Technical Memorandum No. 2b
Proposal for Administrative Closures

Draft

WRIA 35 – Middle Snake River Basin

June 30, 2005

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Tables and Exhibits

1.0 Introduction and Background

This document is Technical Memorandum No. 2b prepared as part of the Level 2 Instream Flow Assessment for WRIA 35 and documents a proposal for administrative closures for WRIA 35. Closures are one part of the overall instream flow management strategy being developed for the WRIA 35 watershed management plan. Tech Memo No.1 describes the overall stream flow management framework and the management points developed for the basin. The framework also includes a review of administrative closures. Tech Memo 2a presents the approach to develop preliminary minimum instream flow (MIF) recommendations to be considered by the Planning Unit[1].

The purpose of this memorandum is twofold: (i) to evaluate how closures or administrative low flows apply to the management of stream flows in WRIA 35; and (ii) provide recommendations for closures and exceptions to the closures for integration into the stream flow management strategy. The Water Quantity/Instream Flow Subcommittee will evaluate the approach presented here for inclusion in the final watershed plan.

1.1 Integration of Closures and Minimum Instream Flows

The intent of setting MIFs and establishing administrative closures is to place restrictions on issuance of ***new*** water rights. This approach is designed to protect stream flows from new appropriations of water. Existing water rights are not affected by closures or MIFs.

Under state law the Department of Ecology can issue "closure" periods or low flow restrictions for future appropriations on specific river reaches. A stream or basin closure means Ecology has determined that no surface waters are available for appropriation through the establishment of water rights for a given stream and over a defined time period. A low flow restriction is a provision that Ecology places on a water right such that all diversion shall cease when the flow of a stream recedes below a specified minimum rate as measured at a particular location. In the case of WRIA 35, no formal closures or low flow restrictions have been *established into rule* by Ecology, as discussed further in Section 1.2.

With minimum instream flows an applicant can receive a new water right. However, their use of the water right must cease whenever the flow in the stream falls below a certain level at a prescribed control point. As a practical matter, this requires monitoring of stream flow and issuance of notices or orders to these water right holders by Ecology when flows drop below the prescribed level. In this sense, MIFs are similar to the low flow restrictions described above.

Ecology has suggested that the use of instream flow rules are preferred over closures because numeric instream flows are more legally defensible and because instream flow rules establish a

[1] Tech Memo No. 2a presents an approach for developing MIF for Management Point 1 – Tucannon River at Starbuck (MP-1) and Management Point 3 – Tucannon River at Marengo (MP-3). Pending completion of instream flow studies in the Asotin subbasin, MIFs may also be developed for one or more additional management points.

river right that adds flexibility to potential intra-basin transfers and other future water rights decisions[2]. However, closures are useful in that they allow protection of flows from further impairment in priority habitat streams without the need for conducting detailed and often costly instream flow studies.

With these considerations in mind, the approach proposed here is to merge aspects of closures and minimum instream flows to utilize the best of each. Specific elements of the merged approach include:

- Develop numeric minimum instream flow recommendations where data is available (i.e. in the Tucannon River and Asotin/George Creeks) and propose for adoption into rule.

- Apply year-round closures (without numerical flows) in streams and drainage areas lacking sufficient stream gauge data and/or instream flow study data (e.g. IFIM) but have been identified as having flow as a primary limiting factor and/or is a priority for restoration/protection. These closures would also be proposed for adoption into rule. Certain exemptions would be applied to the closure:

    - *Reservations for domestic well use and other uses.* Predefined "blocks' of water may be developed based on projected growth, land use and zoning densities (discussed further in Sections 2.1 and 2.2).
    - *Cases where interruptible rights are appropriate.* Interruptible rights would be granted in cases where a potential use can demonstrate a seasonal need for water and the use is not likely to interrupt habitat forming flows (discussed further in Section 2.3).

- Remaining streams would have no restrictions (closures or minimum instream flows). In these cases, future water right applications would be reviewed by Ecology on a case-by-case basis. If upon Ecology and WDFW review, these streams are closed by administrative action, then reservations may also be considered for domestic wells and other uses. These closures and exemptions would then be added to the formal rule in a future update.

1.2 Background on Surface Water Source Limitations

The Department of Ecology (Ecology) has established administrative low flow restrictions and closures on several surface water sources in the state. These are referred to by Ecology as Surface Water Source Limitations (SWSL). SWSLs have been established largely as a result of letters of recommendation received by Ecology from Washington Department of Fish and Wildlife (WDFW), in response to applications for water rights filed with Ecology. In addition to SWSLs being applicable to the water right associated with this application, these SWSLs are used by Ecology in their decision-making process for all subsequent applications for water rights filed on the same stream or stream system.

[2] For example, off-stream storage and aquifer storage and recovery (ASR) would not be available in bas basin closed for the entire year without explicit exemptions.

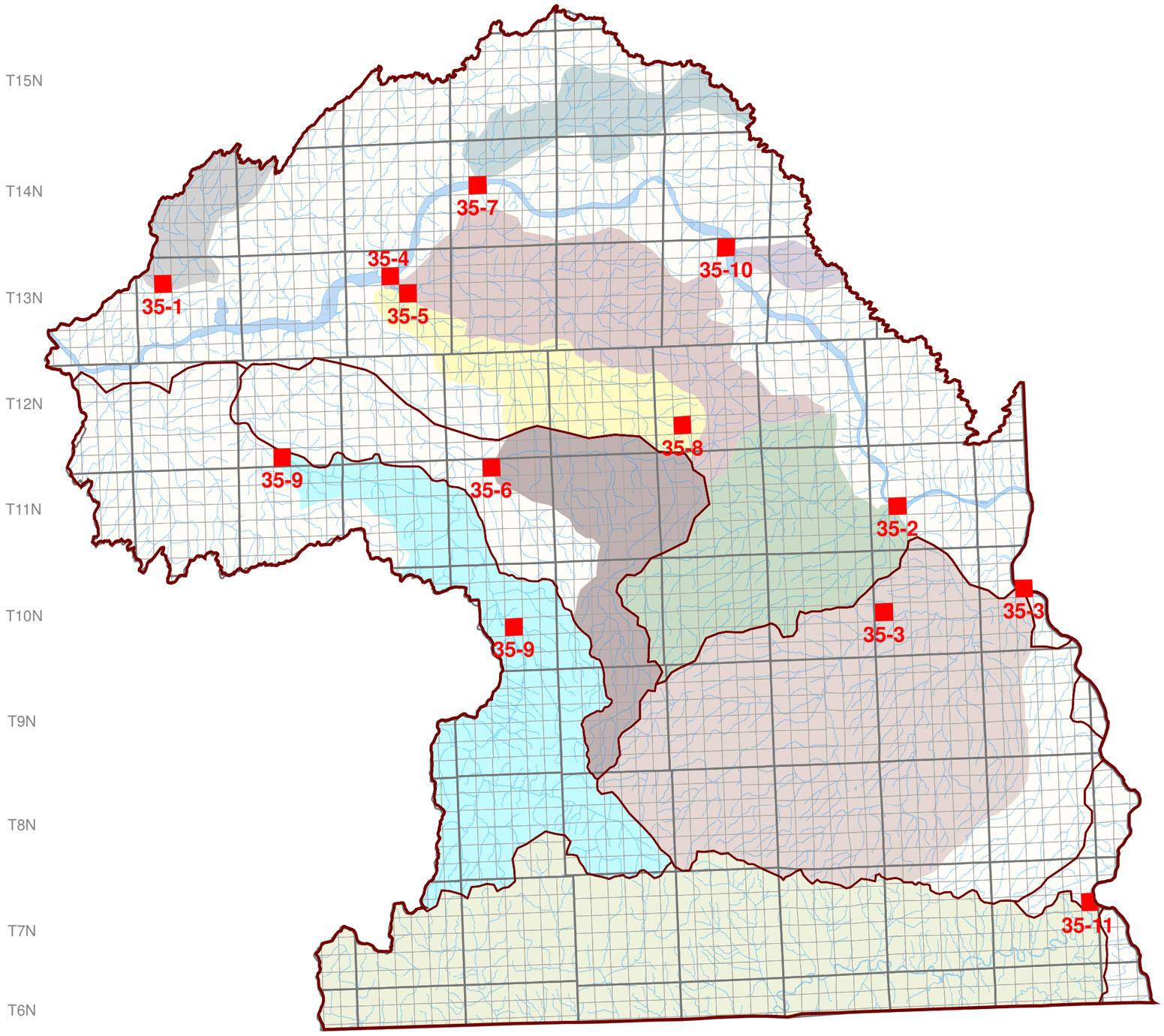
SWSLs are recommendations only and are used as guideline documents for decisions on water rights applications. Historically, some water rights applications have been denied or issued with provisioned flows by Ecology with reference to letters from WDFW. However, denied applications on a surface water source do not administratively close those sources to future appropriation.

