Water Availability Analysis Overview

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Presentation Overview

1. What is a Water Availability Analysis (WAA) and why do you need it?
2. Policy for maintaining flows in Northern California Coastal Streams
3. WAA requirements
4. Water supply report steps
5. Other parts of a WAA
6. New web tool in development
7. Considerations and recommendations

Water Availability Analysis Overview

1. A Water Availability Analysis (WAA) considers whether water is available for a water right permit application after considering available supply and other demands (including instream needs).

2. Supply:

    i. Available supply is generally determined from streamflow gage records or an analysis of precipitation records and watershed area.

    ii. The entire record of streamflow or precipitation should be considered. This is especially important as California's climate is becoming more variable. We also encourage applicants to consider future climate scenarios (e.g. climate change) as part of their analysis.

Water Availability Analysis Overview

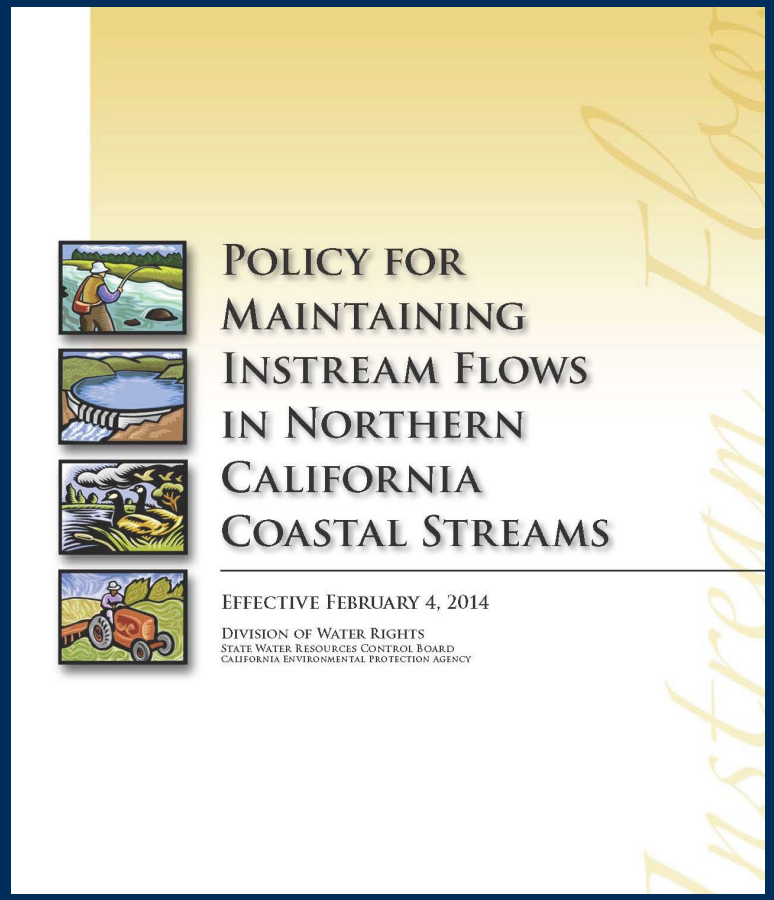
3. Demand:

    i. Demand is generally determined by combining the “face value” of other water diversions that have seniority. Demand should assume that all right holders divert the full amount authorized or for claimants , the maximum amount historically claimed.

    ii. In some cases, the water needed for instream needs such as recreation and fish and wildlife preservation are considered in the demand. Quantification of instream needs may require a study by a fisheries biologist of species that rely on instream flow and their flow requirements.

Water Availability Analysis Overview

4. Water availability considers supply not just based on what the applicant sees at the point they want to take water, but also if that water is already spoken for by those downstream of the project. Important to choose points of interest for analysis, which are typically at the confluences of certain streams or diversion points for large water diverters.

