

# Water Resources Department

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# MEMORANDUM

TO: Water Resources Commission

**FROM:** Ivan Gall, Director

SUBJECT: Agenda Item H, March 14, 2025 Water Resources Commission

# **DIRECTOR'S REPORT**

# I. Recent Actions and Updates

# A. HB 2145 Implementation Summary

House Bill 2145, passed during the 2021 legislative session, successfully modernized many aspects of the Department's Well Construction Program. The changes mandated by the new law were rolled out in phases over three years, with the final phase taking effect on July 1, 2024, and the final legislative report being submitted on January 31, 2025. The biggest change was that the Department now performs a technical review of all submitted well reports and provides feedback to drillers within 120 days. From July 1, 2022, to December 31, 2024, the Department received and reviewed 10,530 well reports. During these reviews, the Department found 5,148 well reports with at least one type of deficiency, categorized into construction deficiencies, incomplete reports, and late filings, with 99% of these deficiencies being resolved. House Bill 2145 brought significant advancements to the Department's Well Construction Program, ensuring a more efficient and modernized process. The phased implementation has streamlined well construction and reporting, enhanced communication with the drilling industry, and will benefit well constructors and landowners by promoting the sustainable and safe management of groundwater resources.

# B. Klamath Dam Removal and Fish Movement

With all of the work completed on physical removal of the Klamath River hydroelectric dams, the Klamath River Renewal Corporation (KRRC) and its contractors have turned their attention to restoration work in the hydroelectric reach. A second round of seeding and planting was completed last fall, and another round will occur this spring. More recently, KRRC has worked to secure funding for the second of two boat ramps in the vicinity of the former JC Boyle dam and reservoir. The ramps are expected to be operational by the beginning of recreational boating on the river this spring. Partial funding is coming from the Oregon State Marine Board.

Once restoration work is completed, and the Federal Energy Regulatory Commission has issued its final sign off on the project, ownership of the lands around JC Boyle will transfer to the Oregon Department of Fish and Wildlife. We are working through several items to prepare for this transfer, currently expected in 2027.

An important goal was achieved with leadership of the Oregon congressional delegation early this month with the passage of federal legislation that was called for in the Klamath Power and Facilities Agreement (KPFA) signed in 2016 by many federal and state agencies, as well as irrigation entities and tribes. This legislation expands the scope of authorizations for the U.S. Bureau of Reclamation with regard to the Klamath Reclamation Project to include restoration activities including fish screening.

As has been widely reported, salmon returns above the former site of Iron Gate dam (the furthest downstream of the four former PacifiCorp dams), have exceeded expectations. Fall Chinook made it at least as far as the Keno fish ladder, and perhaps beyond, with significant spawning in Spencer Creek and in the mainstem of the Klamath River. Coho made it to the mainstem reach at the former JC Boyle Powerhouse. Improvements to monitoring, and short-term improvements to fish passage at the two remaining dams (Keno and Link River) are moving forward and are expected to be in place for the fall migration season this year. A copy of the final ODFW report on salmon migration in the Oregon portion of the Klamath is attached for your information (Attachment 4).

## C. Staffing Update

Since the December meeting, the Department has filled fourteen positions with start dates before February 7, 2025. Of the positions filled, there are four staff who are new to the agency, one staff member moving from a limited duration position to a permanent position, one re-employment within two years, seven internal promotions, and one lateral transfer in from another agency. Positions filled include the following:

- Administrative Specialist 2
- Accounts Payable Specialist
- Assistant Watermaster Roseburg
- District 17 Watermaster
- Field Services Division Administrator
- GIS Analyst
- Hydrographer (2)
- Office Specialist 2
- Service Desk Technician
- Transfer and Conservation Section Caseworker
- Water Right Services Division Administrator
- Water Rights Section Caseworker
- Water Supply Grant Analyst

As of February 7, 2025, the Department has twenty-four vacant positions to fill with eleven of those twenty-four recruitments in process. One of the eleven recruitments in process is a position with an accepted offer that has a start date after February 7, 2025, which will be detailed in the June 2025 Director's Report.

# **D.** Drought Update

At the beginning of the water year, over 61 percent of Oregon was in moderate (D1) drought, with just over 1 percent of the state, in Malheur County, experiencing severe (D2) drought. As of January 30, 2025, drought conditions have improved, with only one percent of the state remaining in moderate drought. These improvements can be attributed to water year precipitation measuring 3 to 6 inches above normal for much of the state. From November to early January, atmospheric rivers brought significant snow to the region, leading to above normal snowpack across most of the state (122 percent as of February 3, 2025); however, conditions have recently plateaued for much of the state. Temperatures across Oregon have generally been above normal for most of the water year ranging from 1° F to 3° F above normal. These conditions have caused snowpack in some basins to slightly decrease and has elevated evaporation in western Oregon. Elevated evaporation rates in western Oregon have slightly decreased soil moisture, but western Oregon has generally been normal to above normal so far in the water year. As a result, reservoir storage in many basins is measuring near to above normal.

# E. Satellite-based Evapotranspiration Data for Oregon (Open ET)

As directed in HB 2018 (2021), OWRD worked with researchers from Desert Research Institute (DRI) and OpenET Inc. to produce a peer-reviewed report on statewide historical irrigation consumptive use and estimates of open water evaporation from all major reservoirs. In January 2025 the final report and dataset were published here: https://www.dri.edu/project/owrd-et/. Data from the statewide ET project were produced at a statewide scale for the period 1985-2022 using satellite imagery, models, gridded weather data, and Oregon water rights. Uncertainty for monthly ET estimates is 10-20%, approaching that of in situ field-based methods for estimating ET. OWRD has evaluated the potential uses of these data for Department business. Identified applications of statewide ET project data are based on the OWRD's current needs and understanding of data accuracy. OWRD will further refine our understanding of these data and periodically review new data as it becomes available. Along with using these data for basin studies, storage distribution estimates, water budgets, and field work planning, OWRD is exploring using these data for the Harney Groundwater Conservation Reserve Enhancement Program (CREP), pond evaporation, and updating the surface water availability model. At this time, OWRD will not use these data as the sole source of information when pursuing in-season regulatory actions, as the sole source of evidence for establishing use or non-use, quantifying applied water for one or a few fields requiring highly accurate accounting, or to meet water use reporting requirements (i.e. pumped or diverted).

# F. Water Availability Reporting System (WARS) Update

In 2024, OWRD began the project to modernize the current Water Availability Reporting System (WARS) and produce water availability information representative of today's climate by December 2029. Project outcomes will support responsible decision-making regarding surface water allocation and provide interested parties with current information on Oregon's water resources; eight new positions have been filled to directly support this project. In 2025, the project team will be focused on meeting data needs, communicating with interested parties, and identifying requirements for the modeling system. To support water availability modeling efforts, the agency is focusing on reducing the backlog of unpublished streamflow records and expanding the gaging network with 10 new long-term gaging stations. The project team is currently working to establish a Technical Advisory Group of subject matter experts to assist in the development of the WARS update.

# G. Annual Report on Greater Harney Valley Groundwater Area of Concern (GHVGAC)

The Malheur Lake Basin Program (Division 512) was amended by the Commission in April of 2016. This created the Greater Harney Valley Groundwater Area of Concern (GHVGAC). The rules require an annual report to the Commission on new groundwater permits issued within the GHVGAC, information on groundwater level data, and an update on the groundwater study, as well as staff recommendations on amending or repealing the rules.

<u>Groundwater Permits Issued within the GHVGAC:</u> Since April 15, 2016, six permits have been issued within the GHVGAC. No new permits have been issued since the Department's 2019 annual report to the Commission.

<u>Groundwater Level Data Collection Update:</u> Groundwater level data continues to be collected quarterly in the GHVGAC and surrounding areas. The current monitoring well network includes 90 observations wells, 26 of which are outfitted with high frequency automated water level data recorders.

<u>Groundwater Study Update:</u> The USGS published the *Groundwater Model of the Harney Basin, Southeastern Oregon* in March 2024. The report can be downloaded from <u>https://pubs.usgs.gov/publication/sir20245017</u>. OWRD staff have been utilizing the numerical groundwater flow model of the basin to inform the Division 512 rulemaking.

<u>Staff Recommendations:</u> OWRD has been working with a Rules Advisory Committee to designate a Critical Groundwater Area in the Harney Basin through Division 512 rulemaking. The Department intends to remove this annual reporting requirement as part of the rulemaking process.

## H. Tribal Update

*Director's Visits:* The Department as well as Oregon Department of Fish and Wildlife, Oregon Watershed Enhancement Board and Oregon's nine federally recognized Tribes continue to coordinate on scheduling meetings between the new Directors and Tribal leadership. The purpose of these meetings is to foster collaborative relationships and learn more about Tribal priorities, goals, and vision around natural resource issues. Thus far, the three Directors have met with Klamath Tribes and the Confederated Tribes of Warm Springs. The meeting with the Confederated Tribes of the Umatilla Indian Reservation is tentatively scheduled for May 16. The Confederated Tribes of Grand Ronde and the Burns Paiute Tribe have extended invitations to the Director and staff to meet with Tribal leadership; those meetings are tentatively scheduled for May 16. March 26 and April 15, respectively.

*Task Force on Tribal Consultation and Department Policy on Tribal Engagement:* The Department has monitored the progress of the <u>Task Force</u>, charged with identifying and clarifying the requirements of State agencies to engage in Tribal consultation (<u>House Bill 3173</u> (2023); Or Laws 2023, ch 531, §§1,2). Although the term of the Task Force ended December 31, Representative Tawna Sanchez has introduced <u>House Bill 2069 (2025)</u>, which would extend the Task Force term through December 2026. Should the HB become law, the Department will rely on Task Force recommendations to update the Department's 2007 policy on Tribal engagement.

