

**Westminster Woods Camp and Conference Center
Water Right Application & Petition for Change**

List of Attachments

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*Digital copy included on CD

**Westminster Woods Camp and Conference Center
Water Right Application & Petition for Change**

Attachment No. 1 – Project Description (#3)

Background

This application is submitted as part of a fisheries enhancement project to improve instream flow in Dutch Bill Creek.

The Westminster Woods Camp and Conference Center is a summer camp and retreat facility that hosts environmental and outdoor education programs for school-age children, among other activities. The camp has been a partner in efforts to restore healthy salmonid populations to Dutch Bill Creek. It has worked with resource agencies on habitat improvement and sediment reduction projects. It has also partnered with the Russian River Coho Captive Broodstock Program on the reintroduction of coho salmon into Dutch Bill Creek by hosting facilities for the acclimatization of juvenile fish prior to their release.

This project will build on past restoration work by enhancing instream flows for native coho salmon and steelhead. It was designed with the Center for Ecosystem Management and Restoration, Gold Ridge Resources Conservation District, Occidental Arts and Ecology Center, Trout Unlimited, and UC Cooperative Extension/California Sea Grant through the Russian River Coho Water Resources Partnership. The project will reduce the camp's water use, eliminate a direct diversion from Dutch Bill Creek, dramatically reduce the rate of water diversion, and shift the timing of diversion from the summer to the winter and spring. The project is funded by the California Department of Fish and Wildlife, National Fish and Wildlife Foundation, National Oceanic and Atmospheric Administration's Restoration Center, and the Department of Water Resources (North Coast Integrated Regional Water Management Plan). The project is included in the programmatic Mitigated Negative Declaration (MND) prepared by the Department of Fish and Wildlife for the Fisheries Restoration Grant Program (State Clearinghouse number 2014122048).

The project has three main components:

1. Implementing water conservation measures to reduce Westminster Woods Camp and Conference Center's water use;
2. Constructing tank storage that will be filled from an on-site spring during the wet season with a low rate of diversion to meet Westminster Woods' remaining (post-conservation measure) water needs;
3. Permanently removing the camp's existing diversion pump on Dutch Bill Creek and dedicating the water to instream use.

Further detail is provided below.

Existing Water Sources and Use

The Westminster Woods Camp and Conference Center's water comes from two sources. The first is a direct diversion from Dutch Bill Creek pursuant to a riparian right (S024280). This diversion supplies the camp's main outdoor irrigation needs, which include lawns that serve as sports fields and recreational areas that total approximately 1 acre. The maximum rate of diversion from Dutch Bill Creek is about 120 gpm, and the total annual diversion is estimated to be about four acre-feet. Irrigation typically begins in June and continues through November. The second source is an on-property spring that is connected to the camp's potable water system, which supplies its domestic needs year-round. See Statement of Water Diversion and Use for System #4901095 submitted in June 2014 (Attachment 5B). The system has been in use since 1946. This use will continue.

A continuously operating streamflow gauge installed at the point of diversion on Dutch Bill Creek has documented that the diversion for irrigation is having an impact on streamflow in Dutch Bill Creek. The project will eliminate this impact by allowing the camp to meet its irrigation water needs with spring water collected during the wet season, thereby enabling it to remove its dry-season diversion on Dutch Bill Creek and dedicate the water to instream flow.

Components of the Project

1. Implementing water conservation measures to reduce the camp's water use

The first goal of the project is to reduce the camp's existing irrigation demand. This will be accomplished by:

- Reducing the overall irrigated area by approximately 25% (1 acre pre-project to 0.73 acres post-project). The existing grass will be removed from two separate fields, measuring 19,000 ft² and 11,750 ft², respectively.
- Replacing the grass in the remaining 75% of the area with more drought-tolerant turf.
- Installing a new, more efficient irrigation system, including soil moisture sensors and smart controllers.

These conservation measures will reduce the overall impact of the camp's water use and have the added benefit of reducing the size of the storage system necessary to meet its needs during the dry season.

2. Installing new storage to supply the Camp's water needs with spring water diverted during the wet season with a low rate of diversion

The camp will install two new water storage tanks with a total volume of 175,000 gallons (enough for four months of irrigation given the reduced demand from the conservation measures). Both tanks are approximately 22 feet in diameter and will be constructed on concrete foundations. The larger tank

(100,000 gallons) will measure 32 feet in height, and the small tank (75,000 gallons) will be 24 feet tall. The new storage will be constructed adjacent to the camp's existing potable water filtration system, and will be filled during the winter-spring rainy season. The storage will allow the rate of diversion to be lowered from over 100 gpm (for the current direct diversion) to less than 1.5 gpm.

Because surface flow from the spring leaves the camp's property during wetter times of the year, the diversion to storage may be subject to the Board's permitting jurisdiction and require an appropriate water right (the subject of this application). The camp proposes to operate the new storage and irrigation system according to the following annual schedule:

Nov. 1	Begin filling storage tanks from spring
June 30	Stop all diversion from spring and continue irrigating entirely with stored water

3. Permanently removing the camp's existing diversion pump on Dutch Bill Creek and dedicating the water to instream flow

Once the new storage system is in place and operational, the Camp will remove its existing point of diversion and diversion infrastructure from Dutch Bill Creek, thereby augmenting streamflow for the benefit of coho salmon and steelhead. In order to ensure the formerly-diverted water remains instream, the camp will submit a change petition dedicating the water previously diverted for the purpose of irrigation under Statement S024280 to instream use and designating the place of use as Dutch Bill Creek. As described above and in Attachment 5, the Camp will continue to use divert water for non-irrigation (domestic) purposes under its riparian right (Statement filed in June 2014).

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Attachment No. 2 – Purpose of Use (#4)

Additional Information regarding domestic use in event of emergency: The storage tanks to be installed through this project are designed to provide a backup water supply for domestic use for the camp and conference center only in the event of an emergency. The camp will sign an agreement with Gold Ridge Resource Conservation District agreeing that the total amount diverted through direct diversion and storage will not exceed 0.86 acre-feet per annum and emergency potable use will be in lieu of irrigation uses.

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Attachment No. 3 – Water Availability Analysis (#6)

Proposed Terms of New Water Right

- Point of diversion:** SW ¼ of NW ¼, Section 21, Township 7N, Range 10W, B&M Mt. Diablo
(unnamed spring tributary to Dutch Bill Creek, thence Russian River)
- Collection season:** November 1 – June 30
- Max. rate of diversion:** 0.003 cfs
- Amount:** 0.86 acre-feet per annum
- Storage:** Two tanks with a combined capacity of 0.54 acre-feet
- Uses:** Irrigation, Fire Protection, and Domestic Use (only in event of emergency; see Attachment 2)

This Water Availability Analysis (WAA) is submitted in support of Westminster Woods Camp and Conference Center's appropriative water right application. The WAA has been prepared pursuant to the requirements and instructions in the SWRCB's Policy for Maintaining Instream Flows in Northern California Coastal Streams (Instream Flow Policy). This water right application is submitted in tandem with a Petition for Change for S024280, which requests to change the purpose of use for the irrigation portion of an existing water right to instream flow for the benefit of fish and wildlife pursuant to Water Code section 1707.

The analysis shows that water is available for appropriation and that the project complies with Section A.1.8.3 of the Policy and almost complies with Section A.1.8.1 of the Policy. The application and Petition for Change will benefit instream flow and aquatic resources.

This Water Availability Analysis consists of three parts:

1. Water Supply Report
2. Determination of the Upper Limit of Anadromy
3. Cumulative Diversion Analysis

I. Water Supply Report (Section A.1.2)

A. Map of PODS for senior diverters and water right claimants (A.1.2(1))

See Water Right Application Attachment No. 6 for a map showing the location of the points of diversion of senior diverters and water right claimants in the watershed.

B. List of Dutch Bill Creek Water Diverters (A.1.2(2))

The existing points of diversion in the Dutch Bill Creek watershed, as listed in eWRIMS, sorted by location in watershed from upstream to downstream (and also including the Austin Creek USGS streamflow gauge used for water availability calculations).

Water Right Application ID	Diversion begin date	Diversion end date	Water right face amount	Diversion rate	Volume of storage	Upstream watershed area, acres	Upstream avg annual ppt, in	Ratio1
A019515	10/1/2011	5/31/2012	17	0.00	17	63.53	54.57	0.00159
A018736	10/1/2011	5/31/2012	14	0.00	14	63.53	54.57	0.00159
S015908	4/1/2012	11/30/2012	0	0.00	0	41.66	57.06	0.00109
A026228	10/1/2011	5/31/2012	3	0.00	3	41.66	57.06	0.00109
A028828	10/1/2011	5/31/2012	3	0.00	3	41.66	57.06	0.00109
S009073	10/1/2011	9/30/2012	13	0.44	0	580.10	55.65	0.01480
A027081	11/1/2011	4/30/2012	1.5	0.00	2	20.83	54.02	0.00052
A025137	10/1/2011	5/1/2012	18	0.00	18	195.98	54.02	0.00485
A015894	11/1/2011	5/31/2012	82	0.00	82	242.88	53.56	0.00597
C000511	11/1/2011	5/1/2012	0.8	0.00	1	277.65	53.71	0.00684
A032192	12/15/2011	3/31/2012	12	0.00	0	22.98	53.56	0.00056
S022924	4/1/2012	9/30/2012	0	0.00	0	468.91	53.83	0.01158
A024827	10/1/2011	4/15/2012	21	0.00	21	468.76	53.82	0.01157
S024666	4/1/2012	9/1/2012	0	0.00	23	412.02	53.80	0.01016
D030460R	10/15/2011	3/15/2012	10	0.00	10	10.01	57.06	0.00026
D029444R	11/1/2011	6/1/2012	5.7	0.00	6	93.46	57.94	0.00248
D030256R	12/1/2011	3/31/2012	2	0.00	2	66.20	59.40	0.00180
A020134	10/1/2011	9/30/2012	13	0.05	0	298.78	57.89	0.00793

A022523	10/1/2011	9/30/2012	10	0.00	0	312.46	57.02	0.00817
A020134	10/1/2011	9/30/2012	13	0.05	0	320.99	56.65	0.00834
C000512	11/1/2011	5/1/2012	0	0.00	0	60.47	54.36	0.00151
D032229	10/15/2011	1/15/2012	5	0.00	5	252.12	54.32	0.00628
S02YYYY	10/1/2011	9/30/2012	1.6	0.022	0	71.46	54.54	0.00179
S024280	5/1/2012	9/30/2012	0	0.27	0	3,658.84	55.05	0.0925
A021271	10/1/2011	9/30/2012	0.3	0.00	0	163.66	54.62	0.00410
S014479	10/1/2011	9/30/2012	0.3	0.00	0	324.77	54.36	0.00810
Austin Creek USGS Gauge (11467200)	10/1/2011	9/30/2012	0	0.00	0	40,205.21	54.00	1.00

*The water right that appears in this table as S02XXXX represents a riparian Statement of Use recently filed by Westminster Woods for its existing potable water supply, which takes water from the same source as the new proposed water right A03XXXX. This Statement does not yet appear in eWRIMS, but the quantitative data presented here are taken from the Statement of Use filed in June 2014.

C. Water Supply Tables (A.1.2(3-5))

As per Section A.1.2(3-5), the following tables present data to characterize the availability of water for appropriation. They include an estimate of unimpaired flows (A.1.2(3)), a tabulation of the estimated percentages of unappropriated water supply available at each POD in the Dutch Bill Creek watershed (A.1.2(4)), and a calculation of the ratio of the proposed project's demand to the remaining unappropriated water supply at each POD (A.1.2(5)).

This project proposes to divert water from November 1 – June 30. The tables present information for the following periods of evaluation: Nov. 1 – Dec. 15, Dec. 15 – Mar. 31, and the months of April, May and June. The estimated diversion rate is approximately 1.5 gallons per minute. The reason we divided the analysis of water availability after March 31 into monthly intervals is to provide adequate resolution to demonstrate that water is available for appropriation continuously through spring and into summer. After March 31, streamflow typically recedes continuously through the dry season, resulting in less and less water each month; we chose to break up the results by month to illustrate that there is water available in April and in May and to show that it is not until June that we begin approaching the limits of water availability (given the small magnitude of the proposed diversion). Grouping discharge data into one analysis for the period after March 31 (i.e., April-June) risks concluding that water is uniformly available over our entire proposed diversion season when it may actually not be. We conducted an analysis of water availability for the period Nov 1 to Dec 15 separately to demonstrate that water is available for appropriation during this period as well, independent of the December 15-March 31 season of diversion as defined in the Policy.

