WPIC Briefing Paper

Can Mitigation Water Banking Play a Role in Montana's Exempt Well Management?

Trout Unlimited
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by

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cover illustration from *Orange County Register, "Water Districts have big loss on Derivatives," (*Sept. 18, 2009).

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Executive Summary

This briefing paper for the Water Policy Interim Committee (WPIC) provides an examination of how mitigation banking can be structured through statute and regulations to facilitate exempt well management in Montana. The paper will begin with a recap of how the exempt well debate has evolved in Montana. It will then investigate efforts in Washington and Oregon to address the cumulative impacts of exempt wells. Here, the first section will focus on the regulatory construction and statutory authority enabling mitigation banking in Kittitas County, Washington, as well as how it has performed since its creation in 2009. The second section will provide an overview of three other mitigation banks in Oregon and Washington and what lessons can be learned from each. The paper will then identify how the authority from each of the examples relates to Montana's statutes and codes. The paper will conclude by offering insight on how statutory and regulatory authority can be created in Montana to allow basin-specific mitigation banking, which will reduce time and transaction costs for both applicants and agency staff while also ensuring protection of surface and ground water availability.

The report was written by Ada Montague, a law student at the University of Montana School of Law with a background in land use planning, working as an intern for the Montana Water Project of Trout Unlimited, with Director Laura Ziemer. Many thanks to all who contributed insight and information to this briefing paper, including Brian Walsh, Amanda Cronin, Jason McCormick, Gen Hubert, Cathy Schaefer, Chris Fieland, Bob Barwin, Sarah Bates, Kerry Strasheim, Chris Corbin and Walt Sales.

Introduction

Montana's Water Use Act does not require permitting for individual wells drawing water at a rate of thirty-five gallons per minute (gpm), not to exceed ten acre feet per year.[1] However, permitting is required if the use is for a "combined appropriation" from the same source by two or more wells or developed springs.[2] Under the Act, a proposed subdivision relying on two or more individual wells drawing from the same aquifer arguably would be a "combined appropriation" and require a permit.

The Montana Department of Natural Resources and Conservation (DNRC), defines a "combined appropriation" by rule as one that is "physically manifold," or actually piped into the same system.[3] This interpretation of the statute has been controversial, because multiple exempt wells can be used to establish residential developments on land not served by community water systems--without triggering the Water Use Act's dictate that "combined appropriations" go through water rights permitting.

In high-growth areas of Montana, many individual wells have been drilled without any monitoring or mitigation requirements. According to the DNRC, 56,083 Exempt Well

[1] Mont. Code Ann. § 85-2-306(3)(a) (2009).
[2] Id.
[3] Admin. R. Mont. 36.12.101(13) (2009)

Certificates of Water Right were issued from 1991 to 2011, with 26, 373 or 47% issued in closed basins.[4] During the same time period, the top three growth counties, Ravalli with 6,509 exempt wells, Flathead with 5,962 exempt wells, and Gallatin with 5,439 exempt wells, had one to two thousand more exempt well certificates issued than any other county in the state.[5] In terms of volume diverted, these numbers translate into a total of 30,660 acre feet per year diverted for all five of the legislatively closed basins combined (assuming ½ acre lawns) from 1991 - 2011.[6]

The number of new wells has brought with it the potential to cause surface water drawdown, groundwater depletion, and even groundwater contamination in areas of high concentration.[7] This phenomenon occurs when multiple wells are developed, typically through a subdivision, in an area with no existing community water infrastructure. Instead of a controlled and monitored source of water, each home relies on individual wells to meet its water use needs. When a large number of individual wells are grouped together they can create impacts on water resources similar to those of a town. Without monitoring or other forms of control typically associated with permitting, the exempt well "loophole" has the potential to cause long-term negative impacts that may not be perceived right away. It is a situation of creeping normalcy, or when a negative change is not at first noticed because it does not seem out of the ordinary. As is often quipped, such a situation could lead to "a death by a thousand cuts." Likewise, the impact of exempt wells in high growth areas over time could be severe on existing water rights.

Over the last five years, the Montana Legislature has made several efforts to investigate the potential consequences of exempt wells. In 2007, legislation established a legal connection between ground water and surface water.[8] The Legislature also created the bipartisan Water Policy Interim Committee (WPIC) formed to study the impacts of water quality and quantity. The same year the legislature authorized the Montana Bureau of Mines and Geology to undertake a groundwater study to create hydrogeologic models of several subbasins and develop monitoring plans.[9] The study was broadened and continued by the 62nd Legislature, and now a total of forty-one programs are proposed to be completed by 2013. In 2011, the Legislature passed HB 602 requiring WPIC to conduct an Interim Study of exempt wells to identify issues, provide policy direction, and instruct the 63rd Legislature on necessary legislation. The WPIC's study will hopefully "guide Montana's policy regarding wells that may be exempt from the permitting process."[10]

Twice the DNRC has been petitioned to address the discrepancy between its regulations and the plain meaning of the statute---first by local government, and second by ranchers across three river basins. In 2006 the Gallatin County Commissioners petitioned the

[4] DNRC, Water Resources Division, WIPC Meeting Materials (June 1, 2011).
[5] Id.
[6] Id.
[7] Water Laws and Policies for a Sustainable Future: A Western States' Perspective, Western States Water Council, 2008. http://www.westgov.org/wswc/publicat.html
[8] Montana H. 831. 60th Legis. (May 3, 2007).
[9] § 85-2-525.
[10] Montana H. 602, 62d Legis., 1 (July 1, 2011).

DNRC to change the definition of "combined appropriation." The petition failed due to "logistical and financial difficulty" to the DNRC in implementing the requested change, and the perception that the proposed new language would "…completely halt the development of any new [exempt] wells on new tracts of record or subdivisions in the Upper Missouri closed basin and in other similar closed basins."[11] In 2009, another group of petitioners, the majority of whom represented senior water right holders in the Horse Creek watershed near Absarokee, MT., again petitioned the DNRC to change the definition of "combined appropriation."[12] The DNRC agreed that the regulation needed to be updated to match the legislative intent of the Water Use Act and reached a settlement with the petitioners. The district court settlement states, "…DNRC recognizes that the 1993 administrative rule defining 'combined appropriation' in Admin. R. Mont. Rule 36.12.101(13) needs to be amended, broadened and updated."[13] Furthermore the DNRC agreed to initiate and complete formal rulemaking changing the definition of "combined appropriation."[14] Currently the settlement obligation to initiate rule-making is under discussion between the petitioners and the DNRC to ensure that it proceeds in a constructive way given the legislatively mandated WPIC Interim Study and its recommendations for legislation in the 63rd Legislature.

To conclude, the exempt well rule as it is currently crafted may have negative ramifications for water availability if unchecked, particularly in high growth areas. However, the DNRC has made clear that permitting all "combined appropriations" is not within its budget and staffing constraints. Mitigation water banking may be an opportunity for a coordinated approach between the DNRC's rulemaking on "combined appropriation" and WPIC's Interim Study that will assist both efforts by providing a less burdensome permitting process in areas with high rates of exempt-well development. According to the petitioners who filed suit against the DNRC, the rulemaking process should go forward in accordance with the suit's settlement.[15] In order to avoid conflict with the WPIC Interim Study, the rulemaking effort could evolve along with the research of the WPIC Interim Study. If both entities look into how mitigation water banking may play a role in the exempt well solution at the same time, the tandem process would increase the efficiency and objectivity of both efforts without compromising either one. By doing so there is an opportunity to explore basin-scale mitigation banking from a variety of perspectives and identify whether it may be a workable path forward to address the cumulative impacts of permit-exempt wells in a way that is not overly burdensome to the DNRC or applicants.

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[11] Gallatin County Commission's Petition to Amend Rule 36.12.101(13) (DNRC 2006).
[12] Katrin R. Chandler, Betty J. Lannen, Polly Rex, Joseph Miller, and the Clark Fork Coalition's Petition to Amend Rule 36.12.101(13) (DNRC 2009).
[13] Stipulation and Or. Of Dismissal, *The Clark Fork Coalition et al v. the DNRC*, http://www.horsecreekwater.org/pdf/Settlement.pdf (Mont. 1st Drst. Ct., Lewis and Clark Co. Nov. 8, 2010) (CIC No. BDV-2010-874).
[14] Id.
[15] Ltr. from Matthew K. Bishop, Western Environmental Law Center, to Candace F. West, Chief Legal Council, Department of Natural Resources and Conservation, *Re: The Clark Fork Coalition et al., v Mary Sexton, et al., CIV-BDV-2010-874*, 1 (Aug. 8, 2011) (copy on file with *Western Environmental Law Center)*.

