Probable Current Class 3 Wetland Stress Status

Calculated as a function the ECFTX model’s calibration run water levels compared with land surface elevation.

Where:

|  |  |  |
| --- | --- | --- |
| m | = | Number of model cells representing a wetland |
|  |  | Wetland area within each model cell |
|  | = | Land surface elevation as represent in each model cell of a known wetland (Class 1 or Class 2) |
|  | = | Simulated water level (head) from each model cell of a known wetland (Class 1 or Class 2) |
|  | = | Sum of the wetland cell areas for each a known wetland location (Class 1 or Class 2) |
|  | = | Area weighted hydrologic index for a known wetland location (Class 1 or Class 2) |

**Summary of Wetland Data Class Definitions**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Wetland Class** | **Data Class Characteristics** | | | |
| **Wetland Type**  **(Ridge/Plain)** | **Current Stress Condition** | **Observed Water Levels** | **Simulated Water Levels** |
| Class 1 | Known | Known | Known | Known |
| Class 2 | Known | Known | Unknown | Known |
| Class 3 | Known | Unknown | Unknown | Known |

In each wetland class interval at a location with a known stress condition we observe not stressed wetlands, and stressed wetlands, for wetlands in each class and wetland type:

(1)

Where:

|  |  |  |
| --- | --- | --- |
|  | = | Class interval for tabulation of wetlands with known stress condition |
|  | = | Number of wetland locations (both stressed and not stressed) |
|  | = | Number of not stressed wetland locations |
|  | = | Number of stressed wetland locations |

Summing the numbers across all class intervals of known stress condition provides the number of wetlands of each wetland type:

(2)

(3)

(4)

Where:

|  |  |  |
| --- | --- | --- |
|  | = | Number of not stressed wetlands with known stress condition |
|  | = | Number of stressed wetlands known stress condition |
|  | = | Number of wetlands observed in all known stress condition |
| Other terms | = | As previously defined |

For each wetland class with known stress condition the percentage of not stressed and stressed wetlands are defined as:

(5)

(6)

Where:

|  |  |  |
| --- | --- | --- |
|  | = | The fraction of not stressed wetlands in the class interval, expressed as a percentage |
|  | = | The fraction of stressed wetlands in the class interval, expressed as a percentage |
| Other terms | = | As previously defined |

The total fraction of not stressed and stressed wetlands in all class intervals with known stress status is calculated similarly.

(7)

(8)

Where:

|  |  |  |
| --- | --- | --- |
|  | = | The total fraction of not stressed wetlands observed in all the class intervals with known stress status |
|  | = | The total fraction of stressed wetlands observed in all the class intervals with known stress status |
| Other terms | = | As previously defined |