



Winter Outlook (2014-2015)

Yamhill County

Winter Weather Planning Meeting

October 23, 2014



Tyree Wilde Warning Coordination Meteorologist National Weather Service Portland, OR







Overview

- Weather Ready Nation
- Tools for Decision Making
- Recap Winter 2013-2014
- Winter Outlook (2014-2015)







Some vehicles are abandoned in Tillamook.





Are you Ready for Winter?

We're hear to help Decision Assistance Building Community Resilience







Working Together → WRN

 A perfect forecast doesn't mean a perfect outcome for the community

"Craig Fugate, FEMA Administrator"

- We must work together to build community resilience
- Weather Ready Nation







Weather-Ready Nation

National Oceanic and Atmospheric Administration



The Weather-Ready Nation initiative is one year old. Since its inception, NOAA has been busy launching new pilot projects, upgrading technology and working with partners to increase the country's resiliency to weather-dependent events







Weather Tools for Decision Making





Being Weather Ready & Staying Informed





 How far out can we tell you about a significant weather/flood event?

5 to 7 Days (Heads up)

24 to 36 hours (Watch)

0 to 12 hours (Warning)



Multi-Media Briefings

Virtual Briefings

Weather-Ready Nation

National Oceanic and Atmospheric Administration





Login Register

LS-

Being Weather Ready Staying Informed

WWUS46 KPQR 240551

951 PM PST WED FEB 23 2011

ional Weather Service Mobile Decision Support Services (MDSS)

URGENT - WINTER WEATHER MESSAGE NATIONAL WEATHER SERVICE PORTLAND OR

LOW ELEVATION SNOWFALL EXPECTED THROUGH FRIDAY MORNING. .UNSEASONABLY COLD WEATHER FOR LATE FEBRUARY IS BRINGING SNOW TO LOW ELEVATIONS ACROSS THE FORECAST AREA. A COLDER AIR MASS WILL MOVE INTO THE REGION TONIGHT AND THURSDAY...WITH ACCUMULATING SNOW DOWN TO THE BEACHES AND VALLEY FLOOR THROUGH FRIDAY MORNING

Recent News.

WSWPQR

iNWS - Interactive NWS

INWS MOBILE ALERTING Receive customized text message and e-mail alerts for National Weather Service

products that you care about

Home My Alerts News FAO About

- **iNWS**
 - cell phone application
 - https://inws.wrh.noaa.gov/user/register

- **NWS Webinars**
- **Email briefings**
- YouTube multi-media briefings
- Phone (always welcome)



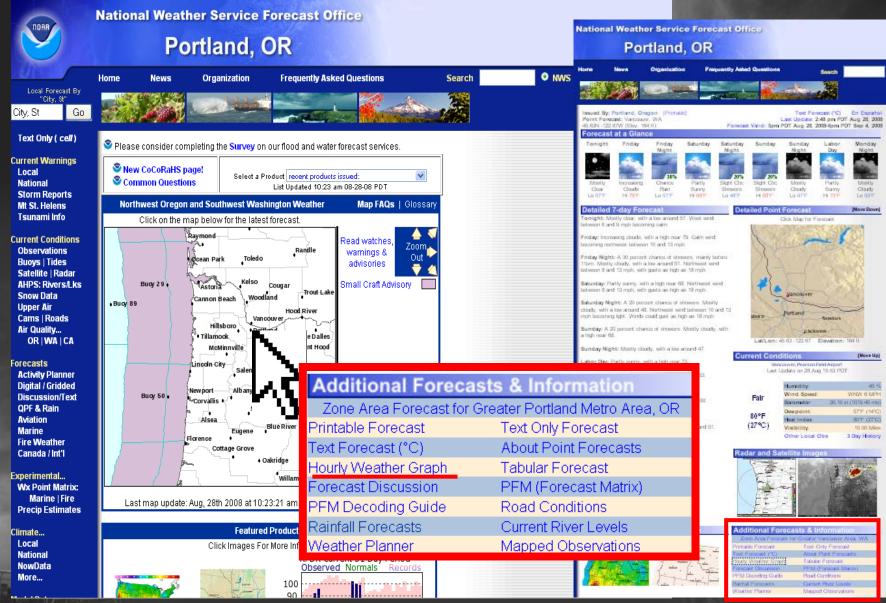
Welcome.



