E.O. 13508 Action Plan FY11 4th Quarter Progress Report - Sort By Goal

Strategy Goal: *Water Quality*

WQ 1. *Implement the Chesapeake Bay TMDL, a rigorous accountability framework for reducing pollution to ensure that all practices needed to reduce pollution to meet Bay water quality standards are in place by 2025*

#	Action	Joint Lead(s)	Due Date	Status	Action Narrative
1	Complete final Bay TMDL including responding to comments	EPA	12/31/2010	Complete	Completed 12/29/10
4	Advance studies to evaluate the management of sediments behind Conowingo Dam and from within the watershed.	DOD-USACE	09/30/2011	Complete	Working to secure funds to finalize the Maryland focused Feasibility Cost Sharing Agreement with Maryland Department of Environment.

WQ 1.a *Federal agencies will contribute to Watershed Implementation Plans*

#	Action	Joint Lead(s)	Due Date	Status	Action Narrative
1	Each Federal agency will provide spatial property boundary data for their respective facilities and lands to EPA to determine baseline pollutant load estimates through modified version of Phase 5.3 watershed model	EPA	10/31/2010	Complete	
2	Include federal facilities portion of load allocations in the apppropriate State Phase II WIPs and/or develop Federal Implementation Plan (FIP) that meets portions of load allocations proposed by State or District	EPA	3/31/2012	In Progress	Schedule revised based on Phase II WIP guide - released 3/30/11

WQ 1.b *Create a system for tracking and reporting for TMDL pollution reduction commitments and two-year milestone commitments.*

#	Action	Joint Lead(s)	Due Date	Status	Action Narrative
1	Develop and implement a Bay Tracking and Accounting System (Bay TAS)	EPA	01/31/2011	Complete	Completed 1/28/11
2	Completing work on setting up the NEIEN (National Environmental Information Exchange Network) system for the Bay watershed for receipt of implementation tracking data from the states from a wider array of sources in a consistent format for input into the Scenario Builder, critical to supporting states work on their Phase 2 WIPs and getting the Bay Tracking and Accounting System (Bay TAS) operational post-December 2010.	EPA	03/31/2011	Complete	BMP data is being received by all partners through the exchange network.
3	Initiate the development of 2 year milestones to begin CY 2012	EPA	09/30/2011	Complete	Development of the 2 year milestones has been initiated, and a Jan 7th completion date is anticipated.

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WQ 1.c *Improve mechanisms for tracking and forecasting land-use and land cover changes associated with water quality degradation.*

#	Action	Joint Lead(s)	Due Date	Status	Action Narrative
1	USGS will improve its initial urban landuse change analysis and incorprote into USGS land-change model to improve forecasting of land use change in urban and agricultural areas and work with EPA to forecast changes using the CBP watershed model. Additional improvement will be made in later years.	USGS	12/31/2010	In Progress	USGS is continuing to refine its urban land-change model,current versions have been incorporated into the WSM supporting the TMDL.
3	Statistically align forested areas as defined by on-the-ground monitoring (by forest researchers), and satellite-derived forest (vs. tree cover) as used in CBP LU/LC maps and track avoided deforestation.	FS	09/30/2011	Complete	USFS has coordinated with USGS the design of customized data base access and has released Forest Inventory and Analysis data for the CB watershed.

WQ 2. *Take regulatory and other actions to support state and District plans to implement the TMDL.*

#	Action	Joint Lead(s)	Due Date	Status	Action Narrative
1	Providing contractual support to Region 3 in early FY11 for preparing responses to anticipated thousands of comments on the draft Bay TMDL following the end of the 45 day public comment period.	EPA	09/30/2011	Complete	
2		No Lead Provided	No Date		

WQ 2.a *Implement current regulations for concentrated animal feeding operations (CAFOs) and propose new regulations to more effectively achieve pollutant reductions necessary to meet the Chesapeake Bay TMDL.*

#	Action	Joint Lead(s)	Due Date	Status	Action Narrative
1	Complete Technical Standards review and engage states in necessary revisions to meet TMDL goals in CAFO Permits. Seek corporate/trade group partnerships to go beyond compliance requirements and work with growers. Conduct a review of each state's CAFO program by 12/30/2010.	EPA	09/30/2011	In Progress	Phase I completed. Phase II completed. Letters being sent to the states on priority items asking them to address them in the context of the WIP II. Phase III targeted to be completed FY12
2	Complete CAFO designation strategy and field test	EPA	09/30/2011	Complete	One site has been selected. EPA mgmt being briefed in Fall 2011.
3	EPA will work in FY11 to develop new CAFO regulations by June 2012 to more effectiely address pollutant reductions necessary to meet the Chesapeake Bay TMDL. (Final rule to be adopted by 2014).	EPA	6/30/2012	In Progress	Internal early guidance has been developed. Further analysis continues.

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WQ 2.b *Implement improvements to the current stormwater program and initiate new national stormwater rulemaking with Chesapeake Bay watershed provisions.*

#	Action	Joint Lead(s)	Due Date	Status	Action Narrative
1	Initiate review all MS4 and Stormwater Construction Permits in the Bay Watershed for TMDL conformance and implementation Urban Stormwater Guidance Issued 7/31 in review of stormwater permits. Provide Training to states and permittee on MS4 requirements.	EPA	09/30/2011	In Progress	Issued specific objection on PA Phase II permit covering 900 sources. Objection resolved. Reached agreement on MDE Fredrick County permit. State is taking comments from NGOs and permittee. Will be used as a template for other permits. Virginia no progress made on issuance of permits.
2	EPA intends to propose revisions by 9/30/11 to the national stormwater regulations, including establishing specific requirements for stormwater discharges from new and redeveloped sites. EPA intends to propose additional provisions specific to the Chesapeake Bay.	EPA	09/30/2011	In Progress	Not started, dependent upon national Multisector general permit content and stormwater MS4 rule revisions.
3	Develop Stormwater Designation strategy for high priority sources and implement. Update requirements for EPA's Construction General Permit and Multisector Stormwater General Permit to be consistent with Bay TMDL	EPA	09/30/2011	Not Started	Not started, dependent upon national Multisector GP content and stormwater MS4 rule revisions.

WQ 2.c *Launch the Chesapeake Bay/ Anacostia Green Streets-Green Jobs Initiative*

#	Action	Joint Lead(s)	Due Date	Status	Action Narrative
1	Design and Implementation of strategy, training and outreach and management of interagency partnership	EPA	09/30/2011	Complete	Completed/ongoing: We continue to partner with several local, state, and federal agencies, as well as the private, academic, industry sectors partners as part of the Green Streets, Green Jobs, Green Towns Academy following up on the highly successful April 29-30, 2011 Green Streets, Green Jobs Forum.
2	Organize and hold Green Streets-Green Jobs training forums	EPA	09/30/2011	Complete	Year 1 Completed: The first Green Streets, Green Jobs Forum was held on April 29-30, 2011 in Silver Spring, MD. Day 2 was specifically geared to training on design/build, policy and planning and green jobs.
3	Collaborate with Chesapeake Bay Trust, Maryland DNR and others on a green design competition funded through a competitive grants.	EPA	09/30/2011	Complete	Completed: In partnership with the Chesapeake Bay Trust and MDE's 319 program, a mini-grant program to support Green Street designs was developed. Nine grants to support design and financing projects in Anacostia towns and cities have been awarded. Case studies are being developed and will be posted on the website soon.

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WQ 2.d *Engage in early dialogue with Bay states and the District regarding how EPA will determine if state programs achieve TMDL pollution reduction goals and meet minimum federal program elements for stormwater and Concentrated Animal Feeding Operations.*

#	Action	Joint Lead(s)	Due Date	Status	Action Narrative
1	Conduct field effectiveness studies of state non-CAFO programs to assess compliance rate with state regulations and effectiveness of controls in priority states.	EPA	09/30/2011	In Progress	This is an ongoing activity. Region III continues to conduct inspections and in the course of those inspections examines the effectiveness of state programs. When deficiencies are identified they are brought to the States attention. We have conducted evaluations in PA and VA and have brought deficiencies to their attention.
2	Conduct Review of Headwater State Stormwater Programs to assess the effectiveness of the state programs	EPA	09/30/2011	Not Started	Evaluations have been completed for both PA and VA. The reports are currently being finalized and should be finished by the end of the quarter.

WQ 2.e *Reduce pollution from wastewater dischargers.*

#	Action	Joint Lead(s)	Due Date	Status	Action Narrative
1	Initiate review of all proposed new or reissued NPDES permits for significant point source discharges of nitrogen, phosphorous, and sediment for TMDL consistency	EPA	09/30/2011	In Progress	We continue to review all Bay permits to ensure consistency with the Bay TMDL. We objected to a PA Phase II permit covering over 900 permittees and the state resolved the deficiency. We have also reviewed and identified areas of concern and negotiated resolutions for VA's Watershed Permit.
2	Monitor implementation of compliance schedules in any NPDES permits or enforcement orders for significant municipal and industrial wastewater dischargers and conduct annual reviews to ensure sources are in compliance with TMDL based limits	EPA	09/30/2011	In Progress	We are in the process of negotiating a FEDFAC agreement with Aberdeen Proving Ground to address their failure to meet their ENR constructions schedule. This will be completed by the second quarter. We are currently in discussions with the state of Maryland regarding the appropriate response to approximately twenty POTWs that have failed to meet their compliance schedule for ENR construction.
3	Review all significant permits to insure that TMDL wasteload allocations have been incorporated.	EPA	09/30/2011	In Progress	See the narrative status for Action 1

WQ 2.f *Reduce pollution from septic systems.*

#	Action	Joint Lead(s)	Due Date	Status	Action Narrative
1	Develop outline of model state program for internal EPA review	EPA	09/30/2011	Complete	
2	Develop first draft of model state program for review by EPA and other federal agency representatives	EPA	09/30/2011	In Progress	First draft due date for review by EPA and other federal agency representatives is modified to March 2012.

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WQ 2.g *Reduce pollution from atmospheric deposition.*

#	Action	Joint Lead(s)	Due Date	Status	Action Narrative
1	Propose NOxSOx secondary national ambient air quality standards by July 12, 2011.	EPA	07/31/2011	Complete	The draft proposal for the NOxSOx secondary NAAQS was signed July 12, 2011.
2	Finalize Transport Rule by summer 2011.	EPA	07/31/2011	Complete	The Cross-State Air Pollution Rule was finalized July 6, 2011.
3	Conduct evaluations of large NOx-emitting sources in NSR priority sectors in Bay airshed and pursue enforcement. Perform modeling to substantiate endangerment to the Bay from nitrogen deposition of broiler house ammonia emissions.	EPA	09/30/2011	In Progress	Regions 2, 3, 4, and 5 continue to work on evaluations of large NOx-emitting sources in the Bay airshed and pursue enforcement where appropriate. EPA has performed background analysis and evaluation of the model inputs, but has not begun the modeling to substantiate the endangerment to the Bay from nitrogen deposition of broiler house ammonia emissions.

