




The Oregon Coordinate System & SPCS 2022

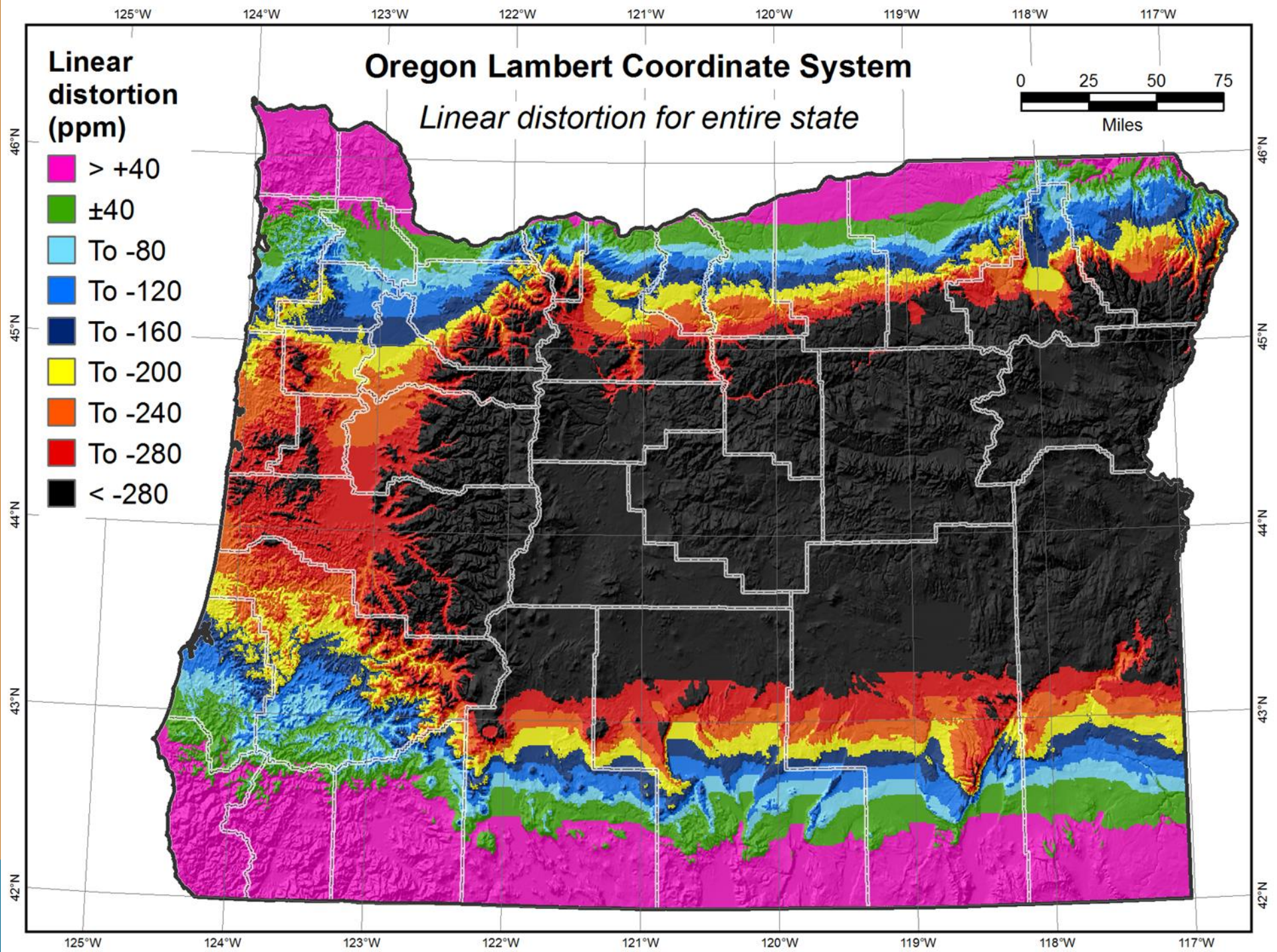
**OGUG Annual Meeting
September 2021**

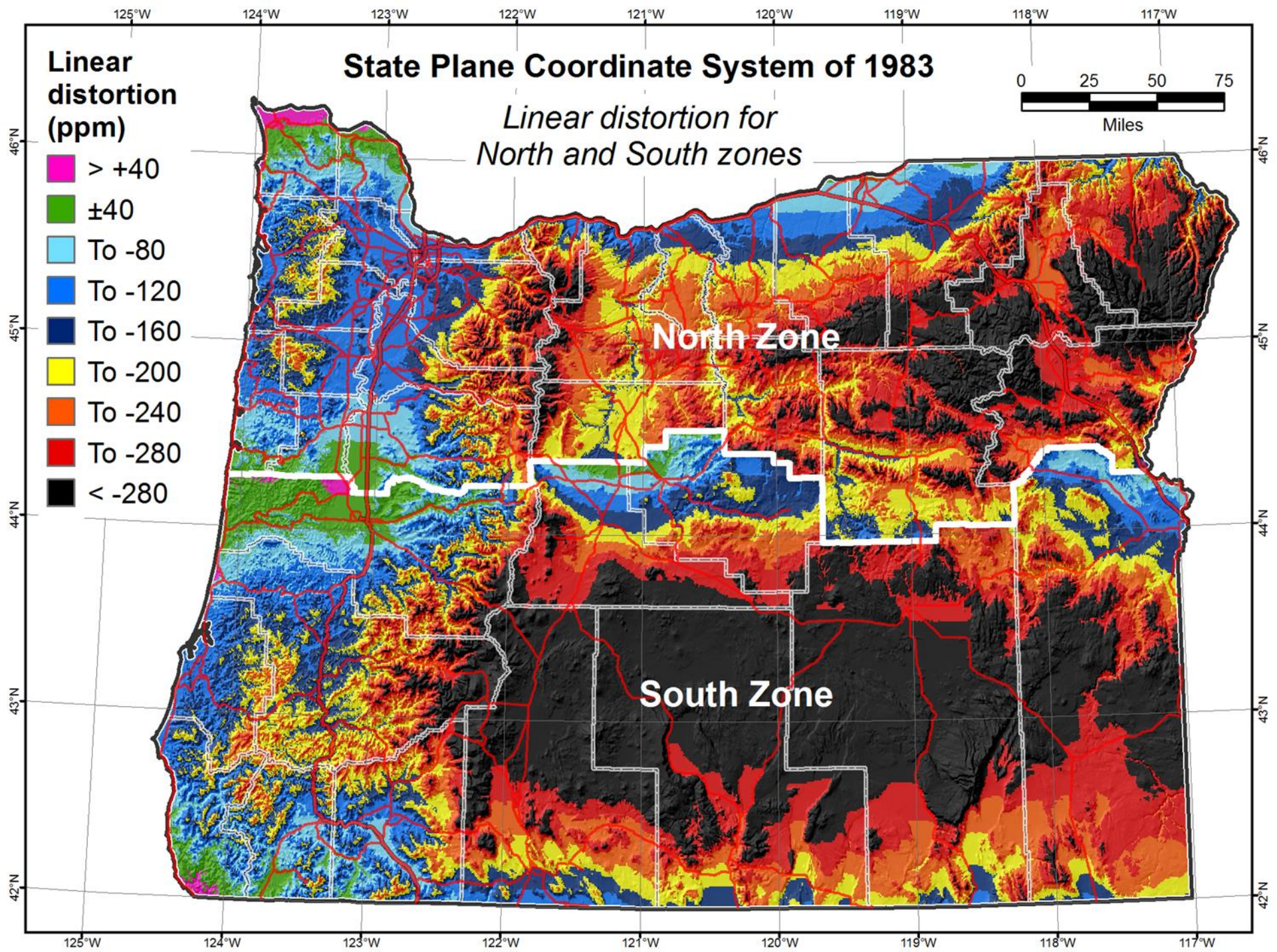
**Brady Callahan
Geospatial Lead
Oregon Parks & Recreation Department**

SPCS 2022

Default	New Statewide	
Default	North & South Zone Update	
Optional	New local low distortion zones	

- **Needed due to new datum (NATRF2022)**
- **NGS plan/policy for SPCS 2022 layers (tiers)**
 1. All States get a single statewide zone
 2. All States get an update to legacy SPCS zones
 3. Multiple Low distortion zones may be used
- Fine print: pick any two, but one **MUST** be the statewide zone