Following the methodology described in Section A.1.2(3-5), for each water right in the watershed, we calculated the upstream catchment area and the average annual precipitation (based on PRISM data of average annual rainfall), as well as the proportion of the water right's face value during the period of evaluation. We used these data to compare the average unimpaired flow during the period of evaluation (based on scaling streamflow from the nearby Austin Creek watershed by a ratio of watershed area an average annual precipitation, defined in the Policy as Ratio 1) at each water right to the summed the total volume of water represented among each upstream water right to calculate the percentage of remaining unimpaired flow at each water right. "Unimpaired" flow data are based on the nearby Austin Creek near Cazadero gauge (highlighted in blue in this table), which operated from 1960 to 1966 and 2004 to present. The Austin Creek gauge was selected because of its proximity to the project site and its duration (18 years of flow records).

There are no water rights on the downstream flow path from the proposed water right (identified as A03XXXX, highlighted in yellow) to the Russian River. (Though water right S014479 appears to be on or very near to Dutch Bill Creek, it is on a small unnamed tributary and is located on the other side of the Bohemian Highway from Dutch Bill Creek; see Figure 1 below.)

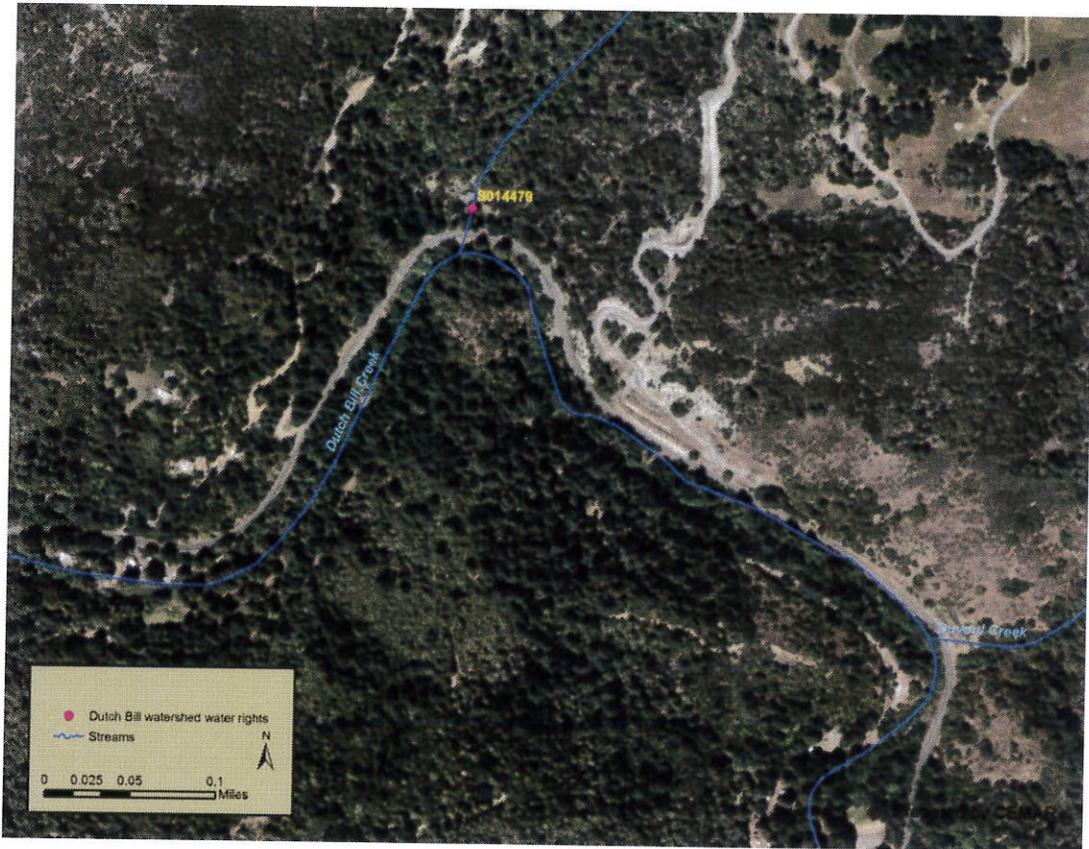


Figure 1. Depicting location of S014479 on tributary to Dutch Bill Creek

The proposed water right will thus not affect any identified water right holder between the proposed water right and the Russian River and does not have potential to affect water rights upstream in the watershed.

At the most downstream diversion on Dutch Bill Creek, S024280 (highlighted in green), the percentage of average unimpaired flow that remains relative to senior water right holders upstream for each time period is as follows:

Time Period	Unappropriated water %
Nov. 1 – Dec. 15	97.6
Dec. 15 – Mar. 31	98.6
Apr. 1 - 30	97.2
May 1 - 31	92.2
Jun. 1 - 30	91.8

We conclude that water is available for appropriation over the entire proposed diversion season.

Nov 1-Dec 15—Water Supply Table for the 27 points of diversion in the Dutch Bill Creek watershed, sorted from largest catchment area to smallest (note that no water rights in the Dutch Bill watershed are on the downstream flow path from the proposed water right):

Application ID	Watershed Area, Acres	Annual Precip Upstream, Inches	Ratio1	Seasonal Unimpaired flow volume, acre feet (AF)	Water Right volume, AF, over defined period	Senior Upstream water right volume, AF, during season	Impaired discharge without new water right, AF	Unappropriated water (%) without new water right	Impaired discharge WITH new water right, AF	Unappropriated water (%) WITH new water right	Percent change
USGS gauge	40,205	54.00	1.00	19,428.42	0.00	0.00	19,428.42	100.00	11680	100.00	0.00
S024280	3,658.84	55.13	0.0925	1,802.30	0.00	43.85	1,758.45	97.57	1758.24	98.55	-0.02%
S009073	580.10	55.65	0.0148	288.86	1.55	8.41	280.45	97.09	1283.10	98.45	0.00
S022924	468.91	53.83	0.0116	225.89	0.00	22.50	203.39	90.04	953.32	93.54	0.00
A024827	468.76	53.82	0.0116	225.77	4.80	22.50	203.27	90.03	952.80	93.54	0.00
S024666	412.02	53.80	0.0102	198.34	0.00	17.70	180.64	91.07	840.55	93.93	0.00
S014479	324.77	54.36	0.0081	157.97	0.04	0.07	157.90	99.95	712.56	99.98	0.00
A020134	320.99	56.65	0.0083	162.72	1.56	4.60	158.12	97.17	721.95	98.33	0.00
A022523	312.46	57.02	0.0082	159.44	1.23	3.04	156.40	98.09	710.89	98.82	0.00
A020134	298.78	57.89	0.0079	154.78	1.56	1.81	152.97	98.83	692.80	99.21	0.00
C000511	277.65	53.71	0.0068	133.43	0.19	17.59	115.84	86.82	559.79	92.99	0.00
D032229	252.12	54.32	0.0063	122.55	0.00	0.00	122.55	100.00	552.93	100.00	0.00
A015894	242.88	53.56	0.0060	116.41	17.41	17.41	99.00	85.05	483.45	92.05	0.00
A025137	195.98	54.02	0.0049	94.73	3.80	3.80	90.93	95.99	418.28	97.86	0.00
A021271	163.66	54.62	0.0041	79.99	0.04	0.04	79.95	99.95	360.79	99.98	0.00
D029444R	93.46	57.94	0.0025	48.45	1.20	1.20	47.25	97.51	215.71	98.68	0.00
A03XXXX	71.46	54.54	0.0018	34.88	0.20	0.40	34.68	99.43	156.45	99.42	-0.29%
S02YYYY	71.46	54.54	0.0018	34.88	0.20	0.20	34.68	99.43	156.91	99.71	0.00
D030256R	66.20	59.40	0.0018	35.19	0.25	0.25	34.94	99.30	156.97	98.88	0.00
A018736	63.53	54.57	0.0016	31.02	5.74	5.74	25.28	81.50	126.20	90.16	0.00
A019515	63.53	54.57	0.0016	31.02	5.74	5.74	25.28	81.50	126.20	90.16	0.00
C000512	60.47	54.36	0.0015	29.41	0.00	0.00	29.41	99.99	132.70	100.00	0.00
A026228	41.66	57.06	0.0011	21.27	1.11	1.11	20.16	94.78	93.30	97.22	0.00
A028828	41.66	57.06	0.0011	21.27	1.11	1.11	20.16	94.78	93.30	97.22	0.00
S015908	41.66	57.06	0.0011	21.27	1.11	1.11	20.16	94.78	93.30	97.22	0.00
A032192	22.98	53.56	0.00056	11.01	0.11	0.11	10.90	98.98	37.58	75.63	0.00
A027081	20.83	54.02	0.00052	10.07	0.37	0.37	9.70	96.30	44.53	98.03	0.00
D030460R	10.01	57.06	0.00026	5.11	2.96	2.96	2.15	42.06	17.00	73.75	0.00

*The water right that appears in this table as S02XXXX represents a riparian Statement of Use recently filed by Westminster Woods for its existing potable water supply, which takes water from the same source as the new proposed water right A03XXXX. This Statement does not yet appear in eWRIMS, but the quantitative data presented here are taken from the Statement of Use filed in June 2014.

Winter season—Water Supply Table for the 27 points of diversion in the Dutch Bill Creek watershed, sorted from largest catchment area to smallest (note that no water rights in the Dutch Bill watershed are on the downstream flow path from the proposed water right):

Application ID	Watershed Area, Acres	Annual Precip Upstream, Inches	Ratio1	Seasonal Unimpaired flow volume, acre feet (AF)	Water Right volume, AF, over defined period	Senior Upstream water right volume, AF, during season	Impaired discharge without new water right, AF	Unappropriated water (%) without new water right	Impaired discharge WITH new water right, AF	Unappropriated water (%) WITH new water right	Percent change
USGS gauge	40,205	54.00	1.00	87,657.89	0.00	0.00	87,657.89	100.00	11680	100.00	0.00
S024280	3,658.84	55.13	0.0925	8,131.67	0.00	117.22	8,014.45	98.56	8013.99	98.55	-0.01%
S009073	580.10	55.65	0.0148	1,303.27	3.73	20.17	1,283.10	98.45	1283.10	98.45	0.00
S022924	468.91	53.83	0.0116	1,019.16	0.00	65.84	953.32	93.54	953.32	93.54	0.00
A024827	468.76	53.82	0.0116	1,018.64	11.51	65.84	952.80	93.54	952.80	93.54	0.00
S024666	412.02	53.80	0.0102	894.88	0.00	54.33	840.55	93.93	840.55	93.93	0.00
S014479	324.77	54.36	0.0081	712.74	0.09	0.18	712.56	99.98	712.56	99.98	0.00
A020134	320.99	56.65	0.0083	734.18	3.74	12.23	721.95	98.33	721.95	98.33	0.00
A022523	312.46	57.02	0.0082	719.38	2.96	8.49	710.89	98.82	710.89	98.82	0.00
A020134	298.78	57.89	0.0079	698.33	3.74	5.53	692.80	99.21	692.80	99.21	0.00
C000511	277.65	53.71	0.0068	602.01	0.45	42.22	559.79	92.99	559.79	92.99	0.00
D032229	252.12	54.32	0.0063	552.94	0.00	0.01	552.93	100.00	552.93	100.00	0.00
A015894	242.88	53.56	0.0060	525.23	41.77	41.77	483.45	92.05	483.45	92.05	0.00
A025137	195.98	54.02	0.0049	427.40	9.13	9.13	418.28	97.86	418.28	97.86	0.00
A021271	163.66	54.62	0.0041	360.88	0.09	0.09	360.79	99.98	360.79	99.98	0.00
D029444R	93.46	57.94	0.0025	218.60	2.89	2.89	215.71	98.68	215.71	98.68	0.00
A03XXXX	71.46	54.54	0.0018	157.37	0.46	0.92	156.91	99.71	156.45	99.42	-0.29%
S02YYYY	71.46	54.54	0.0018	157.37	0.46	0.46	156.91	99.71	156.91	99.71	0.00
D030256R	66.20	59.40	0.0018	158.76	1.79	1.79	156.97	98.88	156.97	98.88	0.00
A018736	63.53	54.57	0.0016	139.97	13.78	13.78	126.20	90.16	126.20	90.16	0.00
A019515	63.53	54.57	0.0016	139.97	13.78	13.78	126.20	90.16	126.20	90.16	0.00
C000512	60.47	54.36	0.0015	132.71	0.01	0.01	132.70	100.00	132.70	100.00	0.00
A026228	41.66	57.06	0.0011	95.97	2.67	2.67	93.30	97.22	93.30	97.22	0.00
A028828	41.66	57.06	0.0011	95.97	2.67	2.67	93.30	97.22	93.30	97.22	0.00
S015908	41.66	57.06	0.0011	95.97	2.67	2.67	93.30	97.22	93.30	97.22	0.00
A032192	22.98	53.56	0.00056	49.70	12.11	12.11	37.58	75.63	37.58	75.63	0.00
A027081	20.83	54.02	0.00052	45.43	0.90	0.90	44.53	98.03	44.53	98.03	0.00
D030460R	10.01	57.06	0.00026	23.05	6.05	6.05	17.00	73.75	17.00	73.75	0.00

*The water right that appears in this table as S02XXXX represents a riparian Statement of Use recently filed by Westminster Woods for its existing potable water supply, which takes water from the same source as the new proposed water right A03XXXX. This Statement does not yet appear in eWRIMS, but the quantitative data presented here are taken from the Statement of Use filed in June 2014.

