

Climate Action Committee Update to Board of County Commissioners Re Recommended Goals – Follow Up



APRIL 22ND, 2024



Happy
Earth
Day

Overview

On 2/26/24, we presented to you re the CAC Recommendation regarding new Emissions and Sequestration goals, and agreed to continue the discussion.

We will focus today on the proposed carbon sequestration goal and the rationale behind it, and then will touch on the emissions goal at the end



Proposed Sequestration Goal

Proposed New Carbon Sequestration Goals for Jefferson County, excluding the Olympic National Park and Wilderness areas (ONPW)

By 2030: a 20% increase above the 2011-2016 baseline of 1.6 Million Metric Tons of CO₂ (MMTCO₂)/year, up to 2.0 MMTCO₂

By 2050: an additional 20% increase to 2.3 MMTCO₂/year, for a total of 40% increase above 2011-2016 baseline



Rationale for Sequestration Goal

From “Potential greenhouse gas reductions from Natural Climate Solutions in Oregon, USA”

- “changes in forest-based activities including deferred timber harvest, riparian reforestation, and replanting after wildfires contributed most to potential GHG reductions”
- our calculations from that paper, focusing on forest-based activities, **results in 18-22% emissions reduction (increase in sequestration) by 2035** from the Oregon 2001-2016 baseline of forest carbon sequestered). **For 2050**, forests results in **33-41% emissions reduction (increase in sequestration)** from baseline.

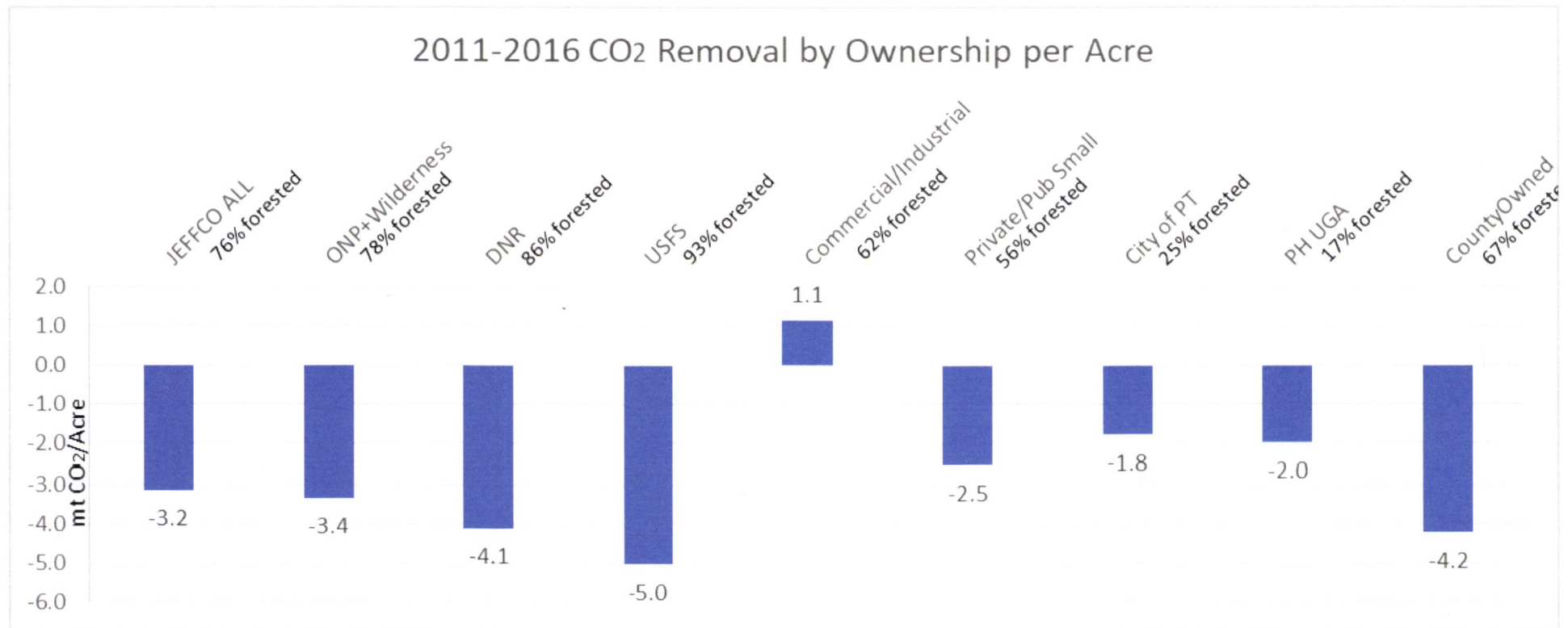
From “Leveraging the potential of nature to meet net zero greenhouse gas emissions in Washington State”