*Staff Training:* On January 30, Dr. Elissa Bullion (State Physical Anthropologist) provided Department staff training on the current template for drafting <u>Inadvertent Discovery Plans (IDP)</u> as well as answering any questions staff had. The virtual training was recorded for other staff unable to attend. The Tribal Liaison is working with other staff to customize the IDP template for Departmental use.

*Ongoing Coordination Efforts:* The Department's Tribal Liaison and other staff continue to attend and provide policy updates during quarterly meetings held by the LCIS Cultural Resources Cluster and the LCIS Natural Resources Working Group. Recent topics have included ongoing rulemaking efforts, IWRS updates, legislative and budget updates, funding opportunities, Mid-Coast Water Planning Partnership updates, and updates concerning the Water Rights Settlement Agreement for the Confederated Tribes of the Warm Springs and Deschutes Basin transfers. During each update, tribal staff are invited to offer input and encouraged to request either coordination or formal consultation on any issue of interest or concern. The Tribal Liaison continues to work with sister agencies and tribal staff to update and standardize communications, coordination, and consultation efforts between the Department and the Tribes concerning policy issues of potential interest or concern.

2024 Government-to-Government Report: The 2024 annual report outlining the Department's coordination and consultation efforts with Oregon's Nine tribes is <u>available on the LCIS</u> website.

## I. Deschutes Basin Groundwater Mitigation Program 2022 Annual Review

The Department is required by OAR 690-505-0500(3) and OAR 690-521-0600 to provide annual evaluations on the Deschutes Basin Groundwater Mitigation Program. The annual evaluation is done in coordination with the Oregon Departments of Fish and Wildlife, Environmental Quality, State Lands, and Parks and Recreation. The annual evaluation is included in Attachment 3. The goals of these annual evaluations are to identify how streamflows are responding to additional groundwater use within the Deschutes Groundwater Study Area and implementation of the mitigation program.

## J. Willamette 2024 Biological Opinion

On December 26, 2024, NOAA Fisheries completed a Biological Opinion under the Endangered Species Act in consultation with the U.S. Army Corps of Engineers (Corps), the Bureau of Reclamation, and the Bonneville Power Administration on the operation and maintenance of the Willamette Valley System. The system is owned and operated by the Corps the includes 13 multipurpose dams and reservoirs, riverbank-protection projects, fish-passage facilities, adult-fish-collection facilities, and hatchery programs in the Willamette River Basin.

The Biological Opinion describes NOAA Fisheries determination that the Corps' proposed action would jeopardize Upper Willamette River Chinook salmon and Upper Willamette River steelhead and would adversely modify their designated critical habitat. The jeopardy Biological Opinion includes a Reasonable and Prudent Alternative that addresses flow management, water quality, fish passage, habitat restoration, monitoring, and hatchery operations and maintenance. The Biological Opinion is publicly available at: <u>https://www.fisheries.noaa.gov/s3//2024-12/WCRO-2023-00324-PERM-BiOp-WillametteValleySystem-20241226.pdf</u>

# II. Upcoming Board and Commission Meetings

<u>Commission / Board</u>	Date
Land Conservation and Development Commission	March 20 - 21, 2025
	June 26 - 27, 2025
Parks and Recreation Commission	April 22 - 23, 2025
	June 17 - 18, 2025
Fish and Wildlife Commission	March 14, 2025
	April 17 - 18, 2025
	June 12 - 13, 2025
Environmental Quality Commission	March 13 - 14, 2025
	May 8 - 9, 2025
Watershed Enhancement Board	April 22 - 23, 2025
Board of Agriculture	March 12 - 14, 2025
	June 11 - 13, 2025

## Attachments:

- 1. Rulemaking Calendar
- 2. Litigation Update
- 3. Deschutes Basin Groundwater Mitigation Program 2022 Annual Review
- 4. ODFW Fish Surveys

# Oregon Water Resources Department

Dula Nama				Toward	Ctatura
Rule Name	Торіс	Lead Staff	GWAC	Target	Status
			Input	WRC Date	
			Expected?		
Malheur Lake	Update to Basin	Jason Spriet,	Yes	Fall/Winter	RAC Meetings
Basin Program -	Rules Following the	Tim Seymour,		2025	#12-14 Ongoing
OAR Chapter 690,	Publication of	Kelly Meinz			through Spring
Division 512	Groundwater Study				2025
Place-Based Water	Rules Regarding	Lili Prahl	No	March 2025	Evaluating Public
<u>Planning – OAR</u>	Development of a	Margo			Comment
Chapter 690,	Place-Based	Mashkovskaya			Prepping for
Division 602	Planning Fund				March Adoption
Best Practices in	Rules Regarding	Charlotte	No	June 2025	<b>Evaluating Public</b>
<u>Community</u>	<b>Best Practices for</b>	Regula-			Comment
Engagement OAR	Equitable	Whitefield			Prepping for
Chapter 690, Division 601	Community	Margo			March Adoption
DIVISION OUT	Engagement Plan	Mashkovskaya			
	for Funding				
	Programs				
HB 2020 (2023)	Establish statewide	Jason Spriet,	Yes	2025	Draft Guidance
Voluntary	criteria for voluntary	Tim Seymour,			Available for
Agreements	water agreement	Laura Hartt			Comment
	ORS 537.525 within				
	a shared reservoir				

# **Current Rulemaking**

# Upcoming Rulemakings

Rule Name	Торіс	Lead Staff	Status
Division 25: Groundwater	Repeal Action based on	Margo Maskovskaya	Scoping and Planning
in Klamath Basin	court decision		
Division 76-Establishment	Repeal Action	Margo Maskovskaya	Scoping and Planning
of Minimum Perennial			
Streamflows			
Division 22- Klamath	Repeal Action	Margo Maskovskaya	Scoping and Planning
Drought Rules			
Division 95- Columbia	Repeal Action	Margo Maskovskaya	Scoping and Planning
Basin Water Development			
Loan Program			
Division 77- Instream Water	Instream Water Rights	Laura Hartt	Scoping and Planning
Rights			

		STATE COURT CASES (TRIAL LEVEL)	
Case	Court	Description	Rulings
Fort Klamath	Marion Co. 21CV37688	PJR of Order approving temp transfer of Crooked Creek water, KA 67, T13673	Ft Klamath filed a petition se definition of basin, whether t paper versus water rights. W
Golden Rule	Harney Co. 19CV53051	PJR of order related to Court of Appeals matter	COA ruled on A172879-1728 issued 09/12/22 and lifted th case further in trial court.
КВА	Klamath Case 00001	Adjudication of water rights in the Klamath Basin	Opening briefs for parties wh were filed on 08.07.2024 and 12.20.2024, and hearings wil
KID 3	Marion 21CV39570	PJR of April 6, 2021 Order to BOR; challenges OWRD's method of calculating whether stored water is being released	r Court granted petitioner's m
Pinnacle Utils v. OWRD	Deschutes Co 22CV08683	Challenge to OWRD order denying limited license application	4-day trial completed Nov 9, due Jan 23
Sprague River Cattle	Marion County 22CV27077	Takings and declaratory judgment claim.	Markowitz firm has taken lea privilege review are occurrin Evidentiary hearing on docur
Rogue River v. OWRD	Marion County 23CV19220	A junior water-rights holder filed this petition challenging Oregon Water Resources Department's enforcement of the Klamath Tribes' call on claim No. KA 622.	Case consolidated with MID. parties' stipulated motion to necessary to release water re every six months. Next status Petitioner filed an unopposed regulation order. OWRD's res
MID v. OWRD	Marion County 23CV19218	A junior water-rights holder filed this petition challenging Oregon Water Resources Department's enforcement of the Klamath Tribes' call on claim No. KA 622.	Case consolidated with Rogu granting parties' stipulated n project necessary to release be filed every six months. Ne Petitioner filed an unoppose regulation order. OWRD's res
Lloyd Piercy v. OWRD, et al.	Umatilla County 23CV27740	A junior water-rights holder filed this petition challenging OWRD's enforcement of the Westland Irrigation Districts' call per the Water Mangment Plan for the Umatilla Basin Project.	Reviewing docs provided by production; motion to dismis on Jan 28 to discuss next ste
New Foothills Properties LLC, et al. v. OWRD, et al (New Foothills I)	Umatilla County 23CV27892	A junior water-rights holder filed this petition challenging OWRD's enforcement of the Westland Irrigation Districts' call per the Water Mangment Plan for the Umatilla Basin Project.	Reviewing docs provided by production; motion to dismis on Jan 28 to discuss next ste
Lloyd Piercy, et al. v. OWRD, et al (New Foothills II)	Umatilla County 24CV32021	A junior water-rights holder filed this petition challenging OWRD's enforcement of the Westland Irrigation Districts' call per the Water Mangment Plan for the Umatilla Basin Project. This is the 2024 version of New Foothills I.	Reviewing docs provided by production; motion to dismis on Jan 28 to discuss next ste
NBCC, LLC, et al v. OWRD, et al	Marion County 23CV32928	PJR Case Regarding Water Rights.	Partial motion to dismiss gra petitioner's amended petitio
Winchester Water Control Dist. v. OWRD, et al	Marion County 23CV33445	Petitioner district contends OWRD wrongfully denied amendment to their water right registration statement that claims less water than is actually held in reservoir.	After filing an amended petit to dismiss and strike and a m on December 16, and respon person hearing for February

## gs & Dates/Litigation Deadlines/Next Steps

seeking review to the Oregon Supreme Court on 3 issues: er temporary transfers are subject to out of basin statute, and Waiting for OSC to rule whether it will hear the appeal. (No

2880; stayed pending a decision 8/9/21. Appellate judgment the stay but petitioners have not taken any action to persue the

who filed exceptions to Walton/Klamath termination act claims and responses were filed on 10.23.2024 Replies were due on will be held on 01.29.2025 and 01.31.2025.

motion to continue 4.15.2022 stay on 4.18.24.