Month of April—Water Supply Table for the 27 points of diversion in the Dutch Bill Creek watershed, sorted from largest catchment area to smallest (note that no water rights in the Dutch Bill watershed are on the downstream flow path from the proposed water right):

Application ID	Watershed Area, Acres	Annual Precip Upstream, Inches	Ratio1	Seasonal Unimpaired flow volume, acre feet (AF)	Water Right volume, AF, over defined period	Senior Upstream water right volume, AF, during season	Impaired discharge without new water right, AF	Unappropriated water (%) without new water right	Impaired discharge WITH new water right, AF	Unappropriated water (%) WITH new water right	Percent change
USGS gauge	40,205	54.00	1.00	11680	0	0	11680	100.00	11680	100.00	0.00
S024280	3,658.84	55.13	0.0925	1084.0	0.00	30.49	1,054.0	97.24	1,053.8	97.21	-0.03%
S009073	580.10	55.65	0.0148	173.7	1.04	5.60	168.12	96.77	168.12	96.77	0.00
S022924	468.91	53.83	0.0116	135.6	0.00	17.84	118.02	86.87	118.02	86.87	0.00
A024827	468.76	53.82	0.0116	135.8	1.60	17.84	117.95	86.86	117.95	86.86	0.00
S024666	412.02	53.80	0.0102	119.3	4.51	16.24	103.05	86.39	103.05	86.39	0.00
S014479	324.77	54.36	0.0081	95.01	0.02	0.05	94.96	99.95	94.96	99.95	0.00
A020134	320.99	56.65	0.0083	97.87	1.04	2.90	94.96	97.04	94.96	97.04	0.00
A022523	312.46	57.02	0.0082	95.89	0.82	1.86	94.03	98.06	94.03	98.06	0.00
A020134	298.78	57.89	0.0079	93.09	1.04	1.04	92.05	98.88	92.05	98.88	0.00
C000511	277.65	53.71	0.0068	80.25	0.12	11.73	68.52	85.39	68.52	85.39	0.00
D032229	252.12	54.32	0.0063	73.71	0.00	0.00	73.70	100.00	73.70	100.00	0.00
A015894	242.88	53.56	0.0060	70.01	11.60	11.60	58.41	83.43	58.41	83.43	0.00
A025137	195.98	54.02	0.0049	56.97	2.54	2.54	54.44	95.55	54.44	95.55	0.00
A021271	163.66	54.62	0.0041	48.11	0.02	0.02	48.08	99.95	48.08	99.95	0.00
D029444R	93.46	57.94	0.0025	29.14	0.80	0.80	28.34	97.24	28.34	97.24	0.00
A03XXXX	71.46	54.54	0.0018	20.98	0.13	0.26	20.84	99.33	20.72	98.76	-0.57%
S02YYYY	71.46	54.54	0.0018	20.98	0.13	0.13	20.84	99.33	20.84	99.33	0.00
D030256R	66.20	59.40	0.0018	21.16	0.00	0.00	21.16	100.00	21.16	100.00	0.00
A018736	63.53	54.57	0.0016	18.66	3.83	3.83	14.83	79.49	14.83	79.49	0.00
A019515	63.53	54.57	0.0016	18.66	3.83	3.83	14.83	79.49	14.83	79.49	0.00
C000512	60.47	54.36	0.0015	17.69	0.00	0.00	17.69	99.99	17.69	99.99	0.00
A026228	41.66	57.06	0.0011	12.79	0.74	0.74	12.05	94.21	12.05	94.21	0.00
A028828	41.66	57.06	0.0011	12.79	0.74	0.74	12.05	94.21	12.05	94.21	0.00
S015908	41.66	57.06	0.0011	12.79	0.74	0.74	12.05	94.21	12.05	94.21	0.00
A032192	22.98	53.56	0.00056	6.62	0.00	0.00	6.62	100.00	6.62	100.00	0.00
A027081	20.83	54.02	0.00052	6.06	0.25	0.25	5.81	95.89	5.81	95.89	0.00
D030460R	10.01	57.06	0.00026	3.07	0.00	0.00	3.07	100.00	3.07	100.00	0.00

*The water right that appears in this table as S02XXXX represents a riparian Statement of Use recently filed by Westminster Woods for its existing potable water supply, which takes water from the same source as the new proposed water right A03XXXX. This Statement does not yet appear in eWRIMS, but the quantitative data presented here are taken from the Statement of Use filed in June 2014.

Month of May —Water Supply Table for the 27 points of diversion in the Dutch Bill Creek watershed, sorted from largest catchment area to smallest (note that no water rights in the Dutch Bill watershed are on the downstream flow path from the proposed water right):

Application ID	Watershed Area, Acres	Annual Precip Upstream, Inches	Ratio1	Seasonal Unimpaired flow volume, acre feet (AF)	Water Right volume, AF, over defined period	Senior Upstream water right volume, AF, during season	Impaired discharge without new water right, AF	Unappropriated water (%) without new water right	Impaired discharge WITH new water right, AF	Unappropriated water (%) WITH new water right	Percent change
USGS gauge	40,205	54.00	1.00	3,547.24	0.00	0.00	3,547.24	100.00	3547.24	100.00	0.00
S024280	3,658.84	55.13	0.0925	329.06	0.00	25.51	303.55	92.25	303.42	92.21	-0.03%
S009073	580.10	55.65	0.0148	52.74	1.04	5.60	47.14	89.38	48.71	89.38	0.00
S022924	468.91	53.83	0.0116	41.24	0.00	16.12	25.12	60.92	25.96	60.92	0.00
A024827	468.76	53.82	0.0116	41.22	0.00	16.12	25.10	60.90	25.94	60.90	0.00
S024666	412.02	53.80	0.0102	36.21	4.51	16.12	20.10	55.49	20.77	55.49	0.00
S014479	324.77	54.36	0.0081	28.84	0.02	0.05	28.79	99.83	29.75	99.83	0.00
A020134	320.99	56.65	0.0083	29.71	1.04	2.90	26.81	90.23	27.70	90.23	0.00
A022523	312.46	57.02	0.0082	29.11	0.82	1.86	27.25	93.60	28.16	93.60	0.00
A020134	298.78	57.89	0.0079	28.26	1.04	1.04	27.22	96.32	28.13	96.32	0.00
C000511	277.65	53.71	0.0068	24.36	0.00	11.61	12.75	52.35	13.18	52.35	0.00
D032229	252.12	54.32	0.0063	22.38	0.00	0.00	22.38	100.00	23.12	100.00	0.00
A015894	242.88	53.56	0.0060	21.25	11.60	11.60	9.65	45.40	9.97	45.40	0.00
A025137	195.98	54.02	0.0049	17.30	0.08	0.08	17.21	99.51	17.79	99.53	0.00
A021271	163.66	54.62	0.0041	14.60	0.02	0.02	14.58	99.83	15.07	99.83	0.00
D029444R	93.46	57.94	0.0025	8.85	0.80	0.80	8.04	90.92	8.31	90.92	0.00
A03XXXX	71.46	54.54	0.0018	6.37	0.13	0.26	6.24	97.91	6.11	95.92	-0.57%
S02YYYY	71.46	54.54	0.0018	6.37	0.13	0.13	6.24	97.91	6.24	97.91	0.00
D030256R	66.20	59.40	0.0018	6.42	0.00	0.00	6.42	100.00	6.64	100.00	0.00
A018736	63.53	54.57	0.0016	5.66	3.83	3.83	1.84	32.43	1.90	32.43	0.00
A019515	63.53	54.57	0.0016	5.66	3.83	3.83	1.84	32.43	1.90	32.43	0.00
C000512	60.47	54.36	0.0015	5.37	0.00	0.00	5.37	100.00	5.55	100.00	0.00
A026228	41.66	57.06	0.0011	3.88	0.74	0.74	3.14	80.93	3.25	80.93	0.00
A028828	41.66	57.06	0.0011	3.88	0.74	0.74	3.14	80.93	3.25	80.93	0.00
S015908	41.66	57.06	0.0011	3.88	0.74	0.74	3.14	80.93	3.25	80.93	0.00
A032192	22.98	53.56	0.00056	2.01	0.00	0.00	2.01	100.00	2.08	100.00	0.00
A027081	20.83	54.02	0.00052	1.84	0.00	0.00	1.84	100.00	1.90	100.00	0.00
D030460R	10.01	57.06	0.00026	0.93	0.00	0.00	0.93	100.00	0.96	100.00	0.00

*The water right that appears in this table as S02XXXX represents a riparian Statement of Use recently filed by Westminster Woods for its existing potable water supply, which takes water from the same source as the new proposed water right A03XXXX. This Statement does not yet appear in eWRIMS, but the quantitative data presented here are taken from the Statement of Use filed in June 2014.

Month of June —Water Supply Table for the 27 points of diversion in the Dutch Bill Creek watershed, sorted from largest catchment area to smallest (note that no water rights in the Dutch Bill watershed are on the downstream flow path from the proposed water right):

