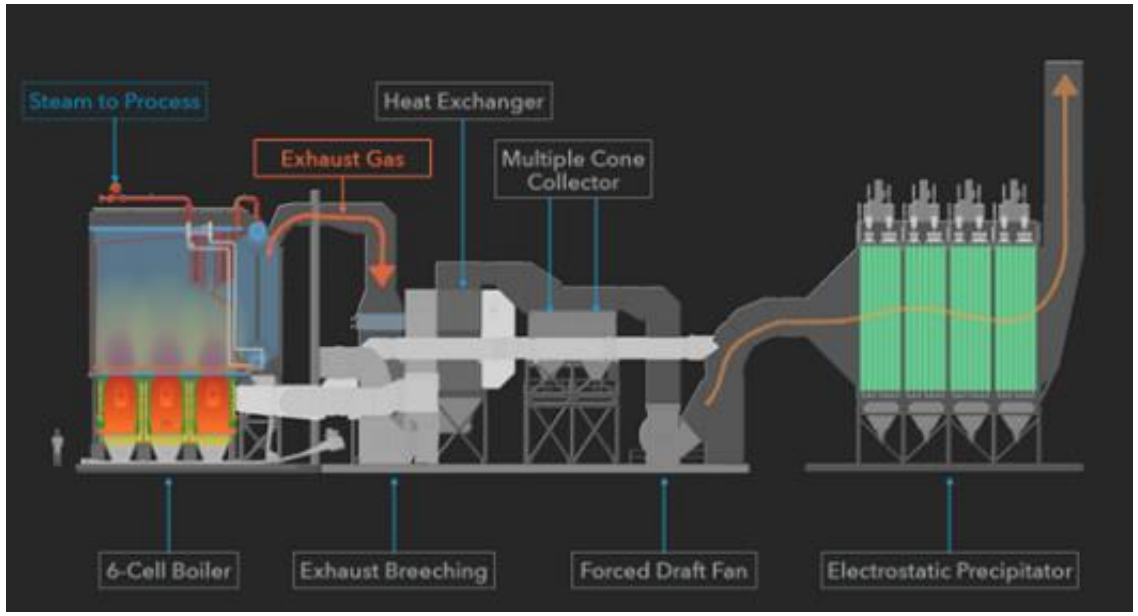
THE PRINEVILLE RENEWABLE ENERGY PROJECT

PREP OVERVIEW

- 24.9 MW biomass co-generation power plant
- Renewable, baseload power generation
- Ultra low emissions- 99% reduction in carbon emissions compared to wildfire
- Extensive environmental and economic benefits
- Thermal attributes options
- Pilot project replicable elsewhere



THE PREP IS SET APART

Biomass Concerns

- Deforestation →
- Harmful emissions →
- Plantations- space and soil depletion →
- Transportation inefficiency →

Prineville Renewable Energy Project

- Forest/grassland health improvements
- Extensive emissions control technology
- No plantations, sustainably sourced fuel supply
- Backhaul and short transport distances for transportation efficiency

EXTENSIVE BENEFITS

1. Forest health improvements & wildfire risk reductions
2. Air quality improvements
3. Water quantity & quality Improvements
4. Increased carbon sequestration
5. Reduced landfill waste
6. Baseload generation- alleviate transmission constraints and improve community resiliency
7. Job creation and revitalization of forest products industry
8. Environmental justice

SUSTAINABLY SOURCED FUEL SUPPLY

Fuel Sources

- Western juniper residuals
- Forest treatment residuals
- Timber harvest residuals
- Forest products manufacturing residuals

IMPROVE FOREST HEALTH & DECREASE WILDFIRE RISK

- Create opportunity for treatment/restoration of up to 3.25 acres per hour
- Create a local market for small diameter, low value species and residuals to promote forest health improvement activities
- Ochoco National Forest and Crooked River Grasslands
  - Support restoration and fuels objectives
  - Help meet state smoke management guidelines

This "win-win" project will provide us greater opportunities to manage areas to improve forest health and restore wildlife habitat by creating local market opportunities for small diameter trees and low value species such as western juniper."

