Our climate and ocean are changing.
We all know the carbon story...

For 650,000 years, atmospheric CO₂ has never been above this line ... until now.

Current level: 440 ppm

1950: 280 ppm

Years before today (0 = 1950)

CO₂ parts per million
INCREASING AIR TEMPERATURES

Global Land and Ocean Temperature Anomalies, January-December

- Reduced summer flows
- Increased stream drying
- Hypoxia
- More Rain
- Loss of estuarine habitat
- Less Snow
- More flooding
- Sea level rise
- Increase in fire intensity
- Stream warming
- Changing ocean currents
- Reduced fall flows
OCEAN ACIDIFICATION

**CO₂ Time Series in the North Pacific**

- **Increasing CO₂ in atmosphere**
- **Increasing pCO₂ in ocean water**
- **Decreasing pH in ocean**
OREGON ON THE FRONTLINE
Climate and Ocean change are undermining the ability of lands and waters to support Oregon’s native fish and wildlife,
**BROADER IMPACTS**

**FISH & WILDLIFE**
Fires, warming streams, drought, algal blooms, ocean acidification will collectively push our species closer to the edge.

**INFRASTRUCTURE**
More frequent and intense fires and flooding as well as sea level rise pose risks to buildings, docks, etc.

**JOBS**
Tens of thousands of jobs in the recreation, tourism, fishing/hunting, and sectors rely on Oregon’s natural resources.

**THE BOTTOM LINE:** Climate and ocean change impacts will cost the State billions of dollars in lost opportunity and rebuilding after impacts occur and threatens existence of many species we care about.
ODFW ACTIONS

- Research & Monitoring
- Fisheries Management
- Conservation Planning
- Habitat Prioritization
- Infrastructure Resiliency
- Collaboration/Coordination
- Strategic plan-focal team
WEST COAST LEADERSHIP

US Climate Alliance

Oregon OAH Coordinating Council

Pacific Coast Collaborative

OA Alliance: International Alliance to Combat Ocean Acidification
ODFW ACTIONS

- Research & Monitoring
- Fisheries Management
- Conservation Planning
- Habitat Prioritization
- Infrastructure Resiliency
- Interagency Coordination
- Strategic plan-focal team
CLIMATE AND OCEAN CHANGE POLICY
POLICY SIDEBOARDS

• INTEGRATION WITH EXISTING POLICY/PROCEDURES
• DEALING WITH UNCERTAINTY
• ODFW’S AUTHORITY
• LONG TERM POLICY RELEVANCE (*Staying out of the weeds*)

HIGH LEVEL, PRINCIPLE BASED POLICY
The Draft Policy

- Vision
- Background
- Key Assumptions
- Goals
- Implementation
- Statewide Coordination
- Key Principles
Through science and proactive leadership to address a changing climate and ocean, ODFW and Oregon:

a) Understand the impacts
b) Determine the most appropriate actions;
c) Work collectively to enhance preparedness
d) Strive toward carbon-neutral operations.

As a result, Oregonians have healthy natural areas that provide clean air and drinking water, food, abundant fish and wildlife, support a thriving economy, and are the first line of defense against fires, droughts, floods, and sea level rise associated with a changing climate and ocean.
BACKGROUND AND KEY ASSUMPTIONS

- Summarizes key information:
  - Oregon Climate Change Research Institute’s 4th Oregon Climate Assessment Report
  - National Climate Assessment

- Establishes connections from global climate system to impacts on Oregon's fish and wildlife


GOALS

1. Understand and act on risks and opportunities associated with changing climate and ocean conditions

2. Provide leadership toward a coordinated statewide and regional response

3. Reduce the Department’s carbon footprint to the extent practicable, with the goal reaching carbon neutrality.
IMPLEMENTATION

1. Coordinate a long term state-wide response
2. Incorporate Key Principles in Department science
3. Incorporate Key Principles in new or revised plans or policies
4. Apply Key Principles in consulting or advisory roles
5. Carbon reduction plan
6. Communications strategy
Key Principles: Coordination

1. Collaborate and partner with a range of groups spanning science, stakeholder interests, and regulatory authorities
IMPLEMENTATION

1. Coordinate a long term state-wide response
2. Incorporate Key Principles in Department science
3. Incorporate Key Principles in new or revised plans or policies
4. Apply Key Principles in consulting or advisory roles
5. Carbon reduction plan
6. Communications strategy
STATEWIDE COORDINATION

Key to reducing conflicts and ensuring timely, equitable actions and investments that prepare our environment and economy for the impacts of climate change

Without Coordination:
Multiple agencies each take own measures

Climate Change Response
- Unbalanced
- Inefficient
- Maladaptive
- Delayed
STATEWIDE COORDINATION

- Coordinated inventories and vulnerability assessment
- Efficient research and monitoring
- Determine clear priorities within and across geographical areas
- Implement priorities
IMPLEMENTATION

1. Coordinate a long term state-wide response
2. Incorporate Key Principles in Department science
3. Incorporate Key Principles in new or revised plans or policies
4. Apply Key Principles in consulting or advisory roles
5. Carbon reduction plan
6. Communications strategy
1. Track the changes
2. Look forward
3. Reduce critical uncertainties
4. Communicate clearly about uncertainty
5. Modify research and monitoring during periods of adverse environmental conditions
IMPLEMENTATION

1. Coordinate a long term state-wide response
2. Incorporate Key Principles in Department science
3. Incorporate Key Principles in new or revised plans or policies
4. Apply Key Principles in consulting or advisory roles
5. Carbon reduction plan
6. Communications strategy
KEY PRINCIPLES: SPECIES AND HABITAT

1. Conservation is foundational
2. Consider future conditions
3. Address species range shifts
4. Adopt strategies robust to uncertainty
5. Maximize conservation outcomes when resources are limited
6. Adapt management to current conditions
7. Protect and enhance the most important habitat
IMPLEMENTATION

1. Coordinate a long term state-wide response
2. Incorporate Key Principles in Department science
3. Incorporate Key Principles in new or revised plans or policies
4. Apply Key Principles in consulting or advisory roles
5. Carbon reduction plan
6. Communications strategy
Key Principles: Operations

1. Enhance infrastructure preparedness
2. Avoid exacerbating the impacts of climate and ocean change
3. Reduce the Department's carbon footprint
PUBLIC PROCESS

Nov - Dec
- Public workshops
- Tribal
- Inter Agency

Today
- Commission Informational

Jan-Feb
- Continued engagement

Feb
- File draft OARs

April
- Commission consideration
Public Process: Responding to Public Comments

Written and oral comments from 20-30 organizations, Agencies, or individuals

1) Incorporated (majority >90%)
2) Follow-up discussion
3) Did not incorporate at this time
Our climate and ocean are changing