Blue River Integrated Water Mgt. Plan

Summit County State of the River
May 14, 2020
The mission of the Blue River Watershed Group (BRWG) is to promote, protect and restore a healthy Blue River watershed through cooperative community education, stewardship, and resource management.
Blue River Integrated Water Management Plan

The purpose of the IWMP is to:

- enable consumptive and non-consumptive water users and stakeholders to understand and quantify current and future water uses/needs and,
- integrate those uses/needs for the maximum benefit of all and for the health and sustainability of the watershed,
- while respecting and protecting existing water rights.
Blue River IWMP Funding

Colorado Water Conservation Board
Department of Natural Resources

Summit County Colorado
Silverthorne Colorado
Bureau of Reclamation
Northwest Colorado Council of Governments
Blue Valley Ranch
Conservation for Wildlife & Agriculture
Community Outreach Progress

Issues Facing the Watershed

Community Priorities

- Climate Change
- Impacts from Major Roadways
- Increasing Land Development and Population Growth in Summit County
- Impacts from Potential Forest Fires
- Loss of Streamside Vegetation and Degradation of River Habitat
- Trans-Mountain Diversions (current and future)
- Low In-Stream Flows
- Water Quality Impacts from Mining and Abandoned Mines
- Other

First Priority | Second Priority | Third Priority
Blue River Watershed Overview

- Watershed closely aligns with County
  - 699 square miles
  - Public land 79 %
  - Elevations 14,270 to 7,400 ft
  - 65 miles long
- 3 major impoundments:
  - Green Mountain Reservoir
  - Dillon Reservoir
  - Goose Pasture Tarn
Blue River Watershed Overview

- 5 communities: Blue River, Breckenridge, Frisco, Dillon, and Keystone
- 4 major ski areas: Arapahoe, Keystone, Breckenridge, and Copper
- 38 farms occupying 25,365 acres
- Population in 2016 estimated to be 30,367
- Population in 2050 projected to about 51,000
- Tourist industry
  - 4 million skier visits in the 2007-2008 ski season
  - Strong summer tourist industry
Blue River Watershed Overview

- Blue River watershed generates about 310,000 acre-feet of water per year
  - Five (5) trans-basin diverters removing about 95,000 ac-ft of water per year (10-yr average, 2012) and projected to increase
  - Municipal water use 8,000 ac-ft (2000) projected to be 18,000 ac-ft at full build-out
  - Agriculture flood irrigates 9000 acres
  - Recreational uses
Blue River IWMP Progress Report

- Three Reaches
  - Reach 1 - headwaters region to DR
  - Reach 2 - middle reach to GMR
  - Reach 3 - GMR to Colorado River

- Review of existing available information and data
  - Hydrology and Water Use
  - Water Quality and Temperature
  - Aquatic Life
  - Stream Assessments (aquatic habitat)
Hydrology
- Periods of low flow naturally occur in the late fall, snowmaking, diversions at the headwaters
- Future flow conditions could potentially be lower
- Water quality is poor from mining impacts
Blue River IWMP- Reach 1

- Aquatic life
  - Lower portion is an excellent fishery, but appears to be in decline
  - Closer to Breckenridge, the fishery is not as robust
- Stream Assessments
  - Limited habitat assessments
  - Highly impacted by dredge boat mining
  - Ongoing restoration
Blue River IWMP- Reach 2

- **Hydrology:**
  - Flows effected by trans-basin diversions and municipal water uses
  - Highly regulated releases, very cold and transition abruptly
Blue River IWMP- Reach 2

![Graph showing temperature and hydrograph comparison for 2008.](image)
Blue River IWMP- Reach 2

- Future flows could potentially be lower due to increased demands
- Water quality appears to be relatively good
- Aquatic life
  - Does not meet Gold Medal status in some sections and appears to be in decline
  - Focus of the task 2 objective
- Stream Assessments
  - No detailed assessments of habitat
  - Healthy robust riparian corridor
Blue River IWMP- Reach 3

- 2010 GCSMP
- Hydrology
  - Recommended flow ranges from GCSMP are commonly present
  - GMR releases can be unnaturally high in fall
Blue River IWMP- Reach 3

Mean Monthly Flows, 2005-2019

Discharge, cfs

January, February, March, April, May, June, July, August, September, October, November, December

BR at Blue River, BR Near Dillon, BR below DR, BR below GMR
Blue River IWMP- Reach 3

- Water quality appears to be relatively good
- Aquatic life
  - Quality brown trout are abundant
- Stream Assessments
  - GCSMP site assessments indicate a healthy robust aquatic and riparian corridor
  - Aquatic habitat is abundant
Blue River IWMP- Task 2 Declining Fishery

- Working with BREW
- Reviewing and assessing
  - Applicable fish surveys
  - Temperature data
  - Hydrology
  - Macroinvertebrate data
  - Water quality data
- IWMP/BREW additional investigations
  - Macroinvertebrate sampling
  - Temperature monitoring
Next Steps for the IWMP

- Advisory Committee
  - Share data and analysis that have been collected so far with the Advisory Committee
  - Receive input from the Advisory Committee to finalize the goals and objectives of the IWMP
  - Hold Advisory Committee meetings virtually if needed

- Community Outreach
  - Community meetings are on hold because of the coronavirus
  - We will either hold these later this year if in person meetings become possible or find an alternative way to get broad community feedback on the IWMP
Get Involved!

Be Part of the IWMP

- Join the IWMP **Advisory Committee** to help guide the direction and focus of the IWMP
- Attend our community meetings about the content of the IMWP later this year
- Sign up for our newsletter to keep up to date with our progress on the plan
- Fill out the survey

Other Ways to Support BRWG

- Become a member of BRWG to support our ability to continue protecting the Blue River Watershed
- Volunteer for our first annual River Cleanup on August 29, 2020
- Join our Board of Directors
Blue River IWMP Website:
www.blueriverwatershed.org/integrated-water-management-plan

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