

## **Milestones and Future Action Items for Core Elements and Objectives**

### **1. Monitoring and Assessment Objectives**

**Overall Goal:** The proposed objectives are intended to strengthen the monitoring and assessment element through the generation of new data including identification of wetlands at risk for conversion from human activity or sea level rise, to promote integration into the overall water quality program and better informed decision-making.

**Objective MA1:** Maintain effort to re-calibrate wetland assessment models. The Virginia wetland assessment model hinges on an assumption about the stressors created by land development patterns. As agricultural practices and urban/suburban development practices evolve it is essential that the model relationship be regularly recalibrated. The target is re-calibration of each physiographic province (Ridge & Valley, Piedmont, and Coastal Plain) every 3 to 5 years.

**Objective MA5:** Assess the efficacy of crowd-sourcing a wetland condition assessment program. Develop a protocol for citizens to report on relative “health” of assessed wetlands to inform selection and priorities for site visits.

**Monitoring and Assessment Objectives Status**

<b>OBJ</b>	<b>Action/Rationale</b>	<b>Completed from WPP 2010-2015</b>	<b>To Be Completed in WPP 2015-2020</b>	<b>Priority Status (High/Mod /Low) for 2015-2020 WPP</b>	<b>Primary Responsible Entity</b>
<b>MA1</b>	This effort was underway by DEQ and the Center for Coastal Resources Management (CCRM) - Virginia Institute of Marine Science (VIMS) and has been completed for the coastal plain (2014), the piedmont (2011) and the Ridge & Valley (2013). This activity is funding dependent and, at present, no funding has been appropriated for this activity. This is a highly critical activity and a high priority. CCRM is making efforts to maintain the model re-calibrations at present.	On-going	X	High	VIMS and DEQ
<b>MA5</b>	CCRM will investigate process and protocols for use of citizen science to inform wetland condition assessment. We have had preliminary conversations on the development and use of a mobile app and the need for and likely success of crowd-sourced data collection.		X	Moderate	VIMS

## 2. Regulation

**Overall Goal:** These objectives will provide the ability to make better permitting decisions relative to cumulative impacts, water quality improvement, tidal wetland sustainability, preservation of wetland functions, and compensatory mitigation tracking and effectiveness.

**Objective R1:** Geo-locate preserved wetlands and evaluate the completeness of DEQ wetland permit records for preserved wetlands.

**Objective R2:** Track unpermitted wetland impacts. DEQ worked with CMI to locate and quantify unpermitted wetland impacts. This activity built upon a previous pilot effort and developed new methods to identify wetland change analysis.

See Final Report regarding Objective R1 and R2:

[http://www.deq.virginia.gov/Portals/0/DEQ/Water/WetlandsStreams/Final%20VADEQ%20Wetland%20Permit%20Compliance%20Report\\_2012.pdf](http://www.deq.virginia.gov/Portals/0/DEQ/Water/WetlandsStreams/Final%20VADEQ%20Wetland%20Permit%20Compliance%20Report_2012.pdf) and

[http://www.deq.virginia.gov/Portals/0/DEQ/Water/WetlandsStreams/Lidar\\_Report\\_Virginia\\_Tech2012.pdf](http://www.deq.virginia.gov/Portals/0/DEQ/Water/WetlandsStreams/Lidar_Report_Virginia_Tech2012.pdf)

**Objective R3:** Work with the VDOT to enhance the Wetland Dataviewer to accommodate VDOT permit review and NEPA documentation needs.

**Objective R4:** Mitigation bank tracking, evaluation and guidance.

**Objective R10:** Develop the capacity to produce a report from WetCAT for use by DEQ and VDOT.

**Objective R11:** Expand data collection capabilities of DEQ staff during site visits.

**Regulation Objectives Status**

<b>OBJ</b>	<b>Action/Rationale</b>	<b>Completed from WPP 2010-2015</b>	<b>To Be Completed in WPP 2015-2020</b>	<b>Priority Status (High/Mod/Low) for 2015-2020 WPP</b>	<b>Primary Responsible Entity</b>
<b>R1</b>	DEQ subcontracted CMI at Virginia Tech to complete a study in 2011 that verified the accuracy and completeness of wetland preservations recorded in DEQ's CEDS database. Additionally, where possible, CMI provided DEQ spatial delineations or locations of wetland preservations in a database form. CMI compared original wetlands permits to the CEDS database, and created a GIS database of visually interpreted wetlands preserved through the permit process.	X - 2011			DEQ
<b>R2</b>	While preliminary, results of the LIDAR study were clearly promising. It was determined that LIDAR has the potential to capture finer changes within wetlands that would otherwise escape detection using other remote sensing or imaging methods.	X - 2011			DEQ
<b>R3</b>	Modifications to WetCAT to allow VDOT and other entities to analyze cumulative impacts associated with linear projects.	X - 2014			DEQ and VIMS
<b>R4</b>	CCRM will continue to enhance WetCAT and build on previously funded and completed efforts to enhance use of WetCAT for mitigation targeting with an emphasis on TMDLs and water quality.	X - 2013	Ongoing	Moderate	VIMS and DEQ
<b>R10</b>	Produce a summary report for wetland condition results for use by VDOT and DEQ to assess preliminary impacts/conditions for NEPA reviews. Develop and test a prototype report for project assessment and permit review. Development and production of reports directly from WetCAT to DEQ and VDOT pending funding support.		X	<b>High</b>	VIMS

