• Jackson County
• Known for: Agriculture - Pears, vineyards, and most recently, hemp and cannabis
• Nearby Crater Lake, rivers, lakes and streams
• Cascades to the east and Siskiyou's to the south.
• Average rainfall per year 18”
BIG BUTTE SPRINGS & ROGUE RIVER WATERSHEDS

• Provides water to ~140,000 customers
  • Eight cities served

• Big Butte Springs 1927 Primary Source
  • Supplies water all year round - up to 19 MGD
  • Decreased by 20% in past few years

• Rogue River – 1968 Secondary Source
  • Duff plant can supply up to 45 MGD
  • Historically runs May – Oct. but now April – Nov.
  • Makes up the difference for lower spring flows
2020/2021 WATER YEAR BIG BUTTE SPRINGS FLOW

Photo Credit: Robert Hunting
CURRENT WATER YEAR SPRINGS FLOW

Setting new historic lows each week; 80% of average
MWC DUFF (ROGUE RIVER) PRODUCTION DATA

- Record production, a result of record demand and reduced supply from the springs
- Duff runs May-Oct. now April-Nov.
- 35 MGD from Duff, 19 MGD Springs
- Max capacity at Duff 45 MGD (70 cfs)
- Typical summer river flows between 1,500 and 2,500 cfs
TOTAL SYSTEM WATER DEMAND

• 2021 Peak System Demand 54 MGD
• Record high demand in past two years
• Total Capacity: Approx. 62 MGD
• Average winter demand: 17 MGD
• Average summer demand: 47 MGD
• Peak day normally early July - August
CASCADES: WATER YEAR
RAINFALL & SNOWPACK

Precipitation at BBS (70% of average)

Basin Snowpack (52% of average)
2021 DROUGHT SUMMARY OF EVENTS

Municipal Supply

• Higher water demand earlier in year - for the past 2 years
• Earliest start up of our secondary source - April 1st, 2021
• Record production, record demand and reduced Springs supply
• Lowest BBS spring flows in past 20 years - reduced by 20%
• June - Chlorine Shortage - triggered our curtailment plan
• Voluntary water reductions requested throughout the summer
• Encouraged customers to participate in our efficiency programs
• Emergency agreements for water supply enacted with provisions
• Water theft from hydrants - more than any previous years
• More water used at our fill stations than in previous years
• Still had a sufficient supply of water to meet the needs of all our communities
Irrigation District Reservoirs

Emigrant Lake

COMBINED WATER STORAGE FOR HOWARD, HYATT, EMIGRANT, AGATE, FISH AND FOURMILE RESERVOIRS AS OF APRIL 27, 2021

FULL POOL WATER YEAR

AVERAGE WATER YEAR

2020 WATER YEAR

2021 WATER YEAR
OREGON DROUGHT MONITOR

May

July

November

D0 - Abnormally Dry
- Ski season is impacted

D1 - Moderate Drought
- Some fields are left fallow
- Water levels begin to decline; recreation and other uses are impacted

D2 - Severe Drought
- Pastures are brown; hay yields are down, and prices are up; producers are selling cattle
- Fire risk increases
- Marshes are drying up, little water is available for waterfowl and wildlife; bears are moving into urban areas

D3 - Extreme Drought
- Planting is delayed
- Wildfire activity is high
- Reservoirs and lakes are very low compared to normal; irrigation water is scarce

D4 - Exceptional Drought
- Power generation is reduced

100.0% of OR
91.5% of OR
71.7% of OR
26.1% of OR
3.6% of OR
2021 DROUGHT SUMMARY OF EVENTS

Weather
• Compounding years of low precipitation and snow accumulation
• 2021 - little precipitation, warmer temperatures, snow melts early
• Trends - more frequent drought years, heavier rain, less snowpack
• High Fire Danger - local fires, drier soils, higher evapotranspiration

Irrigation Districts
• Late start ups and water rotations
• Shut off early mid July & August 1st
• Rural customers using fill stations because of shortage
• Illegal growing operations in question - Water Rights
• Some crops were left fallow this year or had minimal production

Photos Courtesy of Mail Tribune - Jamie Lusch
Storage Reservoirs For Irrigation Districts

Fish Lake
Agate Lake
Fourmile Lake
Howard Prairie Lake
Hyatt Lake
Emigrant Lake
BRING ON THE SNOW!

julie.smitherman@medfordwater.org
541-774-2435
www.medfordwater.org