Unlocking the power of data and online analytics for oil spill prevention and operational decision making

NATIONAL ENERGY TECHNOLOGY LABORATORY
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Jennifer Bauer[1], Patrick Wingo[1,2], Lucy Romeo[1,2], Aaron Barkhurst[1,3], Kelly Rose[1], Rodrigo Duran[1,4], Jake Nelson[1,5], and Amoret Bunn[6]

[1]National Energy Technology Laboratory; [2]AECOM; [3]MATRIC; [4]Thessis, [5]ORISE; [6]Pacific Northwest National Laboratory

Background

Researchers at National Energy Technology Laboratory and Pacific Northwest National Laboratory, working with the Bureau of Safety and Environmental Enforcement, have developed a **Common Operating Platform**, or **COP**, to host an integrated suite of online, spatio-temporal data and tools to synthesize information for offshore spill prevention and operational decision making.

The **Offshore COP** integrates socio-economic, environmental, and metocean data, along three tools from NETL's Offshore Risk Modeling (ORM) suite (BLOSOM, CSIL, and SWIM) to **model potential spills, assess potential impacts and rank and compare various scenarios**.

Offshore Common Operating Platform (COP)

An integrated suite of online, spatio-temporal data, tools, and models for rapid offshore spill prevention and operational decision making insights

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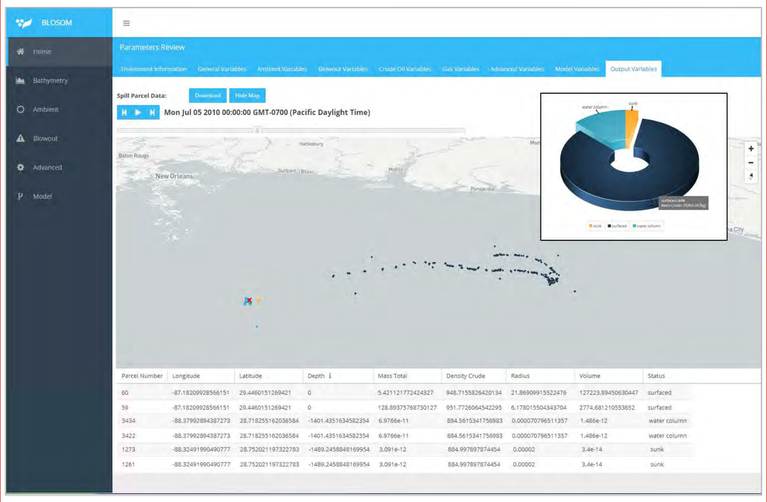
Why use a COP?

- **Wide spread use** - online access to data and tools,
- **Improved processing power** - reduce strain on personal computers & saves disk space,
- **Role-based security** – restrict access to data, tools, and analytical results,
- Access a **wide-range of data** from various sources,
- **Enduring access** to fully executable tools & models,
- **Download and save** outputs,
- **Enhanced data interaction and visualization** - customizable user interface & robust capabilities,
- **Prevent 'stale' data & analytics** - use services to ensure data & tools remains up-to-date & supports rapid, real-time analytics.

BLOSOM

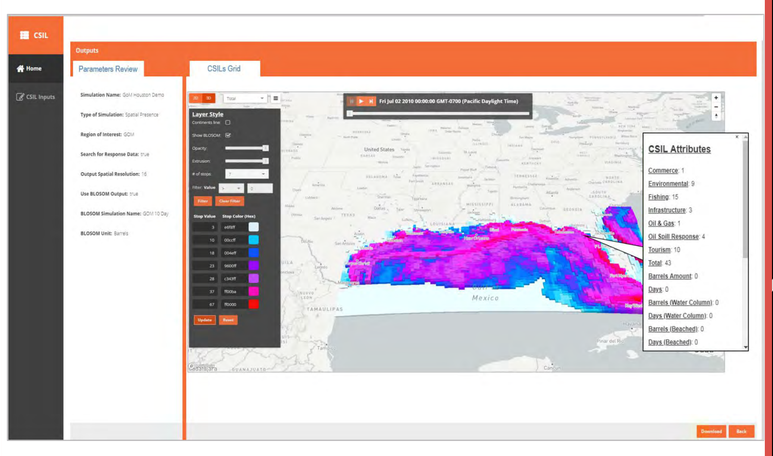
(Blowout and Spill Occurrence Model)



A open-source 4D fate and transport model for simulating blowouts, surface, and other spill types.

CSIL

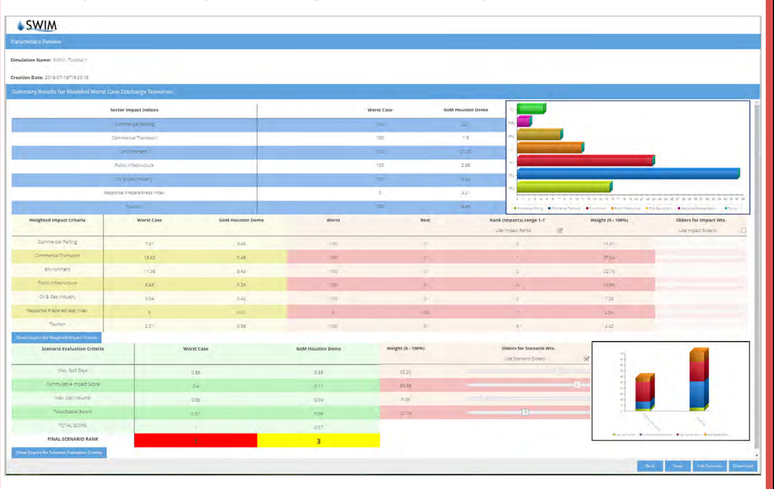
(Cumulative Spatial Impacts Layers)



A spatio-temporal tool that rapidly quantifies and qualifies potential impacts for a range of socio-economic, environmental, and preparedness variables.

SWIM

(Spatially Weighted Impact Model)



A decision support tool that uses spatial and attribute relationships and user-determined weights to compare, evaluate, and rank different scenarios.

Future Development:

Additional data for all **U.S. offshore waters** and **infrastructure life span** and **integrity**, as well as **additional tools from the ORM**, including the **Subsurface Trend Analysis** and **Variable Grid Method**, are being added to the Offshore COP. These enhancements will enable users to preform analyses within the Offshore COP that will help:

U.S. DEPARTMENT OF ENERGY

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For more information on NETL's Offshore portfolio, data, and tools visit:
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POC: Jennifer Bauer, jennifer.bauer@netl.doe.gov