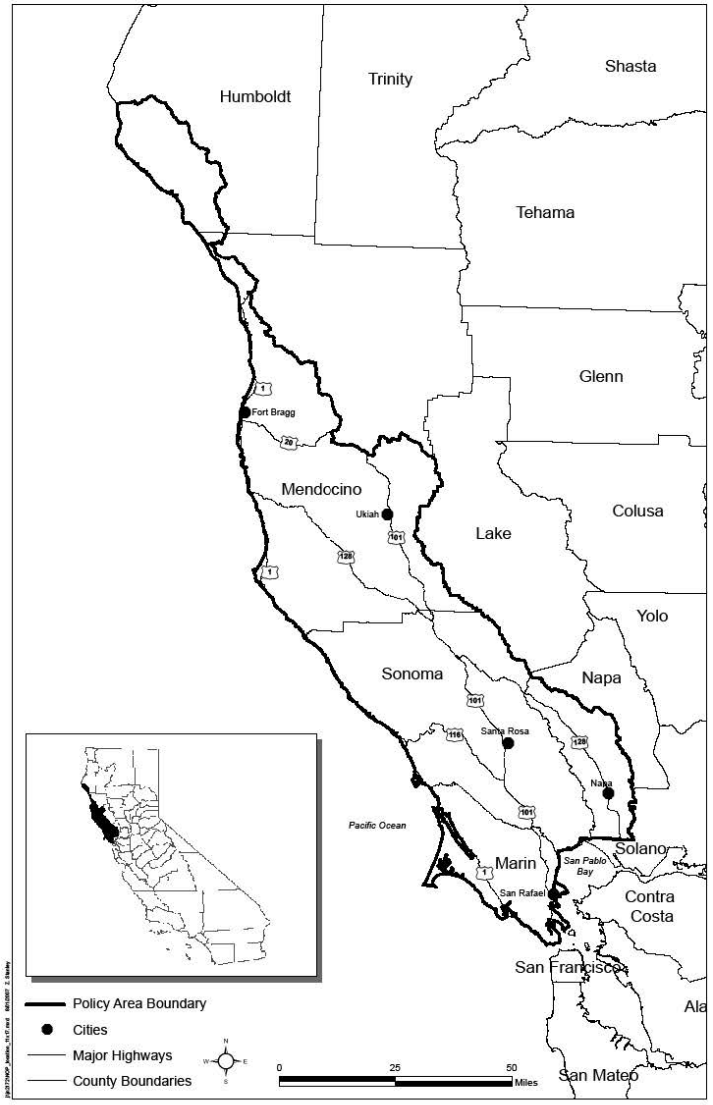


APPENDICES

Policy for maintaining flows in Northern California Coastal Streams

- The State Water Resources Control Board adopted the policy in October 2013.
- Primary objective – to ensure the administration of water rights maintains instream flows for the protection of fishery resources.
- Prescribes protective measures for the season of diversion, minimum bypass flow and maximum cumulative diversion of water rights.
- Guidelines for applying for new water rights.

Policy for maintaining flows in Northern California Coastal Streams



PROJECT LOCATION / POLICY AREA

Figure 1 Geographic Area Affected by the Policy

- Policy geographic area covers all streams discharging to the Pacific Ocean from the Mattole River to San Francisco, and all streams discharging into San Pablo Bay.
- Policy season: Dec 15 – Mar 31

Outside the Policy Geography

- WAAs prepared for projects located outside of the geographic scope of the North Coast Instream Flow Policy need to provide information required under the California Water Code to demonstrate whether water is available for appropriation

- For projects located outside of the Policy area there is no set methodology for conducting a WAA. Applicants should consult with their assigned permitting staff lead to develop their proposed approach.

- Applicants may be able to rely on guidelines for the water supply report component of the Policy to prepare WAAs even if their project is located outside of the Policy area.

Water Availability Analysis Requirements

1. Water Supply Report.
2. Upper limit of anadromy determination, where applicable.
   (If the stream reach from which the applicant proposes to divert water appears to support fish under unimpaired conditions, the State Water Board will presume that the POD is located within the range of anadromous fish)
3. Cumulative diversion analysis.
4. Report of site-specific studies that were performed to identify more precisely the instream flow needs of the fishery resources at locations at and/or below anadromy, where needed.

Water Supply Report Steps

1. Map showing locations of the points of diversion (PODs) of senior diverters and water right holders in the watershed.

2. List of senior diverters, and their season of diversion and face value.

3. Unimpaired flows estimated by either:
    1. An adjustment of streamflow records method or
    2. A precipitation-based streamflow model

