

**Department of Environment and Local Government
Source and Surface Water Management Branch**

**Wetland Ecosystem Services Protocol - Atlantic Canada
A Fact Sheet for New Brunswick**

Nature is complex and varies enormously from place to place. As natural systems, wetlands are no exception. The use of one word describing a wetland type cannot meaningfully predict what a specific wetland does and how it may benefit people and the environment.

Wetland functions are the natural physical, chemical and biological processes that occur in wetlands. These processes provide services that are of value to our society. Not all wetlands perform all functions, nor do they perform all functions equally. A wetland functional assessment is the procedure used in identifying and evaluating wetland functions and values.

What is WESP-AC?

Wetland Ecosystem Services Protocol for Atlantic Canada (WESP-AC) is a standardised method for rapidly assessing wetland functions for all types of wetlands in Atlantic Canada. It is a regionalised adaptation of WESP (Wetland Ecosystem Services Protocol) that has been previously customised for use in Alberta, Alaska, and Oregon and is consistent with other methodologies across various jurisdictions.



WESP-AC consists of a manual and its appendices, three data forms, and an Excel® spreadsheet calculator. The WESP-AC Calculator contains formulas that uses science-based logic models to automatically generate scores which are intended to quantify wetland functions and benefits. It is a standardised desktop and field evaluation method. It generates a set of scores (0 to 10 scale), and ratings (Lower, Moderate, Higher) for 18 specific wetland functions and benefits.

Surface Water Storage, for example, is a wetland function that indicates the effectiveness of a wetland for storing water or delaying the downslope movement of water. Such information is critical when dealing with flood mitigation and climate change.

Conducting a WESP-AC assessment

WESP-AC is a rapid assessment tool designed to take approximately 1 to 3 hours to complete, depending on wetland size, access, and the user's prior experience applying the tool and familiarity with the area. It includes the following 3 forms:

Office Form - Requires a desktop review. Aerial imagery and various desktop tools are used to answer questions pertaining to land cover, wildlife access, distance to nearby infrastructure and water bodies.

Field Form - Requires a field assessment. The assessor walks as much of the Assessment Area (AA) as possible to answer questions pertaining to extent of plant cover and species, hydrology, hydrological connectivity, and soil characteristics.

Stressor Form - Requires a combination of desktop review and field assessment. Stressors to wetlands are represented by increased impacts by humans, proximity to roads, increased runoff, potential for contaminants or soil disturbance.

Upon completion of the forms, the results are input into the WESP-AC Calculator which will generate the function and benefit scores for the wetland.

How will WESP-AC be used in New Brunswick?

In New Brunswick, WESP-AC will be required for certain proposed wetland alterations through the Environmental Impact Assessment (EIA) process and, dependant on scope of project, it may also be required through the Watercourse and Wetland Alteration (WAWA) application process.

Proposed projects are reviewed based on the wetland mitigation sequence: avoidance, minimization and compensation. If the wetland mitigation sequence has been followed, and has demonstrated that avoidance is not possible, then a site-specific assessment of the wetland functions that will be affected may be required using the WESP-AC model.

The results of the assessment will be evaluated by Wetland Biologists at the Source and Surface Water Management Branch, Department of Environment and Local Government (DELG). The information provided in the assessment will guide "avoidance" and "minimization" considerations for proposed wetland impacts, and guide decisions on wetland compensation and restoration proposals.

Who can conduct WESP-AC assessments?

WESP-AC assessments must be completed by a wetland consultant. A wetland consultant is a person having a combination of:

- Completed 2-day WESP-AC training course

- Education and/or demonstrated experience in wetland delineation, restoration, hydrology, wetland soils and botany

WESP-AC assessments are subject to audits, and additional requirements may be imposed by DELG.

Timing of Assessment

The field portion of WESP-AC must be completed within the growing season when vegetation is growing above-ground and can be easily observed. The recognized period, or “season”, for conducting wetland assessments in New Brunswick is June 1st through September 30th. Due to annual variations in weather patterns and ground conditions, the wetland assessment season may be extended. Consultants may submit a written request to a DELG Wetland Biologist to perform wetland assessments outside of the recognized season. The request should include the property PID, and rationale for why the assessment could be accurately completed outside of the season.

WESP-AC reports are valid for a period of 5 years, however a proponent may arrange to re-assess a wetland at any time, provided the WESP-AC protocol is followed.

WESP-AC protocol for report submissions

The following content is required for report submissions and any submission that do not meet these minimum requirements is subject to be returned to the applicant or wetland consultant as incomplete.

The WESP-AC reports must be submitted to the Source and Surface Water Management Branch, DELG for provincial records, review, and potential audit. The reports must be submitted in PDF or Word format with accompanying completed Excel® spreadsheet.

The following must also be included in a WESP-AC submission:

- Property identification number (PID) of all properties on which the WESP-AC was conducted
- Applicant’s contact information
- Date of report and date of the WESP-AC assessment
- Wetland consultant's name, company and contact information
- Signature of the wetland consultant
- Type of WESP-AC conducted (tidal and/or non-tidal)
- Site description including the following:
 - a. a legible site location drawing or map clearly showing the location of the wetland surveyed on the property (use map legends as appropriate)
 - b. aerial image of the site showing boundaries of the wetland and (if different) your assessment area (AA)
 - c. weather conditions at the time of the site visit
 - d. current and historical land use of study area

- e. watercourses observed on site
 - f. wetland type(s) and size
 - g. observed vegetation types, class heights and distribution
 - h. observed surface water characteristics
 - i. ground and soil characteristics (i.e., hummocky, upland inclusions, texture, etc.)
- WESP-AC Excel® spreadsheets as an appendix to the report
 - Site photographs must be included as an appendix to the report. Photographs are to be taken from several angles including surface water (if any) and dominant vegetation
 - List of exotic floral species found within the wetland, in addition to halophytic vegetation for tidal WESP-AC

The report is to also include a written statement summarizing the results of the WESP-AC scores, as well as an analysis of the results.

For additional information please contact the Department of Environment and Local Government:

Source and Surface Water Management Branch
P. O. Box 6000 Fredericton, NB E3B 5H1 Canada
Tel: 506-457-4850
Fax: 506-453-6862
Email: wawa@gnb.ca