WQ 2.h *Reduce costs and provide flexibility through trading and development of protocols and programs for offsetting new and expanded discharges of nutrients and sediment.*

#	Action	Joint Lead(s)	Due Date	Status	Action Narrative
2	Establish Trading mechanism for existing discharges of N and P to meet load and wasteload allocations established in Bay TMDL	EPA	09/30/2011	Complete	This TMDL contains an Appendix S which provides the elements that EPA expects the Chesapeake Bay Watershed jurisdictions to use in the development and updating of their offset and trading programs. There are numerous on-going activities underway that support the implementation of Appendix S and this EO Action Item. Appendix S was finalized when the TMDL was issued - 12/29/10.

WQ 2.i *Reduce pollution through enforcement and compliance efforts.*

#	Action	Joint Lead(s)	Due Date	Status	Action Narrative
1	Implement Bay Enforcement Strategy for Stormwater, Agriculture, and Wastewater. Conduct inspections/pursue enforcement at non-compliant stormwater point sources within geographic areas critical to restoration of Bay. Take enforcement action in accordance with series of violations. Address significant non-compliance at significant WWTPs.	EPA	09/30/2011	In Progress	The region reports out its compliance activities with respect to the Bay Enforcement Strategy to OECA. EPA-R3 provided an attachment containing all activities conducted for this action.
2	Conduct enhanced SRF and State SNC oversight with emphasis on Bay Dischargers. Prioritize Bay Stormwater, CSO and SSO facilities in Bay Watershed for action	EPA	09/30/2011	In Progress	Region III conducted three SRF's this year - VA, PA and DE. These reports are in the process of being finalized based on EPA-HQ comments.

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WQ 2.j *EPA will coordinate with the Clean Water State Revolving Fund managers to build cooperation and partnership in using resources to better protect the Chesapeake Bay.*

#	Action	Joint Lead(s)	Due Date	Status	Action Narrative
1	Engage Region 3's State SRF programs to discuss near and long term SRF plans to integrate Bay protection/restoration goals w/ other SRF program priorities. Initiate opportunities to implement SRF plans identified.	EPA	09/30/2011	Complete	EPA hosted a meeting on "Opportunities for the Clean Water State Revolving Fund in Implementing the Chesapeake Bay Executive Order," with the HQ Municipal Support Division. All Region 3 Bay States plus New York and Region 2 participated. In addition, the Non-Point Source Program (Section 319) was represented. Participants shared information on how they are targeting CWSRF resources to protect and restore the Chesapeake Bay and its tributary waters through point and non point source projects.
2	As a pilot project, EPA will provide technical assistance to MDE for proposed changes that will encourage use of Clean Water SRF to fund projects that promote sustainable communities	EPA	09/30/2011	Complete	The State of Maryland is one of three states selected to participate in a Pilot Technical Assistance Program for Sustainable Communities. EPA provided technical assistance to the state to modify their existing clean water SRF program to ensure their state water infrastructure investments are used to promote location efficient investments. In the fall the State revised their priority ranking factors as a result of this effort.

WQ 2.k *Provide states with additional grants for regulatory and accountability programs.*

#	Action	Joint Lead(s)	Due Date	Status	Action Narrative
1	Provide support to states through Chesapeake Bay Regulatory and Accountability Program grants.	EPA	09/30/2011	In Progress	This is an ongoing effort.
2	Target other CWA funds, such as Chesapeake Bay Implementation Grants, to better protect the Bay and its tributaries.	EPA	09/30/2011	In Progress	This has been initiated. Language was incorporated in the FY11 CBP grant guidance.
3	Use other national CWA base programs such as the nonpoint source grant program established in Section 319 or the state planning grants under Section 106 for Chesapeake Bay watershed implementation activities	EPA	09/30/2011	In Progress	Discussions have been initiated. Will be incorporated in to the next round of guidance for FY12.

WQ 2.l *Pursue funding of stream restoration grants.*

#	Action	Joint Lead(s)	Due Date	Status	Action Narrative
1	Complete an assessment of options to direct existing funds to support increased funding for stream restoration	EPA	12/31/2010	Complete	Assessment completed and sent to FOD chair 12/29/10.

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WQ 3. *Ensure the federal government leads by example in reducing pollution from federal lands and facilities.*

#	Action	Joint Lead(s)	Due Date	Status	Action Narrative
1	Work with states to ensure Federal Facilities achieve and maintain compliance with regulatory requirements through a federal compliance workgroup	EPA	09/30/2011	In Progress	Initial step of working with EPA Region 3 Office of Enforcement Compliance and Environmental Justice (OECEJ) to review their federal facilities multi-media inspection targeting criteria is in complete. OECEJ agreed to add "impaired waters" to targeting criteria. Additional work to review specific selections for compliance audits and coordinating with states is needed.
3	Pursue Federal Facilities Compliance Agreements where appropriate	EPA	09/30/2011	In Progress	

WQ 3.a *Implement the Energy Independence and Security Act, Section 438.*

#	Action	Joint Lead(s)	Due Date	Status	Action Narrative
1	Develop agency-wide policy to ensure implementation of EISA Section 438 stormwater requirements	EPA	12/31/2010	In Progress	Two of nine agencies met the deadline for having policies in place by Dec 2010. An additional 5 agencies have developed and issued policies since Dec 2010. These agencies have submitted documentation to EPA. 2 agencies have not yet implemented policies. EPA has reviewed the policy documentation received to date, and have provided a preliminary assessment, which has been reported to CEQ. EPA is also designing an overall strategy to assist federal agencies with policy implementation and reporting.

WQ 3.b *Implement sustainable land management practices and programs into all federal capital improvements, public works management and energy management projects.*

#	Action	Joint Lead(s)	Due Date	Status	Action Narrative
1	Work with Federal Agencies with 10 or more acres in the Chesapeake Bay watershed to initiate implementation of Section 502 Guidance	EPA	09/30/2011	In Progress	Incorporated into the WIP Phase II Federal Guide issued April 29, 2011.
2	Federal Agencies will incorporate Section 502 Guidance considerations as part of their load reductions strategies in the state Phase II WIPs	EPA	09/30/2011	In Progress	Incorporated into the WIP Phase II guide issued April 29, 2011.

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WQ 3.c *Ensure that stormwater impacts are minimized as part of environmental review of federal-aid highway projects and other federally-assisted transportation projects.*

#	Action	Joint Lead(s)	Due Date	Status	Action Narrative
1	DOT will provide technical assistance to state DOTs as requested and continue encouragement of using federal transportation funds eligible under environmental restoration for projects to address stormwater management problems.	DOT	09/30/2011	In Progress	The Federal Highway Administration Associate Administrator for Planning, Environment and Realty sent a letter to the Secretaries of Transportation for MD, VA, PA, WV, DC, NY and DE on November 24, 2010. This letter encourages State DOTs to use the Federal-aid Program to its fullest potential to address stormwater runoff as part of any Federal-aid project. It also encourages cooperation among Federal, State and local agencies.

WQ 4. *Focus resources on priority watersheds and practices for agriculture to assist states in implementing their Watershed Implementation Plans (WIPs)*

#	Action	Joint Lead(s)	Due Date	Status	Action Narrative
1	See tasks under WQ 4 a-b	NRCS	No Date		

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WQ 4.a *Target efforts at watersheds that contribute the most nitrogen, phosphorus, and sediment.*

#	Action	Joint Lead(s)	Due Date	Status	Action Narrative
1	Obtain and evaluate new datasets (such as USGS SPARROW sediment and high resolution N and P results, vulnerable soils, priority fish and wildlife habitat layers) that will inform review of priority watershed locations. Review FY 2010 priority watershed locations and update as needed for FY 2011. Work with USGS and other partners to further focus conservation practices to the highest N, P, and sediment yielding areas within priority areas (see related action WQ 10 a).	NRCS	12/31/2010	Complete	New data sets have been reviewed and FY11 priority watersheds have been selected. NRCS will continue to evaluate CEAP results and partner data sets for further targeting refinement.
2	Align targeted watershed efforts with state watershed implementation plans	NRCS	09/30/2011	Complete	All six NRCS State conservationists have met with State counterparts to best align program delivery in support of WIPs. This will be an ongoing effort as WIP IIs are developed. This action will carry over to 2012 and beyond, as NRCS will continue to work to align our program delivery to help states achieve their goals.
3	Strive to obligate 100% of FY 2011 Chesapeake Bay Watershed Initiative funds in targeted priority watersheds. Use other USDA programs (EQIP, AMA, WHIP, CTA) as appropriate to plan and implement additional conservation practices in the Watershed.	NRCS	09/30/2011	In Progress	NRCS, working through State Technical Committees, has selected FY11 priority watershed locations. NRCS is evaluating Chesapeake CEAP results for opportunities to further target conservation programs within priority watersheds. The CBWI FY11 program implementation is to build upon the 97% targeting success of FY10. Initial analysis indicates that XX% of CBWI funds were used in priority watersheds. This action will carry forward to 2012, as NRCS will continue to target CBWI funds to priority watersheds.
4	Scope and coordinate studies to reduce sediment behind Conowingo Dam. Advance low impact development projects using prioritized watersheds identified in the Anacostia watershed restoration plan.	DOD-USACE	09/30/2011	Complete	NRCS, working through State Technical Committees, has selected FY11 priority watershed locations. NRCS is evaluating Chesapeake CEAP results for opportunities to further target conservation programs within priority watersheds. This action will carry forward to 2012, as NRCS will continue to target CBWI funds to priority watersheds.

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WQ 4.b *Identify the most effective conservation practices.*

#	Action	Joint Lead(s)	Due Date	Status	Action Narrative
1	Review FY 2010 priority practices in light of USDA Conservation Effects Assessment Project results, USGS SPARROW data and other new data to determine effects of these practices. Begin process of quantifing reductions in N, P, and sediment associated with particular conservation practices. Explore implications of SPARROW models and watershed properties on conservation practices.	NRCS	09/30/2011	In Progress	Chesapeake CEAP results have been released and NRCS staff are evaluating how best to incorporate results into practice selection. The report recommends a systems approach to conservation practice implementation. NRCS is currently developing a revised priority conservation practice list that will be used for 2012 CBWI program delivery. This will be completed by 10/30/2011.
2	Work with States to ensure that where possible, State priority practices are included in the Federal priority practice list	NRCS	12/31/2010	Complete	NRCS States have aligned priority practices with those practices identified in State WIPs. NRCS will continue to do this in 2012.
3	Provide assistance to state and local governments as needed to review and recommend agricultural conservation practices that most effectively reduce N, P, and sediment loads to the Bay for watershed implementation plans.	NRCS	05/31/2011	Complete	All NRCS State Conservationists have met with their State counterparts to lend assistance and support during WIP I creation. This support has continued through initial WIP II development and even become more detailed with local staff engagement. This support will continue in 2012.
4	Advance low impact development projects using prioritized watersheds identified in the Anacostia watershed restoration plan.	EPA	09/30/2011	In Progress	This work is ongoing.