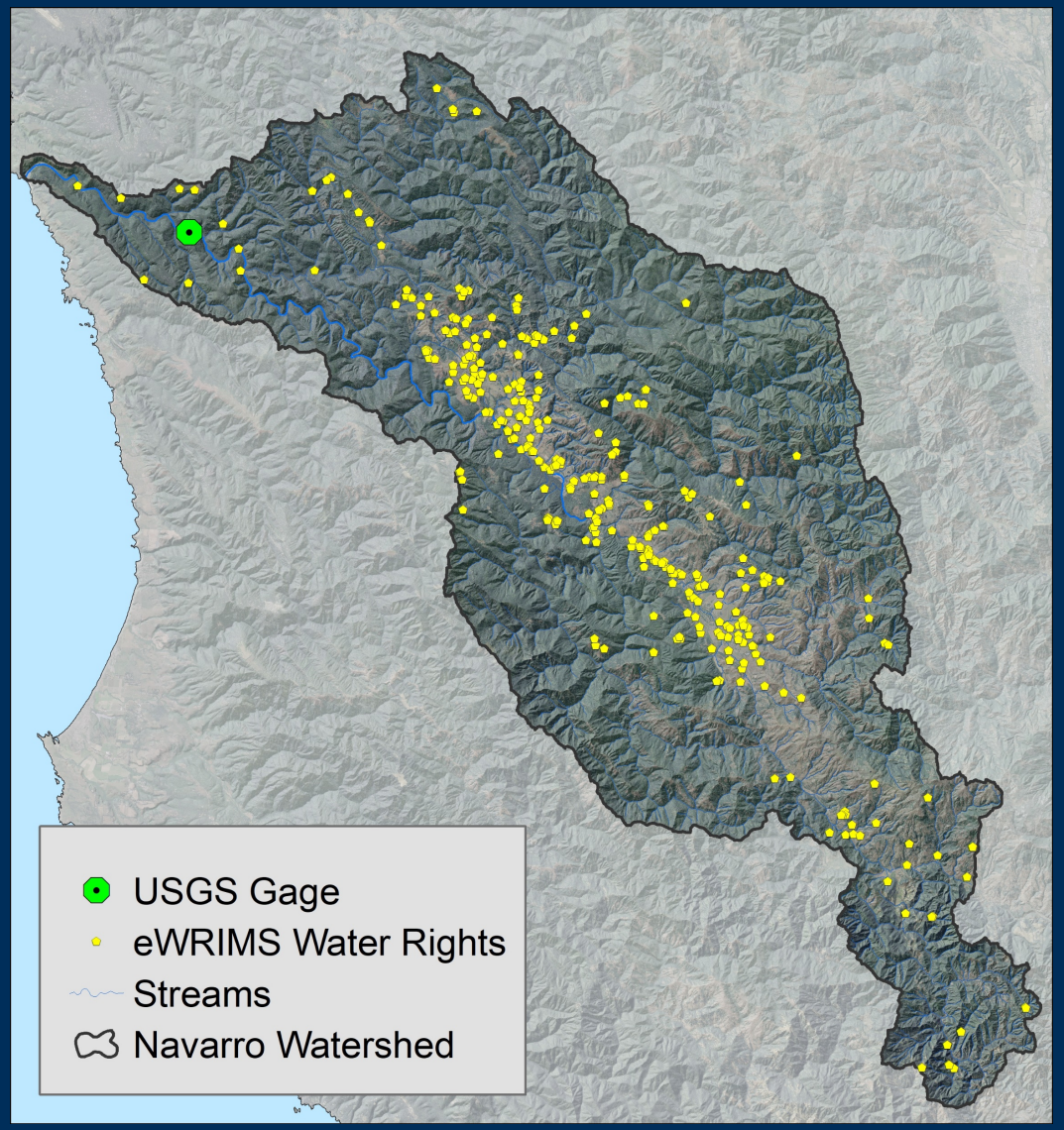
Water Supply Report Steps

4. A tabulation of the estimated percentages of unappropriated water supply available at the POD for each senior priority water right on the water flow path after accounting for senior demands.

5. A calculation of the ratio of the proposed project's demand to the remaining unappropriated water supply at each identified senior POD.

6. A flow frequency analysis of the seasonal unimpaired and impaired flow volume.

Water Supply Report - Example



Data sources:

- Discharge records – USGS Navarro River gage
- Water rights – SWRCB eWRIMS database

Season of diversion:

- Dec 15 – Mar 31

Estimating Supply

Area – Ratio Streamflow Method

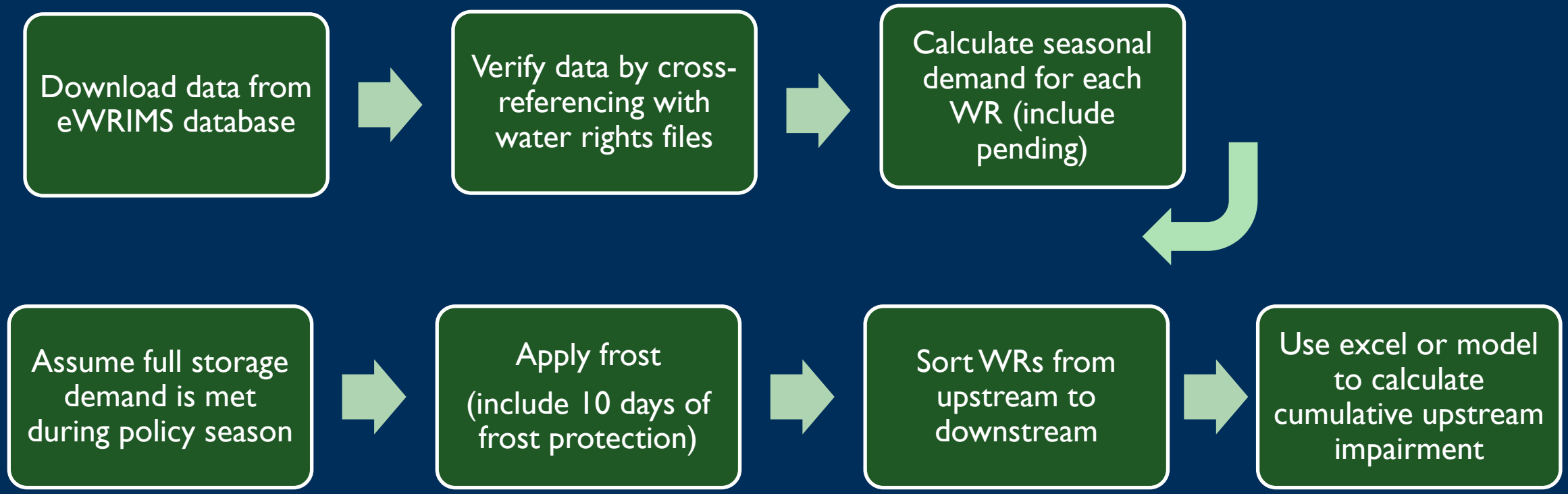
Policy Appendix B.2.1.3:

$$Q_{POA} = Q_{gage} * (DA_{POA} / DA_{gage}) * (P_{POA} / P_{gage})$$

Where:

Q_{POA} = discharge estimated at the Point of Analysis, in cubic-feet per second;
Q_{gage} = unimpaired discharge recorded at the gage, in cubic-feet per second;
DA_{POA} = drainage area at the POA, in square miles;
DA_{gage} = drainage area at gage, in square miles;
P_{POA} = average annual precipitation of the POA, in inches; and
P_{gage} = average annual precipitation of the gage, in inches.

Water Supply Report – Demand



Cumulative Effects Model

Tool: ArcGIS 10.5 Toolbox, requires Spatial Analyst

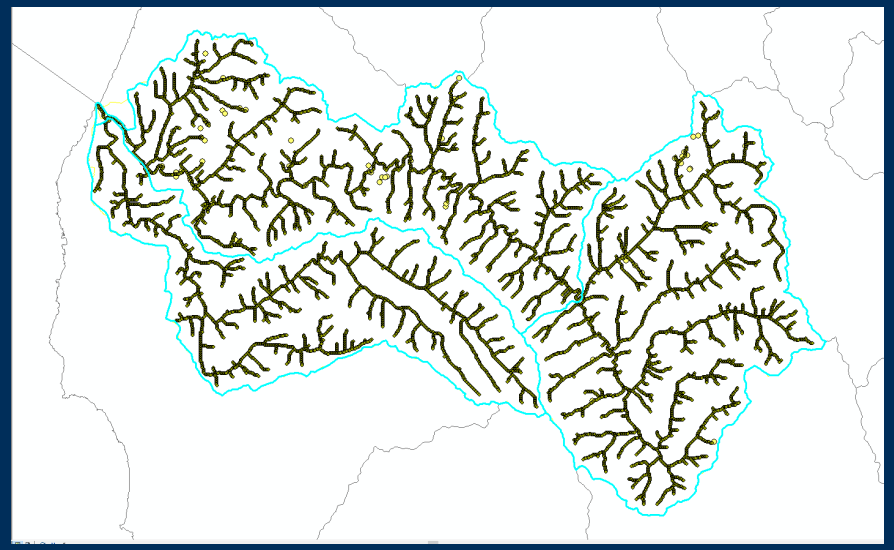
Developed by Matt Dietch & Share Feirer
Updated by Mia van Docto & Kurt Fesenmyer

Required Inputs:

- Cleaned up eWRIMS dataset with face value defined
- USGS gage with field indicating flow season of interest

Outputs:

- Watershed area
- Average annual precipitation
- Unimpaired discharge
- Upstream water demand
- Impaired discharge