-Shane Jeffries, Forest Supervisor ONF and CRNG

IMPROVE AIR QUALITY

- Advanced technologies "scrub" the pair of particulate matter
  - Reduces PM 2.5 by over 99% compared to open burning or wildfire
  - PM 2.5 exposure is the primary health concern associated with wildfire smoke
- Hazardous air quality resulting from wildfires is becoming more common
  - Beyond the top threshold of the EPA air quality index in 2020
- Disposal alternative to open burning or landfills
- Reduces methane emissions from decomposition
- Use of biomass in-lieu-of fossil fuels reduces GHG emissions

IMPROVE WATER QUALITY & QUANTITY

- Reduced fire risk helps protect key watersheds from catastrophic damage

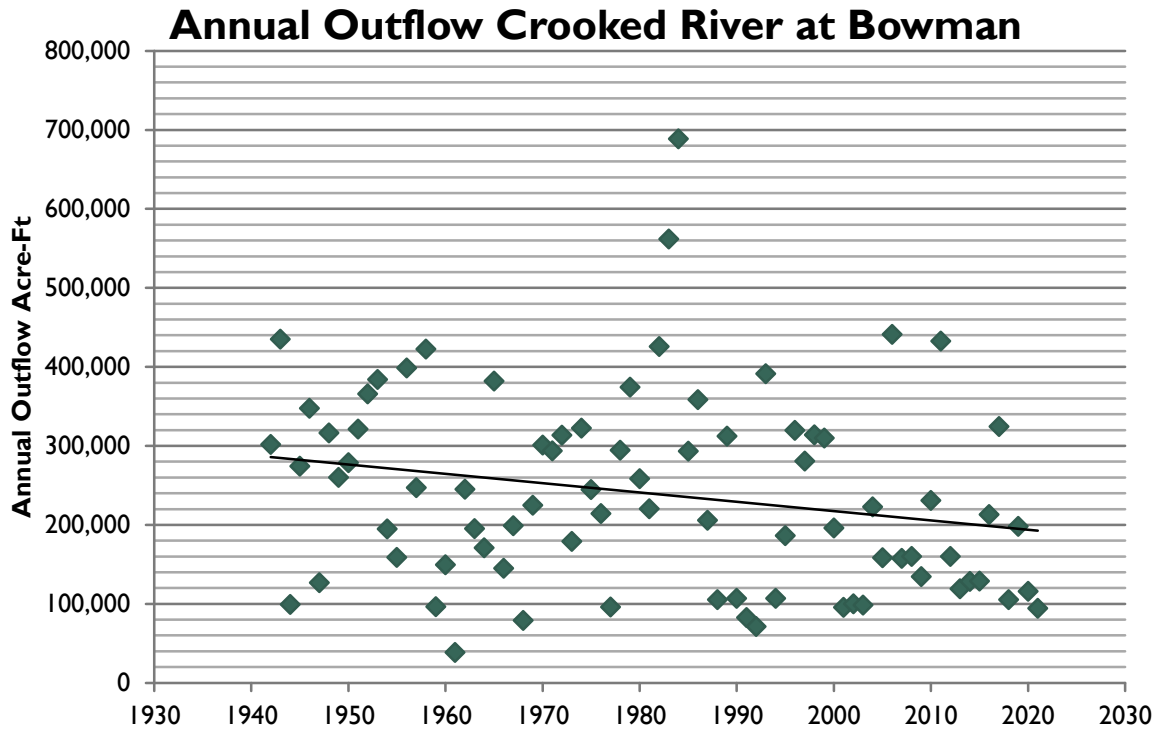
- **Camp Creek Paired Watershed Study**
  - Extensive, long-term study in the Prineville area
  - Confirmed that removal of juniper and reestablishment of historical grass/plant communities increased water availability

- **Juniper encroachment**
  - Juniper range has increased tenfold in Central Oregon since the 1880s
  - One acre of abatement results in an estimated savings of 100,000 gallons of water per year