WQ 5. *Accelerate conservation adoption by working with partners to leverage conservation funding and simplify program participation.*

#	Action	Joint Lead(s)	Due Date	Status	Action Narrative
1	See tasks under WQ 5 a-e.	NRCS	No Date		

WQ 5.a *Leverage funding for conservation in the Chesapeake Bay watershed.*

#	Action	Joint Lead(s)	Due Date	Status	Action Narrative
1	Publish FY 2011 CCPI request for proposals. NRCS anticipates up to $5,000,000 may be available in potential CCPI grants in FY 2011.	NRCS	12/31/2010	Complete	NRCS has published the FY11 CCPI. The specific Chesapeake funding is $3.5 million. Applications have been selected and announcements made. Six CCPI grants were awarded to state and local government agencies and NGOs in DE, MD, PA, and VA.
2	FWS PFW program will partner with NRCS and others to identify projects that benefit federal trust species and improve water quality and to promote citizen-centered conservation.	FWS	09/30/2011		

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WQ 5.b *Utilize EPA funding for agriculture challenges.*

#	Action	Joint Lead(s)	Due Date	Status	Action Narrative
1	EPA will fund projects to address key agricultural challenges in the Chesapeake Bay through the Innovative Nutrient and Sediment Reduction Program, CWA S117 and other grant programs.	EPA	09/30/2011	Complete	The RFP for EPA's Innovative Nutrient and Sediment Reduction Program projects was disseminated by NFWF in spring 2011. Projects were submitted that address key agricultural challenges in the Chesapeake Bay watershed. Awards were made for FY10/11 on 10/05/11. With the award of the FY11 dollars, we are now ahead of schedule by a year.

WQ 5.c *Establish showcase projects in small watersheds.*

#	Action	Joint Lead(s)	Due Date	Status	Action Narrative
1	Prepare annual work plans for FY11 for Showcase Watershed projects. One key task in FY 2011 will be development and implementation of monitoring strategies (see related actions in WQ 5 d and WQ 13).	NRCS	12/31/2010	Complete	All showcase locations have completed annual plans. USGS has developed a strategy for monitoring showcase projects. In FY2012 this strategy can be further refined for specific stream reaches within showcase watersheds. USGS was not able to implement monitoring activities due to lack of funding.
2	Conduct outreach to farmers in showcase watersheds. The outreach goal for the Upper Chester and Conewago Watersheds is to contact 90% of identified farmers. The outreach goal for the Smith Creek Watershed is to contact the 100 largest landowners in the watershed.	NRCS	09/30/2011	Complete	Outreach activities are underway. Upper Chester and Conewago Watersheds have exceeded their goal of 90% of farmers personally contacted. Smith Creek has contacted all producers in the showcase watershed and has made personal contact with over 150 producers in the watershed. While these EO action goals have been met, showcase watershed projects will continue personal outreach efforts as these actions are leading to increased conservation participation.

WQ 5.d *Monitor the results of showcase projects.*

#	Action	Joint Lead(s)	Due Date	Status	Action Narrative
1	USGS will work with NRCS to plan monitoring and assessment in 3 showcase watersheds and implement monitoring and assessment in the 3 showcase watersheds. NRCS will provide conservation practice data and USGS will institute water-quality monitoring in FY2011 in all three watersheds. USGS and NRCS will collaborate to initiate the evaluation of changes in water quality. Initial project will be a study plan among collaborators. USGS funds shown in WQ13.	USGS	03/31/2011	In Progress	USGS is implementing enhanced monitoring and assessment in two showcase watersheds (Chester and Smith Creek). Efforts in 2011 better identified the distribution of nutrients and their sources in the showcase watershed to help NRCS further focus nservation practices. The EPA is also working with USGS to establish sites at the outlets of each showcase watershed as part of the CBP watershed monitoring network.
2	FS will provide contextual setting of the showcase projects, analyzing existing data in the CBP watershed framework to describe how the showcase projects are similar and different from the surrounding landscape.	FS	09/30/2011	Not Started	This action will not be completed in 2011 because of insufficient funds/staff.

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WQ 5.e *Simplify conservation planning for producers.*

#	Action	Joint Lead(s)	Due Date	Status	Action Narrative
1	Limited production release of the CDSI Financial Assistance Desktop Version 1.0 (to selected states across the country). The Conservation Delivery Streamlining Initiative is a national project designed to streamline conservation planning and contracting for NRCS staff and cooperators.	NRCS	01/31/2011	In Progress	This action is larger than the Chesapeake Bay Watershed. Initial testing will begin in October 2011. Limited production release to selected pilot test sites will occur in January 2012.
2	Limited production release of the CDSI Client Gateway Version 1.0 (to selected states across the country). The Conservation Delivery Streamlining Initiative is a national project designed to streamline conservation planning and contracting for NRCS staff and cooperators.	NRCS	01/31/2011	In Progress	This action is larger than the Chesapeake Bay Watershed. Initial testing will begin in October 2011. Limited production release to selected pilot test sites will occur in January 2012.

WQ 6. *Accelerate development of new conservation technologies.*

#	Action	Joint Lead(s)	Due Date	Status	Action Narrative
1	See tasks under WQ 6 a-b.	NRCS	No Date		

WQ 6.a *Fund research and development of conservation technology.*

#	Action	Joint Lead(s)	Due Date	Status	Action Narrative
1	Release Conservation Innovation Grants Chesapeake Bay request for proposals. NRCS anticipates up to $5,000,000 may be available for potential CIG grants.	NRCS	11/30/2010	Complete	NRCS awarded 8 CIG proposals under CBWI for $3.75 million. These proposals were in DE, MD, PA, VA, and WV.
2	Evaluate priority funding needs for conservation technology to ensure that funding resources are effectively allocated.	NRCS	09/30/2011	Complete	NRCS has staff participating in the NFWF grant review process and federal partners are involved with NRCS CIG review. NRCS will continue to work with partners to effectively allocate funds for research and development.

WQ 6.b *Evaluate effectiveness of next generation conservation tools.*

#	Action	Joint Lead(s)	Due Date	Status	Action Narrative
1	Hold workshop on opportunities for enhancing agricultural conservation to meet 2025 goaline.	EPA	10/31/2010	Complete	Conference proceedings were finalized.
2	Use Conservation Effects Assessment Project results, GoalLine 2025 workshop information, and other data to begin the process of developing a method to assess the effectiveness of new conservation tools and practices in reducing nitrogen, phosphorus, and sediment losses.	NRCS	09/30/2011	In Progress	NRCS's Resources Analysis Division is working on the development of a tool that will assess soil vulnerability, level of existing conservation treatment, and potential environmental benefits associated with the addition of new conservation practices. Maryland is the pilot state. The first draft of the tool will be demonstrated in October 2011. This action will carry over to 2012.

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WQ 7. *Develop a system of accountability for tracking and reporting conservation practices.*

#	Action	Joint Lead(s)	Due Date	Status	Action Narrative
1	Meet with state and local partners to expand existing tracking and reporting systems for agricultural conservation practices. (see also tasks under WQ 1b and 1c).	EPA	09/30/2011	In Progress	USDA NRCS and FSA entered into a data-sharing agreement with USGS. This agreement will allow USDA-funded conservation practice data to be transmitted for credit in the CBP Watershed Model through the NEIEN network node, in compliance with the confidentiality provisions of Section 1619 of the Farm Bill. Data transfer is expected to happen on schedule in 2011. EPA continues to meet with USDA and state and local partners to develop mechanisms for tracking and verifying non-cost shared conservation practices. They are on track with meeting their deadline of July 2012 to have the protocols developed and implemented.

WQ 7.a *Expand existing tracking and reporting sytems for conservation practices, best management practices, and treatment technologies.*

#	Action	Joint Lead(s)	Due Date	Status	Action Narrative
1	Review and finalize NEIEN protocols to facilitate data exchange and incorporate state data into the Bay model.	EPA	09/30/2011	Complete	Developed infrastructure, policy and procedures for inbound BMP data submission from States to EPA via NEIEN. System is operational and States are providing information.
2	Implement data sharing agreements with USGS to effectively transfer USDA conservation practice data into the Bay model.	NRCS	09/30/2011	Complete	An MOU was signed on 10/14/10. Processing of data did not occur in 2011 due to lack of funding.
3	NRCS and EPA will continute to review and evaluate CEAP and Bay model results to determine the most appropriate way to model agricultural practices in the Bay model	NRCS	09/30/2011	In Progress	A meeting was held between Bay and CEAP modelers to discuss similarities and differences between the models. EPA met with Chief White just prior to the release of the CEAP report. EPA agreed to evaluate opportunities to incorporate CEAP results into the Bay Model. Additional analysis is needed. NRCS is updating the CEAP report with additional farmer surveys and conservation practice data from additional years; a revised report should be available in 2012.
4	USGS will work with FSA and NRCS to store information on agricultural BMPs and provide to EPA for the watershed model. USGS will work to get up initial database in FY2011.	USGS	09/30/2011	In Progress	A data-sharing agreement has been agreed to among agencies and initial work is being done to asses data and prepare guidance for data management.

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WQ 7.b *Develop and implement a method for tracking and reporting voluntary conservation practices on agricultural land*

#	Action	Joint Lead(s)	Due Date	Status	Action Narrative
1	Begin developing protocols for reporting non-cost share conservation practices that were applied without federal or state financial assistance. NEIEN data transfer standards will be used. The protocol should include a procedure for assessing these practices and determining if they are 1) functioning and 2) meet technical standards. The protocol should indicate where landowners can go to report their data (e.g., a website, a local NRCS or FSA office, the county extension agent, etc.). This work is being funded through an agreement with NACD.	NRCS	09/30/2011	In Progress	NRCS has entered into an agreement with the National Association of Conservation Districts to hire a specialist to develop the process for non-cost share conservation practice tracking. NADC has hired a coordinator and visited 5 of the 6 Bay States to begin a process to account for conservation practices outside of cost share. This action is scheduled for completion in 2012.

WQ 8. *EPA, DOI, and NOAA will work with state and local governments and stakeholders to expand understanding of the extent and seriousness of the toxic contaminant problem in the Bay and its watershed and to develop contaminant reduction goals by 2013*

#	Action	Joint Lead(s)	Due Date	Status	Action Narrative
1	Implement Toxics workplan; EPA, USGS, FWS, & NOAA workgroup will meet with federal and state managers to discuss critical information needed to develop specific toxic outcomes for the Toxics report.	EPA	09/30/2011	In Progress	An inter-agency work group has met twice for preliminary discussion on a process that will produce the November 2012 report on available data and its relation to effects thresholds. A workshop meeting is scheduled for Oct 2011, which will include state participation.
2	USGS working with USFWS will conduct sampling of selected fish and wildlife species in the Potomac watershed. The sampling will focus on endocrine-disrupting chemicals in fish, wildlife, water, and sediment. The sampling design will address potential sources of the compounds including waste-water treatment plants and confined feeding operations. The USGS will also summarize recent sampling results from the Potomac watershed on fish health condition and endocrine-disrupting compounds.	USGS	09/30/2011	In Progress	The USGS, working with FWS, is conducting limited sampling of toxic contaminants and effects on fish species in the Potomac and Susquehanna River Basins. The USGS expanded the research to include fish and wildlife (osprey) in urban areas of the Potomac but funds for additional sampling to identify distribution and sources of contaminants and thier impact on fish and wildlife was not appropriated by Congress.

