

Supplementing data with the World Ocean Database

Seascape Genomics of North Pacific Forage Fishes RCN Group


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Data you have in hand

- Collection site coordinates are preferred, general localities are usable
- Collection dates are preferred, seasons are usable
- Depth is optional


How to supplement dissolved oxygen data

Navigate to the World Ocean Database (<https://www.ncei.noaa.gov/access/world-ocean-database-select/dbsearch.html>)



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WORLD OCEAN DATABASE SELECT AND SEARCH

How to supplement dissolved oxygen data

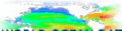
Select “Geographic Coordinates”, “Observation Dates”, and “Measured Variables” as the search criteria



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WORLD OCEAN DATABASE SELECT AND SEARCH

Note: At this time, World Ocean Database 2018 (WOD18) contains [prereleased](#) data and flags for the WOA18.

The WOD18 is an NCEI product and an [IODE](#) (International Oceanographic Data and Information Exchange) project.

The WODselect retrieval system allows a user to search *World Ocean Database* and new (quarterly updated/added) data using a user-specified search criteria. A distribution map and cast count of these search criteria will give the user the option to have the data extracted and placed on the NODC FTP site in the WOD native, 'csv', and netCDF data formats.

To build a user defined search query:

1. Place check mark in front of any number of criteria.
2. Press the "Build a query" button.

(If any criteria below are not checked, the default will apply).


SEARCH CRITERIA: (definitions)	DEFAULT:
<input checked="" type="checkbox"/> Geographic Coordinates	- whole world
<input checked="" type="checkbox"/> Observation Dates - e.g., Year(s), Month(s), Day(s)	- all years/months/days
<input type="checkbox"/> Dataset - e.g., OSD, CTD, XBT	- all datasets
<input checked="" type="checkbox"/> Measured Variables - e.g., Temperature, Salinity, Nutrients	- all available variables
<input type="checkbox"/> Biology - e.g., Phytoplankton, Zooplankton	- all available plankton
<input type="checkbox"/> Deepest Measurement	- all depths
<input type="checkbox"/> Country	- all countries
<input type="checkbox"/> Ship/Platform	- all ships/platforms
<input type="checkbox"/> Cruise	- all cruises
<input type="checkbox"/> Accession #	- all accessions
<input type="checkbox"/> Project	- all projects
<input type="checkbox"/> Institute	- all institutes
<input type="checkbox"/> Data Exclusion Using WOD Quality Control Flags	- no exclusion
<input type="checkbox"/> Data Additions	- WOD18 released data

Build a query

Reset


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Click “Build a query”



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Build a query

Reset

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Enter the bounding coordinates of the sample range

GEOGRAPHIC COORDINATES:

(Use option A or B below, then continue)

A. Manually input coordinates:

for South and West coordinates use the '-' sign, e.g., 90.5°W = -90.5; 30.5°S = -30.5

Northern edge

Western edge

Eastern edge

Southern edge

B. Rubberband selection coordinates

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Enter the bounding dates of the sampling events (if dates occur in batches, such as annual cruises, consider running a query for each cruise).

OBSERVATION DATES:

(data gathered between Jan. 1773 - present)

☐ Check if profiles taken in Months/Days for each years desired. (If unchecked, all profiles taken between (From) Year/Month/Day and (To) Year/Month/Day (inclusive) are desired). See [example](#)

	Year [YYYY]	Month [1-12]	Day [1-31]
From:	<input type="text" value="2016"/>	<input type="text" value="3"/>	<input type="text" value="28"/>
To:	<input type="text" value="2018"/>	<input type="text" value="2"/>	<input type="text" value="7"/>

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Select the variables you are interested in. If you are interested in more than one data type (eg, oxygen and/or pH), only check the boxes associated with those measurements in column 1 (not column 2).

Selection column 2 will only report data if BOTH measures are available in a given cast.

MEASURED VARIABLES:

Column 1: Select variables to include in the extracted file if available in a cast. If no variables are marked in Column 1, the extracted data file will contain all available variables (default).

Column 2: Select variables that must all be present in a cast. Any variable marked in Column 2 will be in the extracted file even if not marked in Column 1.

ALL 

1	2	Variable	WOD unit/scale	Datasets where variables are stored <i>More information about datasets, pdf (0.01 MB)</i>
<input type="checkbox"/>	<input type="checkbox"/>	Temperature	°C	OSD, CTD, MBT, XBT, SUR, APB, MRB, PFL, UOR, DRB, GLD
<input type="checkbox"/>	<input type="checkbox"/>	Salinity	unitless	OSD, CTD, SUR, APB, MRB, PFL, UOR, DRB, GLD
<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	Oxygen	μmol/kg	OSD, CTD, PFL, UOR, GLD, DRB
<input type="checkbox"/>	<input type="checkbox"/>	Phosphate	μmol/kg	OSD
<input type="checkbox"/>	<input type="checkbox"/>	Silicate	μmol/kg	OSD
<input type="checkbox"/>	<input type="checkbox"/>	Nitrate and Nitrate+Nitrite	μmol/kg	OSD, PFL
<input type="checkbox"/>	<input type="checkbox"/>	pH	unitless	OSD, SUR, PFL
<input type="checkbox"/>	<input type="checkbox"/>	Chlorophyll	μg/l	OSD, CTD, SUR, UOR
<input type="checkbox"/>	<input type="checkbox"/>	Plankton	multiple	OSD
<input type="checkbox"/>	<input type="checkbox"/>	Alkalinity	meq/l	OSD, SUR
<input type="checkbox"/>	<input type="checkbox"/>	Partial Pressure of Carbon Dioxide	atm	OSD, SUR

Click “Get an inventory” at the bottom of the screen.

