

CONSERVATION

& DROUGHT MANAGEMENT

Executive Summary

Big Sky Community Water Conservation and Drought Management Plan

OVERVIEW

The Big Sky Water Conservation and Drought Management Plan presents strategies to conserve Big Sky's water supply, to sustainably manage water supply for future generations, and safeguard the community's greatest asset, the Gallatin River.



>>> GOALS

Big Sky aspires to set the bar to the highest standard of responsible water use. Achieving this vision **requires everyone in the community understanding the value of our water resources, actively participating in water conservation, and responsible, water-smart growth.**

Demand Management vs. Supply Management

This Plan focuses on demand-side ("water use") strategies to address conservation and drought mitigation. Supply-side strategies are guided by Water Providers.

THE NEED:





No further water rights can be allocated in the Gallatin or Madison watersheds.



Groundwater withdrawals impact the *availability* of *fresh water* supplies and streamflows.

Water supply deficit is predicted to occur in the near future.



Limited precipitation and higher temperatures limit the *reliability* of snowpack as water supply.







BIG SKY WATER SUPPLY CONNECTIONS





- Big Sky County Water and Sewer District
- Yellowstone Club
- Moonlight Basin
- Firelight Meadows
- Spanish Peaks Mountain Club
- Other (water providers with 50 connections or less)
- Private Wells



CONSERVATION WORKS!

Conservation is the most costeffective, expedient, and environmentally-friendly way to thrive through drought and stretch water supplies while ensuring a high quality of life and healthy rivers.

EFFORTS TO REDUCE SUMMER DEMAND WILL HAVE THE GREATEST IMPACT

PROJECTED DEMAND



Bottom Line: Legal water availability (3,800 million gallons annually) will not constrain growth; aquifer capacity and infrastructure limitations will.

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The Big Sky Water Conservation Program has **helped save over 8.4 million gallons** of water since it started in 2016.

Note: Data above is from October 2020.

BIG SKY WATER CONSERVATION PROGRAM STRATEGIES

Gallatin River Task Force Five Year Focus



EDUCATION & OUTREACH

Strategies that motivate or inspire behavior change.

- Print/digital marketing
- Conservation campaigns
- In-person events
- Demonstration gardens
- Landscape partnerships



Strategies that provide technical assistance or financial motivators.

- Indoor/Outdoor Rebates
- Custom Rebates
- Business/Organization
 Water Conservation Plans
- Developer Incentives



ADVOCACY & PARTNERSHIPS

Strategies that provide pathways for community water leaders to stretch existing supplies.

- Water Provider Partnerships
- HOA Partnerships
- Climate Action Plan
- Zoning & Subdivision Code

COMMUNITY WATER CONSERVATION STRATEGIES

Safeguarding Big Sky's drinking water supply & streamflows in the Gallatin River will require everyone in the community actively participating in water conservation.

WATER PROVIDERS

- Meter all water use
- Set rate structures that
 encourage water efficiency
- Educate customers on the value of water & water conservation practices



BIG SKY WATER WISE LANDSCAPE GUIDE



DEVELOPERS/BUILDERS/ HOMEOWNERS ASSOC.

- Incorporate water conservation requirements into your Covenants, Conditions, and Restrictions (CCR's) and/or Design Requirements.
- Install EPA WaterSense fixtures and EnergyStar appliances in all new construction
- Utilize and promote water-wise landscaping practices
- Utilize water recycling and reuse including grey water systems, rain barrels, and reclaimed wastewater distribution systems

RESIDENTS/ BUSINESSES

- Utilize water-wise landscaping practices
- Install EPA WaterSense fixtures and EnergyStar appliances when remodeling or replacing worn out products
- Track your water use/bill
- Find and fix leaks
- Take advantage of rebates offered by the Big Sky Water Conservation Program

TRACKING WATER CONSERVATION

- >> Tracking water conservation will help the community set goals and track progress.
- >>> Current water savings are based on program participation.
- Recommendation: Improve water conservation data tracking. Five year focus:
 - Track annual water demand
 - Ensure water use is metered
 - Align water provider data
 - Set community reduction goal

Big Sky's average water usage is approximately **320 gallons** per connection per day, for all water users and uses. The State of Montana's average per connection water use is **275 gallons** per day.



DROUGHT MANAGEMENT



DROUGHT VULNERABILITY ASSESSMENT

- Southwest Montana is prone to drought.
- Climate change models are predicting reduced snowfall, earlier snowmelt, more precipitation in the form of rain rather than snow.
- Population growth is predicted to be 6% annually.
- Big Sky's topography and fractured aquifers make it challenging to develop new reliable wells.



DROUGHT MONITORING

- A drought monitoring tool is being developed to pull data from key hydrologic indicators including surface and groundwater.
- Drought Responses will vary by severity of drought and are limited to demand-side measures.

SPOTLIGHT DROUGHT RESPONSE

Address the growing threat of more frequent and prolonged drought conditions by monitoring local drought conditions and facilitating community-wide drought response.

Five Year Focus:

- Web-based drought
 dashboard
- Stakeholder led drought committee
- Community-wide response
 actions
- Drought communication campaigns

For more information visit: Gallatinrivertaskforce.org

Contact Us/Get Involved: 406-993-2519 headwaters@gallatinrivertaskforce.org