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WQ 9. *EPA will work with DOI, states, and stakeholders to develop toxic contaminant strategies by 2015*

#	Action	Joint Lead(s)	Due Date	Status	Action Narrative
1	Work with EPA to reconcile implementation of FWS SmaRxt Disposal and USEPA pharmaceutical takeback programs	FWS	09/30/2011	In Progress	FWS has identified POCs and is awaiting coordination meeting with EPA and USGS.
2	Review and modify workplan to ensure effectiveness of activities in priority areas to inform strategy development; EPA will work with partners to begin development of a prioritization process that will help identify the most likely regulatory and voluntary controls that can be used to reduce toxic contaminants.	EPA	09/30/2011	In Progress	This action will follow the completion of the report described in WQ 8.
3	EPA will work with partners to begin development of a prioritization process that will help identify the most likely regulatory and voluntary controls that can be used to reduce toxic contaminants. The initial findings would be part of the 2012 report (see above) that includes an assessment of progress toward management actions take for the Chesapeake Bay Toxics Reduction and Prevention Strategy	EPA	No Date	In Progress	This action will follow the completion of the report described in WQ 8.

WQ 10. *Improve computer models used to guide restoration activities.*

#	Action	Joint Lead(s)	Due Date	Status	Action Narrative
1	USGS will work with EPA to improve models to guide water-quality restoration. In 2011, USGS will improve SPARROW nutrient models for Chesapeake Bay and models to estimate changes in water-quality trends and work with EPA to provide results to states for watershed implementaiton plans (see QW10a) and to NRCS for priority watersheds (see QW 10a and WQ4a). USGS will also improve its land-change model. (see WQ 1c.).	USGS	09/30/2011	In Progress	USGS completed development development of improved SPARROW mutrient models for the Chesapeake Bay Watershed. Improved sediment model was released in early 2011. A report on enhanced nutrient models expected in Oct.

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WQ 10.a *Use results from watershed models to prioritize locations of actions.*

#	Action	Joint Lead(s)	Due Date	Status	Action Narrative
1	USGS and EPA will work together to provide seleced results from the CBP watershed model and new SPARROW sediment and existing nutrients models to help states develop the Phase 2 watershed implementation plans. USGS will also collaborate with NRCS to use results to focus conservation practices in agrictural priority watersheds. Selected results will be put into the USGS COAST decision tool for improved access to model results. USGS will establish a decision-support specialist to closely interact with the states and NRCS to apply the results. [USGS funds reflected under WQ10].	USGS	12/31/2010	In Progress	SPARROW sediment results have been loaded into COAST. USGS discussed results of nutrient models with the Water-Quality Goal Team to support the development of phase II of WIPs. USGS is also continuing improvement of trend techniques for load over time.
2	Provide results from updated CBP watershed model to help agencies and states focus water quality actions in areas of highest nutrient and sediment loads in the Bay.	EPA	09/30/2011	In Progress	This is an ongoing activity that will continue through 2017. The watershed model was complete on 6/22/11.

WQ 10.b *Develop groundwater models.*

#	Action	Joint Lead(s)	Due Date	Status	Action Narrative
1	USGS will release a ground-water model of the MD eastern shore. The results wil be used to help determine direct ground-water discharge of nitrogen to the Bay.	USGS	09/30/2011	In Progress	Model development was completed and a draft report is in review.

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WQ 10.c *Ensure availability of Bay forecasts and modeling results.*

#	Action	Joint Lead(s)	Due Date	Status	Action Narrative
1	Engage with stakeholders (via workshop) to: (1) identify potential forecast models and define models, outputs, users and paths to operational status; (2) Support activities leading to pre-operational and operational implementation of ready models and forecasts; and (3) distribute pre-operational models for evaluation. This work will include coordination with partners to identify data-inputs. For example, USGS will provide results of loads to the Bay from River-input stations to help improve ecological forecasting.	NOAA	09/30/2011	Complete	On Dec 1-2, NOAA met with Maryland, Delaware and Virginia managers responsible for responding to harmful algal blooms (HABs). This included a review of models and forecasts that were available in 2010, discussion of strategy for 2011. Demonstration models for nowcasts and forecasts include both satellite-based and hydrodynamic-ecosystem based. These models are being examined for capability to blend them. Methods to improve communication to assure the use of available data were also identified. A 2-day workshop was held on July 5th and 6th that involved technical and management representatives from NWS, NOS, NESDIS, and NMFS to finalize plans for the development of an operational ecological forecasting pilot for the Chesapeake Bay. The group agreed on using dissolved oxygen/hypoxia data, which when paired with available data on temperature can provide detailed volumetric measurements of available habitat for living resources in the Bay throughout the year. It was decide that the forecasts will be built using existing models, and will draw on the unique capabilities of each of the line offices in the region to transition model output and observational data into a validated operational forecast. It is expected that at least the first three objectives have or will be completed by the end of Q4.
2	Specific examples of outputs for FY 2011 include: (1) NOAA will complete and validate habitat model for harmful algal bloom (HAB) species in the Bay (complete for one species, validate for 2 additional species.)*; (2) NOAA will continue its research on how best to link freshwater inputs and models to estuary modeling capabilities to create Coast Estuary River Information Service (CERIS) for the Chesapeake Bay.	NOAA	09/30/2011	In Progress	Complete, implement, and validate habitat models for the following three HAB species: Karlodinium veneficum, Prorocentrum minimum and Microcystis aeruginosa. Skill assessment for K. veneficum is complete; work is ongoing for the latter two HAB species. Providing experimental near-real time, satellite imagery to support detection and monitoring of blue-green algal blooms in MD is ongoing.
3	NOAA will support research to implement a coupled Regional Ocean Modeling System-Water Quality hydrodynamic model for use in ecological forecasting. This research will expand hypoxia forecasting efforts for Chesapeake Bay to consider interactions between nutrient management trends and variable climatic conditions, and to determine the exposure of economically and ecologically important species to hypoxia (and co-occurring low pH) in the field.	NOAA	09/30/2011	In Progress	Work on a coupled ROMS hydrodynamic and biogeochemical models is ongoing. A simple oxygen model was linked to a physical model. Models generated from retrospective data analysis have provided information on summer hypoxia.

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WQ 11. *Improve water-quality monitoring in the watershed*

#	Action	Joint Lead(s)	Due Date	Status	Action Narrative
1	USGS will work with the EPA and the states to maintiain the CBP nontidal network. Sites will be added out the outlets of up to 5 small watersheds to improve monitroing in agricutural and urban land use areas (related to item WQ 13).	USGS	09/30/2011	In Progress	EPA is working with the USGS, states and DC to expand the CBP watershed monitoring network. About 20 sites were added in 2011 with a focus on monitoring in smaller agricutural and urban watersheds. USGS continued to work with the MD and VA to run the River-Input Monitoring (RIM) sites and update loads and trends for the RIM sites and watershed network.
2	Support state monitoring programs with grant funds.	EPA	12/31/2010	In Progress	All jurisdictions have received their FY11 funding levels.

WQ 12. *Improve tracking of management actions and land use activities.*

#	Action	Joint Lead(s)	Due Date	Status	Action Narrative
1	See actions related to WQ1b (Bay Tracking and Accounting System and the National Environmental Information Exchange Network) and WQ7 (tracking and reporting systems for agricultural conservation practices).	EPA	09/30/2011	In Progress	Exploring data aggragation approaches with NRCS & FSA data.

WQ 13. *Monitor and assess restoration activities in small urban and agricultural watersheds.*

#	Action	Joint Lead(s)	Due Date	Status	Action Narrative
1	USGS and EPA will work together in 5 small watershed to plan and implement monitoring and assessment of water quality change (the 3 NRCS showcase watersheds and two urban watersheds). The USGS will enhance research of processes affecting nutrients and sediment in a subset of these watersheds. NRCS will provide improved reporting of BMP information in the showcase watershed and work with USGS to explain water quality change. USGS will also work to synthsize selected results existing small watershed studies (see SS 15).	USGS	03/31/2011	In Progress	EPA and USGS have worked to implement monitoring in smaller agricutural and urban watersheds as part of the expansion of the CBP watershed monitoring network (see WQ11). In three small watersheds, USGS is conducting in depth monitoring and research on water-quality response to BMPs. The watersheds include two USDA showcase watersheds (see WQ5d) and urban areas near DC.
2	Support state monitoring programs with grant funds. (*also see WQ14)	EPA	09/30/2011	Complete	All jurisdictions have received their FY11 funding levels.
3	Baltimore Ecosystem Study (BES) will monitor and evaluate urban restoration activities in the Baltimore ecoregion, adopting an integrated research approach that utilizes ecological, social and economic data. Baltimore is one of two urban Long Term Ecological Research (LTER) projects in the US. The LTER boasts decades of research and should be one of the urban watersheds monitored for the EO.	FS	09/30/2011	In Progress	This action is going as planned. It is a long-term, ongoing project that will be continuing beyond 2011.

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WQ 14. *Improve monitoring and assessment of stream conditions.*

#	Action	Joint Lead(s)	Due Date	Status	Action Narrative
1	Support state monitoring programs with grant funds.	EPA	09/30/2011	Complete	All jurisdictions have received their FY11 funding levels.

WQ 15. *Improve monitoring of tidal waters.*

#	Action	Joint Lead(s)	Due Date	Status	Action Narrative
1	NOAA, through the CoastWatch East Coast Node, will distribute satellite remote sensing data products that provide information about chlorophyll a concentrations, temperature, and turbidity for the Chesapeake Bay.	NOAA	06/30/2011	Complete	Chesapeake Total Suspended Material algorithm in per-review; distributed on CoastWatch Website, coordinating validation with MD DNR
2	NOAA will coordinate with MD DNR to provide data to support improved detection of harmful algal blooms of the genus Microcystis.	NOAA	12/31/2010	In Progress	
3	Support state monitoring programs with grant funds.	EPA	09/30/2011	In Progress	Decisions were made in the 3rd quarter to increase funding in MD and VA 117e for one additional cruise. The additional cruise supports a critical assessment of conditions in the middle of the Bay that has recently been shown to be sensitive to nutrient load conditions through time as well as climate driven effects. This will help track ecosystem response to management actions. Tidal and Nontidal WGs have met through the CBPO STAR in a joint meeting this quarter that will result in Case Study summaries and plans for watershed syntheses that cut across the nontidal and tidal realms of monitoring. Action teams are being formed in the 4th quarter. A summary of case studies is planned first during calendar year 2011. Plans for synthesis work will be made in 2011 but look to get underway with a team in 2012.

WQ 16. *Expand NOAA buoy system to improve water-quality monitoring and assess new sensors for monitoring emerging contaminants.*

#	Action	Joint Lead(s)	Due Date	Status	Action Narrative
1	NOAA will continue to operate and maintain Chesapeake Bay Interpretive Buoy System (CBIBS). In addition, and in cooperation with MD DNR, NOAA will begin to support water quality monitoring.	NOAA	09/30/2011	In Progress	Tenth buoy added to System 7/2011. Successful operations continue. Operations and Maintenance capabilities improved through creation of O&M plan; increased sparing capability; contracting to EO partners like MD DNR to improve data quality by more frequent instrument replacement; investigations into improving data quality new data management tools for sharing data and data quality information with partners. nering with with Washington College to deploy N and P sensors in the Chester R.