Ecology has the authority to pass a State regulation (in the Washington Administrative Code) that would formalize these SWSLs. This is considered to offer stronger provisions that restrict issuance of new water rights or provide conditions on new water rights. This has been done in other WRIAs, but is not the case for the SWSLs in WRIA 35. In the case of WRIA 35, the SWSLs are used strictly as guidance or recommendations from WDFW to Ecology in future issuance of water right permits.

As documented in the Level 1 Assessment (HDR-EES, 2004), several SWSLs have been developed for streams within WRIA 35. The SWSLs are listed in Table 1. The SWSL locations and the areas they affect are shown in Exhibit 1.

Table 1
Summary of Existing Surface Water Source Limitations in WRIA 35

Map Key	Stream Name	Description of Closure or Low Flow
35-1	Alkali Flat Creek	*Low flow of 0.5 cfs located at T13N, R38E, Sec. 8.* Based on letter from Fisheries Oct. 25, 1955; Nov. 15 1957; Apr. 18, 1952. Letter from Game Apr. 24, 1952; Dec. 15, 1971, Mar. 29, 1971.
35-2	Alpowa Creek	*Closure/adjudication located at T11N, R45E, Sec. 20.* Based on adjudication decree dated Mar. 28, 1923
35-3	Asotin Creek	*Low Flow of 10 cfs located at T10N, R45E, Sec. 19.* *Low flow of 70 cfs located at T10N, R46E, Sec. 16; from April 1 to June 30; and low flow of 15 cfs from July 1 to Mar. 31.* Based on letter from Fisheries, Dec. 11, 1956; June 28, 1969.
35-4	Deadman Creek	*Adjudication located at T13N, R40E, Sec. 9.* Based on adjudication decree dated Jan. 24. 1929.
35-5	Meadow Creek	*Adjudication located at T13N, R40E, Sec. 15.* Based on adjudication decree dated June 6, 1922.
35-6	Pataha Creek	*Low flow of 10 cfs located at T13N, R41E, Sec. 4.* Based on letter from Game dated Oct. 29, 1968.
35-7	Penawawa Creek	*Closure located at T14N, R41E, Sec. 17.* Based on a letter from Fisheries, June 19, 1952; *Closure rescinded Feb. 14, 1963* based on letter from Game May 17, 1962.
35-8	South Meadow Creek	*Bypass flow located at T12N, R43E, Sec. 29.* Based on letter from Fisheries dated Aug. 12, 1952. (bypass sufficient for stock grazing)
35-9	Tucannon River	*Closure located at T10N, R41E, Sec. 22. Low flow of 50 cfs located at T12N, R39E, Sec. 33.* Based on letter from Fisheries dated Dec. 12, 1972, Oct. 28, 1974.
35-10	WaWaWai Canyon	*Adjudication located at T13N, R43E, Sec.3.* Based on adjudication decree dated Mar. 31, 1931.
35-11	Grande Ronde River	*No diversion after Sept. 15(until May 1) or when baseflow is established at T7N. R46E, Sec 13.* Based on letter from Game dated Nov. 12, 1975.



LEGEND

- Closures
- WRIA 35 Boundary
- Townships
- Rivers and Streams

N

0 4 8 16 Miles

EXHIBIT 1
WRIA 35
Existing Administrative Low Flows and Closures
March 2004

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2.0 Provisions on Closures

In addition to developing minimum instream flows and closures for *protecting* flows, the Watershed Planning Act (Chapter 90.82 RCW) requires the planning units to develop strategies to supply water in quantities sufficient to satisfy instream flows for fish ***and*** to provide water for future out-of-stream uses for water when necessary[3]. As a result provisions or exemptions can be developed to allow future water use by specifying criteria and a process for allowing the issuance of new water rights that would not be conditioned or restricted by the minimum instream flows and/or closures. The potential mechanisms for establishing these allowances or exceptions include the following:

- Setting aside or reserving an amount of water for future use;
- Modifying existing stream closures to allow more flexibility in addressing future water needs;
- Continuing to allow exempt wells under the existing statutory exemption (RCW 90.44.050);
- Approving mitigation that provides water-for-water to offset potential adverse flow effects from new permits;
- Overriding consideration of the public interest (OCPI); and
- Provision that allows for changes (change in place of use, point of diversion and/or time of use) to existing water rights.

These exemptions become an even more important consideration in cases where a basin has only limited development. For WRIA 35, the projected population and water demand growth is relatively small compared to other basins in the state. However, there may eventually be changes in these projections, and a closure without exemptions or provisions may prevent the ability to meet these future demands as required by law.

2.1 Provisions for Domestic (Exempt) Well Usage

Although the Level 1 Assessment concluded that rural water demand will remain relatively constant through the planning period, it is important to acknowledge the need to condition closure rules to allow future rural development and meet their water demands while satisfying instream needs.

Domestic wells are exempt from applying for a water right permit (Chapter 90.44.050 RCW). While excluded from the permit application process, domestic wells represent rights that are junior to pre-existing senior rights within the basin. Management of domestic wells is significant to the degree that they may impair senior rights or reduce stream flows to the impairment of fish, especially in smaller tributaries at high development densities.

[3] Note: the allowance for future use is intended for residential domestic use and other small uses.

Ecology has argued that from a legal basis, domestic wells cannot be protected from a stream closure or interruptible rights if they are in connectivity with surface water unless a reservation of water is defined within the rule. Therefore, the Planning Unit should consider a "domestic well reservation" as a protective measure for landowners to ensure domestic wells will continue to be allowed.