9, 2024; Written closings filed; Objections to Proposed Findings

lead on discovery efforts. Electronic document collection and ring now.

cument collection efforts set for April 8, 2025.

D. On October 16, 2024, the court entered an order granting to abate case pending completion of infrastructure project r reservoir for downstream senior users. Status updates to be filed tus hearing set for April 30, 2025, at 8:30 a.m. On January 7, 2025, sed motion to file a second amended petition based on new response deadline will be abated.

gue River. On October 16, 2024, the court entered an order d motion to abate case pending completion of infrastructure se water reservoir for downstream senior users. Status updates to Next status hearing set for April 30, 2025. On January 7, 2025, sed motion to file a second amended petition based on new response deadline will be abated.

by petitioners; working on response to petitioners' requests for miss contempt claim granted by court; conferring with petitioners teps

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ranted during October 2024 hearing. Awaiting entry of order and ion. Discovery ongoing. Status hearing set for January 28, 2025.

etition for review with leave of court, respondents filed a motion motion for partial summary judgment. Petitioner filed a response ondents filed a reply on January 17. The court set a one hour inry 6.

### **OWRD ACTIVE LITIGATION CHART**

Upper Crooked River Conservationists v. OWRD	Crook County, 23CV46779	Petitioners (nonprofit org and a ranch) challenge permit issued to Bureau of Reclamation for fish life	The court heard oral argume motion to dismis and oral arg 12.09.2024. The parties were
Roaring Springs Ranch, Inc. v. Water Resources Department, et al.	Harney County, 24CV20196	Petition for Judicial Review challenging the decison by the Water Resources Department denying an application for groundwater use for irrigation.	Sent 10-day letter to opposir Petitioners filed their respon set a hearing for March 18, 2
Waterwatch of Oregon v. OWRD	Marion County, 24CV32104	Petition to compel OWRD to initiate a water rights cancellation proceeding. YoungWoo Joh has been in contact with OWRD on the filing.	Motion to dismiss deadline e developments.
Allen Ditch Co. v. OWRD	Umatilla County, 24CV43601	Petition for Judicial Review challenging OWRD's decision to require petitioners to install a measuring device at their point of diversion from a canal.	Held Initial Client Meeting 10 Dismiss filed 11.22.2024; Res February 19, 2025.
Dillon Irrigation Co. v. OWRD	Umatilla County, 24CV43600	Petition for Judicial Review challenging OWRD's decision to require petitioners to install a measuring device at their point of diversion from a canal.	Held Initial Client Meeting 10 Dismiss filed 11.22.2024; Res February 19, 2025.
Pioneer Irrigation v. OWRD	Umatilla County, 24CV43598	Petition for Judicial Review challenging OWRD's decision to require petitioners to install a measuring device at their point of diversion from a canal.	Held Initial Client Meeting 1 Dismiss filed 11.22.2024; Re February 19, 2025.
Courtney Irrigation Co. v. OWRD	Umatilla County, 24CV43596	Petition for Judicial Review challenging OWRD's decision to require petitioners to install a measuring device at their point of diversion from a canal.	Held Initial Client Meeting 10 Dismiss filed 11.22.2024; Re February 19, 2025.
		GENERAL COUNSEL CASES (ORDERS AND CONTESTED CASE LEVEL)	-
Case		Description	
Casa	Count	STATE COURT CASES (APPELLATE LEVEL)	Dulinga
Case Waterwatch/East Valley v. OWRD	Court A173292	Description Challenge to OWRC order denying reservoir application	Rulings Oral argument held 11/7/24
Fort Klamath	A181385	Appeal from PJR approving temporary transfer of Crooked Creek water, KA 67, T13673	Petitioners have filed a petit whether the court will allow
Bridgeview Vineyards vs. OWRD	A183504	cancellation order. Petitioner appeals from circuit court order dismissing petition as untimely.	We have filed our answering submission. Schroeder Law and it has been dismissed as
Gould	A185116	PJR of order granting temporary change in place of use and points of diversion. Pinnacle Utilities has moved to intervene.	General judgment entered Ju Pinnacle has requested addir
		FEDERAL COURT CASES (TRIAL LEVEL)	
Case	Court	Description	Rulings
Case KID v. BOR	Court USDC Or 21CV0504 Judge Aiken		Rulings Appellate Division (Denise Fj certiorari to the US Supreme reactivated.
	USDC Or 21CV0504	Description           KID filed Motion for Preliminary Injunction in KBA and BOR removed it to federal court; seeks	Appellate Division (Denise Fj certiorari to the US Supreme reactivated.
KID v. BOR US v. OWRD	USDC Or 21CV0504 Judge Aiken USDC OR 21-cv-1442 Judge Clarke ND CA3:19-cv-04405	Description           KID filed Motion for Preliminary Injunction in KBA and BOR removed it to federal court; seeks injunction against release of stored water.           BOR asserts same claims as in Yurok case and also a PJR under the Oregon APA against the April 6 No Release Order           Tribes and others challenge the final BiOp (2019), BOR's environmental assessment and finding of no significant impact from BOR operations; primarily that set amount of irrigation water is	Appellate Division (Denise Fj certiorari to the US Supreme reactivated.

nent on the remaining (failure to state a claim) arguments in our argument on the cross motions for summary judgment on ere told to expect a ruling in the next 45 days.

sing counsel 6.13.24. We filed a motion to Dismiss on 10.30.2024; onse on 12.6.2024; we filed our reply on 12.20.2024. The Court 5, 2025.

e extended indefinitely after recent administrative proceeding

10.23.2024; Filed motion to consolidate on 10.30.2024; Motion to Response due 1.21.2025. The Court scheduled a hearing for

10.23.2024; Filed motion to consolidate on 10.30.2024; Motion to Response due 1.21.2025. The Court scheduled a hearing for

10.23.2024; Filed motion to consolidate on 10.30.2024; Motion to Response due 1.21.2025. The Court scheduled a hearing for

10.23.2024; Filed motion to consolidate on 10.30.2024; Motion to Response due 1.21.2025. The Court scheduled a hearing for

## gs & Dates/Litigation Deadlines/Next Steps

24. Under advisement.

tition for review in the Supreme Court, we are waiting to hear w review

ng brief and are waiting for the case to be scheduled for w was allowed to withdraw as attorney of record for Bridgeview, as a party, leaving only Mr. Eichmann.

l July 11; Pet's appeal filed Aug 9. Transcript due 12/9/24. ditional transcript, which is due on 2/3/25.

gs & Dates/Litigation Deadlines/Next Steps

Fjordbeck) is handling the mandamus petition. KID's petition for ne Court was recently denied. District court case has not yet been

on US's First Claim for Relief; Appellate is handling appeal; Ifs filed in 9th Circuit; oral argument complete and waiting on a KID motion to certify state law questions on 11/18/24

hth Circuit's ruling in Yurok Tribe.

## **OWRD ACTIVE LITIGATION CHART**

Grant Knoll v. OWRD/WRC	USDC Oregon 1:23-cv-00929-CL	A junior water-rights holder filed this petition challenging Oregon Water Resources Department's	Case is stayed pending Ninth
	Judge Mark D. Clarke	enforcement of the Klamath Tribes' call on claim No. KA 622.	
Glenda Stilwell v. OWRD/WRC	USDC Oregon 1:23-cv-00930-CL	A junior water-rights holder filed this petition challenging Oregon Water Resources Department's	Case is stayed pending Ninth
	Judge Mark D. Clarke	enforcement of the Klamath Tribes' call on claim No. KA 622.	
Ryan Hartman, et al v. OWRD/WRC	USDC Oregon 1:23-cv-00927-CL	A junior water-rights holder filed this petition challenging Oregon Water Resources Department's	Case is stayed pending Ninth
	Judge Mark D. Clarke	enforcement of the Klamath Tribes' call on claim No. KA 622.	

## Agenda Item H, Attachment 2 2/10/2025

nth Circuit's ruling in Yurok Tribe.

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nth Circuit's ruling in Yurok Tribe.

# DESCHUTES BASIN GROUNDWATER MITIGATION PROGRAM





# DESCHUTES BASIN GROUNDWATER MITIGATION PROGRAM

**2022 ANNUAL REVIEW** OREGON WATER RESOURCES DEPARTMENT



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# Introduction

The attached report provides the 2022 Annual Evaluation of the Deschutes Basin Groundwater Mitigation Rules (Oregon Administrative Rules (OAR) Chapter 690, Division 505) and the Deschutes Basin Mitigation Bank and Mitigation Credit Rules (OAR Chapter 690, Division 521).

# Background

A groundwater study of the Deschutes Basin above Lake Billy Chinook was conducted in the late 1990's by the U.S. Geological Survey (USGS) in cooperation with the Oregon Water Resources Department (OWRD); the City of Bend; City of Redmond; City of Sisters; Deschutes and Jefferson counties; the Confederated Tribes of the Warm Springs Reservation of Oregon (CTWS); and the U.S. Environmental Protection Agency and the Bureau of Reclamation.

