

# Introduction to CoastWatch

Dale Robinson and Cara Wilson  
NOAA CoastWatch West Coast Node (WCN)

NOAA CoastWatch Satellite Course  
Online Version

## Versioning

- Robinson, 2020, 2017
- Tomlinson and Vogel, 2018
- Abecassis and Howell, 2018



# CoastWatch is a national program funded by NESDIS<sup>1</sup>

**MISSION: PROVIDE ACCESS TO AND PROMOTE THE USE OF OCEAN SATELLITE DATA PRODUCTS**

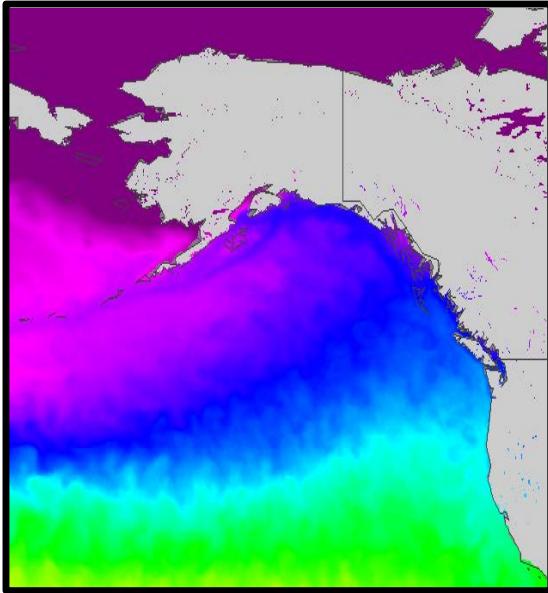


<sup>1</sup>National Environmental Satellite, Data, and Information Service



# Alaska is served by two CoastWatch nodes

## WEST COAST NODE



**Cara Wilson<sup>1</sup>**

Node Manager

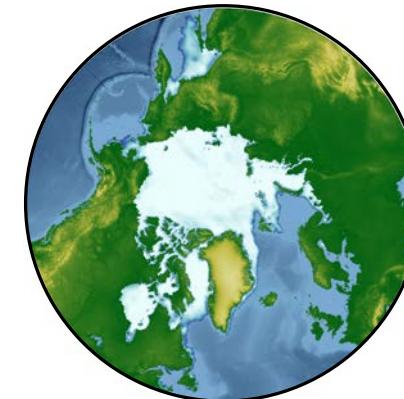
**Dale Robinson<sup>1,2</sup>**

Operations Manager

## Service Region

Alaska to California

## POLARWATCH



**Jennifer Sevadjian<sup>1,2</sup>**

Operations Manager

**Cara Wilson<sup>1</sup>**

Node Manager

**Dale Robinson<sup>1,2</sup>**

Deputy Node Manager



## Service Region

Polar and Sub-Polar Regions

<sup>1</sup>NOAA Southwest Fisheries - Environmental Research Division

<sup>2</sup>UC Santa Cruz- Cooperative Institute for Marine Ecosystems and Climate (CIMEC)



# West Coast Node and PolarWatch are embedded in Southwest Fisheries Science Center locations



**Cara Wilson**

Environmental Research Division (ERD)  
Monterey, California



**Dale Robinson**

Environmental Research Division (ERD)  
Santa Cruz, California

**Jennifer Sevadjian**  
ERD (SWFSC HQ)  
La Jolla, California



# CoastWatch shares expertise among nodes

KNOWLEDGE, CAPABILITIES, AND RESOURCES OF THE NETWORK ARE AVAILABLE TO YOU



# Contact information for the nodes and central office

## CoastWatch Central

### Contact email

[coastwatch.info@noaa.gov](mailto:coastwatch.info@noaa.gov)

### Website

[coastwatch.noaa.gov](http://coastwatch.noaa.gov)



## Central Pacific

### Ops Manager

Melanie Abecassis  
[melanie.abecassis@noaa.gov](mailto:melanie.abecassis@noaa.gov)

### Node Manager

Evan Howell  
[evan.howell@noaa.gov](mailto:evan.howell@noaa.gov)

### Website

[oceanwatch.pifsc.noaa.gov](http://oceanwatch.pifsc.noaa.gov)

## Great Lakes

### Ops Manager

Songzhi Liu  
[oar.glerl.cw@noaa.gov](mailto:oar.glerl.cw@noaa.gov)

