MAKING
COMPLEX
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CHEMMAP

Chemical Spill Transport & Fate Modeling Software

RELEASE NOTES
VERSION: 7.2.0

rps

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RPS PROMISES ABSOLUTE DELIVERY:

Prepared by:

RPS Ocean Science

55 Village Square Drive
South Kingstown RI 02879, USA

T +1 401 789 6224
E MapSupport@rpsgroup.com

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1 INTRODUCTION

The first version of CHEMMAP was delivered over 20 years ago and is now used globally by major companies and international governments. It has been used successfully to support spill response, planning, and permitting in over 100 countries. The scientists and researchers at RPS have incorporated lessons learned and new technologies into CHEMMAP version 7.2.0.

Version 7.2.0 of CHEMMAP includes enhancements and added features to help improve spill response, drill exercises, impact risk assessments, and contingency planning. Enhancements were made to both the model and the user interface. This document describes the various new features and bug fixes included in CHEMMAP v7.2.0.

1.1 Operating System Compatibility

Version 7 (and newer) of the RPS MAP applications, OILMAP, SARMAP, and CHEMMAP, are supported on the following Microsoft Windows platforms: Windows 10, 8, 7, Windows Server 2012 and 2016, as well as cloud computing platforms including Microsoft Azure and Amazon Web Services.

1.2 CHEMMAP v7.2 Modules

Surface module	Simulate the behavior of surface chemical spills released on the water surface.
Subsurface module	Simulate chemical releases occurring below the water surface.
Stochastic module	Calculate the probabilistic distribution of chemicals in water and on shore.
Airmap module	Calculate the atmospheric dispersion of the lighter chemical fractions from a spill.
Biological Exposure & Effects module	Calculate area exposed above toxicological threshold and the dose aquatic biota are exposed to

2 CHEMMAP V7.2 USER INTERFACE UPDATES

2.1 Resolved Interface Bugs

The following bugs have been reported, logged, and **fixed**:

1. Sorting by Modified Date when Opening Scenarios now lists the time of day, along with the date, when the scenario was last saved.