- Their model for extended timber harvest resulted in an increase of carbon sequestration in Jefferson County by 2050 of between 0.11-0.22 MMTCO₂e/yr
- This is a **3% - 6%** increase in carbon sequestration from the 2011-2016 baseline of the CAC Forest Inventory by 2050.
- If that same increase was applied to the County excluding ONPW, that would result in a **7 – 13%** increase.
 - Adding in avoided conversion and riparian reforestation increases this to 7-17%
- Note that modeling in that paper limited the amount of extended harvest rotation to 40% of all private lands, and to 32% of state lands.

Hypothetical Upper Limit for JeffCo Using Data from Forest and Trees GHG Inventory

- The Forest Inventory report analyzed the per acre amount of carbon sequestration by ownership type.
- Figure 12 of the report shows that the US Forest Service (USFS) land had the highest per acre amount of carbon removal, at 5.0 mtCO₂/acre in the 2011-2016 timeframe

Figure 12 of Forest GHG Report – Net CO2 Removals by Ownership per Acre



Hypothetical Upper Limit for JeffCo Using Data from Forest and Trees GHG Inventory

- If that same USFS per acre carbon sequestration rate was applied to the DNR, commercial/industrial, small private/public, and county-owned areas (455,651 acres) of the county,
- and all other areas were held constant at 2011-2016 levels,
- that would result in a **76% increase in the carbon sequestration per year** for the county excluding ONPW areas.

Hypothetical Upper Limit for JeffCo Using Data from Forest and Trees GHG Inventory

- Alternatively, if ~54,000 acres of commercial/industrial land were purchased and switched to management resulting in sequestration similar to USFS rate from report from 2011-2016, that would increase carbon sequestration per year to the 20% by 2030 goal

Opportunities to Increase Carbon Sequestration

From Forest & Trees GHG Inventory Report, Suggested Next Steps:

- Work with DNR to do trust land transfers or reconveyance to County ownership (benefit depends on ownership type)
- Support forest management on small public/private lands (126,701 acres in county) through education, policies and opportunities such as:
 - Forest Carbon Works which offers carbon credit payments for small landowners
- Continue to fund County forestry programs to include carbon management

Other Opportunities from Report

- **Engage Washington Congressional delegation and 24th** Legislative District on carbon policies, including **carbon pricing**.
- Encourage and incentivize **planting of trees** for long term establishment in un-forested areas.
- Consider expanding the **tree ordinance** to encourage retaining standing trees when practical.

Other Opportunities

- Continue to guard against conversion of forestland to nonforest
- Look for opportunities for increasing sequestration in agricultural
- Look for opportunities for riparian and tidal reforestation, as well as post-fire replanting

Forest Management Co-Benefits

- ❖ Stormwater management/mitigation
 - ❖ Enhanced water quality and conservation
 - ❖ Temperature mitigation
 - ❖ Public health benefits
 - ❖ Protects biodiversity, provides food and habitat for wildlife
 - ❖ Increases employment from non-timber forest products and tourism
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Proposed Sector Based Emissions Goal

By 2030: Emissions 58.7% below 2018 levels

By 2050: Emissions 95% below 2018 levels



Questions and Discussion