Final Water Supply Table

POD (Application ID)	Watershed Area Above POD (sq mi)	Avg Annual precip of wshd above POD (in)	Ratio1	Diversion Season	Seasonal Unimpaired Flow Volume (AF)	Dec15-Mar31 Seasonal Demand Before New Water Right	Upstream Demand (Dec15-Mar31)	Remaining unimpaired discharge, ac-ft, Before New Water Right	Percentage of remaining unappropriated water Before New Water Right	Additional Impairment Caused By New Water Right (AF)	Remaining Unimpaired Discharge, ac-ft, After New Water Right	Percentage of Remaining Unappropriated Water After New Water Right	Percent Change Caused By New Water Right
Proposed POD	39.09	49.69	0.15	Dec 15 - Mar 31	40,738.3		167.5	40,570.8	99.59%	10.85	40,559.94	99.56%	-0.027%
S009642	39.4	49.63	0.15	Dec 15 - Mar 31	41,011.7	0.00	167.5	40,844.3	99.59%	10.85	40,833.43	99.57%	-0.026%
A015520	39.46	49.61	0.15	Dec 15 - Mar 31	41,057.6	0.00	167.5	40,890.2	99.59%	10.85	40,879.33	99.57%	-0.026%
S014234	178.67	48.78	0.66	Dec 15 - Mar 31	182,793.7	0.38	1,034.9	181,758.8	99.43%	10.85	181,747.94	99.43%	-0.006%
S019471	181.3	48.66	0.67	Dec 15 - Mar 31	185,028.1	0.00	1,195.7	183,832.4	99.35%	10.85	183,821.57	99.35%	-0.006%
S016617	181.31	48.66	0.67	Dec 15 - Mar 31	185,038.3	5.49	1,195.7	183,842.6	99.35%	10.85	183,831.78	99.35%	-0.006%
S022430	181.31	48.66	0.67	Dec 15 - Mar 31	185,038.3	0.00	1,201.2	183,837.1	99.35%	10.85	183,826.29	99.34%	-0.006%
A029910	181.32	48.66	0.67	Dec 15 - Mar 31	185,048.5	55.60	1,201.2	183,847.3	99.35%	10.85	183,836.49	99.35%	-0.006%
A029911	181.32	48.66	0.67	Dec 15 - Mar 31	185,048.5	40.00	1,256.8	183,791.7	99.32%	10.85	183,780.89	99.31%	-0.006%
S021348	181.88	48.63	0.67	Dec 15 - Mar 31	185,505.6	22.93	1,296.8	184,208.8	99.30%	10.85	184,197.97	99.30%	-0.006%
S021346	183.25	48.58	0.67	Dec 15 - Mar 31	186,710.7	38.89	1,319.7	185,391.0	99.29%	10.85	185,380.18	99.29%	-0.006%
S021345	183.49	48.57	0.67	Dec 15 - Mar 31	186,916.8	2.07	1,358.6	185,558.2	99.27%	10.85	185,547.34	99.27%	-0.006%
A024525	183.77	48.55	0.67	Dec 15 - Mar 31	187,124.9	0.00	1,360.7	185,764.3	99.27%	10.85	185,753.41	99.27%	-0.006%
S021347	183.77	48.55	0.67	Dec 15 - Mar 31	187,124.9	21.64	1,360.7	185,764.3	99.27%	10.85	185,753.41	99.27%	-0.006%
A009618	48.55	183.77	0.67	Dec 15 - Mar 31	187,124.9	0.00	1,382.3	185,742.6	99.26%	10.85	185,731.77	99.26%	-0.006%
A024526	183.77	48.55	0.67	Dec 15 - Mar 31	187,124.9	3.83	1,382.3	185,742.6	99.26%	10.85	185,731.77	99.26%	-0.006%
S021351	183.78	48.55	0.67	Dec 15 - Mar 31	187,135.1	54.60	1,386.1	185,749.0	99.26%	10.85	185,738.12	99.25%	-0.006%
S013771	184.74	48.51	0.68	Dec 15 - Mar 31	187,957.6	0.00	1,440.7	186,516.9	99.23%	10.85	186,506.07	99.23%	-0.006%
A018052B	186.37	48.45	0.68	Dec 15 - Mar 31	189,381.5	0.00	1,482.4	187,899.1	99.22%	10.85	187,888.23	99.21%	-0.006%
A027580	186.49	48.45	0.68	Dec 15 - Mar 31	189,503.4	20.00	1,573.6	187,929.8	99.17%	10.85	187,918.97	99.16%	-0.006%
A030449	186.5	48.45	0.68	Dec 15 - Mar 31	189,513.6	15.00	1,593.6	187,920.0	99.16%	10.85	187,909.13	99.15%	-0.006%
A018052A	186.5	48.45	0.68	Dec 15 - Mar 31	189,513.6	0.00	1,608.6	187,905.0	99.15%	10.85	187,894.13	99.15%	-0.006%
S015103	187.47	48.41	0.69	Dec 15 - Mar 31	190,342.0	0.00	1,608.6	188,733.4	99.15%	10.85	188,722.53	99.15%	-0.006%
A029594	187.49	48.41	0.69	Dec 15 - Mar 31	190,362.3	71.00	1,608.6	188,753.7	99.15%	10.85	188,742.84	99.15%	-0.006%
A023120	187.7	48.4	0.69	Dec 15 - Mar 31	190,536.2	84.00	1,937.8	188,598.3	98.98%	10.85	188,587.50	98.98%	-0.006%
S016614	190.25	48.29	0.69	Dec 15 - Mar 31	192,685.8	1.14	2,021.8	190,664.0	98.95%	10.85	190,653.11	98.95%	-0.006%
S016035	190.26	48.29	0.69	Dec 15 - Mar 31	192,695.9	0.00	2,023.0	190,672.9	98.95%	10.85	190,662.09	98.94%	-0.006%
S016307	190.26	48.29	0.69	Dec 15 - Mar 31	192,695.9	0.00	2,023.0	190,672.9	98.95%	10.85	190,662.09	98.94%	-0.006%
S008637	222.87	47.49	0.80	Dec 15 - Mar 31	221,983.9	0.00	2,408.3	219,575.6	98.92%	10.85	219,564.77	98.91%	-0.005%
S023911	297.56	46.77	1.05	Dec 15 - Mar 31	291,883.6	0.00	2,466.6	289,417.0	99.15%	10.85	289,406.14	99.15%	-0.004%