Application ID	Watershed Area, Acres	Annual Precip Upstream, Inches	Ratio1	Seasonal Unimpaired flow volume, acre feet (AF)	Water Right volume, AF, over defined period	Senior Upstream water right volume, AF, during season	Impaired discharge without new water right, AF	Unappropriated water (%) without new water right	Impaired discharge WITH new water right, AF	Unappropriated water (%) WITH new water right	Percent change
USGS gauge	40,205	54.00	1.00	1,078.93	0.00	0.00	1,078.93	100.00	1547.24	100.00	0.00
S024280	3,658.84	55.13	0.0925	100.09	0.00	8.19	91.90	91.82	91.77	91.69	-0.13%
S009073	580.10	55.65	0.0148	16.04	1.00	1.00	15.04	93.76	15.04	89.38	0.00
S022924	468.91	53.83	0.0116	12.54	0.00	4.36	8.18	65.25	8.18	60.92	0.00
A024827	468.76	53.82	0.0116	12.54	0.00	4.36	8.18	65.23	8.18	60.90	0.00
S024666	412.02	53.80	0.0102	11.01	4.36	4.36	6.66	60.42	6.66	55.49	0.00
S014479	324.77	54.36	0.0081	8.77	0.02	0.05	8.73	99.46	8.73	99.83	0.00
A020134	320.99	56.65	0.0083	9.04	1.01	2.80	6.23	68.96	6.23	90.23	0.00
A022523	312.46	57.02	0.0082	8.85	0.79	1.80	7.05	79.68	7.05	93.60	0.00
A020134	298.78	57.89	0.0079	8.60	1.01	1.01	7.59	88.31	7.59	96.32	0.00
C000511	277.65	53.71	0.0068	7.41	0.00	0.00	7.41	100.00	7.41	52.35	0.00
D032229	252.12	54.32	0.0063	6.81	0.00	0.00	6.81	100.00	6.81	100.00	0.00
A015894	242.88	53.56	0.0060	6.46	0.00	0.00	6.46	100.00	6.46	45.40	0.00
A025137	195.98	54.02	0.0049	5.26	0.00	0.00	5.26	100.00	5.26	99.53	0.00
A021271	163.66	54.62	0.0041	4.44	0.02	0.02	4.42	99.46	4.42	99.83	0.00
D029444R	93.46	57.94	0.0025	2.69	0.03	0.03	2.66	99.01	2.66	90.92	0.00
A03XXXX	71.46	54.54	0.0018	1.94	0.13	0.26	1.81	93.35	1.68	86.60	-6.75%
S02YYYY	71.46	54.54	0.0018	1.94	0.13	0.13	1.81	93.35	1.81	93.35	0.00
D030256R	66.20	59.40	0.0018	1.95	0.00	0.00	1.95	100.00	1.95	100.00	0.00
A018736	63.53	54.57	0.0016	1.72	0.00	0.00	1.72	100.00	1.72	32.43	0.00
A019515	63.53	54.57	0.0016	1.72	0.00	0.00	1.72	100.00	1.72	32.43	0.00
C000512	60.47	54.36	0.0015	1.63	0.00	0.00	1.63	100.00	1.63	100.00	0.00
A026228	41.66	57.06	0.0011	1.18	0.00	0.00	1.18	100.00	1.18	80.93	0.00
A028828	41.66	57.06	0.0011	1.18	0.00	0.00	1.18	100.00	1.18	80.93	0.00
S015908	41.66	57.06	0.0011	1.18	0.00	0.00	1.18	100.00	1.18	80.93	0.00
A032192	22.98	53.56	0.00056	0.61	0.00	0.00	0.61	100.00	0.61	100.00	0.00
A027081	20.83	54.02	0.00052	0.56	0.00	0.00	0.56	100.00	0.56	100.00	0.00
D030460R	10.01	57.06	0.00026	0.28	0.00	0.00	0.28	100.00	0.28	100.00	0.00

*The water right that appears in this table as S02XXXX represents a riparian Statement of Use recently filed by Westminster Woods for its existing potable water supply, which takes water from the same source as the new proposed water right A03XXXX. This Statement does not yet appear in eWRIMS, but the quantitative data presented here are taken from the Statement of Use filed in June 2014.

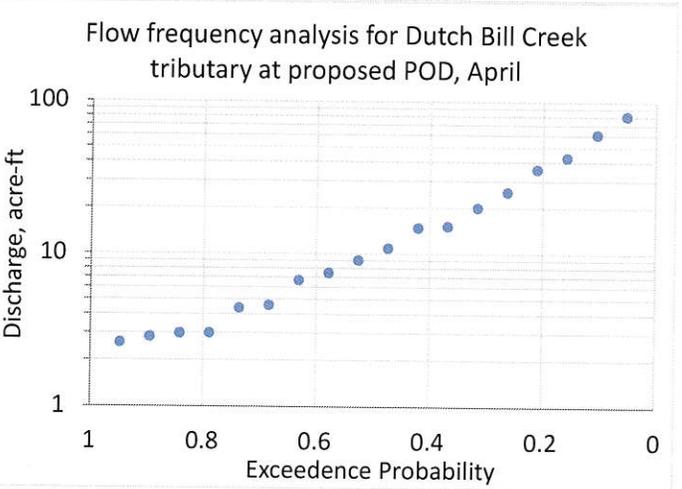
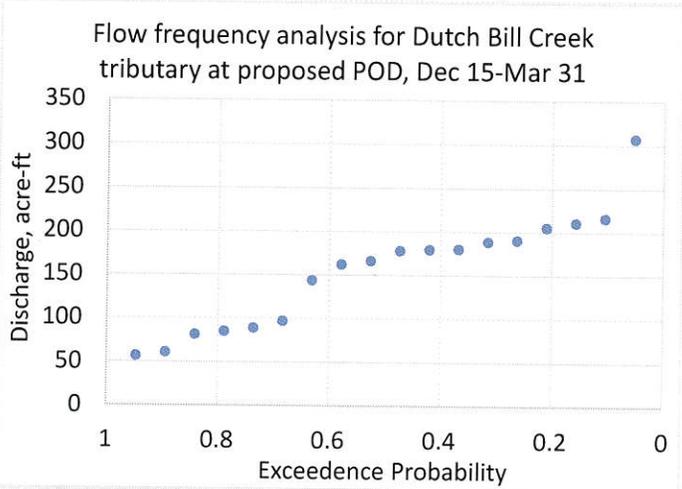
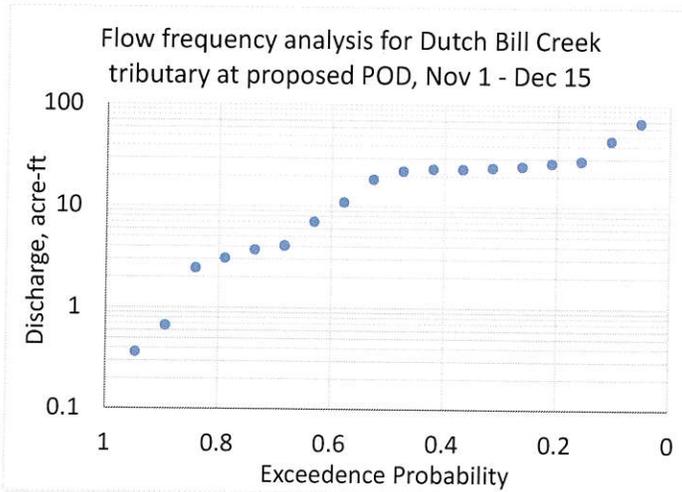
D. Flow Frequency Analysis (A.1.2(6))

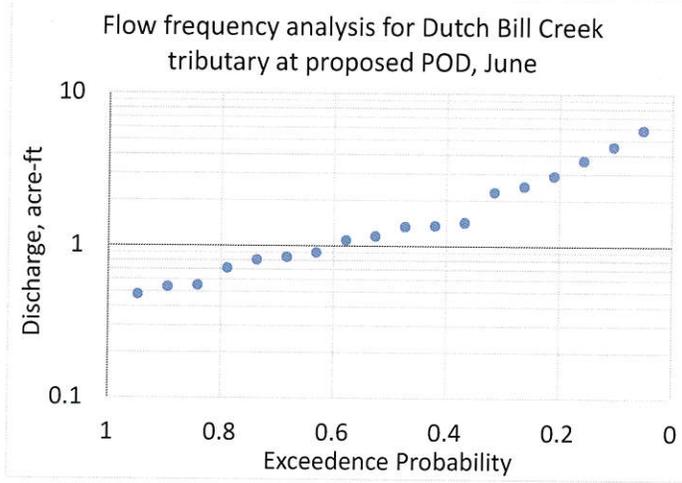
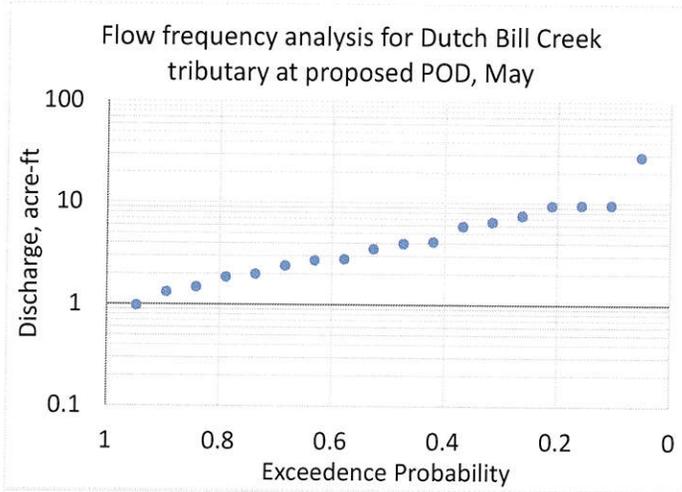
Section A.1.2(6) of the Instream Flow Policy states that a set of flow frequency analyses shall be provided at:

- The POD(s) of the proposed project
- The senior PODs at which the percentage calculated in A.1.2(3) (the estimate of unimpaired flow) is the lowest
- Any other senior PODs at which the ratio is less than 50%, if any

POD of the proposed project: The figures below present the probability of exceedence for total discharge at proposed point of diversion for unnamed tributary to Dutch Bill Creek (based on each year's discharge recorded at the historical USGS Austin Creek gauge 11467200, scaled by Ratio 1) over the following periods: early diversion season (November 1 to December 15), winter diversion season (December 15 to March 31), month of April, month of May, and month of June.

Senior PODs: Because there are no senior PODs on the flow path below the proposed POD, nor any senior PODs on the flow path at which the ratio is less than 50%, no flow frequency analyses were performed for senior PODs. The location of the existing water right where the percentage of remaining unappropriated flow (see water supply tables above) is lowest is not on the flow path below the proposed POD.





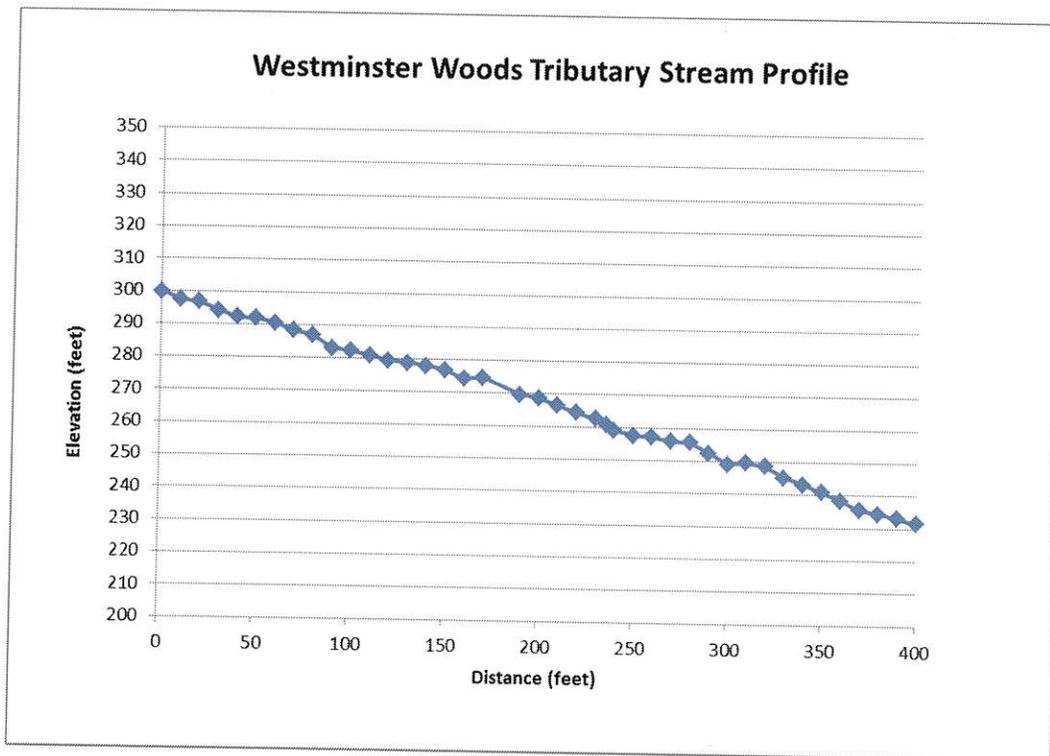
II. Maps (A.1.3)

Maps are included in Attachment No. 6.

III. Determination of the Upper Limit of Anadromy (A.1.4)

Section A.1.4(2) states that the applicant may demonstrate that the POD lies above the upper limit of anadromy by “demonstrating that the gradient of a segment of the stream reach between the POD and Pacific Ocean or to a flow-regulated mainstem river, depending on the water flow path, exceeds a continuous longitudinal slope over a distance of large enough magnitude that anadromous fish cannot move upstream beyond the lowest point of the gradient. The gradient shall be a continuous longitudinal slope of 12%, or greater, over a distance of 330 feet along the stream (R2 Resource Consultants, 2007b).”

