

Sustainable Water Management for Colorado Ski Resorts

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CO Ski Industry Stats

Source: RRC Associates Study Summary by [ColoradoSki.com](https://coloradoski.com)

Industry generates
\$4.8 billion
annual economic impact

Supports more than
46,000
Colorado jobs

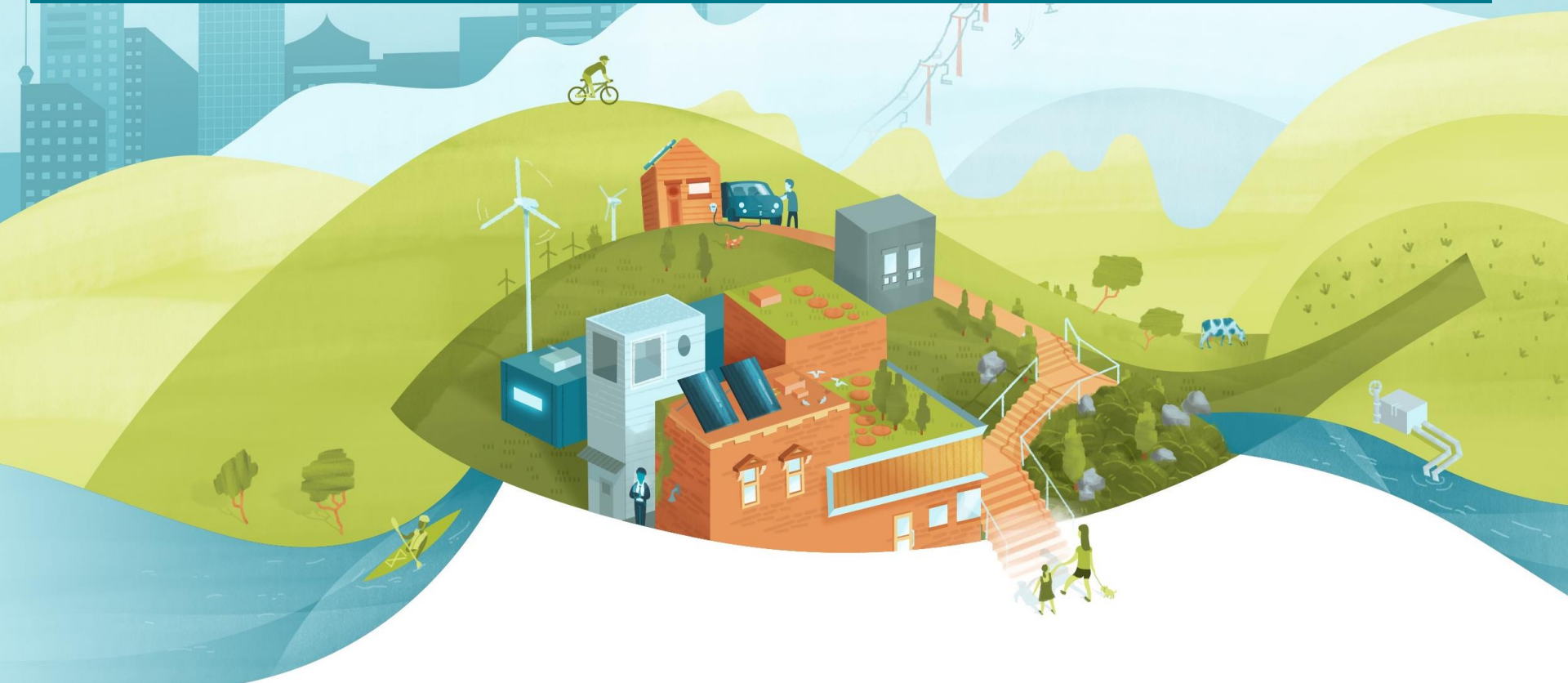
Guests spend
>\$300
per skier
visit

Impact-driven, people-centered solutions

Transformative
Energy & Water Solutions

Sustainable, Resilient, & Regenerative
Systems

Symbiotic Built
& Natural Environments

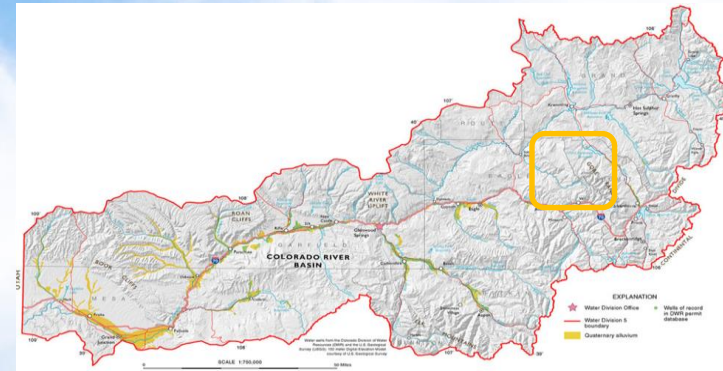


Blue River Watershed



About Blue River Watershed and Summit County, Colorado

- West slope community
- Headwater that feeds the Colorado River and East slope users
- Home to 4 major ski resorts
- Small permanent population (~30,000) but large visiting population



COLORADO
Colorado Water
Conservation Board
Department of Natural Resources



Blue River Enabling Factors

- Economic and social values around the environment
- History of regional collaboration
- Engaged non-governmental organizations to support implementation, education, and outreach