### Node Manager

Philip Chu  
[philip.chu@noaa.gov](mailto:philip.chu@noaa.gov)

### Website

[coastwatch.glerl.noaa.gov](http://coastwatch.glerl.noaa.gov)

## Caribbean/Gulf of Mexico

### Ops Manager

Joaquin A. Trinanes  
[joaquin.rinanes@noaa.gov](mailto:joaquin.rinanes@noaa.gov)

### Node Manager

Gustavo Goni  
[gustavo.goni@noaa.gov](mailto:gustavo.goni@noaa.gov)

### Website

[cwcaribbean.aoml.noaa.gov](http://cwcaribbean.aoml.noaa.gov)

## West Coast

### Ops Manager

Dale Robinson  
[dale.robinson@noaa.gov](mailto:dale.robinson@noaa.gov)

### Node Manager

Cara Wilson  
[cara.wilson@noaa.gov](mailto:cara.wilson@noaa.gov)

### Website

[coastwatch.pfeg.noaa.gov](http://coastwatch.pfeg.noaa.gov)

## East Coast

### Ops Manager

Ron Vogel  
[coastwatch.info@noaa.gov](mailto:coastwatch.info@noaa.gov)

### Node Manager

Michelle Tomlinson  
[coastwatch.info@noaa.gov](mailto:coastwatch.info@noaa.gov)

### Website

[eastcoast.coastwatch.noaa.gov](http://eastcoast.coastwatch.noaa.gov)

## PolarWatch

### Ops Manager

Jennifer Sevadjian  
[jennifer.sevadjian@noaa.gov](mailto:jennifer.sevadjian@noaa.gov)