Strategy Goal: *Water Quality*

WQ 17. *Evaluate water-quality changes and progress to adjust management actions.*

#	Action	Joint Lead(s)	Due Date	Status	Action Narrative
1	USGS, collaborating with EPA, will better explain water-quality changes and their relation to BMPs in major watersheds of the Bay basin.	USGS	09/30/2011	In Progress	The USGS prepared a plan to assess water-quality change for the Eastern Shore. The Eastern Shore will be done in 2012-13 and the Potomac in 2013-2015.

WQ 18. *Ensure TMDL allocations account for climate change impacts.*

#	Action	Joint Lead(s)	Due Date	Status	Action Narrative
1	Determine the climatological changes (temperature, wind, rainfall) likely to occur with climate change and, thru the use of the bay models, determine the changes that will occur in water quality at Bay TMDL loads and other scenarios	EPA	09/30/2011	In Progress	Three pronged approach: 1) We are nearing completion of a preliminary study with STAC and Penn State; 2) We will soon begin a comprehensive study of expected hydrologic change with USGS; and 3) We are advisors on a large NSF proposal to comprehensively look at climate change effects on the Chesapeake.
2	USGS will be conducting an initial analysis of changes in streamflow and nutrient loads under different climate change scenarios (funding and more information under CC11.	USGS	09/30/2011	In Progress	USGS is continuing to assess the potential effect of climate change on streamflow that will be completed in 2012. Assessment of water quality change is dependent on additional funding and was not started.

Strategy Goal: *Habitat*

RH 1. *Restore and protect priority Chesapeake marshes.*

#	Action	Joint Lead(s)	Due Date	Status	Action Narrative
1	In FY11 Restore and protect 300 acres of priority Chesapeake Bay marshes for the American black duck an other wetland birds.	FWS	09/30/2011	In Progress	FWS Coastal Program: developing a project to restore and protect 350 acres of forests and salt marsh on the Chicamacomico River in the Nanticoke - Blackwater watershed. Also in process of acquiring 200 acres of salt marsh on Cedar Island at the mouth of the Pocomoke River using FWS Coastal Grant and MD DNR funds. Cedar Island provides secluded nesting, migrating, and wintering habitat for black duck. The property will be added to Cedar Island Wildlife Management Area. Settlement will occur following approval by the Maryland Board of Public Works. Migratory Bird program: NAWCA Small Grant approved to restore water control capability, allowing enhancement of 56 acres of degraded wetland and preventing 85 acres from being lost. NAWCA Standard Grant applied for to restore/protect 930 acres of wetlands in the Chesapeake Bay watershed.
2	Work with USGS and LCCs to determine how many acres of wetlands need to be restored, enhanced and protected to see gains in fish and wildlife habitat and water quality.	FWS	09/30/2011	Not Started	Wetland Action Team meeting scheduled for April 28, 2011 includes agenda item to discuss and rank factors impacting wetland restoration work
3	Work with partners to develop detailed soil maps for the watershed where they don't exist (SSURGO).	FWS	09/30/2011	Not Started	Work was dependent on the President's 2011 Budget and will not be initiated.

Strategy Goal: *Habitat*

RH 2. *Increase incentives for wetland restoration and enhancement on private land.*

#	Action	Joint Lead(s)	Due Date	Status	Action Narrative
1	Restore/enhance 1,200 acres in priority watersheds, including Maryland's Lower Eastern Shore	FWS	09/30/2011	Complete	The Partners for Fish and Wildlife Program from the PA, NY, and Ecological Field offices as well as the CBFO have completed 493.5 acres of wetland restoration within the Chesapeake Bay watershed. The Service expended $70,371 towards these wetland restoration projects. The largest percentage of the wetland restoration acres are located in MD & DE (275.5 acres combined) utilizing $7.8 million in WRP funds to acquire easements and complete the hydrology and ecological restoration plans.
2	Implement at least 5 new PFW agreements per state to restore wetlands on private lands	FWS	09/30/2011	In progress	
3	In cooperation with the States, apply for NAWCA small grant and Coastal grant to combat the invasive weed Phragmites on 500 acres of Chesapeake Bay wetlands	FWS	09/30/2011	In Progress	
4	Use the USDA Wetlands Reserve Program to restore, protect, and enhance wetlands on private lands in the Chesapeake Bay Watershed.	NRCS	09/30/2011	Complete	NRCS will continue to implement WRP in 2012. NRCS and FWS are working to implement WRP in MD by completing the hydrology and vegetation restoration on a 1,800 acre site in Somerset County. 100 acres were restored in 2011 and the remaining 1,700 acres will be restored in 2012.The site is also being used for the development of a remote sensing monitoring protocol using SAR. This research is a joint endeavor with the NRCS, USFS and USFWS.

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RH 3. *Strengthen federal coordination on permits that impact wetlands.*

#	Action	Joint Lead(s)	Due Date	Status	Action Narrative
1	FWS will work with SRBC Water Quality Monitoring Network on minimum base flow for groundwater recharge in the Susquehanna to sustain floodplain connectivity	FWS	04/30/2011	In Progress	FWS-CBFO is participating as an IRT review member for the MD SHA draft mitigation banking umbrella prospectus.
2	NOAA's Northeast Regional Office will work to further coordination with other regulatory agencies by: (1) initiating discussions on the benefits of programmatic consultations; (2) recommending an approach to facilitate such programmatic consultations; (3) renewing its Memorandum of Agreement with the USACE to provide enhanced authority for protecting priority habitats used by NOAA's trust resources; and (4) keeping staff from USACE districts, Coast Guard and other regulatory agencies updated on stewardship requirements of applicable laws/regulations (e.g., Magnuson-Stevens Fishery Conservation and Management Act, Fish and Wildlife Coordination Act). In addition, NOAA will retain an up to date tabulation of the amount of Endangered Species Act critical habitat placed under threat and the amount of habitat saved.	NOAA	09/30/2011	In Progress	2 - NOAA Fisheries has begun discussion with the ACOE and MD on the potential for a streamlined permit programmatic process for aquaculture permitting.
3	Provide outreach opportunities designed to educate the public on various aspects of the USACE Regulatory program including jurisdictional authorities over waters of the United States and their adjacent wetlands.	DOD-USACE	09/30/2011	Complete	Baltimore and Norfolk Districts provided and educational presentation at the recent EMT Conservation and Wetland banking workshop.

RH 4. *Accelerate application of Conservation Reserve Enhancement Program (CREP) to achieve state goals for riparian forest buffer adoption.*

#	Action	Joint Lead(s)	Due Date	Status	Action Narrative
1	Develop and distribute outreach materials for CREP/forest buffers (e.g., videos, posters, etc.)	FS	09/30/2011	Complete	Short web video was produced; a portion of FS 2011 grants to states supported forest buffer outreach materials
2	Hold educational meetings with TSP's and partners in each state to discuss the relevance of CREP/forest buffers to Bay and state goals.	FS	09/30/2011	In Progress	Meetings will be accomplished in FY2012 in part through FS 2011 grants to states and partners. Newly formed interagency team (NRCS/FSA/State Forestry) will assist in planning and implementing this action.

Strategy Goal: *Habitat*

RH 5. *Restore forest buffers in priority watersheds.*

#	Action	Joint Lead(s)	Due Date	Status	Action Narrative
1	Develop and overlay forest buffer priority map with CBWI priority watersheds map.	FS	09/30/2011	In Progress	Forest buffer priority maps are being developed for select NRCS CBWI priority watersheds in MD, VA, and PA in 2011-2012, supported by FS 2011 grants to states.
2	Develop, test, and distribute criteria for determining which riparian areas are the highest priority for restoration.	FS	09/30/2011	In Progress	Buffer targeting matrix for prioritization has been developed and vetted with Forestry Workgroup. It is being applied/tested in MD and will be applied in VA and PA through FS 2011 grants to states. Working with National Agroforestry Center to review prioritization criteria.
3	Restore 35 acres of riparian forest at Eastern Neck NWR to improve water quality and create additional high quality habitat for migratory birds and other wildlife	FWS	09/30/2011	In Progress	FWS has contracted project with local contractor and tree planting is underway at Eastern Neck NWR. FWS Partners for Fish and Wildlife program is working with NRCS to assist in delivery of Wetland Reserve Program projects, which accelerates wetland restoration and promotes native forest communities.

RH 6. *Explore alternative payment mechanisms for incentivizing the installation of targeted riparian forest buffers.*

#	Action	Joint Lead(s)	Due Date	Status	Action Narrative
1	Meet with experts to discuss how criteria for placing highly-effective buffers on private land could be used in various agency programs.	FS	05/31/2011	Not Started	This action will be initiated after RH6.2 (option paper) is completed in Sept. 2011.
2	Produce option paper on payment mechanisms, including how to minimize the costs associated with buffer restoration while maximizing the pounds of pollutants removed.	FS	03/31/2011	Complete	Option paper was produced in Sept 2011 and will be distributed to interested parties.
3		No Lead Provided	No Date		

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RH 7. *Enhance technical capacity for riparian buffer restoration.*

#	Action	Joint Lead(s)	Due Date	Status	Action Narrative
1	Increase technical assistance in watersheds with species-of-interest (e.g., Upper James where rare, freshwater mussles will be protected by buffer restoration).	FWS	07/31/2011	In Progress	The Partners for Fish and Wildlife Program in concert with USDA NRCS and our non government partners increased staffing capacity in Maryland, Pennsylvania, and Virginia with cost-shared biologist positions. Theses positions provided assistance to NRCS in the implementation of conservation programs and practices that resulted in accelerated delivery of on-the-ground habitat restoration. Our efforts with NRCS under the Partners for Fish & Wildlife Program during FY11 resulted in the successful delivery "on-the-ground" of 20 miles of riparian habitat restoration.
2	Assess impact of current partnership initiative that provides additional direct landowner assistance in MD.	FS	09/30/2011	In Progress	MD had hiring delays, but 2 part-time outreach positions are now in place. Impact will be assessed in 2012.
3	Build and support collaborative partnership to provide additional forestry technical assistance to landowners in targeted landscapes.	FS	09/30/2011	In Progress	In follow up to the Bay State Forester-NRCS State Conservatist-FSA Director web meeting on 4/13, an interagency team has been formed to coordinate on this and other forest buffer actions. FS 2011 grant to Virginia will support additional forestry technical assistance in priority Shenendoah Valley watersheds.

