



COMMUNITY PLANNING:
**Water
Availability**



Baseline Characteristics:

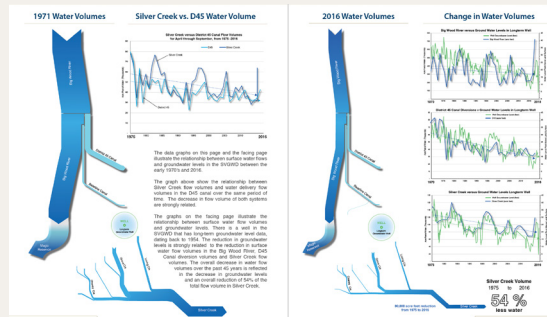
WATER AVAILABILITY

Blaine County sits atop two principal aquifers.¹ One being an unconfined aquifer that follows the valley floor, roughly mimicking the path of the Big Wood River from north to south. Water flows down the valley and either stays shallow or goes down into a deeper, confined aquifer south of Baseline Road in the Bellevue Triangle. The two aquifers reconnect near the community of Gannett, where the pressure of the confined aquifer pushes the water up above the ground, forming the springs and tributaries that feed Silver Creek. Whereas precipitation and snowmelt channeled through supporting tributaries feed the Big Wood, Silver Creek depends on this groundwater upwelling to maintain flows. In turn, the aquifers are recharged by stream seepage and precipitation filtering downward.²

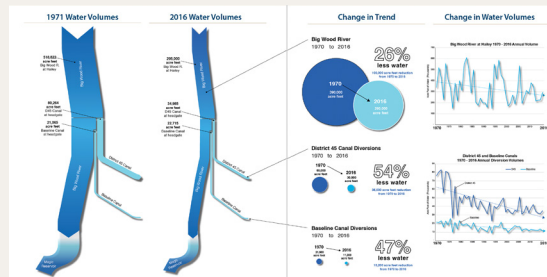
As recently the early 1970s, when Idaho established an permitting system for surface water rights,³ there was a general view that development and land uses did not impact the County's water supply.⁴ Now, there's evidence that environmental changes, regional growth and overallocation have severely impacted groundwater levels over time.⁵

A 2007 report prepared in collaboration with local entities and published by the US Geological Survey showed "significant declining trends" at three wells that the Survey identified as representative of the valley's groundwater system.⁶ Ground water monitoring since 1975 backs those

findings with a clear downward trend.^{7,8} Population and water level trends over the 50-year period are addressed in the 2007 USGS report, speculating a relationship between consumptive uses and groundwater levels.⁹ The 2022 Order Establishing Moratorium on most new appropriations declares the "surface and ground waters of the Big Wood River drainage [to be] connected."¹⁰



Correlated Change in Surface and Ground Water Volumes³⁹



Change in Surface Water Flows⁴⁰

An analysis of the annual streamflow volumes of the Big Wood found that it was 26% lower in 2016 than it was in 1970.¹¹ Water available to the area's two principal diversion canals, which deliver a majority of the surface water used for agricultural irrigation in the south valley, was cut in half.¹² Silver Creek, the bellwether for the south county's aquifer, saw flows fall by 54% from 1975 to 2016.¹³ Both measures indicate an overall decline throughout the water system. Decreases in surface water flows and groundwater levels are interconnected, and susceptible to the pressures of climate change.

Climate change is exacerbating drought and triggering snowmelt earlier in the year. Average temperatures are steadily increasing year round,¹⁴ compromising the capacity of the region's snowpack to store water through spring and into summer.¹⁵ Spring runoff has and will continue to begin earlier each year, significantly reducing streamflows during the hottest months of the summer.¹⁶ More frequent and intense drought and wet periods further stress the ecology of the Big Wood River basin.¹⁷ Meanwhile, more efficient irrigation methods and water delivery methods offer less aquifer recharge. Lower ground water levels throughout the aquifer have reverberated system wide.

Reservoirs

The Magic and Little Wood reservoirs are the county's two largest man-made reservoirs.³⁴ Primarily, both are used to store water for irrigation.

