AERMOD MPI™ Version 12060

AERMAP MPI™ Version 11103

Getting Started

1. About AERMOD MPI & AERMAP MPI (8-Core)

AERMOD MPI is Lakes Environmental parallel version of the AERMOD model. **AERMOD MPI Version 12060** is the parallel version for the US EPA AERMOD model dated 12060 released by the US EPA on March 2, 2012.

AERMAP MPI is Lakes Environmental parallel version of the AERMAP model. **AERMAP MPI Version 11103** is the parallel version for the US EPA AERMAP model dated 11103 released by the US EPA on April 13, 2011.

AERMOD MPI and **AERMAP MPI** are limited to a maximum of 8-cores.

2. Running AERMOD MPI in AERMOD View

Once **AERMOD View** and **MPICH2** are installed in your computer, you will have access to the AERMOD MPI executable through the **Preferences** dialog in AERMOD View. The AERMOD MPI executable can be specified in the same way that you would specify any other AERMOD executable. See steps below:

Step 1: Open the **Preferences** dialog by clicking **File | Preferences** from the menu.



a	ERMOD View 7.6	.0 - Mode	I: AERMO	OD - [0	:\Lake:	s\AEF
File	Model View	Import	Export	Data	Run	Out
	New Project					
	Open Project					
	Close Project					
	Save Project					
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	Backup					•
	Import					•
	Project Repair					
	Reports					
	Print					
	Print to PDF					
<u> </u>	Preferences					
_	Deactivate Web	License			_	
	Exit					

- **Step 2:** In the **Preferences** dialog, select **EPA Models/Limits | AERMOD**.
- Step 3: Make sure the **Default** radio button is selected, and select AERMOD_MPI_LAKES_12060.EXE from the drop-down list.

Preferences			x
Settings • General • Appearance • Download Settings • EPA Models/Limits • AERMOD	AERMOD Execut C Default AERMOD_MPLI # MPI Processe Storage Limits	able C User-Specified	•
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	Tip Lakes model.	Environmental uses original U.S. EPA models as the default selected Users can also specify any external model executables as desired.	
		<u>Cancel</u> <u>O</u> K	K

Note: The executable name, **AERMOD_MPI_LAKES.EXE**, will always correspond to the most recent version of the AERMOD MPI version, in this case, version 12060.



Step 4: You can select to run the AERMOD MPI with a reduced number of cores/processes. This option is available when you specify an AERMOD MPI Executable. The # MPI Processes list box will automatically detect how many processors you have in your computer and select this option as the default. Click the OK button to save the changes and close the Preferences dialog.

Preferences		
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Appearance Download Settings	AERMOD_MPLLAKES_12060.EXE	_
EPA Models/Limits	# MPI Processes. 4	
···· · · · · · · · · · · · · · · · · ·	Storage Limits	
····· + ISCST3 ····· + ISC-PRIME	Neme 2 Description	Limit
* BRIP	NREC No. of Receptors	<unlimited></unlimited>
🏶 Model Input Files	NSRC No. of Sources	<unlimited></unlimited>

Step 5: AERMOD View will automatically recognize the selected AERMOD MPI executable and the selected number of processes next time you try to run the AERMOD model.



Project Status [AERMO]	AERMOD_MPI_LAK	ES_12060.EXE (#MPI: 4 of 4)]		x	
Input File: TUTORIAL.)	ADI	Output File: TUTORIAL.ADO			
Control Source Rece	ptor <u>M</u> eteorological <u>C</u>	<u>D</u> utput			
Dispension Options:	DEFAULT				
Output Types:	CONC				
Urban Dispersion Op	tion: NO				
Plume Depletion:		Output Warnings:	NO		
Polutant:	SO2	Optional Files:		_	
Averaging Time:	1 3 24 ANNUAL	EVENT Input File:	NO		
Exponential Decay:	NO	Re-Start File:	NO		
Terrain Height:	ELEVATED	Error Listing File	NO		
		Nodel Debug File:	NO		
Flagpole Receptors:	NO (0.0 m)	Net Profile Debug Fi	ile: NO		
Run BPIP prior to AERMOD					
Project is Complete You Can PIIN Now					
			4		
<u>Н</u> ер	Preferences	Details Verify Run	▶ <u>B</u> un	<u>C</u> lose	

3. Running AERMAP MPI

Once **AERMOD View** and **MPICH2** are installed in your computer, you will have access to the AERMAP MPI executable through the **Preferences** dialog in AERMOD View. The AERMAP MPI executable can be specified in the same way that you would specify any other AERMAP executable. See steps below:

- **Step 1:** Open the **Preferences** dialog by clicking **File | Preferences** from the menu.
- **Step 2:** In the **Preferences** dialog, select **EPA Models/Limits | AERMAP**.
- **Step 3:** Make sure the **Default** radio button is selected, and select **AERMAP_MPI_LAKES.EXE** from the drop-down list.