Flow Frequency Analysis

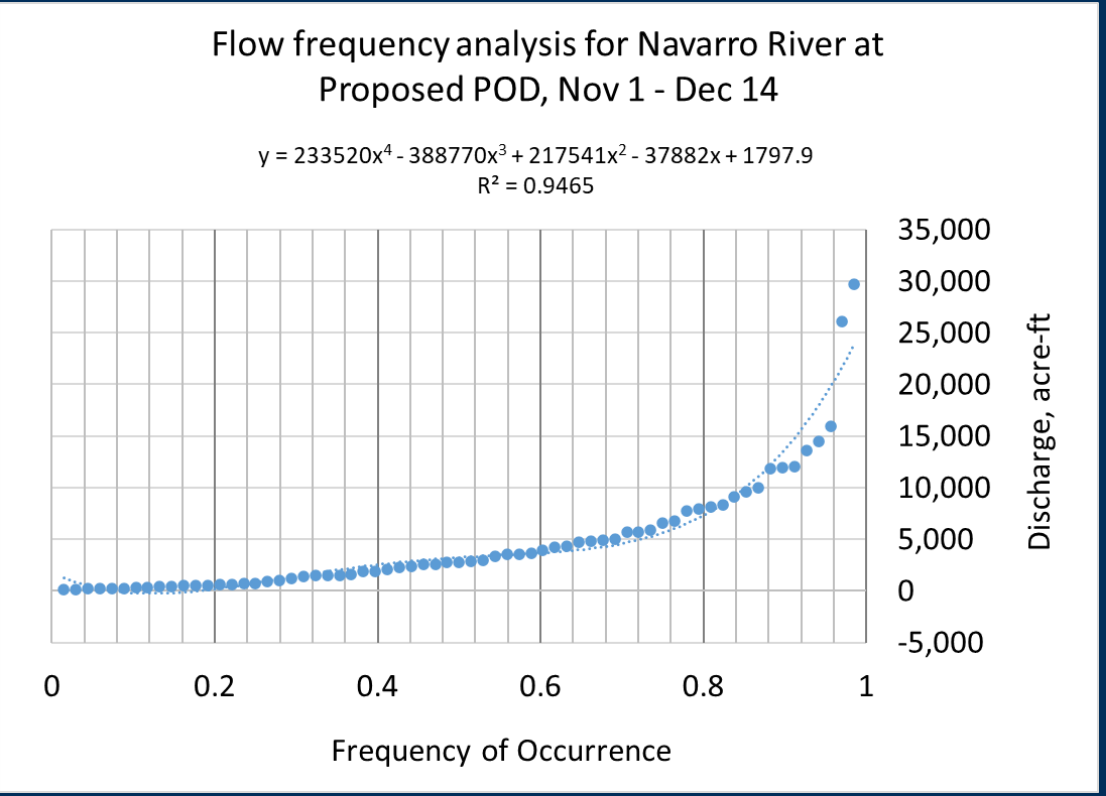
Calculate the average seasonal unimpaired flow occurrence frequency using the Weibull formula (described in policy section B.5.2.3):

$$F = 1-(m/(N+1)$$

Where:
F = the frequency of occurrence

m = the rank of the average seasonal unimpaired flow volume, with the largest value receiving m =1

