

OGWC Natural & Working Lands

Monday, May 22, 2023

Lisa Gaines, Director of the OSU Institute for Natural Resources
Lisa DeBruyckere, President of Creative Resource Strategies, LLC

AGENDA

- Welcome and introductions
- Oregon Global Warming Commission Natural & Working Lands Proposal
- Project Deliverables and Timeline
- Roles and Responsibilities; Process to Achieve Deliverables
- Questions We Seek to Answer/Technical Approach
- Our Progress
- Key Next Steps

Proposed Goals & Metrics

Outcome-Based Goal

Sequester at least an **additional 5MMTCO₂e per year in Oregon's natural and working lands and waters by 2030**, and at least **9.5MMTCO₂e per year by 2050**

- Relative to a 2010 to 2019 activity-based baseline.
- Separate from, and in addition to, Oregon's sector-based emissions reduction goals.
- Periodically re-evaluated as we better understand the potential from the land sector in Oregon



Proposed Goals & Metrics

Activity-Based Metrics

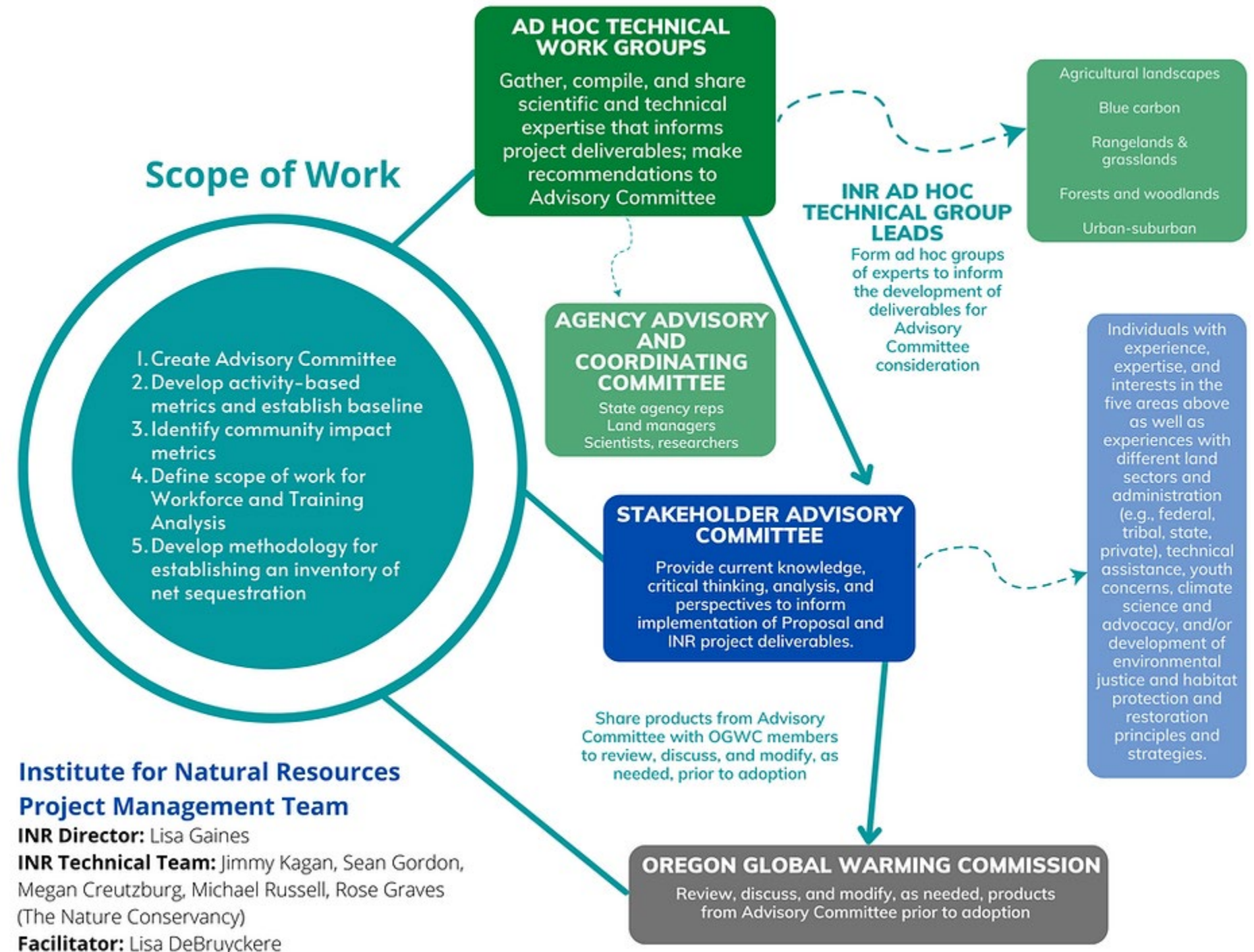
Activity-based metrics (e.g., acres of adopted soil health practices, riparian reforestation, and urban forest canopy expansion)