Section I: Statutory and Regulatory Construction

How are statutes and regulations structured to enable mitigation banking? It is helpful to look to Kittitas County, Washington, which recently undertook an effort to mitigate the impacts of permit-exempt wells on stream flows. The Kittitas mitigation banking effort is perhaps more complex than what would be needed in Montana. Because salmon are protected under the Endangered Species Act (ESA), restoration efforts on their behalf has influenced water policy and rulemaking in Washington State since the late 1990s. In the Kittitas, this means that mitigation water is tightly linked to the location of permit-exempt wells. Despite this difference, the statutory and regulatory construction of Kittitas' water mitigation banking program and an analysis of what has worked and what has not is a useful exercise in preparation for a discussion of how Montana could use mitigation banking as a way to address its own exempt well conditions. Montana's statutory and regulatory framework will later be discussed in Section III.

Kittitas County, WA.

Kittitas County is located in the center of Washington State and has a population of 40,915 people, according to the 2010 Census. The geography of the county varies from mountainous terrain in the northwest with an average annual rainfall of as much as 147 inches to the more arid high plains of the east and southeast, where average precipitation is as low as 7 inches per year.[16] The county experienced increased growth pressure during the housing boom of 2000. The area is also heavily used for irrigation, including surface water diversions and storage water from the Bureau of Reclamation's large project in the Yakima. In 2007, as a result of heavy reliance on the state's exemption for residential, individual wells from permitting requirements, a private entity petitioned the County and the State of Washington, Department of Ecology (Ecology) to place a moratorium on the use of the exemption until more was known about water availability in the county.[17] The petition led to a cooperative effort between the county and Ecology to establish a permanent rule to manage exempt groundwater wells until the aquifers and water supplies in upper Kittitas County could be studied.

That new rule prevents any further appropriation of groundwater from Upper Kittitas County, unless those appropriations can be water budget neutral.[18,19] In order to do so,

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[16] Kittitas County, *Average Annual Precipitation*, http://www.co.kittitas.wa.us/publicworks/hazard-mitigation-plan/20110217-maps/Precip.pdf (accessed Aug. 16, 2011).

[17] State of Washington Department of Ecology, *Memorandum of Agreement Between Kittitas County and the State of Washington, Department of Ecology Regarding Management of Exempt Ground Water Wells in Kittitas County*, http://www.ecy.wa.gov/programs/wr/cro/images/pdfs/moa_kitt_eco482008.pdf (April 7, 2008).

[18] The new rule is not retroactive and does not apply to water uses for structures with an approved building permit issued prior to July 16, 2009. State of Washington Department of Ecology, *Upper Kittitas Ground Water Rule – Chapter 173-539A WAC*, http://www.ecy.wa.gov/programs/wr/cro/kittitas_wp.html (accessed Aug. 1, 2011).

[19] A "Water budget neutral project" means an appropriation or project where withdrawals of public ground water are proposed in exchange for placement of other water rights into the trust water right program that are at least equivalent to the amount of consumptive use. State of Washington Department of Ecology,

the State established a water exchange where developers, contractors and individuals can purchase water rights from basin specific mitigation banks to offset their consumptive use of groundwater. Political support for the rule came due to a United States Geological Survey (USGS) mapping project focusing on the interaction between surface and ground water in the Yakima River basin.[20] The study demonstrated that even deep aquifer wells affect the surface water and that there is a definite effect of wells on surface water.

Another source of political support was from senior water rights holders, who were already not getting their full water supply in dry years. Between the hydrogeologic study and likelihood of harm to senior water users, the case was compelling to the Washington legislature who recognized that the situation, if left unchecked, would violate the Washington Water Code. The Washington Department of Ecology ("Ecology") created the Kittitas Water Exchange by rule, which sets forth requirements for metering and reporting, ensuring an efficient process for water banking transactions and for requesting a determination of water budget neutrality. It also provides for technical assistance, enforcement, and clarifies which withdrawals are considered new uses subject to the emergency rule.[21]

The statutory authority for Ecology's new rule stems from two general provisions of the Revised Code of Washington (RCW). Section 90.54.050 RCW (2010) allows Ecology to prevent new appropriations until sufficient information is available regarding water supplies where information regarding water availability is insufficient to make sound decisions about allocations. In addition, the Groundwater Code, RCW § 90.44.050, authorizes Ecology to establish metering requirements for permit-exempt wells where needed.[22]

The Kittitas Ground Water Rule, Washington Administrative Code (WAC) § 173-539A (2010), closed the basin to further ground water withdrawals. Additionally, WAC §§ 173-500-040 & 173-546-100 establish watershed planning criteria and require strategies to increase additional water sources to meet watershed needs, as well as a minimum flow for the Yakima River. Procedurally, in order for a state agency to adopt a new rule, the Washington Administrative Procedures Act requires a cost-benefit analysis and a least burdensome alternative analysis to be performed and used in making a decision about adopting new rules.[23] Ecology used the information generated from its dual analyses to inform their rule adoption decision, as required by § 34.05.328 and to issue a Revised Small Business Economic Impact Statement (SBEIS).[24] The Revised SBEIS explained to

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"Chapter 173-539A WAC: Upper Kittitas Groundwater Rule, http://www.ecy.wa.gov/laws-rules/wac173539a/x0812a.pdf (accessed August 1, 2011).

[20] USGS Washington Water Science Center, *Upper Kittitas County*, http://wa.water.usgs.gov/projects/kittitasgw/ (accessed Aug. 3, 2011).

[21] WAC § 173-539A (2011).

[22] State of Washington Department of Ecology, *"Chapter 173-539A WAC: Upper Kittitas Groundwater Rule*, http://www.ecy.wa.gov/laws-rules/wac173539a/x0812a.pdf (accessed August 1, 2011).

[23] RCW § 34.05.328(1)(d) & (e) (2011).

[24] State of Washington Department of Ecology, *Revised Small Business Economic Impact Statement*, http://www.ecy.wa.gov/pubs/1011034.pdf (accessed August 12, 2011).

businesses needing to obtain new uninterruptible water how it can be done under the new rule and what costs are likely to be involved.

Ecology, through the new rule, created the Kittitas Water Exchange (the "Exchange") as a tool to make water available through several mitigation water banks. Through the Exchange, parties seeking mitigation water can move water to where it is most needed, whether for development, in-stream flows, or otherwise.[25] The Exchange is part of the Washington Trust Water Rights Program ("Trust Water Program"), which is permitted by statute to serve "water banking purposes statewide."[26] The Trust Water Program "…provides a way to legally hold water rights for future uses without the water right relinquishing. Water is held in trust to benefit groundwater and in-stream flows, and other beneficial uses. While water is held in trust it retains its original priority date."[27, 28] Two statutes govern the Trust Water Program; RCW § 90.38, which pertains to the Yakima River basin where Kittitas County is located, and RCW § 90.42, which establishes the Trust Water Rights Program.[29] RCW § 90.42.100 sets forth how trust water rights are to be managed and used.

The Trust Water Program is used to hold water rights for Water Banking and also to implement the Water Acquisition Program, which focuses on increasing stream flows in the sixteen watersheds within the state where trout and salmon are at risk. Efforts to restore salmon fisheries began in the late 1990's, when the fish was first listed as an endangered species under the Endangered Species Act (ESA). The Water Acquisition Program began in 2003. The program uses state and federal funds to pay farmers, ranchers and other water-right holders willing to sell, lease or donate water where low stream flows compromise fish survival.[30] Water obtained is returned to the creeks, streams and rivers where it was originally withdrawn.