Strategy Goal: *Habitat*

RH 8. *Remove stream barriers and provide fish passage.*

#	Action	Joint Lead(s)	Due Date	Status	Action Narrative
1	Working in partnership, NOAA, FWS, NRCS, and the States of MD, VA, and PA will open 67 miles for fish passage to benefit anadromous and resident fish species.	NOAA/FWS	09/30/2011	Complete	DRAFT (Oct 25 will have final #s) In MD, Simkins Dam removal has opened 20 miles in Q3. FWS eel passage goal is to open the Potomac Watershed to American eel passage. The Shenandoah River Watershed is nearly completely open to upstream and downstream eel passage; the last two dams on the South Fork of the Shenandoah River are planned for eelway construction. On the main stem Potomac River, final plans are being drafted for eel passage at Dams 4 & 5.
2	Complete MD Fish Passage Prioritization (deliverable - prioritized list of MD fish barrier projects).	NOAA/FWS	10/31/2010	Complete	MD Fish Passage Prioritization document is complete. However, efforts are still underway to complete the Fish Passage Prioritization Exercise for the Chesapeake Bay (MD, VA and PA) through a partnership with TNC. Funding from both NOAA ($87,985) and USFWS has been allocated for this effort. High priority projects in MD have been identified - although the final product to include MD, VA and PA will not be complete until FY12.
3	Begin VA and PA Fish Passage Prioritization (deliverable - prioritized list of VA fish barrier removal projects milestone will be addressed in 2012 Action Plan; PA in 2012/2013 action plan).	NOAA/FWS	9/30/2012	Complete	FY 11 progress is complete. VA and PA fish passage prioritzation has begun. Efforts are underway to complete the Fish Passage Prioritization Exercise for the Chesapeake Bay (MD, VA and PA) through a partnership with TNC. Funding from both NOAA ($87,985) and USFWS has been allocated for this effort. Completion date is scheduled for FY2012.
4	Carryout environmental clearance for providing upstream passage for American Eel at Potomac River dams 4 & 5 along the C&O Canal NHP.	NPS	09/30/2011	In Progress	Project is incurring design edits. Construction of the eel ladder will likely not begin until FY12.

RH 9. *Document return of fish and mussels to opened stream reaches.*

#	Action	Joint Lead(s)	Due Date	Status	Action Narrative
1	Conduct fish and freshwater mussel surveys above sites where barriers have been removed in the past 5 years	FWS	09/30/2011	In Progress	Monitoring is a built in permit requirement for fish passage projects, such as those at hydroelectric dams on the Lower Susquehanna River..
2	Monitor effectiveness of fish passage structures that have been installed in the last 5 years	FWS	09/30/2011	Not Started	This work was dependent on the President's 2011 Budget and will not be initiated.
3	Develop standard sampling techniques to assess juvenile recruitment from newly accessible diadromous fish spawning and rearing habitat	FWS	09/30/2011	Not Started	This work was dependent on the President's 2011 Budget and will not be started.

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RH 10. *Combat invasive species that threaten habitat.*

#	Action	Joint Lead(s)	Due Date	Status	Action Narrative
1	Implement actions in the snakehead management plan, including salinity and temperature tolerance studies, and collaborate with NPS to reduce spread of snakehead through the Chesapeake & Ohio Canal (Fisheries). With the Aquatic Nuisance Species Task Force/Mid-Atlantic Panel, develop and deploy strike team for early detection/rapid response on 11 national wildlife refuges and surrounding private lands (Refuges). Continue eradication of nutria (Ecological Services base funding) and work with USGS to monitor wetland recovery. Work with partners to address C. ariakensis concern (Fisheries). Restore/enhance 50 acres in WV through Potomac Highlands Cooperative Weed Pest Management Initiative.	FWS	09/30/2011	In Progress	Continue to manage invasives at USACE reservoirs. FWS Fisheries is engaged in snakehead movement studies in the Potomac River, Bioassays to inform snakehead control efforts, and the development of a National Management Plan for snakehead control. Controlling invasive woody vegetation on 50 acres of wetlands supporting the federally-threatened bog turtle. Continuing to remove the destructive exotic invasive nutria from 300,000 acres of Chesapeake Bay marshes through the efforts of the FWS-funded Chesapeake Bay Nutria Project. Nutria have been removed from approximately 1000 acres during this quarter and over 150,000 acres since the project began.
2	NOAA, Sea Grant, state representatives from Chesapeake Bay watershed states, the Mid Atlantic ANS Panel and others will identify and initiate research together to identify ways to assess and interdict the live bait pathway of invasion in the mid-Atlantic area. Conduct research prioritization and research project selection.*	NOAA	09/30/2011	In Progress	In April, 2010, the Smithsonian Environmental Research Center received support for their project Importation of Baitworms and their Live Algal Packing Materials to the Mid-Atlantic: Vector Characterization and Management. Project efforts is primarily focused on salt water anglers in the mid-Atlantic region including the Chesapeake Bay. This multiyear grant funds a interdisciplinary team of marine invasion biologists and social scientists to investigate the biological and social science dimensions of the live bait worm vector from harvester, through suppliers to angler. Survey work was conducted in the mid-Atlantic region and Maine. An outreach and education campaign promoted safe disposal of live bait among anglers while they participated in a free bait 'giveaway.' Similar work continues this fall, with data analysis and planning for a comprehensive social science intervention campaign for the next summer.
3	Actively manage invasive species on flood risk management/reservoir projects.	DOD-USACE	09/30/2011	Complete	USACE continues to actively manage invasive species on flood risk management/reservoir projects across the Chesapeake Bay watershed.

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4	Carry-out invasive species eradication efforts at National Parks and map new invasive species occurrences.	NPS	09/30/2011	Complete	In an effort to manage the most significant non-native invasive plant populations within the Chesapeake Bay Watershed, the National Park Service identified and attempted to manage more than 60 species of invasive plants in 2010. To accomplish this task, more than 500 acres of park lands were inventoried, 383 acres were treated with herbicides, 117 acres were retreated to eliminate problematic plant populations, and 1030 acres were monitored post treatment to assess the effectiveness of the selected management options. From actions implemented by park level personnel, one non-native invasive plant species was totally controlled on park lands found within the watershed in 2010.

RH 11. *Restore forest habitat in priority areas.*

#	Action	Joint Lead(s)	Due Date	Status	Action Narrative
1	Convene interested parties to discuss targeted forest restoration and begin to prepare Strategy.	FS	04/30/2011	Complete	Webinar was held on 5/5 with over 65 federal, state, local and ngo entities to kick off development of strategy. Six strategy teams are being convened to address the targeting priorities: urban/community, green infrastructure, wildlife, brownfields, mine lands, agroforestry.
2	Identify and map targeted areas for restoration. Example: FWS will develop and implement priority projects to meet habitat needs of various migratory birds; restore/enhance 1600 forest acres in VA/MD/DE, including 31 acres at Eastern Neck NWR.	FS/USGS/FWS	09/30/2011	In Progress	FS is coordinating with FWS, USGS, and newly formed strategy teams (RH11.2) to compile GIS layers for Forest Restoration Strategy to be completed in 2012.
3	Target a portion of an existing cooperative grant program to reforest large private lots currently managed as lawn.	FS	09/30/2011	In Progress	Several 2011 NFWF Small Watershed Grants support this action and negotiations for expanding the scope of the Grants to include reforestation as an objective per the Forest Restoration Strategy have begun for 2012.

Strategy Goal: *Habitat*

RH 12. *Restore living shorelines.*

#	Action	Joint Lead(s)	Due Date	Status	Action Narrative
1	Provide technical expertise on specific engineering designs for living shoreline projects and complete funded living shoreline projects (e.g., Jamestown r-H Phase 2 (200 linear feet/.25 acres), Haven Creek (800 LF, .9 acres, 500 feet in VA by FWS). (DRAFT - update Haven Creek and add an FY 10 project).	NOAA/FWS	09/30/2011	In Progress	DRAFT (update Haven Creek). NOAA Restoration Center has completed the Jamestown 4-H Living Shoreline (350LF and .2 acres) and Jamestown Beach (400 LF and .08 acres). Haven Creek project is under construction (825 LF and .9 acres). The FWS has completed strategic plans for their Ecological Services Offices in Virginia and Maryland. These plans identify living shorelines as one of their priorities to restore habitat for several listed species. In FY10, the FWS has funded project to protect 2 miles of natural shorelines in Maryland for the protection of the Puritan Tiger Beetle and the Northeastern Beach Tiger Beetle. In Virginia the FWS has provided funds towards a project in Matthews County to restore/protect 0.96 mile of shoreline. These project also support the conservation of many other trust species like American eel.

RH 13. *Restore island habitats in the Bay.*

#	Action	Joint Lead(s)	Due Date	Status	Action Narrative
1	Continue Island design and construction through Poplar Island Expansion and initiate design for Mid-Bay Island	DOD-USACE	09/30/2011	Complete	Poplar Island-Continue engineering and design of wetland cells; stone monitoring; annual surveys and monitoring; restoration management and project coordination. planting, tidal inlet structure and initiate design of the Poplar Island expansion. Mid Bay- Negotiate and execute a design agreement with the State of Maryland.
2	Host and Facilitate monthly educational field trips to Poplar Island.	DOD-USACE	09/30/2011	Complete	
3	Restore tidal wetlands. USGS and FWS will assess relative value of poplar island restoration to migratory birds in support of restoration of island habitats.	FWS/USGS	09/30/2011	In Progress	USGS published article on island restoration and use for water birds. FWS actively manages and restores fish and wildlife habitats at Poplar Island; activities include predator control, hydrology restroation and management, monitoring of species populations and seabird nesting habitat management and restoration.

Strategy Goal: *Habitat*

RH 14. *Mitigate impacts of highway projects on habitat.*

#	Action	Joint Lead(s)	Due Date	Status	Action Narrative
1	Number of plans initiated. DOT and Eco-Logical partner agencies will continue encouragement of the Eco-Logical approach.	DOT	09/30/2011	In Progress	Mitigation of anticipated effects of a proposed Federally-assisted transportation project is eligible as part of funding for these projects. Project selections are made by state DOT's and locals, Design decisions are made by project sponsors taking into account mitigation required to comply with Federal and other environmental laws. DOT's role is to ensure that environmental reviews are completed and appropriate mitigation considered. This year DOT presented a number of workshops on using the Eco-Logical approach and gave a presentation at the International Conference on Ecology and Transportation(ICOET).
2	FWS will continue to provide consultation on habitat mitigation for DOT and SHA partners within base funds	FWS	09/30/2011	In Progress	FWS-CBFO Reviewed and provided recommendations to 4 projects currently in MD SHA project planning. Intercounty Connector (ICC) FWS-CBFO reviewed and provided comments for 11 compensatory mitigation and environmental stewardship projects.