The CTWS (Boundary shown in Appendix 1), along with the United States of America and the State of Oregon, is a party to the Confederated Tribes of the Warm Springs Reservation Water Rights Settlement Agreement, dated November 17, 1997 and amended effective May 16, 2002 (WRSA). The WRSA recognizes CTWS tribal reserved water right interests on the Deschutes River and tributaries for on and off Reservation uses. In addition, the parties to the WRSA have agreed to pursue long-term, cooperative management of the waters that affect their interests.

On September 13, 2002, the Commission adopted the Deschutes Basin Groundwater Mitigation Rules and the Deschutes Basin Mitigation Bank and Mitigation Credit Rules. The rules provide for mitigation of impacts to scenic waterway flows and senior water rights including instream water rights, while allowing additional appropriations of groundwater in the Deschutes Basin Groundwater Study Area (Appendix 2). The mitigation program, by rule, allows an additional 200 cubic feet per second (CFS) of new groundwater use, referred to as the allocation cap.

# **Evaluation Requirements**

Under OAR 690-505-0500(3) and OAR 690-521-0600 of the Deschutes Basin Groundwater Mitigation Rules, the Department is required to annually evaluate and report on the Deschutes Basin Groundwater Mitigation Program, including the implementation and management of mitigation credits allocated through existing mitigation banks. This annual evaluation report is to include information on new groundwater appropriations, streamflow impacts, and mitigation activity to determine whether scenic waterway flows and instream water right flows in the Deschutes Basin continue to be met on at least an equivalent or more frequent basis as compared to longterm, representative base-period flows (1966 to 1995).

The annual review must address the following topics:

- New groundwater appropriations
- Mitigation activity
- Mitigation bank activity
- Streamflow impacts
- Consultation with the Oregon Department of Fish and Wildlife (ODFW), Oregon Parks and Recreation Department, Oregon Department of Environmental Quality (ODEQ), and Oregon Department of State Lands

 Determination of whether the scenic waterway and instream water right flows in the Deschutes Basin continue to be met on at least an equivalent or more frequent basis.

# **Report Contents**

This report incorporates all the elements required for the annual report, as outlined in OAR 690-505-0500(3) and OAR 690-521-0600.

# Agency Comments

The Department provided a draft of the report for review by the agencies listed above on November 7, 2024. Comments were provided by ODFW and ODEQ (see Appendix 3) and are summarized below.

Issues and concerns raised by ODFW include:

- Improvements to the Program must be made prior to the allocation cap being lifted.
- Water accounting and monitoring should be improved to ensure mitigation is providing a true offset for impacts and remains available as "wet water" in perpetuity. Such improvements may require additional gages, flow measurement, and modeling beyond what is currently in place.
- Mitigation under the Program should directly offset the impact by being located upstream of the impacted reach, not within a larger "Zone of Impact."
- Impacts of increased groundwater use under the Mitigation Program to local springs, which are an important source of cold-water inputs to streams by providing cold-water refugia and other habitat benefits for fish.

- The effect of the Mitigation Program on streamflows outside of the irrigation season.
- Continue working with other state agencies to seek funding for research, development and implementation of these concerns.

Issues and concerns raised by ODEQ include:

- The issues raised in previous Annual Report reviews are still relevant to the current report and are included below:
  - Allocation cap should not be lifted at this time.
  - The model should consider actual streamflows, actual frequency of instream water right being met, groundwater level declines, water quality, and aquatic habitat.
  - Time lag of impacts from groundwater withdrawals.
  - Spatial consideration of impacts, recommendation for mitigation projects to be sited upstream from groundwater withdrawals. Currently, mitigation credits may come from anywhere within the Zone of impact.
  - Accuracy of accounting, consumptive use coefficients used to determine mitigation requirements and credits.

# Allocation Cap

To limit the amount of impact on surface water flows, the mitigation program established a 200 CFS cap on the amount of water that may be allocated to new groundwater use. At the end of 2022 the amount of water use approved under the cap was 155.54 CFS. The allocation cap restriction may only be lifted or modified by the Commission if the Department's evaluation determines that scenic waterway and instream water right flows are being met on at least an equivalent or more frequent basis as compared to long-term, representative base-period flows (1966 to 1995) and meets the Department's mission to sustainably protect and manage the resource.

The CFS amount deducted from the 200 CFS cap is the amount of water (in CFS) allowed in the Department's final order approving an application requesting the use of groundwater located within the Deschutes Groundwater Study Area (DGWSA). Final orders set a five-year limit for the applicant to provide the required mitigation (i.e., the mitigation obligation). Once the applicant meets their mitigation obligation, the Department issues the groundwater permit. If the mitigation is not provided by the deadline, the final order expires and the CFS is added back into the cap.

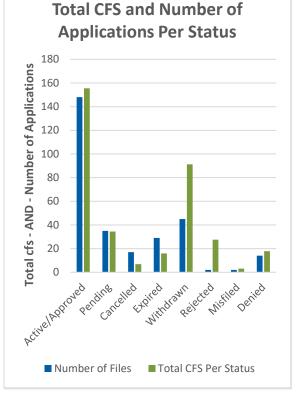
All actions that allow CFS to be added back into the cap are:

- Rates associated with offsets pursuant to 690-505-0610(8);
- Rates associated with applications withdrawn after final order issuance pursuant to 690-505-0620;
- Portions of rates approved by a final order issued under 690-505-0620, but not included in a water right permit that is issued following satisfaction of the mitigation requirement;
- Rates associated with expired final orders pursuant to 690-505-0620(2);
- Portions of rates associated with permits issued pursuant to 690-505-0620 and subsequently cancelled;
- Rates associated with certificates issued pursuant to 690-505-0620 and subsequently canceled; and
- 7. Rates associated with the portion of use originally authorized under a permit

issued pursuant to 690-505-0620, but not included in a subsequent certificate.

Since the adoption of the rules in September 2002 through the end of 2022, approximately 292 groundwater applications have been submitted to the Department within the DGWSA totaling approximately 352.36 CFS; however, approximately 162.42 CFS has been added back to the cap for various reasons (outlined above). Therefore, as of the end of 2022, the total allocated CFS remains under the 200 CFS cap.

Figure 1 shows the status of all the applications received and the total amount of CFS associated with each action category. These action categories include the active and pending applications, as well as the cancelled, expired, withdrawn, rejected, misfiled, and denied applications.



*Figure 1: Total CFS & Number of Applications Submitted by end of 2022* 

# 2022 Mitigation Activity

For each groundwater permit application submitted, the Department reviews the application and notifies the applicant of their "mitigation obligation." The "mitigation obligation" is expressed as a volume of water in acre feet and is equivalent to the consumptive portion of the use proposed in the permit application. Groundwater applicants mitigate for this consumptive portion of their proposed use. Consumptive use is calculated using average consumptive use data for different types of use (i.e., irrigation, municipal, etc.) obtained from the U.S. Geological Survey and OWRD's own information on consumptive use.

Mitigation must be provided in the amount (mitigation water) and in the location (zone of impact) specified by the Department. Each applicant has five years from the date the final order is issued to provide the required mitigation. Applicants must provide mitigation before a new permit may be issued.

# New Groundwater appropriations and Mitigation Activities as of end of 2022

### A. Active Permits Issued:

- 145 permits issued
- 44 of which are certificated
- B. Active Final Orders Issued:
  - 12 final orders
- C. Applications Pending with No Final Order:
  - 35 applications
- D. Allocation cap summary (Figure 2):
  - 155.54 CFS total CFS allocated under cap (permits and final orders)
  - 34.40 CFS pending applications not yet deducted from 200 CFS cap
  - 10.06 CFS remaining CFS if all pending applications were approved

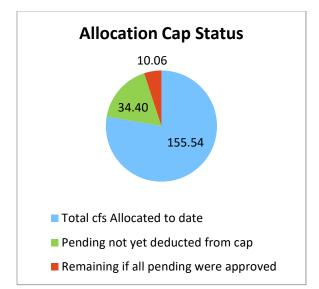
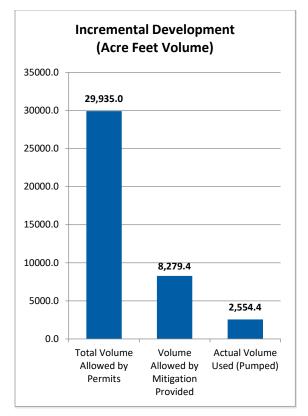


Figure 2: Allocation Cap Status

E. Incremental Development Plans: By rule, the Department may allow a municipal or quasi-municipal applicant to satisfy their mitigation obligation incrementally as the water use is developed, rather than requiring mitigation to be provided before the permit is issued. These applicants must report annually to the Department on the volume of water used and the source of mitigation. There are 22 permits that have incremental development plans.

A summary of water use for municipal and quasi-municipal permit holders with incremental development plans is provided in Figure 3. This figure is a comparison between the amount that these water users are authorized to use at full development, the amount of water they could use based on how much mitigation they have provided through 2022, and the amount of water they actually used during 2022. Overall, in 2022, more mitigation was provided by entities with incremental development plans than was needed to mitigate for their actual use.