The Kittitas Water Exchange is currently made up of five "water banks," with another two water banks pending. The senior water rights that make up the water banks can provide mitigation water within a defined area, and are held under the Trust Water Program. The Washington Department of Ecology oversees the Water Exchange, and processes the change in use of the water rights to a mitigation purpose. To facilitate water banking, willing buyers and sellers are connected through a website maintained by Ecology. The website tracks information about available mitigation waters for all of the water banks in the Exchange. It also provides links to the water rights associated with

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[25] State of Washington Department of Ecology, *Kittitas Water Exchange*, http://www.ecy.wa.gov/programs/wr/cro/wtrxchng.html (accessed Aug. 1, 2011).
[26] RCW § 90.42.100 (2011).
[27] State of Washington Department of Ecology, *Trust Water Rights Program*, http://www.ecy.wa.gov/programs/wr/market/trust.html (accessed Aug.1, 2011).
[28] Water can also take advantage of retaining its original priority date by being put in a temporary trust, or placed in in-stream flow through a change process, and if the owner manages it according to Ecology's requirements, the water is essentially its own trust water right. Telephone Interview with Jason McCormick, Project Manager for the Washington Water Trust, Ellensburg, Wash. (Aug. 3, 2011).
[29] Washington State Legislature, *Water Rights – environment*, http://apps.leg.wa.gov/RCW/default.aspx?cite=90 (accessed Aug. 2, 2011).
[30] State of Washington Department of Ecology, *Water Acquisition*, http://www.ecy.wa.gov/programs/wr/instream-flows/wacq.html (accessed Aug. 16, 2011).

each bank, forms needed to acquire mitigation water, a "Consumptive Use Calculator" consistent with the Upper Kittitas Ground Water Rule,[31] and information about Water Budget Neutral (WBN) determinations. In 2009 Ecology was authorized by a legislative change to use the website as well as newspapers for public notice for two types of trust water rights - donations and short term leases.[32]

The creation of each water bank is initiated through an application to Ecology, who performs a review process of the extent and validity of the water to be used and issue a Trust Water Right Report of Examination (ROE) and Certificate, which document the quantification of the comparative quantity of water associated with the right(s). The bank is officially made a part of the Exchange through a "Trust Water Right Agreement," which sets forth the legally described water and land involved in the bank and the method(s) in which water will be disbursed from the bank.
The following gives an overview of each water bank in the Exchange:

1. The Lamb and Anderson Bank (Upper Kittitas Basin) is made up of three water rights provided by Suncadia Resort. Depending on where proposed new ground water uses are contemplated, the available water rights may or may not be an effective means of mitigation. As a result, a Mitigation Suitability Map was created to assist future land use decision making (Exhibit A). Several streams are closed to further development.
2. The Suncadia and Roan Bank (Swauk Basin) is made up of the portion of First Creek water claims provided by Suncadia Resort (Exhibit B).
3. SwiftWater Ranch Water Bank (Teanaway Basin) is made up of three water rights on the Teanaway River provided by SwiftWater Ranch, LLC. These water rights were transferred from irrigation to instream flow rights. The Trust Water Right agreement limits water made available for mitigation purposes to SwiftWater and/or third parties acceptable to SwiftWater. The SwiftWater Bank also has a Mitigation Suitability Map (Exhibit C).
4. Reecer Creek Golf Course Bank (Lower Kittitas Basin) is made up of one water right provided by SC Aggregate Company, Inc. This bank is also by where the proposed new use of ground water will be located and has a Mitigation Suitability Map (Exhibit D).
5. Williams and Amerivest Bank (Lower Kittitas Basin) is made up of two water rights provided by Williams and Amerivest, respectively. It is similarly limited as the majority of the other banks in terms of suitability and has a Mitigation Suitability Map (Exhibit E).

With an understanding of the statutory and regulatory framework of Washington's Trust Water Rights Program, the Kittitas Water Exchange and each of the Exchange's sub-basin mitigation banks, a look at how the mitigation tool functions will allow for critical

[31] WAC § 173-539A (2011).
[32] RCW § 90.42.040(5)(c): "For a trust water right donation described in RCW 90.42.080 (1)(b), or for a trust water right lease described in RCW 90.42.080(8) that does not exceed five years, the department may post equivalent information on its web site to meet the notice requirements…"

analysis. Understanding the pros and cons of the county's water mitigation banking will be helpful in assessing how to employ such a tool in Montana.

Kittitas: Lessons Learned

While the Kittitas Water Exchange provides an example of how mitigation water banking can work, it also highlights some of the difficulties in establishing such a tool. The Kittitas Water Exchange and its enabling regulatory and statutory language provide an example of how a water exchange can be legally created. It also demonstrates how such a tool works to maintain a water neutral system where the pressure of mitigation on new water users is offset by providing access to underutilized water from other areas. However, the new rule requiring mitigation was not accepted with much local support, which resulted in several negative consequences for both the community and the mitigation banking program.

Mitigation banking in Kittitas suffers from a negative perception by the community. Local decision-makers characterize the new rule as a "moratorium" on new wells, and in general most see it as a growth control measure and not as one designed to preserve existing water rights. One repercussion of the lack of support was a petition authorized by the Assessor's Office in Kittitas County that allowed landowners, pursuant to statute,[33] to report how the new rule's restrictions limit the use of their property, and therefore reduce their property value.[34] Not surprisingly, because the water exchange does not enjoy much local support it is only a success because it is state-mandated.

A recent court decision in favor of mitigating groundwater withdrawals highlights the tension. In *Kittitas Co. v. E. Wash. Growth Mgmt. Hearings Bd.*, the Washington Supreme Court found the Kittitas County revised comprehensive plan and development code noncompliant with the Washington Growth Management Act (GMA).[35] The Court found the Growth Management Hearings Board acted properly by finding the county's subdivision regulations did not protect water resources as required by the GMA. A story by the Yakima-Herald Republic reported the Court "… in a 6-3 decision, used strong language to conclude the county violated state law in recent years when it reviewed and approved side-by-side subdivision requests, allowing developers to evade legal limits on the use of exempt wells to serve each home."[36]

Another ramification related to lack of local support is limited public input during the development of the rule, which left out alternative, perhaps better solutions addressing local concerns. One important aspect, for example, included setting the price for mitigation water. Without public input, it was left to the private sector to determine the

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[33] RCW § 84.40.039 (2011).
[34] Kittitas County, *Press Release*, http://www.co.kittitas.wa.us/assessor/press/20100720-petition-for-reduction.pdf (accessed Aug. 2, 2011).
[35] *Kittitas County v. E. Wash. Growth Mgmt. Hearings Bd.*, 2011 Wash. LEXIS 596 (Wash. July 28, 2011).
[36] David Lester, *State Supreme Court slams Kittitas County on water*, Yakima-Herald Republic http://www.celp.org/kittitas/petition/Media/Entries/2011/7/29_State_Supreme_Court_slams_Kittitas_County_on_water.html (July 29, 2011).

price and, as a result, the cost of mitigation water in the Yakima basin is unusually high. The average price is $5,700/mitigation credit, where 1 mitigation credit = 0.17 acre feet (af) of consumptive use, i.e. indoor water use and outdoor irrigation of up to 500 sq.ft. When calculated per acre-foot, the total value is ~$30,000/af of historic consumptive use volume. In contrast, purchasing an individual water right outright is often in the range of $2,000-3,500/af of consumptive use.[37] Part of the price setting-process was established by the first major development, the Suncadia Resort, which was pending when the new rule came into effect. Through a contribution of its water rights to the state required for mitigation of its impacts to surface water, Suncadia established the first water bank in the Exchange, and therefore positioned itself to set the price for mitigation water not needed for Suncadia's own mitigation purposes.[38] While Suncadia's dedication of water rights to a mitigation purpose was to the resort's benefit in the long-run, without the Suncadia, the Kittitas Exchange would likely not have been so quickly established. On the other hand, Suncadia was able to capitalize on setting up the water bank, affecting the price of water for the entire Exchange.