HDR-EES has worked with other planning groups in Washington State to develop an approach to address domestic wells (EES, 2004; HDR-EES, 2005). The approach for reservation or block of water for domestic wells is as follows:

- The numerical reservation should be large enough to ensure consistency with predicted land use over the planning period (e.g. 20 years). Small tributaries and other flow sensitive areas should be protected from increased development densities by maintaining existing zoning densities.
- Ecology would manage the system to track the total number of domestic wells in comparison with the number allowed by the reservation.
- Well location and selected aquifer for well completion should take into consideration known surface-ground water interaction and fish habitat flow conditions. For example, confined aquifer should be targeted whenever possible.
- An average annual use would be guaranteed per dwelling for domestic, stock-watering, and irrigation of limited acreage (e.g ½ acre). As an example, an average annual use of 800 gpd per dwelling was proposed for the Walla Walla basin, which is consistent with studies conducted in other basin in Washington. For larger acreages or where higher levels of irrigation may occur for small farms, water rights permits would likely be necessary.
- Individual wells would be metered and water usage reports made available to confirm compliance with water rights.

Because rural development and growth is expected to remain constant or be small, the Planning Unit should decide whether a reservation of water for domestic wells is needed if closures are to be adopted into rule.

2.2 Provisions for Municipal and Industrial Needs

The municipal and industrial needs in WRIA 35 are relatively limited. A comparison of the annual water rights and the annual demands for years 2005 and 2025 for the four communities in WRIA 35 is shown in Table 2. In general, for these communities existing water rights are able to meet the projected growth in water demands over the planning period. The only exception is possibly with the Town of Asotin, where their annual water right of 417 acre-ft is less than the projected annual demand of 599 acre-ft by 2025. Thus, the need for municipal and industrial water reserves is small. Nevertheless, the Planning Unit needs to decide whether reservations of water for municipal and industrial use are needed if closures are to be adopted into rule.

Table 2 Comparison of Water Demands and Water Rights for Municipal Use				
Community	**2005 Demand (acre-ft)**	**2025 Demand (Projected) (acre-ft)**	**Annual Primary Surface Water Right (acre-ft)**	**Annual Primary Ground Water Rights (acre-ft)**
Asotin	409	499	NA	417
Pomeroy	462	510	165	278
Starbuck	38	38	NA	566
Clarkston (Asotin Co. PUD)	5,719	6,934	47,955	26,618

For cases where a new water right is needed in a stream or basin with a closure, the proposed approach for using the reservations would be as follows:

- Establish reservations of water that may be used for municipal, industrial and other purposes if no other option is feasible. The reservation would indicate specific amounts of water by jurisdiction and basin.

- Generally, the preferred alternative would be to use a ground water source that is not hydraulically connected to surface water. The water rights applicant would be required to evaluate all potential sources and demonstrate why use of the reservation is required. Responsibility for this analysis would be with the applicant.

- Use of the reservation of water would be required to include off-setting or mitigative actions for potential stream flow impairment.

2.3 Provisions for Stream Flow Enhancement Projects

Stream flow enhancement is one of the strategies in the stream flow management approach, which requires an interruptible water right. This strategy involves surface water withdrawal during spring or fall months to directly enhance (e.g. releases from surface water storage) or indirectly enhance (e.g., aquifer storage and recovery or shallow aquifer recharge) base flows during low flow periods (typically July to October) of an existing or future year. This strategy attempts to maximize available habitat in an average or high flow year, or mitigate impacts in a low flow year.

An exception to a closure would provide the opportunity to allow flow enhancement strategies that take advantage of higher or excess flows to be implemented while maintaining the long-term beneficial impacts to fish populations. Applicable permits would have to be obtained from Ecology, WDFW and other agencies. Analysis for the applicable permits would include confirming whether adequate water iss available during the desired time period, and ensuring that flow enhancement strategies would provide long-term benefit to salmonids.

To further refine this concept and set up an official program, specific management objectives would need to be defined for a geographic area of interest, and analysis would need to be conducted if and when a flow enhancement project is being considered. A balance between

maintaining channel forming flows and providing for enhancement of baseflows is desired by WDFW. Therefore, only a small fraction (e.g. no more than 5% of instantaneous flow amount) of the total flow available would be allowed to be accessed on this exceptions basis.

3.0 Basis for Modifying Closures

The following subsections describe the geographical extent and time periods for the proposed closures.

3.1 Geographical Extent of Closures

In general, Ecology interprets closures for a listed stream as applying also to a direct tributary to the listed stream, even if a closure is not explicitly listed for that tributary. Therefore, in the proposed closures to follow in Section 4, all tributaries to the listed stream are also considered closed.

3.2 Closure Periods

In addition to selecting where closures should be applied, the other primary decision to be made is over what period the closure should be applied. Closures and SWSLs can be applied on a year-round basis, as well as over a defined period within a year. Often closures or SWSLs closure periods are inconsistent in streams within a basin.

With few exceptions (e.g. Asotin Creek low flows), all of the existing SWSLs in the Middle Snake Basin are applied year-round. The impact of a year-round closure or extending the irrigation season to begin earlier and end later is dependent on the number of water rights holders that divert water during the non-irrigation seasons. Generally, there is plenty of flow available during the winter months to meet fish habitat needs. The critical period is during the transition from the wet to dry season (early spring and late fall). During this period closure would likely benefit fish habitat by protecting flows. However, in the winter months (December – March) there typically will not be many water rights applications and closure would provide little benefit.

With respect to the biological justifications for selecting the closure periods, the recommended closures are based on where and when the important life stage and species occur. Table A-1 in the appendix presents a summary of the fish presence in WRIA 35 based on several sources. The "limiting" lifestage/species in terms of presence and timing is Chinook spawning in the summer and fall (~June through December) and steelhead spawning in the spring (~February through May). Based on these periods, it is recommended that closure periods be applied year-round for the entire basin where closures are to be applied, i.e. where fish restoration/protection priorities exist.

Another reason for recommending year-round closures is the hardship imposed by interruptible rights and lack of adequate, long-term enforcement of instream flow rules and stream gauge data. Interruptible rights could be granted in cases where a user can demonstrate a seasonal need for water, and the use is likely not to interrupt habitat-forming flows. An example would be for

recharge projects that occur during the high flow winter and early spring periods as discussed in Section 2.

