Water in Colorado and the Grand Valley
Overview

- Water in Colorado
- Focus: Water in the Grand Valley
  - What watershed/ river basin are we in?
  - Where does the water we use come from?
  - What water quality issues do we have?
- How can we be good stewards of our water?
Celebrate...because water is important for all that we do
Celebrate...because Colorado is a headwaters state

Snow falls in the mountains

Builds as snowpack
And drains in the spring and summer. Nourishing 19 states and Mexico
Celebrate... because water has shaped Colorado’s history

Since the beginnings of settlement, mining and agriculture
Then what’s the problem?
Population is increasing but there’s no “new” water

Many uses compete for a scarce and limited water supply

Communities (9%)

Environment

Agriculture (86%)

Recreation
- 80% of Colorado’s population is on the Front Range.
- 80% of Colorado’s precipitation falls on the Western Slope.
Colorado may be facing a Water Gap
How can we fill the gap?

- From agriculture (buy water rights)?
  - Impacts to communities.
  - Impacts to food production.

- With more transmountain diversions (build dams & tunnels)?
  - Headwaters already impacted: low, flat flows.
  - Downstream water quality problems.
  - What about our downstream neighbors?

- From conservation (indoor & outdoor)?
  - How much lifestyle change are we ready for?
  - How do you make it happen?
Focus on the Grand Valley

• What watershed are we in?
• Where does the water we use come from?
• What water quality issues do we have?
A **Watershed** is:
An area defined by topography that contributes runoff to a single outlet.

Also called…
River basin
Catchment
Drainage basin
Drainage area

What watershed is Grand Junction in?
Colorado Basin

Colorado River Basin

[Map of the Colorado Basin showing major cities and rivers]
Colorado Basin Snapshots
Gunnison Basin Snapshots
Where do we get our water?

- Drinking water from Grand Mesa

- Irrigation water from the Colorado River
What about water quality?
Water Quality: Urban Runoff

5-2-1 Drainage Authority
http://521drainageauthority.org/kids.html
Water Quality: Salt & Selenium

Schematic of Selenium Pickup in Irrigation Water

- Selenium in winter 20-200 PPB
- Drain
- Irrigated Field
- Root Zone
- Deep Percolation
- Shallow Groundwater
- Canal leakage
- Mancos Shale Bedrock
- Confining layer
- Soils derived from shale
- Some Groundwater
  - Flows directly to river
  - Flows to River
- River

Selenium about 1 PPB in Canal Water
How can we be good stewards of our water?
How You Can Learn More:

www.ColoradoMesa.Edu/WaterCenter

http://www.thedripwebsite.com/

Water2012.org