A contrasting example to the Suncadia Water Bank, is Walla Walla where water banking is not mandated and does enjoy more public support. As a result, prices for mitigation water are lower ($2,000/credit). The resulting situation is a double-edged sword though; from a market perspective the lower mitigation water rates are more attractive, but there is not enough certainty to engender much activity, though the lack of mitigation purchases is also related to the housing market downturn.[39] According to Jason McCormick, Project Manager for the Washington Water Trust, having public support is important to establish fair and locally-tailored water mitigation banks, but the state is often at odds with the public when mandating a mitigation regime. A line is needed somewhere between gathering local support and providing enough certainty to encourage participation in a mitigation banking program.[40]

One of the sources of complexity of the Kittitas Water Exchange is the limited geographic area in which each of the five water banks can offer mitigation water. This tight connection between the source of mitigation water and area of exempt-well development is largely driven by need to mitigate relatively precisely any impact to surface flows. Ecology developed maps to indicate where development was most suitable for four of the five sub-basin banks. The Mitigation Suitability Maps for the Suncadia, Reecer, and Swiftwater Banks provide a delineation of where mitigation water is likely to be approved for development.[41] Areas of likely suitability, areas that will require additional information, and unsuitable areas are shown (Exhibits A, B, C, D, and

[37] Telephone Interview with Jason McCormick, Project Manager for the Washington Water Trust, Ellensburg, Wash. (Aug. 3, 2011).
[38] Bob Barwin, e-mail correspondence with the authors of Sept 2, 2011.
[39] There have been three water transactions to date since the program's inception in 2008, due largely to the housing market downturn. Telephone Interview with Amanda Corbin, Project Manager for the Washington Water Trust (Aug. 18, 2011).
[40] Telephone Interview with Jason McCormick, Project Manager for the Washington Water Trust, Ellensburg, Wash. (Aug. 3, 2011).
[41] State of Washington Department of Ecology, *Suncadia and Roan (Swauk Basin) Water Bank*, http://www.ecy.wa.gov/programs/wr/cro/sbwb.html (accessed Aug. 2, 2011).

E). While a helpful guide, this mapping effort may also further the perception that water banking can also act to control or direct growth. From both the state's perspective and those participating in the exchange, however, the mapping effort has increased the efficiency and reliability of the program. In addition, regardless of community perception, the Washington Supreme Court has clearly determined that Ecology is acting within its statutory authority to limit ground water withdrawals within the basin.[42]

The Kittitas Water Exchange is a success for three primary reasons: (1) it is mandated by the state, (2) it is based on a water budget neutral system, and (3) it uses multiple basin-specific banks. On the other hand, the exchange was unsuccessful in engendering much local support, which inadvertently led to high mitigation rates set by the private sector without public input. It also led to pushback from decision makers in the county and a negative perception by residents. In order to best use this information it will be useful to analyze several other mitigation banking scenarios. The following section will further explore the Walla Walla exchange as well as the mitigation programs on the Deschutes and Dungeness to provide additional examples with which to compare the Kittitas experience and discuss Montana's potential path forward.

Section II: Other Examples of Mitigation Banks

In 2009, Trout Unlimited worked with Sarah Bates to describe examples of ground water mitigation exchanges and how they could function in Montana.[43] The paper outlined the elements of a groundwater mitigation exchange based on three examples from the Northwest, the Walla Walla and the Dungeness in Washington State and the Deschutes in Oregon. This paper will update those efforts in order to remain consistent with previous efforts to understand mitigation water banking and its legal authority as well as provide additional examples to inform a discussion of Montana's options regarding mitigation banking.

Walla Walla and Dungeness in Washington State

The Washington statutory and regulatory authority for the Walla Walla and Dungeness Mitigation Banks are similar to those authorizing the Kittitas Water Exchange, with some important distinctions. All three watersheds are sanctioned under the Trust Water Program in RCW § 90.40.040 (2010), which enables mitigation banking. In addition, all three are also authorized by the Groundwater Code (RCW § 90.44.050) and surface water statutes contained in RCW § 90.03. Walla Walla, like the Yakima basin, is further regulated under minimum flow requirements set forth in RCW § 90.22.010. The

[42] A challenge to the closing of the Yakima basin to further groundwater withdrawals was soundly rejected by the Washington Supreme Court, who held that it was within Ecology's power to close the basin due to surface water draw down due to groundwater pumping. *Kittitas Co. v. E. Wash. Growth Mgt.Hrgs. Bd.* 2011 WL 3206867 (Wash. July 28, 2011).

[43] Sarah Bates, *Blueprint for a Ground Water Mitigation Exchange Pilot Project in Montana*, Montana Water Project, Trout Unlimited (2009).

Dungeness, however is not. Indeed the Dungeness does not have a functioning water mitigation bank at this time due to the fact that there is no in-stream flow, or "water management rule" pursuant to RCW § 90.03.247.

The Dungeness is a different stream network from the Walla Walla and the Yakima basins. In the Dungeness there are three aquifers with quantification of the groundwater/surface water interaction. However, the data is not as complete as in the other two basins. The mitigation banking system for the Dungeness is currently pending, but is set up with a draft rule for water budget neutrality and so will function like the Kittitas Exchange with some differences. Due to the more complex geology and hydrogeography in the Dungeness, the calculation of a mitigation obligation is also more complicated. In order to ensure the system will function, Ecology established a maximum depletion level that cannot be compromised by over appropriation.[44] The bank would then function under a board of directors, made up of biologists from Ecology and the Jamestown/S'Klallam Tribe, who direct where mitigation credits will be spent to prevent maximum depletion, and who take on the risk of making such a decision.

Another challenge is that the Dungeness is currently over-appropriated, according to Brian Walsh, Program Development and Operations Support for Ecology, and Tribal rights are unaccounted for.[45] This is common to all three basins and tribal rights remain a question in terms of what really is a water budget neutral system where there is no net loss, as in Kittitas, or a mass balance system, as in Walla Walla. The Kittitas Exchange has built in some certainty by providing a state review that occurs in coordination with the tribes during the transaction of mitigation credits and this is likely to be the case for the Dungeness as well.

As in the Walla Walla, using mitigation banking to address water scarcity issues began in the Dungeness through the state's watershed planning program, authorized by RCW § 90.82. The watershed planning program identified individual Water Resource Inventory Areas (WRIAs), and provided funding to create management plans to address watershed health and particularly water availability. The planning process can also set minimum flows, also known as "water management rules." According to the statute, "[t]he purpose … is to develop a more thorough and cooperative method of determining what the current water resource situation is in each WRIA of the state and to provide local citizens with the maximum possible input concerning their goals and objectives for water resource management and development."[46] Kittitas, while also a WRIA, already had a minimum in-stream flow set, making the legal argument for mitigation banking more compelling.

The Walla Walla mitigation water banking program is regulated by WAC § 173-532. The basin is characterized by a shallow gravel aquifer with a deeper aquifer below it. The town of Walla Walla sits on top of the aquifer and because it was determined all

[44] Telephone Interview with Bob Barwin, Regional Manager, Water Resources Policy & Programming for Ecology, Yakima, WA. (Aug. 19, 2011).
[45] Telephone Interview with Brian Walsh, Program Development and Operations Support for Ecology, Lacey, WA. (Aug. 16, 2011).
[46] RCW § 90.82.005 (2011).

surface flows are connected to the shallow aquifer in that area (~ 120 feet or less deep), one set mitigation fee was determined to be sufficient to address water depletion concerns in high density areas. Mitigation water is only required if a new groundwater appropriation is going to be used for outside the home use during the summer. The system is simple and cheap and functions with little controversy, but there have been only three mitigation credit purchases to date since the program's inception in 2008.[47] It was initially set up through the Washington Water Trust, who purchased two water rights with money from the state. In January of 2011 they transferred management to the Walla Walla Watershed Management Partnership, a pilot program whose authority and purpose were formed by the state, but functions as a non-governmental nonprofit. The organization is enabled legislatively, is exempt from certain rules, and will sunset in 2019.[48] However, it is not further overseen by the state and acts as a broker for obtaining mitigation monies from those interested in drilling new wells drawing from the basin's shallow gravel aquifer. New appropriators must pay $2000 to obtain a mitigation credit. The new wells drilled only need mitigation credits, though, if they will use the water for outdoor use during the summer. The explanation given for the low rate of mitigation credit purchases is the slump in the housing market.[49]