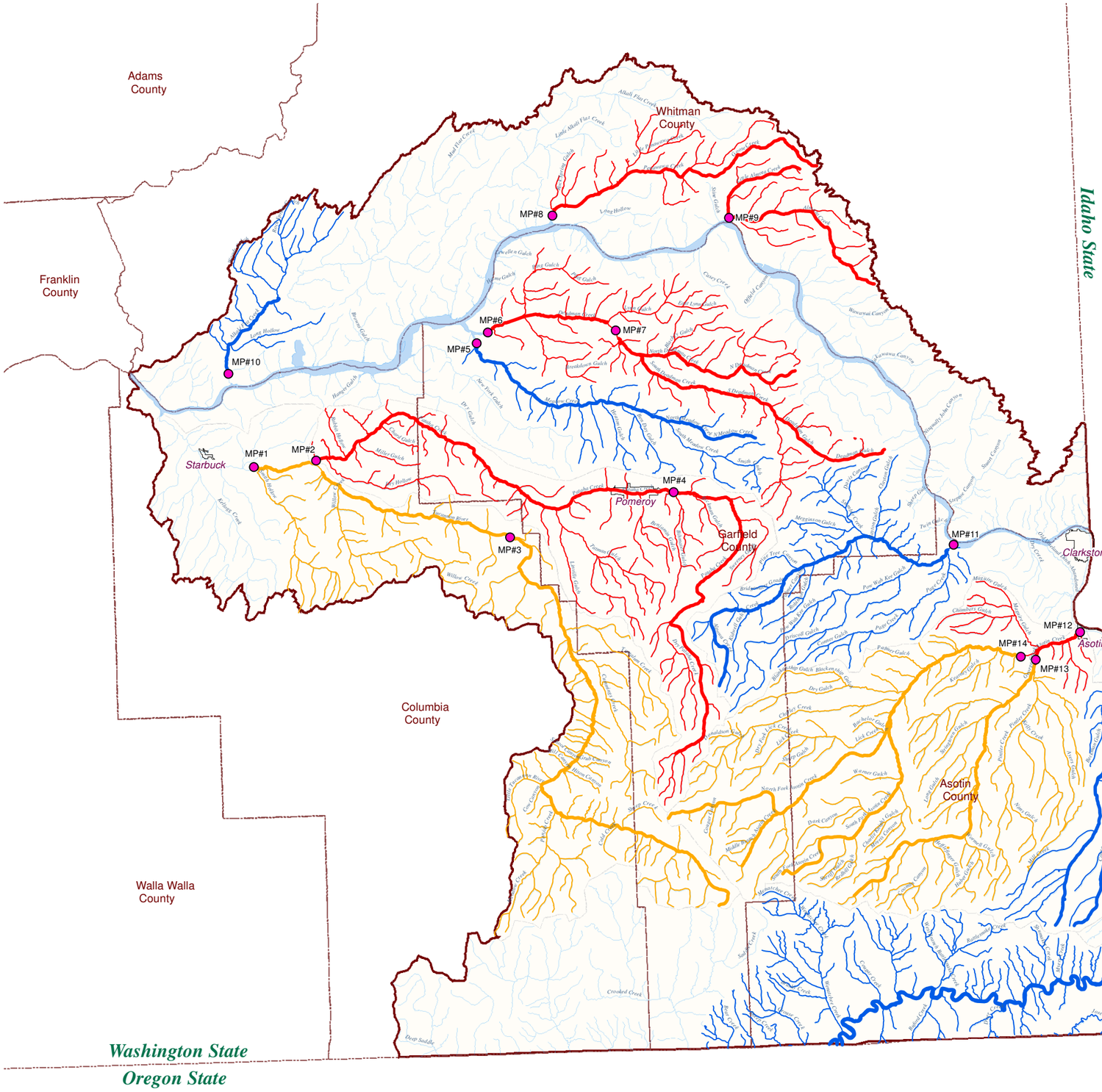
4.0 Proposed Closures for WRIA 35

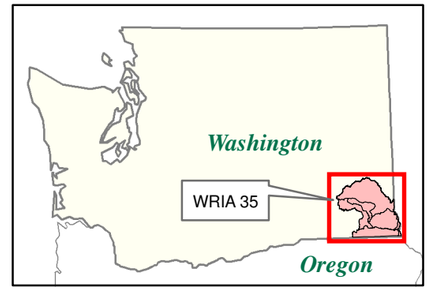
As described in Section 1.2, the approach for integrating closures into the stream flow management strategy includes:

- Develop minimum instream flow recommendations for those streams where data is available.
- Apply a year-round closure in streams/drainage areas with no available data for recommending minimum instream flows, and where flow is a key limiting factor and which has been identified as priority restoration/protection area.
- Identify potential needs for water reserves (for domestic wells, municipal/industrial uses) and other exceptions to the closure (for interruptible water rights for flow enhancement projects).
- Maintain no restrictions in the remaining streams where Ecology would evaluate future water rights applications on a case-by-case basis. Any new closures and exceptions would then be adopted into rule as part of the review and update process.

Table 3 summarizes the proposed closure recommendations and modifications to the existing SWSLs based on the characteristics and flow restoration priorities in WRIA 35. Table A-2 in the appendix includes additional details on the basis for the proposed closure recommendations. Exhibit 2 shows the locations of streams with the proposed closures.

Table 3 Summary of Proposed Closure Recommendations		
"Closure" Recommendation	**General Basis**	**Applicable Management Points**
■ Remove existing closure or low flow restriction and adopt a minimum instream flow into rule.	■ Streamflow is a primary limiting factor and stream is a priority for restoration/protection. ■ Data is available to develop minimum instream flow recommendations.	■ MP-1 – Tucannon River @ Starbuck ■ MP-3 – Tucannon River @ Marengo ■ MP-13 – George Cr. above Asotin Cr. ■ MP-14 – Asotin Cr. above Charley Cr.
■ Adopt a year-round closure into rule.	■ Not a priority for restoration, but provides flow to priority stream ■ Stream and tributaries are relatively small and vulnerable to depletion by any future consumptive water uses (especially during summer and early fall periods).	■ MP-2 and MP-4 – Pataha Creek
■ Adopt a year-round closure into rule.	■ Ecology has established a closure or low flow restriction based on WDFW recommendation. ■ Streamflow is <u>not</u> a primary limiting factor and stream is <u>not</u> a priority for restoration/protection.	■ MP-12 – Lower Asotin Cr.
■ Adopt a year-round closure into rule.	■ No existing closure or low flow restriction (but includes adjudications). ■ Streamflow is a primary limiting factor and stream is a priority for restoration/protection.	■ MP-6 and MP-7 – Deadman Creek ■ MP-8 – Penawawa Creek ■ MP-9 – Little Almota Creek
■ No recommended restrictions at this time. Additional basis should be developed prior to adopting a closure into rule. ■ Review water rights applications as they are submitted.	■ Ecology has established a closure or low flow restriction based on WDFW recommendation from previous applications. ■ Streamflow is <u>not</u> a primary limiting factor and stream is <u>not</u> a priority for restoration/protection.	■ MP-10 – Alkali Flat Creek ■ MP-11 – Alpowa Creek
■ No recommended restrictions at this time. Additional basis should be developed prior to adopting a closure into rule. ■ Review water rights applications as they are submitted.	■ No existing SWSL. ■ Streamflow is <u>*not*</u> a primary limiting factor and stream is <u>*not*</u> a priority for restoration/protection.	■ MP-5 – Meadow Creek ■ MP-15 – Tenmile Creek ■ MP-16 – Couse Creek ■ MP-17 – Grande Ronde ■ Remainder of streams (drainage areas) not listed above.





LEGEND

- WRIA 35
- City Boundary
- County Boundary
- Management Points
- Streams w/o Management Points (No Restrictions)

Restrictions

Adopt a minimum instream flow

Adopt a year-round closure

No recommended restrictions

N

0 2.5 5 10 Miles

EXHIBIT 2

WRIA 35
Locations of Proposed Restrictions

June 2005

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References

Economic and Engineering Services, Inc. (EES). 2004. *Grays-Elochoman and Cowlitz River Watershed Plan – Final.* Prepared for Lower Columbia Fish Recovery Board.