F. Mitigation Activity: For each mitigation project submitted, the Department identifies the amount of water resulting from the project that can be used for mitigation purposes. The resulting protectable water, expressed in acre feet, is also referred to as "mitigation water" or "mitigation credits." One acre foot of mitigation water is equal to one mitigation credit. For each project submitted, the Department also identifies the zone or zones of impact in which the mitigation water provides instream benefits and may be used for mitigation purposes. Mitigation for active groundwater permits and certificates issued by the Department under the Mitigation Program is provided through permanent instream transfers and temporary instream leases (Figure 4). Mitigation credits established by a

Mitigation Project are considered used when assigned to a groundwater application or permit.

- As of the end of 2022 there are 73 total active mitigation projects, consisting of:
  - 52 permanent instream transfer projects;
  - 20 temporary instream lease projects; and
  - 1 permanent reservoir release for City of Prineville.

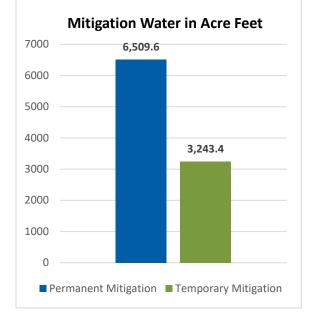


Figure 4: Mitigation Water

 Figure 5 shows the established mitigation broken out by zone of impact. The reason these amounts are more than the established amounts is because mitigation is sometimes established in multiple zones (i.e., 10 credits established in the middle and general zones, but only a maximum total of 10 credits can be used in either the middle or general zones, or a combination thereof).

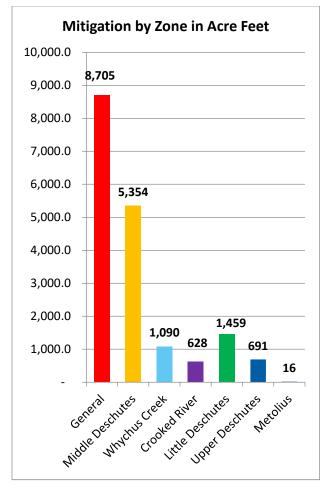


Figure 5: Mitigation by Zone

The above Figures 4 and 5 do not include the 5,100.0 AF of permanent mitigation credits issued to the City of Prineville as identified in Water Right Certificate 94149. These mitigation credits may be used to satisfy the mitigation obligation of a groundwater use found to impact surface water flows in the General and/or Crooked River Zones of Impact and are reported and managed on a water year schedule (Oct. 1 - Sept. 30). These mitigation credits may only be used by the City of Prineville and cannot be conveyed to any other person or mitigation bank. As of the writing of this report, 972.0 AF of these mitigation credits have been assigned to City of Prineville incremental groundwater permits.

- G. Mitigation Banks: Mitigation banks must submit an annual report detailing all credit transactions and activities for the preceding calendar year. As of the end of the 2022 year, there are three mitigation banks:
  - Deschutes River Conservancy Mitigation Bank (DRC Mitigation Bank);
  - Deschutes Irrigation, LLC; and
  - Arnold Irrigation District Mitigation Bank.
- H. Mitigation Bank Activity:

## DRCMB

- Filed the required annual report
- Submitted 20 instream leases in 2022
- Maintained sufficient "reserve" credits to cover temporary mitigation credits used by groundwater permit holders in each zone of impact. (For each temporary mitigation credit used to satisfy all or part of the mitigation obligation of a groundwater permit, a mitigation bank is required to keep a matching credit in reserve.)
- Figure 6 shows the amount of temporary mitigation credits generated by the DRCMB, the credits allocated to a groundwater permit, and the reserve credits DRCMB is required to keep.

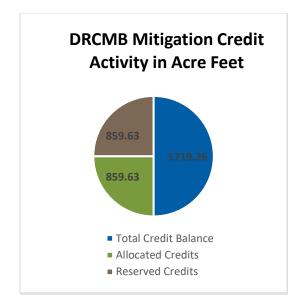


Figure 6: DRCMB Mitigation Credit Activity in Acre Feet

As of the end of the 2022 year, the following mitigation banks had not yet undertaken any mitigation activity. The mitigation program rules do not require a mitigation bank to be active to remain in place.

### **Deschutes Irrigation, LLC**

### Arnold Irrigation District Mitigation Bank

### **Delinquent Permits:**

Instream leases are one of the identified sources of mitigation under OAR 690-521-0300(1)(b); however, this temporary mitigation (instream lease-based mitigation) may only be established through a Mitigation Bank chartered by the Oregon Water Resources Commission. To date, temporary mitigation has been available from the DRC Mitigation Bank, which primarily brokers temporary mitigation credits available through final orders issued by OWRD approving instream lease applications. Some permit holders who have used temporary mitigation in the past failed to continue providing that mitigation. Every year, the Department and DRC Mitigation Bank each

notify permit holders who have failed to provide mitigation.

By rule and by permit condition, every groundwater user with a permit issued under the Deschutes Basin Groundwater Mitigation Program is required to maintain mitigation for the life of the groundwater use. Ultimately, the permit holder is responsible for maintaining any temporary mitigation being used annually with the DRC Mitigation Bank.

Since groundwater permit holders using temporary mitigation credits need to obtain mitigation credits on an annual basis, there is the risk of groundwater users failing to maintain the required mitigation. Under the Mitigation Program, when a permit holder fails to maintain their source of mitigation, OWRD is required, under OAR 690-505-0620, to regulate the use, propose denial of any permit extension request, and propose cancellation of the permit.

Figure 7 below shows the number of confirmed delinquent permits each year during a five-year period from 2018 through 2022. During the 2022 year, after being notified, all five delinquent permit holders rectified the situation by providing the required annual mitigation.

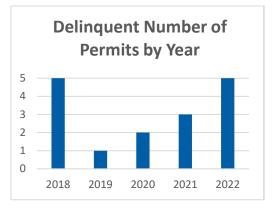


Figure 7: Delinquent Number of Permits by Year

# Mitigation Effects on Streamflow

To evaluate the impact of the mitigation program on scenic waterway flows and instream water right flows, the Department developed a streamflow modeling program based on gaging records from the 1966-1995 base period, a pre-mitigation program time frame. The model simulates the long term (i.e., steady-state) estimated hydrologic effects of mitigation credits and debits on the historical records at the gaged locations across the basin, and then evaluates how often the instream flow requirements (ISFR) are met based on this adjusted streamflow data compared to the original flow records (Cooper, 2008). A modeling approach was used because the steady-state, long-term impact of streamflow to mitigation-related activities may take years or even decades to be reflected as actual changes in streamflow (Gannett and Lite, 2004), plus climate variability generally masks the streamflow response to mitigation activities at most locations (Cooper, 2008). The simulations do not reflect activities affecting streamflow outside of the mitigation program, such as canal piping/lining.

Analysis of the 2022 data demonstrates that, on an annual basis, the simulated change in percent of time instream flow requirements (% ISFR) are met at the evaluation points ranges from -0.17% to +1.29%. Similarly, the overall annual change in mean streamflow ranges from -0.006 CFS to +27.4 CFS (Appendix 4).

Consistent with previous annual reports, the seasonal change in the quantity of streamflow (CFS) continues to be negative at all evaluation points during the non-irrigation season and positive at all evaluation points during the irrigation season, reflecting the general timing difference between the hydrologic impacts to streamflow of credits (irrigation season) and debits (year-around).

Similarly, the changes in % ISFR met generally follows this same seasonality as changes in streamflow quantity. The magnitude of change in % ISFR met varies by month and site, reflecting how close historical flows were to the ISFR prior to the mitigation program. If the historical flows were close to the ISFR for a given evaluation site, then a small change in flows can result in a large change in % ISFR is met, while the opposite is true if the historical flows differed greatly from the ISFR.

Again, this difference in seasonal results is expected due to the inherent timing difference between when the hydrologic effects of debits and credits reach the stream network. Debits (new groundwater withdrawals) produce a decrease in streamflow year-round due to the pumping effects on groundwater being attenuated in time (Gannett and Lite, 2004). Credit (instream leases and instream transfers of surface water rights) effects are immediate and occur primarily during the irrigation season.

# Summary

The Department continues working to effectively implement the Deschutes Basin Groundwater Mitigation Program. Groundwater permit applications and mitigation projects are moving through the required processes. Overall, the program continues to produce positive benefits as more mitigation water has been approved and protected instream than is required for active groundwater permits and certificates.

In response to comments and questions received from sister agencies (as outlined in

"Agency Comments" above and provided in Appendix 3 attached to this report), the Department understands the concerns brought forth regarding impacts to cold-water springs, the zonal mitigation impacts, model accounting and climate change, and impacts during the non-irrigation season. From the beginning of the Deschutes Mitigation Program, however, it was determined that the program should be structured in such a way so that it was a manageable system for OWRD to track and maintain long-term. OWRD considered the goals of the Mitigation Program, the Deschutes Groundwater Mitigation Flow Model, and the base period flows (1966-1995) and created sub-zones and consumptive use coefficients to keep the Deschutes Mitigation Program manageable. Seasonal uses were allowed to generate credits that could then be purchased to mitigate for year-round uses.

OWRD is continuing to work with ODFW, ODEQ, and interested parties to address these challenging issues. Other concerns may need to be addressed through other venues and initiatives to develop and implement a basin-wide water management plan.

