



Deschutes River Conservancy Strategic Plan 2015-2025

Executive Summary

1 Mission

The mission of the Deschutes River Conservancy (DRC) is to restore stream flow and improve water quality in the Deschutes Basin.

2 Vision

By the year 2025, we envision a future where:

- Local governments and non-governmental organizations (NGOs) have executed and are implementing a regional water management agreement that balances water for irrigators, municipalities and rivers;
- Stream flows are well on their way to meeting targets;
- Instream, riparian, and floodplain habitat enhancements are in full scale implementation, enabled by and complementing flow restoration;
- Trust among basin stakeholders is high. The DRC Board is respected and highly functional; and
- Citizens are knowledgeable of and are champions of the DRC's flow restoration strategies.

3 Values

- *Open.* Value and seek out diverse perspectives.
- *Consensus-based.* Work to overcome differences and make consensus decisions.
- *Collaborative.* Deploy cooperative, non-regulatory approaches. Committed to helping all parties achieve their respective goals.
- *Innovative.* Proactively seek new approaches for solving old problems.
- *Non-litigious.* Do not engage in litigation.
- *Adaptive.* Adapts and refines goals and strategies based on evolving information and opportunities.
- *Partnership-based.* Leverage partners' strengths to complement flow restoration with the physical habitat restoration and land conservation necessary to achieve watershed-scale outcomes.

4 Strategic Goals and Priorities

Program Goals & Priorities	Strategies
<p>Achieve large-scale stream flow restoration:</p> <ul style="list-style-type: none"> • Upper Deschutes River • Whychus Creek • Lower Crooked River • Tumalo Creek 	<p>Facilitate water management agreement among local governments to restore the upper Deschutes River and Tumalo Creek.</p> <p>Implement existing strategies in Tumalo Creek, Whychus Creek, and the lower Crooked River.</p>
<p>Strengthen Partnerships</p>	<p>Maintain, built, or strengthen numerous partnerships to generate support, leverage funding, and maximize conservation outcomes.</p> <p>Partners include the Confederated Tribes of Warm Springs, state and federal agencies, local governments, irrigation districts, state and federal legislators, NGOs, fishing clubs, and more.</p>
Organizational Goals & Priorities	Strategies
<p>Build Trust</p>	<p>Improve levels of trust among board members and between board members and staff.</p> <p>Transform from a board of competing interests to a fully collaborative forum.</p>
<p>Grow Communications Capacity</p>	<p>Educate members of the public and enroll them to support river restoration.</p>
<p>Expand Institutional/Public Funding</p>	<p>Replace Pelton Fund with other hydro mitigation revenues.</p> <p>Pursue feasibility of public financing through ballot measures or other means.</p>



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4 Strategic Overview

Long-term stream flow restoration can be most effective when it leverages the opportunities inherent in water management challenges. In much of the Deschutes Basin, the porous, fractured basalt geology, uneven distribution of water between users, and expanding urban areas create both water management challenges and opportunities to restore stream flow. The DRC's stream flow restoration strategy focuses primarily on removing the barriers to more efficient use and distribution rather than on developing additional water supply.

These opportunities vary across the basin. Along the Deschutes River and its tributaries, preliminary planning by the Deschutes Water Planning Initiative suggests that there is already enough water available to meet most instream and out-of-stream needs during many years. Excessive canal losses, well understood in the Deschutes Basin, limit the amount of water reaching agricultural lands. At the same time, farms in and around Bend and

Redmond have become increasingly fragmented, in many cases beyond the point of commercial agricultural viability. The desire for a rural lifestyle has driven water use, often inefficient, on these properties. Increased efficiency, tighter management of water within districts, and improved management of existing water supplies across districts remain the most effective opportunities for meeting the water needs of rivers and growing cities in Central Oregon.

Over the last two decades, tourism and recreation have replaced timber and agricultural production as the primary economic drivers in parts of the Deschutes Basin. This shift has created opportunities for and greatly increased interest in stream flow restoration among local communities. Stream flow restoration provides opportunities for strengthening local economies through increased tourism, recreation, and population growth - people moving to Central Oregon for its quality of life. Local and regional communities and their elected officials' priorities should extend beyond their water supplies to the restoration of the river.

The DRC also recognizes that improving stream flows is only one component of a larger strategy to restore stream structure and function in the basin. Certain streams may require large-scale habitat restoration, barrier removal, or riparian land protection in addition to flow enhancement. We design and implement comprehensive watershed restoration strategies in partnership with local organizations and agencies to address these challenges.

5 Collaborative Approach

The DRC believes that a coordinated, collaborative approach offers the greatest opportunities to restore stream flows throughout the Deschutes Basin. This approach requires the participation and active engagement of all parties, and, by design, it must benefit all parties. For example, achieving flow targets requires simultaneously addressing the needs of out-of-stream water users. Collaboration fails if one party attempts to achieve its goals at the expense of another's.

The residents of the basin have a long history of working together to meet water management challenges. This collaborative approach has resulted in truly unique achievements like a tribal water rights settlement that holds existing water right holders harmless, the creation of a groundwater mitigation program that allows municipal water use to expand while protecting river flows, and the historic reintroduction of anadromous fish to the upper basin as a component of a hydroelectric relicensing agreement. These examples of past collaboration demonstrate the basin's unique ability to come together and work constructively on matters of basin-wide importance.

Since 2006, the DRC and its partners have collaborated to engage instream, agricultural, and municipal interests in a process to identify their unmet water needs and to develop and analyze water management strategies to address those needs. These efforts have been conducted cooperatively in partnership with the Deschutes Water Alliance, through the DRC's Deschutes Water Planning Initiative, and now under the Deschutes Basin Study. A truly collaborative effort, the Basin Study will lay out alternative approaches for meeting the goals of irrigation, municipal, and instream interests. In summary, these goals include:

1. Irrigation

- Sustainability for irrigation districts, including:
 - Increased water security for junior water rights, especially in dry years;
 - Increased financial security for districts affected by land fragmentation and urbanization; and
 - Reduced legal liabilities associated with federal regulation and with public safety.

2. Municipal

- Achieve a reliable, affordable supply of mitigation credits to meet the growing domestic water supply needs of cities.

3. Instream

- Stream flows are adequate to support ecologically functioning stream and river systems.