Community Impact Metrics

Community impact metrics should be designed to evaluate the benefits and burdens associated with different Natural and Working Lands strategies, practices, and programs including effects on jobs, local economies, public health, and access to programs, among other factors.

OUR PROCESS

OGWC NATURAL & WORKING LANDS PROJECT



Activity-Based Metrics

Metrics to help track the implementation of activities (interventions) that contribute to the reduction of GHGs in the NWL sector.*

Objective: Develop activity-based metrics and a baseline of these activities for Oregon's NWL.

Natural & Working Lands (NWL) Inventory

NWL inventories estimate carbon stocks and fluxes of GHGs across different land use categories and quantify the uncertainty around these estimates.

Objective: Create a tiered proposal for a greenhouse gas inventory for Oregon's NWL sector.

* (e.g., IPCC's "land use, land use change and forestry (LULUCF)" GHG inventory sector)

Activity-Based Metrics

Goal: Develop activity-based metrics and a baseline of these activities for Oregon's NWL.

1. What are the recommended activities to capture and store more carbon and reduce GHGs in Oregon's NWL sector? Which should be included in this effort?
2. What method should be used to develop a baseline for these activities and track implementation through time?
How much is occurring and how much has happened in the past? How much would occur following 'business-as-usual'?
3. How do we best measure or estimate the amount of carbon that is captured and stored by implementing the activities?

Natural and Working Lands Inventory

Objective: Create proposals for a greenhouse gas inventory consistent with IPCC framework inventory methodologies.

BASIC

Uses more advanced methods to apply a stock change approach. Higher resolution activity data and regionally-specific data/emission factors are used.

ADVANCED

Uses detailed state-specific data and models, advanced methods driven by high-resolution activity data and disaggregated to fine grid scales. Provides greater certainty than lower tiers and have closer link to ecosystem dynamics.



What are the recommended methods to determine:

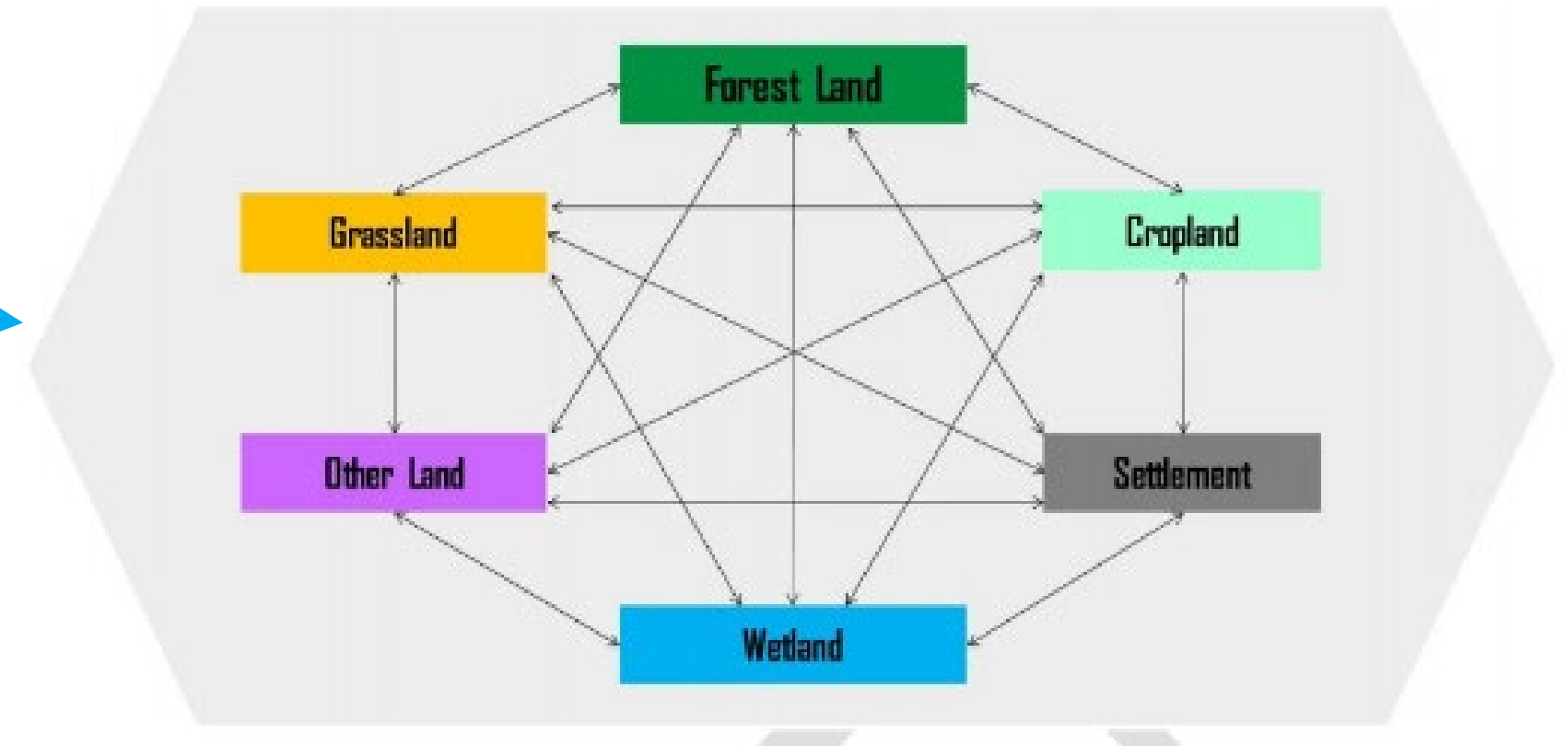
1. The current carbon stocks and net sequestration in Oregon's NWL?
2. How carbon stocks, emissions, and sequestration in Oregon's NWL change through time?
3. The causes of these changes?
4. How we track these differences?

Approach

- Consistent with IPCC Guidelines and Best Practices
- Informed by national and state approaches
- Best use of available science
- Acknowledge that metrics/inventory methods may improve through time
- Arrange by land use categories

Oregon-specific land use category definitions are being developed and will be informed by IPCC guidelines/standardized definitions.

Categories of land use change



OUR PROGRESS

• TASK 1: ADVISORY COMMITTEE

- Committee was formed in late 2022 and a total of eight meetings have been held.

NWL Advisory Committee Meetings

This web page contains the meeting recordings and information associated with the OGWC Natural and Working Lands Advisory Committee meetings. This page is updated monthly to illustrate the progress being made by stakeholders in advancing Oregon's natural and working lands proposal.