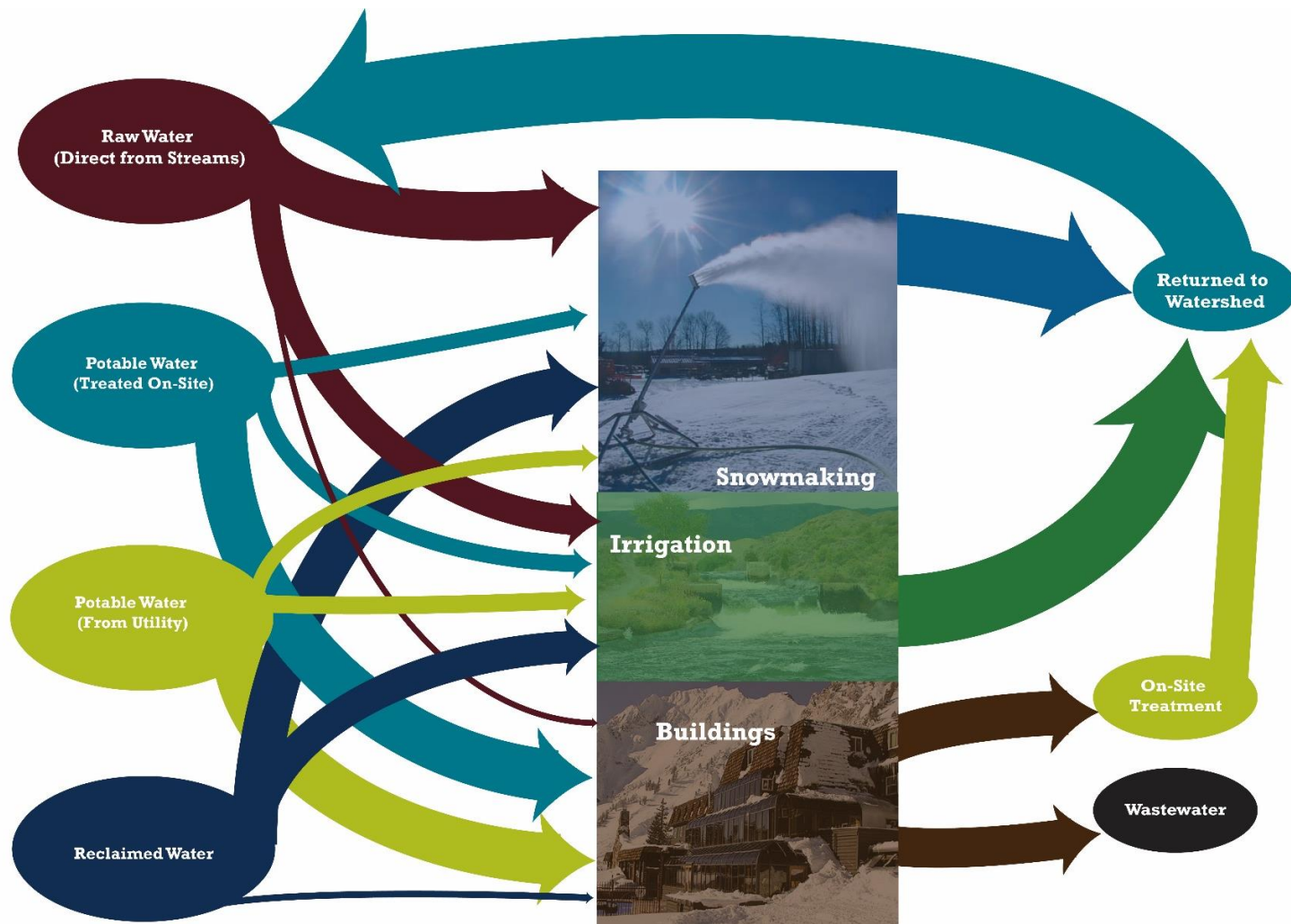


Sustainable Slopes: Water Elements

- Water Use for Snowmaking
- Water Use in Facilities
- Water Use for Landscaping and Summer Activities
- Water Quality Management
- Wastewater Management



