



## Services for Oil and Gas Industry



ASA develops and uses computer models and simulations for solutions related to marine, freshwater, and terrestrial environments. Our area of expertise may be narrowly focused but our scope of services is broad, reflecting decades of experience addressing environmental and engineering challenges by simulating physical, chemical, and biological processes. We assess actual events and predict possible alternatives to address water quality, circulation, and pollutant transport questions throughout the world.

### Solutions for:

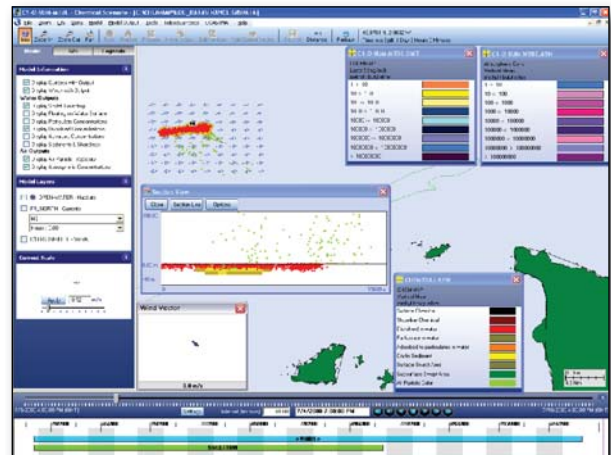
#### Contingency Planning

ASA uses historical wind and current conditions to perform hypothetical oil spill simulations for selected spill incidents. The results help us determine most likely spill paths on a monthly, seasonal, or annual basis. The computer model provides maps showing probabilities of most likely spill paths and most likely shoreline impact. This allows oil spill contingency planners to develop response plans for typical spills in any region of the world. Many international oil companies have used this technology to successfully obtain permit application for exploration and drilling activities.



#### Risk Assessment

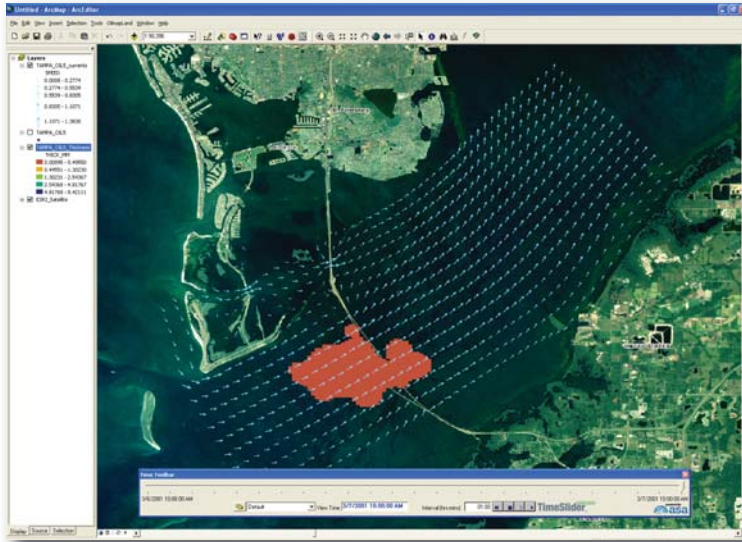
By analyzing the most likely potential sources of spills by studying shipping routes and pipeline paths, ASA provides detailed reports on likely spill events and their potential impacts. By performing reverse trajectory calculations from sensitive sites such as water intakes or fragile wetlands, we can identify probable release locations of spills and principal avenues of vulnerability for these important resources. Results can be used to determine the probability of oiling sensitive resources.





## Integrated Regional Contingency Plans

The open architecture GIS data management system is an ideal framework to store local, regional, and national contingency plans. As the system may contain links to photographs, videos, text etc., contingency plans may be provided in electronic format by Port Authorities and local agencies and linked to areas on the map. The user may select regions and search the contingency plan for information related to the region. ASA has considerable experience in integrating these plans for clients around the world.



## Integrated Surveillance Data

Integrate Surveillance data OILMAP provides the ability so that the user may instantaneously modify the spill trajectories based on overflight information by adding GIS polygons that represent oil observations. This may also be implemented by importing observations based on remote-sensed data or GPS locations. As the GIS supports a variety of import/export functions, data from surveillance equipment should be supported with relative ease.

Industry clients include:

ExxonMobil



ASA has built a wide range of computer modeling applications to solve environmental problems and oil and gas industry challenges. Our computer tools are combined with over 25 years of service experience with issues including: water quality management, biological assessment, and oil and hazardous materials modeling.

ASA's family of environmental modeling tools are available for licensed use and customization and include: AIRMAP, CHEMMAP, COASTMAP, HYDROMAP, OILMAP, SARMAP, SIMAP, MUDMAP and WQMAP.

ASA's clients include international governments, universities, research institutes and major oil companies. ASA has a proven track record in providing high quality scientific support services to these clients in support of their global operations.

For more information visit our web site at [www.asascience.com](http://www.asascience.com).



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