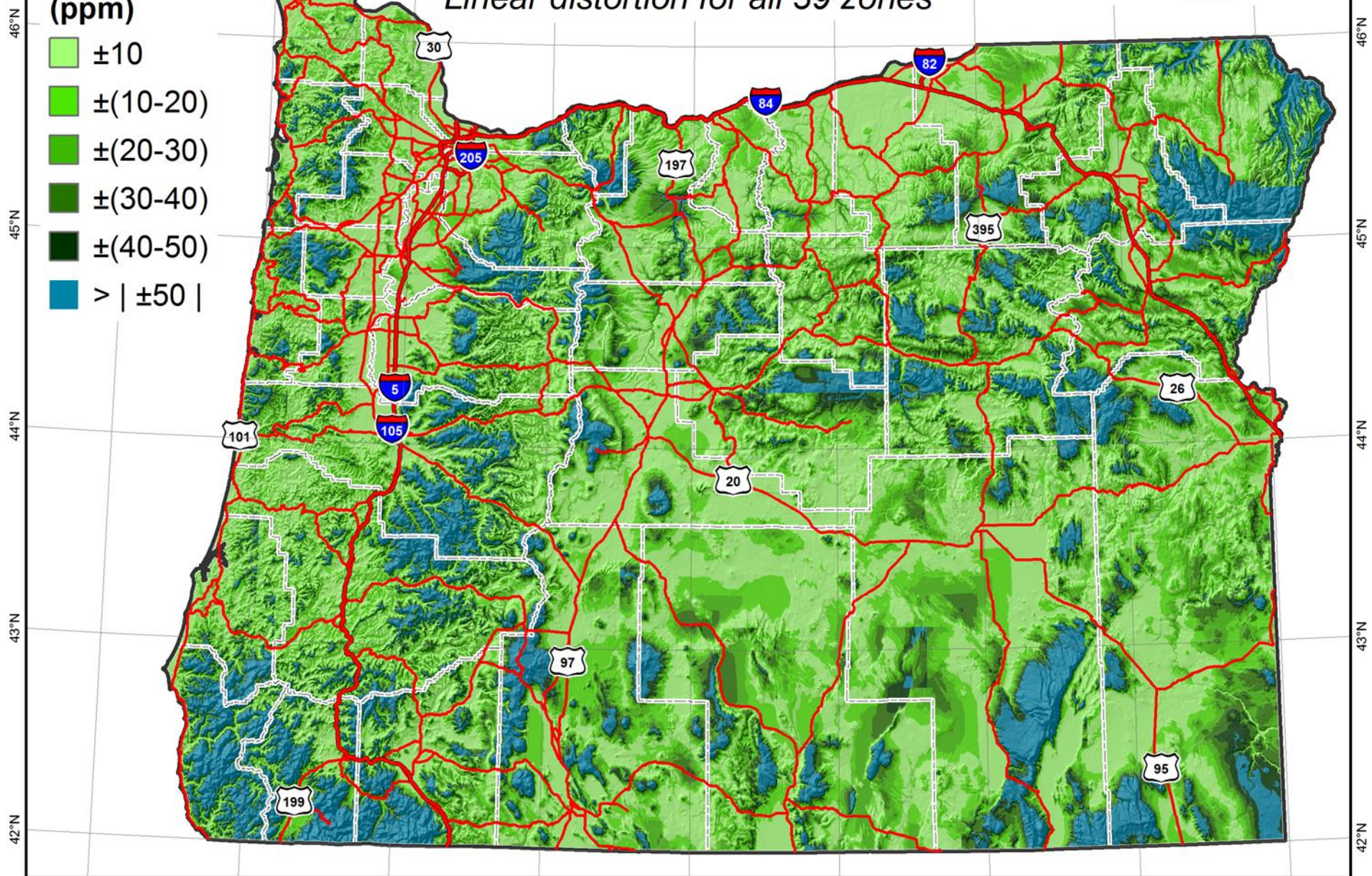
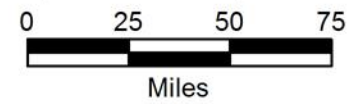
125°W 124°W 123°W 122°W 121°W 120°W 119°W 118°W 117°W