Deschutes in Oregon

The Deschutes Ground Water Mitigation Program "was developed to provide for new ground water uses while maintaining scenic waterway and in-stream water right flows" specifically in the Deschutes Basin.[50] There are two water banks in the Deschutes basin, the Deschutes Water Alliance (DWA) Water Bank and the Groundwater Mitigation Bank. The mitigation program is authorized under ORS § 537.746 and House Bill 3494 (2005 Oregon Law) and implemented in Oregon Administrative Rules under OAR §§ 690.505 & 521. The goals are to maintain flows for Scenic Waterways and senior water rights, including in-stream water rights, facilitate restoration flows in the middle reach of the Deschutes River and related tributaries; and sustain existing water uses and accommodate growth through new ground water development.[51] The Oregon Water Resources Department is required to review the program every five years and assess the cumulative rate of water appropriated under all ground water permits approved, the

[47] Telephone Interview with Amanda Corbin, Project Manager for the Washington Water Trust (Aug. 18, 2011).
[48] For more information on how the Walla Walla Watershed Management Partnership was set up and functions visit http://www.wallawallawatershed.org/partnership/about/partnership-primer.
[49] The Walla Walla Watershed Management Partnership also works to restore fisheries and starting in October of 2011 the organization will become a "Qualified Local Entity" (QLE) and partner with the Columbia Basin Water Transactions Program, which is an ESA driven tool for monies for fisheries set up with the Bonneville Power Administration (BPA). Columbia Basin Water Transactions Program, *The Program*, http://www.cbwtp.org/jsp/cbwtp/projects/index.jsp (accessed August 17, 2011).
[50] Oregon Water Resources Division, *Deschutes Basin Mitigation Program* http://www.wrd.state.or.us/OWRD/Deschutes_five_year_eval.shtml (accessed August 19, 2011).
[51] Id.

volume of water provided for mitigation, and the measured stream flow of the Deschutes and its major tributaries.[52]

Both banks are managed by the Deschutes River Conservancy (DRC). The DWA Water Bank is in place to secure water through permanent mitigation credits for agriculture, cities, and rivers. There are six members of the DWA Water Bank, the Deschutes River Conservancy, Central Oregon Irrigation District, Swalley Irrigation District, City of Bend, City of Redmond, and Avion Water Company. The DWA bank is based on voluntary participation.[53]

The Groundwater Mitigation Bank provides temporary mitigation credits through an Instream Leasing Program. The Groundwater Bank provides temporary mitigation credits to new ground water appropriators, which then either need to be renewed at the expiration of their term, or acquire permanent mitigation.[54]

Section III: Fitting Mitigation Banking into Montana's Statutory and Regulatory Framework

In Washington, the statutory authority for mitigation banking is in the overarching authority for the Trust Water Rights Program. In Oregon, basin-specific legislation authorizes the Deschutes mitigation exchange. Montana's Constitution allows the sale of water: "The use of all water that is now or may hereafter be appropriated for sale, rent, distribution, or other beneficial use, the right of way over the lands of others for all ditches, drains, flumes, canals, and aqueducts necessarily used in connection therewith, and the sites for reservoirs necessary for collecting and storing water shall be held to be a public use."[55] One option for the application of Montana's existing statutes to mitigation water banking is through the controlled groundwater area statute, Mont. Code Ann. § 85-2-506.

The controlled groundwater statute allows a petitioner, as defined in § 85-2-506(2)(c)(i), to create a boundary for a controlled ground water area within which a permit from the DNRC is required to appropriate groundwater.[56, 57] This provision could provide a

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[52] Id.
[53] Deschutes River Conservancy, *Deschutes Water Alliance Water Bank* http://www.deschutesriver.org/What_We_Do/Water_Banking/Water_Bank/default.aspx (accessed August 19, 2011).
[54] Id.
[55] Mont. Const. art. IX, § 3(2).
[56] Mont. Code Ann. § 85-2-306(3)(a) (2011): "Outside the boundaries of a controlled ground water area, a permit is not required before appropriating ground water by means of a well or developed spring with a maximum appropriation of 35 gallons a minute or less, not to exceed 10 acre-feet a year, except that a combined appropriation from the same source or two or more wells or developed springs exceeding this limitation requires a permit."
[57] Mont. Code Ann. § 85-2-506(2) (2011): "The rulemaking process for designation or modification of a controlled ground water area may be initiated by:(a) the department;(b) submission of a correct and

mechanism to delineate areas of high growth where ground water withdrawals are affecting surface water rights and require a permit for new groundwater appropriations by 35 gpm wells. A statutory amendment to this provision could make mitigation credits an alternative to permitting, and thereby reduce the influx of permit applications originally anticipated by a change to the rule defining "combined appropriation." Amendments may also be contemplated in order to decrease the cost to taxpayers of a DNRC-designated controlled groundwater area; or, like the Deschutes, legislatively create particular controlled groundwater areas.

In order to sell water for mitigation purposes, a water right holder must first make the water available for sale by changing its use through the DNRC "change process."[58] The 2011 Legislature made this process more accessible to a water banking application through HB 24, sponsored by Rep. McChesney.[59] Through HB 24's amendments to the Water Use Act, a water rights owner may change their purpose of use to marketing for a mitigation purpose for up to 20 years, without identifying the contracts for sale ahead of time.[60] [61]

From the perspective of senior water right holders, it will be critical be to know that the timing, reach and return of the flows are accounted for and a process is in place that will ensure mitigation efforts are replenishing surface waters when using a controlled groundwater area to establish a mitigation exchange.[62] Tracking the sale of water and its use for mitigation purposes is therefore an essential part of any mitigation exchange. An open question is whether Montana can adopt the relative simplicity of a basin-scale mitigation credit system like Walla Walla, or whether a more complex, sub-basin credit system like Kittitas is required. If a basin-scale water exchange is adopted that maintains a neutral water balance in the basin, then there would have to be some process in place to ensure that mitigation water is addressing water-scarce reaches of stream and river within the basin.

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complete petition from a state or local public health agency for identified public health risks; or(c) submission of a correct and complete petition:(i) by a municipality, county, conservation district, or local water quality district formed under Title 7, chapter 13, part 45; or(ii) signed by at least one-third of the water right holders in a proposed controlled ground water area."

[58] Mont. Code Ann. § 85-2-402 (2011).

[59] Text of HB 24: http://data.opi.mt.gov/bills/2011/billpdf/HB0024.pdf (last accessed on September 2, 2011).

[60] Id.

[61] The Grass Valley French Ditch Company, located in Missoula County, is in the process of changing their unused water rights from irrigation purposes to being available for purchase. According to Chris Corbin of Lotic Water Marketing, the change will "…allow the [ditch] company to protect the remaining agricultural shareholders within the company, help finance the maintenance and operations of the company, and offer a source of water for future mitigation of water development." *See* Lotic, *The Montana Water Market: An Opportunity for Irrigation Companies*, http://www.scribd.com/doc/27527361/The-Montana-Water-Market-An-opportunity-for-irrigation-Companies (accessed August 22, 2011).

[62] Telephone Interview with Walt Sales, President of Assn. of Gallatin Agric. Irrigators (AGAI), Amsterdam, MT. (Aug. 22, 2011).

