Hindman proposes to change the three authorized points of diversion from the Walla Walla River to a hydrogeologically connected well under Water Right Certificate No. 11123.

Attributes of the Certificate and Proposed Change

Table 1 Summary of Proposed Changes to Water Right No. 11123

Attributes	*Documented*	*Proposed*
Name	Emmitt J. Lynch	Shirley Hindman
Priority Date/Date of Application for Change	January 29, 1968	October 6, 2003
Instantaneous Quantity	2.32 cubic feet per second	*No change*
Annual Quantity	522 acre feet per year	*No change*
Source	Walla Walla River	A hydrogeologically connected well
Point of Diversion/Withdrawal	N½SE¼ of Sec. 21[a] E¾S½N½ of Sec. 22[a] NW¼SW¼ of Sec. 23[a]	Within the N½ of Sec. 22[a]
Purpose of Use	Irrigation of 174 acres	*No change*
Period of Use	October 1 through July 1	*No change*
Place of Use	Portions of Sections 21, 22 and 23[a]	*No change*

[a]All within T. 7 N., R. 32 E.W.M.

In addition to this application, one other application was filed by Shirley Hindman on Walla Walla Adjudicated Certificate No. 646. Each application will have decisions based on its own respective findings.

Legal Requirements for Proposed Change

The following is a list of requirements that must be met prior to authorizing a change of existing points of surface water diversion to a hydrogeologically connected well.

- **Public Notice**

A notice of application was duly published in accordance with RCW 90.03.280 in The Times on February 22 and March 1, 2007 and no protests were received.

- **State Environmental Policy Act (SEPA)**

Environmental review under SEPA is required for many projects; however, some minor projects are categorically exempt from SEPA. Appropriations of one cfs or less of surface water, or of 2,250 gpm or less of ground water, for any purpose, and appropriations of 50 cfs or less for surface water used for irrigation are categorically exempt from SEPA. See WAC 197-11-305.

DRAFT

- **Water Resources Statutes and Case Law**

RCW 90.03.380(1) states that a water right that has been put to beneficial use may be changed. The point of diversion, place of use, and purpose of use may be changed if it would not result in harm or injury to other water rights.

The Washington Supreme Court has held that Ecology, when processing an application for change to a water right, is required to make a tentative determination of extent and validity of the claim or right. This is necessary to establish whether the claim or right is eligible for change. R.D. Merrill v. PCHB and Okanogan Wilderness League v. Town of Twisp

A point of diversion for a surface water right may be changed to a groundwater point of withdrawal. The authority is derived from RCW 90.03.380, RCW 90.44.020-030, RCW 90.44.100 and RCW 90.54.020(9). RCW 90.03.380(1) states that a water right that has been put to beneficial use may be changed if it would not result in detriment or injury to other water rights. Additionally, moving the point of diversion to a groundwater withdrawal requires compliance with the groundwater code (RCW 90.44), including a finding that there be no detriment to the public welfare and that the source of the existing diversion and the proposed point of withdrawal be part of the same water body.

- **Water Resource Policy**

Water Resources Program Policy POL-2010 is in part a policy designed to clarify and provide consistency in determining if surface water to ground water change will utilize the same source. This policy requires that both the authorized source and the proposed source are the same source or body of water. The policy definition for source is defined below:

"A source of water is a body or bodies of water which:

- *Are hydraulically connected.*
- *Share a common recharge (catchment) area.*
- *Share a common flow regime.*
- *Are isolated from the other sources by the presence of effective barriers to hydraulic flow."*

INVESTIGATION

In considering the proposed changes/transfers, the investigation included, but was not limited to, research and review of: (1) appropriate rules and statutes; (2) Surface Water Certificate Nos. 11123, 646 w/chg. 184 and other water rights/claims/permit in the vicinity; (3) diversion works and wells; (4) USGS topographic maps, aerial photographs, State of Washington Irrigation Guide (Natural Resources Conservation Service 1997) and; (5) discussions with Department of Ecology regional program staff.

A site visit of the project was conducted on October 7, 2008, by Dan Tolleson. This project is located approximately five miles east of Wallula, Washington. The water right is located in the Walla Walla Basin which is managed under Chapter 173-532 WAC Water Resources Program for the Walla Walla River Basin, WRIA 32.

The authorized place of use is the bottom lands lying on both sides of the Walla Walla River within portions of Sections 21, 22 and 23, T. 7 N., R. 32 E.W.M. This area is for the most part cultivated land with riparian vegetation adjacent to the river. Several homes, barns and outbuildings are also located within portions of Section 22 and 23. The homes are supplied water from domestic wells under the exemption. This project is bordered on the north by railroad tracks and the south by US Highway 12 with the exception of the portion within Section 23. This place of use consists of approximately 260 acres of land with two owners. Only the portion of the water right appurtenant to land owned by the Hindmans is proposed for change under this application.