Linear distortion (ppm)

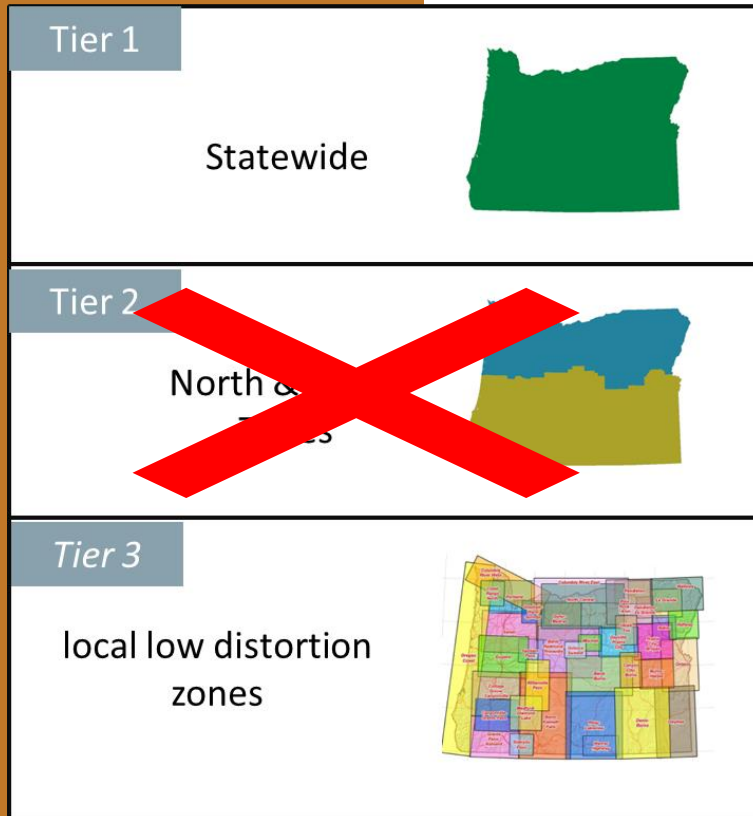
- ±10
- ±(10-20)
- ±(20-30)
- ±(30-40)
- ±(40-50)
- > |±50|

Oregon Coordinate Reference System (OCRS)