Point Forecasts



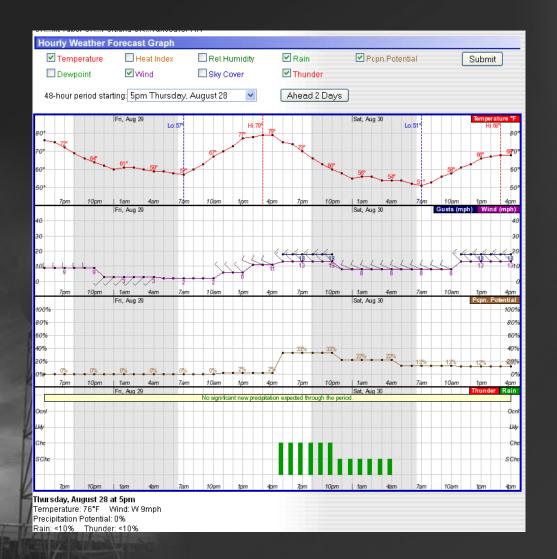
(weather.gov)





Hourly Weather Graphs



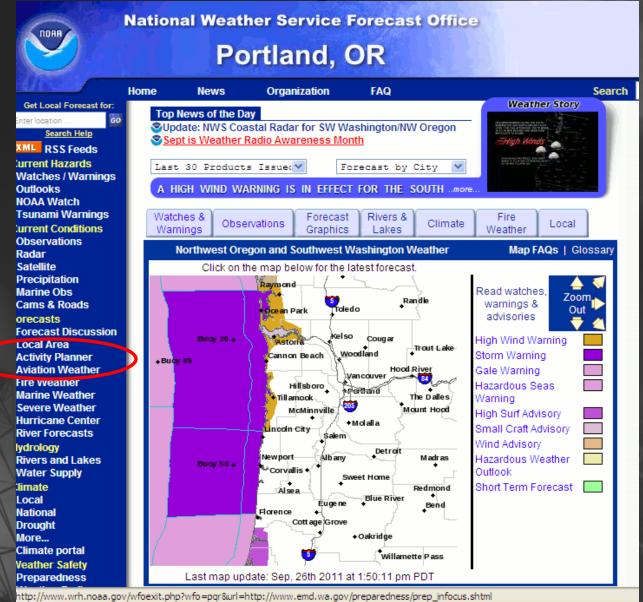


National Weather Service Forecast Office Portland, OR eued By: Portland, Oregon (Proteble Last Update: 2:48 pm PDT Aug 28, 2008 Foreign Valid: Sem POT Aug 28, 2008-Sem POT Sep 4, 2008 inday: Increasing clouds, with a high near 79. Gain wind Finday Night: A 30 parcent chance of shawers, marry before bly cloudy, with a low around ST. Northwest wind steeps as tight as stage the . Aum E1 beach as tight as 18 moh. Saturday: Partly surry, with a high near 68. Northwest wind east 8 and 13 mph, with guida as high as 18 mph. Saturday Night: A 20 percent charcs of showers. Westly Soudy, with a low around 48. Northwest wind between 10 and 13 on becoming light. Winds could guilt as high as 18 min. Sunday Night: Mostly cloudy, with a low around 47. abor Day: Partly surry, with a high mair 73. Vencouver, Pearson Field Airport Last, Update on 28 Aug 15:10 POT Monday Night: (Violity cloudy, with a low around 53) useday: Partly survey, with a high mor 75 Wind Speed Fuenday Night: Mostly cloudy, with a low around 50 STE (MC Wednesday: Partly surry, with a high miar 74. Wednesday Night: Mostly cloudy, with a low around 51. Visibility. 10.00 NWs 3 Day History Inunday: Partly surery, with a high near 74 Phyrial Forecasts













NWS All NOAA Go

Interactive

Activity Planner



Home

National Weather Service Forecast Office

Portland, OR

National Weather

Port

Home

News Organization Search for:
Weather Activity Planner for 45:34*N 121:72*W

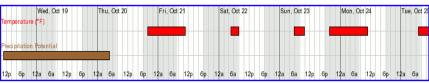
Point Forecast: 3 Miles NE Government Camp OR

Weather Activity Planner

This interactive forecast display is intended for general planning purposes. Data entered may have been changed for accuracy. Please verify the below data is appropriate. All wind direction information should be entered in a clockwise direction (using compass directions i.e. E, ESE, SE, etc.). Public comments and suggestions are encouraged.

This application generates products from a digital forecast data base. It is intended to allow a user to define and produce a forecast for general planning purposes only. As any weather or hydrologic event evolves, updated forecasts and warnings are issued by the NWS. Customers are urged to obtain the latest official forecast information prior to engaging in any weather sensitive activity, and to monitor forecasts for updates during such activities.

The Weather Activity Planner is NOT meant to replace a spot forecast request. Weather Activity Planner surface winds are a gridded representation of projected, local surface winds at a 5km or 2.5km resolution. The surface winds returned do NOT account for fuel type, sheltering or slope aspect. Users can select either surface wind speeds or 20 foot winds (if the 20 foot wind grid is available). If precise wind forecasts are needed, please submit a spot forecast request to your servicing Weather Forecast Office.