In December 2013, John Green, Lead Scientist with the Gold Ridge Resource Conservation District, conducted a channel thalweg survey below the POD on the unnamed stream tributary to Dutch Bill Creek. Below the POD, the slope is 17.1% over a distance of 400 feet. The stream profile and survey notes are included below.

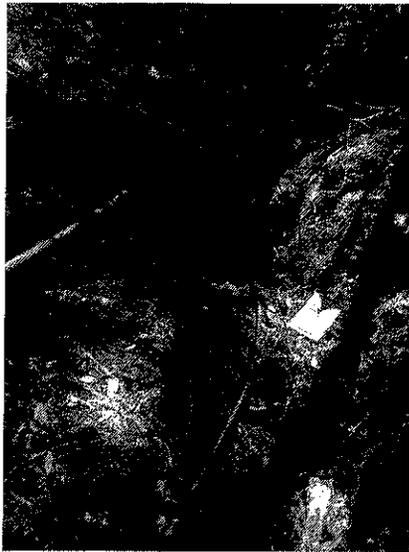


Westminster Woods Camp		
Delineation of upper limit of anadromy		
Channel thalweg survey - 12/6/2013		
Distance (ft)	Elevation	Notes
0	300	Start survey at culvert outlet - survey downstream
10	297.56	
20	296.82	~3' rock step
30	294.25	
40	292.34	~1.5' boulder step
50	292	
60	290.61	~3' log step @63'
70	288.44	
80	287.08	
90	283.15	~1.5' log and boulder step @90'
100	282.34	
110	281.08	LB trib @117'
120	279.5	
130	278.87	
140	277.99	
150	276.84	
160	274.26	
170	274.71	180' is approximately same elevation, D is at instrument
190	269.69	~5' log cascade @185-190'
200	268.79	
210	266.5	
220	264.4	
230	262.51	
236	260.98	~2' boulder step @237'
240	259.07	
250	257.58	
260	257.18	
270	256.03	
280	255.63	~3' boulder/wood cascade @283-287'
290	252.46	~3' wood/boulder cascade @295-299'
300	249.19	
310	249.67	
320	248.73	2.5' boulder/wood step @323-327'
330	245.29	
340	243.16	2' boulder and wood step @336-346'
350	240.93	
360	238.39	3' boulder/wood step @351-356'
370	235.55	3.5' wood/rock cascade @360-370'
380	234.57	
390	233.13	
400	231.58	EOS at mouth of LB gully
	400	Overall distance (feet)
	68.42	Overall elevation change (feet)
	17.1	Overall slope (%)

The gradient of a segment of the stream reach between the POD and Dutch Bill Creek exceeds a continuous longitudinal slope of 12% or greater over a distance of 330 feet. Therefore, as per Section A.1.4(2), the applicant is able to demonstrate that the POD is above the upper limit of anadromy.

IV. Stream Classification (A.1.6)

As detailed above, the Point of Diversion is located above the upper limit of anadromy. The springs do not appear to provide habitat for aquatic non-fish vertebrates and/or aquatic benthic macroinvertebrates or combinations of other indicators, such as free water, aquatic plants, or hydric soils. Most of the springs do not exhibit any obvious surface connection to the stream, nor any definable channel. The observations suggest that the POD lies within a Class III stream. John Green, Lead Scientist with Gold Ridge Resource Conservation District, photographed the springs at the Point of Diversion in August 2014. Additional photos are available in Attachment No. 9.



Springs 2 & 3



Spring 4



Spring 8

V. Cumulative Diversion Analysis (A.1.8)

The following Cumulative Diversion Analysis for diversions on Class III streams demonstrates that the proposed project, in combination with senior diverters, will not adversely affect instream flows needed for the protection of fishery resources, as required by Section A.1.8 of the Instream Flow Policy. We performed the analyses using two different sets of criteria provided by in the Policy: the Cumulative Diversion Analysis for Diversions on Class III streams (A.1.8.1) and the Alternative evaluation criteria for onstream reservoirs on Class III streams (A.1.8.3).

A. Diversions on Class III Streams (A.1.8.1)

Step 1: Does the new diversion on the Class III stream reduce the number of days the unimpaired Median February Flow is exceeded at a downstream Class II stream by more than 10% IN ANY MONTH?

First, calculate the median February flow at a Class II stream POI: where the stream changes from Class II to Class III.

- Based on field observations, this occurs just below the proposed diversion location.
- Ratio1 at proposed Point Of Diversion (relative to Austin Creek streamflow gauge): 0.00179
- Median February flow at Austin Creek gauge (operated 1960-1966, 2004-2014): 161 ft³/s
- Median February Flow at proposed Point Of Diversion: 0.00179 X 161 = 0.288 ft³/s

The existing riparian diversion to supply potable water, plus the new diversion to store irrigation water in winter, have a combined maximum rate of diversion of 11.5 gallons per minute, or 0.025 ft³/s. These are the only diversions affecting flow in this stream (up to the confluence with Dutch Bill Creek).

Therefore, the range of flow that could cause the unimpaired flow to fall below the median February flow is from 0.288 to 0.292 ft³/s. If the diversion were to operate when flow is greater than 0.313 ft³/s, the reduction of 0.025 ft³/s would not cause flow to fall below the 0.288 ft³/s median February flow threshold.

The table below summarizes the number of days in each year of record when flow at the Class II stream Point of Interest exceeds 0.288 ft³/s (the median February flow, scaled from the Austin Creek USGS gauge) and exceeds 0.292. The difference between the two values equals the number of days when the flow would be reduced from above the median February flow to below the median February flow.

	November	December	January	February	March	April	May	June
Days with flow above Median Feb Flow 0.288	61	181	219	256	260	158	14	0
Days with flow above 0.288 plus divn rate 0.0044	55	172	209	246	245	144	11	0
Percentage bypass days lost from divn	10.9%	5.23%	4.78%	4.07%	6.12%	9.72%	27.3%	0

Based on the assumptions above, the number of days over the Austin Creek period of record when the median February flow would have been exceeded at the point where the stream becomes a Class II stream ranges from 260 times in March, to 0 times in June. The only times when the new diversion reduces the number of days the unimpaired Median February Flow is exceeded at a downstream Class II stream by more than 10% is in November (10.9%) and May (27.3%, though based on historical records, in most years, the median February flow is only exceeded during the month of May in four of 18 years).

Step 2: Does the new diversion in combination with all senior diverters of record reduce the number of days the unimpaired flow needed for spawning, rearing, and passage is exceeded at POIs at or below anadromy by more than 10% IN ANY MONTH?

For this analysis, we selected as our Point of Interest the location where the unnamed stream reaches Dutch Bill Creek. The unnamed stream from which water will be diverted is not capable of supporting salmonids (i.e., a Class II stream), and there are no additional diversions with a given diversion rate in the Dutch Bill Creek drainage network downstream of this point on Dutch Bill Creek.

First, calculate the Qmbf where the unnamed stream reaches Dutch Bill Creek.

Qmbf at Dutch Bill Creek POI:

1. Ratio1 at the POI, relative to Austin Creek streamflow gauge: 0.0925
2. Average Daily Flow, Austin Creek: 161 ft³/s
3. Average annual flow, POI: 15.13 ft³/s
4. Drainage area: 5.72 mi²
5. Using the equation in Appendix B.3.5.4, the Qmbf is 58.66

Of the 27 water rights in the Dutch Bill Creek watershed, four have a given diversion rate during the proposed diversion season (this excludes the water right that will be dedicated to instream flow). Their combined rate of diversion is 0.54 ft³/s. Therefore, the range of flow that could cause the unimpaired flow to fall below the minimum bypass flow Qmbf is from 58.66 to 59.2 ft³/s. If the diversion were to operate when flow is greater than 59.2 ft³/s, the reduction of 0.54 ft³/s would not cause flow to fall below the 58.66 ft³/s median February flow threshold.

The table below summarizes the number of days in each year of record when flow at the Dutch Bill Creek Point of Interest exceeds 58.66 ft³/s (Qmbf, scaled from the Austin Creek USGS gauge) and exceeds 59.2. The difference between the two values equals the number of days when the flow would be reduced from above Qmbf to below Qmbf.

	November	December	January	February	March	April	May	June
Days with flow above Median Feb Flow 0.288	14	81	75	94	82	30	3	0
Days with flow above 0.288 plus divn rate 0.0044	14	81	75	92	81	30	3	0
Percentage bypass days lost from divn	0	0	0	2.17%	1.23%	0	0	0

Based on the assumptions above, the number of days when the Minimum Bypass Flow would have been exceeded at the Point of Interest on Dutch Bill Creek ranges from 94 times in March, to 0 times in June. In no month does the new diversion reduce the number of days the unimpaired Minimum Bypass Flow is exceeded by more than 10%.

Step 3: Will the proposed project change the 1.5 year return flow at Points of Interest downstream?

The data in the table below show the peak flow for Austin Creek based on the period of record, as well as the peak flow scaled to the Point of Interest on Dutch Bill Creek where the unnamed Class II tributary reaches Dutch Bill Creek, according to its Ratio 1 value (0.0925).

Year	Peak flow, Austin Creek, ft ³ /s	Peak Flow, POI #1, ft ³ /s	Recurrence interval, years
2006	17,700	1,640	18
1962	15,100	1,400	9
2013	14,500	1,340	6
2008	14,300	1,320	4.5
1966	14,000	1,300	3.6
2004	13,400	1,240	3
1960	13,000	1,200	2.57
1965	12,100	1,120	2.25
1963	11,500	1,060	2
2010	10,200	940	1.8
2012	9,550	880	1.64
1961	9,470	880	1.5
2007	7,640	710	1.38
2011	7,220	670	1.29
2005	6,560	610	1.2
1964	6,150	570	1.13
2009	3,830	350	1.06

Based on these data, the 1.5-year event corresponds to a flow of 880 ft³/s at the Dutch Bill Creek Point of Interest.

The table of all existing water rights in the Dutch Bill Creek watershed indicates that the sum of diversions from the Dutch Bill Creek drainage network upstream of the Dutch Bill Creek Point of Interest is 0.54 ft³/s. This magnitude of diversion will not appreciably affect a flow of 880 ft³/s.

B. Alternative evaluation criteria for onstream reservoirs on Class III streams (A.1.8.3)

Under A.1.8.3, the criterion of exemption from a bypass flow, maximum rates of diversion and season of diversion for onstream reservoirs on class III streams is that the sum of the water rights volume for the proposed project and all other projects upstream at a point on a class I stream (i.e., at the POI where the unnamed stream enters Dutch Bill Creek) is no more than 5% of the November 1- March 31 unimpaired discharge. Based on our water supply tables, the sum of upstream water rights at the POI is 43.85 acre-fee in November 1 - December 15 and 117.2 acre-

feet in December 15-Mar 31, for a total of 161.1 acre-feet. The total discharge over these two periods is 1,802 acre-feet and 8,132 acre-feet, respectively, for a total of 9,934 acre-feet. The sum of water rights is 1.6% of seasonal discharge. The project meets this condition.

The proposed project is not an "onstream reservoir," but we believe the project should be processed under that section of the Policy. We cannot think of any circumstances in which the project would present a risk to instream resources or other water rights holders beyond that which would be presented by an onstream reservoir. We believe based on the record of proceedings for the Policy that your staff and stakeholders were focused on onstream reservoirs because they were considered a harder case than diversions to offstream storage, and that if the point had been raised the Section would have been made specifically applicable to both. Therefore we request that the application be processed according to its terms.

C. Compliance with the Instream Flow Policy

1. Diversions on Class III streams

Section A.1.8.1 states that projects located on Class III streams may be allowed to operate with any minimum bypass flow and maximum rate of diversion values that result in compliance with the conditions listed above; this includes no minimum bypass or maximum rate of diversion as long as the conditions are met. The project as specified, with a diversion season from November through April and a maximum rate of diversion of 0.003 cfs, meets two of the three of the Instream Flow Policy criteria for Class III streams:

- Condition #1¹: The project misses meeting this condition: the project and all senior diverters the reduce the number of days above the median February flow by 10.9% in November and 27.2% in May (based on a period of record of 18 years); all the other months are under 10%.
- Condition #2²: In no month does the new diversion reduce the number of days the unimpaired Minimum Bypass Flow is exceeded by more than 10%.
- Condition #3³: The 1.5 year return flow at the Dutch Bill Creek Point of Interest is not significantly affected by upstream diversions during the proposed period of diversion.

