# **lake\_climate\_change.zip Contents**

## File Types and Descriptions

|  |  |  |  |
| --- | --- | --- | --- |
| **Name** | **Entity Type** | **Externally Defined Format** | **Description** |
| glm2.nml | text/x-rsrc | application/GLM | File to configure lake characteristics, meteorological driver data, and physical response variables for General Lake Model (GLM). Save as .nml to run. Located within lake\_climate\_change.zip folder |
| R\_Script.R | text/x-rsrc | application/R | Script that outlines the Activity A, B, and C steps that students complete as part of the module. Located within lake\_climate\_change.zip folder |
| field\_data.csv |  |  | Observational field data for Awesome Lake’s water temperatures. Located within lake\_climate\_change.zip folder |
| met\_hourly.csv |  |  | Meteorological driver data for Awesome Lake used in the General Lake Model (GLM). Located within lake\_climate\_change.zip folder |
| met\_hourly\_plus2.csv |  |  | Meteorological driver data used in the General Lake Model (GLM) for a year-round +2°C climate scenario for Awesome Lake. Located within lake\_climate\_change.zip folder |
| met\_hourly\_plus4.csv |  |  | Meteorological driver data used in the General Lake Model (GLM) for a year-round +4°C climate scenario for Awesome Lake. Located within lake\_climate\_change.zip folder |
| met\_hourly\_plus6.csv |  |  | Meteorological driver data used in the General Lake Model (GLM) for a year-round +6°C climate scenario for Awesome Lake. Located within lake\_climate\_change.zip folder |
| **Name** | **Entity Type** | **Externally Defined Format** | **Description** |
| MyExpRoot folder |  |  |  |
| glm2.nml |  | application/GLM | File to configure lake characteristics, meteorological driver data, and physical response variables for General Lake Model (GLM). Save as .nml to run. |
| job\_desc.json |  |  | JavaScript Object Notation file that specifies the range of GLM model scenarios to run through the GRAPLEr package |
| met\_hourly.csv |  |  | Meteorological driver data used in the General Lake Model (GLM). |

## Data Table Structure

**field\_data.csv**

|  |  |  |  |
| --- | --- | --- | --- |
| Column name | Description | Unit or  code explanation or date format | Empty value code |
| DateTime | Date and time of sampling | YYYY-MM-DD HH:MM:SS |  |
| Depth | Water depth where the sensor reading was measured | meter |  |
| Temp | Water temperature | celsius |  |

**met\_hourly.csv, met\_hourly\_plu2.csv, met\_hourly\_plus4.csv, met\_hourly\_plus6.csv**

|  |  |  |  |
| --- | --- | --- | --- |
| Column name | Description | Unit or  code explanation or date format | Empty value code |
| time | Date and time of sampling | YYYY-MM-DD HH:MM:SS |  |
| ShortWave | Short wave radiation | wattsPerSquareMeter |  |
| LongWave | Long wave radiation | wattsPerSquareMeter |  |
| AirTemp | Air temperature | celsius |  |
| RelHum | Relative humidity in percent | dimensionless |  |
| WindSpeed | Wind speed | metersPerSecond |  |
| Rain | Hourly rain accumulation | metersPerDay |  |
| Snow | Hourly snow accumulation | metersPerDay |  |