

2022 WATER YEAR IMPACTS SURVEY PRELIMINARY RESULTS

Purpose:

- Gather information about impacts and response actions taken during the 2022 water year (October 1, 2021 - September 30, 2022) due to abnormally dry or abnormally wet conditions.
- Connect climate conditions to sector-specific impacts to help inform planning, response actions, and technical & scientific information needs.

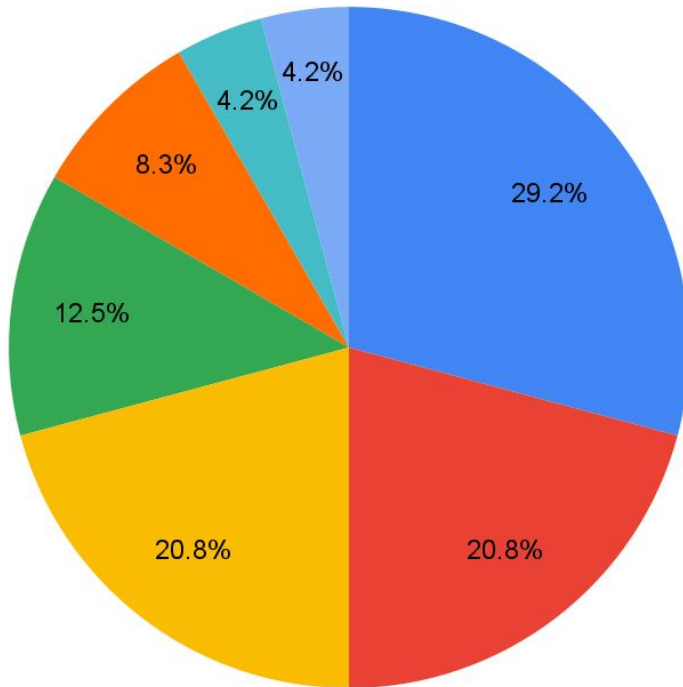


SURVEY RESULTS

95.5%

Experienced
abnormally **dry** conditions
abnormally **wet** conditions
or **both**