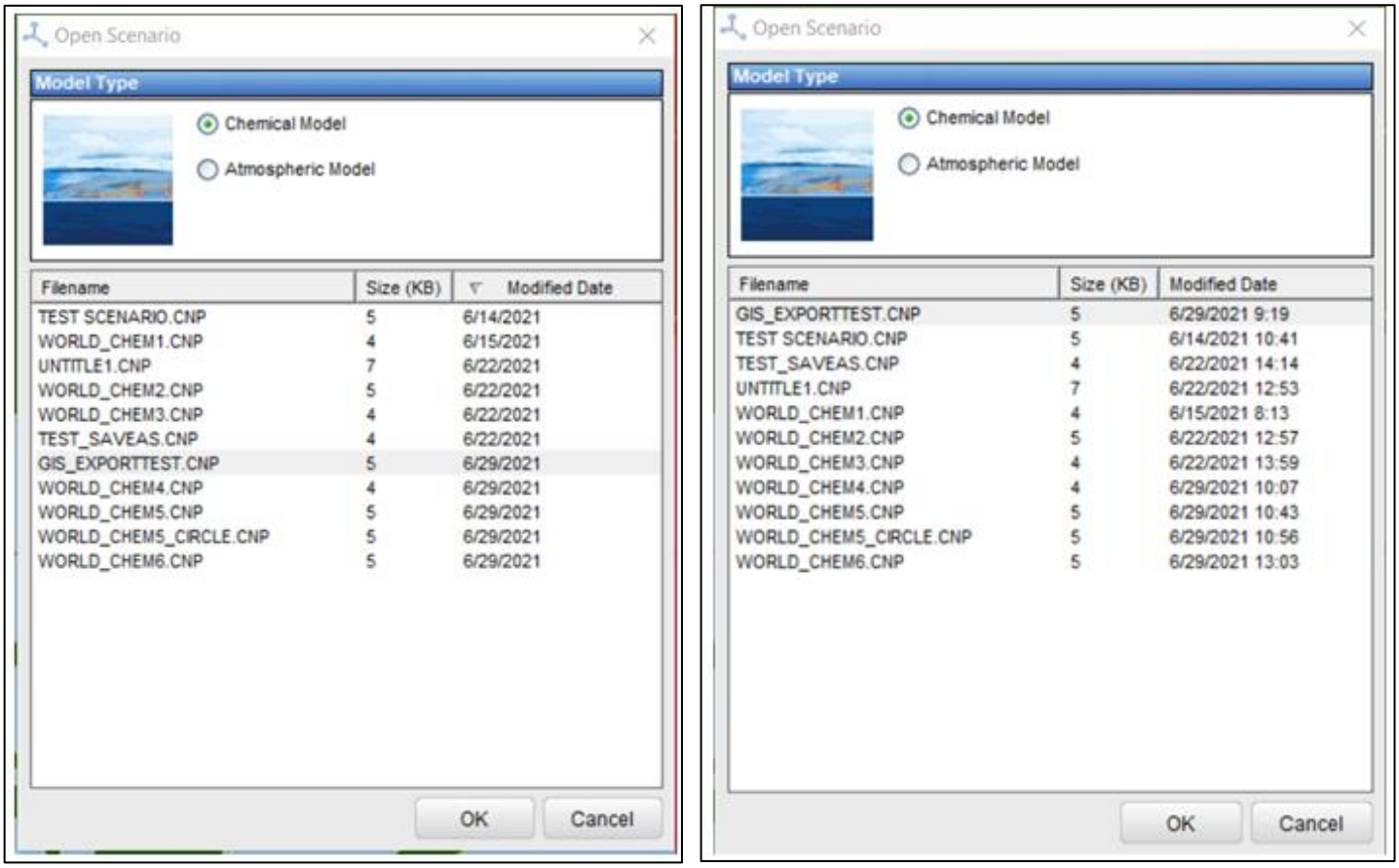

Figure 1. Time labels fixed on sorting by date when opening scenarios.

2. Fixed crashing when exporting Average Exposure Concentrations of particulate, dissolved, and adsorbed concentrations.
3. When visualizing the time when peak averages occur, the default legend settings result in an unfilled box surrounding the spill area. Manually adusting the key to have a minimum time >0 (in the below case, 0.1) fixes the issue and the box disappears. In addition, the initial division values default to 10 hours despite the scenario being longer. We changed the legends to default to 0.1 -> simulation length in hours. *If a legend already exists (in the keys folder) it will not get overwritten, you'll have to delete them ahead of time.*

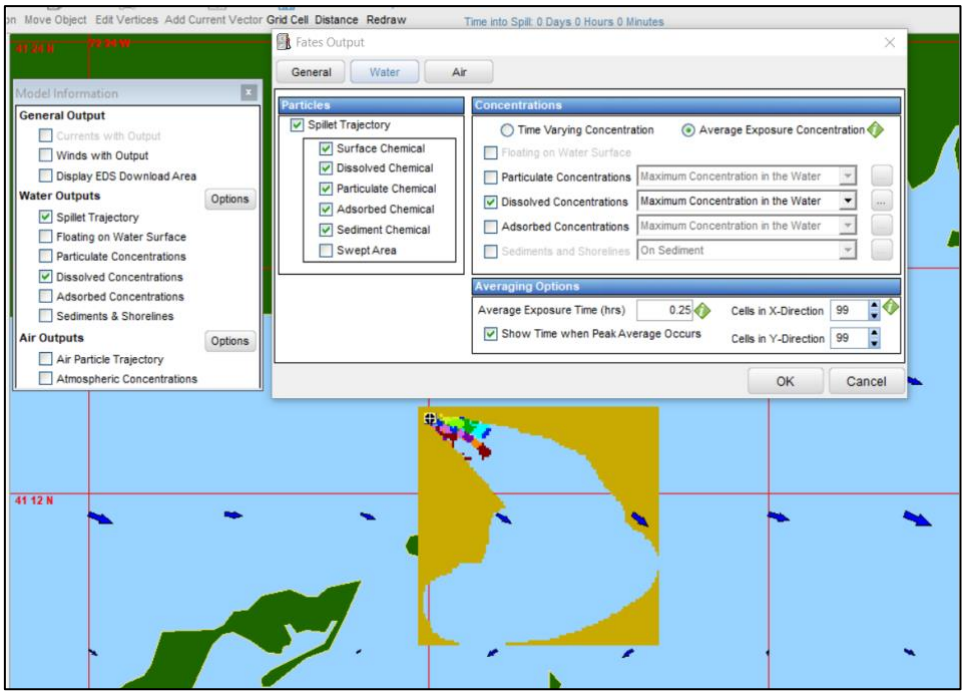

Figure 2. Fixed legend of Time when Peak Average Occurs.