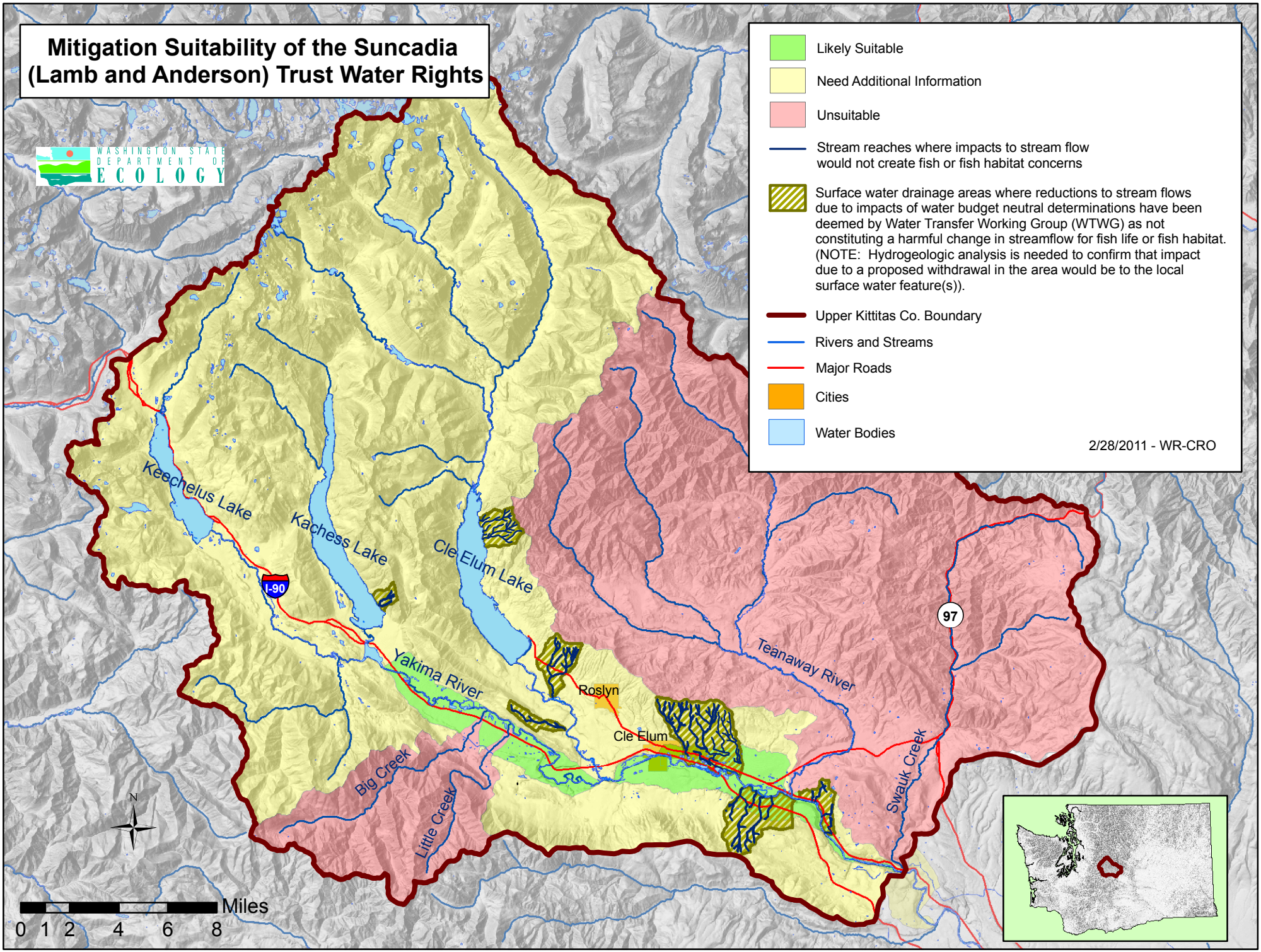
Conclusion

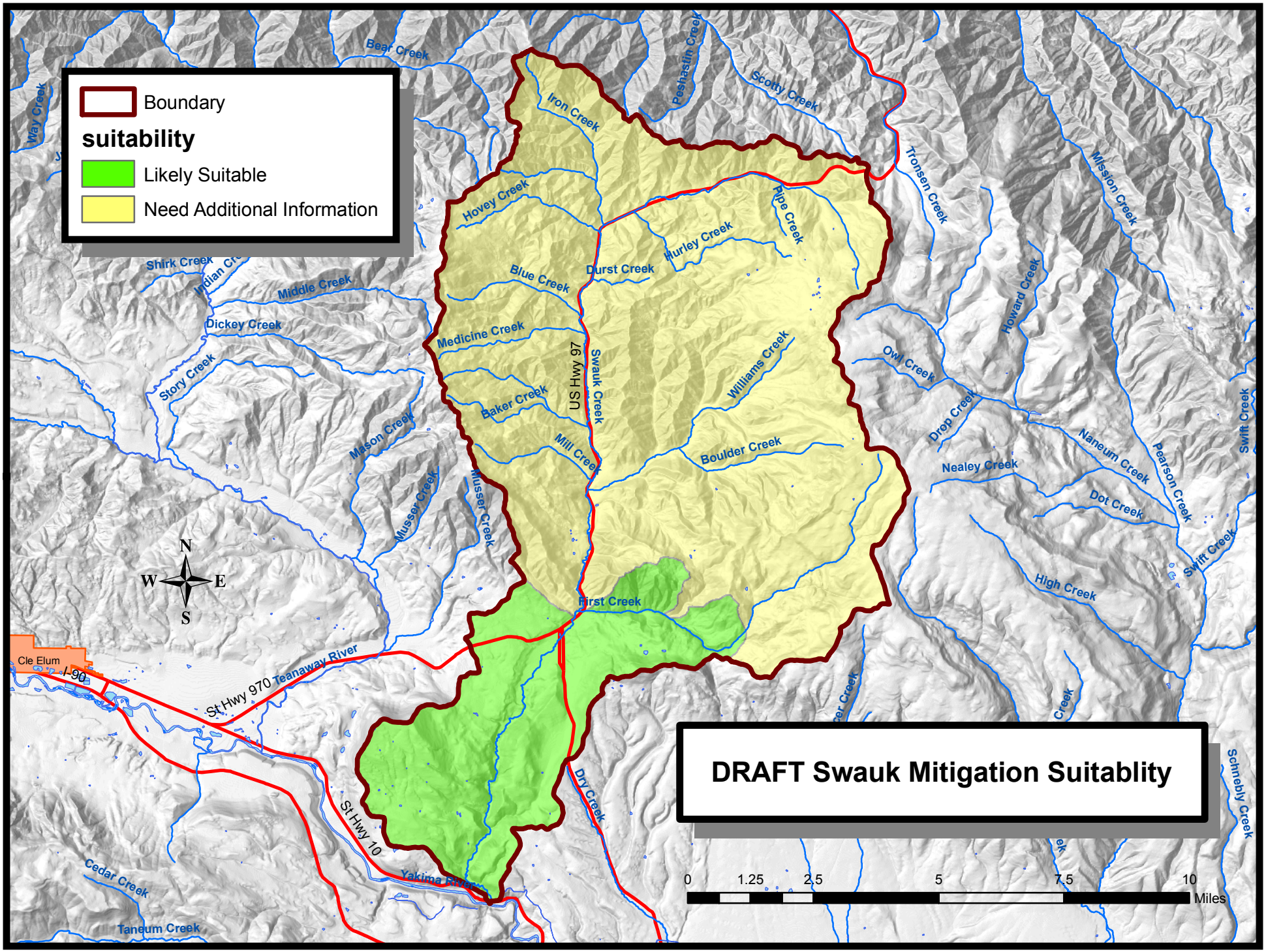
Montana's current exempt well regulation has the potential for negative consequences such as surface water drawdown, harm to senior water rights, and drinking water contamination. In order to address these negative consequences, the DNRC and the WPIC are considering changes on a regulatory and statutory level, respectively. Two goals are being served by this tandem effort: one is to satisfy a settlement the DNRC reached with those senior water right holders who petitioned to change the DNRC's current exempt-well rule; and, the other is to provide the 63rd legislature with the guidance needed for any needed statutory changes.

Other states have dealt with similar issues regarding their own exempt well provisions. This paper reviewed several basins in Washington and Oregon that have adopted mitigation water exchanges to offset groundwater withdrawals with mitigation water. The authority for these exchanges varies from state-to-state and basin-to-basin. They can be voluntary or mandatory, they can be started by the private sector or by state funding, they can impact certain types of uses and be limited by surface flow targets, a water-budget neutral parameter, or a mass balance objective. They all have in common some baseline level of data showing where and how surface and ground water interactions are occurring.

In examining how such a mitigation exchange might work in Montana, the existing statutory framework on controlled groundwater areas could be modified slightly to accommodate a water exchange. Through the DNRC's change process, there is the ability to track and monitor water rights made available for mitigation purposes. Or, through a statutory change enabling groundwater mitigation plans similar to those used for surface water appropriations in closed basins, the use of mitigation water could be more formally monitored.

A mitigation water exchange could be established in Montana with an extension of existing statutes, and regulatory changes by the DNRC. While there are certainly obstacles to over come---knowledge of the surface groundwater interactions in a basin, over-sight and review of the mitigation banking transactions, efficient processing of change applications, and ensuring fair market value for mitigation credits, to name a few---there are examples to learn from in other jurisdictions, and ways to address thoughtfully the potential risks of such a new Montana endeavor.