n = the length of the gage data record, in years



Cumulative Diversion Analysis

Application ID	Face Val	Max Div	Div Season	Dec 15	Dec 16	Dec 17	Dec 18	Dec 19	Dec 20	Dec 21	Dec 22	Dec 23	Dec 24	Dec 25	Dec 26	Dec 27	Dec 28	Dec 29	Dec 30	Dec 31
	(af per yr)	(cfs)																		
A025060	11.0	none	11/1 to 5/15	0.0367	0.0367	0.0367	0.0367	0.0367	0.0367	0.0367	0.0367	0.0367	0.0367	0.0367	0.0367	0.0367	0.0367	0.0367	0.0367	0.0367
A025061A	44.0	none	11/1 to 5/15	0.1469	0.1469	0.1469	0.1469	0.1469	0.1469	0.1469	0.1469	0.1469	0.1469	0.1469	0.1469	0.1469	0.1469	0.1469	0.1469	0.1469
A025147	9.0	none	10/1 to 4/1	0.0301	0.0301	0.0301	0.0301	0.0301	0.0301	0.0301	0.0301	0.0301	0.0301	0.0301	0.0301	0.0301	0.0301	0.0301	0.0301	0.0301
A025771	2.5	none	11/1 to 6/1	0.0083	0.0083	0.0083	0.0083	0.0083	0.0083	0.0083	0.0083	0.0083	0.0083	0.0083	0.0083	0.0083	0.0083	0.0083	0.0083	0.0083
A027580 (2)	20.0	none	11/1 to 5/1	0.0668	0.0668	0.0668	0.0668	0.0668	0.0668	0.0668	0.0668	0.0668	0.0668	0.0668	0.0668	0.0668	0.0668	0.0668	0.0668	0.0668
A027758 (2)	75.0	1.0	11/1 to 6/1	0.2378	0.2378	0.2378	0.2378	0.2378	0.2378	0.2378	0.2378	0.2378	0.2378	0.2378	0.2378	0.2378	0.2378	0.2378	0.2378	0.2378
A027896	5.0	none	11/1 to 5/31	0.0167	0.0167	0.0167	0.0167	0.0167	0.0167	0.0167	0.0167	0.0167	0.0167	0.0167	0.0167	0.0167	0.0167	0.0167	0.0167	0.0167
A028227 (2)	12.0	none	10/1 to 4/30	0.0401	0.0401	0.0401	0.0401	0.0401	0.0401	0.0401	0.0401	0.0401	0.0401	0.0401	0.0401	0.0401	0.0401	0.0401	0.0401	0.0401
A028904	2.4	none	10/1 to 5/1	0.008	0.008	0.008	0.008	0.008	0.008	0.008	0.008	0.008	0.008	0.008	0.008	0.008	0.008	0.008	0.008	0.008
A028944 (3)	122.0	none	11/1 to 6/15	0.3868	0.3868	0.3868	0.3868	0.3868	0.3868	0.3868	0.3868	0.3868	0.3868	0.3868	0.3868	0.3868	0.3868	0.3868	0.3868	0.3868
A028945	40.0	2.75	3/1 to 6/1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
A028946	80.0	none	11/1 to 6/15	0.2536	0.2536	0.2536	0.2536	0.2536	0.2536	0.2536	0.2536	0.2536	0.2536	0.2536	0.2536	0.2536	0.2536	0.2536	0.2536	0.2536
A028947 (3)	50.0	2.75	3/1 to 5/31	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
A029192 (2)	24.0	none	11/1 to 7/30	0.0761	0.0761	0.0761	0.0761	0.0761	0.0761	0.0761	0.0761	0.0761	0.0761	0.0761	0.0761	0.0761	0.0761	0.0761	0.0761	0.0761
A029305 (2)	18.6	none	10/1 to 4/30	0.0621	0.0621	0.0621	0.0621	0.0621	0.0621	0.0621	0.0621	0.0621	0.0621	0.0621	0.0621	0.0621	0.0621	0.0621	0.0621	0.0621
A029594 (2)	71.0	none	11/1 to 3/31	0.2251	0.2251	0.2251	0.2251	0.2251	0.2251	0.2251	0.2251	0.2251	0.2251	0.2251	0.2251	0.2251	0.2251	0.2251	0.2251	0.2251
A029645 (2)	15.0	none	11/1 to 4/1	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05
A029646	6.0	1.02	3/1 to 4/1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
A029672 (2)	19.0	none	11/1 to 3/31	0.0603	0.0603	0.0603	0.0603	0.0603	0.0603	0.0603	0.0603	0.0603	0.0603	0.0603	0.0603	0.0603	0.0603	0.0603	0.0603	0.0603
A029679	90.0	2.0	11/15 to 3/31	0.3129	0.3129	0.3129	0.3129	0.3129	0.3129	0.3129	0.3129	0.3129	0.3129	0.3129	0.3129	0.3129	0.3129	0.3129	0.3129	0.3129
A029711	30.0	none	12/15 to 3/31	0.1315	0.1315	0.1315	0.1315	0.1315	0.1315	0.1315	0.1315	0.1315	0.1315	0.1315	0.1315	0.1315	0.1315	0.1315	0.1315	0.1315
A029810 (4)	12.0	none	11/15 to 4/1	0.0414	0.0414	0.0414	0.0414	0.0414	0.0414	0.0414	0.0414	0.0414	0.0414	0.0414	0.0414	0.0414	0.0414	0.0414	0.0414	0.0414
A029907	6.0	none	12/15 to 3/31	0.0263	0.0263	0.0263	0.0263	0.0263	0.0263	0.0263	0.0263	0.0263	0.0263	0.0263	0.0263	0.0263	0.0263	0.0263	0.0263	0.0263
A029910	55.6	none	12/15 to 3/31	0.2438	0.2438	0.2438	0.2438	0.2438	0.2438	0.2438	0.2438	0.2438	0.2438	0.2438	0.2438	0.2438	0.2438	0.2438	0.2438	0.2438
A029911	40.0	3.0	3/1 to 3/31	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
A030448 (2)	70.0	none	12/15 to 3/31	0.3069	0.3069	0.3069	0.3069	0.3069	0.3069	0.3069	0.3069	0.3069	0.3069	0.3069	0.3069	0.3069	0.3069	0.3069	0.3069	0.3069
A030449 (2)	15.0	3.0	3/1 to 3/31	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
A030479	12.0	none	12/1 to 3/31	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05
A030492	30.0	none	12/15 to 3/31	0.1315	0.1315	0.1315	0.1315	0.1315	0.1315	0.1315	0.1315	0.1315	0.1315	0.1315	0.1315	0.1315	0.1315	0.1315	0.1315	0.1315
A030533	30.0	none	12/15 to 3/31	0.1315	0.1315	0.1315	0.1315	0.1315	0.1315	0.1315	0.1315	0.1315	0.1315	0.1315	0.1315	0.1315	0.1315	0.1315	0.1315	0.1315
A030717	3.8	none	10/1 to 5/30	0.0121	0.0121	0.0121	0.0121	0.0121	0.0121	0.0121	0.0121	0.0121	0.0121	0.0121	0.0121	0.0121	0.0121	0.0121	0.0121	0.0121
A030718	30.0	none	12/15 to 3/31	0.0509	0.0509	0.0509	0.0509	0.0509	0.0509	0.0509	0.0509	0.0509	0.0509	0.0509	0.0509	0.0509	0.0509	0.0509	0.0509	0.0509
A030722 (3)	100.0	none	12/15 to 3/31	0.4384	0.4384	0.4384	0.4384	0.4384	0.4384	0.4384	0.4384	0.4384	0.4384	0.4384	0.4384	0.4384	0.4384	0.4384	0.4384	0.4384
A030761 (4)	37.3	none	12/15 to 3/31	0.1136	0.1136	0.1136	0.1136	0.1136	0.1136	0.1136	0.1136	0.1136	0.1136	0.1136	0.1136	0.1136	0.1136	0.1136	0.1136	0.1136
A030792 (4)	29.0	none	12/15 to 3/31	0.127	0.127	0.127	0.127	0.127	0.127	0.127	0.127	0.127	0.127	0.127	0.127	0.127	0.127	0.127	0.127	0.127
A030794	5.9	none	10/1 to 6/1	0.0197	0.0197	0.0197	0.0197	0.0197	0.0197	0.0197	0.0197	0.0197	0.0197	0.0197	0.0197	0.0197	0.0197	0.0197	0.0197	0.0197
A030828	24.3	none	10/1 to 6/1	0.0811	0.0811	0.0811	0.0811	0.0811	0.0811	0.0811	0.0811	0.0811	0.0811	0.0811	0.0811	0.0811	0.0811	0.0811	0.0811	0.0811
A030859 (4)	51.0	none	10/1 to 9/30	0.17	0.17	0.17	0.17	0.17	0.17	0.17	0.17	0.17	0.17	0.17	0.17	0.17	0.17	0.17	0.17	0.17
A030860	20.0	none	11/1 to 3/31	0.0634	0.0634	0.0634	0.0634	0.0634	0.0634	0.0634	0.0634	0.0634	0.0634	0.0634	0.0634	0.0634	0.0634	0.0634	0.0634	0.0634
A030861 (3)	25.0	none	11/15 to 4/15	0.0788	0.0788	0.0788	0.0788	0.0788	0.0788	0.0788	0.0788	0.0788	0.0788	0.0788	0.0788	0.0788	0.0788	0.0788	0.0788	0.0788
A030870 (2)	40.0	none	12/15 to 3/31	0.1753	0.1753	0.1753	0.1753	0.1753	0.1753	0.1753	0.1753	0.1753	0.1753	0.1753	0.1753	0.1753	0.1753	0.1753	0.1753	0.1753
A030994	9.0	none	11/1 to 5/30	0.0285	0.0285	0.0285	0.0285	0.0285	0.0285	0.0285	0.0285	0.0285	0.0285	0.0285	0.0285	0.0285	0.0285	0.0285	0.0285	0.0285
A031003	20.0	2.0	3/1 to 5/31	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