Tuesday, October 25 at 6am Temperature: 37 °F

Precipitation Potential: 22%

48-hr Element Meteorogram

| Element | Min | | Max | Element | Min | | Max |
|--------------------------|-----|----|-----|--------------------------|-----|----|-----|
| Temperature (°F) | 30 | to | 36 | Surface Wind Speed (mph) | | to | |
| Relative Humidity | | to | | Sky Cover | | to | |
| Surface Wind Speed (mph) | | to | | Precipitation Potential | 0 | to | 20 |

Latitude/Longitude Entry
decimal degrees (i.e. 42.134) or deg min sec (i.e. 42.23.34)
Use "-" (negative sign) in longitude for locations in Western Hemisphere
Latitude: 45.3275 Longitude: -121.7159 Submit

Radar and Satellite Images



Additional Forecasts & Information

International System of Units Forecast Discussion
7-Day Forecast Tabular Forecast
Quick Forecast

PFM (Forecast Matrix) PFM Decoding Guide



Observations





Get Local Forecast for

Text Only (cell)

Current Warnings Local National Storm Reports **eSpotter** Mt St. Helens

Tsunami Info Current Conditions Observations **Buoys | Tides**

AHPS: Rivers/Lks **Snow Data** Upper Air CoCoRaHS Cams | Roads Air Quality... OR | WA | CA

orecasts

Activity Planner Digital / Gridded Discussion/Text QPF & Rain QPF & Rain Aviation Aviation Marine Marine **Water Supply** Water Supply **Fire Weather Fire Weather** Canada / Int'l Canada / Int'l

xperimental... Wx Point Matrix: Marine | Fire **Precip Estimates**

Climate... Local Local National **NowData** More... More...

Model Data Graphics Guidance Meteograms

Neather Safety Weather Radio Safety Info SkyWarn™ COOP Prg.



Home

Loc

Loc

 $\leftarrow * \rightarrow$

 \downarrow

+ 56 +

Condit

In Ore

Astoria

Aurora

Baker

In Was

Belling

Breme

Other

Hourly I Pacific/

Select

Alaska

Arizon North (

Rest of

Select

Alabai

Arkans Conne

Get Local Forecast for: Text Only (cell)

Current Warnings Storm Reports **eSpotter** Mt St. Helens Tsunami Info

Current Conditions Observations

Buoys | Tides Satellite | Radar AHPS: Rivers/Lks Snow Data Upper Air CoCoRaHS Cams | Roads Air Quality... ORIWAICA

Forecasts

Activity Planner Digital / Gridded Discussion/Text

Experimental... Wx Point Matrix: Marine | Fire **Precip Estimates**

National NowData

Model Data Graphics Guidance Meteograms

Weather Safety Weather Radio Safety Info SkyWarn™ COOP Prg.

National Weather Service Mesonet Observations

56 51

-Quick Zooms-

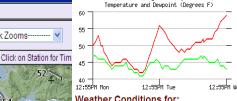
Warrenton

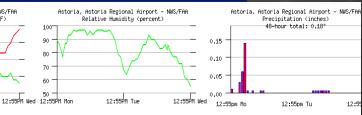
Cannon

56

Long Beach







Weather Conditions for:

Astoria, Astoria Regional Airport, OR (KAST) Elev: 10 ft; Latitude: 46.15694; Longitude: -123.88250

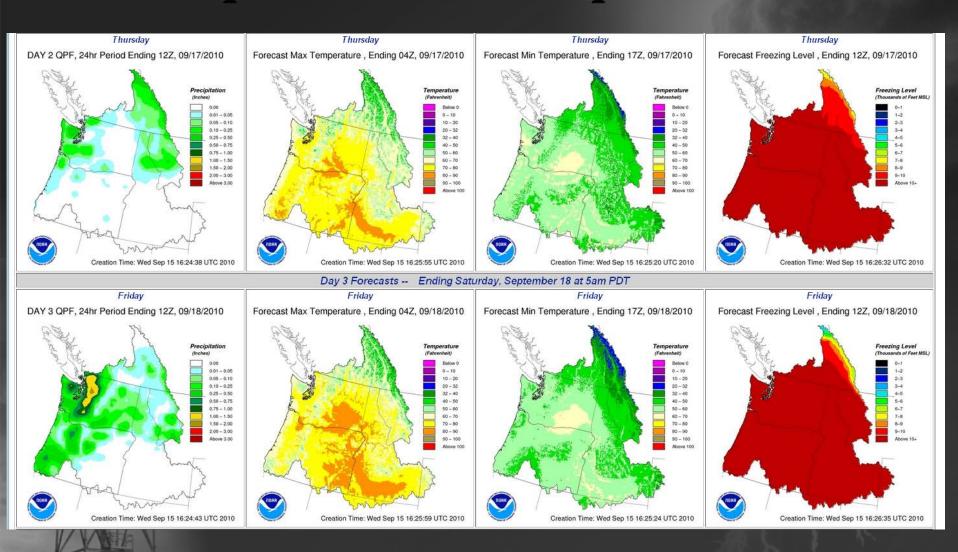
Wed, 09 Nov 1:40 pm (PST) Most Recent Observation: Wed, 09 Nov 12:55 pm PST (PST)