Currently, water is diverted from the Walla Walla River for irrigation purposes under this right. These diversion works consist of pickups with fish screens, pumps and pressurized pipelines. They are proposed to be changed to a hydrogeologically connected well. This well is proposed to be a basalt well since water in the quantities required for this project are not available from the shallow sediment aquifer. This proposed well is to be located within the NE¼SW¼ of Section 22, Township 7 North, Range 32 E.W.M. It is proposed to be constructed to whatever depth and size is required to supply sufficient water.

This water right is provisioned with the following low flow restriction to protect fish:

> *"Diversion under this permit during the months of June and October shall cease when the flow of the Walla Walla River, as measured at the US Geological Survey gauging station near Touchet, Washington, upstream from the confluence of the Touchet River, falls to 91 cubic feet per second. Furthermore, authority for diversion in June or October must be obtained from the Watermaster prior to diversion."*

The gauging station described in this provision was never constructed and no plans currently exist to construct this station. It appears that a reasonable estimate for regulation can be derived from other existing stations.

History of Water Use

Surface Water Certificate No. 11123 has a priority date of January 29, 1968, which is very junior in comparison to other water rights within this basin. Because of this junior priority date and concern for fish habitat this right was not authorized for irrigation during low flow season of July thru September. This right is on occasion regulated to satisfy senior water rights.

Aerial photographs in conjunction with a field investigation were used to help verify the extent of development, historical use and beneficial use under Surface Water Certificate No. 11123C. Historically, most of the irrigable land within the place of use was farmed. Over time, portions of this right have been left unused. In the last five or more years approximately 46.5 acres have been irrigated within the following fields: that portion of Section 21 owned by the Hindmans and the west half of Section 22, all south of the Walla Walla River and north of US Highway 12. The remainder of the right lying outside the above described area and the land irrigated under WWAC 646 appears to be subject to relinquishment for non-use.

The authorized water duty of this certificate is 3 acre-feet per year, per acre from October 1 to July 1. Historically, this right has predominately been used to irrigate pasture and alfalfa. The State of Washington Irrigation Guide (WA210-VI-WAIG) states that an estimated 0.97 acre-foot, per acre, is required for grass/turf in the Walla Walla area, from October 1 to July 1 (October requires 0.07 acre-feet per acre and May to June requires 0.9 acre-feet per acre). The current irrigation system of hand lines is estimated at a 70% efficiency rate of application. With a 70% efficiency rate of application an estimated 1.4 acre-feet per acre would need to be applied for crops that use 0.97 acre-feet per acre. Because of the limited irrigation season this water right is utilized under the practice of deficit irrigation. Deficit irrigation consists of filling the soil profile with as much water as it will hold so the crop will have water to draw from when it's not irrigated. Some of this water, used to fill the soil profile, is return flow and some of it is consumptively used by the crop. Therefore, up to three acre-feet per acre appears to be a reasonable approximation of water use. A more accurate water duty can be determined with continued meter data.

Hydrologic/Hydrogeologic Evaluation

Applications for change of water right permits and certificates are governed by RCW 90.44.100, which states in part that the holder of a valid right to withdraw public ground waters may, without losing his/her priority of right, construct wells at a new location in substitution for, or in addition to, those at the original location, or he/she may change the manner or the place of use of the water. Any amendment shall be issued by the Department of Ecology (Ecology) only under the conditions that (1) an additional or substitute well or wells shall tap the same body of public ground water as the original well or wells; (2) use of the original well or wells shall be discontinued upon construction of the substitute well or wells; (3) the construction of an additional well or wells shall not enlarge the right conveyed by the original permit or certificate; and (4) all existing water rights shall not be impaired. Ecology may specify an approved manner of well construction and shall require a showing of compliance with the provisions of the amendment.

The following hydrogeologic analysis was written by John Covert, Senior hydrogeologists in Ecology's Eastern Region Water Resources Program.

The applicant is requesting a change from a surface water source (Walla Walla River) to a basalt well located about 250 feet away from the river. The two closest basalt wells to the proposed location are 685' and 1,247' deep. These wells exhibit confined heads. The unconsolidated sand, gravel, silt and clay material situated on top of the basalt are apparently not capable of satisfying this right. Pumping groundwater from the confined basalt aquifers at this location does not impact the hydrologic regime of the area in the same manner as would a pump in the Walla Walla River at a nearby location. The cone of depression that develops when the confined basalt aquifer is pumped will spread out in three dimensions and over time. With basalt aquifers the storativity is low so the cone of depression will necessarily spread out over a large area. The cone of depression will continue to interact with the surrounding aquifer and interconnected surface water bodies to which the aquifer in that area naturally discharges for months if not years after the cessation of any particular year's irrigation season pumping. Recharge rates to the basalt aquifer that ultimately replenishes the quantity of water pumped during any time interval are typically very low. Consequently, it takes quite a long time to replace the water withdrawn from storage within basalt aquifers during pumping. Over this time interval, the contribution of groundwater discharge to surface water flows is reduced. For these reasons it is often not possible to transfer a surface water right to a groundwater source.

