Core Element Framework Revisions

Monitoring and Assessment

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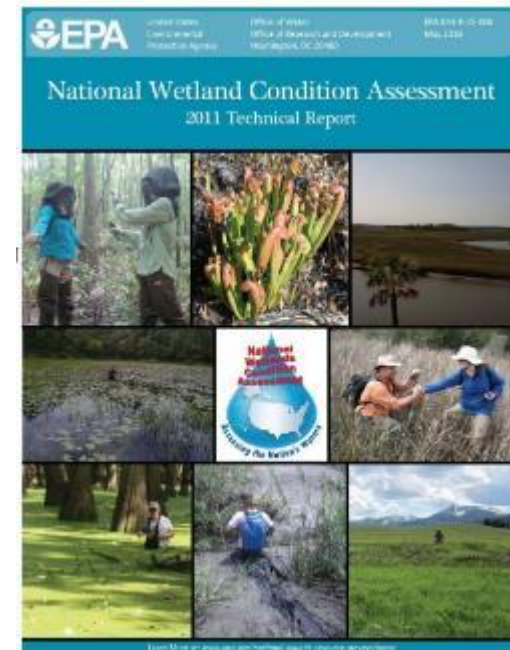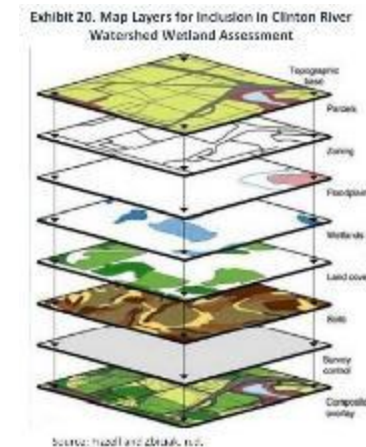# Monitoring and Assessment

The revisions include:

◦ Removal of repetitious language throughout

- ◦ Redundancy in activities between actions (e.g. coordination, collaborate)

◦ Consolidation of ideas

- ◦ Strategy development

◦ Use of more concise language and phrases

- ◦ Integrate, Develop, Partner, Engage

◦ Incorporating references

- ◦ NWCA
- ◦ NWI Plus
- ◦ Revamped Resources/References Section

Monitoring and Assessment

The revisions include:
- Clarification of stepwise process for the actions/activities in Introduction
  - Objectives are based on level of development
- Incorporating details reflecting current activities & current protocols
  - Use of NWCA and other intensification studies
  - Innovative tool development and use
  - Developing partnerships
  - Staff training
  - Mapping
  - Education

Exhibit 20. Map Layers for Inclusion in Clinton River Watershed Wetland Assessment

National Wetland Condition Assessment
2011 Technical Report

Monitoring and Assessment

1. Definition

2. Goals & Benefits
◦ No net loss and overall increase
◦ Baseline, change, value, and trends
◦ 3 Objectives and 3 Stages

3. Program Building Activities Menu
◦ Actions – 13
◦ Activities – 61 to 59

4. Resources

Definition

EPA refers to a three-tier framework for wetlands monitoring and assessment. Most states and tribes draw on one or more of these tiers when designing and implementing their wetlands monitoring programs.

Level 1 or landscape assessments rely entirely on GIS data, utilizing landscape disturbance indices to assess wetland condition. This approach involves characterizing the lands that surround wetlands using landscape metrics (e.g., percent forest cover and land use category). Assessment results can provide a coarse gauge of wetland condition within a watershed.

Level 2 or rapid assessments use relatively simple metrics to assess wetland condition. They are customarily based on the readily observable hydrogeomorphic and plant community attributes of wetlands. They also can employ the use of a "stressor checklist." Rapid assessment methods typically produce a single score that describes where a wetland generally falls along a gradient of human disturbance and with respect to ecological integrity.

Level 3 or intensive site assessments provide a more thorough and rigorous measure of wetland condition by gathering direct and detailed measurements of biological taxa and/or hydrogeomorphic functions. Two examples of the type of indicators that might be used in Level 3 assessment are plant composition/structure and soil organic matter content.

EPA refers to a three-tier framework for wetlands monitoring and assessment[1]. Most states and tribes draw on one or more of these tiers when designing and implementing their wetlands monitoring programs. *Level 1* or landscape assessments rely entirely on GIS data, utilizing landscape disturbance indices to assess wetland condition. *Level 2* or rapid assessments use relatively simple metrics to assess wetland condition. *Level 3* or intensive site assessments provide a more thorough and rigorous measure of wetland condition by gathering direct and detailed measurements of biological taxa and/or hydrogeomorphic functions.

Footnote: https://www.epa.gov/wetlands/wetlands-monitoring-and-assessment

Goals & Benefits

Altered text:

We offer a list of steps within each Action which is accompanied by a recommended, but not all inclusive, list of Activities. The steps help define the Action under each Objective and the list of Activities identify what could reasonably be carried out to meet the objectives of the Action. The tables below attempt to capture the breadth of activities by level of development (i.e. 1,2,3)* while not being overly prescriptive.

*beginning stage (1), developing stage (2), and developed stage (3)

Program Building Activities Menu

Objective 1 – Monitoring Strategy and Objectives

ACTIVITIES: 1a & 1b: addressed redundancies between these two activities – removed or consolidated language.