Keystone Ranch East of Prineville

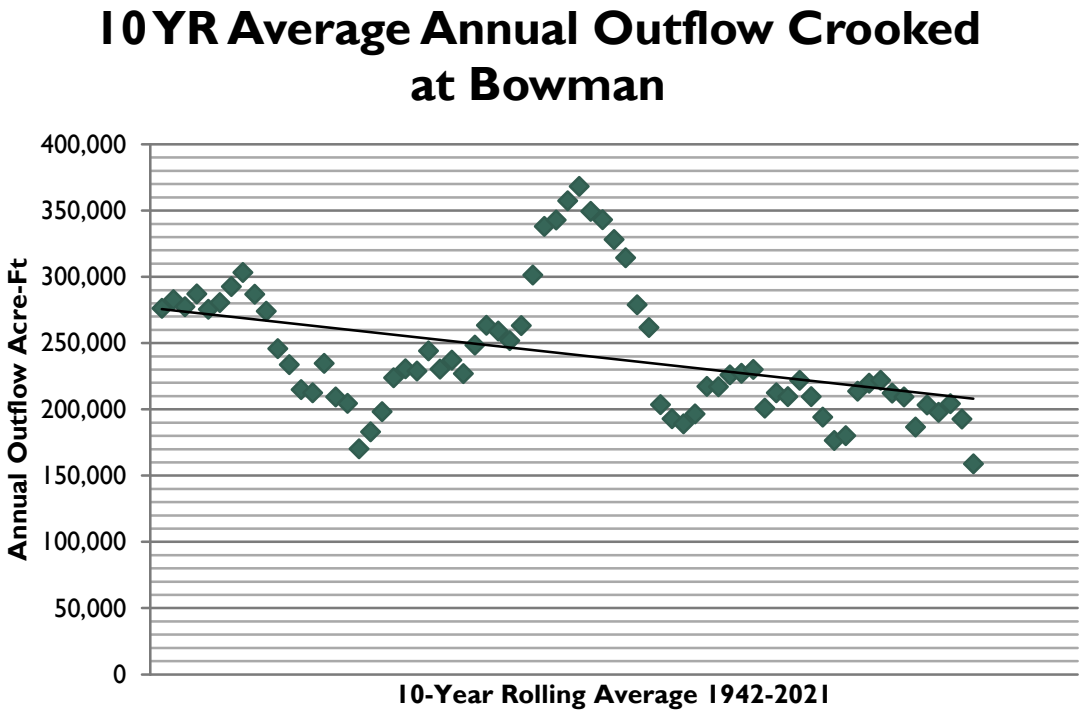
IMPROVE WATER QUALITY & QUANTITY

- **Outflow from the Crooked River has been monitored since 1942**
  - Maximum 689,000 acre1ft in 1984
  - Minimum 39,000 acre-ft in 1961
  - Fitted trend line shows a decrease of 85,000 acre-ft per year



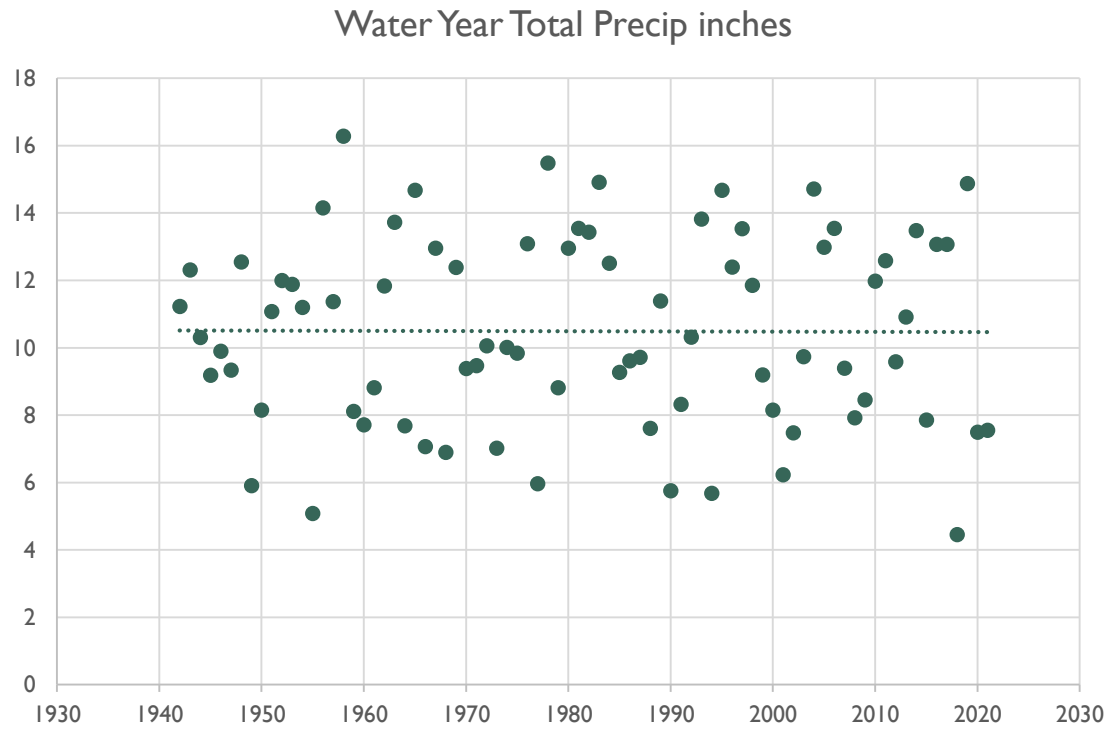
IMPROVE WATER QUALITY & QUANTITY

- **10 year rolling average is used to smooth the data**
  - Cyclical climate patterns emerge
  - Fitted line shows a similar decrease in outflow
  - Decrease in outflow directly correlated with juniper invasion