2. Alternate evaluation criteria for onstream reservoirs on Class III streams

Section A.1.8.3 (Alternate evaluation criteria for onstream reservoirs on Class III streams) states that projects located on Class III streams may be allowed to operate without a minimum bypass flow, maximum rate of diversion, or season of diversion if the cumulative depletion of the project and all senior projects is not more than 5 percent of the seasonal (November 1 to March 31) volume measured downstream at the upper limit of anadromy and points of interest below.

- The sum of water rights is 1.6% of seasonal discharge. The project meets this condition.

As stated above, the proposed project is not an "onstream reservoir," but we believe the project should be processed under that section of the Policy. We cannot think of any circumstances in which the project would present a risk to instream resources or other water rights holders beyond that which would be presented by an onstream reservoir.

Therefore we request that the application be processed according to Section A.1.8.3. If the Division determines that Section A.1.8.3 is not applicable, we request an exception to the Policy for the project,

¹ Cumulatively the project and all senior diverters of record will not reduce the number of days the unimpaired February median flow is exceeded at the POIs located on downstream Class II streams by more than 10 percent in each month during the diversion season over the period of record for the analysis.

² Cumulatively the project and all senior diverters of record will not reduce the number of days the unimpaired flow needed for spawning, rearing, or passage is exceeded at the POIs located at and below anadromy by more than 10 percent in each month during the diversion season over the period of record for the analysis.

³ The project will not change the existing 1.5 year return flow at the POIs located at and below anadromy.

which is beneficial to instream resources and is specifically the sort of project called for in Policy Section 3.3.2.5 (Voluntary modification of authorized diversions for the enhancement of fish and wildlife resources). The request for exception and expedited processing is included following the Petition for Change.

3. Project Benefit to Streamflow

The calculations presented above consider the impact of the new water right, but do not consider the impact of the forgone use of the old water right. When considered together, the project has a benefit for instream flow and aquatic resources under all circumstances. The project will decrease stream impairment during the period when diversions have the potential to most significantly affect streamflow.

Each of the following pages shows two maps: the map on the left indicates the cumulative effects of diversions through the drainage network under the current diversion regime, and the map on the right shows the cumulative effects under the proposed diversion regime (which includes the whole project at Westminster Woods -- conservation measures, tank storage, reduction in rate of diversion, and instream dedication).

The maps show the effect of each diversion in the watershed, which is a function of its diversion magnitude and the flow magnitude at the point of diversion when the diversion operates. We used information in the eWRIMS database to inform the magnitude of diversion and the time of year when diversions may operate and estimated "unimpaired" streamflow for each point of diversion from the nearby Austin Creek USGS streamflow gauge (a gauge with more than 10 years of record) by a ratio of upstream catchment area and mean annual rainfall (as specified in Appendix B.2.1.3 in the North Coast Instream Flow Policy).

Under typical winter conditions, the existing suite of diversions result in impaired flow greater than 95% of unimpaired flow throughout almost all of the drainage network (see Impairment by Winter Diversions, Median February Flow); the exception is in the headwaters, where impaired flow is 90-95% of unimpaired flow). The proposed diversion at Westminster Woods impairs flow by less than 5% immediately downstream under median February and median March conditions, and does not lead to impairment of less than 5% on the nearest salmonid-bearing stream (Dutch Bill Creek).

Under median April flow conditions (Impairment by Springtime Diversions, Median April Flow), the cumulative effects caused by other water rights are slightly more significant: more of Dutch Bill Creek is impaired by 5 to 10%, but the lower reaches still have 95-100% of unimpaired flow under existing and proposed conditions with the new water right.

In late spring and summer, the cumulative effects of diversions are more substantial. Under May streamflow conditions, existing diversions from Dutch Bill Creek impair flow by more than 10% for most of the drainage network ("Existing" conditions [map on left] for Impairment by Springtime Diversions, Median May Flow). The water right proposed here would replace irrigation uses of riparian diversion S024280, causing a benefit to flow throughout Dutch Bill Creek from the point of diversion to the

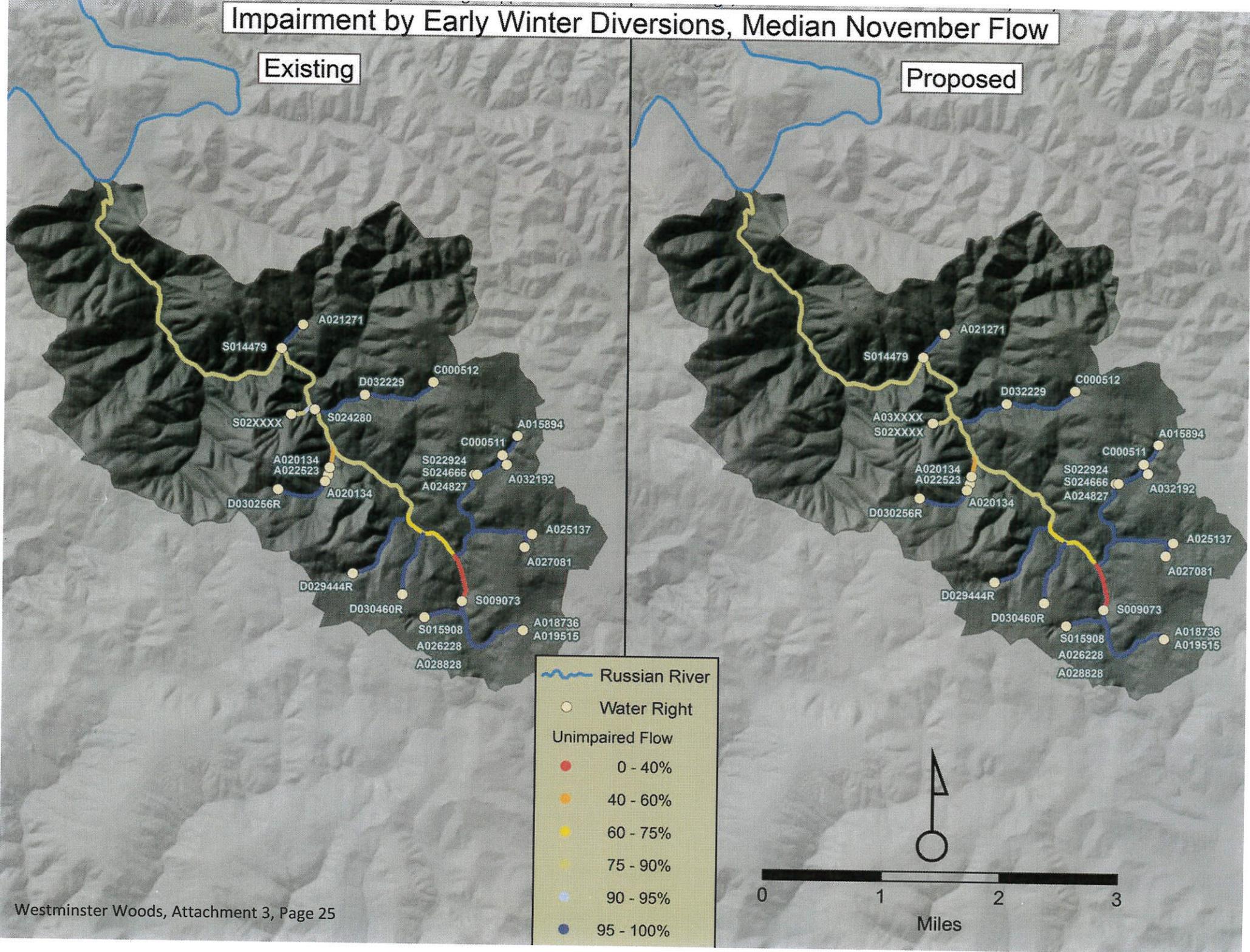
Russian River confluence. For example, flow in the lower reaches of Dutch Bill Creek would be impaired between 5-10%, rather than 10-25%. The benefit of replacing the diversion at S024280 is even greater later in summer. For example, flow below S024280 ranges between 0 and 60% of unimpaired flow under the existing suite of diversions under typical July and September flows; with S024280 no longer operating, flow will be 75 to 90% of unimpaired flow through most of Dutch Bill Creek.

The maps are followed by a table showing the percentage of unimpaired streamflow pre- and post-project at select locations at different types of year.