From a regulatory perspective, if this change was approved and the new point of withdrawal (a basalt well) had to be curtailed to protect a senior surface water right that was being impaired by a lack of sufficient flow to satisfy its authorized withdrawal rate, the prolonged reduction in groundwater discharge to the affected surface water source would cause impairment of the senior right.

When a junior surface water right needs to be regulated to protect senior rights, the cessation of pumping immediately restores the full quantity previously being diverted to be available to satisfy senior rights. It could

take months to years for the full impact of groundwater pumping from the confined basalt aquifers to stop adversely impacting the flow regime in the river.

Certificate No. 11123 only authorizes diversion of river water from October 1 thru July 1, each year. Groundwater pumping effects from a basalt well on streamflow could negatively impact flow in the river during the period when this certificate does not authorize water to be pumped from the river. The underlying adjudicated surface water right (646) associated with 11123 is authorized to withdraw year round at varying rates depending on the time of year. The lag time between pumping and impact on the surface water source that pumping groundwater from a basalt well will create would still be a problem if water right 646 needed to be regulated to protect senior rights. RCW 90.03.380(1) states that a water right that has been put to beneficial use may be changed if it would not result in detriment or injury to other water rights. Given the hydrogeologic circumstances of this change application request, impairment of other water rights is likely to occur if this change is granted.

When surface water to groundwater changes are allowed, specific circumstances typically exist, such as shallow, unconsolidated aquifers that exhibit bank storage conditions (the heads fluctuate with nearby river stage). Under these circumstances, the aquifer characteristics and connections to the nearby surface water body allow the aquifer waters to interact with the surface water body in nearly identical ways to having a pump in the river. In these circumstances both water sources share the same flow regime and may be effectively the same source. These conditions do not exist at the proposed location. The thin, unconsolidated aquifer material in nearby wells that could potentially be the same source does not produce the required quantity. The quantity of water needed to satisfy this proposed change would have to come from deeper, confined basalt aquifers (as described above). As such, this water supply is not the same source as the original point of withdrawal.

Impairment Considerations

"Impair" or "impairment" means to: 1) adversely impact the physical availability of water for a beneficial use that is entitled to protection, and/or 2) to prevent the beneficial use of the water to which one is entitled, and/or 3) to adversely affect the flow of a surface water course at a time when the flows are at or below instream flow levels established by rule (POL-1200), and/or 4) degrade the quality of the source to the point that water is unsuitable for use by existing water right holders (WAC 173-150). Demonstration of impairment would require evidence of a substantial and lasting or frequent impact reflecting such conditions.

This change application requests authorization to change three authorized points of surface water diversion to a hydrogeologically connected well under Surface Water Certificate No. 11123. This right has a season of use from October 1 to July 1 and is subject to interruption to satisfy downstream senior rights in dry years. The proposed well with its proposed design would have some impact to the Walla Walla River. This impact would be spread out over the year and would in part occur during the season in which water is not authorized to be pumped under this right. This would leave less water for downstream water rights during low flow summer months. This negative impact to downstream users would be impairment, since water is not always available.

Public Interest Considerations, Enhancement and Other Appurtenant Rights

Public interest considerations, enhancement of the right and other rights appurtenant to the project have not been evaluated in this report, since the proposed hydrogeologically connected well is not the same source.

CONCLUSIONS

Based on the discussion in the "Hydrologic/Hydrogeologic Evaluation" section above, it is Ecology's determination that the proposed well is not in direct hydrogeologic continuity with the Walla Walla River and is not the same source of water.

A water right does exist under this certificate, but is not available for the proposed change. The proposed change will not withdraw from the same source or body of water. The proposed change will cause impairment to senior water rights and negatively impact the flows of the Walla Walla River.

The public interest test, enhancement and the determination of overlapping water rights have not been addressed in this report, based on the finding of the proposed well being a different source.

It is the conclusion of this examiner that, in accordance with Chapters 90.03 and 90.44 RCW, this application to change the three authorized points of surface water diversion to a hydrogeologically connected well under Surface Water Certificate No. 11123 should be denied.

DRAFT

RECOMMENDATIONS

Based on the above investigation and conclusions, I recommend that the request to change to three authorized points of surface water diversion to a hydrogeologically connected well under Surface Water Certificate No. 11123 be **denied.**

Report by: _____ _____

Dan Tolleson Date

Water Resources Program

If you need this publication in an alternate format, please call Water Resources Program at 360 407-6600. Persons with hearing loss can call 711 for Washington Relay Service. Persons with a speech disability can call 877-833-6341.

W/Draft ROEs/SW 11123 Hindman/Tolleson 2011

DRAFT