Supplementing data with the World Ocean Database

Seascape Genomics of North Pacific Forage Fishes RCN Group

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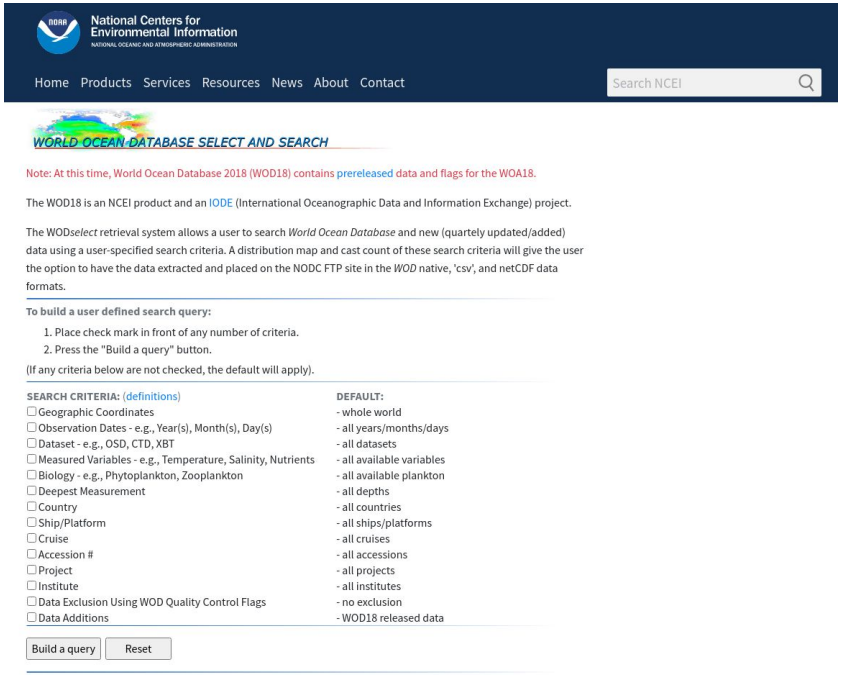
Data you have in hand