| 350 | | | _ | | | | | | | | | | | | | | | _ |
|-------|------------------------------|-------------|-----------|-----------|----------|------|------------------|------|--------------------------------|------------------|-------------------|--------------------|----------|----------|----------|----------|------|------|
| 1 | Time | Temp | | Relative | | | Visibility | WX | Clouds | Sea Level | | | | Precip | | | | |
| S. | | | | | Directio | | | | | | _ | Pressure | | | | | | |
| 4 | (PST) 09 Nov 12:55 pm PS1 | (f) - 50 | (f) 43 | (%) 55 | ESE | | (miles) 10.00 | | OVC045 | (mb) 1021.5 | (inches) 30.17 | (inches) 30.168 | (inches) | (inches) | (inches) | (inches) | Temp | Temp |
| Mark. | 09 Nov 12.55 pm PS1 | | | | ESE | 10 | 10.00 | | OVC045 OVC043 | | | | | | | | | |
| | 09 Nov 10:55 am PS1 | | 44 44 | | ESE | 8 | 10.00 | | BKN041 OVC060 | 1022.0 1022.4 | 30.18 30.19 | 30.178 30.188 | | | | | | |
| | 09 Nov 9:55 am PST | 55 | 46 | | ESE | 12 | 10.00 | | | 1022.4 | 30.19 | 30.188 | | | | | 55 | 51 |
| 9 | 09 Nov 8:55 am PST | 54 | 45 | | ESE | 7 | 10.00 | | FEW043 BKN060 BKN040 BKN050 | 1022.3 | 30.19 | 30.188 | | | | | 55 | 51 |
| 10 | 09 Nov 7:55 am PST | 52 | 45 | | ESE | 8 | 10.00 | | FEW049 | 1022.3 | 30.19 | 30.188 | | | | | | |
| 1/2 | 09 Nov 6:55 am PST | 52 | 45 | | ESE | 6 | 10.00 | | OVC049 | 1022.2 | 30.18 | 30.178 | | | | | | |
| | 09 Nov 5:55 am PST | | 46 | | SE | 7 | 10.00 | | | | | | | | | | | |
| | 09 Nov 4:55 am PST | 52 51 | 47 | | ESE | 7 | 10.00 | | SCT038 OVC045 OVC030 | 1021.9 | 30.18 | 30.178 | | | | | | |
| 28 | 09 Nov 4:44 am PST | 52 | 46 | | ESE | 7 | 10.00 | | OVC030 | 1021.8 | 30.18 30.18 | 30.178 30.178 | | | | | | |
| 53 | 09 Nov 4:44 am PST | 51 | 40 | | ESE | 7 | 10.00 | | OVC030 OVC028 | 1021.7 | 30.18 | 30.178 | | | т | | 51 | 48 |
| ٨ | 09 Nov 2:55 am PST | 51 | 47 | | ESE | 7 | 10.00 | | OVC028 OVC026 | 1021.7 | 30.17 | 30.108 | | | | | 91 | 40 |
| 14 | 09 Nov 1:55 am PST | 51 | 46 46 | | ESE | 8 | 10.00 | | OVC026 OVC026 | 1021.9 | 30.18 | 30.178 | | | | | | |
| 2 | 09 Nov 12:55 am PS1 | | 46 | | ESE | 6G24 | 10.00 | | | 1022.0 | | | т | | | | | |
| | 08 Nov 11:55 pm PS1 | | 46 | | E | 5 | 9.00 | DΛ | BKN026 OVC035 OVC024 | 1022.1 | 30.19 30.19 | 30.188 30.188 | Ť | | | | | |
| | 08 Nov 10:55 pm PS1 | | 46 | | E | 6 | 10.00 | | OVC024 OVC022 | 1022.3 | 30.19 | 30.188 | Ť | | | | | |
| 5 | 08 Nov 9:55 pm PST | 48 | 46 | | E | 6 | 10.00 | -RA | OVC022 | 1022.4 | 30.19 | 30.100 | Ť | | | | 52 | 48 |
| 132 | 08 Nov 8:55 pm PST | 49 | 45 | | ESE | 5 | 7.00 | DΛ | OVC024 OVC021 | 1022.4 | 30.20 | 30.188 | Ť | | | | 52 | 40 |
| 5 | 08 Nov 7:55 pm PST | 48 | 44 | | E | 6 | | -RA | OVC021 | 1022.2 | 30.18 | 30.178 | Ť | | | | | |
| not | 08 Nov 6:55 pm PST | 49 | 43 | | ESE | 7 | 8.00 | | OVC028 | 1021.9 | 30.18 | 30.178 | Ť | Т | | | | |
| 100 | 08 Nov 5:55 pm PST | 50 | 43 | | SSE | 6 | 10.00 | -IVA | OVC028 | 1021.8 | 30.18 | 30.178 | | | | | | |
| | 08 Nov 4:55 pm PST | 51 | 43 | | ESE | 5 | 10.00 | | BKN043 BKN055 OVC070 | | 30.18 | 30.178 | | | | | | |
| | 08 Nov 3:55 pm PST | 52 | 44 | | SSE | 5 | 10.00 | | FEW038 BKN090 | 1022.0 | 30.19 | 30.178 | | | | | 56 | 48 |
| 3 | 08 Nov 2:55 pm PST | 54 | 44 | | SE | 6 | 10.00 | | FEW034 SCT040 OVC095 | | 30.19 | 30.188 | | | | | 30 | 70 |
| 1 | 08 Nov 1:55 pm PST | 55 | 43 | | SE | 6 | 10.00 | | FEW043 OVC090 | 1022.2 | 30.19 | 30.188 | | | | | | |
| ma | 08 Nov 12:55 pm PS1 | | 45 | | ENE | 7 | 10.00 | | FEW038 | 1022.5 | 30.20 | 30.198 | | | | | | |
| 4 | 08 Nov 11:55 am PST | | 46 | | NE | 8 | 10.00 | | OVC055 | 1023.1 | 30.22 | 30.218 | | | | | | |
| | 08 Nov 10:55 am PST | | 45 | | ENE | 7 | 10.00 | | OVC060 | 1023.7 | 30.23 | 30.228 | | | | | | |
| 4 | 08 Nov 9:55 am PST | 48 | 45 | | E | 3 | 10.00 | | OVC050 | 1023.7 | 30.23 | 30.228 | | | | | 48 | 40 |
| arris | 08 Nov 8:55 am PST | 46 | 44 | | Ē | 5 | 10.00 | | OVC055 | 1023.7 | 30.23 | 30.228 | | | | | - | |
| inc | 08 Nov 7:55 am PST | 43 | 42 | | ESE | 5 | 10.00 | | BKN055 | 1023.6 | 30.23 | 30.228 | | | | | | |
| 5 | 08 Nov 6:55 am PST | 42 | 41 | 96 | ESE | 3 | 9.00 | | SCT055 | 1023.4 | 30.22 | 30.218 | | | | | | |
| | 08 Nov 5:55 am PST | 42 | 41 | | ESE | 3 | 8.00 | | BKN055 | 1023.3 | 30.22 | 30.218 | | | | | | |
| ene | 08 Nov 4:55 am PST | 43 | 42 | 97 | CALM | | 10.00 | | OVC050 | 1023.8 | 30.24 | 30.238 | | | | | | |
| 0 | 08 Nov 3:55 am PST | 43 | 42 | 97 | CALM | | 10.00 | | SCT050 | 1024.0 | 30.24 | 30.238 | | | T | 0.19 | 46 | 42 |
| /5 | 08 Nov 2:55 am PST | 44 | 43 | 96 | SE | 3 | 10.00 | | FEW055 | 1023.9 | 30.24 | 30.238 | | | | | | |
| 5 | 08 Nov 1:55 am PST | 45 | 43 | 93 | CALM | | 10.00 | | OVC050 | 1024.3 | 30.25 | 30.248 | | | | | | |
| 耐 | 08 Nov. 12:55 am PST | 46 | 45 | 96 | SSE | .5 | 10.00 | | FEW030 BKN037 OVC055 | 1024 5. | 30.26 | 30.258 | | T | | | | |