<p><b>R11</b></p>	<p>This objective is intended to maximize data collection capabilities of field personnel. Tablets have been distributed to DEQ monitoring staff and training conducted. DEQ staff have been uploading information and continuation of data collection. Develop and implement procedures to automate and modernize biological data collection to advance integration of stream water quality monitoring and wetlands monitoring for beneficial uses and water quality standards. These actions will cross-walk with the Water Quality Standards for Wetlands Core Element. Options are being explored and discussed.</p>		<p>X</p>	<p><b>High</b></p>	<p>DEQ and VIMS</p>
-------------------	--	--	----------	--------------------	---------------------

### 3. Planning and Sustainability

**Overall Goal:** To plan for the persistence of tidal and non-tidal wetland ecosystem functions in the face of climate change and development pressures, to promote the use of living shorelines, and plan for tidal wetland resilience including managed retreat in the face of sea level rise.

**Objective PS2:** Establish and maintain a process for improved communication among state, federal, local non-governmental and governmental partners managing or working in wetlands. CCRM/ VIMS will establish a contact list for all parties, initiate a list-serve communication capability and strategy, and develop a web-based information clearinghouse.

**Objective PS3:** Assess climate-induced changes to tidal and non-tidal wetlands with an emphasis on headwater wetlands and connectivity to downstream wetland systems.

**Planning and Sustainability Objectives Status**

<b>OBJ</b>	<b>Action/Rationale</b>	<b>Completed from WPP 2010-2015</b>	<b>To Be Completed in WPP 2015-2020</b>	<b>Priority Status (High/Mod/Low) for 2015-2020 WPP</b>	<b>Primary Responsible Entity</b>
<b>PS2</b>	Virginia has multiple parties engaged in wetlands preservation and management, including state (including North Carolina via VIMS engagement in APNEP), federal (USACE), and local agencies, as well as numerous local, state, and regional nongovernment organizations (NGOs). The lack of an effective method of consistently sharing information among these groups has been problematic in obtaining common goals because of funding sources, individual agency goals and agency resources.		X	<b>High</b>	VIMS, DEQ, and VMRC
<b>PS3</b>	CCRM/ VIMS has received an multi-year award (CD-96329601) from the EPA to begin the assessment on the York River system.		X	<b>High</b> Underway: 2014-2017	VIMS

#### 4. Information Acquisition

**Overall Goal:** To provide accurate and timely data for continued enhancement of the wetland dataviewer (WetCAT) and other GIS-based wetland tools.

**Objective IA1:** Obtain iterative landcover data set. This effort is critical to a comprehensive picture of Virginia’s wetlands with regard to human and/or natural losses of wetland acreage and ecosystem services.

##### Information Acquisition Objectives Status

<b>OBJ</b>	<b>Action/Rationale</b>	<b>Completed from WPP 2010-2015</b>	<b>To Be Completed in WPP 2015-2020</b>	<b>Priority Status (High/Mod/Low) for 2015-2020 WPP</b>	<b>Primary Responsible Entity</b>
<b>IA1</b>	Required for data development and ongoing analysis of WetCAT over time. DEQ's Water Quality Program is currently conducting orthophotography of the entire Commonwealth of Virginia throughout the year through funding from NOAA. This data will be imported into WetCAT once completed.	On-going	X	High	VIMS and DEQ

## 5. Outreach/Education

**Overall Goal: Develop and deliver outreach materials, presentations and training to decision makers and the general public. Enable better informed decision-making and increase awareness of wetland management programs and permit compliance.**

**Objective O/E1:** Improve public communications print materials. See  
<http://www.deq.virginia.gov/portals/0/deq/water/wetlandsstreams/publicguiderevised2012.pdf>

**Objective O/E2:** Maintain and update DEQ Wetlands website to incorporate new reports, data and programs. See  
<https://www.deq.virginia.gov/our-programs/water/wetlands-streams/monitoring-assessment-strategy>  
and <http://www.deq.virginia.gov/Portals/0/DEQ/Water/WetlandsStreams/WetlandsStatusandTrendsReport-Dec2013.pdf>

**Objective O/E3:** Maintain outreach for local government decision-makers.  
See: <http://events.r20.constantcontact.com/register/event?oeidk=a07eadresat9a39b2f7&llr=5knx77cab> and  
<http://ccrm.vims.edu/publications/pubs/rivers&coast/RC914.pdf>

### Outreach/Education Objectives Status

OBJ	Action/Rationale	Completed from WPP 2010-2015	To Be Completed in WPP 2015-2020	Priority Status (High/Mod/Low) for 2015-2020 WPP	Primary Responsible Entity
O/E1	DEQ updated and expanded the Public Guide to the Wetland Permitting Process in Virginia. Completed September 2012.	X -2012			DEQ
O/E2	Modify existing website content to keep current as reports, data, and outreach materials are updated.		X	High	DEQ
O/E3	Continue effort to provide presentations to explain the use of WetCAT to localities for their comprehensive landuse planning. CCRM conducts an annual workshop for Wetland Board Members. Additionally, each local government for which a CCRMP had been completed has gotten targeted training on the elements within the portal. This targeted education effort has been developed, in part, as a response to the need for additional training as identified through the Regulatory Fidelity Study. CCRM also produces a annual newsletter and quarterly e-news. DEQ has presented WetCAT at several local and national workshops.		X	High	DEQ and VIMS