HDR-EES. 2004. WRIA *35 – Middle Snake River Watershed Level 1 Assessment – Draft.* Prepared for Asotin County PUD.

HDR-EES. 2005. *WRIA 32 – Walla Walla Basin Watershed Management Plan – Final.* Prepared for Walla Walla County.

APPENDIX

Table A-1 WRIA 35 Fish Distribution Summary Matrix

Management Points			Steelhead - summer						Chinook					Bull trout/Dolly Varden			
Stream Name	**MP**	**Sub-basin**	**WRIA data**	**Mendel 2004**	**Sub-basin plan, EDT**	**Streamnet**	**SalmonScape (WDFW)**	**Mendel comments**	**WRIA data**	**Sub-basin plan, EDT, Appendix B**	**Streamnet**	**SalmonScape (WDFW)**	**Mendel comments**	**WRIA data**	**Sub-basin plan**	**StreamNet**	**SalmonScape (WDFW)**	**Mendel comments**
Tucannon - below Smith Hollow nr. Starbuck	1	TUC	Not spawning or rearing, but heavy MIG traffic. SP and R starts between #1 and #3.	NA	SP and R throughout mainstem above Kellogg into upper watershed. Also in Cummings, Meadow,. SP in Panjab.	SP and R throughout mainstem above Kellogg into upper watershed to RM 55. Also in Cummings, Meadow,. SP in Panjab, other tribs	DP to Kellogg Crk. PP in Kellogg and Smith Hollow. SP and R in mainstem from Kellogg to past Cold Crk near headwaters. See MP#3 for upper Tucannon.	Concurs that spawning and rearing above Kellogg. Notes that rearing in late summer very unlikely due to high temps.	**spch**-Mainstem to County line. SP&R upstream of MP3. **fch** SP and R from mouth to Willow Crk. **su.ch** roughly same as fch.	**spch** - migartion throughout. SP and R begin just downstream of MP#3 at King Grade and up to Sheep Creek, approx 30 miles.. **fch** Spawning up to just past Pataha. SP and R from mouth to RM 17.	**spch** - MIG only to RM 25. SP and R to RM 52. **fch** - miragtion only RM 0-.11, Rearing .11-.4, SP and R from .4-13.8. MIG from 13.8-17.3. **such** - approximately same as fch	**spch** - DP in mainstem to midway between Willow Crk and MP#3. Above this point, SP & R all the way to Cold Crk in mainstem. DP above Cold Crk R in lowest reach of Panjab. **fch** - SP and R from mouth to just past Willow Crk. DP above Willow for approx 1/4 m		MIG to upper watershed	MIG. SP in upper watershed tributaries.	no data	DP in mainstem all the way to Panjab. SP & R only above Panjab.	
Pataha Cr @ Mouth	2	TUC	SP and R upstream of #4. This site needed for MIG, temp., etc	NA	MIG above this point to upper Pataha. Rearing above MP#4. Spawning uncertain. (Appendix B)	MIG throughout mainstem.	DP to Pomeroy. See MP#4 for upper Pataha.	Concurred with other data. Also noted that brook trout are present in upper basin.	no data	not present	no data	no data		Suspected in upper Pataha.	Not known in Pataha	no data	No data in Pataha, except upper reaches; see MP#4.	
Tucannon @ Marengo	3	TUC	Throughout. SP and R from Willow Crk to headwaters	NA	SP and R throughout mainstem above Kellogg into upper watershed. Also in Cummings, Meadow,. SP in Panjab.	SP and R throughout mainstem above Kellogg into upper watershed to RM 55. Also in Cummings, Meadow,. SP in Panjab, other tribs	SP and R in mainstem from Kellogg to past Cold Crk near headwaters. PP above to Sheep Crk. SP and R in Panjab to Meadow Crk. PP in Meadow and upper Panjab. DP in lower mile of Little Tocannon. PP above for another mile. SP and R in Cummings lower 4-5 mil	Concurs with other data.	**spch**-Mainstem to County line. SP&R upstream of MP3.	**spch** - SP and R throughout mainstem above this point, SP beginning just downstream at King Grade and up to Sheep Creek, approx 30 mi	**spch** - MIG only to RM 25. SP and R to RM 52. **fch** and **such** both downstream of this point	**spch** - DP in mainstem to midway between Willow Crk and MP#3. Above this point, SP & R all the way to Cold Crk in mainstem. DP above Cold Crk R in lowest reach of Panjab.		Healthy. SP and R in upper Tucannon, upstream of Panjab. Also in Panjab, Meadow, other tribs.	SP in numerous upper watershed tributaries. R throughout upper watershed.	no data	DP in mainstem all the way to Panjab. Also in Cummings. SP & R above Panjab in mainstem to nearly headwaters, Bear Crk, Panjab Crk, Turkey Crk, Meadow Crk, lower Cold Crk. Presumed presence in Little Tucannon and upper Cold Crk.	
Pataha @ Pataha	4	TUC	SP and R upstream of this point.	NA	R and MIG above this location to upper Pataha. Spawning uncertain.	MIG throughout mainstem.	R in mainstem above MP#3 to Dry Pataha. PP above Dry Pataha. R also in Binmaier Gulch.	Concurred with other data. Also noted that brook trout are present in upper basin.	no data	not present	no data	no data		Suspected in upper Pataha.	Not known in Pataha	no data	No data in Pataha for much of mainstem and tributaries. Presence undetected in upper mainstem.	
Meadow Crk @ Mouth	5	MS	no data	Qlelec - 1 0+ found throughout. Qlelec - one adult and one 1+ below forks. Many records od "no salmonids". No redds anywhere.	NA	no data	PP throughout Meadow Crk, and in lower few miles of S. Meadow and N. Meadow.	Concurred that this is Meadow Crk not S, Meadow. Though fish use and distribution info is skethcy, stated that low flows are a serious problem in this basin and supports quantity control.	no data	NA	no data	no data		no data	NA	no data	no data	
Deadman Cr. @ Mouth	6	MS	no data	**see below**	NA	no data	DP from mouth to Meadow Crk. SP and R in mainstem for approx 3 mi. above Meadow. DP above this section to almost Lynn Gulch. PP in Lynn Gulch, remaining mainstem Deadman to forks, lower Deadman above forks and NF Deadman for several miles.	Confirms spawning and rearing to forks.	no data	NA	no data	no data		no data	NA	no data	no data	
Deadman Cr. below forks	7	MS	no data	Low densities of 0+ and 1+ in lower reaches. No juveniles in NF or SF. One adult in upper SF. No redds in NF or SF. Some redds between RM 2.9 and 6.5 on mainstem	NA	no data	PP in lower Deadman above forks and NF Deadman for several miles.	Confirms spawning and rearing to forks. Not much is known about use above forks, but expressed strong support for water control due to extreme low flows in the forks.	no data	NA	no data	no data		no data	NA	no data	no data	
Penawawa Cr @ Mouth	8	MS	unknown in lower	0+ high in lower, though not throughout. Low numbers of 1+ as well as adults found in upper watershed. No redds in lower 2 miles. Most between RM 4-6.	NA	MIG only mouth to RM 1.1	SP and R for several miles into upper watershed in mainstem Penawawa.	Concur with SalmonScape data.	no data	NA	no data	no data		no data	NA	no data	no data	
Almota	9	MS	unknown in lower	High densities of 0+ and some 1+. Higher in upper watershed. Adults and redds found in Almota, not in Little Almota. SEE Notes.	NA	MIG only from mouth to RM 1.1 in Almota. MIG only from mouth to 1.3 in Little Almota	Almota mainstem DP to forks. In mainstem SP and R for several miles into upper watershed. DP above SP areas. R in lower Little Almota. DP to approx RM 1.0 in Little Almota.	Concurred that this should be referred to as Almota. The main fork of the Almota, which comes out of the southeast, is thick with R juveniles and in some areas, SP. Little Almota is only occupied for the bottom section due to several natural barriers th	no data	NA	no data	no data		no data	NA	no data	no data	
Alkali Flat @ Mouth	10	MS	unk., some SP	Upper Alakali with sparse numbers of 0+ and 1+, qualitative. Some scattered adults. Entire lower section void of salmonids with exception of one smapling point with 3 adults. No redds.	NA	SP and R from RM 5.3 to 6.8	DP to Rock Spring Gulch. PP to McCard Gulch.	e-shocking data may have had some O. mykiss, but not confirmed that they were necessarily steelhead. Could have been rainbows. Some of the evidence for presence is anecdotal.	no data	NA	no data	no data		no data	NA	no data	no data	One adult bull trout may have been in the lower Alkali during winter. A tag from a tagged BT was found there, but no fish. If it was there, it likely was just stopping in as the habitat is not suitable.