### Node Manager

Cara Wilson

### Node Manager

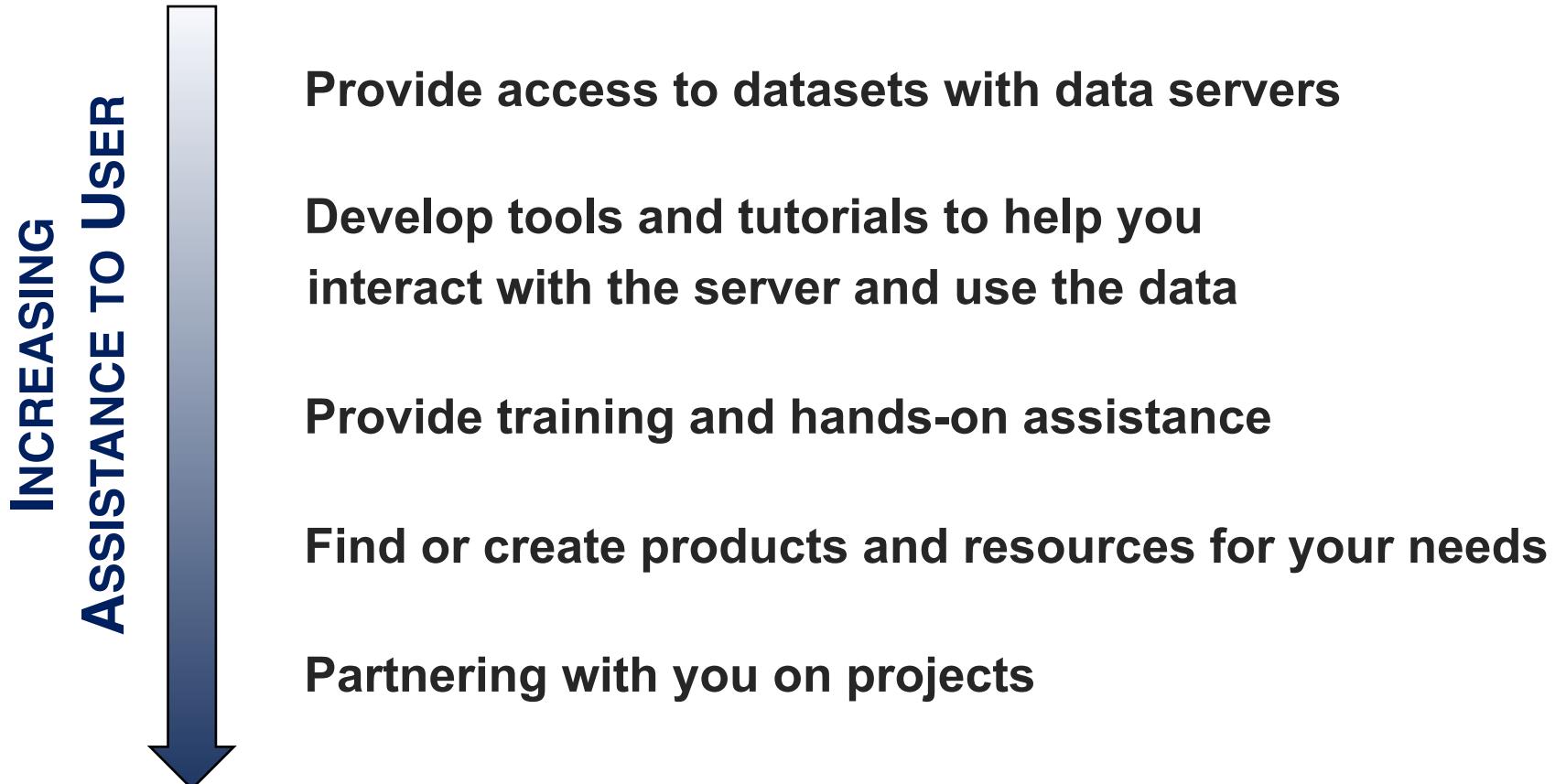
Dale Robinson

### Website

[polarwatch.noaa.gov](http://polarwatch.noaa.gov)



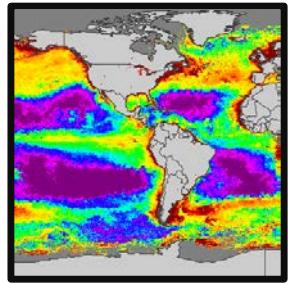
# We offer several levels of service to help you use satellite data



