

Ichthyop-FVCOM User Guide using Data Portal

1. Website: <https://ichthyop.org/> [includes documentation, publications list, etc]
2. Download .jar file from: <https://github.com/uw-ssmc/ichthyop/tree/feature/fvcom-grid>. This is the branch we slightly edited, the official Ichthyop FVCOM branch is here: <https://github.com/ichthyop/ichthyop/tree/feature/fvcom-grid>. Follow instructions for how to download and compile the code in the README for either one.
3. Jdk/java is required for the .jar file to run. Download here: <https://www.oracle.com/java/technologies/downloads/>
4. To run the simulation, you need a hydrodynamic nc file. All files are now available at the Salish Sea Modeling Center data portal: <https://ssmc-uw.org/data-portal/>. Pick your year of interest and then use the HYD solutions. The number in the filename corresponds to the day of the year. You need to download each day you want Ichthyop to run.
5. You need a configuration file to run the Ichthyop program with your desired specifications. A sample FVCOM compatible configuration file is found here: <https://github.com/uw-ssmc/ichthyop/tree/feature/fvcom-grid/src/test/resources/fvcom> titled "test-fvcom.xml". Open that with your Ichthyop program and modify as desired.
6. A sample release zone file is also in <https://github.com/uw-ssmc/ichthyop/tree/feature/fvcom-grid/src/test/resources/fvcom> titled "one_zone.xml". For FVCOM using the Salish Sea Model solutions, the zones need to be in the projected coordinates for the UTM 10N zone.
7. After you run the simulation, you can look at the output nc file in panoply: <https://www.giss.nasa.gov/tools/panoply/download/>. Jdk/java is also required on the computer for this program to run.
8. Python scripts to analyze the Ichthyop outputs are here: <https://github.com/ichthyop/ichthyop-python>. Note you may wish to project the coordinates back to lat/lon, as Ichthyop-FVCOM solutions output in the UTM 10N projection. A repo specifically for fvcom postprocessing is here: <https://github.com/uw-ssmc/ichthyop-fvcom-postprocessing>. There are also scripts in r that also have not been modified for projected coordinates: <https://github.com/ichthyop/ichthyop-r>