Owned by the Big Wood Canal Company, Magic is by far the biggest, with a maximum capacity of 191,000 acre-feet.³⁵ Filled by the Big Wood River and Camas Creek, Magic is a gross indicator of water availability in the Big Wood River Basin. The amount of water in

the reservoir varies widely year to year. In May 2023, it was upward of 98% full; two years earlier, it was just 4% full, leading to a 26 day irrigation season for its shareholders.³⁶

Little Wood Reservoir is a smaller body, holding about 30,000 acre-feet. Managed by the Little Wood Irrigation District, the reservoir's water is important to agricultural users around Carey.³⁷ Residential development in Carey depends on ground water from wells, which the county considers "reasonably shallow."³⁸

Increased water demand, locally and regionally, further stresses local water resources. Agriculture—by far the system’s largest segment of water users—has felt the pressures of diminished water resources in recent years.¹⁸ Agricultural uses account for almost 74% of water use across the Big and Little Wood Drainage in Water District 37.¹⁹ In 2016 they accounted for 125,000 of 169,687 acre-feet in 2016, some 40.7 billion gallons.²⁰

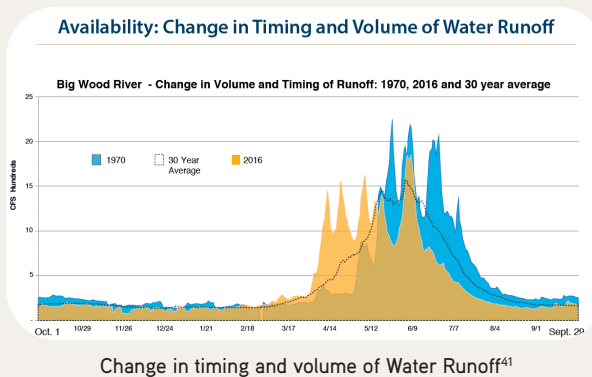
Domestic wells were the second biggest user, consuming 24,907 acre-feet that same year; municipalities used 11,000; golf courses used 8,380; and snowmaking used 400.²¹

In Idaho, like most Mountain West states, the water rights supporting this usage are based on a doctrine known as ‘Prior Appropriation,’ which stipulates that older water rights have priority in times of scarcity. It’s commonly summed up as ‘first in time, first in right’; in other words, a user can fill their allocation only after all the users who came before have filled theirs. Locally, the oldest surface water rights date back to the 1880s. More junior claims, like many of the groundwater wells in the Bellevue Triangle, commonly originated in the 1940s.²² When water is scarce, senior users can ‘call on’ junior users to curtail use in order to fulfill senior allotments—something experts forecast will happen more and more going forward.²³

Much has changed since the majority of local water rights were allocated and the Doctrine of Prior Appropriation was established— therein lies the tension. Old rights are based on the hydrological and climatic conditions that predate Idaho’s statehood. Today, there is less water available in the west than there was when the legal framework took shape. Furthermore, the Prior Appropriation Doctrine encourages individual users to protect their stake—not the basin as a whole. In recent years, senior surface right users have issued water calls against upstream groundwater users²⁴—something that will likely grow more common if climate and use trends continue.²⁵

To mitigate these challenges, the Idaho Department of Water Resources issued an order in 1991 designating the Big Wood River Ground Water Management Area, spanning from Magic Dam north up the Big Wood River, east to upper Silver Creek and west to the Camas Prairie.²⁶ The Management Area includes a variety of surface and groundwater users— but not all domestic users in the unincorporated County. The 1991 order also established a Management Policy, restricting new appropriations of water.²⁷ The policy helped weaken the downward trend in ground water levels that steepened over the previous 50 years; however the levels have not rebounded.²⁸

In 2020, the Director of the Idaho Department of Water Resources convened select users to serve on an Advisory Committee for the Management Area.²⁹ Over the course of two years, the Advisory Committee drafted and adopted a Management Plan that includes a suite of programs to mitigate the impacts of groundwater pumping and to maintain streamflow targets.³⁰ The Plan’s goals include supporting the availability of ground and surface water, stream health, as well as the aquifer health.³¹ It calls for tactics, such as fallowing acres within groundwater districts, limiting groundwater pumping for irrigation seasonally, establishing a fund to finance water conservation and infrastructure projects, delivering water from the Snake River, and cloud seeding.³² The 2022 plan is set to expire at the end of 2024, and the Advisory Committee is currently discussing updates to the Plan.³³