Under the DRC's collaborative approach, we focus on restoring stream flow while addressing our partners' goals. This approach provides the greatest opportunities for success in a region with multiple unmet demands. The organization strives to restore stream flow in a manner that maintains agricultural production and helps to meet municipal water supply needs. We recognize that alternate approaches, such as the Deschutes Basin Habitat Conservation Plan (HCP), provide alternate paths to meeting some of these goals. To the extent possible, the DRC will coordinate with its partners so that the strategies developed in the HCP and other similar processes complement and do not conflict with the strategies developed through our collaborative approach.

The DRC historically worked with its partners to restore stream flow on a project-by-project basis. The organization increasingly recognizes the relationship between water supply and demand across reaches, particularly in the upper Deschutes River, middle Deschutes River, and Tumalo Creek. The DRC has adopted this large-scale, collaborative approach to address the risks and leverage the opportunities created by these relationships.

We also recognize that stream flow restoration alone may not be sufficient to restore functioning stream systems. The DRC will partner with local, state, and federal agencies and organizations to ensure that we collectively address all of the factors limiting stream function in priority reaches.

6 Geography

The DRC focuses on restoring flow and improving water quality in the Deschutes Basin. While the DRC's mission encompasses the entire basin, we've prioritized restoration opportunities in the upper Deschutes Basin above the Pelton Round Butte complex (see Figure 1). This geography encompasses the Deschutes River from its headwaters to Lake Billy Chinook and its tributaries, including Tumalo and Whychus Creeks. It also encompasses the Crooked River downstream from Prineville Reservoir and its tributaries, specifically Ochoco and McKay Creeks.

7 Stream Flow Objectives

The DRC's overarching goal is to restore the flow necessary to provide for functioning stream and rivers in the Deschutes Basin. We have adopted flow restoration objectives in these priority reaches to help us meet our overarching goal. The DRC's priority flow restoration objectives include meeting stream flow targets and/or moving towards a more natural flow regime in the following reaches (Table 1):

- Deschutes River downstream from Wickiup Reservoir (increased fall, winter, and spring flows and reduced summer flows);
- Crescent Creek (increased fall, winter, and spring flows);
- Tumalo Creek;
- Deschutes River downstream from the City of Bend;
- Whychus Creek;
- Crooked River downstream from North Unit Irrigation District's pumps;
- McKay Creek; and
- Ochoco Creek.

The DRC's partners have focused on restoring flow in additional reaches. Restoring conditions in these reaches may occur in partnership with or separate from the DRC. Partners have identified the need to meet stream flow targets and/or move towards a more natural hydrograph in:

- Little Deschutes downstream from Crescent Creek (increased fall, winter, and spring flows); and
- Crooked River downstream from Prineville Reservoir.

The DRC has not fully identified objectives and targets for some of the reaches discussed above. However, the Deschutes Basin Study and the Deschutes Basin Habitat Conservation Plan will inform the DRC's Board and staff as to the ecological importance of restoring flow in these reaches. These processes will likely suggest desired hydrographs and strategies for achieving them, and the Board may adopt their suggestions.

The DRC recognizes that other reaches in the basin have ecological and cultural importance. Given the limited resources available, the organization has focused on restoring stream flows in the priority reaches described above. As opportunities arise outside of these priority areas, the DRC will evaluate and engage in them if they (1) contribute to the DRC's reputation, relationships, operations or abilities, and (2) don't limit the DRC's ability to work in priority areas.

The DRC has historically adopted the instream water rights applied for by the Oregon Department of Fish and Wildlife as minimum flow targets. These baseline flow targets may not be best suited to meet water quality standards or support functioning stream and river ecosystems in some reaches. For example, the Oregon Department of Fish and Wildlife applied for and received a 300 cfs instream water right to support aquatic life in the upper Deschutes River. Historical and ongoing research on this reach by federal agencies suggests that a fully functioning system requires stream flows of greater than 300 cfs. This research suggests that stream flows of 500 cfs will begin to support riparian vegetation and allow for active channel restoration. Likewise, the Oregon Department of Fish and Wildlife applied for and received an instream water right to support fish populations in Whychus Creek. Historical and ongoing research on the relationship between stream flow and stream temperature suggests that meeting this water right will not provide the stream temperatures necessary to support robust fish populations in some locations and at some times of year.

DRC staff and board members are participating in several processes, particularly the Deschutes Water Planning Initiative and the Deschutes Basin Study, to better identify and understand flow needs in the Deschutes River and its tributaries. We expect that these processes will inform flow targets and that associated monitoring, evaluation, and modeling will identify how we can reach those targets in our priority reaches. These new targets and strategies may or may not align with the instream water rights referenced above or with the strategies identified below. Where appropriate, the Board of Directors may adopt these targets and strategies as they're identified, evaluated, and demonstrated to be achievable. In the absence of any new agreed upon targets, the DRC will continue to use the instream water rights applied for by the Oregon Department of Fish and Wildlife in most of its priority reaches.

The DRC has adopted stream flow targets based on the organization's current understanding of the reaches in which it invests (Table 1). The DRC selected these targets to be achievable within ten years under this Strategic Plan. In some reaches, such as the upper Deschutes River, the DRC has adopted a flow target that it can achieve in ten years with the understanding that restoring stream function will require a different flow target and a longer time period.