Management Points			Steelhead - summer						Chinook						Bull trout/Dolly Varden				
Stream Name	**MP**	**Sub-basin**	**WRIA data**	**Mendel 2004**	**Sub-basin plan, EDT**	**Streamnet**	**SalmonScape (WDFW)**	**Mendel comments**	**WRIA data**	**Sub-basin plan, EDT, Appendix B**	**Streamnet**	**SalmonScape (WDFW)**	**Mendel comments**	**WRIA data**	**Sub-basin plan**	**StreamNet**	**SalmonScape (WDFW)**	**Mendel comments**
Alpowa Cr @ Mouth	11	MS	SP, R. upstream of Stember. unkn.	NA	NA	SP and R from RM 7.3 to 13.1	R in Alpowa from mouth to Kidwell Gulch. SP in middle section. PP in Kidwell Gulch and lower Po Wa Kee Crk. DP in lower Page Crk.	Thick with juveniles throughout. Spawning very likely even in lower Alpowa, but access has been difficult with several landowners.	no data	NA	no data	no data		no data	NA	no data	no data	
Asotin Cr @ Mouth	12	AS	SP and R upstream of George, throughout	NA	Rearing throughout from mouth into both forks and Charley Crk. Spawning above George. (Appendix B)	MIG only for Mouth to RM 6. R and MIG from RM 6 to 9.3. SP and R from 9.3 to 14.9. (Streamnet)	Mouth to George, R only. SP and R in mainstem above George, George, Pintler, N Fork Asotin, S Fork Asotin, Charley. See MP#14 for upper reaches.	This year 180 redds between mouth and George, but it was an odd water year.	no data	Known - SP in NF Asotin from Lick Crk to Natl Forest boundary ~ 5 miles. Few juveniles in S Fork. Presumed historical - mainstem and lower reaches of NF and SF Asotin. (Appendix B)	no data	**spch** - Historic presence - spring Chinook in mainstem and up North Fork to Grouse Gulch and lower S. Fork. **fch** - no data	Few juveniles and a few redds between Charley and the forks. Due to low numbers, there is considerable debate as to whether Chinook are "functionally extinct" in this basin.	no data	Upper mainstem Asotin, Charlie Creek, the North (including Cougar Crk for spawning) and lower South Fork of Asotin creeks.	no data	No data from mouth to George Crk. Presumed presence in mainstem from George to forks. DP in Charley Crk to Donaldson. Presumed presence in upper George above Hefflefinger and in Coombs Canyon. See MP#14 for upper Asotin details.	FS says there were some in upper George. Very rare. NF SP and R in upper in the SF of the NF. Last two years smoplt trap has caught a few.
George Crk above Asotin Cr.	13	AS	unknown in lower	High densities of 1+ and 0+ juv. 1+>0+. Tribs with high 0+ and some 1+. Redds in George and in tribs	SP and R all the way to near headwaters upstream of Coombs Canyon. In Pinter Crk all the way to Nims Creek. (Appendix B)	5.25 miles, MIG only (StreamNet)	SP and R in mainstem George to Petty Gulch, and in Pintler Crk. DP in lower reaches of several tributaries, incl. Kelly Crk, Ayers Gulch, Coombs Cyn, Heffelfinger Gulch.	Lower George all the way past Coombs. Juveniles in Heffel. SP in Coombs.	no data	historical unknown, currently not present	no data	no data		no data	One BT noted in upper George in 1993. (Forest Service)	no data	No data in lower George. Presumed presence in upper George above Hefflefinger and in Coombs Canyon.	FS observation and habitat
Asotin Crk above Charley	14	AS	SP and R throughout	NA	SP and R in S Fork to RedHill Gulch and N Fork to Cougar Canyon. (Appendix B)	SP and R in Asotin to forks (StreamNet). 9 miles of SP and R in N Fork. SP and R for 8.5 miles of S Fork. (Steamnet).	SP and R in mainstem to forks, in SF to Redhill Gulch, in NF to SF of NF. PP in NF above SF of NF, and in lower SF of NF and Middle Branch of NF.	Concur with SalmonScape data.	no data	Known - SP in NF Asotin from Lick Crk to Natl Forest boundary ~ 5 miles. Few juveniles in S Fork. Presumed historical - mainstem and lower reaches of NF and SF Asotin. (Appendix B)	no data	no data	Few juveniles and a few redds between Charley and the forks. Due to low numbers, there is considerable debate as to whether Chinook are "functionally extinct" in this basin.	no data	Upper mainstem Asotin, the North (including Cougar Crk for spawning) and lower South Fork of Asotin creeks.	no data	No data from mouth to George Crk. Presumed presence in mainstem from George to forks, and into South Fork to Warner Gulch. DP in Charley Crk to Donaldson, and in N Fork to SF of NF. SP and R in N Fork above SF to NF to headwaters. Presumed presence in Co	
Tenmile @ mouth	15	MS	unknown in lower	Redds found in all areas sampled from mouth to RM 6.	All accessible tribs with adequate flows and temp for spawning and rearing. (Appendix B)	no data	SP and R in mainstem to upper watershed. PP in unnamed tributaries in upper watershed. R in lower Mill CRk. DP in Mill Creek lower middle section.	Concur with SalmonScape data.	no data	NA	no data	no data		no data	No known current or historical (Appendix B)	no data	no data	
Couse Crk @ Mouth	16	MS	unknown in lower	A few redds above RM 2.1 in 2002, none in 2001.	NA	no data	SP and R in mainstem to Hoskins Gulch. PP in RB tributary to Edeburn Gulch.	Concur with SalmonScape data.	no data	NA	no data	no data		no data	NA	no data	no data	
Grande Ronde @ Mouth	17	MS	MIG throughout mainstem within WA state. SP in Buford, Rattlesnake, Cottonwood, Grouse and two tribs that I don't have names for in same area. R in all of these except Buford.	NA	Grande Ronde and major tributaries. Buford, Applegate Canyon, Rattlesnake, Cottonwood, Bear Creeks.	Grande Ronde mainstem R and MIG only within WA. SP and R in Buford from mouth to RM 4.7. Cottonwood Crk SP and R to RM 2.5. Rattlesnake Crk SP and R to RM 2.5, MIG to RM 5.4.	DP in mainstem and in Joseph Crk throughout WA., lower Shumaker and upper Rattlesnake. SP and R in lower Rattlesnake, Buford, Cougar, Cottonwood, Grouse. Presumed presence in Bear Crk and Deer Crk.	Joseph Crk - lower 5-6 mi in WA. Has flow limitations in summer, Steelhead and some fch in lower.	**spch** - mainstem Grande Ronde use unknown. **Fch** - no data	**spch** - Grande Ronde mainstem. Major tributaries, mostly in OR,. **fch** - Grande Ronde and major tributaries	**spch** - R and MIG in mainstem throughout WA. No spawning in WA. No tributary use in WA. **fch** - SP and R from mouth to RM 52, mainstem only.	**spch - DP throughout mainstem in WA. fch - SP throughout mainstem within WA.**	Many tribs to Wenaha are in Washington. These have spring ch. NOT summer rearing. Joseph Crk - lower 5-6 mi in WA. Has flow limitations in summer, Steelhead and some fch in lower.	Mainstem Grande Ronde listed as "Healthy"	Grande Ronde and major tributaries	Garnde Ronde mainstem MIG only in WA. Tributart use extensive in OR.	DP in mainstem throughout WA, and in Menatchee Crk and Indian Tom Crk (trib to Menatchee).	Many tribs to Wenaha are in Washington. These have spring ch