Precipitation & Temp Forecasts





How High will the River Get?



NOAA





Current Conditions

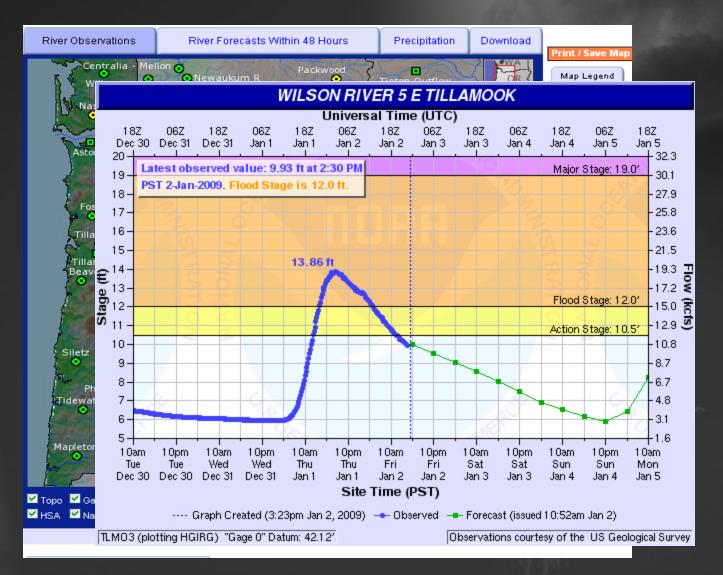
Observations Buoys | Tides Satellite | Radar