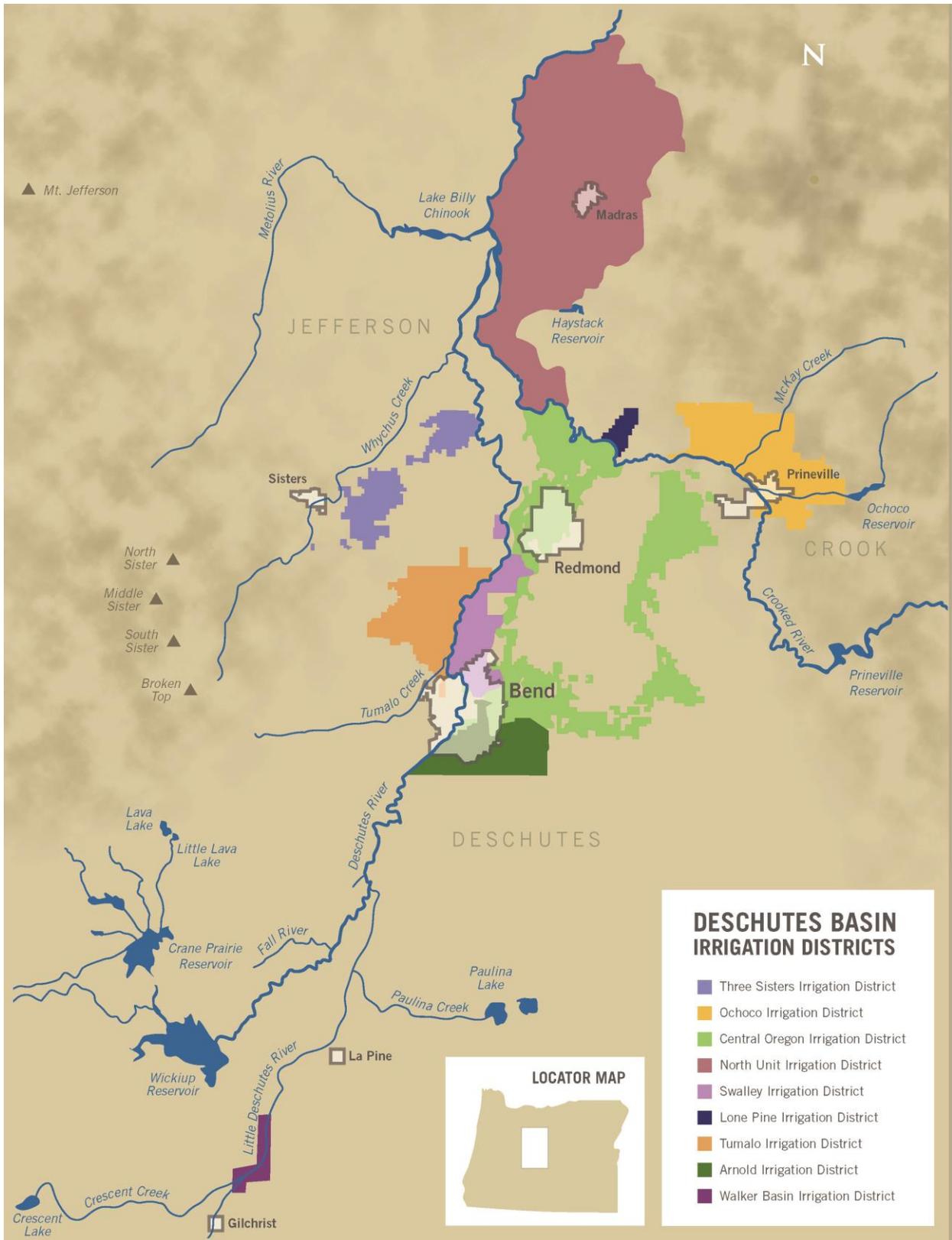


Figure 1. The DRC has prioritized the restoration of stream flow in the upper Deschutes Basin, focusing on the Deschutes and Crooked Rivers and their tributaries.

Table 1. Stream flow targets in the Deschutes River and its tributaries.

Reach	Location	Season	Target	Narrative
Deschutes River, Wickiup Reservoir to City of Bend	Downstream from Wickiup Reservoir	Non-irrigation	At least 300 cfs in all years and up to 500 cfs when water is available.	<p>The State of Oregon has adopted a 300 cfs year-round water right to support aquatic life in this reach. Both historic and ongoing research indicates that this reach will require closer to 500 cfs to begin to function and to allow for active channel restoration. DRC selected 300 cfs as an achievable ten-year target and 500 cfs as a longer term target necessary to begin to restore a functioning system.</p> <p>Water availability varies by year in the upper Deschutes River. In some years, the DRC expects that it and its partners can restore stream flows of greater than 300 cfs while maintaining water supplies for out-of-stream uses. Over the next ten years, the organization seeks to restore up to 500 cfs when doing so aligns with the organization's collaborative strategy. Correspondingly, the DRC will work with its partners over the next ten years to prepare to meet a 500 cfs target in the future.</p>
Crescent Creek, Crescent Creek, Crescent Lake to Mouth	At Crescent Lake	Non-irrigation	To be determined	<p>The Deschutes River Conservancy has not yet adopted a stream flow target for Crescent Creek. Partners have suggested natural stream flows as a ten-year achievable target in Crescent Creek, and this target may not be appropriate in some years due to concerns associated with potential flooding. The DRC's partners are currently working to evaluate stream flow needs in Crescent Creek. The organization will revise its target if partners agree on a different target necessary to restore a functioning system.</p>
Tumalo Creek	Downstream from Tumalo Irrigation District's diversion	Irrigation and non-irrigation	<p>ODFW instream water rights (vary by month).</p> <p>Natural stream flows in July, August and September¹</p>	<p>The Oregon Department of Fish and Wildlife applied for and received a water right to support fish populations in this reach. The water right varies by month, and DRC has adopted this water right as its target during most of the irrigation season. The Deschutes River Conservancy acknowledges that the instream water right may be equal to or greater than the amount of water available in the creek during some months and some years. The organization will work with its partners to revise its targets as necessary during these months.</p> <p>The DRC has selected natural stream flows less the City of Bend's diversion as its targets for July, August and September, maximizing Tumalo Creek stream flows to reduce water temperatures in the Deschutes River.</p>
Deschutes River, City of Bend to Lake Billy Chinook	Downstream from Tumalo Creek confluence	Irrigation	250 cfs	<p>The Oregon Department of Fish and Wildlife applied for a 250 cfs year-round water right in this reach. Although this application is currently pending with the department, DRC and its partners have adopted its 250 cfs recommendation as an irrigation season target.</p> <p>As in other reaches, the DRC seeks to improve both stream flows and stream temperatures in this reach. This strategy focuses on restoring stream flow in</p>

¹ whether and how we can achieve this target in September needs additional analysis.

Reach	Location	Season	Target	Narrative
				Tumalo Creek to meet these objectives in the Deschutes River.
Whychus Creek	Downstream from TSID's diversion	Irrigation	33 cfs	The Oregon Department of Fish and Wildlife applied for and received a water right to support fish populations in this reach. The water right varies by month, and DRC selected this target based on the June through February water right. Ongoing research suggests that this reach may require greater than 33 cfs to provide water temperatures that support robust fish populations in some locations and at some times of year; DRC selected 33 cfs as an achievable ten-year target that all partners agree on. The DRC will adopt a higher long-term target if partners agree it's necessary to meet our goals in the creek.
Crooked River, Prineville Reservoir to Hwy 97 Bridge	Downstream from Prineville Reservoir; and Downstream from North Unit Irrigation District's pumps	Irrigation and non-irrigation	75 cfs	The Oregon Department of Fish and Wildlife applied for a water right that varies by month in this reach. This application is currently pending with the department, and ongoing planning associated with the allocation of storage from Prineville Reservoir to instream use will inform target refinement over the next ten years. DRC has adopted the application's 75 cfs recommendation for July through January as year-round target. The organization will revise this target as necessary based on the outcomes of the Crooked River Jobs and Water Security Act, the Habitat Conservation Plan, and other ongoing efforts.
Ochoco Creek	Downstream from Ochoco Reservoir at lowest flow location	Irrigation; and Non-Irrigation	6.3 cfs; and To-be-determined	The Oregon Department of Fish and Wildlife applied for and received a water right to support fish populations in this reach. The water right varies by month, and DRC selected this irrigation season target based on the August water right. DRC has not yet selected a non-irrigation season target.
McKay Creek	Downstream from Allen Creek; and Upstream from Jones Dam	Irrigation	Natural stream flows	The Oregon Department of Fish and Wildlife applied for and received a water right to support fish populations in this reach. The water right varies by month. DRC selected this irrigation season target based on the total water rights available to move instream through the McKay Switch; ultimately, DRC intends to restore near-natural stream flows in the creek.