4. Fixed error that greys out time varying values when exporting SHP or KML files. Options would grey out if you chose Average Exposure Concentrations on specific outputs.
5. Fixed “Division by zero” error when exporting Atmospheric Concentration – Average Exposure concentrations.
6. Fixed “Subscript out of range” when calculating Average Exposure Concentrations – Avergaing options. This error happened at any cell number above 99 cells. 800 x 800 cells is now the max grid that can be used.

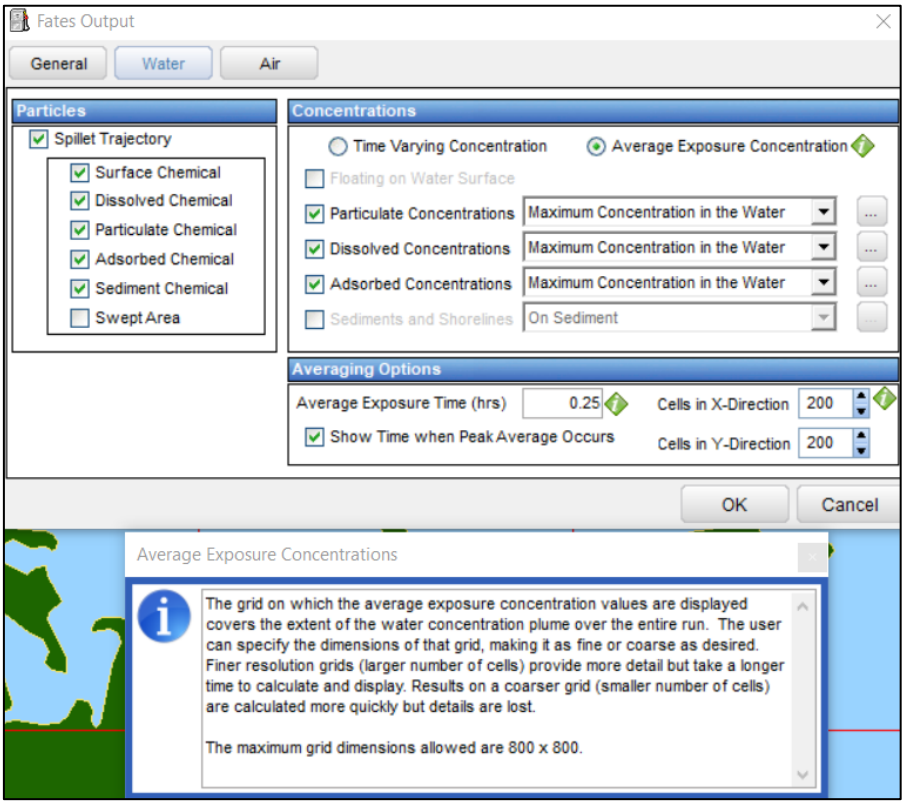

Figure 3. Fixed maximum grid dimensions when calculationg average exposure concentrations.

7. Fixed inability to increase cell numbers using arrows in above form (Average Exposure Concentrations options).
8. Fixed 'Model Type' error when running only the atmospheric model.