Regional Coordination

In addition to the Blaine County government and the five cities therein, community partners in water availability include:

Big Wood Canal Company

Big Wood River Groundwater Management Advisory Committee

Big Wood Water Collaborative

Boise State University

Conservation, Infrastructure & Efficiency Fund (CIEF) Committee

Flood Control District #9

Galena Ground Water District

Idaho Conservation League

Idaho Department of Water Resources

Natural Resources and Conservation Services, USDA - Idaho Office

Silver Creek Alliance

South Valley Ground Water District

Sun Valley Water and Sewer District

The Nature Conservancy



Photo: John Finnell

Shared Goals

PROCESS

Recognizing the significant overlap in Comprehensive Plan policy statements from Blaine County and its cities– Carey, Bellevue, Hailey, Ketchum and Sun Valley– the Wood River Land Trust scoped the Community Planning program and its action plan objectives (Chapter 3) to stem from goals shared between three or more municipalities. This Chapter 2: Shared Goals presents shared goals backed by Comprehensive Plan policy statements, as displayed in the following tables. Furthermore, the following tables present aspirational ideals meant to house and guide shared goals.

POLICY BACKING

For each focus area, see the policy statements that support the shared goal. From the Land Trust’s perspective, shared goals in each focus area work towards the following set of ideals.



WATER AVAILABILITY

IDEAL: Robust stream flows and groundwater levels sustain watershed health and water availability in Blaine County.

SHARED GOALS	SUPPORTING POLICIES
W.1 - Support the monitoring and management of water consumption, across user groups.	Blaine County - Chapter 5: Natural Environment: Resources, Hazard Areas, and Conservation, Policy Statement E-3, E-5, E-10, E-12. Chapter 6: Public Services, Facilities and Utilities, Water and Wastewater Policy Statements C-8, C-12. Chapter 7: Economic Development, Policy Statement D-7, E-2; Chapter 8: Land Use, Policy Statements B-5, B-8.
	City of Carey - Natural Resources: Desirable Goals 1,3, Objective 1. Land Use, Agricultural/Residential Low Density Areas, Desirable Goal 6.
	City of Bellevue - Chapter 2: Population, Goal 4, Objective 1, Action 4. Chapter 6: Natural Resources, Goal 1. Goal 2, Objective 6; Chapter 8: Public Services, utilities, and Facilities, Goal 1, Objectives 1, 2.
	City of Hailey - Section 1: Natural Resources, Energy and Air Quality, Goals 1.1, 1.2
	City of Sun Valley - Principle 1: Goal 1, Objectives 1.1, 1.3. Goal 4, Objectives 4.1; Principle II, Goal 6, Objective 6.2. Principle III, Goal 8, Objective 8.2.
W.2 - Mitigate the impacts of existing and new development on water availability.	Blaine County - Chapter 5: Natural Environment: Resources, Hazard Areas, and Conservation, Policy Statement E-4, E-13, E-14, E-16. Chapter 6: Public Services, Facilities and Utilities, Water and Wastewater C-9, C-10. Chapter 7: Economic Development, Policy Statement D-7. Chapter 8: Land Use, Policy Statements B-5, B-6.
	City of Carey - Natural Resources: Desirable Goal 1, Objectives 1, 2, 3, 7. Land Use, Agricultural/Residential Low Density Areas, Desirable Goal 7.
	City of Bellevue - Chapter 6: Natural Resources, Goal 2, Objective 4. Chapter 8: Public Services, utilities, and Facilities, Goal 1, Objectives 2. Chapter 13: Community Design, Goal 1, Objective 3.
	City of Ketchum - Chapter 1: Community Vision and Core Value 10. Chapter 4: Community Design and Neighborhoods, Goal CD-2, Policies CD-2.5. Chapter 5: Natural Resource Stewardship, Goal NR-3, Policies NR-3.1, 3.2, 3.3, 3.4. Goal NR-4, Policies NR-4.1, 4.2, 4.3; Goal NR-6, Policy NR-6.5. Goal NR-8, Policy NR-8.1. Chapter 9: Public Safety and Utilities, Goal PSU-2, Policy PSU-2.1
	City of Sun Valley - Principle 1: Goal 4, Objectives 4.1. Principle II, Goal 6, Objective 6.1.
W.3 - Reduce water consumption to support fishery health.	Blaine County - Chapter 5: Natural Environment: Resources, Hazard Areas, and Conservation, Policy Statement E-6, E-7, E-8, E-9.
	City of Hailey - Section 1: Natural Resources, Energy and Air Quality, Goal 1.1.
	City of Ketchum - Chapter 1: Community Vision and Core Value 6. Chapter 5: Natural Resource Stewardship, Goal NR-1, Policies NR-1.2.
	City of Sun Valley - Principle 1: Goal 1, Objective 1.3.