8 Methods and Tools

We expect to apply both new and existing tools across irrigation district and hydrologic boundaries to meet irrigation, municipal, and instream goals. Meeting these goals will require a willingness to be adaptive and apply different tools to meet different objectives in different years. It will also require a willingness at the local, state, and federal level to address legal and administrative barriers that currently hamper flexible water management in the Deschutes Basin.

Restoring flows in the Deschutes River and its tributaries as outlined above will require a combination of temporary and permanent transactions and agreements. We expect that the following tools will play a role in flow restoration over the next decade:

Conserved Water. Canal lining and piping will continue to provide conserved water for flow restoration. Canal piping is relatively expensive, though, and we expect to focus on projects and programs that benefit multiple users. Potential examples include:

- Conserving Deschutes River water, allocating that water to lands in North Unit Irrigation District currently served by the Crooked River, and allocating the associated Crooked River water rights instream;
- Conserving Deschutes River water to improve district reliability in association with management agreements that maintain flows in the upper Deschutes River; and
- Conserving Deschutes River water, allocating that water to lands in Tumalo Irrigation District currently served by Tumalo Creek, and allocating the associated Tumalo Creek water rights instream.

Instream Leasing. Instream leasing will provide for cost-effective flow restoration in reaches across the Deschutes Basin. Over the next decade, we will engage irrigation districts in long-term agreements to maintain a base level of instream leasing. We will work with each irrigation district to identify and implement tools, such as pricing, policy, and management changes, which facilitate instream leasing while benefiting the district and its patrons.

Water Rights Transfers. Transferring water rights off of urbanizing lands to either instream or out-of-stream uses will maximize the productivity of water in the Deschutes Basin. As with conserved water, the greatest benefits will come from projects and programs that meet multiple needs. As an example, transferring senior Deschutes River water rights off of urbanizing lands, placing those water rights on lands in North Unit Irrigation District that currently have Crooked River water rights, and transferring the Crooked River water rights instream for mitigation meets agriculture, instream, and municipal needs simultaneously.

In-District and On-Farm Efficiency. Operational and on-farm efficiencies provide a significant unrealized water supply in the region. Investments in infrastructure, management, education, and social marketing may allow water users to draw from this supply without reducing irrigated acreage.

Management Agreements. Managing water differently to benefit multiple uses and users will be a major component of a comprehensive restoration strategy. These agreements may occur between districts, between districts and their patrons, or between districts and instream interests. For example, Central

Oregon Irrigation District's hydropower revenue will increase with increased winter flows in the upper Deschutes River. However, increased upper Deschutes River flows increase the risk of North Unit Irrigation District's storage in Wickiup Reservoir not filling. If Central Oregon Irrigation District agrees to provide a drought year supply of water to North Unit Irrigation District in exchange for higher winter flows, both districts benefit.

Reservoir Operations. The Deschutes Water Alliance's 2006 report on reservoir operations and preliminary Deschutes Water Planning Initiative (DWPI) analysis suggested that operating the three reservoirs on the Deschutes River and its tributaries upstream from Bend differently could benefit instream and out-of-stream users, and could result in increased overall storage. Optimization may include operating the reservoirs as one large storage pool, prioritizing storage in reservoirs with lower leakage rates, optimizing the storage potential of Crescent Lake, and adapting the 1938 inter-district agreement that dictates how the reservoirs fill to best accommodate needs. We embrace these recommended changes and the recommendations from the DWPI.

Along the Crooked River, releasing water from Prineville Reservoir into the Crooked River is one of the only tools to increase flows downstream from the reservoir. The DRC supports the implementation of the Crooked River Collaborative Water Security and Jobs Act (H.R. 2640) to allocate uncontracted storage for fish and wildlife flows that maintain broad support from all major stakeholder groups.

New Off-channel Storage. Off-channel storage like Monner Reservoir, a potential reservoir site near Madras that Reclamation assessed in the 1970s, would help to meet both instream and district goals by shifting some storage capacity from the upper basin downstream in the system. Barriers to new storage include high expense and a potentially lengthy administrative and political process to get new storage projects approved, designed and implemented. New storage should be considered as an option to move beyond the benefits provided by other tools, particularly a change in the location of storage that does not involve new appropriative water rights.

Tribal Reserved Water Rights. The Confederated Tribes of Warm Springs (CTWS) have reserved rights for up to 200 cfs of Deschutes River, Metolius River, and Pelton Lakes water for use on or off their reservation. These water rights offer the opportunity to contribute to the DRC's mission while meeting CTWS's interests through a variety of approaches. DRC staff will continue to work with CTWS to evaluate how to best leverage these water rights.

9 Approach

The diagram below depicts the DRC's approach to restoring flow throughout the Deschutes Basin (Figure 2). As mentioned above, this approach assumes that baseline instream, agricultural, and municipal water needs can be met through improved efficiency and redistribution rather than new supply in most years. Over the next 15 years, the DRC and its partners will implement a suite of interconnected actions focusing on long-term lease and transfer agreements, reservoir optimization, improving on-farm and conveyance efficiency, and other water management policies and practices intended to meet multiple needs. We expect that these actions will require a relatively modest investment.

These actions will meet baseline needs during most, but not all years. They may not provide the flow necessary to support functioning streams in all locations. Meeting baseline needs during the driest years and providing for fully functioning streams in all locations and during all years will require major investments in major infrastructure,

particularly off-channel storage. The Deschutes Basin Study will provide new information and insight as to the best suite of actions to meet the goals.

