Deschutes Water Alliance
Balancing Water Uses for Agriculture, Cities and Rivers in the Deschutes Basin

Deschutes Basin Board of Control
Confederated Tribes of Warm Springs
Deschutes River Conservancy
Central Oregon Cities Organization
Deschutes, Crook, and Jefferson Counties
Deschutes Water Alliance
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Deschutes Basin
2nd Largest Watershed in Oregon
10,700 square miles

Basin Population
227,404
Crook County 23,023
Deschutes County 158,456
Jefferson County 20,512
Wasco County 23,775
Sherman County 1,638
Groundwater: Recharge

Precipitation in the Upper Deschutes Basin

Distribution of Precipitation

Explanation
- Less than 9 inches
- 9 to 20 inches
- 20 to 40 inches
- 40 to 80 inches
- More than 80 inches

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Massive Aquifer that recharges 3800 cfs annually
No Water Available
Have agreed to a cap on consumptive use...
Local Government Interests

- Supply drinking water
- Improve river health – ESA, CWA
- Maintain recreational assets
- Sustain agriculture
- Produce hydropower
Responding to the Challenges

- Low Streamflow and Water Quality
- Urbanization
- Groundwater Mitigation
- Regulatory Drivers
Deschutes River
(30 yr averages)

Natural Flow

Summer Flow

Winter Flow

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Irrigation District
Urbanization

160,000 Irrigated Acres

Cities overlay Districts

- Madras
- Prineville
- Redmond
- Sisters
- Bend
Surface Water / Groundwater Connection

Pumping Here

100 Miles apart

Protected Scenic Flows Here
Deschutes Basin
Groundwater Mitigation

- Groundwater permit applicant has to offset the impact of the new water use by returning surface water to the Deschutes River or a tributary.

- In order to receive a groundwater permit, the groundwater applicant can satisfy this need by acquiring groundwater mitigation credits.
Integrated Response To Regulations

- ESA
- Safe Drinking Water Act
- Clean Water Act
- Scenic Waterway Act
- Mitigation Rules

Instream

Meet All Demands

Out of Stream

Meet All Demands
Deschutes Water Alliance

Mission

- Improve streamflows and water quality for the benefit of fish, wildlife and people.
- Secure and maintain a reliable and affordable supply of water to sustain agriculture.
- Secure a safe, affordable, and high quality water supply for urban communities.
Deschutes Water Alliance

History

- Formed under Federal grant in 2004
- Conducted Supply/Demand Studies
- Developed Pilot Water Bank
- Water Summit – May 2006
- Mobilized quick legislative action on mitigation
Demand for “New” Water in 2025 (260,000 acre feet)

Demand: Water Redistributed to New Uses, 2025

- **Agriculture**: 13%
- **Resorts etc.**: 9%
- **Municipal**: 2%
- **Instream**: 76%
How to get 260,000 acre feet of water for redistribution?

Supply: Water Redistributed by Source, 2025

- Conservation: 49%
- Water Transfers: 24%
- Leasing: 8%
- Reservoir Management: 19%
### Summary of District Conservation

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<th>District:</th>
<th>COID</th>
<th>SID</th>
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<th>Tumalo</th>
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<td># of DRC Piping Projects</td>
<td>7</td>
<td>8</td>
<td>1</td>
<td>2</td>
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<td>Instream Benefit (CFS)</td>
<td>25</td>
<td>37</td>
<td>1.5</td>
<td>8</td>
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<td>84</td>
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Central Oregon Irrigation District
Swalley Irrigation District
Three Sisters Irrigation District
District Benefits

- Reduced District O&M Costs
- Improved Water Management
- Reduced Liabilities
- Power Savings
- Hydroelectric Generation
How to get 260,000 acre feet of water for redistribution?

Supply: Water Redistributed by Source, 2025

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- Water Transfers: 24%
- Reservoir Management: 19%
- Leasing: 8%
DWA Water Bank

DWA Bank: Historic Water Transfers

- Mitigation: 80%
- Restoration: 20%

Total Acres: 1,100
Total Rate: 18 CFS
Volume: 6,000 AF
Mitigation Purchased

- 2,600 Credits
  - of which: 1,300 Pending
  - $1,300/credit
DWA Water Bank Results

- Instream transfers - 1100 acres
  - Mitigation transfers - 870 acres
  - Restoration transfers - 215 acres

- Streamflow restoration - 18 cfs
District Leasing

Instream Leases

Leases used for GW Mitigation Credits

Leases paid by H20 volume

Leases paid by land area

Leases not paid

Acres of Water Rights

Restoration of Flows on the Deschutes River
Future Directions

- Ag to Ag transfers
- Inter-Subbasin swaps
- Storage management & allocation
Lessons Learned
What worked

- Cooperative Approach
  - Voluntary, non-regulatory
  - Market incentives
  - Forums for discussion (DRC, DWA)
- Balancing of societal interests
  - Finding the win-win
- Planning studies that catalyzed cooperative, cost effective action.
What Created Challenges

- Regulatory environment that drives win-lose rather than win-win.
- Lack of basin-wide water management strategy.
  - Going beyond incremental approach
  - Creating assurances
  - Working across jurisdictions
- Lack of capacity to effectively operate the DWA.