RH 15. *Improve forest buffer and wetland habitat mapping.*

#	Action	Joint Lead(s)	Due Date	Status	Action Narrative
1	Convene federal partners to assess current wetland and stream mapping technical capabilities, related efforts and stakeholder needs and develop an implementation work plan for FY ’12.	FS	05/31/2011	Complete	The Chesapeake Bay Wetland and Stream Mapping Workshop was conducted on July 27. The goal of the workshop was to help assess current wetland and stream mapping technical capabilities, related efforts and stakeholder needs. An implmentation plan is being developed.
2	Establish wetland geospatial specialist and technician positions and purchase hardware and software necessary to implement FY ’12 work plan.	FS	09/30/2011	Not Started	MD 3 FEIS
3	Collect and analyze baseline in situ and remotely sensed data to train staff and bolster the calibration and initial validation of map products.	FS	09/30/2011	Not Started	Awaiting status from Forest Service Research; will add update soon

RH 16. *Provide forest mapping tool to watershed groups and local governments.*

#	Action	Joint Lead(s)	Due Date	Status	Action Narrative
1	Load fully-functional tool to web.	FS	02/28/2011	In Progress	Mapping tool is in the final stage of testing and will be released for application in 2012.
2	USGS will provide a land cover mapping tool for forest and impervious surface and will hold a series of workshops to demonstrate use of the tool.	USGS	07/31/2011	In Progress	Mapping tools are nearing completion and presented to Forest WG. Improvements being made.

Strategy Goal: *Habitat*

RH 17. *Improve tools for streams and fish passage.*

#	Action	Joint Lead(s)	Due Date	Status	Action Narrative
1	Develop a stream assessment tool that identifies critical functions of streams and thresholds of fluvial geomorphologic stability and biological health	FWS	09/30/2011	In Progress	CBFO Coastal Program-Stream Habitat Assessment and Restoration: Is currently working on 2 stream tools. 1) A Stream Functional Framework that identifies critical stream functions that should be assessed as part of stream restoration or mitigation. Framework also identifies thresholds of functions and methods to assess functions. Final draft is completed and final is scheduled for Dec 2011 - status "in-progress". 2) Revisions to the Natural channel design review check list. The checkist is a list of questions that should be addressed when reviewing a stream restoration or mitigation design. Scheduled for completion winter 2011 - status "in-progress".
2	Develop a drainage-wide decision support system to help prioritize habitat restoration and AMD mitigation in the upper watershed	FWS	09/30/2011	Not Started	US 50 PACM
3	Conduct vulnerability assessment for brook trout drainages in upper Susquehanna River watershed (PA and NY)	FWS	09/30/2011	In Progress	FWS staff working in coordination with Eastern Brook Trout Joint Venture

RH 18. *Integrate watershed planning for key tributaries.*

#	Action	Joint Lead(s)	Due Date	Status	Action Narrative
1	Advance watershed plans for the Anacostia, Lynnhaven and Upper Rappahannock.	DOD-USACE	09/30/2011	Complete	Scope draft cost sharing agreements required prior to starting the two (2) specific Feasibility reports that would document environmental, economic, and engineering solutions needed to identify/select the optimum improvement plans for Prince Georges County and Montgomery County. 2. Lynnhaven-working to negotiate and execute the design agreement with the non-Federal sponsor. 3. Upper Rappahannock planning to prepare feasibility phase activities, specifically, initiate modeling efforts on proposed restoration sites.
2	Establish an internal team to work as a community of practice on IWRM issues in Chesapeake Bay.	DOD-USACE	09/30/2011	Complete	USACE members identified for IWRM team. Also pursuing funding and Federal interest for Chesapeakebay Comprehensive Watershed Plan to identify priority areas for restoration and protection.
3	Establish wetland geospatial specialist and technician positions and purchase hardware and software necessary to implement FY ’12 work plan.	DOD-USACE	09/30/2011		
4	Commence watershed feasibility in Southern PA to assist in meeting sediment TMDLs	No Lead Provided	No Date		

Strategy Goal: *Habitat*

RH 19. *Improve monitoring of habitats.*

#	Action	Joint Lead(s)	Due Date	Status	Action Narrative
1	FWS will develop an improved rapid method to monitor stream restoration projects; NOAA will assess its programs to determine the best approaches to improve monitoring for habitats, and will provide information on those programs and their capabilities to the Chesapeake Monitoring Alliance.	NOAA/FWS	09/30/2011	In Progress	Improved monitoring (through either collection of additional information at existing sites or addition of monitoring sites) is contingent on receipt of additional funds. CBFO Coastal Program-Stream Habitat Assessment and Restoration: Is currently developing a rapid stream restoration monitoring protocol. Scheduled for completion fall 2011.
2	NOAA will establish monitoring programs to assess changes in vegetative communities, focusing on programs in the VA and MD National Estuarine Research Reserves (see action CC-7, regarding the estuarine monitoring network).	NOAA	09/30/2011	Complete	NOAA: Vegetation community monitoring protocols in place at both MD and VA Chseapeake Bar NERRs; Surface Elevation Tables (SETs) established throughout both reserves to monitor elevation change in targeted wetland habitats; local geodetic control networks established in key components of both reserves to monitor habitat changes in response to changing local sea levels.
3	Work with the Susquehanna River Basin Commission and/or other watershed commissions or agencies to improve monitoring of the Susquehanna River, Potomac River, and Annacostia River, and other Chesapeake Bay tributaries (for example, by deploying real-time water quality monitoring stations, etc.).	DOD-USACE	09/30/2011	Complete	Work with the Susquehanna River Basin Commission and/or other watershed commissions or agencies to improve monitoring of the Susquehanna River, Potomac River, and Annacostia River, and other Chesapeake Bay tributaries (for example, by deploying real-time water quality monitoring stations, etc.). Continue to support SRBC by representing the Federal agencies on the Commission. Continue membership in the Anacostia Watershed Restoration Partnership at all levels, the Patuxent River Commission and the Interstate Commission on the Potomac River Basin.
4	Complete five year monitoring of Heritage Island wetland restoration project at National Capital Parks East.	NPS	09/30/2011	Complete	Anticipate completion by due date.

RH 20. *Improve tracking of wetland restoration.*

#	Action	Joint Lead(s)	Due Date	Status	Action Narrative
1	Collect and analyze baseline in situ and remotely sensed data to train staff and bolster the calibration and initial validation of map products.	EPA	Ongoing	In Progress	Habitat GIT's Wetland Workgroup working with CBP Data Center to develop pilot using NEIEN node to collect data on wetland work in Maryland in FY12. A stream and wetland restoration workshop is being held July 27, 2011.

RH 21. *Improve baseline data for wetlands.*

#	Action	Joint Lead(s)	Due Date	Status	Action Narrative
1	Update the Chesapeake Bay watershed NWI maps to the National Wetlands Mapping Standard, beginning with targeted watersheds	FWS	09/30/2011	Not Started	dependent on receipt of new FY11 funding.

Strategy Goal: *Habitat*

RH 22. *Predict impacts of stressors at the land-water interface.*

#	Action	Joint Lead(s)	Due Date	Status	Action Narrative
1	Complete year 1 field sampling effort (sub-estuarine field sites for Submerged Aquatic Vegetation, Phragmites, macrofauna). Note: sampling started in FY 2010, first year of project. *	NOAA	12/31/2010	Complete	This is a multi-year project that will provide information on the combined effects of shoreline hardening, watershed land use and Phragmites invasion of tidal wetlands on habitat quality for seagrasses and estuarine animal species. Studies will relate the presence and condition of sub-tidal seagrasses and estuarine animals to dominant shoreline type (natural, riprap, bulkhead), watershed land use (dominated by forest, agriculture, or developed land) and other factors such as wave energy, sediment supply, and water oxygen levels. Field sampling has been completed for FY10 and FY11. One more complete sampling year will take place in summer 2012.
2	Activities completed for FY 11 and will continue in FY 12. Share the information derived from the year one sampling effort with natural resource management representatives and other interested stakeholders, to gain input regarding the development of appropriate research products.*	NOAA	04/30/2011	Complete	PB-12 Stream
3	USGS will work with NOAA and SERC to assess factors affecting shallow water habitats. USGS focus is on habitat for waterbirds.	USGS	09/30/2011	Complete	Sampling for waterbirds is completed for yr one. Integration of waterbird results with habitat and other project data will be ongoing over winter and spring 2011. Summer 2012 includes sampling for year 2. Progress is on track for completion of FY11 tasks by 9/30/2011.

RH 23. *Evaluate use of Coastal and Marine Spatial Planning in the Bay.*

#	Action	Joint Lead(s)	Due Date	Status	Action Narrative
1	Complete evaluation of potential to support Coastal and Marine Spatial Planning in the Chesapeake Bay with State partners, and consult with other federal agencies as appropriate.	NOAA	03/31/2011	Complete	The coastal data and support needs assessment was completed and shared with Maryland and Virginia for their review. These needs are being used by NOAA staff in considering how best to support ongoing spatial planning efforts in the Chesapeake. In addition, NOAA staff are participating on specific CMSP projects with both states. Both MD and VA have also placed an emphasis on CMSP in their CZMA 309 Strategies for FY11-15.
2	Determine the appropriate type and level of support NOAA (and other federal agencies) could provide to States to support Coastal and Marine Spatial Planning in the Chesapeake Bay.	NOAA	06/30/2011	Complete	Activiites complete as planned for FY 11 - will be ongoing. NOAA, TNC, MD, and VA are collaborating on a spatial plan to prioritize oyster restoration, aquaculture, living shoreline, and fish passage projects throughout the Bay. A scope of work has been developed, a steering committee identified, and a work plan is under review

Strategy Goal: *Habitat*

RH 24. *Evaluate impacts of river flow and sediment build-up on habitat.*

#	Action	Joint Lead(s)	Due Date	Status	Action Narrative
1	Work with SRBC and ICPRB to advance low flow studies	DOD-USACE	09/30/2011	Complete	1. Working to secure funds to complete the feasibility phase including preparation of a draft report, internal review activities, and report finalization- Middle Potomac River, MD Watershed Assessment. 2. Working to secure funds to complete the Phase 1 Feasibility report and initiate the Phase 2 feasibility report for Susquehanna River Basin, MD Low Flow Management Study. Signed cost sharing agreement (see also WQ4a).
2	Advance evaluation of sediment behind the Conowingo Dam.	DOD-USACE	09/30/2011	Complete	Enter new text here.
3	USGS will provide results from a project on the potential changes to sediment in the Susquehanna basin due to climate change and land-use change in the Bay watershed(see CC11).	USGS	09/30/2011	In Progress	USGS provided results from prefious reservoir studies to USACOE. Plans to provide climate ipactes will not be done due to funding reductions, but USGS will provide support to USACOE for new sediment assessment of reservoir.

Strategy Goal: *Fish & Wildlife*

FW 1. *Launch a Bay-wide oyster strategy using scientific support for decision making.*

#	Action	Joint Lead(s)	Due Date	Status	Action Narrative
1	Convene Sustainable Fisheries Goal Implementation Team to provide coordination and oversight for bay-wide oyster restoration activities (e.g., USACE master plan, MD spatial plans, VA restoration plans). Establish subject-specific workgroups/technical committees to coordinate subtasks (e.g., identify prime restoration sites, common restoration goals/metrics/monitoring, acquiring substrate, hatchery capacity).	NOAA/DOD-USACE	03/31/2011	Complete	Other programs have been queried and at this time they are not suitable for new business development."
2	Establish oyster coordinator to lead NOAA's engagement on Bay-wide oyster issues.	NOAA	12/31/2010	Complete	NOAA Oyster Lead was hired in November 2010
3	Continue efforts to develop and finalize the Native Oyster Restoration Master Plan	DOD-USACE	9/30/2012	In Progress	NOAA is working with USACE on the Master Plan as well as FY11 Substrate placement projects. Looking to finalize Plan in 2012.