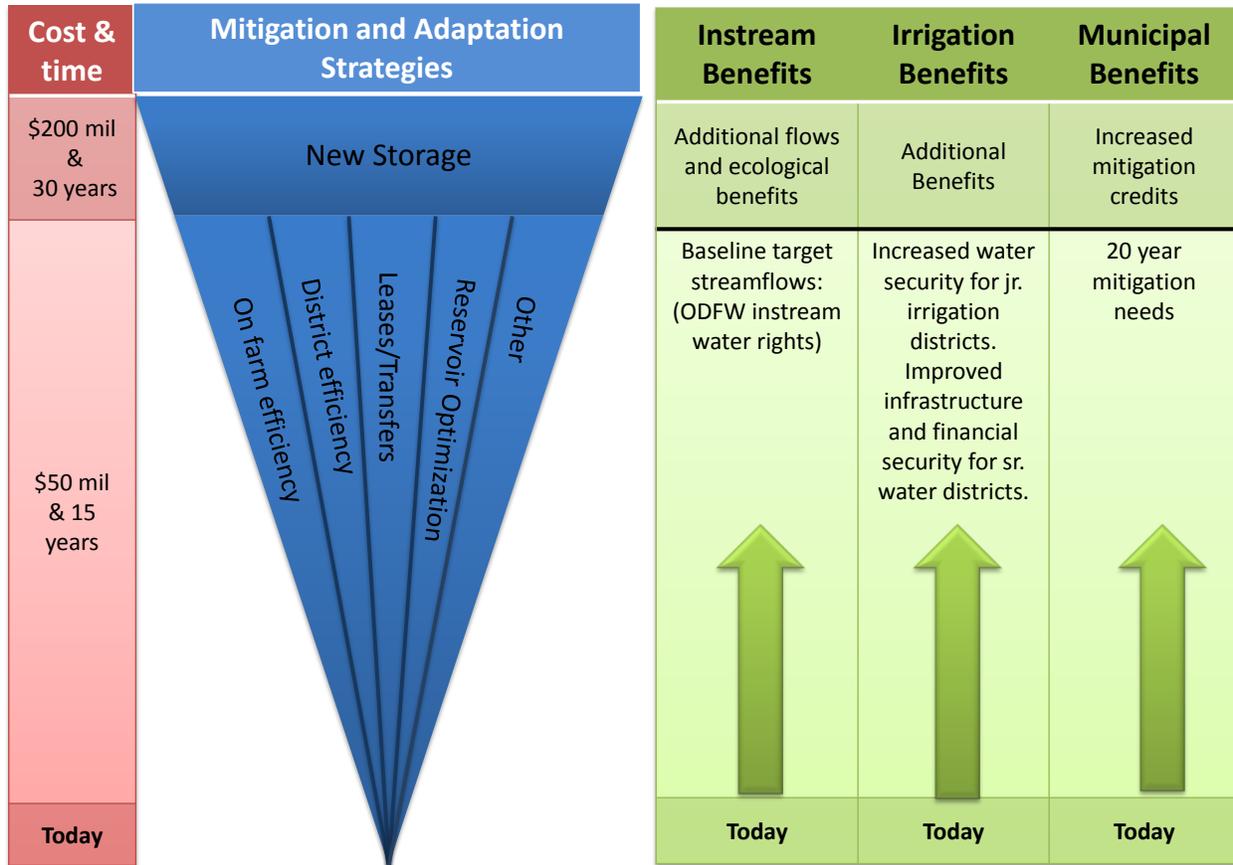


Figure 2. The DRC’s approach relies on a suite of interconnected actions that simultaneously meet multiple needs.

10 Flow Restoration Strategies by Reach

10.1 Deschutes Initiative

10.1.1 Deschutes River, Wickiup Reservoir to the City of Bend.

Over the next ten years, the DRC will focus intensely on restoring stream flows in the Deschutes River and its tributaries between Wickiup Reservoir and the City of Bend. The DRC’s project-by-project approach to restoring flow through instream transfers, leases, and allocations of conserved water has succeeded in other reaches. However, the large scope and scale of the flow challenges in the upper Deschutes River require a different approach.

This large-scale approach focuses on the redistribution of water across irrigation district boundaries to restore stream flows while maintaining agricultural viability and production. Each of the six irrigation district drawing water from the upper Deschutes River has different needs. The two largest districts, North Unit Irrigation District and Central Oregon Irrigation District, encompass 86% of irrigated lands in the region and reflect these differences. North Unit Irrigation District primarily serves relatively efficient agricultural producers. The district, which holds the most junior water rights out of the Deschutes River districts, needs improved water reliability to better serve

its commercial farmers. Central Oregon Irrigation District, one of the senior water rights holders in this region, primarily serves small-acreage lifestyle farms. The district delivers twice as much water per acre as North Unit Irrigation District, and it faces the erosion of its revenue base due to urbanization. Coordinated inter-district leasing, transfers, voluntary diversion reductions, trading of conserved water, and others water management tools that move water and water rights between these two districts could meet both of their needs. This approach succeeds if it provides both instream and out-of-stream water users with secure and reliable water supplies.

North Unit Irrigation District relies on water stored in Wickiup Reservoir to meet its irrigation needs. Increased stream flows in the upper Deschutes River increase the risk that reservoir will not store enough water to meet the district's needs. The DRC's approach to flow restoration in the upper Deschutes River will minimize that risk. It will rely on an interrelated set of administrative processes and contractual agreements that support the following movement of water:

- Urban districts with senior water rights reduce their diversions and pass Deschutes River live flow to junior users as necessary, reducing their reliance on stored water;
- All associated Deschutes River irrigation districts consent to a water management agreement between senior and junior users;
- North Unit Irrigation District junior water rights are more reliably served by Deschutes River live flow, reducing their dependence on water stored in Wickiup Reservoir; and
- North Unit irrigation District and other districts agree to a minimum flow of 300 cfs or more below Wickiup Reservoir.

Restoring flow in the upper Deschutes River depends primarily on cooperative agreements between these two districts. Given the complex relationships between irrigation districts and their water supplies, all related districts on the Deschutes River need to be parties to and benefit from these agreements. These agreements will reflect a shift from a relatively insular, district-by-district approach to water management to a basin-scale approach that meets all water users' needs.