AHPS: Rivers/Lks

Snow Data Upper Air Cams | Roads Air Quality... OR I WAI CA

Forecasts

Activity Planner Digital / Gridded Discussion/Text OPF & Rain Aviation Marine Fire Weather Canada / Int'l





The Future



Building a Weather-Ready Nation

• Building Community Resilience

 Working with <u>you</u> to prepare for and respond to significant weather / flood









Decision Support Services



Virtual Briefings

Impact based Warnings

IMET Services

Multi-Media Briefings Exercises with Customers

EWARN & iNWS

Wx Story

Seasonal Workshops

IRIS – Customer Impacts Digital
Database
(NDFD)

IPAWS

Commercial Mobile Alert System

Taking the Pulse of the Planet - from the sun to the sea

Internet





What happened last winter? Winter Recap

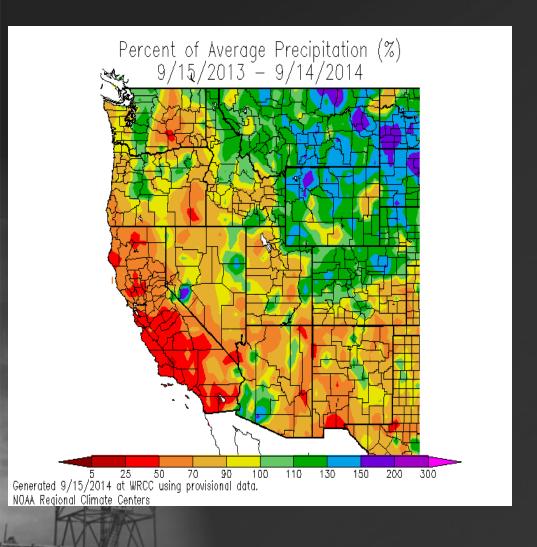
2013-2014











- Precipitation
 - Cascades: near normal
 - Coast: 70-90% of normal
 - Valley: 70-80% of normal
- Mountain snow
 - Slightly below normal north Cascades
 - Much below normal south Cascades

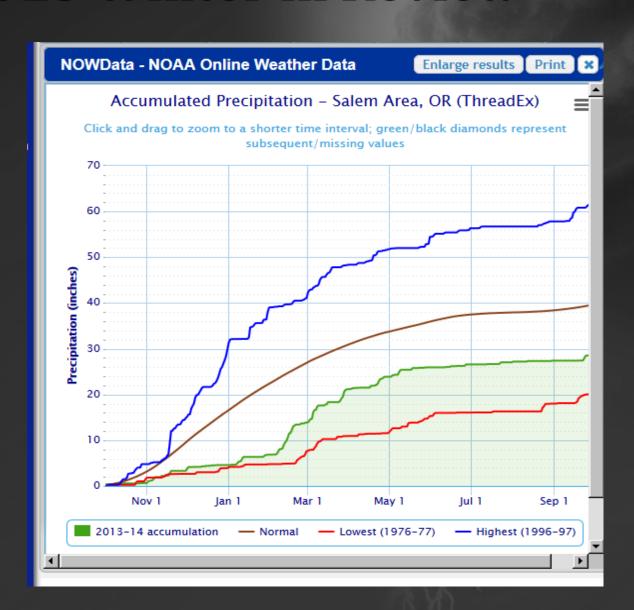




2012-2013 Winter in Review

Astoria rainfall

Oct 2013-Sep 2014





But we had this!

• Feb 6-9 snow & ice storm













How about this Winter?