4 May 2023
1:00pm-2:30pm

[Attendees](#)
[Chat Box Discussion](#)
[Agenda](#)



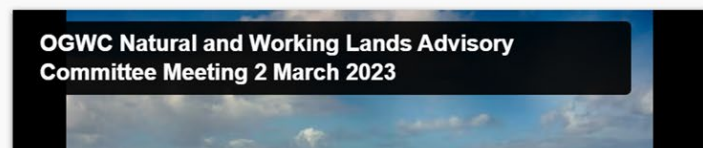
6 April 2023
1:00pm-2:30pm

[Attendees](#)
[Chat Box Discussion](#)
[Powerpoint](#)
[Agenda](#)



2 March 2023
1:00pm-2:30pm

[Attendees](#)
[Chat Box Discussion](#)



First Name	Last Name	Affiliation	Title
Lauren	Anderson	Oregon Wild	Climate Forest Program Manager
Jocelyn	Bridson	Tillamook County Creamery Association	Director of Environment & Community Impact
Mimi	Casteel	Hope Well Wine and Vineyard	Owner, Winegrower and Agricultural Consultant
Gary	Clarida	Retired	Forestry technician, sawyer, and equipment maintenance supervisor
Craig	Cornu	PNW Blue Carbon Working Group	Coordinator
Tyler	Ernst	Oregon Forest Industries Council	Policy Counsel, Manufacturing and Resources
Brian	Glaser	Ernest Glaser Farms	Farm Owner and Operator
Greg	Green	Ducks Unlimited	Director of Conservation Programs - PacNW
Ben	Hayes	Springboard Forestry, LLC/Hyla Woods	Manager/Principle
John	Hillcock	Wallowa County	Commissioner
Greg	Holmes	1000 Friends of Oregon	Working Lands Program Director/Southern Oregon Advocate
Megan	Kemple	Oregon Climate and Agricultural Network	Co-Director, Director of Policy Advocacy
Dylan	Kruse	Sustainable Northwest	Vice President
Debora	Landforce	2 Fox Farm	Partner
Jan	Lee	Oregon Association of Conservation Districts	Executive Director
Karen	Lewotsky	Oregon Environmental Council	Rural Partnerships Lead; Water Program Director
Nicole	Maness	Willamette Partnership	Partner, Resilient Habitat and Working Lands
Mike	McCarthy	McCarthy Family Farm, Owner; Parkdale Valley Land Trust, President; Oregon Farm Bureau State Board	
Dan	Probert	Country Natural Beef	Director
Josh	Robinson	Robinson Nursery	Co-Owner
Elizabeth	Ruther	The Pew Charitable Trusts	Science and Policy Analyst
Amanda	Sullivan-Astor	Associated Oregon Loggers	Forest Policy Manager
Laura	Tabor	The Nature Conservancy	Climate Action Director
Joseph	Vaile	Klamath-Siskiyou Wildlands Center	Climate Program Director
Katie	Voelke	North Coast Land Conservancy	Executive Director
Teryn	Yazdani	Beyond Toxics	Staff Attorney, Climate Policy Manager

OUR PROGRESS

• TASK 2: ACTIVITY-BASED METRICS AND BASELINE

- Draft practices and metrics
 - Highly certain/established evidence practices
 - Less certain/emerging evidence practices
 - Current not recommended/unlikely practices
- Produced by **technical teams**
- Review by **Advisory Committee**, including development of additional recommendation by Agriculture and Forestry Subcommittees
- Project facilitators reached out to 65 **external reviewers** nationally – most recommended by Advisory Committee – compilation by June 1
- All 3 groups will be represented in final INR report to OGWC
- Baselines scheduled to be completed in July – shared as FYI with AC and reviewed by state and federal agencies



OUR PROGRESS

• TASK 3: COMMUNITY IMPACT METRICS

- Framework for assessment completed
- Menu of opportunity for community metrics completed
 - AC is reviewing and recommending a suite of potential metrics that could be used by all Oregon communities
 - Facilitators are convening with state agency representatives to discuss a suite of community metrics best associated with state program implementation (e.g., urban forestry)