- Total daily direct diversions tabulated for each day during the diversion season
- Estimate total instantaneous flow demand
- Complicated – need to take things like frost protection into account

Instream Flow Needs

- Instantaneous flow rate to be maintained past the proposed projects POD
- To protect fish habitat
- To provide appropriate contributions to fish habitat downstream
- Determined on a case-by-case basis
    - NMFS, DFG and Division staff have recommended that a bypass equal to the February median flow be used in “North Coastal” watersheds
- OR conduct a site specific study to identify bypass flow needs

Future Water Availability Tool

- The Nature Conservancy, Trout Unlimited and Foundry Spatial were awarded funding from WCB to build an online water availability tool.
- Tool will perform similar functions as the desktop Cumulative Effects Model but may link directly with eWRIMS data and USGS data or the Natural Flows Database to decrease the amount of data processing for the users.
- Model will be completed in June 2024.

Considerations and Recommendations

1. New applications are required to include sufficient information to support a reasonable likelihood that water is available.

2. A permit grants a right to divert and use water but does not guarantee that water will always be available. California has a highly variable climate and parties seeking new permits are at the end of the line after existing diverters. Alternative water sources may be needed.

3. A yield analysis that considers the availability of water during different water year types and the ability to maximize the water right can be helpful. The yield analysis should be inclusive of any conditioning resulting from the regional criteria (after completion of the cumulative diversion analysis). For example, if diversion will not commence until stream flow reaches a certain level.

Considerations and Recommendations

4. It's important to consider California's changing climate. Parties should use all of the historical data available to better capture variability and consider use of a future climate change projected dataset to better understand what amount of supply their project may receive in the future. The Division developed a fact sheet and webpage a few months ago to help prospective applicants consider climate change.

5. Demand data may need to be scrutinized closely and cleaned up prior to use:
   - Water right statements do not have a specified face value so reported diversions are used; and,
   - Investigation of water rights may be needed as some water right holders or claimants may double-report their diversions.

Useful Web Links

https://www.waterboards.ca.gov/waterrights/water_issues/programs/applications

https://www.waterboards.ca.gov/waterrights/water_issues/programs/water_availability/

https://www.waterboards.ca.gov/waterrights/water_issues/programs/climate_change/

https://www.waterboards.ca.gov/waterrights/water_issues/programs/applications/state_filed_applications/

https://www.waterboards.ca.gov/waterrights/water_issues/programs/instream_flows/docs/adopted_policy.pdf

Thank you!

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