



## Developing Wetland Water Budgets – Syllabus



**Duration:** 4 Weeks

**Credit Hours:** 12 Hours

### General Information

The Swamp School's Developing Wetland Water Budgets Course (DWWB) is a unique blend of live, interactive, and online modules paired with hands-on fieldwork at a wetland of your choice. It is designed to get you trained at a pace and schedule that is convenient for you. The course is presented in a weekly format and runs for 4 consecutive weeks. Our training has been accepted for a number of professional continuing education and certification programs including the Professional Wetland Scientist (PWS) program. You are required to complete the fieldwork at a wetland of your choice, (with permission).

**Note:** A site must be identified that will be used for the class. Direct access to the site is not necessary, a park or public area would work well, the idea being that a simulated wetland will be built on the site. All site data can be collected from the Internet however, personal observation of the site is highly recommended. Permission must be obtained from the landowner.

### Course Description

Establishing an accurate estimate of the anticipated water budget of a wetland is critical to a project's success. This course will teach the student how to create a water budget for an existing or planned wetland site. Students will learn how to identify sources of water and the type of landform the site is in, the different types of mitigation that can be designed, how to quantify water discharge in all forms, and how to ensure that the potential site meets the technical and regulatory aspects of the design.

During the course, students will learn two current engineering models (simple and CN methods) for estimating wetland hydrology; understand the interrelationship between the physics and the biology of wetlands, prepare a wetland water budget, and design a wetland based upon hydrology estimates using the Thornthwaite Equation.

At the conclusion of the course, there will be a presentation to introduce a Wetland Water Budget Modeling Software product called Wetbud.

### Course Requirements

You are expected to present original work for all weekly assignments, respond to weekly forum discussions, and provide responses to other students' discussions on or before the due date of the assignment. ALL information for course assignments must be current and completed within the time frame of the published course start and end dates unless the staff of the Swamp School grants a specific exception to this policy. Submissions completed for an employer's work-related project will be accepted if they meet the time restrictions mentioned above.

Weekly class assignments include the preparation of a submission that may include an essay, pictures, maps, or other course-related material. You must also complete a final exam.

**Instructor Contact** - Directly within the class via Moodle email.

### Time Limits

Weekly assignments are to be turned in within the timeframe indicated for each assignment, normally ten days from the start of the lesson. Daily assignments in weeklong courses are due the next day. You must complete all class requirements by the official end date of the course. If you are unable to complete the class within that time frame you MUST notify the Swamp School in writing. Late work may be turned in after due dates but may be penalized. If you have not completed the course by the official end date, additional time extensions can be requested but may be subject to an additional fee. If you wish, you may transfer into the next scheduled session of the course, however, some or all of your previous coursework may not carry over to the new session and you may also be subject to a re-enrollment fee. The Swamp School reserves the right to modify this policy on a case-by-case basis.

**NOTE:** In the event that the student falls more than two weeks behind during the class term, the student's course access will be suspended without notice until the student contacts the Swamp School to discuss continuation in the class or transfer to another session. It is up to the student to contact the Swamp School to discuss re-enrollment options.

### **Plagiarism and Writing Standards**

The Swamp School's expectation is that all your work will be original. A detailed description of our policy on proper submission of an assignment is outlined in our Plagiarism Statement and Writing Standards.

### **Grading\***

Weekly Assignments - 60%

Weekly Class Discussions - 30%

Final Exam - 10%

\*A minimum overall grade of 80% is required to pass this class.

### **Course Schedule**

<b>Week</b>	<b>Topic</b>
Week 1	Introduction; Mitigation
Week 2	Simple Method and CN Method to Calculate Runoff
Week 3	PET Calculations
Week 4	Wetbud Weather Station; Final Exam