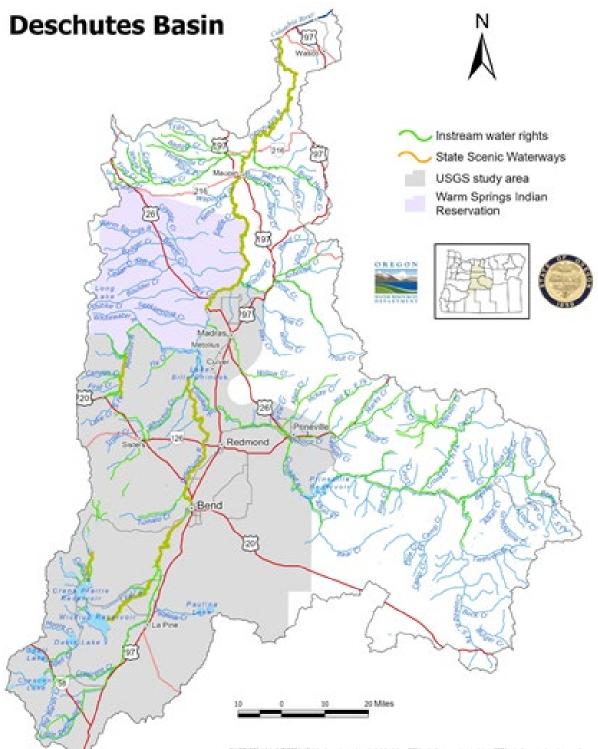
The Deschutes Groundwater Mitigation Program is a performance based, adaptive approach to managing new groundwater permits in the Deschutes Groundwater Study Area. As part of this adaptive approach, the program included a cap on how much new groundwater use could be approved. The Department may issue final orders approving groundwater permit applications for a cumulative total of up to 200 CFS. This limitation is one of the elements of the program that is to be reviewed as part of the program evaluation. The 200 CFS cap represents the rate up to which water may be withdrawn from the groundwater resource. It is important to note that this rate-based limitation is different from the consumptive use portion (in acre feet) for which groundwater permit applicants must provide mitigation.

As discussed in the "Allocation Cap" section of this report, the quantity of water (CFS) allocated under the cap fluctuates up and down from year to year as a result of various administrative actions (i.e., denial, cancellation, expiration, withdrawal, etc.) which add back previously deducted CFS to the cap. As of the end of 2022, 155.54 CFS was allocated under the cap.

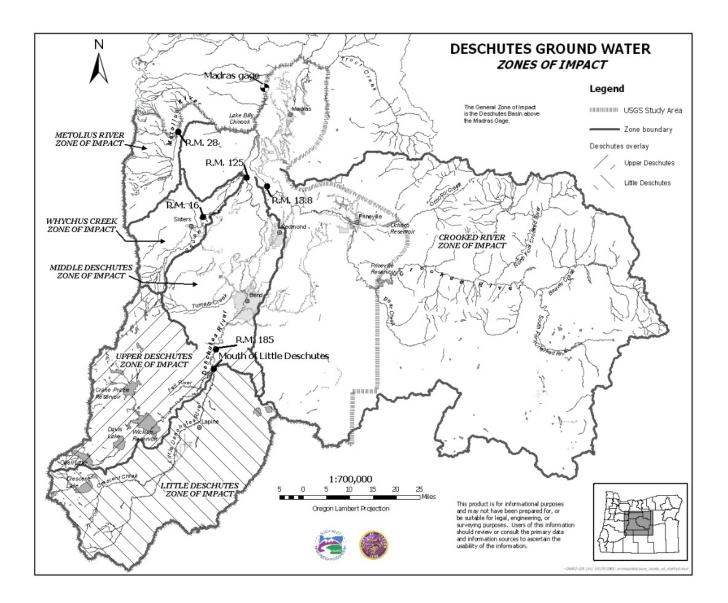
Given the status of the 200 CFS allocation cap, the Department understands there is much interest and diverse opinion in how the future of the Deschutes Basin Groundwater Mitigation Program should unfold. The Department has prioritized working through the many complex issues related to the Program. Both sister-agencies and interested parties have been invited to engage in the OWRD process to evaluate modifications to the existing Deschutes Basin Groundwater Mitigation Program.

# Appendices

- Deschutes Basin Groundwater Study Area Map
- Deschutes Basin Groundwater Study Area Zone of Impact Map
- 3. Comments from ODFW and ODEQ
- 4. Summary of Modeled Streamflow for Water Year Ending September 2022



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Department of Fish and Wildlife Habitat Division 4034 Fairview Industrial Dr SE Salem, OR 97302-1142 Voice: 503-947-6000 Fax: 503-947-6330 Internet: www.dfw.state.or.us

December 20, 2024



Sarah Henderson Flow Restoration Program Coordinator, Transfer and Conservation Division Oregon Water Resources Department 725 Summer Street NE, Suite A Salem, OR 97301-1271

### RE: ODFW Comments on the DRAFT 2022 Annual Review of the Deschutes Basin Groundwater Mitigation Program

Dear Ms. Henderson,

The Oregon Department of Fish and Wildlife (ODFW) appreciates the opportunity to provide comments on the DRAFT 2022 Annual Review of the Deschutes Basin Groundwater Mitigation Program (Program). Overall, ODFW agrees that the Program has been successful in maintaining and improving flows for State Scenic Waterways and senior water rights, particularly instream water rights, during the irrigation season. However, as we acquire more information about the additional detrimental impacts to fish and wildlife expected in the future from a changing climate, we have increasing concerns about water accounting, the impacts to springs, and decreases in flow during the non-irrigation season.

Since inception of the Program, ODFW has repeatedly submitted comments that address our ongoing concerns and have discussed potential solutions with the Oregon Water Resources Department (OWRD) many times. As our concerns are already on record, please refer to past comment letters for details (e.g., ODFW Comments on the DRAFT 2021 Annual Review of the Deschutes Basin Groundwater Mitigation Program, January 6, 2023). We are pleased to currently be engaged in thorough discussions with OWRD for Program improvements as we get closer to the allocation cap being reached and the Program sunset in 2029. ODFW looks forward to continuing conversations and advising the agency on ways to strengthen the efficacy of the Program to improve and protect instream flow for fish, wildlife, and their habitats.

As in the past, ODFW will review our primary concerns here for the record. In general, and as currently being discussed with OWRD, ODFW recommends these tangible improvements to the

> To protect and enhance Oregon's fish and wildlife and their habitats for use and enjoyment by present and future generations.

Page 2 of 2

Program be addressed before the 200 cfs cap on the Program is lifted and/or the Program is reauthorized:

- Water Accounting and Impacts of Climate Change: ODFW would like to see a
  comparison of the streamflow model reporting and current, measured
  improvements/declines in streamflow. The draft identifies success because 6,509.6 AF of
  instream flow has been permanently restored to the Deschutes River and its tributaries. A
  comparison showing how this amount truly offsets the impacts from new groundwater
  use and information on the reliability of the mitigation water in regard to its physical and
  regulatory availability would tell a more complete story.
- Zonal Mitigation: ODFW recommends mitigation under the Program directly offset the impact by being located upstream of the impacted reach.
- Impacts to Springs: ODFW would like to discuss the proposed path forward regarding combined efforts to obtain funding for a study aimed at identifying impacts to the springs within the Study Area and to understand whether any impacts are the direct result of the mitigation program.
- Impacts During the Non-Irrigation Season: ODFW recommends providing a more complete picture when communicating the efficacy of the Program at meeting key goals by looking at benefits/impacts to flow during the non-irrigation season as well as the irrigation season. Concluding that the Program has been successful in meeting key goals by relying on assessments on an annual/yearly basis is misleading given the Program allows declines in flow (and potential impacts to the Scenic Waterway and senior water rights) during the non-irrigation season.

Thank you for the chance to comment. We look forward to revisiting Program goals and rule language and pursuing solutions to our concerns in upcoming discussions as OWRD plans for Program updates. In the meantime, ODFW recommends the 200 cfs cap not be lifted until these issues are resolved, and the Commission can determine that scenic waterway flows and instream water right flows in the Deschutes Basin continue to be met year round (including during the non-irrigation season) on at least an equivalent or more frequent basis as compared to long-term, representative base period flows established by the Department per OAR <u>690-505-0500(4)</u>. In the meantime, the 200 cfs cap should not be modified or the Program reauthorized until these concerns are resolved. If you have any questions, please contact me at 971-280-3773.

Sincerely,

Denette L Saucera

Danette Faucera, Water Policy Coordinator

### **HENDERSON Sarah A \* WRD**

From:	HENDRICKSON Cole * DEQ
Sent:	Monday, December 9, 2024 1:29 PM
То:	HENDERSON Sarah A * WRD
Subject:	RE: ACTION NEEDED: Review / Comments requested: DRAFT Deschutes GW Mitigation
-	Program 2022 Annual Review

Hi Sarah,

Due to a lack of staff time, DEQ will not have the capacity to review the Draft Deschutes GW Mitigation Program Annual Report for 2022. The issues DEQ has raised in previous Annual Report reviews are still relevant to the current report. We plan to support the program through collaboration surrounding the update being led by Emelie McKain.

Thank you,

Cole Hendrickson he/him Integrated Water Resources Program Coordinator Integrated Water Resources Specialist Eastern Region (Bend Office) <u>Cole.Hendrickson@DEQ.Oregon.Gov</u> Cell: 458-256-9155



# **Streamflow Model Data**

The data presented in the following tables are from the Department's Deschutes Mitigation model. The "before mitigation" or baseline condition of streams in the Deschutes Basin has been determined from streamflows measured during water years 1966 to 1995. The model has been developed to mathematically estimate the change in streamflow expected due to mitigation (credits) and groundwater allocation (debits). The model is designed to reflect the theoretical, steady-state response of streamflow to mitigation-related activities only. In some cases, the actual hydrologic response to mitigation activities, such as new groundwater pumping, may take years or decades to be reflected as changes in streamflow.