10.1.2 Crescent Creek, Crescent Lake to Mouth

The Deschutes River Conservancy has prioritized the restoration of non-irrigation season stream flows in Crescent Creek as a strategy to improve conditions in both the creek and the Little Deschutes River. The organization's approach to restoring Crescent Creek focuses on working with Tumalo Irrigation District and its partners to:

- Pipe the remainder of Tumalo Irrigation District's Tumalo Feed Canal;
- Pipe Tumalo Irrigation District's laterals and provide pressurized water;
- Reduce on-farm demands within Tumalo Irrigation District;
- Operate Crescent Lake, Crane Prairie Reservoir, and Wickiup Reservoir under new rules; and
- Maintain near-natural stream flows in Crescent Creek during many years.

The Deschutes River Conservancy's work with Tumalo Irrigation District will reduce irrigation demands on Crescent Lake storage and allocate stored water for instream use. Changing the operations of Crescent Lake, Crane Prairie Reservoir, and Wickiup Reservoir will allow Tumalo Irrigation District to draw from more reliable sources of water than Crescent Lake. Following these actions, a storage and release agreement with the district will operate the reservoir as an almost run-of-the-river system and restore near-natural stream flows during many years.

10.1.3 Tumalo Creek

Restoring stream flow in Tumalo Creek benefits both the creek and the Deschutes River downstream from its confluence with the creek. Restoring stream flow in Tumalo Creek will contribute cold water to and decrease

water temperatures in the Deschutes River. It will move water temperatures closer to standards with much less water than would be needed from the Deschutes River to achieve the same outcome.

Under this approach, Tumalo Irrigation District:

- Pipes the remainder of the Tumalo Feed Canal;
- Pipes its laterals and provides pressurized water;
- Reduces on farm demand;
- Agrees to divert from the Deschutes River instead of Tumalo Creek in July and August; and
- Maintains instream leasing.

Correspondingly, the City of Bend:

- Applies a self-imposed cap to its diversion from Bridge Creek.

Piping Tumalo Irrigation District's Tumalo Feed Canal enables the suite of actions necessary to restore large amounts of stream flow to the creek. Once the district and its partners finance and implement this project, the district can pipe the remainder of its laterals and provide pressurized water to its patrons. The district will have the capacity to divert additional Deschutes River water, potentially supplied through transfers or allocations of conserved water, with a fully piped system. Correspondingly, Tumalo Irrigation District can leave additional Tumalo Creek water instream to simultaneously meet instream needs in the creek and in the Deschutes River.

This approach also includes the negotiation of a cap on the City of Bend's diversion. The City has indicated its willingness to voluntarily cap its diversions but has not formally committed to this action.

10.1.4 Deschutes River, City of Bend to Lake Billy Chinook

The DRC's strategy to restore conditions in the middle Deschutes River focuses on restoring stream flows and decreasing stream temperatures in the Deschutes River downstream of Tumalo Creek. This approach maximizes the stream flows entering the Deschutes River from Tumalo Creek. Water temperatures in Tumalo Creek are typically lower than those in the Deschutes River, and increasing Tumalo Creek stream flows will decrease water temperatures in the Deschutes River.

The DRC's strategy for this reach focuses on:

- Maximizing stream flows entering the Deschutes River from Tumalo Creek; and
- Securing long-term commitments to lease water in the Deschutes River.

Given limited resources, the organization has prioritized restoration investments in Tumalo Creek (which flows into this reach) rather than the Deschutes River. Deschutes River stream temperatures are relatively warm prior to reaching the City of Bend, and increasing stream flows at the diversions on the Deschutes River upstream from Tumalo Creek may not be the most effective approach to reducing downstream temperatures.

The DRC recognize that the benefits of increased stream flow in this reach extend beyond water temperatures. To the extent that resources are available, the DRC supports Deschutes River stream flow restoration as a method to improve downstream habitat conditions. Securing long-term commitments with irrigation districts to lease water in the Deschutes River provides one cost-effective tool to achieve this objective.

The DRC also recognizes the value of traditional tools to permanently restore stream flow, such as allocation of conserved water and instream transfers, in this reach. The DRC has proposed to rely extensively on these tools in

other reaches, particularly in those reaches where the organization can achieve multiple benefits. The organization supports the continued use of these tools in the middle Deschutes River when applying them here does not limit its ability to apply them in reaches with potentially greater benefits.

10.2 Crooked Initiative

10.2.1 Crooked River, Prineville Reservoir to Highway 97 Bridge

The DRC's strategy to restore stream flow in the lower Crooked River focuses on opportunities in the Crooked River downstream from Prineville Reservoir and the Crooked River downstream from North Unit Irrigation District's pumps. The strategy focuses on two sets of actions:

- Releases of uncontracted storage from Prineville Reservoir; and
- Increasing stream flows downstream from North Unit Irrigation District's pumps through the North Unit Water Supply Program.

The Crooked River Collaborative Water Security and Jobs Act directs federal agencies to release uncontracted storage in Prineville Reservoir to support fish populations in the Crooked River. The DRC does not anticipate having a role in managing these releases. As of 2015, the parties responsible for developing the Crooked River Collaborative Water Security and Jobs Act are negotiating if and how those releases will be protected instream. The DRC supports the protection of these releases as part of a larger strategy that meets instream and out-of-stream needs.

The North Unit Water Supply Program restores stream flows in the Crooked River downstream from North Unit Irrigation District's pumps. The program provides Deschutes River water rights to lands currently served by the Crooked River, moves the associated Crooked River water rights instream, and protects that water instream at North Unit Irrigation District's pumps through a management agreement with the district that limits their pumping based on minimum flow requirements in the river. The transfer of water rights off of urbanizing lands and the allocation of conserved water will provide the Deschutes River water necessary to complete the program.

The DRC recognizes that the Crooked River Collaborative Water Security and Jobs Act could affect the amount of water available for North Unit Irrigation District to pump and, therefore, the efficacy of this program at restoring stream flows in the Crooked River. These changes may reduce the organization's ability to invest in the program. The DRC is committed to completing this program as part of a large-scale strategy to meet instream and out-of-stream needs and will develop new approaches to fund and implement it if necessary.

10.2.2 McKay Creek, Forest Service Boundary to Jones Dam

The DRC has prioritized the restoration of stream flows in McKay Creek to provide spawning habitat for steelhead trout and Chinook salmon. The DRC has focused on two actions in the creek:

- Provide an alternate source of water to irrigators who divert from McKay Creek through the McKay Switch; and
- Partner with the Crooked River Watershed Council and landowners to complete riparian and upland restoration projects that improve natural water storage capacity along McKay Creek.