Impairment by Early Winter Diversions, Median November Flow

Existing

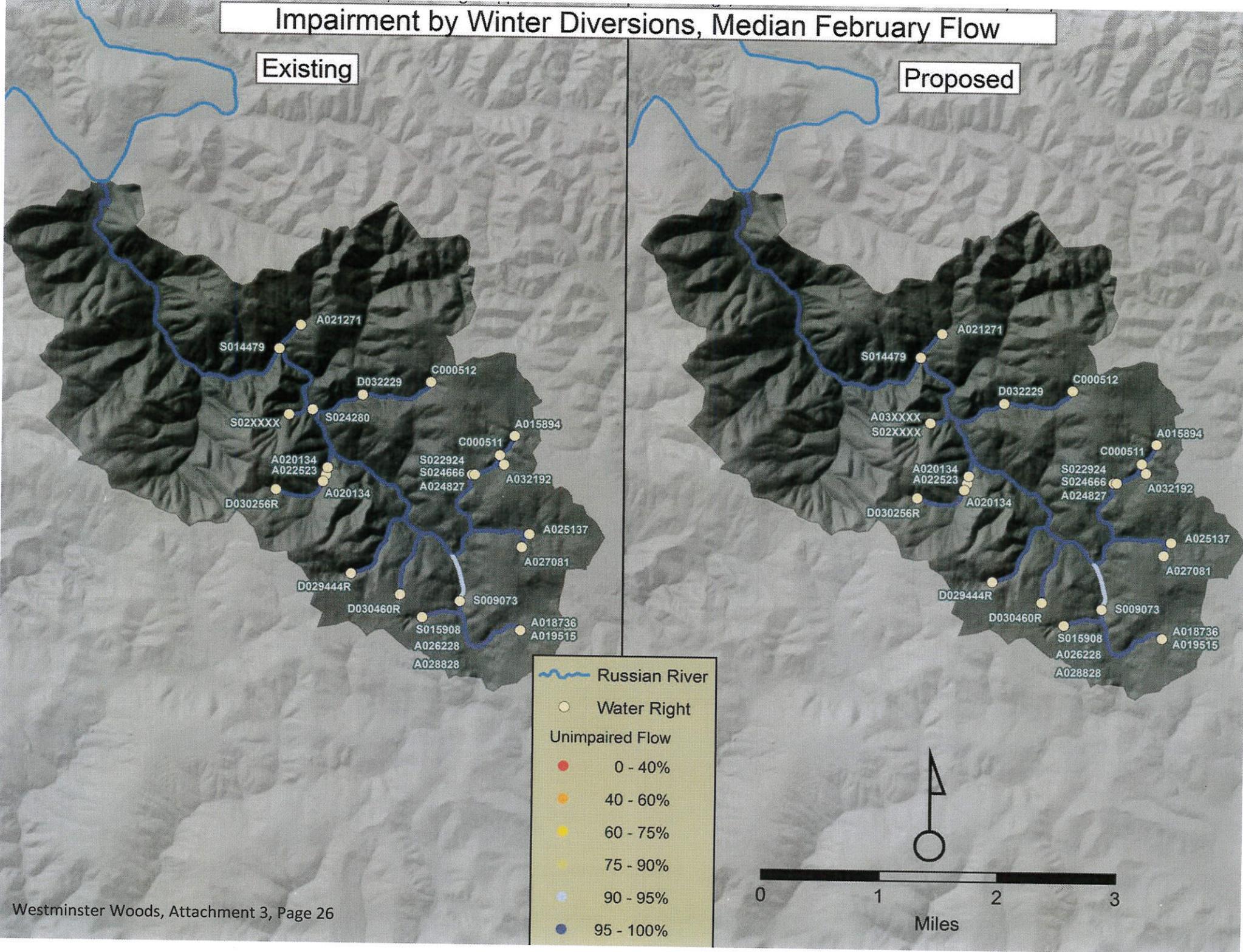
Proposed



Impairment by Winter Diversions, Median February Flow

Existing

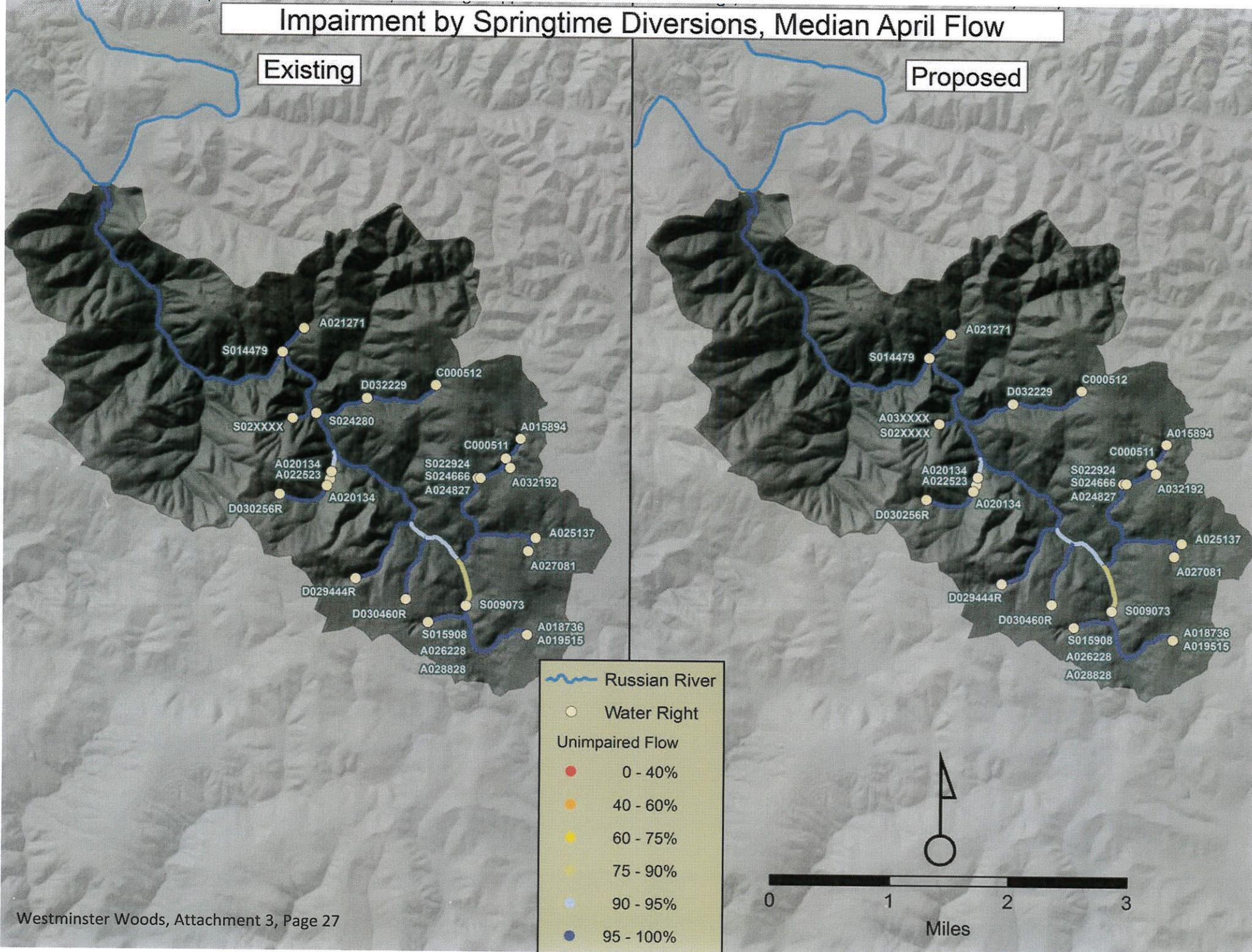
Proposed



Impairment by Springtime Diversions, Median April Flow

Existing

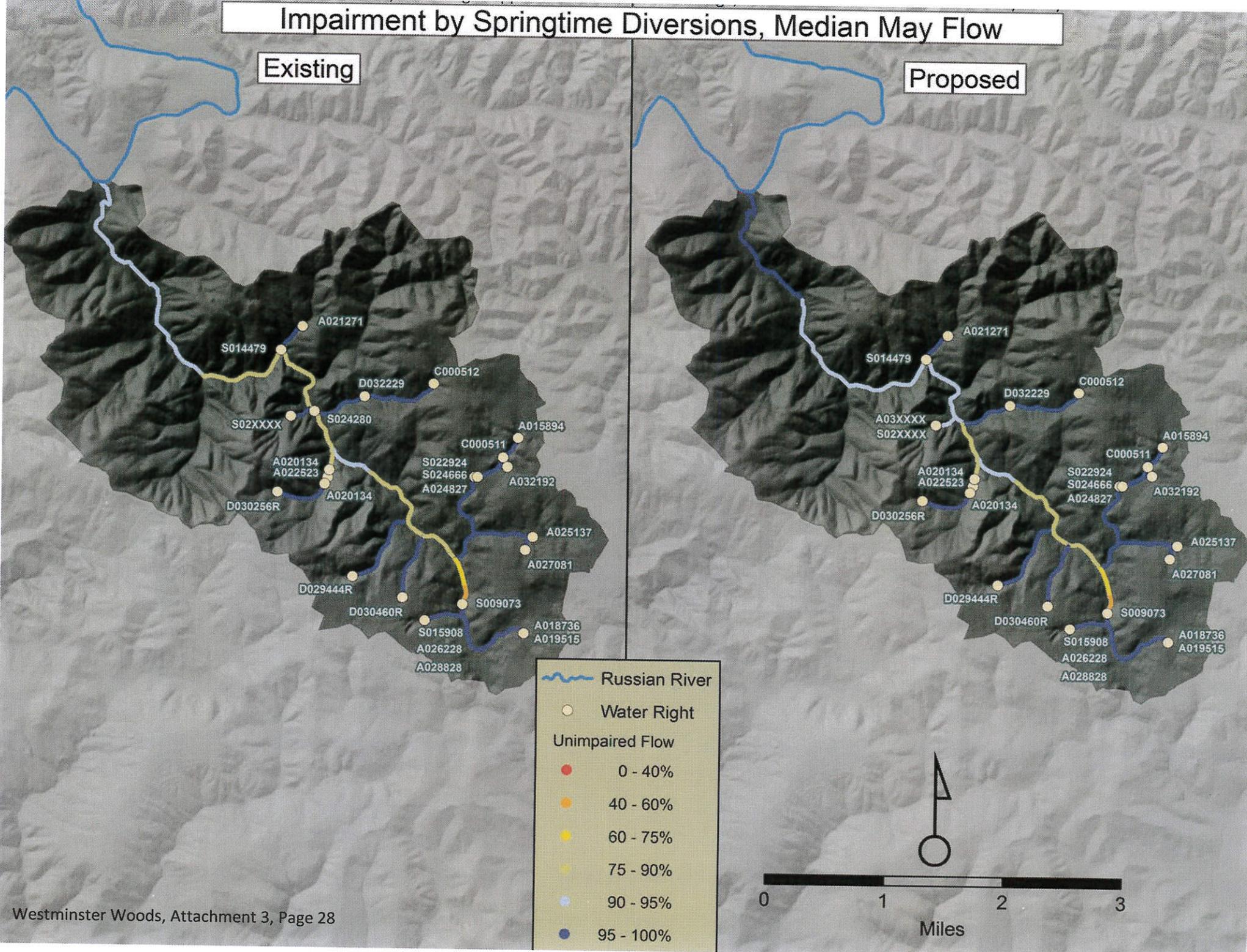
Proposed



Impairment by Springtime Diversions, Median May Flow

Existing

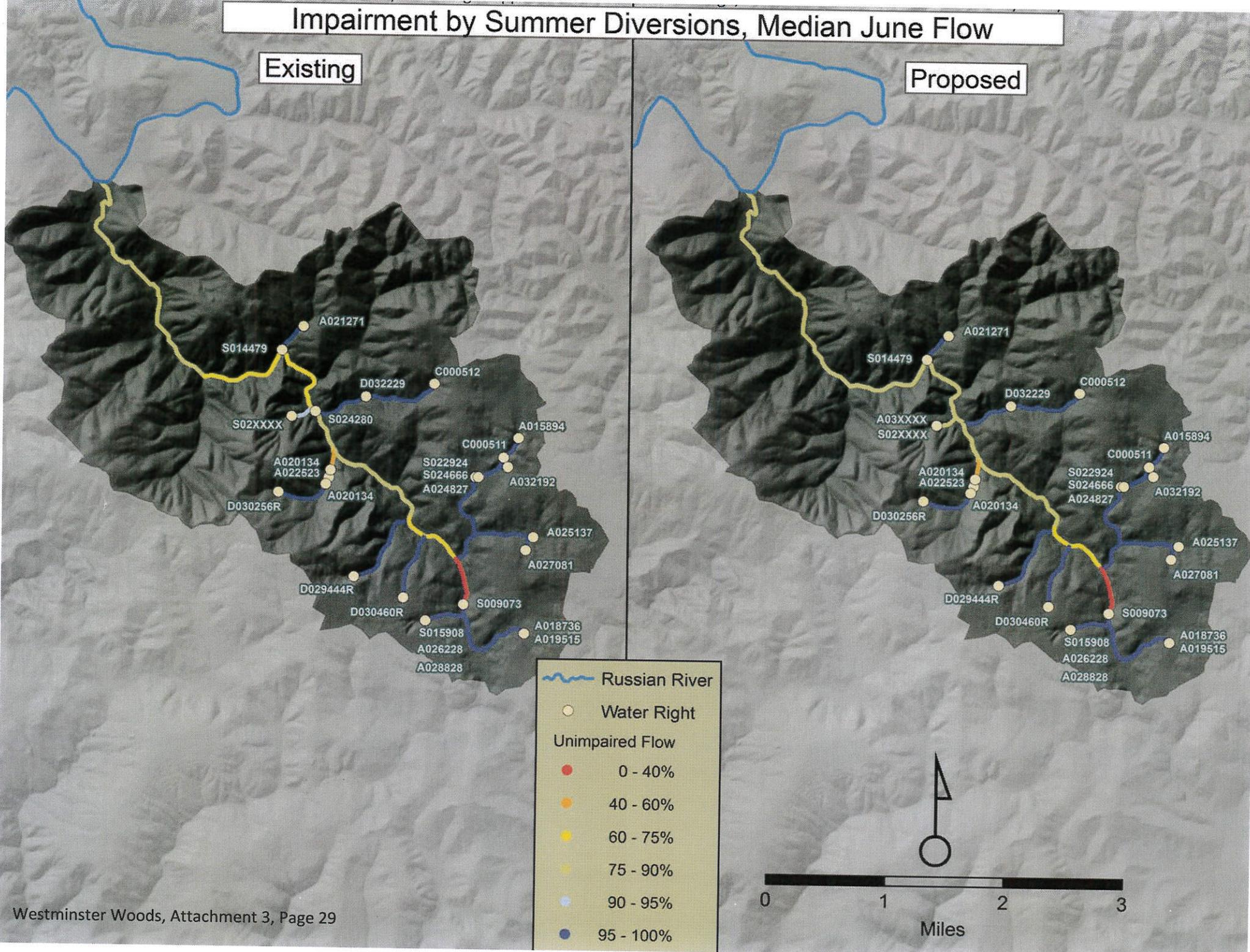
Proposed



Impairment by Summer Diversions, Median June Flow

Existing

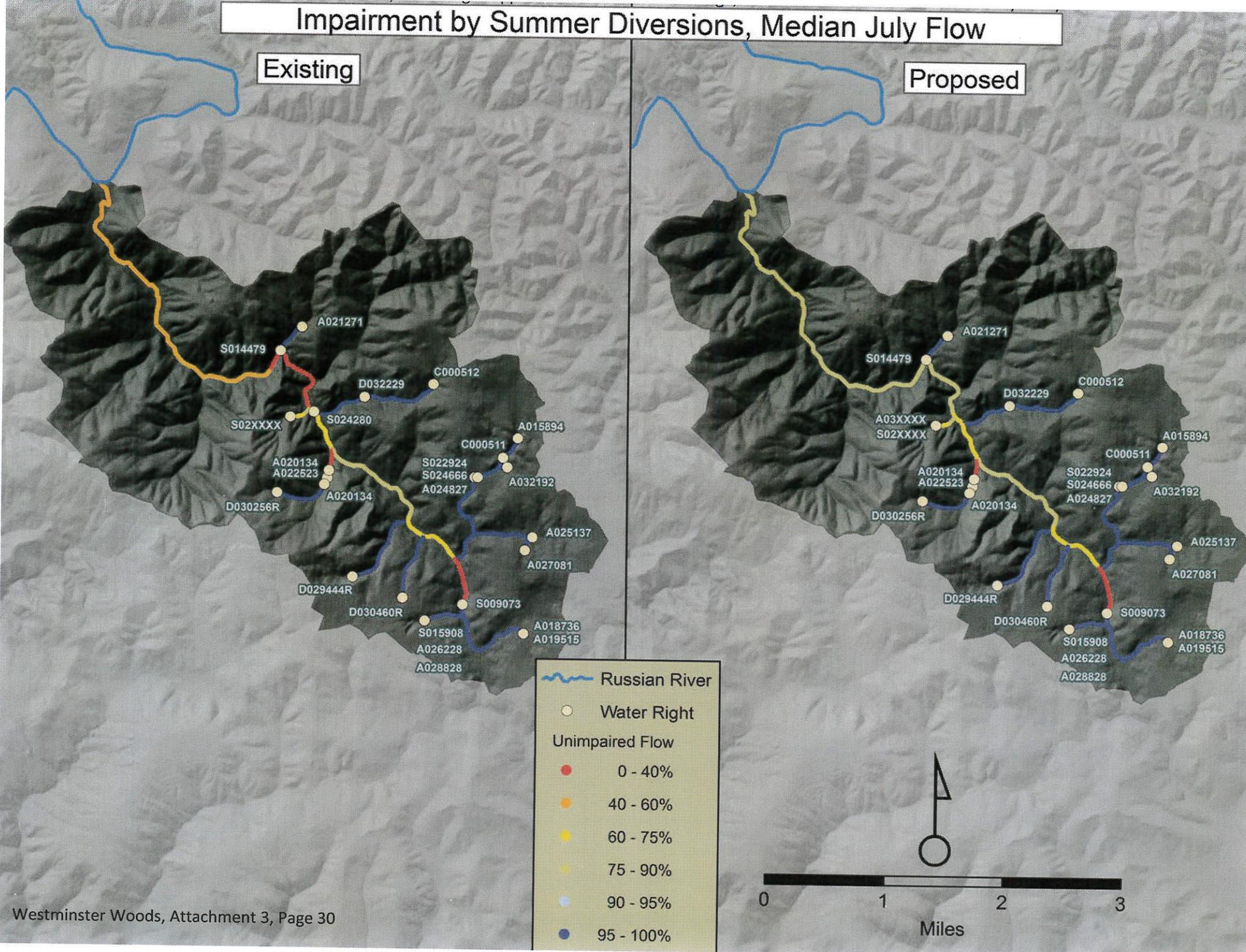
Proposed



Impairment by Summer Diversions, Median July Flow

Existing

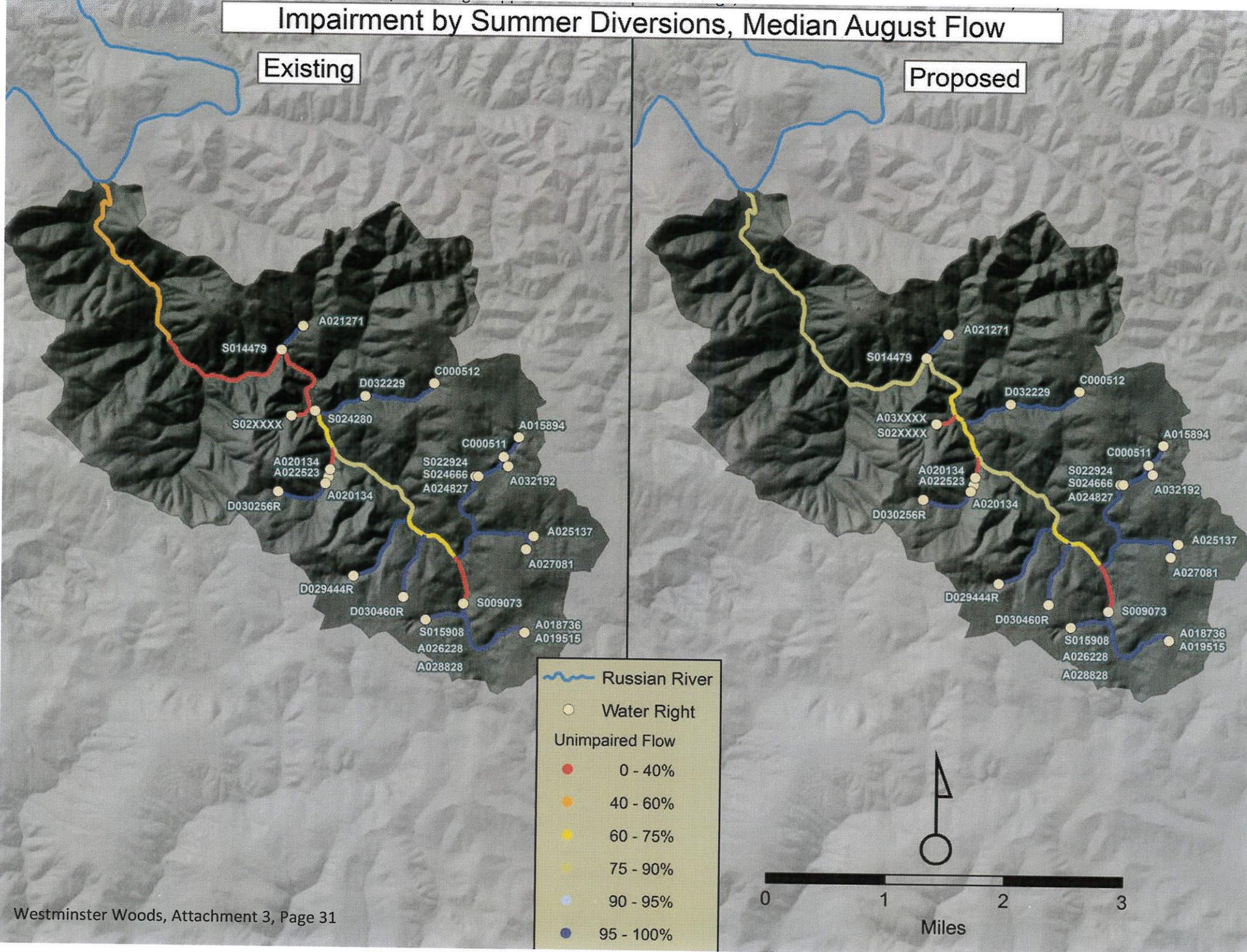
Proposed



Impairment by Summer Diversions, Median August Flow

Existing

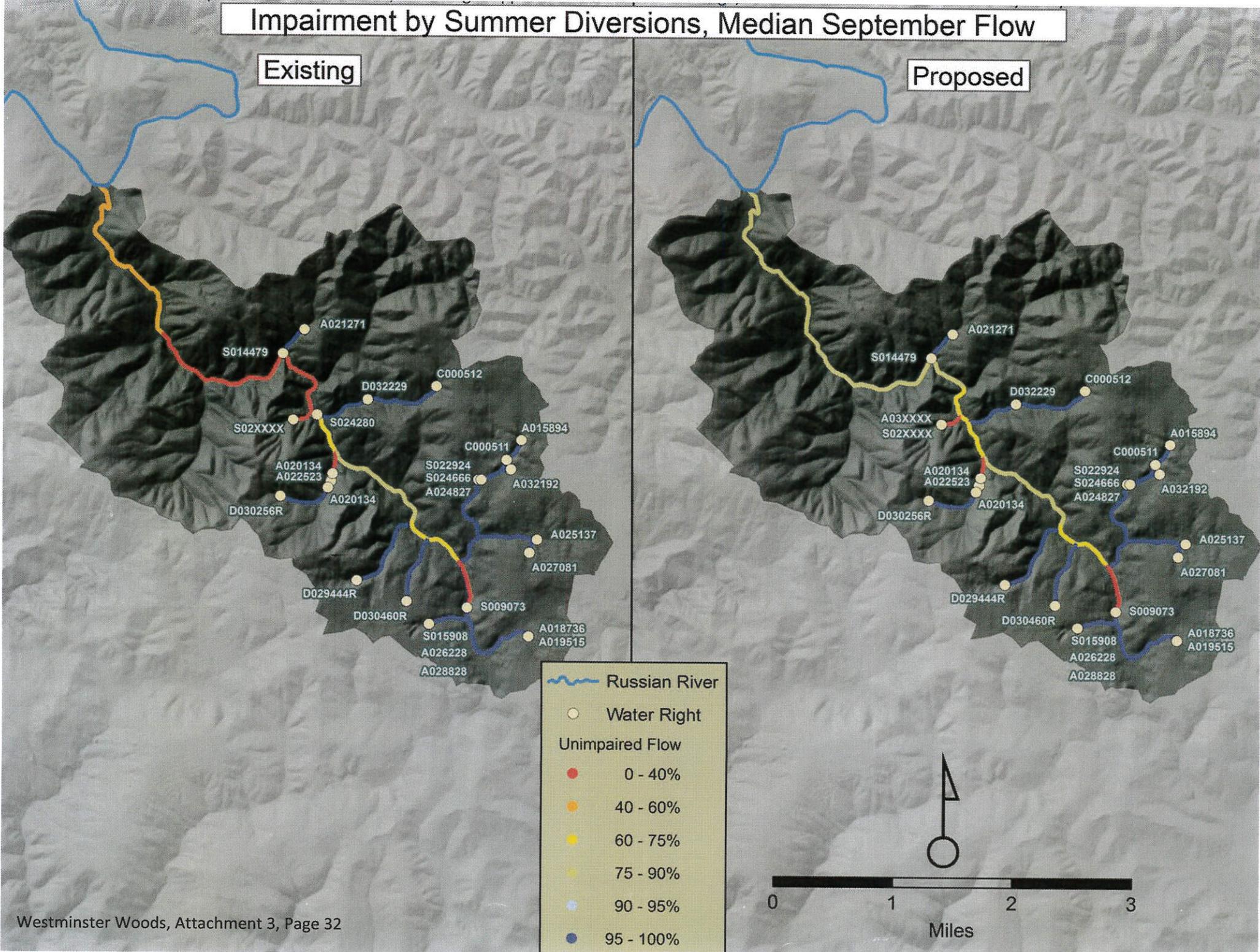
Proposed



Impairment by Summer Diversions, Median September Flow

Existing

Proposed



Percent Unimpaired Flow Pre- and Post-Project

Estimated percentage of unimpaired streamflow, based on calculated impairment caused by upstream diversions, in the Dutch Bill watershed at select locations, at selected times of year. *Blue text indicates a net increase in unimpaired flow caused by dedicating water right S024280 to instream flow.* The new water right proposed in this application causes no additional appreciable impairment to streamflow in Dutch Bill Creek (less than 0.1 percent) during the conditions chosen here (median November, median February, median March, median April, median May, and median June flow conditions).

Location	Median November		Median February		Median March		Median April		Median May		Median June		Median July		Median September	
	Before project	After project	Before project	After project	Before project	After project	Before project	After project	Before project	After project	Before project	After project	Before project	After project	Before project	After project
Below S009073 (upstream of proposed project)	0% un-impaired (zero flow)	0%	91%	91%	90%	90%	82%	82%	55%	55%	2%	2%	0%	0%	0%	0%
Below Lancel C (upstream of proposed project)	12	12	97	97	97	97	94	94	84	84	67	67	66	66	66	66
Below Alliance Redwoods (upstream of proposed project)	76	76	98	98	98	98	96	96	89	89	77	77	71	71	71	71
Below S024280 (at proposed project)	80	80	98	98	98	98	96	96	84	91	62	80	20	75	0	74
Below S014479	84	84	99	99	98	98	97	97	88	93	72	85	40	81	25	80
Above Russian R confluence	90	90	99	99	99	99	98	98	92	95	81	90	59	87	50	87