Winter Outlook 2014-2015

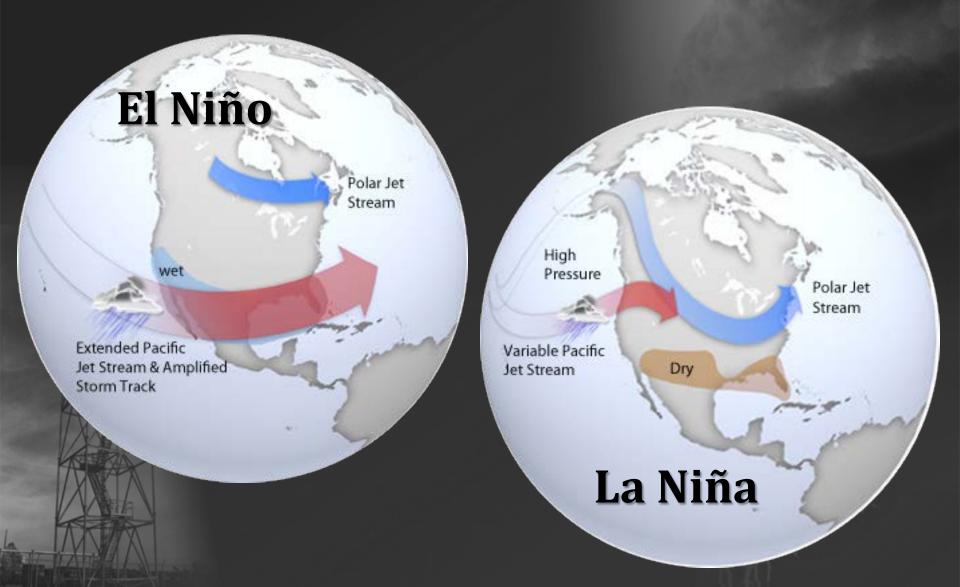








El Niño vs. La Niña





El Niño *vs.* La Niña Weather Patterns

DEATHER SECTION AND ADDRESS OF THE PARTY OF

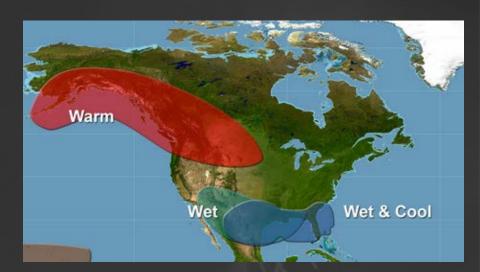
La Niña

- Cooler than average waters in the central and eastern tropical Pacific
- Cooler temperatures with an increase in precipitation.



El Niño

- Warmer than average waters in the central and eastern tropical Pacific
- Warmer temperatures and a decrease in precipitation



Winter Conditions



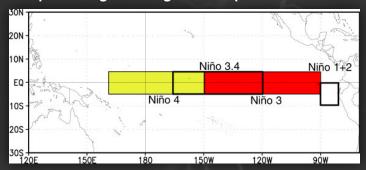
ENSO Status



- Neutral conditions
- Neutral conditions since Autumn 2012
- Expected to transition to weak El Niño



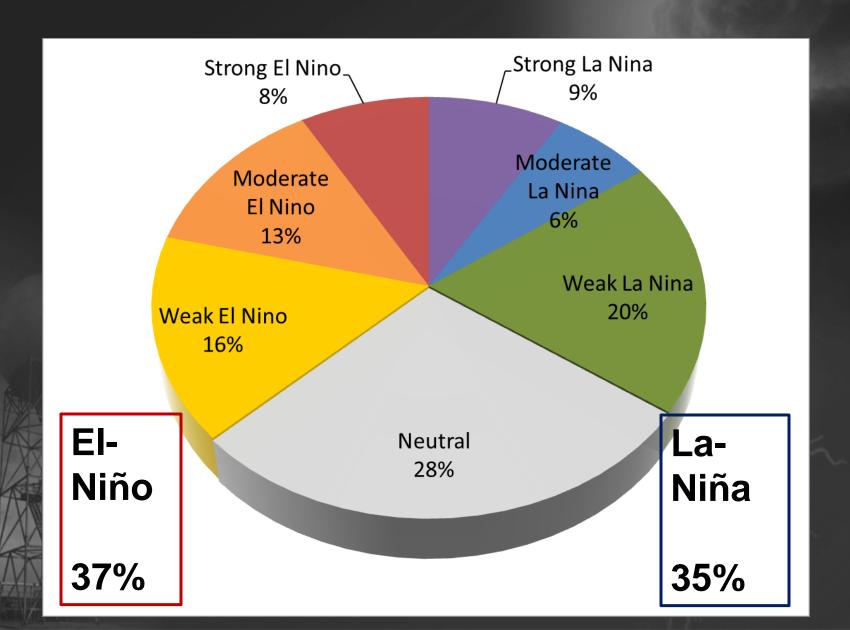
Map showing NINO regions in Equatorial Pacific