Preferences			- • ×
Settings Settings Appearance Download Settings World Map Settings EPA Models/Limits CENTRE	AERMAP Execut © Default AERMAP_MPL # MPI Processe Storage Limits -	table O User-Specific LAKES.EXE es: 4	<u>_</u>
AFRIADI)	Parameter Name	Description	Storage 🔺
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Printing Page Layout		No. of X - Coord. Values No. of Y - Coord. Values	<unlimited></unlimited>
		No. of DEM Terrain Data Files No. of Nodes per profile in a DEM file No. of Profiles per a DEM file	<unlimited> <unlimited> <unlimited> <unlimited></unlimited></unlimited></unlimited></unlimited>
Lavers Default Settings Contaut Palette Contours Terrain Contours	Tip Lakes	Environmental uses original U.S. EPA models as the default (selected s desired.
		<u>C</u> an	

- **Note:** The executable name, **AERMAP_MPI_LAKES.EXE**, will always correspond to the most recent version of the AERMAP MPI version, in this case, version 11103.
- Step 4: You can select to run the AERMAP MPI with a reduced number of cores/processes. This option is available when you specify an AERMAP MPI Executable. The # MPI Processes list box will automatically detect how many processors you have in your computer and select this option as the default. Click the OK button to save the changes and close the Preferences dialog.

-	AERMAP Executable		
Default O User-Specified		C User-Specified	
	AERMAP_MPI_LAKES.E	XE	-
	# MPI Processes: 4	v	



Step 5: AERMOD View will automatically recognize the selected AERMAP MPI executable and the selected number of processes next time you try to run the AERMAP model within the **Terrain Processor** window.



4. Running AERMOD MPI in Batcher

- **Step 1:** Start **Batcher** either from within AERMOD View (**Run | Batcher** menu option) or from the Windows Start menu.
- **Step 2:** The AERMOD Batcher is displayed. You can select the AERMOD MPI Executable (e.g., AERMOD_MPI_Lakes_12060.exe) from the drop-down list box or by pressing the _____ button.
- **Step 3:** Specify the number of **MPI Processes** to be used and then you are ready to specify your **AERMOD input files** and press the **Run** button to start processing.

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AERMOD Runs ISCST3 Runs ISC-PRIME Runs Run Options					
AERMOD EXE: C\Program Files (x86)\Lakes\AERMOD View\Models\AERMOD_MP_LAKES_12060 EXE 🔹 # MPI Processes: 4 🔹 Add Input Files					
Run Input File A Status Output File A Project Path Duration	RL				
1 TulurialADI - TulurialADO CXLakes/AERMOD View/Tuluriah					



5. Activating AERMOD MPI License in a 2nd Computer

With each AERMOD View single seat license, **you receive an additional Web License activation for the AERMOD MPI Executable** only. This way, you can install AERMOD View in your computer and in a separate computer; **activate the AERMOD MPI Web License**, and run AERMOD MPI executable using the **Batcher** program in the second computer.

Note: Please note that the **AERMOD View license can only be activated in one computer**. The second activation for the **AERMOD MPI** is to allow you to run projects that will take many hours/days to run using **Batcher** and the **AERMOD MPI** executable. This will allow you to work with the AERMOD View interface for your other smaller projects.

How to Activate your Second AERMOD MPI License:

Step 1: From Batcher, select the menu option File | License Admin – AERMOD MPI.

Æ AI	ERMOD Batcher 7.6.0 [C:\Lakes\AERMOD View\Tutori
File	Tools Help
	New
	Open
	Save
	Save As
	License Admin - AERMOD MPI
- Name	Exit

Step 2: The **License Admin** dialog is displayed. Press the **Activate Web License** button.



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	Web License	
	Version #: 7.6.)	
	Activate Web License	
	Deactivate Web License	
	Test Web License	
Ţip —	The Icense for AERMOD MPI requires that you are connected to the internet to activate/deactivate the Web License.	
	Close	

Step 3: The **Web License Administration** dialog is displayed. Specify the **Serial #** and **Activation Key** for **AERMOD MPI** you received by email and press the **Activate** button.





Step 4: A message is displayed stating that the license was successfully activated. Press **OK** and then close the **License Admin** dialog.



Note: You do not have to activate the AERMOD MPI license in the computer that you already have AERMOD View License activated (HASP Key or Web License). The **AERMOD MPI License** is a second activation for another server/computer to run the **AERMOD MPI** executable using **Batcher**.



6. Important Notes

- The AERMOD MPI is a multi-core capable model that is built to utilize the complete set of computing resources to gain maximum performance. Such resource utilization is very rigorous on the system components because it uses the electronic components to the fullest. It is always advisable, when running Lakes Environmental AERMOD MPI, to have proper cooling system for your computer. You can also choose to run AERMOD MPI using a smaller number of cores to prevent overheating.
- Please note that the AERMOD View license can only be activated in one computer. The second activation for the AERMOD MPI is to allow you to run projects that will take many hours/days to run using Batcher and the AERMOD MPI executable. This will allow you to work with the AERMOD View interface for your other smaller projects.
- **3.** Depending on your operating system and security settings, when running AERMOD MPI within AERMOD View you may be prompted to unblock **MPICH2**, please select **Unblock**.

🔐 Wind	ows Security Alert	8				
۲	Windows Firewall	has blocked some features of this program				
Window unblock risks of i	Windows Firewall has blocked this program from accepting incoming network connections. If you unblock this program, it will be unblocked on all public networks that you connect to. What are the risks of unblocking a program?					
	Name:	Process launcher for MPICH2 applications				
	Publisher:	Argonne National Lab				
	Path:	C:\program files\mpich2\bin\mpiexec.exe				
	Network location:	Public network				
		What are network locations?				
		Keep blocking 💮 Unblock				