See notes on following page.

Abbreviations

AS	Asotin subbasin
DP	Documented presence
fch	Fall Chinook
LB	left bank
MIG	Migration
MS	Middle Snake subbasin
NA	Not Applicable
NF	North Fork
OR	Oregon
PP	Presumed presence
R	Rearing
RB	Right bank
RM	River Mile
SF	South Fork
SP	Spawning
spch	Spring Chinook
such	Summer Chinook
TUC	Tucannon subbasin
WA	Washington

Notes regarding lack of data in matrix cells.

"WRIA Data" - The notation "no data" refers to the fact that the map coverages in the on-line WRIA data included the stream in question, but no data for the species is provided. In most cases this likely means that the species is not present, but no affi

Mendel 2004 (steelhead only) - The Mendel study documented results of elctroshocking and spawning surveys from several tributaries to the Middle Snake. Those tributaries that were not included in the study are listed as "NA". This does not mean that the

"Sub-basin Plans" - The subbasin plans for the Asotin, Tucannon and Grande Ronde were reviewed. Those streams not included within the geographic scope of any of these plans are listed as "NA". If the stream was included but no information was given rega

Streamnet and SalmonScape (WDFW) - "No data" means that the database had no data for the species in the tributary of interest. In most cases this likely means that the species is not present, but no affirmative statement has been made regarding its absen

References used in matrix

WRIA data:	Distribution maps from WRIA 35 website maintained by Ecology: http://www.ecy.wa.gov/services/gis/maps/wria/number/wria35.htm
Mendel 2004	Brief Assessment of Salmonids and Stream Habitat Conditions in Snake River Tributaries of Asotin, Whitman and Garfield Counties in Washington. March 2001-June 2003 - Final Report
Subbasin Plans	Asotin Subbasin Plan and Appendix B Tucannon Subbasin Plan and Appendix B Grande Ronde Subbasin Plan. Appendix 2 and 8.
Streamnet	Data queries for Fish Distribution
SalmonScape	WDFW database for fish distribution.
Mendel, Glen	WDFW personal communication

Table A-2
Closure Analysis and Basis for Proposed Restrictions

Management Point	Instream Priorities	Projected Out-of-Stream Demands	Existing Restriction	Proposed Restriction	Basis and Notes
MP-1 Tucannon below Smith Hollow near Starbuck	■ Spawning and rearing for steelhead; used as migration corridor for bull trout. ■ Priority restoration area based on Subbasin Plan. ■ Flow is a primary habitat limiting factor.	■ Demands for Starbuck and rural areas projected to remain relatively constant over planning period. ■ Agricultural water use projected to remain relatively constant.	■ SWSL: No diversion when flow drops below 50 cfs as measured at confluence with the Snake River ■ Year-round restriction	■ Remove SWSL restriction. ■ Adopt a minimum instream flow into rule(1).	■ Data is available to develop minimum instream flow recommendations for this management point. ■ MIF provides greater flexibility in providing for stream flow protection and out-of-stream uses.
MP-2 Pataha Cr. @ mouth	■ Used for migration by steelhead; bull trout presence suspected. ■ *Not a priority restoration area based on Subbasin Plan.* ■ Flow not defined as a primary habitat limiting factor.	■ Pomeroy demands projected to increase from 462 to510 ac-ft/yr over planning period. ■ Rural demands projected to remain relatively constant over planning period. ■ Agricultural water use projected to remain relatively constant.	■ Existing SWSL based on MP-4 location (low flow of 10 cfs)	■ Revise SWSL ■ Adopt a year-round closure into rule to apply to new water rights applications.	■ Although flow is not defined as a primary habitat limiting factor, Pataha Creek is a key tributary to the Tucannon, thus, a closure is recommended. ■ Implement conservation techniques and develop a target flow. ■ New Ecology gauge has been installed at MP-2 location.
MP-3 Tucannon @ Marengo	■ See MP-1 ■ Also, spawning and rearing of bull trout occurs in headwaters.	■ See MP-1 ■ Most existing demands currently occur below MP-3.	■ SWSL: year-round closure ■ Year-round restriction	■ Maintain SWSL closure until adequate data is available to adopt minimum instream flow into rule(2).	
MP-4 Pataha @ above Pomeroy	■ Spawning and rearing for steelhead; suspected presence for bull trout. ■ *Not a priority restoration area based on Subbasin Plan.* ■ Flow not defined as a primary habitat limiting factor.	■ See MP-2 ■ Majority of existing demands currently occur above MP-4.	■ SWSL: No diversion when flow drops below 10 cfs as measured at Tatman Moutain Gulch bridge (below MP-4).	■ Revise SWSL ■ Adopt a year-round closure into rule to apply to new water rights applications.	■ Year-round closure recommended because Pataha Creek is a key tributary to Tucannon River. ■ Implement conservation techniques and develop a target flow. ■ Based on existing data, mean streamflows below MP-4 drop below 10 cfs from late June – early November.
MP-5 Meadow Cr. @ mouth	■ No data; presumed presence for steelhead. ■ Not a priority restoration area based on Subbasin Plan. ■ Flow not defined as a primary habitat limiting factor.	■ Limited current-out-of-stream demands. ■ Rural demands projected to remain relatively constant over planning period.	■ Stream has been adjudicated, implying no available water in the stream(3).	■ No recommended restrictions to new water rights applications at this time, except case-by-case review by Ecology.	■ Fish distribution data is limited. ■ Limited flow data; however, based on existing data, mean streamflows at mouth of Meadow Creek drop below 2 cfs from June – October.
MP-6 Deadman Cr. @ mouth *and* MP-7 Deadman Cr. below forks	■ Spawning and rearing for steelhead to forks; presumed presence above. ■ Priority restoration area based on Subbasin Plan. ■ Flow is a primary habitat limiting factor.	■ Limited current-out-of-stream demands. ■ Rural demands projected to remain relatively constant over planning period.	■ Stream has been adjudicated, implying no available water in the stream(3).	■ Adopt a year-round closure into rule to apply to new water rights applications.	Combine MP-6 and MP-7 into one management point.
MP-8 Penawawa Cr. @ mouth	■ Spawning and rearing for in upper watershed; migration in lower reach. ■ High density of juvenile steelhead. ■ Priority restoration area based on Subbasin Plan. ■ Flow is a primary habitat limiting factor.	■ Limited current-out-of-stream demands. ■ Rural demands projected to remain relatively constant over planning period.	■ SWSL: has been rescinded (formerly year-round closure)	■ Adopt a year-round closure into rule to apply to new water rights applications.	
MP-9 Almota Cr. @ mouth	■ Spawning and rearing into upper watershed for steelhead; migration only in lower mile. ■ Priority restoration area based on Subbasin Plan. ■ Flow is a primary habitat limiting factor.	■ Limited current-out-of-stream demands. ■ Rural demands projected to remain relatively constant over planning period.	■ None.	■ Adopt a year-round closure into rule to apply to new water rights applications.	