Estimated Water Cycle for Ski Industry

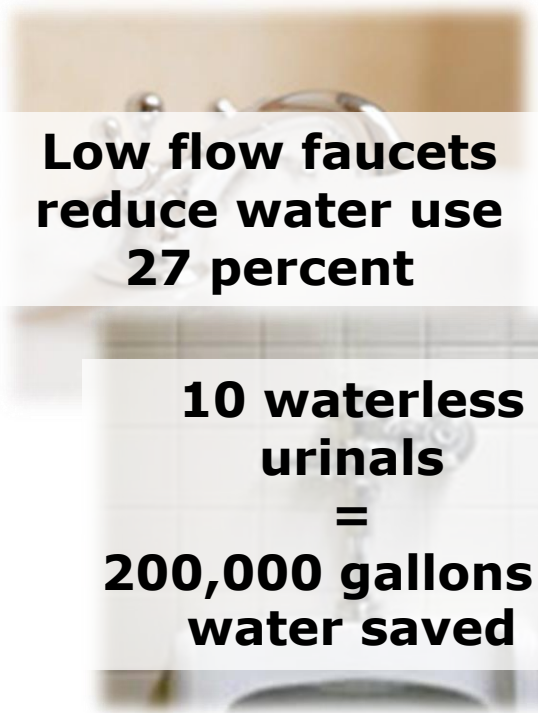


Ski Industry Water Management Practices



Adoption Curve





**Low flow faucets
reduce water use
27 percent**

**10 waterless
urinals
=
200,000 gallons of
water saved**

VAIL RESORTS®
EXPERIENCE OF A LIFETIME™

ASPEN SNOWMASS®



**Dirt-based
superpipe
=
4 million gallons of
water saved**



Source: Paul Conrad/The Aspen Times

Climate Impacts on the Winter Tourism Economy in the United States



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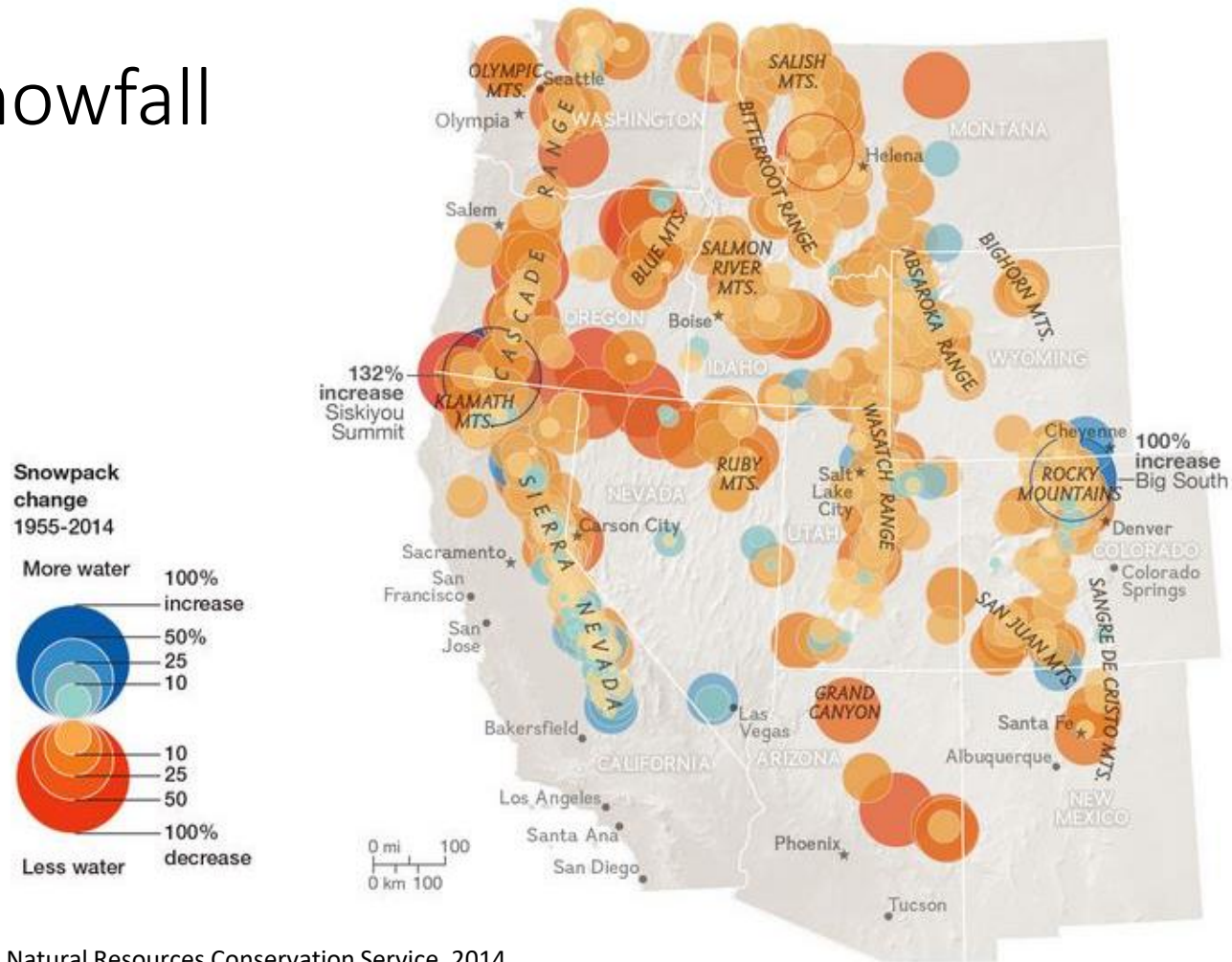
STRATUS CONSULTING

Climate Change in Park City: An Assessment of Climate, Snowpack, and Economic Impacts

Prepared for:

The Park City Foundation
PO Box 681499
Park City, UT 84068

Historic Snowfall Change



Natural Resources Conservation Service, 2014

Ski Resorts: Snow & Rain Impacts

- Warmer temperatures can lead to warmer and shorter winters overall
- Greater chances of precipitation falling as rain rather than snow
- More rain-on-snow events, which can deplete snowpack
- Greater variability in snow-making capabilities due to weather conditions



Photo Credit: [Nature Partners](#)



Ski Resorts: Customer Demographics

	% Agree
Solving climate change now will cost less money than if we wait until later .	>62%
We can achieve environmental protection and economic growth at the same time .	>70%
Convinced that climate change is happening .	>71%

75% of NSAA
member resorts
have sustainability



NSAA Climate Challenge

- Inventory
 - Target
 - Reduce
- Advocate
 - Adapt



Climate Adaptation Toolkit





Business Case Research:

2% profit increase from investing in sustainability

- ✓ Increase revenue
- ✓ Reduce energy expenses
- ✓ Reduce waste expenses
- ✓ Reduce materials & water expense
- ✓ Increase employee productivity
- ✓ Reduce hiring and attrition expenses
- ✓ Reduce strategic and operational risks

Arapahoe Basin Sustainability Plan



Where to from here? Vision and Innovation

- Role of water utilities
- Applicability across CII sectors
- Collaborations in One Water
- Uniquely Colorado