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It is possible no data will exist for your query. The following page will be returned.

QUERY RESULTS:

There were no data found for your request.

Please return to [WODselect](#) query builder page if you would like to make another selection.

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If data exists, however, you will be able to download it. Click “DOWNLOAD DATA”.

Full (expanded) file size estimate (0.4 MB)

Gzipped file size estimate (95.5 KB)

NOTE: *the file size estimates are for the WOD native format*

Data extractions will take approximately 1 min.

DOWNLOAD DATA

If you encounter any problems, please contact: OCL.help@noaa.gov

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World Ocean Database will want some specifics about the form you would like the data in. Make your selections, enter your email, and click “EXTRACT DATA”.

DOWNLOAD DATA:

1. CHOOSE FORMAT

☐ WOD native ASCII format

Ocean Data View supports WOD native format

- [output example](#)

- [downloading and reading instructions](#)

☒ Comma Delimited Value (CSV) format

Ocean Data View does not support csv

format

- [output example](#)

- [downloading and reading instructions](#)

netCDF format

☐ single cast [*more info](#)

(available on observed levels only)

☐ ragged array [*more info](#)

☒ Data from each selected instrument in separate file

☐ Data from all selected instruments together

☒ Standard output [*CSV output definitions](#)

☐ 2007 Excel rows limit

☐ Older Excel rows limit

2. CHOOSE DEPTH LEVEL

☒ Observed level data [*definition](#)

☐ Standard level data [*definition](#)

3. CHOOSE FLAG TYPES

☐ IQuOD [*definition](#)

(flags, uncertainties, additional metadata)

☒ WOD flags [*definition](#)

4. CHOOSE XBT/MBT corrections *(not applicable for single cast netCDF format)*

No corrections



[Info on XBT bias corrections](#)

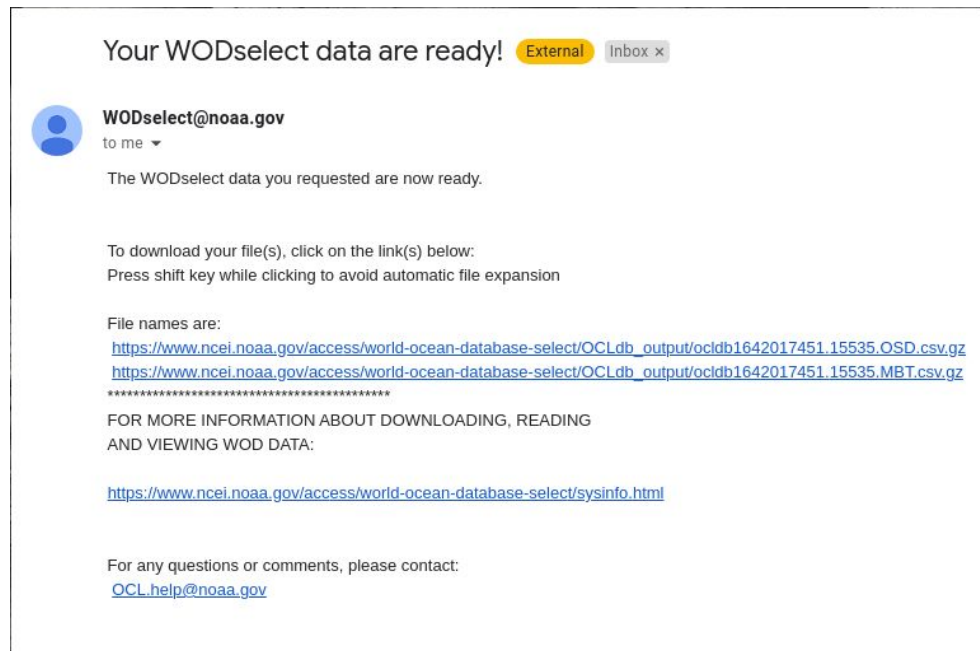
5. EXTRACT DATA

Enter your E-mail address

to

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You will receive an email from “WODselect” containing link(s) to the requested files. It may take a few moments for the email to be delivered.



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The downloaded and extracted file(s) contain all instrument casts that returned the variable of interest (such as CTD for temperature). Now you can identify measurements taken nearest to your coordinates and selected date. This is why, in some instances, more targeted queries may be more efficient.

Caveats

Just because you cannot find data for a set of coordinates within some date range does not mean similar data does not exist. Consider running queries for a broader geographic range and/or for previous years (or remove the dates entirely).

“Filling in” data in this way can be useful and informative, but always remember this process inherently introduces error. Keep this in mind when interpreting results.

If you try this guide, let us know!