Action Plan

OBJECTIVES

For each focus area and shared goal, see a subset of high-level objectives. The objectives are intended to be broad, so that they offer flexibility in implementation. The following Implementation section provides information about how the objectives will be prioritized over time.

APPROACHES

In shaping the scope and objectives of the Community Planning program at the Land Trust, the leaders in local government identified five approaches through which they welcome our support and partnership. Every objective adopts one of the following approaches:



ENGAGE:

Centering the community, the “engage” approach describes how the Land Trust will listen to, share information with, and involve stakeholders in land use planning. On various levels and through a mix of mediums, we will facilitate and host conversations about how to steward a more livable future for the people and wildlife of Blaine County.



EVALUATE:

The “evaluate” approach prioritizes access to up-to-date information. Reliable and relevant data is necessary to respond to the community’s concerns, inform planning decisions, and prioritize solutions. Importantly, accurate information can also help build consensus. We see where there are gaps in knowledge and understanding, then collaborate with partners to investigate the dynamics behind community needs and potential solutions.



EDUCATE:

When community issues or needs arise, they generally stem from a complex combination of factors. Ecological, hydrologic, geographic, economic and social trends influence the baseline characteristics of the Community Planning focus areas– summed up in our lived experience. Education supports us to understand the complexity of our lived experience, including the challenges we need to resolve and the solutions that support our shared goals.



ENCOURAGE:

The Land Trust recognizes the remarkable alignment between its vision for conservation and the shared goals of our leading partners, in local government. All the while, the Land Trust understands the pressures of competing priorities and developmental markets that threaten to compromise the bountiful environment and quality of life that the local community cherishes. The Land Trust is prepared to encourage its partners to act in alignment with our core values, when it’s most important to do so.



COORDINATE:

When the community needs a leader to address a community need or problem, the Land Trust is poised to coordinate solutions. Coordination involves going between people and groups to organize deliberation, resolution and action. Being flexible– plus overseeing a service area that is regional, not just local– the Land Trust is well positioned to work up and down the valley, between jurisdictions. Coordination is needed to coexist and make efficient use of resources.

WATER AVAILABILITY

Ideal: Robust stream flows and groundwater levels sustain watershed health and water availability in Blaine County.

SHARED GOALS	OBJECTIVES
W.1 - Support the monitoring and management of water use, across user groups.	W.1.a - Engage the community to be aware of current stream flows, known ground water levels, seasonal predictions, and water usage across the County.
	W.1.b - Educate the community about the connections between climate change, water availability, and the need to conserve water.
	W.1.c - Encourage increased capacity for monitoring of usage, water levels, and diversions.
	W.1.d - Encourage implementation of the Big Wood River Ground Water Management Plan.
W.2 - Mitigate the impacts of existing and new development on water availability.	W.2.a - Engage the community in growth scenario planning for the management of ecosystem services and natural resources, like water.
	W.2.b - Evaluate prospective water usage with developable land.
	W.2.c - Evaluate outdoor water use associated with domestic and municipal water rights.
	W.2.d - Educate the community about how compact development uses water more efficiently.
	W.2.e -Coordinate incentives for developments to incorporate water retention systems.
	W.2.f - Coordinate incentives for water smart landscaping- for individual users, HOA's, as well as landscaping companies.
	W.2.g - Coordinate partners to treat stormwater runoff, including that of snow storage, with constructed wetlands.
W.3 - Reduce water demand to support fishery health.	W.3.a - Engage community partners to lease, sell, and donate their water rights, through private agreements, for conservation efforts.
	W.3.b - Educate the community about how minimum stream flows affect habitat quality and fish access, along different waterways.
	W.3.c - Encourage more efficient water delivery systems and irrigation practices at place of use.

WOOD RIVER LAND TRUST



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to view the
full report**



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