Table A-2
Closure Analysis and Basis for Proposed Restrictions

Management Point	Instream Priorities	Projected Out-of-Stream Demands	Existing Restriction	Proposed Restriction	Basis and Notes
MP-10 Alkali Flat Cr. @ mouth	■ Limited data, limited spawning and rearing in middle segments for steelhead. ■ Not a priority restoration area based on Subbasin Plan. ■ Flow not defined as a primary habitat limiting factor.	■ Several diversions occur in middle and upper drainage area. ■ Rural demands projected to remain relatively constant over planning period.	■ SWSL: No diversion when flow drops below 0.5 cfs as measured above Mud Flat Cr. ■ Year-round restriction	■ No recommended restrictions to new water rights applications at this time, except case-by-case review by Ecology.	
MP-11 Alpowa Cr. @ mouth	■ Steelhead juveniles present throughout, spawning and rearing primarily in middle and upper sections. ■ Not a priority restoration area based on Subbasin Plan. ■ Flow not defined as a primary habitat limiting factor.	■ Large diversions occur in lower area. ■ Rural demands projected to remain relatively constant over planning period; rural Clarkston development not expected to reach Alpowa Creek drainage.	■ SWSL: closure to irrigation, open to single domestic and stockwater use. ■ Year-round restriction.	■ No recommended restrictions to new water rights applications at this time, except case-by-case review by Ecology.	
MP-12 Asotin Cr. @ mouth	■ Rearing and migration for steelhead in lower portion ■ Not a priority restoration area based on Subbasin Plan. ■ Flow not defined as a primary habitat limiting factor.	■ City of Asotin demands projected to increase from 409 499 ac-ft/yr over planning period ■ Rural demands projected to remain relatively constant or decrease slightly over planning period. ■ Agricultural water use projected to remain relatively constant.	■ SWSL: No diversion when flow drops below 70 cfs as measured at FSH Bridge in Town of Asotin from April 1 – June 30. ■ SWSL: No diversion when flow drops below 15 cfs as measured at FSH bridge from July 1 – March 31.	■ Adopt a year-round closure into rule to apply to new water rights applications.	Although not a priority, the lower Asotin is used for migration to upper Asotin Cr, George Cr, and Charley Cr. where spawning and rearing do occur.
MP-13 George Cr. above Asotin Cr.	■ Spawning and rearing of steelhead throughout including tributaries; presumed presence for bull trout. ■ Priority restoration area based on Subbasin Plan. ■ Flow is a primary habitat limiting factor.	■ See MP 12.	■ Assume SWSL from MP-12 applies.	■ Revise SWSL ■ Maintain SWSL closure until adequate data is available to adopt minimum instream flow into rule(4).	
MP-14 Asotin Cr. above Charley Cr.	■ Spawning and rearing of steelhead throughout including tributaries; presumed presence for bull trout. ■ Priority restoration area based on Subbasin Plan. ■ Flow is not a primary habitat limiting factor.	■ See MP-12.	■ SWSL: No diversion when flow drops below 10 cfs as measured above George Cr. ■ Year-round restriction.	■ Revise SWSL ■ Maintain SWSL closure until adequate data is available to adopt minimum instream flow into rule(4).	
MP-15 Tenmile Cr. @ mouth	■ Spawning and rearing throughout for steelhead ■ Not a priority restoration (listed for priority protection) area based on Subbasin Plan. ■ Flow not defined as a primary habitat limiting factor.	■ Limited current-out-of-stream demands. ■ Rural demands projected to remain relatively constant over planning period.	■ None.	■ No recommended restrictions to new water rights applications at this time, except case-by-case review by Ecology.	Perhaps naturally “flow-limited”
MP-16 Couse Cr. @ mouth	■ Spawning and rearing throughout for steelhead ■ Not a priority restoration (listed for priority protection) area based on Subbasin Plan. ■ Flow not defined as a primary habitat limiting factor.	■ Limited current-out-of-stream demands. ■ Rural demands projected to remain relatively constant over planning period.	■ None.	■ No recommended restrictions to new water rights applications at this time, except case-by-case review by Ecology.	
MP-17 Grande Ronde	■ Rearing and migration for steelhead in mainstem within WA; spawning in tributaries. ■ Not a priority restoration (listed for priority protection) area based on Subbasin Plan. ■ Flow not defined as a primary habitat limiting factor.	■ Limited current-out-of-stream demands. ■ Rural demands projected to remain relatively constant over planning period.	■ SWSL: No diversions after September 15 or when “base flow is established.” Diversions limited to occur from May 1 – September 15.	■ No recommended restrictions to new water rights applications at this time, except case-by-case review by Ecology.	

Notes:

(1) Tech Memo 2a (Draft June 2005) includes a preliminary recommendation for minimum instream flow levels. A formal minimum instream flow recommendation to Ecology should be adopted by the Planning Unit as part of the WRIA 35 Watershed Management Plan.

(2) Tech Memo 2a (Draft June 2005) includes preliminary recommendations for minimum instream flow levels at MP-3; however, it also recommends that additional flow data be collected because of the statistical instability of the flow record.

(3) These streams have been adjudicated. Generally, where there is a completed adjudication, there was a need to determine the actual existing water rights/water use, implying there was limited or no additional water available for new water rights based on Ecology’s review. The result is similar to a closure to new water rights.

(4) Tech Memo 2a (Draft June 2005) does not currently include preliminary recommendations for minimum instream flow levels for George Cr. and Asotin Cr. However, the approach presented in the tech memo will be applied to the instream flow study data for the Asotin Cr. locations.