

MEETING THE DEMAND FOR WATER

CHALLENGES FACING OUR WATER SUPPLY

 **Variable Precipitation**

 **Climate Change**

 **Wildfires**

 **Water Rights**

 **Lack of Knowledge**



Variable Precipitation

Recent trends are frequent, severe flooding events and prolonged drought:

- Floods - very harmful to people, roads, infrastructures, and river systems
 - Watershed damage includes: streambank erosion and destruction of trees and vegetation
 - Stream water temperatures increase causing harm to ecosystem
 - Damage to culverts cuts off stream connectivity to fish migration and spawning areas
 - Increase of aquatic parasites and fish disease
- Drought
 - Causes extreme quality of life issues for humans and ecosystems
 - Lower stream flows increase stream water temperatures
 - Increases chance of mega wildfires
 - Increases disease and parasites in trees and organisms



Climate Change

- Increase period of summer temperatures
- Storms have increased in intensity
- Spring storms have changed from snow to rain causing increased and faster spring runoff (less time to soak into the soil)
- Increase in evaporation rates from lakes and reservoirs
- Increase in stream water temperatures is having harmful effect on river ecosystems



Wildfires

Normal fires promote healthy forest and clear dead and diseased trees. The western fire season has increased 1-3 months since the 1970s.

- Continuing trend of larger and more intense mega fires
- Long term damage to watersheds
- Burned areas produce heavy runoff that is very damaging to streams due to ash, silt, and mudslides
- Aquatic insect populations decline drastically, causing fish to starve
- Regeneration of ecosystem takes decades



Water Rights

- Water rights are property rights
- Usage can be bought and sold
- Determines who can use the water and how much
- Determines who has priority over others to be able to use the water:
 - During low water years the junior water owners may not receive any water
 - Water from Colorado rivers flows to 18 different states causing many water rights issues



Lack of Knowledge

In order to solve the problems associated with our water shortage, citizens should become acquainted with the issues surrounding water rights, water usage, and most importantly what they can do to conserve water