The Crooked River Collaborative Water Security and Jobs Act facilitates the first action listed above. It authorizes the expansion of Ochoco Irrigation District to include lands along McKay Creek and provides the district with water to irrigate those lands. The DRC will work with partners to install the infrastructure necessary to deliver district water to lands along McKay Creek. The DRC will work with landowners to transfer their McKay Creek water rights

instream and eliminate most or all of the diversions on the creek. After eliminating these diversions, the DRC will support its partners' implementing riparian and upland restoration projects that retain water and improve summer stream flows.

10.2.3 Ochoco Creek, Ochoco Dam to Mouth

The DRC has not fully developed its stream flow restoration strategy for Ochoco Creek. The creek experiences both irrigation season and non-irrigation season stream flow challenges associated with water storage and diversion. The DRC has not yet developed a non-irrigation season tools to restore stream flow in Ochoco Creek. The organization has identified the following tools to restore summer stream flows:

- Secure a long-term commitment to lease water in Ochoco Creek;
- Lease or transfer Mill Creek water rights instream; and
- Secure a long-term commitment to increase outflows from Ochoco Reservoir.

10.3 *Whychus Initiative*

10.3.1 Whychus Creek, Whychus Creek, TSID Diversion to Road 6360

The DRC's restoration strategy in Whychus Creek focuses on meeting stream flow targets throughout the irrigation season. Water rights along the creek exceed the amount of water available in the creek. The majority of these water rights, both instream and out-of-stream, receive only a portion of their water during most of the irrigation season. Meeting the DRC's 33 cfs stream flow target in the creek requires protecting greater than 33 cfs of water rights in the creek.

The DRC's approach to restoring conditions in Whychus Creek continues the organization's existing efforts along the creek. The DRC will focus on:

- Piping the remaining canals and laterals in Three Sisters Irrigation District;
- Transferring non-district senior water rights instream;
- Securing long-term commitments to lease water in Whychus Creek; and
- Developing a drought plan which includes a minimum stream flow agreement.

To date, the DRC has identified how to restore approximately 30 cfs of wet water instream through water conservation, leasing, and transfers during most years. The DRC has explored alternate approaches to meeting the 33 cfs target in Whychus Creek during all years, including management agreements, drought year leasing, and surface-groundwater exchange agreements. The DRC will develop these alternate approaches and identify how to meet the 33 cfs target during most years.

11 **Financing**

DRC staff project that executing the restoration strategy described above will cost approximately \$50M. Financing this effort will require a comprehensive approach that leverages new and existing funders. The DRC expects to apply the following financing strategies to maximize progress towards its objectives over the next ten years:

1. Anadromous reintroduction reaches (Crooked River, Whychus Creek, and tributaries):
 - Aggressively leverage investments in anadromous reintroduction areas and extend Pelton Fund investments through 2025;
 - Secure Bonneville Power Administration/Tribal Accord investments to replace investments by the declining Pelton Fund;

- Enter into a long-term agreement with Three Sisters Irrigation District to support leasing investments in Whychus Creek; and
- Promote Whychus Creek and the Crooked River as equal in priority to other Mid-Columbia Steelhead reaches under the Columbia Basin Water Transactions Program.

2. All reaches:

- Maintain Columbia Basin Water Transactions Program investment at current levels;
- Increase Oregon Watershed Enhancement Board investments through the development of new Focused Investment Partnerships;
- Expand private investments from individuals, corporations, and foundations;
- Build a coalition to advance state and local financing to implement a regional water management agreement, possibly through state and local bonding; and
- Generate steady consulting revenue to offset fixed payroll and administrative costs.

12 Communications

12.1 Situation Analysis

The DRC operates in a delicate social and political environment. Few area residents understand the complexity of managing the river, especially considering the number of different players at the table. Much of the public is primarily interested in the river due to its recreational value and an environmental ethic. Residents are largely unaware of how much of the region's economy depends upon irrigated agriculture, the legal framework that determines how the river is managed, and the extent and nature of the problems facing the river. Furthermore, much of the general public lacks awareness of the DRC's actual mission, assuming it to be an environmental advocacy organization rather than a collaborative, consensus-based entity.

The DRC has identified the following outreach goals:

Short-term outcomes, mission of the organization

- The general public and specific interest groups become more aware and educated about the problem with how our river is currently being managed and fully engaged in the solutions.
- Current collaborative efforts to balance the needs of everyone that depends upon the river – fish, farmers, cities, recreation, and Tribes - while maintaining our quality of life in this region are supported by the community.

Long term outcome, mission of the organization

- The general public, targeted interest groups and all stakeholders feel heard, validated, and fully compelled to devise and support viable solutions that benefit everyone.
- A sense of pride in how our river is being managed is uniformly felt by the citizens of Central Oregon.
- The public's understanding of the problems facing the river and enthusiasm for solving them are sufficient to pass a ballot measure to finance the solution.

Long term outcome, positioning of the DRC

- The DRC is respected by ALL stakeholders as the trusted voice for the river and its many uses. DRC's role is to bring balanced, level-headed reasoning and education to the general public, targeted interest groups, and all stakeholders about what it will take to have a fully functioning, healthy river in this region. The DRC is seen as a trusted and credible organization.

12.2 Role of the DRC Board and Staff

To better assist with inclusive stakeholder representation through DRC messaging, staff and board members formed a Communications Committee in FY14. The main objective of the Committee is to ensure balanced and fair messaging that meets the needs of the DRC's partners and stakeholders. Through this committee, the Board and staff support the organization's strategic plan in the following manner:

- Collectively work to help the general public better understand the DRC brand, our work in the Deschutes Basin, and greater water management strategies;
- Create a consistent Communications Plan and Messaging Platform that meets the needs of the DRC stakeholders;
- Strive to have proactive communications as opposed to reactive communications in the event of a significant water related PR challenge (such as a fish kill or changing water temperatures and stream flows in the Deschutes); and
- Bridge the communication gap between technical water professional and the lay person.

12.3 Targeted Audiences and Stakeholder Groups

The success of the DRC's strategic plan hinges in large part on public support of the plan's goals and strategies to achieve them. The most cost effective way for the DRC to influence public opinion is through direct outreach to elected officials and opinion leaders in the private and public sectors. Ultimately, this targeted outreach needs to be followed by a communications campaign to generate the financing needed to implement the strategy. The first priority is targeted outreach to community influencers such as the following:

- Confederated Tribes of Warm Springs executive staff
- County Commissioners
- City Councilors
- Irrigation District boards
- State Legislators
- State and Federal Agency heads
- Governor's Office
- Chambers of Commerce
- Central Oregon Intergovernmental Council
- OSU Cascades
- Economic Development of Central Oregon (EDCO)
- Parks & Recreation Districts
- Fishing Clubs
- Corporate CEOs
- Environmental NGOs

12.4 Board Structure and Role of the Board

At its retreat in March 2014, the Board decided that it should spend less time reviewing and discussing detailed technical proposals and more time discussing the major strategic issues facing the organization. These discussions are intended to focus on issues that have significant potential impact on the organization's mission. This requires board members to participate openly in dialogue and to work on collaborative solutions.