Mitigation Suitability of the Suncadia (Lamb and Anderson) Trust Water Rights
WASHINGTON STATE DEPARTMENT OF ECOLOGY
Likely Suitable
Need Additional Information
Unsuitable
Stream reaches where impacts to stream flow would not create fish or fish habitat concerns
Surface water drainage areas where reductions to stream flows due to impacts of water budget neutral determinations have been deemed by Water Transfer Working Group (WTWG) as not constituting a harmful change in streamflow for fish life or fish habitat. (NOTE: Hydrogeologic analysis is needed to confirm that impact due to a proposed withdrawal in the area would be to the local surface water feature(s)).
Upper Kittitas Co. Boundary
Rivers and Streams
Major Roads
Cities
Water Bodies
2/28/2011 - WR-CRO
Keechelus Lake
Kachess Lake
Cle Elum Lake
I-90
Yakima River
Roslyn
Cle Elum
Teanaway River
97
Swauk Creek
Big Creek
Little Creek
N
Miles
0 1 2 4 6 8


Boundary
suitability
Likely Suitable
Need Additional Information
DRAFT Swauk Mitigation Suitablity
Bear Creek
Peshastin Creek
Scotty Creek
Iron Creek
Hovey Creek
Pipe Creek
Hurley Creek
Durst Creek
Blue Creek
Tronsen Creek
Mission Creek
Howard Creek
Shirk Creek
Middle Creek
Dickey Creek
Medicine Creek
US Hwy 97
Swauk Creek
Williams Creek
Owl Creek
Story Creek
Baker Creek
Mill Creek
Boulder Creek
Drop Creek
Nealey Creek
Naneum Creek
Pearson Creek
Swift Creek
Mason Creek
Musser Creek
Dot Creek
High Creek
First Creek
N
W
E
S
Cle Elum
I-90
St Hwy 970
Teanaway River
St Hwy 10
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Cedar Creek
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Schnebly Creek
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2.5
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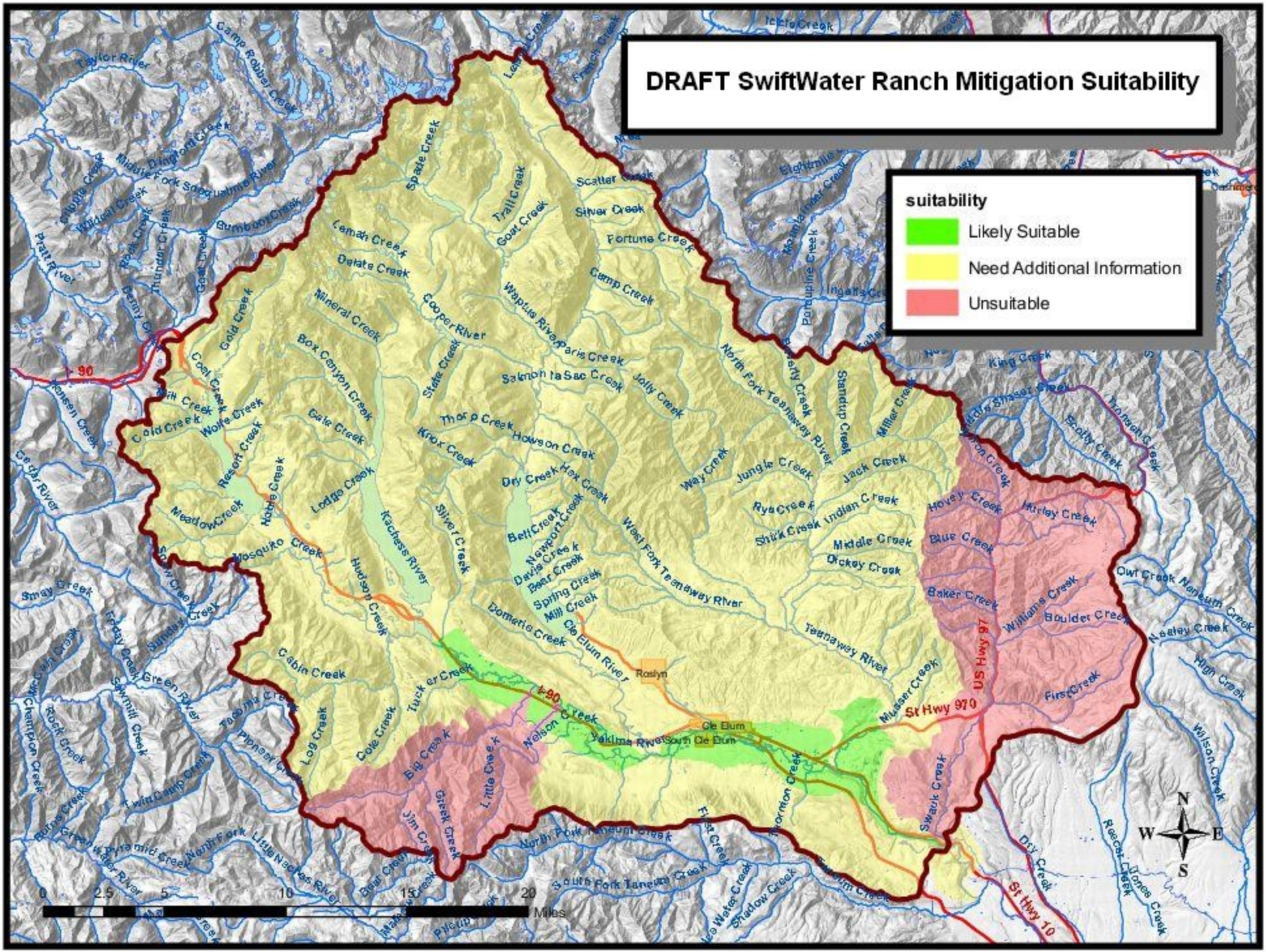
7.5
10
Miles