Linear distortion for all 39 zones



SPCS 2022



Oregon Tier Proposal

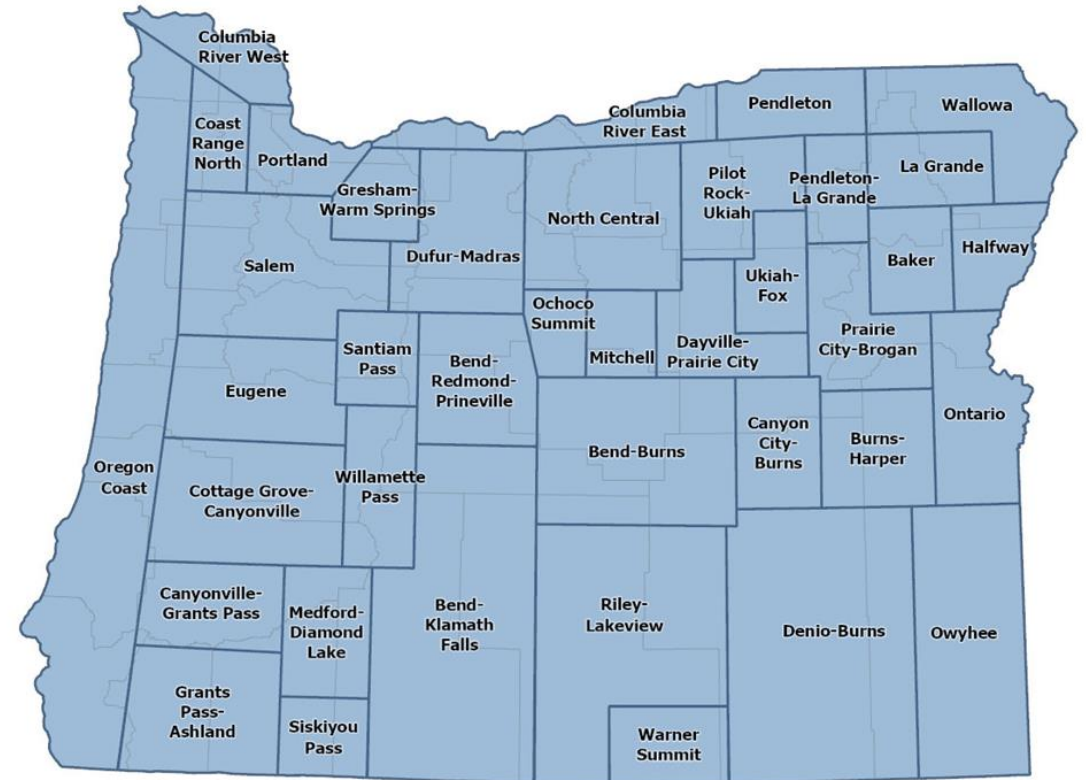
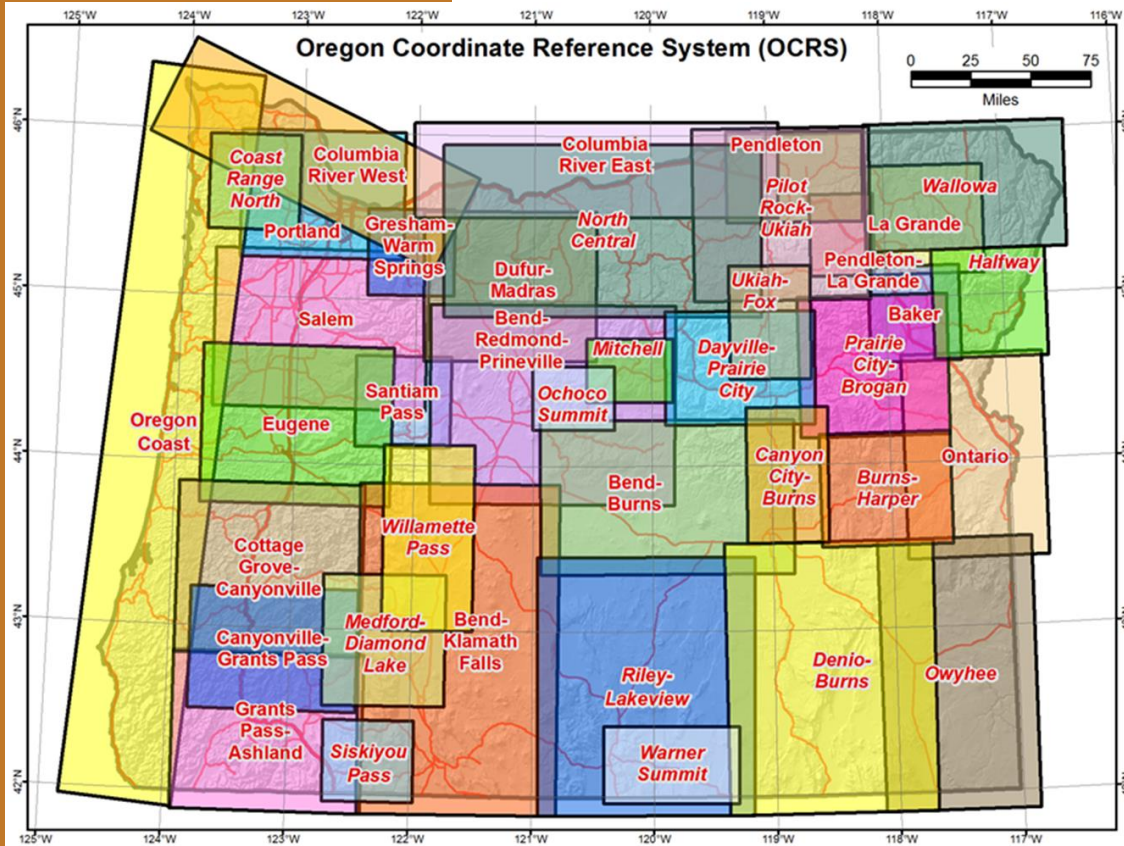
- Initially – “Let’s have them all!”
 - NGS reminder- “*Pick any two* but one MUST be the statewide zone”
- Modified Oregon proposal
 - Tier 1 – Statewide
 - Tier 2 – Low distortion zones