The Board has made great strides in recent years reforming its committee structure (Figure 3) and decision processes. Future success hinges upon our ability to tackle the tough issues, those that have been around for decades, and to reach consensus about resolving them. Perfecting the communication process and the expectations envisioned above will be critical to the DRC's future success.

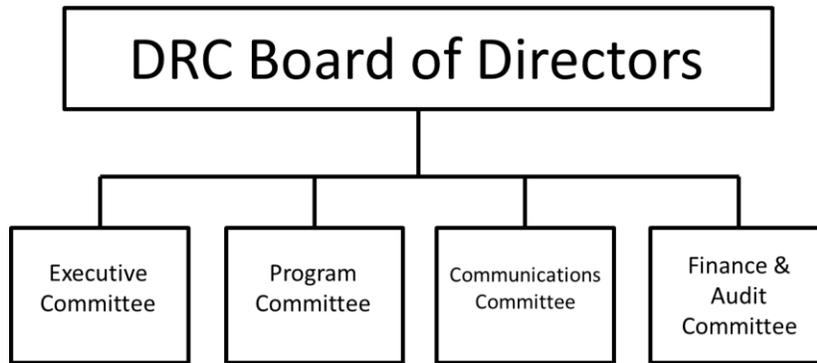


Figure 3. Four committees advise the DRC Board of Directors.

The Board represents a microcosm of the basin with all its conflicting and compatible interests together in one small place. The Board provides the forum where the water management controversies and conflicts get vetted, discussed, and resolved and where opportunities get identified and pursued. If the DRC’s board members, representing their broad interests, cannot figure out how to make progress on the most intractable issues, then it is unrealistic to think that the basin at-large can do so. The Board needs to take a leadership role in finding collaborative ways to fix decades-old water management challenges and to not shy away from the difficult conversations that this role requires. Once board members have reached a consensus on difficult issues, it will be critical that they support and/or participate in the implementation of solutions as well.

13 DRC Staff Structure and Role

The structure of the staff reflects the structure of the Board. Staff are organized into the Communications and Development, Programs, and Finance and Administration departments (Figure 4).

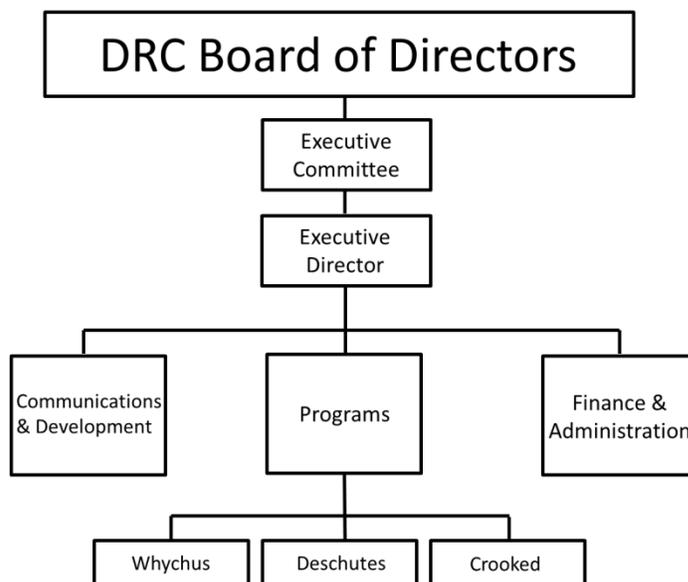


Figure 4. DRC staff structure mirrors the structure of the Board of Directors.

13.1 Program

The Program staff devotes its time to investigating, scoping, designing, financing, and implementing collaborative stream flow projects. In addition to restored stream flow, these projects and transactions generate a broad set of

direct benefits for project partners, usually irrigators. In addition to its project work, the DRC staff participates in a number of basin-scale planning efforts. Currently, the staff is engaged in two such planning efforts, the Deschutes Basin Study and the Habitat Conservation Plan. The project work and planning work are complementary. The learning gained from projects help inform and ground the planning effort in practical experience and the planning effort generates new ideas, approaches and agreements from which the next generation of projects is born.

The Program staff also prepares the program content for board committees and meetings. Traditionally, this content was comprised of technical project proposals; the emphasis has shifted to written descriptions and explorations of strategic issues.

In order to assist the Board in creating an effective forum for consensus building around difficult issues, program staff will need to develop and maintain capabilities in issues analysis and presentation. The ability to summarize complex issues and to present them in simple terms is an important skill for staff to develop and maintain. Also, considering the large size of the board, better articulation by the staff of what they need from the board in order to advance issues will be increasingly important.

13.2 Communications & Development

The staff in this area focuses on two essential roles: raising the unrestricted resources of the organization and communicating the organization's priorities and activities to key audiences. The two roles are tightly related; a failure to communicate with particular segments of the public diminishes our ability to raise funds. The very nature of the DRC's multi-stakeholder composition has made it difficult to convey clear and straight forward messages to the public, particularly those segments that support the organization financially.

Given the disparity of interests represented on the Board, it is critical that the Board work closely with staff to generate unambiguous messages that serve to galvanize public support for the key initiatives and goals of the organization. When the messages are too broad and attempt to be everything to all people, they do not fully resonate with the DRC's targeted audiences and often go unheard.

Conveying impactful messages that support the DRC's stream flow restoration mission in a manner in which all board members can universally support has been challenging. Illustrative stories that highlight the complexity of the demands on the river occasionally make some board members uncomfortable, but are essential in order to help the public understand, and support, needed future changes in how the river is managed. The Board and staff need to find common ground so that communications efforts can be implemented with the full confidence of both.

13.3 Finance and Administration

The staff in this department fulfills the essential financial budgeting, accounting, and reporting responsibilities as well as the general administration of the office. Finance staff work directly with auditors to facilitate the annual audit and with the major institutional donors on progress and status reports.

In order to advance the long range program strategy of the organization, DRC staff will have to perfect a system of financial forecasting to guide a process of enrolling major funding sources. Elements of the DRC's current long range financial strategy appear in earlier sections of this strategic plan.