DRAFT SwiftWater Ranch Mitigation Suitability
suitability
Likely Suitable
Need Additional Information
Unsuitable
Cle Elum
Roslyn
South Cle Elum
Yakima River
Teanaway River
West Fork Teanaway River
North Fork Teanaway River
Cooper River
Waptus River
Salmon la Sac Creek
Paris Creek
Jolly Creek
Camp Creek
Fortune Creek
Silver Creek
Scatter Creek
Trail Creek
Goat Creek
Spade Creek
Lemah Creek
Potato Creek
Mineral Creek
Box Canyon Creek
Gold Creek
Coal Creek
Cold Creek
Wolfe Creek
Reecer Creek
Cole Creek
Lodge Creek
Meadow Creek
Mosquito Creek
Hatchet Creek
Hudson Creek
Kachess River
Silver Creek
Thorp Creek
Knox Creek
Howson Creek
Dry Creek
Hex Creek
Bell Creek
Newport Creek
Davis Creek
Bear Creek
Spring Creek
Mill Creek
Domatio Creek
Tucker Creek
Cabin Creek
Log Creek
Cole Creek
Big Creek
Little Creek
Jim Creek
Grasshopper Creek
Nelson Creek
Musser Creek
Swauk Creek
Morrison Creek
Fish Creek
Shadow Creek
Ice Water Creek
South Fork Teanaway Creek
North Fork Teanaway Creek
Standup Creek
Miller Creek
Beverly Creek
Jack Creek
Jungle Creek
Way Creek
Rye Creek
Shick Creek
Indian Creek
Middle Creek
Dickey Creek
Hovey Creek
Morley Creek
Blue Creek
Baker Creek
Williams Creek
Boulder Creek
First Creek
Owl Creek
Naneum Creek
Neeley Creek
High Creek
Wilson Creek
Manastash Creek
Scotty Creek
King Creek
Porcupine Creek
Ingalls Creek
Eightmile Creek
Taylor River
Camp Robber Creek
Middle Fork Snoqualmie River
Dingford Creek
Pratt River
Thunder Creek
Rock Creek
Great Creek
Bumpboot Creek
Smay Creek
Sunday Creek
Green River
Sawmill Creek
Champion Creek
Twin Camp Creek
Burns Creek
Pyramid Creek
North Fork Little Naches River
Pioneer Creek
Tacoma Creek
Friday Creek
Jeanen Creek
Cedar River
I-90
St Hwy 970
US Hwy 97
St Hwy 10
Dry Creek
Reecer Creek
Jones Creek
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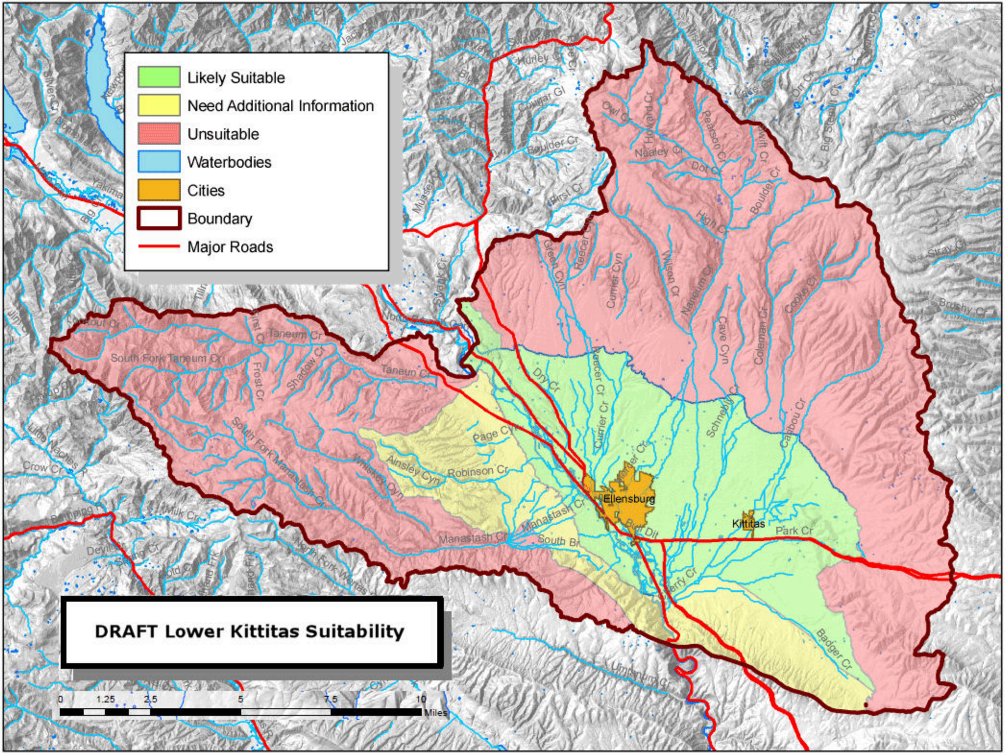
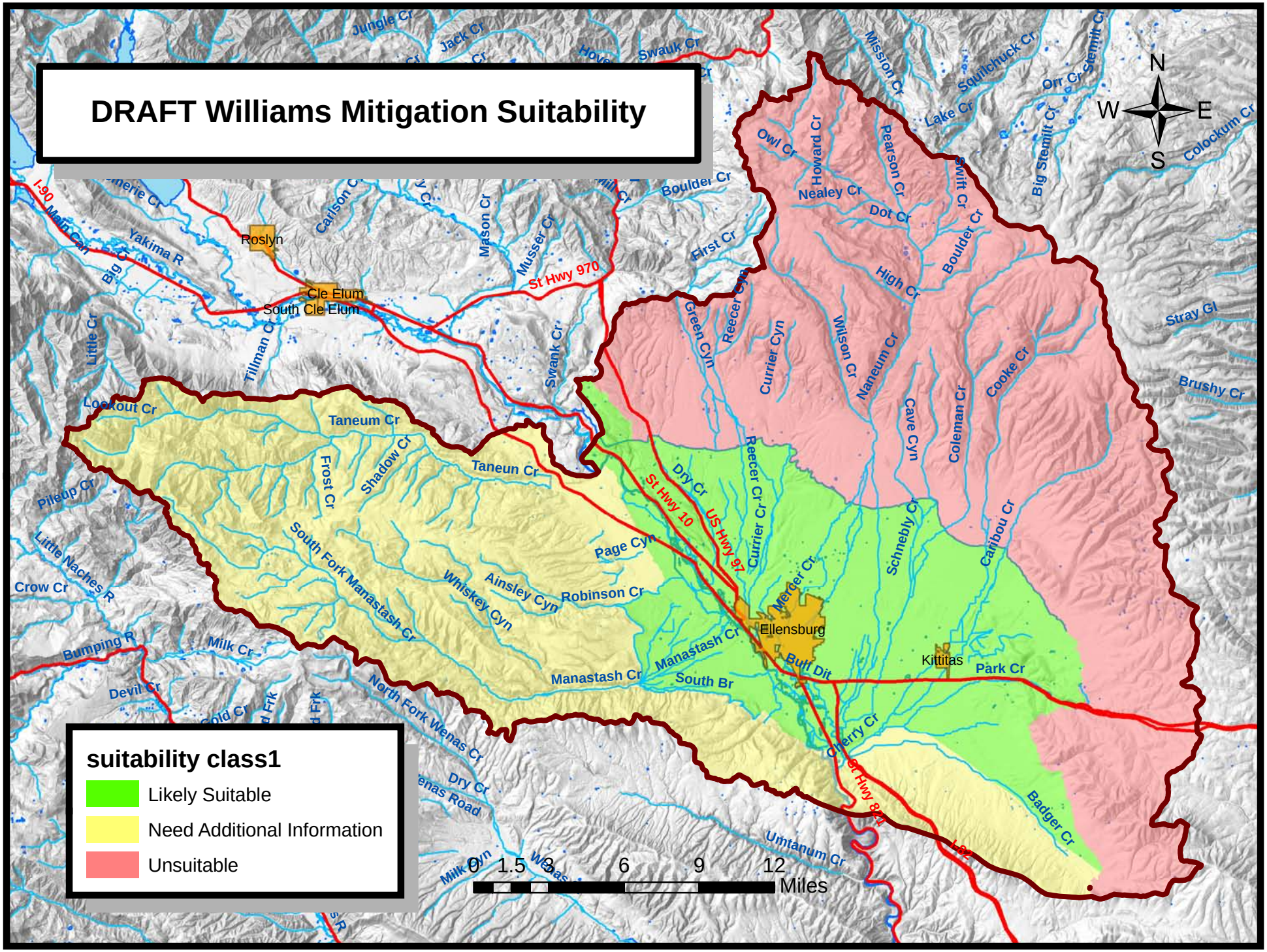
S


Likely Suitable
Need Additional Information
Unsuitable
Waterbodies
Cities
Boundary
Major Roads
DRAFT Lower Kittitas Suitability
0 1.25 2.5 5 7.5 10
Miles
Ellensburg
Kittitas


DRAFT Williams Mitigation Suitability
suitability class1
Likely Suitable
Need Additional Information
Unsuitable
0 1.5 3 6 9 12
Miles
N
W
E
S
Roslyn
Cle Elum
South Cle Elum
Ellensburg
Kittitas
I-90
St Hwy 970
St Hwy 10
US Hwy 97
St Hwy 821
Yakima R
Taneum Cr
Manastash Cr
South Fork Manastash Cr
North Fork Wenas Cr
Milk Cr
Bumping R
Crow Cr
Little Naches R
Pileup Cr
Lookout Cr
Tillman Cr
Swank Cr
Mason Cr
Musser Cr
Boulder Cr
First Cr
Owl Cr
Howard Cr
Pearson Cr
Nealey Cr
Dot Cr
Swift Cr
Boulder Cr
High Cr
Green Cyn
Reecer Cyn
Currier Cyn
Wilson Cr
Naneum Cr
Cave Cyn
Coleman Cr
Cooke Cr
Stray Gl
Brushy Cr
Colockum Cr
Big Stemilt Cr
Orr Cr
Stemilt Cr
Squilchuck Cr
Lake Cr
Mission Cr
Swauk Cr
Jack Cr
Jungle Cr
Frost Cr
Shadow Cr
Taneun Cr
Page Cyn
Whiskey Cyn
Ainsley Cyn
Robinson Cr
Dry Cr
Reecer Cr
Currier Cr
Merder Cr
Schnebly Cr
Caribou Cr
Buff Dit
South Br
Park Cr
Cherry Cr
Badger Cr
Umtanum Cr
Dry Cr
Milk Cyn