Examples of Place-based Community Impact Socioeconomic Metrics

The Framework

Impact metrics measure the benefits and burdens on communities associated with strategies for carbon sequestration in natural and working lands and waters (Senate Bill 1534). Impact measurement is a process of collecting and analyzing data to assess the effect of a program, intervention, or policy on a particular population.[1] Community impact metrics measure the benefits and burdens associated with different strategies, practices, and programs that may inform and evaluate the co-benefits and impacts of GHG emissions reductions and increased carbon storage strategies on natural and working lands.[2] Science-based targets should incorporate consistent and continual reporting processes, transparency in data sources and calculation methodologies, and interoperability with evolving standards and regulations.[3]

Criteria to consider when developing social and cultural metrics[4]:

- Incorporate impacts based on discussions with stakeholders and the recognition of both individual and community-level effects.
- Incorporate proxy and constructed metrics to help overcome measurement difficulties and provide information about context-specific impacts
- Seek to meaningfully engage the diverse potentially affected interests
- Develop measures that are readily understood, concise, and operational to facilitate implementation in decisions.
- Adopt a values-focused approach that allows for personal experience and facilitates analysis of alternatives.
- Document value trade-offs and key risk tolerances.
- Adopt best practices regarding risk and impact communication to highlight impact assessments.
- Incorporate stakeholder perceptions into assessments and inventories.

[1] <https://www.sopact.com/>
 [2] https://www.oregon.gov/lcd/Commission/Documents/2021-11_Item-10_OGWC_Attachment-A_Natural-and-Working-Lands-Carbon-Sequestration-and-Storage-Proposal-OGWC.pdf
 [3] https://tideline.com/wp-content/uploads/2022/10/Tideline_Truth-in-Climate-Impact-FINAL-Oct-2022.pdf
 [4] Bessette and Gregory (2020)

Economic Stability

Employment

- Reductions in land sector unemployment/increased employment
- Equitable access to green job opportunities
- Improved access to land-sector based education and training
- Investments in workforce development and local skilled jobs
- Short- and long-term sufficiency wage land sector jobs created and representative of the diversity of local communities
- Capacity of land sector workforce and number of workers
- Contribution of natural and working lands to the state's economy and employment
- # of individuals receiving land sector-based job training

Income

- Increases in medium household income
- Increased local income in communities within and adjacent to natural and working lands

Business Growth

- % change in business establishments
- \$ invested in projects that enhance carbon storage and reduce GHG emissions
- Tax incentives available to landowners to support GHG emission reductions and support carbon storage
- Increase in tourism levels

Poverty and low-income

- % of children under 18 years of age in poverty
- No increase in low-income households in communities\

Energy

- Lower consumer energy bills

Neighborhood/Physical Environment

Housing

- Increases in home ownership across racial and ethnic groups
- Population spending more than 30% of income on housing
- # subsidized housing units per 1,000
- % vacant housing units
- Worker access to housing in the community in which they work
- # of new green roofs

Transportation

- Access to all ages and abilities bicycle network
- % of community members with access to high-frequency public transportation choices within 1/2 mile

Parks

- Equitable distribution and access to parks and open spaces (including walkability)
- Green corridors and connections as well as buffers that provide access to nature and protection and relief from climate hazards
- Proximity to green spaces and green infrastructure within developed lands
- # of citizens benefitting from and using green corridors
- Increase in scenic values

Food

Food security

- % of population that is food insecure
- # of people whose calorie intake falls below FAO-defined specified values

Food quality

- Equitable access to healthy options (fresh food)

Education

Literacy

- % of 3rd graders reading at grade level

Training

- Access to technological and other training for farmers
- Access to vocational training

High School Education

- % CCSD high schools

Higher Education

- Population aged 25 and older with a bachelor's degree or higher

Health

Medical bills

- % of population 18-64 years of age with health insurance
- # of primary care physicians per 100,000

Life expectancy/quality

- Increases in life expectancy of residents
- Fewer air quality-related health problems and impacts

Workers

- Protection of workers to climate hazards

Hospital Visits

- # of asthma emergency department visits by children

Sustainability

Water

- # gallons per capita per day
- Enhanced water quality
- Volume of water reused
- # of violations of Safe Water Drinking Act
- Flood risk reduction