Support from OACES, OGIC, URISA

SPCS 2022

NGS requires non-overlapping boundaries in SPCS 2022

***Does not change parameters**



SPCS 2022

Tier 1

Statewide



Tier 2

local low distortion
zones



Update from NGS in June 2021:

- Preliminary designs start going out **Summer 2021**
- Minor changes (edits to false eastings, northings, names) **early 2022**
- NGS final acceptance/publication **mid-2022**
- NGS official rollout of SPCS 2022 – **TBD**

How will SPCS 2022 affect the Oregon Coordinate System?

Oregon Coordinate System



SB 877 - 2011

- **Defined in State Law (ORS 93.312) as:**
 - a) Oregon Stateplane 1927
 - b) Oregon Stateplane 1983
 - c) Oregon Coordinate Reference System
- **Implemented under Oregon Administrative Rule (734-005-0010)**
 - Three Systems (SPCS 1927, 1983, OCRS)
 - Description for development of OCRS
- **Zone Parameters (OAR 734-005-0015)**

Oregon Coordinate System

Planned to be updated to include the zones from SPCS 2022

- Add 39 low distortion projections (aka “OCRS”)
 - New datum
 - Different coordinate ranges
- Add single statewide zone
 - Different than current statewide OGIC Lambert

- New coordinates to be approved by OAR Committee
- New coordinates to be defined and published in OAR 734-005-0015



The screenshot shows the Oregon Secretary of State website. The header includes the Oregon Secretary of State logo and a navigation menu with links for Home, Business, Voting, Elections, State Archives, and Audits. The main content area is titled "Department of Transportation Highway Division - Chapter 734". It lists "Division 5 OREGON COORDINATE SYSTEMS" and "734-005-0005 Purpose". The purpose is defined as "The purpose of this administrative rule is to define the Oregon Coordinate System projection coordinate systems that are authorized for use in the State of Oregon". It also lists "Statutory/Other Authority: ORS 184.616, 184.619 & Ch.179 OL 2011" and "Statutes/Other Implemented: ORS 209.130, 209.155, 209.250, 390.770 & C". The history is "HWD 13-2011, f. 12-22-11, cert. ef. 1-1-12". At the bottom, it lists "734-005-0010 Oregon Coordinate Systems".

Oregon Geographic Information Council

Oregon Coordinate Reference System standard

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Oregon Lambert

Ten different major map projections have been commonly used in Oregon, and all have varied error across the state. A common projection for data display, analysis, publishing and transfer is needed. The [Oregon Geographic Information Council](#) endorsed the use of Oregon Lambert as a standard for state agencies.

Oregon Lambert is recognized by the [European Petroleum Survey Group](#) (EPSG) which maintains and publishes an international coordinate reference system database. The EPSG spatial reference ID for Oregon Lambert is 2992.

Coordinate Reference System description

Projection: LAMBERT CONIC CONFORMAL
Datum: NAD83
Units: INTERNATIONAL FEET, 3.28084 (.3048 METERS)
Spheroid: GRS1980

Parameters

1st Standard Parallel: 43 00 0.000
2nd Standard Parallel: 45 30 0.000
Central Meridian: -120 30 0.000
Latitude of Projection's Origin: 41 45 0.000
False Easting: 1,312,335.958 Feet
False Northing: 0.00000 Feet

** Notes: US Survey foot = 1200/3937 meters (0.3048006096 m). International foot = 0.3048 m exactly. 1 meter = 3.28084 Intl. feet



- Oregon Statewide Lambert
 - Replacement with single zone SPCS 2022/OCRS
 - Tied to OAR

Oregon Coordinate System

Update Timing

- NGS final publication of SPCS 2022 (**late 2022?**)
- NGS rollout of NATRF 2022 (**2025?**)
- NGS release of SPCS 2022 (**2025-2026?**)
- OAR Committee approval of changes (**2025?**)
- New Coordinate Systems adopted and published to OAR 734-005-0015 (**2026?**)

Questions?