ENSO Occurrence

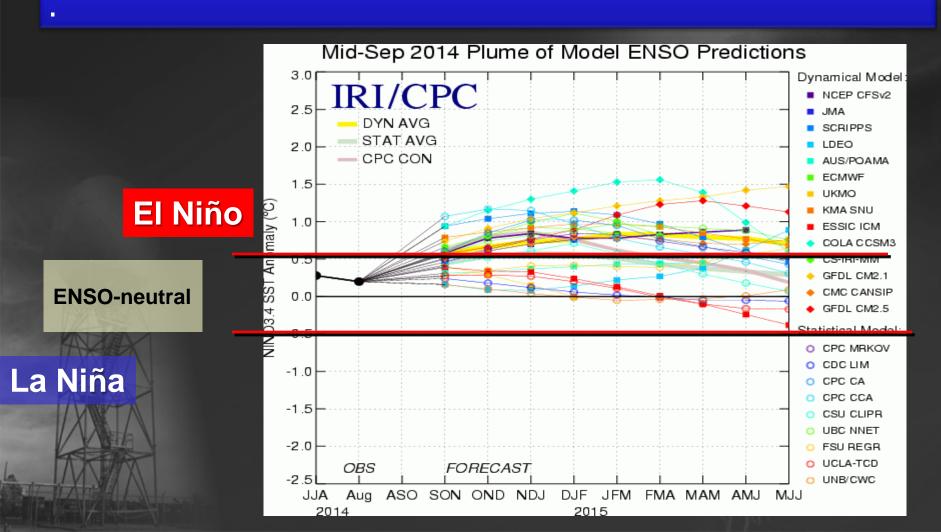






Climate Model Predictions

Climate models predict a weak El-Nino will develop in the Oct-Dec 2014 time frame and persist into the early winter of 2015



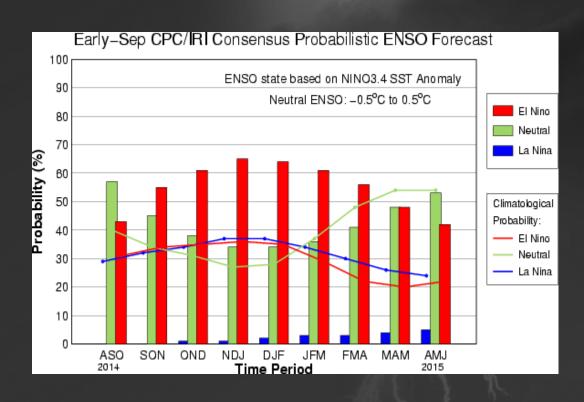




ENSO Projections

- Neutral conditions currently
- Forecast is for weak El-Nino to develop later this fall
- The chance of El-Niño is at 60-65%

Climate Prediction Center / International
Research Institute for Climate and Society
Consensus Probabilistic ENSO Forecast







Winter Outlook Dec 2014 - Feb 2015

Temperature

Precipitation



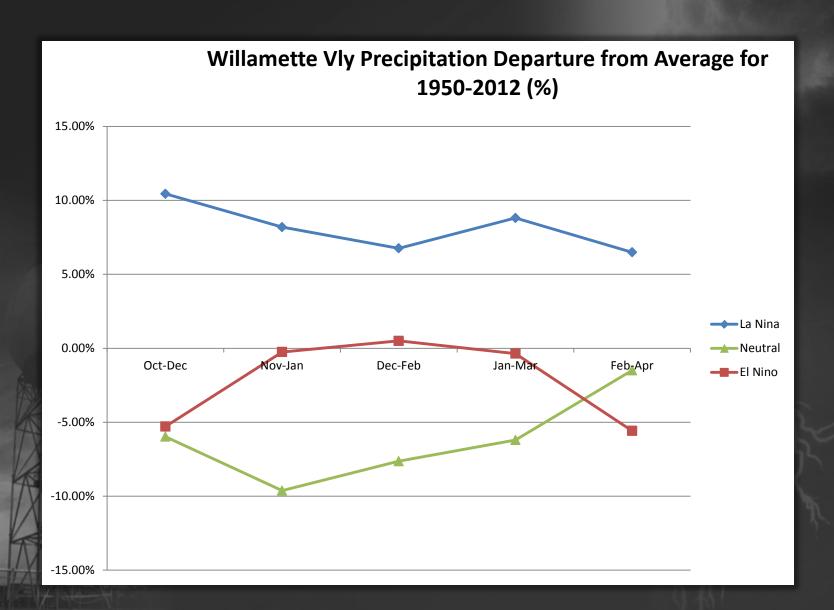








Willamette Valley Precipitation







In Summary

- ENSO Neutral conditions continue
- Chance of El Niño developing is at 60-65% this winter
- Can expect this Fall/Winter to be (on average):
 - Temperature: 40-50 % chance of above average
 - Precipitation: 30 % chance of below average
 - Snowpack: Likely below average

As always, be prepared for the any type of extreme weather Mother Nature sends our way in Oregon this winter!



Questions?



POC: Tyree Wilde, NWS Portland tyree.wilde@noaa.gov 503-326-2340 x223