CHANGE IN PERCENT OF TIME INSTREAM REQUIREMENTS ARE MET IN THE DESCHUTES BASIN AS A RESULT OF MITIGATED GROUNDWATER USE

Effective Date: 9/30/2022

Time: 1		utes River	at Mouth Date:	10/03/2024
Month	Base Line	Mitigated	Change in	
	%	%	Percentage  %	Change   %
JAN	93.20	92.90	-0.32	-0.35
FEB	90.80	90.20	-0.59	-0.65
MAR	95.30	95.10	-0.22	-0.23
APR	99.90	99.90	0.00	0.00
MAY	99.10	99.50	0.32	0.32
NOC	98.00	98.80	0.78	0.79
JUL	91.00	93.40	2.47	2.65
AUG	100.00	100.00	0.00	0.00
SEP	98.10	98.20	0.11	0.11
OCT	97.40	97.50	0.11	0.11
NOV	99.90	99.80	-0.11	-0.11
DEC	91.70	91.10	-0.64	-0.71
ANNUAL	96.20	96.40	0.16	0.17

#### CHANGE IN MEAN STREAM FLOW (CFS)

IN THE DESCHUTES BASIN AS A RESULT OF MITIGATED GROUNDWATER USE

#### Effective Date: 9/30/2022

Time: 1		utes River at	t Mouth Date:	10/03/2024
Month	Base Line	Mitigated	Change	Percent
1 1			in cfs	Change
1 1	cfs	cfs	cfs	%
JAN	6910.0	6880.0	-28.7	-0.42
FEB	7080.0	7050.0	-28.7	-0.41
MAR	7250.0	7220.0	-28.6	-0.40
APR	6640.0	6640.0	-1.10	-0.02
MAY	5800.0	5830.0	25.4	0.44
JUN	5200.0	5240.0	44.8	0.85
JUL	4590.0	4640.0	51.1	1.10
AUG	4380.0	4430.0	49.2	1.11
SEP	4430.0	4470.0	34.3	0.77
OCT	4710.0	4710.0	4.16	0.09
NOV	5390.0	5360.0	-28.4	-0.53
DEC	6190.0	6160.0	-28.7	-0.47
ANNUAL	5710.0	5710.0	5.57	0.10

CHANGE IN PERCENT OF TIME INSTREAM REQUIREMENTS ARE MET IN THE DESCHUTES BASIN AS A RESULT OF MITIGATED GROUNDWATER USE

### Effective Date: 9/30/2022

Deschutes River below Pelton Dam				
Time: 1	.3:35		Date:	10/03/2024
Month    	Base Line    %	Mitigated %	Change in Percentage %	Percent  Change  %
JAN	64.70	63.90	-0.86	-1.35
FEB	63.00	61.50	-1.53	-2.50
MAR	67.80	66.70	-1.18	-1.77
APR	71.40	71.40	0.00	0.00
MAY	58.80	64.10	5.27	8.22
JUN	55.60	60.80	5.22	8.59
JUL	41.00	46.10	5.16	11.20
AUG	98.20	99.50	1.29	1.30
SEP	66.80	69.40	2.67	3.84
0CT	81.10	81.10	0.00	0.00
NOV	97.20	97.20	0.00	0.00
DEC	66.10	65.40	-0.75	-1.15
ANNUAL	69.30	70.60	1.29	1.82

CHANGE IN MEAN STREAM FLOW (CFS) IN THE DESCHUTES BASIN AS A RESULT OF MITIGATED GROUNDWATER USE

### Effective Date: 9/30/2022

Deschutes River below Pelton Dam				
Time: 1	3:36		Date:	10/03/2024
Month	Base Line	Mitigated	Change	
1 1			in cfs	
	cfs	cfs	cfs	%
				1
JAN	5240.0	5210.0	-28.7	-0.55
FEB	5190.0	5160.0	-28.7	-0.56
MAR	5520.0	5490.0	-28.6	-0.52
APR	5130.0	5130.0	-1.10	-0.02
MAY	4420.0	4450.0	25.4	0.57
JUN	4230.0	4270.0	44.8	1.05
JUL	4020.0	4070.0	51.1	1.25
AUG	3940.0	3990.0	49.2	1.24
SEP	3980.0	4010.0	34.3	0.86
OCT	4190.0	4190.0	4.16	0.10
NOV	4680.0	4650.0	-28.4	-0.61
DEC	5030.0	5000.0	-28.7	-0.57
ANNUAL	4630.0	4630.0	5.57	0.12

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CHANGE IN PERCENT OF TIME INSTREAM REQUIREMENTS ARE MET IN THE DESCHUTES BASIN AS A RESULT OF MITIGATED GROUNDWATER USE

Effective Date: 9/30/2022

Metolius River at Lake Billy Chinook Time: 13:36 Date: 10/03/2024				
Month    	Base Line    %	Mitigated %	Change in  Percentage  %	
JAN    FEB   MAR   APR   MAY   JUN   JUL   JUL   JUL   AUG   SEP   OCT   NOV   DEC   ANNUAL	97.70 99.20 99.80 100.00 100.00 100.00 100.00 100.00 100.00 100.00 100.00 100.00 99.70		0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.0	0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00
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CHANGE IN MEAN STREAM FLOW (CFS) IN THE DESCHUTES BASIN AS A RESULT OF MITIGATED GROUNDWATER USE

### Effective Date: 9/30/2022

Time: 1		ver at Lake	-	ook 10/03/2024
Month	Base Line	Mitigated	Change	Percent
1 1			in cfs	Change
	cfs	cfs	cfs	%
JAN	1510.0	1510.0	-0.044	0.00
FEB	1560.0	1560.0	-0.044	0.00
MAR	1560.0	1560.0	-0.044	0.00
APR	1520.0	1520.0	-0.044	0.00
MAY	1560.0	1560.0	0.056	0.00
JUN	1590.0	1590.0	0.056	0.00
JUL	1490.0	1490.0	0.056	0.00
AUG	1400.0	1400.0	0.056	0.00
SEP	1350.0	1350.0	0.006	0.00
0CT	1330.0	1330.0	-0.044	0.00
NOV	1370.0	1370.0	-0.044	0.00
DEC	1450.0	1450.0	-0.044	0.00
ANNUAL	1470.0	1470.0	-0.006	0.00

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CHANGE IN PERCENT OF TIME INSTREAM REQUIREMENTS ARE MET IN THE DESCHUTES BASIN AS A RESULT OF MITIGATED GROUNDWATER USE

### Effective Date: 9/30/2022

D Time: 1		ver at Lake	e Billy Chin Date:	ook 10/03/2024
Month	Base Line	Mitigated	Change in	Percent
1 1			Percentage	Change
1 1	%	%	%	%
JAN	100.00	100.00	0.00	0.00
FEB	100.00	100.00	0.00	
MAR	100.00	100.00	0.00	0.00
APR	97.10	100.00	2.89	2.89
MAY	100.00	100.00	0.00	0.00
JUN	100.00	100.00	0.00	0.00
JUL	100.00	100.00	0.00	0.00
AUG	100.00	100.00	0.00	0.00
SEP	100.00	100.00	0.00	0.00
OCT	94.40	99.90	5.48	5.49
NOV	100.00	100.00	0.00	0.00
DEC	100.00	100.00	0.00	0.00
ANNUAL	99.30	100.00	0.70	0.70

CHANGE IN MEAN STREAM FLOW (CFS) IN THE DESCHUTES BASIN AS A RESULT OF MITIGATED GROUNDWATER USE

### Effective Date: 9/30/2022

D Time: 1	eschutes Ri 3:37	ver at Lake	-	ook 10/03/2024
Month  	Base Line    cfs	-	in cfs	Percent  Change  %
JAN FEB MAR APR JUN JUN JUL AUG SEP OCT NOV DEC	1320.0 1300.0 843.0 552.0 606.0 550.0 519.0 537.0 725.0 1130.0 1220.0	1290.0 860.0 595.0 666.0 616.0 584.0 587.0 745.0 1120.0 1210.0	-9.61 -9.47 17.6 43.1 59.8 66.1 64.3 49.4 20.1 -9.61 -9.61	-0.73 -0.74 2.05 7.24 8.98 10.70 11.00 8.41 2.69 -0.86 -0.79
ANNUAL	881.0	904.0	22.9	2.53

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CHANGE IN PERCENT OF TIME INSTREAM REQUIREMENTS ARE MET IN THE DESCHUTES BASIN AS A RESULT OF MITIGATED GROUNDWATER USE

#### Effective Date: 9/30/2022

Time: 1	Deschutes 3:37	River at L	ower Bridge. Date:	10/03/2024
Month	Base Line	Mitigated	Change in	
	%	 %	Percentage  %	Change   %
JAN	60.50	59.00	-1.51	-2.55
FEB	63.80	62.50	-1.30	-2.08
MAR	68.30	67.70	-0.54	-0.79
APR	23.60	25.10	1.56	6.19
MAY	1.29	1.72	0.43	25.00
JUN	2.11	3.67	1.56	42.40
j JUL	0.11	0.97	0.86	88.90
AUG	0.86	2.15	1.29	60.00
SEP	3.67	4.89	1.22	25.00
OCT	13.00	14.20	1.18	8.33
NOV	52.20	50.90	-1.33	-2.62
DEC	56.30	55.60	-0.75	-1.35
ANNUAL	28.60	28.90	0.23	0.79