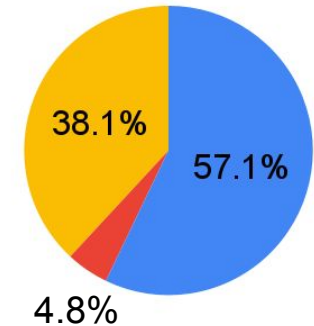
25 Respondents



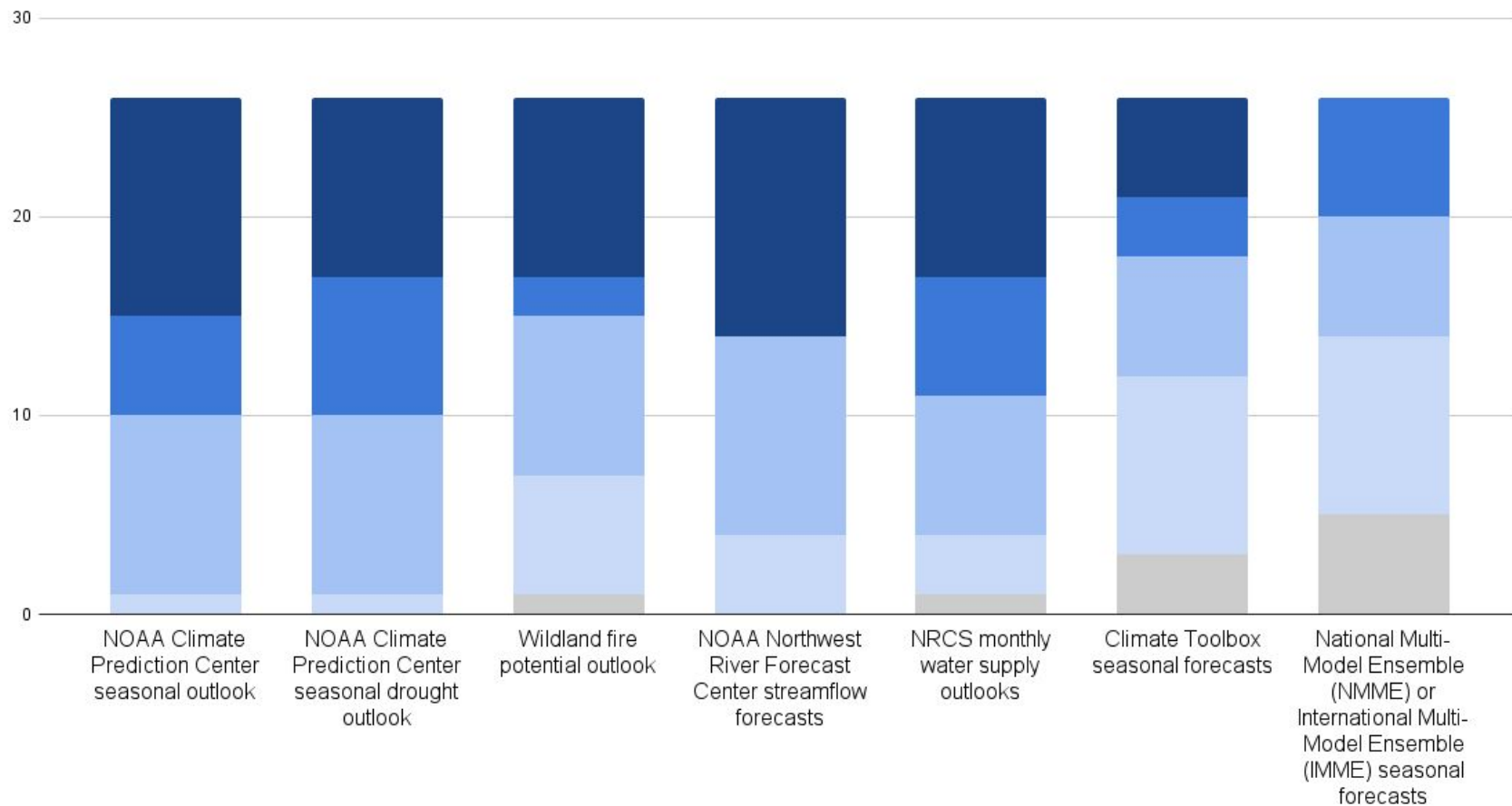
- State Government Agency 29.2%
- Local Government Agency 20.8%
- Federal Government Agency 20.8%
- Other Private Sector/Industry 12.5%
- Tribal Agency/Government 8.3%
- Utility 4.2%
- Individual 4.2%

• Abnormally Dry • Abnormally Wet

• Both



■ Frequently ■ Often ■ Sometimes ■ Rarely ■ Never



DRINKING WATER SECTOR RESULTS

SECTOR	% THAT EXPERIENCED ABNORMALLY DRY OR WET CONDITIONS	IMPACTS DRY	IMPACTS WET	% THAT CHANGED OPERATIONS IN RESPONSE
DRINKING WATER 12 Respondents	DRY: 83.3% WET: 58.3%	<ul style="list-style-type: none"> Lower than normal reservoir levels or inflows (4) Voluntary conservation (2) Water right restriction/reduced water allocation (2) Use of a backup or alternative water source Declining groundwater levels/increased pumping costs (2) Water quality impacts (2) 	<ul style="list-style-type: none"> Decrease in water demand Water quality impacts Increased source water contamination Significant and widespread flooding November 2021 Use of a backup or alternative water source Water rate change 	DRY: 72.7% WET: 50%

Quotes Elaborating on Impacts

- “Generally water demand is declining because of water efficient appliances and customer water usage patterns changing. But hot September conditions change the dynamic of seeing a decrease in water use after Labor Day and extend the period of time that water utilities may have to provide higher levels of water supply”
- “Flooding washed out I-95, and blew out local roads on the Nez Perce Reservation and within the region. The Umatilla, Nez Perce, Colville, and Yakama reservations all experienced flooding, as did reservations on the west side.”