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

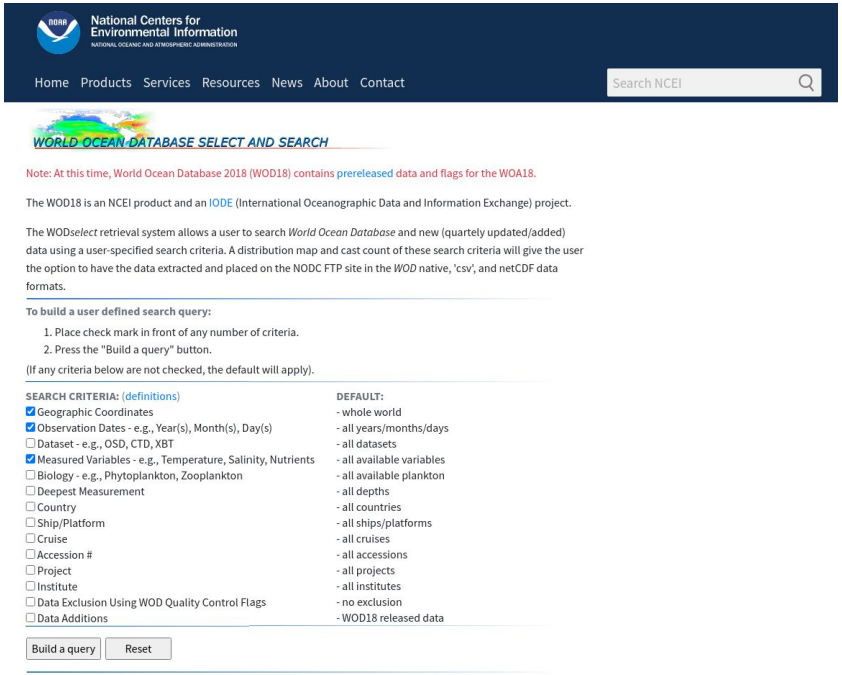
How to supplement dissolved oxygen data

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



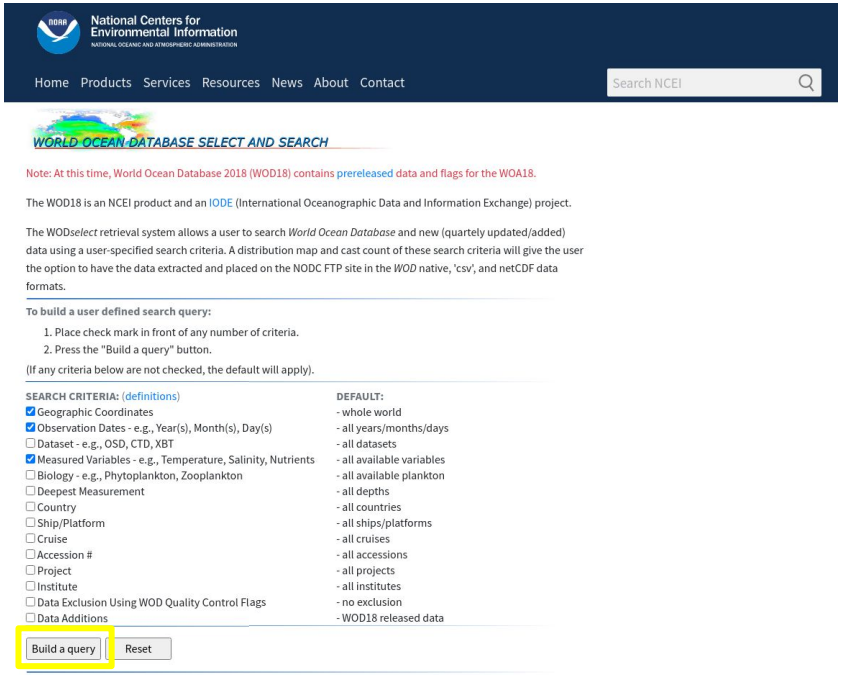
How to supplement dissolved oxygen data

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



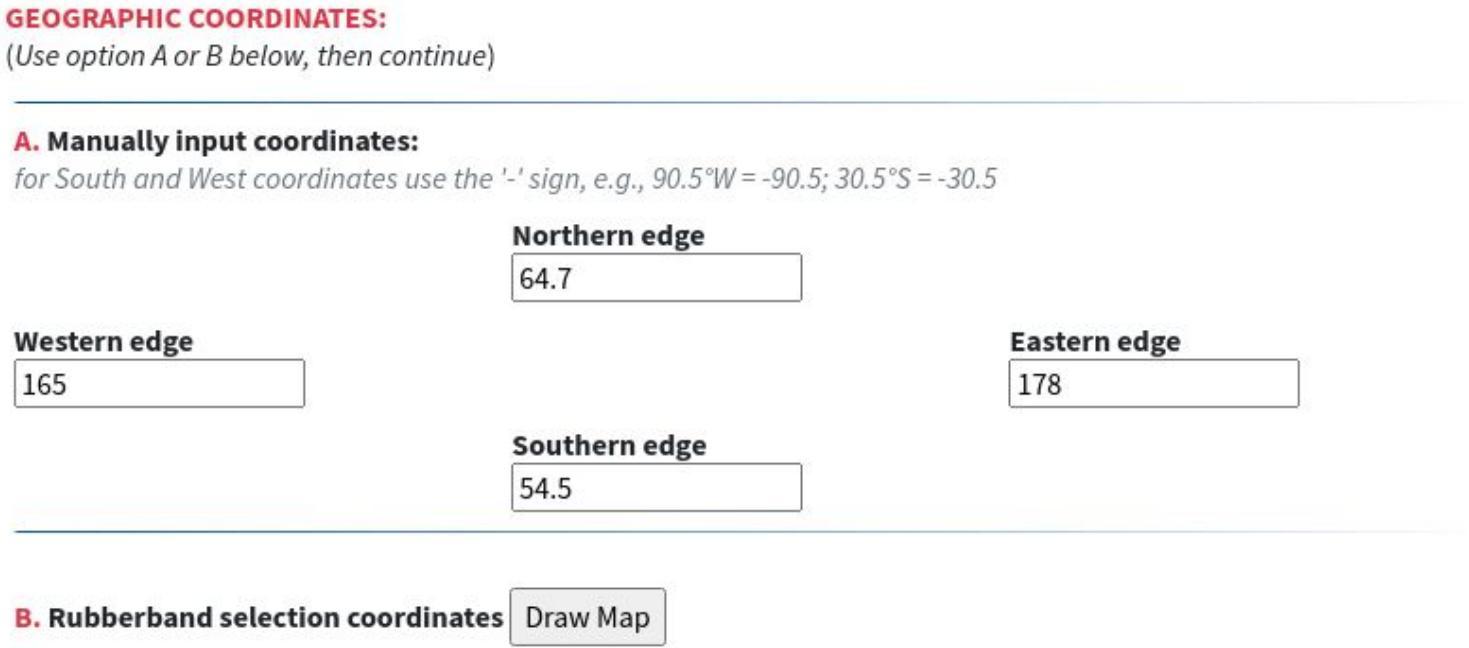