Recycling

- % of municipal waste recycled
- Reduction in total waste disposed

Air quality

- % of good air quality days annually
- Fewer days of unhealthy air quality
- Air pollution that does not exceed NAAQS and standards
- Reduced haze and improved visibility

Incentives

- Annual investment in weatherization, electric heat pump, and community solar incentive/subsidy programs
- Support for farmers to implement climate-resilient agricultural practices
- Amount of consumer incentives that reward people for taking steps to reduce their use of fossil fuels

Fossil Fuel Alternatives

- % of land sector-based businesses that supply all or a portion of their electrical needs with solar, or alternative climate-friendly energy sources
- # of electric vehicle charging stations

Temperature

- Relative decrease in local temperatures during summer period

Management, ownership, and capacity

Public engagement

- Capacity and access for broad participation in land sector-based scoping, planning, design, and implementation
- Inclusion of small farmers in program development and design
- Development of shared decision-making frameworks with tribal partners
- Incorporation of traditional ecological knowledge and tribal expertise into management
- Strengthened partnerships with RCDs and SWCDs to identify needs and opportunities of small farms, woodlands, and landowners
- % of private property owners and developers that implement climate change preparation measures (e.g., reducing impervious areas)

Land ownership

- Diverse land ownership and management
- Support for diverse organizations and individuals to own, manage, and steward land



OUR PROGRESS

- **TASK 4: WORKFORCE DEVELOPMENT AND TRAINING NEEDS ASSESSMENT AND GAP ANALYSIS OF NATURAL AND WORKING LAND SECTORS IN OREGON**
 - Reviewed and compiled other workforce development and training needs assessments and gap analyses
 - Outreach to Oregon workforce development and training needs specialists, including those associated with natural and working lands
 - Compiled information into scope of work
 - ODOE will release Request for Information to solicit specific methodologies and approaches to conducting assessment and gap analysis, including projected costs.

State of Oregon



COVER PAGE

DEPARTMENT OF ENERGY

REQUEST FOR INFORMATION (RFI)

Seeking Information About:

Workforce Development and Training Needs Assessment and Gap Analysis of Natural and Working Lands Sectors in Oregon

RFI #23-XXX

Date of Issue:

Responses Due Date:

Single Point of Contact (SPC):

Address:	550 Capitol St. NE
City, State, Zip	Salem, OR 97301
Phone (voice)	503-508-8190
E-mail:	Odoe.contracts@energy.oregon.gov

Key Issues

- **Task 1: Advisory Committee**
 - Creating committee representative of the diversity of Oregonians (geographic, etc.)
 - Integrating tribal perspectives into statewide process
 - Avoiding confounding political and policy processes with science-based INR process to produce report for OGWC
- **Task 2: Activity-based Metrics and Baseline**
 - Prospective funding associated with specific industries can confound science-based INR process
 - OGWC proposal goals to measure carbon and GHG relative to different scales and activities on the ground
 - Emerging science and existing unknowns about contributions of some practices to C storage and GHG emissions reductions
 - Recognition that industries want to be recognized for their contributions, big or small, to Oregon's C storage and GHG emissions goals
 - Crossover in sector-based emissions and Agriculture Sector
- **Task 3: Community Impact Metrics**
 - Developing a framework for Oregon versus a suite of specific metrics for Oregon
 - Scale for considering community impact metrics
 - Metrics for different purposes – e.g., statewide program (Urban Forestry Program), municipal program (e.g., City of Portland Forestry), local community
- **Task 4: Workforce Development and Training Needs Assessment and Gap Analysis of Natural and Working Land Sectors in Oregon**
 - Ensuring all land sectors are represented, despite lack of data and information for some sectors
 - Ensuring a new program is not created, rather create efficiencies across all existing programs, filling gaps in existing programs, etc. to create a robust framework for Oregon
- **Task 5: Inventory Methodology**
 - Scale of data
 - Privacy concerns with private lands
 - Assumptions