Adaptation Responses

- “The flooding placed more emphasis on the need to implement identified flood damage reduction measures”
- “Buying water now that my well is dry”
- “Utilized an alternative contingent water supply that we don’t typically use because of hotter and drier late summer conditions”

AGRICULTURE SECTOR RESULTS

SECTOR	% THAT EXPERIENCED ABNORMALLY DRY OR WET CONDITIONS	IMPACTS DRY	IMPACTS WET	% THAT CHANGED OPERATIONS IN RESPONSE
AGRICULTURE 9 Respondents	DRY: 77.8% WET: 22.2%	<ul style="list-style-type: none"> ▪ Water right restriction/reduced water allocation (5) ▪ Reduced crop yield (4) ▪ Reduced crop value (4) ▪ Plant stress (4) ▪ Insect infestation (3) ▪ Declining groundwater levels/increased pumping costs (4) ▪ Less surface water and streamflow available (4) ▪ Crop disease ▪ Reduced pasture/forage ▪ Use of a backup or alternative water source 	<ul style="list-style-type: none"> ▪ Reduced Crop Yield (2) ▪ Infrastructure damage (2) ▪ Pasture/field flooding ▪ Shorter growing season ▪ Delayed planting ▪ Animal stress ▪ Animal death 	DRY: 83.3% WET: 20%

Quotes Elaborating on Impacts

- “Damage to fruit trees is widespread, possibly permanent”
- “Flooding caused significant infrastructure damage and loss of livestock. Wet spring delayed planting, etc.”
- “The winter heat wave caused plants to flower early including native plants that people gather”
- “Weeds and weed control became an issue”

Adaptation Responses

- “Planted different crops.”
- “Reduced water allocation. Increased supplemental pumping.”

RECREATION SECTOR RESULTS

SECTOR	% THAT EXPERIENCED ABNORMALLY DRY OR WET CONDITIONS	IMPACTS DRY	IMPACTS WET	% THAT CHANGED OPERATIONS IN RESPONSE
RECREATION 7 Respondents	DRY: 85.7%. WET: 42.9%	<ul style="list-style-type: none"> ▪ Closures due to wildfire (4) ▪ Closures due to wildfire smoke (4) ▪ Limited sites for activities (3) ▪ Change in visitation amount or timing (3) ▪ Shortened snow recreation season (2) ▪ Reduced revenue (2) ▪ Reduced visitation due to less appealing landscape (2) ▪ Longer summer hiking and camping season (2) ▪ Shortened river recreation season 	<ul style="list-style-type: none"> ▪ Closure of roads and trails due to flooding (2) ▪ Trail degradation due to extended wet period 	DRY: 80%. WET: 66.7%

Quotes Elaborating on Impacts

- “This spring there was so much moisture that local events were cancelled or modified, but sports that depend upon highwater like white water rafting were exceptionally good this year, as was skiing, and the wildflower viewing was off the charts throughout the entire spring and summer... There were more flowers out for longer this year which will hopefully help pollinators rebound after the exceptional drought last summer.”

Adaptation Responses

- “We acquired fire fighting equipment and trained our team to first respond in the event of a wildfire in our permit area.”
- “Ceased outside activities due to hazardous air risks”
- “Ceased hiking on trails that were super saturated mud”
- “Delayed Pass Opening”

FORESTRY SECTOR RESULTS

SECTOR	% THAT EXPERIENCED ABNORMALLY DRY OR WET CONDITIONS	IMPACTS DRY	IMPACTS WET	% THAT CHANGED OPERATIONS IN RESPONSE
FORESTRY 5 Respondents	DRY: 100% WET: –	<ul style="list-style-type: none"> More disease (3) Loss of timber due to wildfire (2) Limited access for operations due to wildfire danger (2) Tree mortality (2) Change in timing of tree growth (2) Leaf or needle drop/sparse canopy 		DRY: 80%% WET: –

Quotes Elaborating on Impacts

- “Large wildfires consumed fuels even in areas of old fire scars”
- “The trees in the Sierras and Cascades are suffering.”
- “Some ponds could not be utilized as water sources for fire”

Adaptation Responses

- “Increased guidance for landowners on hot drought prevention and mitigation”
- “Ordered [fire] resources”
- Reduced access