How to supplement dissolved oxygen data

Click “Build a query”



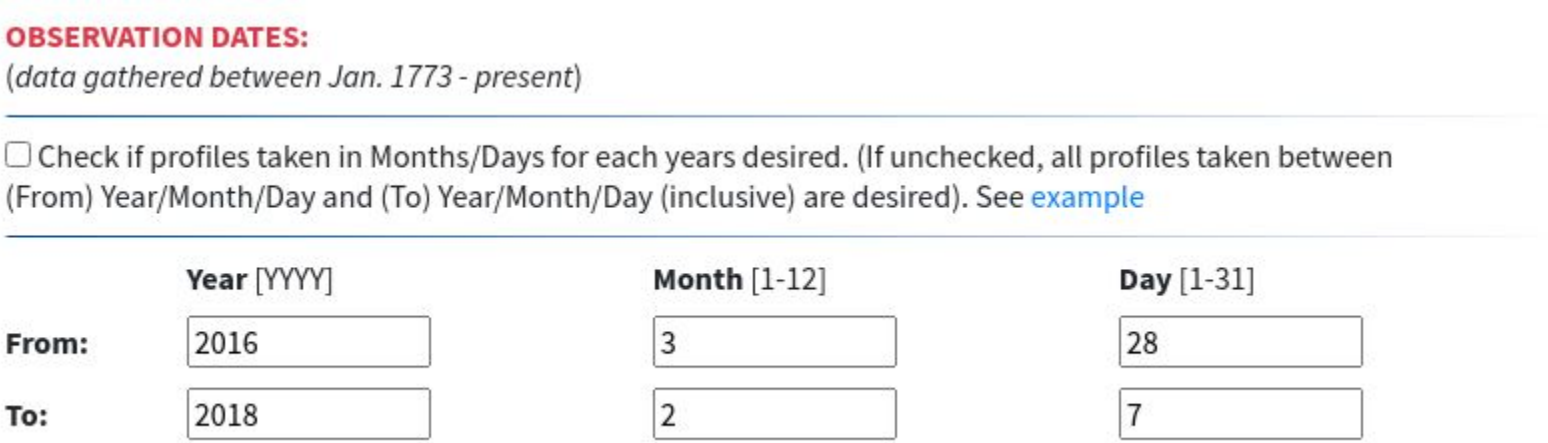
How to supplement dissolved oxygen data

Enter the bounding coordinates of the sample range



How to supplement dissolved oxygen data

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



How to supplement dissolved oxygen data

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.