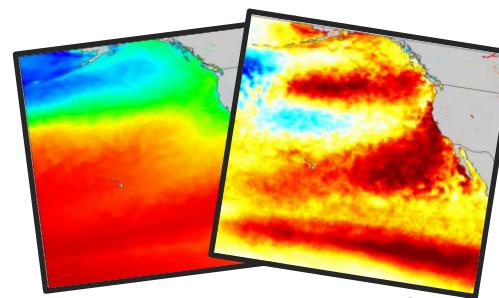
# Data servers

## ERDDAP: a simple, consistent way to download data

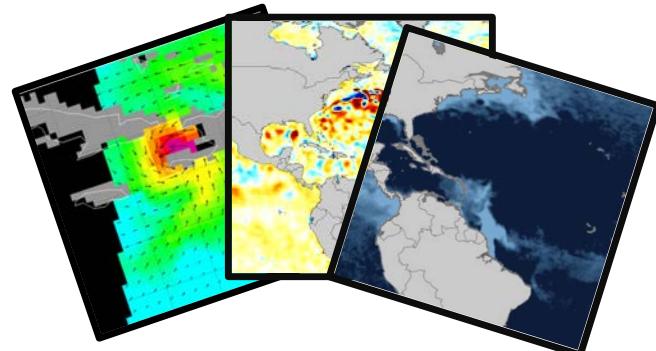
**1,000+ SATELLITE DATASETS**



Chlorophyll

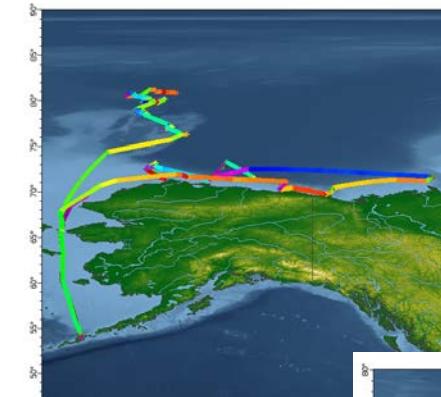


SST · SST Anomaly

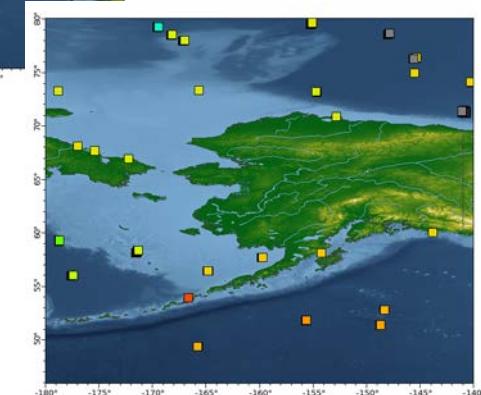


Surface Winds · Sea Surface Salinity  
Sea Surface Height and Anomaly

**400+ NON-SATELLITE DATASETS**



Research Ship  
Underway Data



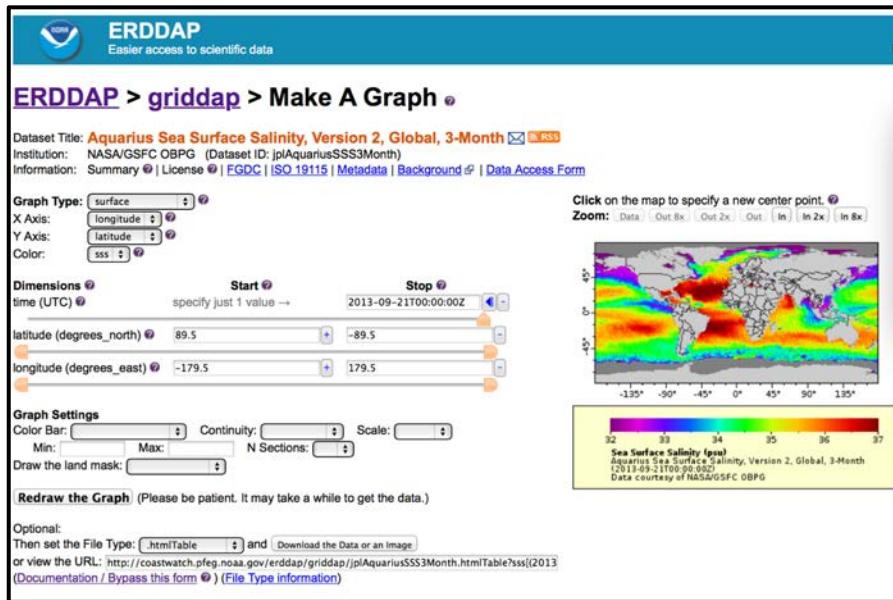
International Arctic  
Buoy Program



# Data servers

ERDDAP is the primary data server at WCN

<https://coastwatch.pfeg.noaa.gov/erddap/>



ERDDAP Servers at CoastWatch

**West Coast Node**

<https://coastwatch.pfeg.noaa.gov/erddap/>

**Caribbean/Gulf of Mexico Node**

<https://cwcgom.aoml.noaa.gov/erddap/>

**Great Lakes Node**

<https://coastwatch.glerl.noaa.gov/erddap/>

**Pacific Node**

<https://oceanwatch.pifsc.noaa.gov/erddap/>

**PolarWatch**

<https://polarwatch.noaa.gov/erddap/>

**CoastWatch Central**

<https://coastwatch.noaa.gov/erddap/>

**ERDDAP PRESENTATION: TUESDAY**



# Tools and tutorials

## For help accessing and using data

**Scripts and code snippets in R, Python**

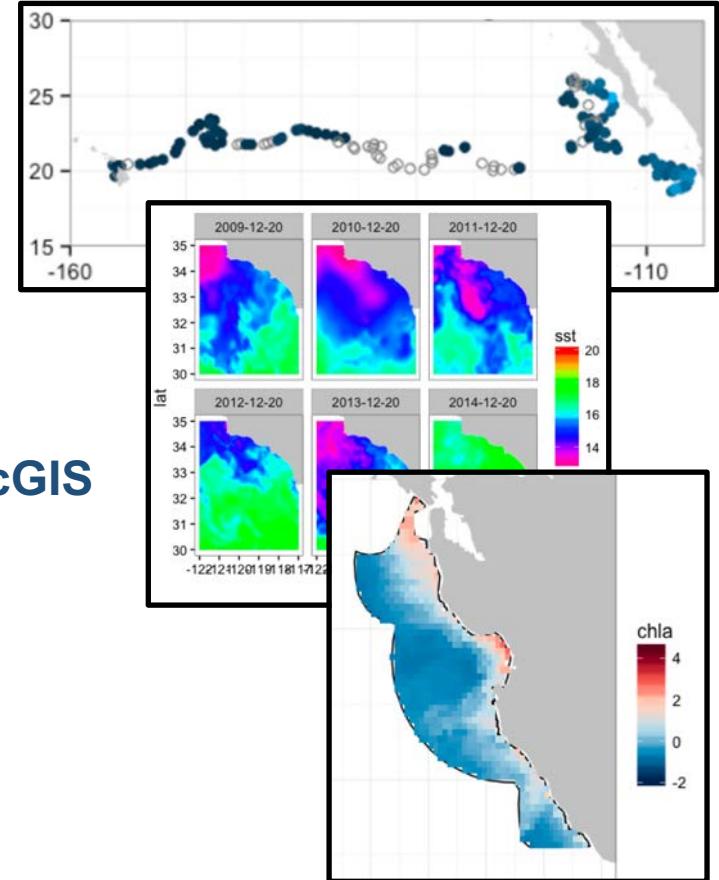
**Software modules (R, Python) that do common tasks**