Objective 1c – Monitoring Design

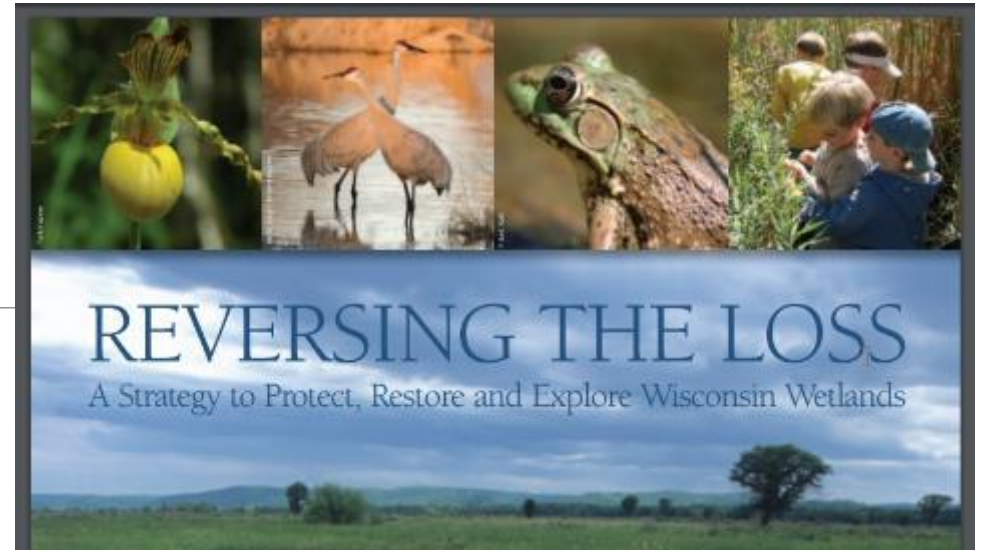Added ACTIVITIES: Develop mapping system to be used as part of the sampling design (including how wetland inventory maps will be updated).

Objective 1 (for programs in the earliest stages of moni
assessment strategy consistent with *Elements of a State Wa*
(EPA, 2006) that states and tribes can use to manage wetla

Actions[†]
a. Identify program decisions and long-term environmental outcome(s) that will benefit from a wetlands monitoring and assessment program
b. Define wetlands monitoring objectives and strategies
c. Develop monitoring design, or an approach and rationale for site selection that best serves monitoring objectives (e.g., census, probabilistic survey, rotating basin)
d. Select a core set of indicators to represent wetland condition or a suite of functions

Objective 1 (for programs in the earliest stages of mon
assessment strategy consistent with *Elements of a State W*
(EPA, 2006) to manage wetlands according to stated obje

Actions[†]
a. **Monitoring Strategy**: Identify program decisions and long-term environmental outcome(s) that will benefit from a wetland monitoring and assessment program (i.e. develop a <u>wetlands</u> monitoring strategy)
b. **Monitoring Objectives**: Define wetlands monitoring objectives and goals which generate data that serve management decision needs.
c. **Monitoring Design**: Select and integrate multiple designs to meet the full range of decision needs.
d. **Monitoring Design – Wetland Condition**: Select a core set of indicators to represent wetland condition or a suite of functions

Objective 1

Actions[†]	Menu of Activities[†]
a. **Monitoring Strategy**: Identify program decisions and long-term environmental outcome(s) that will benefit from a wetland monitoring and assessment program (i.e. develop a <u>wetlands</u> monitoring strategy)	• Document program's long-term environmental goals • Identify programs that will ultimately use monitoring data, e.g. track trends, 401 certifications, restoration, permitting • Collaborate with water quality programs in a state/tribe • Identify how wetland data can be used to implement watershed planning and integrated into existing water quality monitoring efforts.

Program Building Activities Menu

Objective 2 – Incorporating details reflecting current activities by States & Tribes

2a. Ensure the scientific validity of monitoring and laboratory activities

Added ACTIVITY: Train staff in monitoring and assessment techniques

2b. Monitor wetland resources as specified in strategy

Added ACTIVITY: Engage or expand involvement in National Wetland Condition Assessment or intensification projects

2d. Tracking monitoring data in a system that is accessible, updated on a timely basis, and integrated with other state or tribal water quality data

Added ACTIVITY: Develop a plan for data storage in a location that is accessible to all users.

Objective 2

Actions[†]	Menu of Activities[†]
a. Ensure the scientific validity of monitoring and laboratory activities	• Draft and peer review Quality Management Plan and Quality Assurance Project Plan • Develop Field Operations Manual • Select, prioritize, and peer review candidate site assessment indicators • Train staff in monitoring and assessment techniques
b. Monitor wetland resources as specified in strategy	• Conduct pilot monitoring projects (small-scale projects to test methods, calibrate, enhance reference network, etc.) • Develop a schedule for monitoring wetland resources • Engage or Expand involvement in National Wetland Condition Assessment or intensification projects • Partnering with other programs (fish, forest, highways, etc), federal agencies, academic institutions or NGO's

Program Building Activities Menu

Objective 3 – Recognize the importance of wetland mapping tools and map use to the M&A program

3c. Improve the site-specific management of wetland resources

      Added ACTIVITY: Innovative mapping tool development and use (e.g. use of NWI+ and other refinement tools)

      CONSIDERATION: Wetland mapping is not wetland monitoring

Objective 3a – Evaluate monitoring program to determine how well it is meeting a state/tribe's monitoring objectives

      Added ACTIVITY: Plan for and consider long term needs – frequency of repeated monitoring, covering of cost, etc.

Objective 3

Actions	Menu of Activities
a. Evaluate monitoring program to determine how well it is meeting a state/tribe's monitoring program objectives	• Develop schedule to evaluate monitoring program • Track program reviews • Ensure assessment method(s) are providing the necessary information • Make changes as necessary to the program • Review other wetlands program elements (e.g., restoration, regulation, water quality standards) • Modify other aspects of wetlands program as needed based on review of monitoring data • Plan for and consider long term needs – frequency of repeated monitoring, covering of cost, etc.

Questions? Comments…