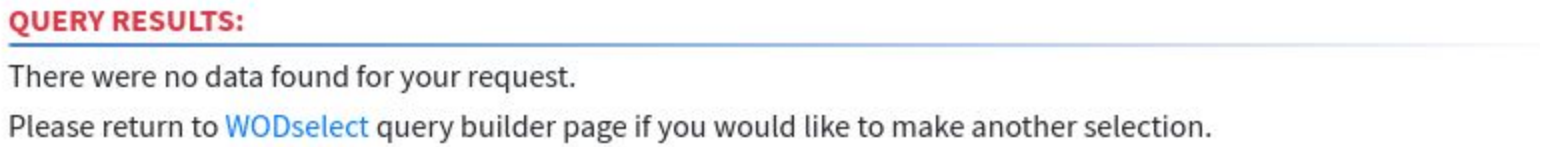
ALL ◉

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

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

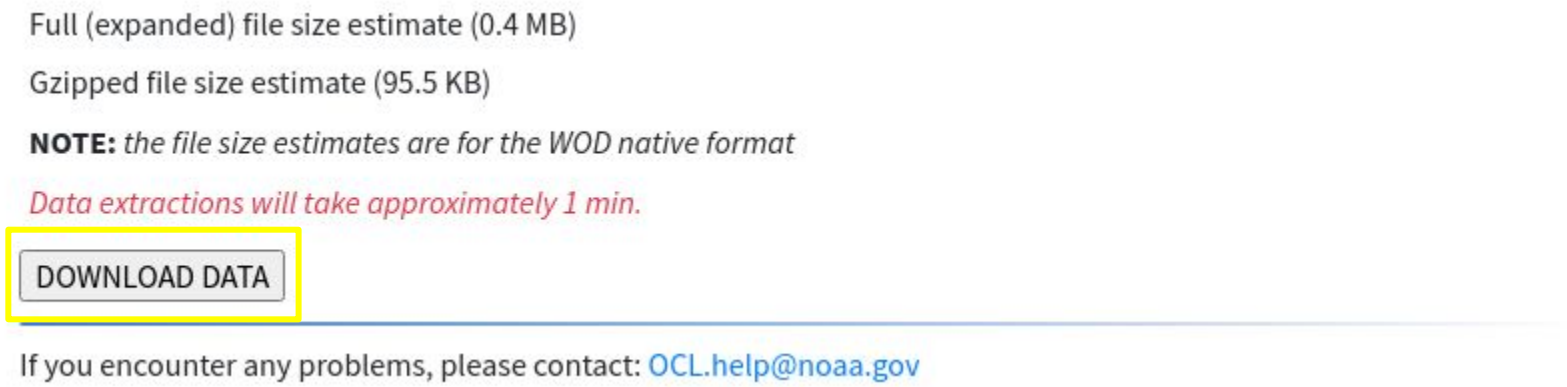
How to supplement dissolved oxygen data

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



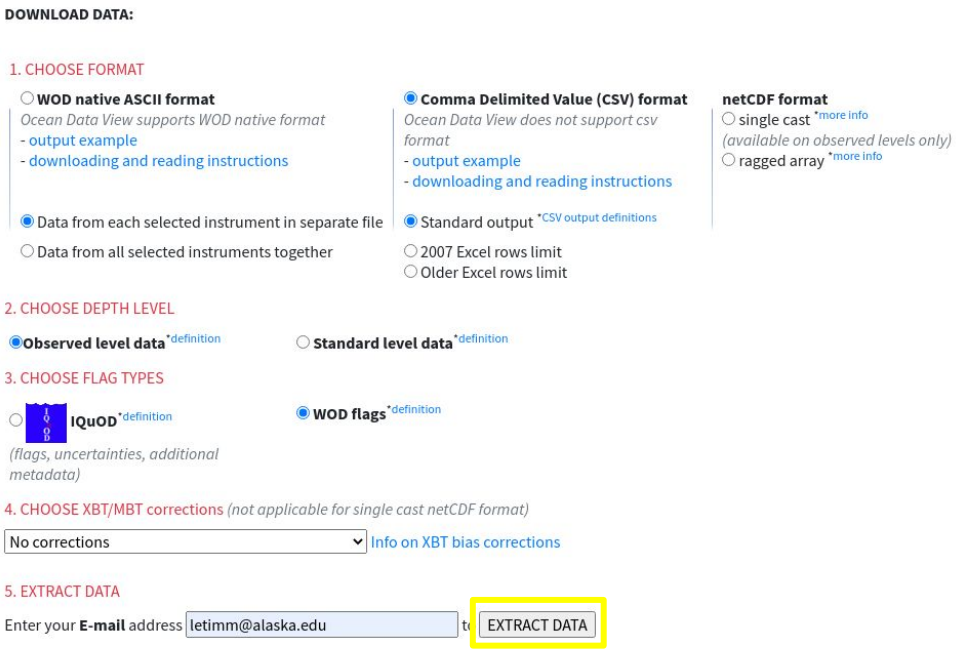
How to supplement dissolved oxygen data

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



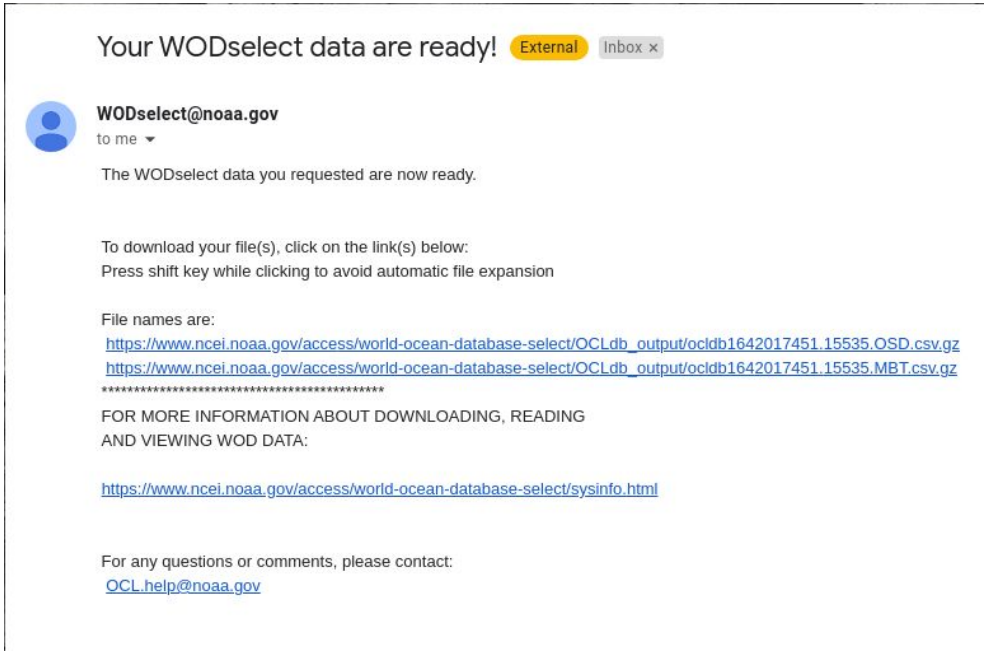
How to supplement dissolved oxygen data

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”.



How to supplement dissolved oxygen data

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



Your WODselect data are ready! External Inbox ×

WODselect@noaa.gov
to me

The WODselect data you requested are now ready.

To download your file(s), click on the link(s) below:
Press shift key while clicking to avoid automatic file expansion

File names are:
https://www.ncei.noaa.gov/access/world-ocean-database-select/OCLdb_output/ocldb1642017451.15535.OSD.csv.gz
https://www.ncei.noaa.gov/access/world-ocean-database-select/OCLdb_output/ocldb1642017451.15535.MBT.csv.gz
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FOR MORE INFORMATION ABOUT DOWNLOADING, READING
AND VIEWING WOD DATA:

https://www.ncei.noaa.gov/access/world-ocean-database-select/sysinfo.html

For any questions or comments, please contact:
OCL.help@noaa.gov

How to supplement dissolved oxygen data

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!