# **teleconnections.zip Contents**

## File Types and Descriptions

|  |  |  |  |
| --- | --- | --- | --- |
| **Name** | **Entity Type** | **Externally Defined Format** | **Description** |
| Teleconnections\_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. |
| Lake\_Characteristics |  | application/vnd.ms-excel | File with site information and physical characteristics of each lake. Tabs for each lake include long-term annual climate data used in the module. Save as .xlsx to run in script. |
| Lakes/Barco folder |  |  |  |
| glm2.nml | text/x-rsrc | application/GLM | File to configure lake characteristics, meteorological driver data, and physical response variables for the Barco Lake General Lake Model (GLM). Save as .nml to run. |
| Lake\_Characteristics |  | application/vnd.ms-excel | File with site information and physical characteristics of each lake. Tabs for each lake include long-term annual climate data used in the module. Save as .xlsx to run in script. |
| met\_hourly.csv |  |  | Meteorological GLM driver data for a baseline simulation based on observed data for Barco Lake. |
| Lakes/Crampton folder |  |  |  |
| glm2.nml | text/x-rsrc | application/GLM | File to configure lake characteristics, meteorological driver data, and physical response variables for the Crapmton Lake General Lake Model (GLM). Save as .nml to run. |
| Lake\_Characteristics |  | application/vnd.ms-excel | File with site information and physical characteristics of each lake. Tabs for each lake include long-term annual climate data used in the module. Save as .xlsx to run in script. |
| met\_hourly.csv |  |  | Meteorological GLM driver data for a baseline simulation based on observed data for Crampton Lake. |
| Lakes/Falling Creek folder |  |  |  |
| glm2.nml | text/x-rsrc | application/GLM | File to configure lake characteristics, meteorological driver data, and physical response variables for the Falling Creek Reservoir General Lake Model (GLM). Save as .nml to run. |
| Lake\_Characteristics |  | application/vnd.ms-excel | File with site information and physical characteristics of each lake. Tabs for each lake include long-term annual climate data used in the module. Save as .xlsx to run in script. |
| met\_hourly.csv |  |  | Meteorological GLM driver data for a baseline simulation based on observed data for Falling Creek Reservoir. |
| inflow.csv |  |  | Surface inflow GLM driver data for a baseline simulation based on observed data for Falling Creek Reservoir. |
| outflow.csv |  |  | Surface outflow GLM driver data based on observed data for Falling Creek Reservoir. |
| Lakes/Mendota folder |  |  |  |
| glm2.nml | text/x-rsrc | application/GLM | File to configure lake characteristics, meteorological driver data, and physical response variables for the Lake Mendota General Lake Model (GLM). Save as .nml to run. |
| Lake\_Characteristics |  | application/vnd.ms-excel | File with site information and physical characteristics of each lake. Tabs for each lake include long-term annual climate data used in the module. Save as .xlsx to run in script. |
| met\_hourly.csv |  |  | Meteorological GLM driver data for a baseline simulation based on observed data for Lake Mendota. |
| inflow.csv |  |  | Surface inflow GLM driver data for a baseline simulation based on observed data for Lake Mendota. |
| outflow.csv |  |  | Surface outflow GLM driver data based on observed data for Lake Mendota. |
| Lakes/Prairie Pothole folder |  |  |  |
| glm2.nml | text/x-rsrc | application/GLM | File to configure lake characteristics, meteorological driver data, and physical response variables for the Prairie Pothole General Lake Model (GLM). Save as .nml to run. |
| Lake\_Characteristics |  | application/vnd.ms-excel | File with site information and physical characteristics of each lake. Tabs for each lake include long-term annual climate data used in the module. Save as .xlsx to run in script. |
| met\_hourly.csv |  |  | Meteorological GLM driver data for a baseline simulation based on observed data for Prairie Pothole. |
| Lakes/Suggs folder |  |  |  |
| glm2.nml | text/x-rsrc | application/GLM | File to configure lake characteristics, meteorological driver data, and physical response variables for the Suggs Lake General Lake Model (GLM). Save as .nml to run. |
| Lake\_Characteristics |  | application/vnd.ms-excel | File with site information and physical characteristics of each lake. Tabs for each lake include long-term annual climate data used in the module. Save as .xlsx to run in script. |
| met\_hourly.csv |  |  | Meteorological GLM driver data for a baseline simulation based on observed data for Suggs Lake. |
| Lakes/Sunapee folder |  |  |  |
| glm2.nml | text/x-rsrc | application/GLM | File to configure lake characteristics, meteorological driver data, and physical response variables for the Lake Sunapee General Lake Model (GLM). Save as .nml to run. |
| Lake\_Characteristics |  | application/vnd.ms-excel | File with site information and physical characteristics of each lake. Tabs for each lake include long-term annual climate data used in the module. Save as .xlsx to run in script. |
| met\_hourly.csv |  |  | Meteorological GLM driver data for a baseline simulation based on observed data for Lake Sunapee. |
| inflow.csv |  |  | Surface inflow GLM driver data for a baseline simulation based on observed data for Lake Sunapee. |
| outflow.csv |  |  | Surface outflow GLM driver data based on observed data for Lake Sunapee. |
| Lakes/Toolik folder |  |  |  |
| glm2.nml | text/x-rsrc | application/GLM | File to configure lake characteristics, meteorological driver data, and physical response variables for the Toolik Lake General Lake Model (GLM). Save as .nml to run. |
| Lake\_Characteristics |  | application/vnd.ms-excel | File with site information and physical characteristics of each lake. Tabs for each lake include long-term annual climate data used in the module. Save as .xlsx to run in script. |
| met\_hourly.csv |  |  | Meteorological GLM driver data for a baseline simulation based on observed data for Toolik Lake. |
| inflow.csv |  |  | Surface inflow GLM driver data for a baseline simulation based on observed data for Toolik Lake. |
| outflow.csv |  |  | Surface outflow GLM driver data based on observed data for Toolik Lake. |

## Data Table Structure

**met\_hourly.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 | NA |
| ShortWave | Short wave radiation | wattsPerSquareMeter | NA |
| LongWave | Long wave radiation | wattsPerSquareMeter | NA |
| AirTemp | Air temperature | celsius | NA |
| RelHum | Relative humidity in percent | dimensionless | NA |
| WindSpeed | Wind speed | metersPerSecond | NA |
| Rain | Hourly rain accumulation | metersPerDay | NA |
| Snow | Hourly snow accumulation | metersPerDay | NA |

**inflow.csv (if applicable)**

|  |  |  |  |
| --- | --- | --- | --- |
| **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 | NA |
| FLOW | Stream inflow rate | cubicMetersPerSecond | NA |
| SALT | Inflow stream salinity | milligramsPerLiter | NA |
| TEMP | Inflow water temperature | celsius | NA |

**outflow.csv (if applicable)**

|  |  |  |  |
| --- | --- | --- | --- |
| **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 | NA |
| FLOW | Stream inflow rate | cubicMetersPerSecond | NA |