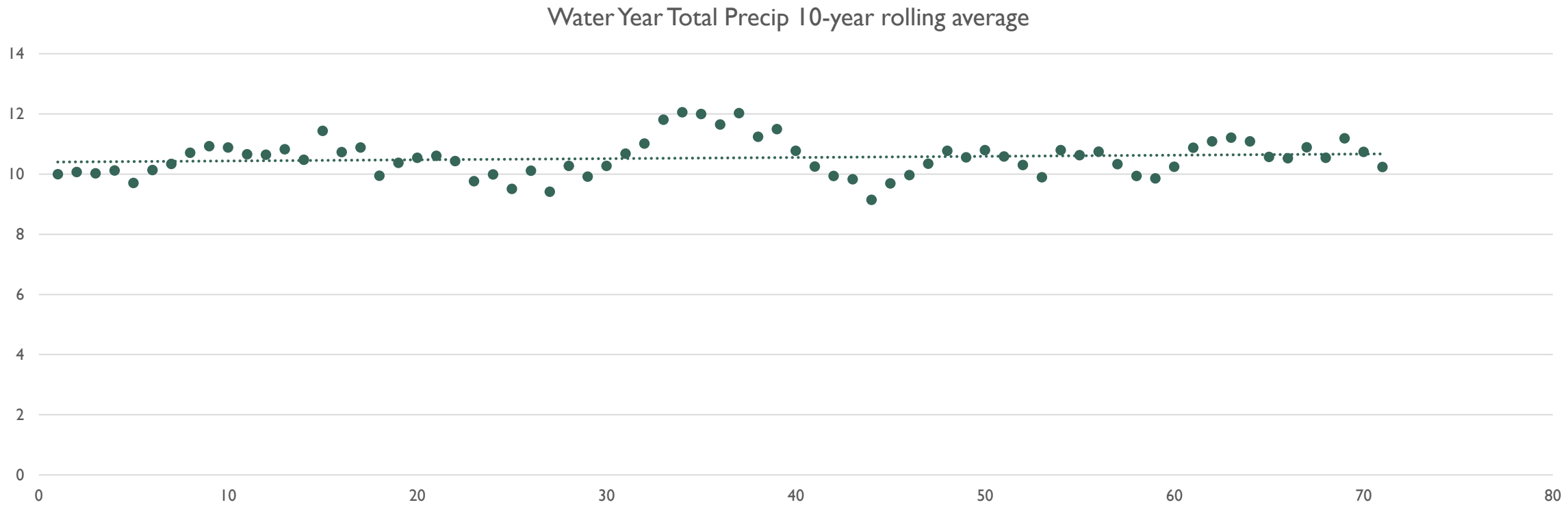


IMPROVE WATER QUALITY & QUANTITY

- **What is the cause of the reduced outflow from the Crooked?**
  - Climate change?
  - Additional irrigation?
- **Precipitation is not decreasing**



IMPROVE WATER QUALITY & QUANTITY



IMPROVE WATER QUALITY & QUANTITY

- Juniper will consume approximately 100,000 gallons of water per year per acre
- **Decrease in outflow directly related to juniper invasion**
- Number of juniper infested acres in Crook County has increased to nearly 2 million acres
- Pre-European settlement juniper was confined to fire-safe localities such as rocky ridgelines
- **PREP creates a market for juniper biomass!**

LOCAL, BASELOAD ENERGY GENERATION

- PREP will help sustain economic development and address transmission constraints in the region
  - Add power capacity to the region without costly and long-term transmission infrastructure improvements
  - BPA has identified local baseload generation as an ideal solution
- **Increased community resiliency**
  - In an extreme event or power disruption, the facility may provide power for critical and emergency services

ENVIRONMENTAL JUSTICE

PREP will markedly enhance environmental justice

- Low-income/disadvantaged populations::
  - Can't easily leave or move when there are wildfires
  - Tend not to have high quality HVAC systems that filter polluted air
  - Disproportionately work outside putting their health and job at risk
  - Disproportionately have health conditions that are negatively impacted by wildfire smoke
  - Often can't pay for "fire hardening" of their property and/or live in fire prone zones

PROPOSED AMENDMENTS AND EXAMPLE IMPACT

Proposed amendments developed by the City of Prineville

- "Qualifying western juniper biomass"- remove OWEB and revise verbiage to say biomass derived from western juniper in the state of Oregon
- Credit allowed shall be $0.04 per kilowatt hour of electricity produced from facilities using at least 30% qualifying western juniper biomass
- Applied to tax years beginning on or after January 1, 2025 and before January 1, 2031

Example impact for the Prineville Renewable Energy Project (PREP)

- Tax credit for PREP would total approximately $8.4 million annually
- Project will create 15 direct and 100 indirect jobs
- $145 million capital investment

Taxes generated from jobs and the facility would more than offset tax credit

QUESTIONS/COMMENTS?

THANK YOU!