CHANGE IN MEAN STREAM FLOW (CFS) IN THE DESCHUTES BASIN AS A RESULT OF MITIGATED GROUNDWATER USE

### Effective Date: 9/30/2022

Time: 1	Deschutes 3:38	River at L	ower Bridge Date:	
Month	Base Line	Mitigated	Change	
1 1			in cfs	Change
1 1	cfs	cfs	cfs	%
JAN	683.0	681.0	-2.07	-0.31
FEB	705.0	703.0	-2.07	-0.29
MAR	714.0	712.0	-2.07	-0.29
APR	299.0	323.0	24.3	7.53
MAY	51.2	99.2	48.1	48.40
UNC	50.5	112.0	62.0	55.10
JUL	42.6	107.0	64.6	60.30
AUG	46.2	110.0	63.9	58.00
SEP	61.0	110.0	49.3	44.70
OCT	222.0	247.0	25.8	10.40
NOV	551.0	549.0	-2.07	-0.38
DEC	614.0	612.0	-2.07	-0.34
ANNUAL	335.0	362.0	27.4	7.58

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CHANGE IN PERCENT OF TIME INSTREAM REQUIREMENTS ARE MET IN THE DESCHUTES BASIN AS A RESULT OF MITIGATED GROUNDWATER USE

### Effective Date: 9/30/2022

Deschutes River above Diversion Dam at Bend Time: 13:38 Date: 10/03/2024				
Month  	Base Line   %	Ū	Change in Percentage %	Change
JAN FEB MAR APR JUN JUN JUL JUL AUG SEP OCT NOV DEC	37.30 40.00 42.90 73.20 97.00 100.00 100.00 97.00 54.60 29.00 35.70	39.30 42.20 73.80 97.50 100.00 100.00 98.20 56.30 28.70	-0.71 -0.75 0.56 0.54 0.00 0.00 1.22 1.72 -0.33	-1.80 -1.79 0.75 0.55 0.00 0.00 1.24 3.05 -1.16
ANNUAL	67.40			

CHANGE IN MEAN STREAM FLOW (CFS) IN THE DESCHUTES BASIN AS A RESULT OF MITIGATED GROUNDWATER USE

### Effective Date: 9/30/2022

Des Time: 1		r above Div		at Bend 10/03/2024
Month	Base Line	Mitigated	Change	Percent
1 1			in cfs	Change
1 1	cfs	cfs	cfs	%
JAN	712.0	710.0	-2.04	-0.29
FEB	738.0	736.0	-2.04	-0.28
MAR	781.0	779.0	-2.04	-0.26
APR	877.0	884.0	7.14	0.81
MAY	1180.0	1190.0	15.3	1.28
JUN	1360.0	1380.0	20.1	1.46
JUL	1440.0	1460.0	23.4	1.60
AUG	1290.0	1310.0	22.9	1.75
SEP	1090.0	1110.0	17.6	1.59
OCT	721.0	731.0	9.69	1.33
NOV	590.0	588.0	-2.04	-0.35
DEC	650.0	648.0	-2.04	-0.31
ANNUAL	953.0	962.0	8.89	0.93

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CHANGE IN PERCENT OF TIME INSTREAM REQUIREMENTS ARE MET IN THE DESCHUTES BASIN AS A RESULT OF MITIGATED GROUNDWATER USE

Effective Date: 9/30/2022

Deschutes River at Benham Falls				
Time: 1	3:38		Date:	10/03/2024
Month  	Base Line    %	Mitigated %	Change in Percentage %	
JAN	43.40	43.20	-0.22	-0.50
FEB	54.50	54.40	-0.12	-0.22
MAR	32.50	31.40	-1.08	-3.42
APR	69.60	69.60	0.00	0.00
MAY	78.10	78.10	0.00	0.00
UUC	92.60	92.60	0.00	0.00
JUL	96.80	96.80	0.00	0.00
AUG	94.50	94.60	0.11	0.11
SEP	67.80	67.90	0.11	0.16
OCT	54.00	54.00	0.00	0.00
NOV	35.90	35.70	-0.22	-0.62
DEC	44.60	44.60	0.00	0.00
ANNUAL	63.70	63.60	-0.12	-0.19

CHANGE IN MEAN STREAM FLOW (CFS) IN THE DESCHUTES BASIN AS A RESULT OF MITIGATED GROUNDWATER USE

### Effective Date: 9/30/2022

Deschutes River at Benham Falls				
Time: 1	3:39		Date:	10/03/2024
Month	Base Line	Mitigated	Change	Percent
1 1			in cfs	Change
	cfs	cfs	cfs	%
JAN	814.0	812.0	-2.02	-0.25
FEB	845.0	843.0	-2.02	-0.24
MAR	901.0	899.0	-2.02	-0.22
APR	1240.0	1240.0	-0.949	-0.08
MAY	1850.0	1850.0	-0.128	-0.01
JUN	2100.0	2100.0	0.553	0.03
JUL	2200.0	2200.0	3.89	0.18
AUG	2040.0	2040.0	3.42	0.17
SEP	1730.0	1740.0	2.77	0.16
0CT	1000.0	1010.0	2.60	0.26
NOV	685.0	683.0	-2.02	-0.30
DEC	752.0	750.0	-2.02	-0.27
ANNUAL	1350.0	1350.0	0.186	0.01

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CHANGE IN PERCENT OF TIME INSTREAM REQUIREMENTS ARE MET IN THE DESCHUTES BASIN AS A RESULT OF MITIGATED GROUNDWATER USE

### Effective Date: 9/30/2022

Little Deschutes River at mouth Time: 13:39 Date: 10/03/2024				
Month	Base Line	Mitigated	Change in	Percent
1 1			Percentage	Change
1 1	%	%	%	%
JAN	22.90	20.80	-2.15	-10.40
FEB	37.30	34.60	-2.72	-7.85
MAR	27.40	27.10	-0.32	-1.19
APR	45.20	45.00	-0.22	-0.49
MAY	55.90	55.80	-0.11	-0.19
JUN	56.60	56.60	0.00	0.00
JUL	85.10	86.90	1.83	2.10
AUG	93.90	94.30	0.43	0.46
SEP	72.00	73.10	1.11	1.52
OCT	11.60	12.80	1.18	9.24
NOV	14.70	14.00	-0.67	-4.76
DEC	20.30	19.70	-0.64	-3.28
ANNUAL	45.30	45.10	-0.17	-0.38

CHANGE IN MEAN STREAM FLOW (CFS) IN THE DESCHUTES BASIN AS A RESULT OF MITIGATED GROUNDWATER USE

### Effective Date: 9/30/2022

Little Deschutes River at mouth Time: 13:39 Date: 10/03/2024							
Month	Base Line	Mitigated					
	cfs	cfs	in cfs cfs				
JAN	162.0	160.0	-1.99	-1.25			
FEB	183.0	181.0	-1.99				
MAR	219.0	217.0	-1.99	-0.92			
APR	262.0	261.0	-0.918	-0.35			
MAY	329.0	329.0	-0.097	-0.03			
JUN	298.0	299.0	0.584	0.19			
JUL	230.0	234.0	3.92	1.68			
AUG	200.0	203.0	3.45	1.70			
SEP	144.0	146.0	2.80	1.91			
OCT	76.7	79.3	2.63	3.31			
NOV	108.0	106.0	-1.99	-1.88			
DEC	142.0	140.0	-1.99	-1.42			
ANNUAL	196.0	196.0	0.217	0.11			

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CHANGE IN PERCENT OF TIME INSTREAM REQUIREMENTS ARE MET IN THE DESCHUTES BASIN AS A RESULT OF MITIGATED GROUNDWATER USE

### Effective Date: 9/30/2022

Deschutes River above Little Deschutes River Time: 13:40 Date: 10/03/2024							
Month	Base Line	Mitigated	Change in	Percent			
1 1			Percentage	Change			
i i	%	%	%	%			
JAN	29.70	29.70	0.00	0.00			
FEB	30.10	30.10					
MAR	33.50	33.50	0.00				
APR	68.40	68.40	0.00	0.00			
MAY	97.80	97.80	0.00	0.00			
иис	98.80	98.80	0.00	0.00			
JUL	100.00	100.00	0.00	0.00			
AUG	100.00	100.00	0.00	0.00			
SEP	99.80	99.80	0.00	0.00			
0CT	56.80	56.80	0.00	0.00			
NOV	20.90	20.90	0.00	0.00			
DEC	24.70	24.70	0.00	0.00			
ANNUAL	63.50	63.50	0.00	0.00			

CHANGE IN MEAN STREAM FLOW (CFS) IN THE DESCHUTES BASIN AS A RESULT OF MITIGATED GROUNDWATER USE

### Effective Date: 9/30/2022

Deschutes River above Little Deschutes River Time: 13:40 Date: 10/03/2024						
Month	Base Line	Mitigated	Change	Percent		
1 1			in cfs	Change		
1 1	cfs	cfs	cfs	%		
JAN	329.0	329.0	0.000	0.00		
FEB	331.0	331.0	0.000	0.00		
MAR	319.0	319.0	0.000	0.00		
APR	654.0	654.0	0.000	0.00		
MAY	1220.0	1220.0	0.000	0.00		
JUN	1500.0	1500.0	0.000	0.00		
JUL	1690.0	1690.0	0.000	0.00		
AUG	1530.0	1530.0	0.000	0.00		
SEP	1260.0	1260.0	0.000	0.00		
0CT	561.0	561.0	0.000	0.00		
NOV	246.0	246.0	0.000	0.00		
DEC	280.0	280.0	0.000	0.00		
ANNUAL	829.0	829.0	0.000	0.00		