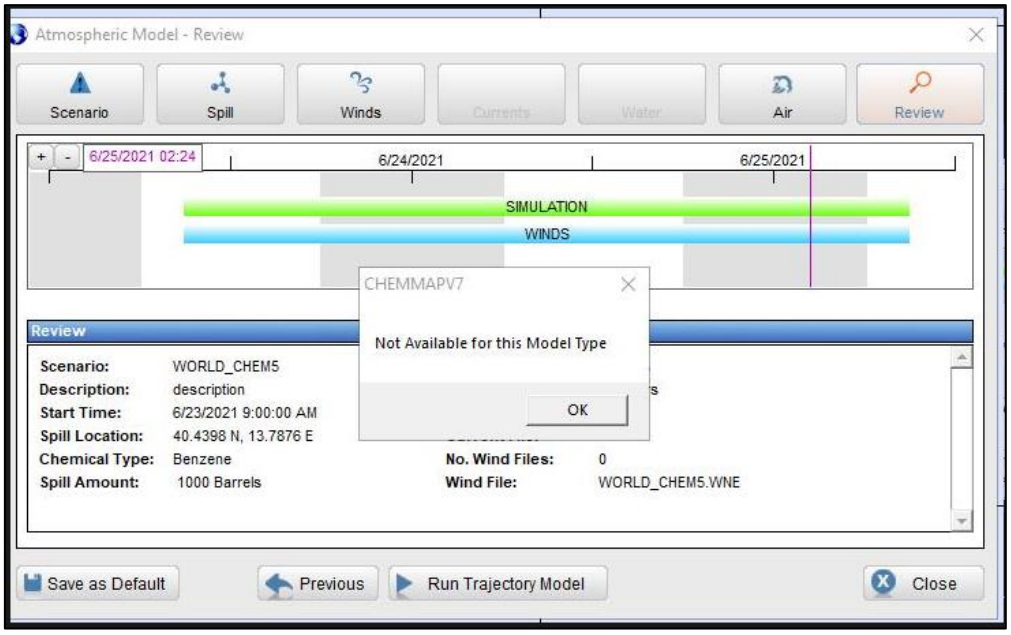

Figure 4. Fixed error when running only the atmospheric model.

9. Fixed model form panel disappearing when selecting to not overwrite an existing scenario
10. Fixed incorrect messaging when moving vertices of a GIS object / polygon.
11. Fixed incorrect EDS download AOI size when reopening a case that previously used EDS download.
12. Fixed "Overflow error when selecting chemical within region

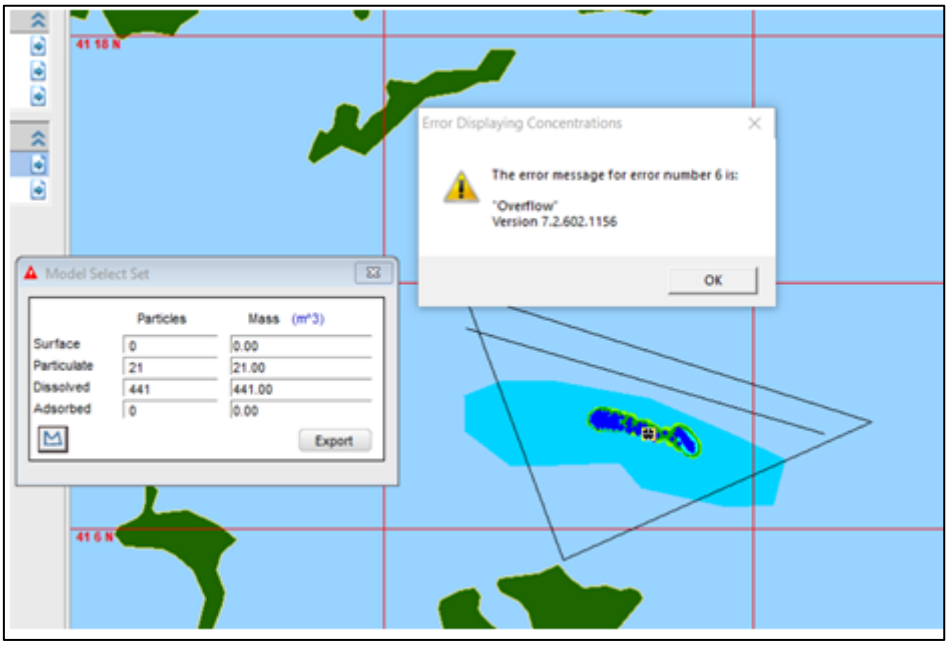

Figure 5. Overflow message now fixed when selected chemical within region.

13. Made date format in SHP file consistent with other Map Apps - YYYY/MM/DD HH:MM

2.2 Interface Updates and Enhancements

The following enhancements and updats have been **added**:

1. Additions to ‘Help’ dropdown
    a. Terms of Use
    b. License administrator link
    c. Contact RPS – email to MapSupport@rpsgroup.com
    d. Maintenance website link
2. Created an option to Create Microsoft PowerPoint report. You can find this under the Model Output dropdown.

3 CHEMMAP V7.2 MODEL UPDATES

3.1 Model Computational Improvements

1. Chemodel is now 64-bit compatible. Improving the model speeds of the simulations.

4 MODELING INPUT GUIDELINES

1. Time step guidelines: no more than 30 minutes for offshore and coastal releases, less for rivers and harbors. Hourly time steps are not recommended, as results can be misleading.
2. Due to the improvements of CHEMMAP's model, it is recommended that users enter a large enough amount of Lagrangian particles/spillets (in the Parameters Tab). Number of particles should be on the order of 1,000 and more (compared to previous versions of CHEMMAP). *Less than 1,000 particles should not be used.*