**Tutorials to complement the scripts and modules**

**A plug-in and techniques for getting raster satellite data into ArcGIS**

**R CODE AND TOOLS PRESENTATION: WEDNESDAY**

**ARCGIS PRESENTATION: THURSDAY**



# Training

## You are attending first online version of the Satellite Course



WCN's has held an annual NOAA Satellite Course since 2006.

Starting in 2018, the course is offered by other CoastWatch Nodes and the Central Office.

### **LIST OF ALL UPCOMING SATELLITE COURSES**

[coastwatch.noaa.gov/cw/user-resources/satellite-data-training-courses.html](https://coastwatch.noaa.gov/cw/user-resources/satellite-data-training-courses.html)

### **WEST COAST NODE COURSE INFORMATION**

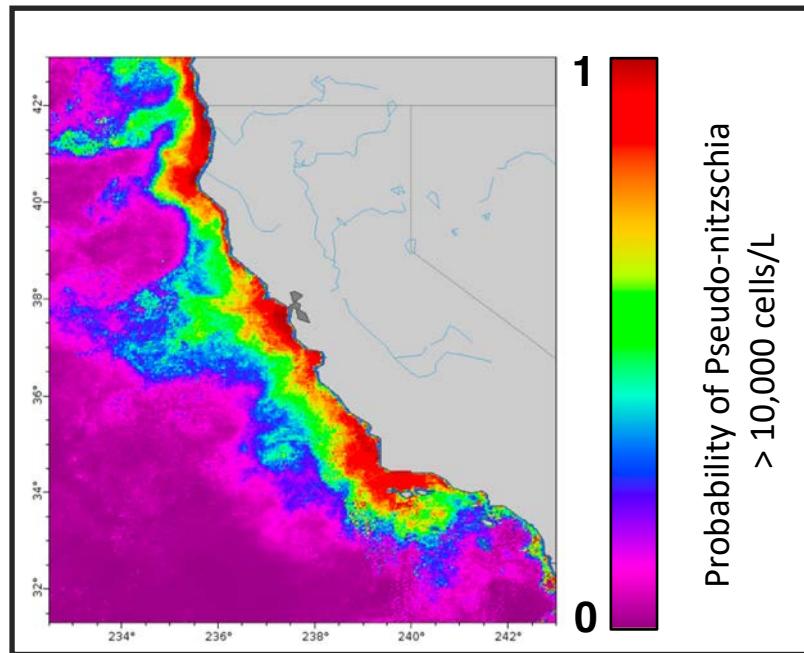
[https://coastwatch.pfeg.noaa.gov/courses/satelite\\_course.html](https://coastwatch.pfeg.noaa.gov/courses/satelite_course.html)



# Partnering with you

## Engagement with research and management groups

### Harmful Algal Bloom Forecast



### Fisheries Management Tools

NOAA COASTWATCH  
WEST COAST REGIONAL NODE  
Loggerhead Turtle Conservation

Turtle Bycatch Overview  
Conservation Area Status  
Historical Data Dashboard

Photo credit: Ralph Pace  
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West Coast Node Projects Page: <https://coastwatch.pfeg.noaa.gov/projects/>



# Contact us and visit the websites!

## Questions?

**Cara Wilson**

cara.wilson@noaa.gov

**Dale Robinson**

dale.robinson@noaa.gov

**Jennifer Sevadjian**

jennifer.sevadjian@noaa.gov



**CoastWatch West Coast**

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**PolarWatch**

polarwatch.noaa.gov

**CoastWatch Central Office**

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