Strategy Goal: *Fish & Wildlife*

FW 2. *Restore priority tributaries and support enforcement.*

#	Action	Joint Lead(s)	Due Date	Status	Action Narrative
1	Complete seafloor mapping in MD and VA tributaries, consisting of pre-restoration habitat characterization surveys and analyses for three tributaries. Administer FY 10 awards for restoration in MA and VA tributaries.	NOAA	09/30/2011	Complete	Pre-restoration assessments of sanctuaries in MD tributaries identified for the first round of construction are complete. All required broad scale (side scan sonar) mapping for Maryland target tributaries for FY 11 completed by NOAA (Harris Creek, Miles and Wye Rivers and the Eastern Bay Sanctuary. Fine scale (multibeam sonar) assessment of restoration sites in Harris Creek for final site selection completed. Additional fine scale mapping completed in Choptank River (Cook Point sanctuary) and Severn River (alternative substrate study with MDNR and USACE). Site selection analyses using these and other environmental data were completed for Harris Creek, and are underway in remaining 2011 target tributaries. MD Geological Survey partners completed their broad scale mapping responsibilities in Cox creek and the Little Choptank River. Information supplied will be used to perform site selection analyses in early 2012. NOAA will conduct broad scale mapping on the Lafayette River in Virginia early in December 2011.
2	Deploy additional reef ball materials at MD and VA sites for habitat benefit and harvest protection.*Administer FY 10 awards for restoration in MD and VA tributaries.	NOAA	06/30/2011	In Progress	NOAA has funded Chesapeake Bay Foundation to engage volunteers to construct and set with oysters reef balls for deployment in MD and VA. Some reef balls have been set and deployed. This effort will continue into 2012 with additional funding. FY 10 awards are awarded and projects under awards are being implemented.
3	Advance planning and Decision Document for Phase V for Piankatank, and substrate construction contract, likely in the Choptank River system.	DOD-USACE	09/30/2011	Complete	The Decision Document for the Piankatank River Oyster Restoration project is currently being written, and we propose to augment the restored reefs in the Great Wicomico River in 2011. Construction of 8.5 acres of oyster reef habitat using granite will be completed by March 2011. Planning for additional substrate construction will be initiated in late January 2011 (see also FW13)

Strategy Goal: *Fish & Wildlife*

FW 3. *Expand commercial aquaculture.*

#	Action	Joint Lead(s)	Due Date	Status	Action Narrative
1	Identify opportunities and constraints for use of NOAA and other Federal financial assistance programs	NOAA	09/30/2011	In Progress	A significant impediment to shellfish aquaculture was the amount of time it took to gain the requisite permits. The NOAA Office of Aquaculture and NMFS NERO Aquaculture Coordinator collaborated closely with the NERO Habitat and Protected Resource Divisions in a successful effort working with the Baltimore Army Corps District and the State of Maryland to craft a General Permit for Shellfish Aquaculture. This effort included meeting for 7 months between all of the parties. This effort resulted in a Corps general Permit being released which will streamline the time needed to gain a permit for shellfish permit. The NERO Aquaculture Coordinator has been consulting with the NERO Fishery Finance Program Office to learn more about the FFP to be able to identify businesses that qualify for the program. Currently the program does not allow for new entrants into the industry to be funded as a track record of business cash flow is required. The knowledge gained from this effort will allow the NERO office to direct suitable businesses to the program. The NERO Aquaculture Coordinator has also been monitoring the Blue Crab Disaster" funds used in the State of Maryland for training displaced Blue Crab fishing industry participants in oyster culture. This program is being administered by the state.
2	Draft priority topics for competitive grant programs	NOAA	09/30/2011	In Progress	Continued action and consultation with science centers is underway. New Aquaculture Science Coordinator is on board and working on it. Sea Grant and NOAA SBIR funding will be directed to shellfish proposals that have implications for the Chesapeake bay. The NERO Aquaculture Coordinator continues to monitor the Blue Crab Disaster Funds which have a large shellfish component included. The NOAA Aquaculture office continues to work to increase the Fishery Finance program to include more aquaculture related activities. The NERO Aquaculture Coordinator works with the NERO Fishery Finance program office and has directed prospective applicants to that office.

3	Identify potential science support from NOAA science centers	NOAA	09/30/2011	In Progress	"The NOAA Office of Aquaculture and the NERO Aquaculture Coordinator continues to work with industry to identify issues that need support from the Science Centers. The effort continues with close interaction with the relevant science centers. Currently the Milford lab works closely with industry and the Office of Aquaculture to coordinated efforts and support for this effort. This is an ongoing multi year effort. As an example of the efforts in the past year, a research effort is continuing on the ecological affects of shellfish harvesting on the benthic environment, another effort is the use of ribbed mussels in the Bronx River for environmental remediation. "

FW 4. *Support continued inter-jurisdictional blue crab management.*

#	Action	Joint Lead(s)	Due Date	Status	Action Narrative
1	Evaluate and revise (if applicable) the current blue crab abundance target.	NOAA	08/31/2011	Complete	Stock Assessment for blue crab was finalized and released to the public on August 9. It was peer reviewedby Center for Independent Experts (CIE) March-April 2011 and presented to the Goal Implementation Team in June 2011. These reviews were provided to the full Fisheries Goal Team for consideration and movement on Action 2. CIE New assessment provides revised target and threshold reference points.
2	Using revised blue crab abundance target, work with States and Potomac River Fisheries Commission to update fisheries regulations as necessary (developing coordinated interjurisdictional agreements).	NOAA	09/30/2011	In Progress	The Chesapeake Bay Stock Assessment Committee met September 19-20 and reviewed the stock assessment recommendations. Final recommendations to fishery managers (Executive Committee) will be conducted in October 2011 for adoption at December 2011 Full Goal Implementation Team meeting.
3	Identify the critical factors affecting the abundance of blue crab in the Bay to support ecosystem-based decision making and fisheries management (index of ecosystem-based fisheries management).	NOAA	9/30/2012	Not Started	CBSAC was charged with establishing an approach to developing ecological reference points by June 2012.

FW 5. *Revise blue crab population rebuilding target.*

#	Action	Joint Lead(s)	Due Date	Status	Action Narrative
1	Note - for FY 2011 Action Plan, NOAA actions for FW4 and FW5 are combined; see FW 4 for FY 2011 actions.	NOAA	09/30/2011		

Strategy Goal: *Fish & Wildlife*

FW 6. *Restore stream habitat through partnerships.*

#	Action	Joint Lead(s)	Due Date	Status	Action Narrative
1	Develop and implement high priority stream passage and barrier removal projects throughout the watershed, focusing on brook trout habitat. Restore/enhance 10 miles brook trout habitat; consistent with the goals and objectives of the Eastern Brook Trout Joint Venture.	FWS	09/30/2011	In Progress	FWS coordinating with EBTJV and Trout Unlimited to prioritize stream restoration projects and leverage existing funding sources to implement projects. CBFO Coastal Program-Stream Habitat Assessment and Restoration: Currently working two projects: 1) Mossy Creek, Augusta Co. VA 2,500 linear feet of stream restoration. Currently develop designs. Construction scheduled for spring 2012. 2) Little Tuscarora Creek, Frederick, MD. Currently developing landowner agreement. Work scheduled to start in fall 2011. Additional projects could be conducted, but funds are limited.
2	Develop and implement habitat restoration projects, focusing on improving water quality (e.g., pH) and restoring natural stream structure and function in 4-8 subwatersheds.	FWS	09/30/2011	In Progress	
3	USACE to continue advance partnerships with River Basin Commissions, states, counties and nonprofits in support of stream habitat restoration.	DOD-USACE	No Date	Complete	Continue to support SRBC by representing the Federal agencies on the Commission. Contine membership in the Anacostia Watershed Restoration Partnership at all levels, the Patuxent River commission and the Interstate Commission on the Potomac River Basin.

FW 7. *Consider climate change in prioritizing sub-watersheds for restoration.*

#	Action	Joint Lead(s)	Due Date	Status	Action Narrative
1	develop a database and framework to identify and prioritize site specific brook trout restoration and conservation projects	FWS	09/30/2011	In Progress	CBFO Coastal Program-Stream Habitat Assessment and Restoration: Currently working two projects: 1) Mossy Creek, Augusta Co. VA 2,500 linear feet of stream restoration. Designs are completed. Construction scheduled for fall 2011. 2) Little Tuscarora Creek, Frederick, MD. Currently developing landowner agreement. We and our partners TU and Potomac Conservancy) have applied for three grants: NFWF, AR - Potomac Highlands, ad CBT. Work scheduled to start in fall 2011 if grants are awarded. Additional projects could be conducted, but funds are limited.

FW 8. *Restore black duck habitat.*

#	Action	Joint Lead(s)	Due Date	Status	Action Narrative
2	See RH1, Action 1	FWS	09/30/2011		

Strategy Goal: *Fish & Wildlife*

FW 9. *Increase nutrient sources on refuge lands.*

#	Action	Joint Lead(s)	Due Date	Status	Action Narrative
1	Convene workshop among federal, state and NGO partners concerned with black duck population recovery to ensure coordination and cooperation in research, monitoring, and conservation delivery of this priority species	FWS	09/30/2011	In Progress	FWS formed a Scoping Team that is working with ACJV partners to plan a Strategic Decision Making workshop to be held Summer 2011 to bring black duck experts together with refuge personnel
2	Initiate research project to determine energetic carrying capacity of Chesapeake basin habitats necessary to restore wintering black duck population	FWS	09/30/2011	In Progress	FWS provided funding to Univ of Delaware for research to compare and contrast several methods of sampling American Black Duck foods in wintering habitats. Builds on previous studies in central New Jersey and will inform estimates of carrying capacity within study area.
3	Restore and stabilize emergent wetlands at the Barbados Island portion of Blackwater NWR, and expand and create new high quality moist soil impoundments at Blackwater and Eastern Neck NWRs	FWS	09/30/2011	Not Started	This work was dependent on the President's 2011 budget and will not be initiated.

FW 10. *Facilitate interjurisdictional, ecosystem-based fisheries management.*

#	Action	Joint Lead(s)	Due Date	Status	Action Narrative
1	Formalize use of the Sustainable Fisheries Goal Implementation Team as a forum to support interjurisdictional coordination on issues related to the management of Bay fisheries.	NOAA	06/30/2011	Complete	GIT1 Charter is complete and is operating on a routin meeting schedule with identified working groups for oysters, blue catfish and EBFM. Full Goal Team meetings are held regularly (semi-annually). Executive Committee conference calls have been held monthly.
2	Identify and support Bay-wide fisheries science (monitoring, assessment, and research) priorities needed to improve management.	NOAA	03/31/2011	Complete	2011 Federal Funding Opportunity was released and NOAA NCBO funded 17 projects focusing on Chesapeake Bay species of interest.
3	Strengthen coordination of regional efforts with national policies and programs (e.g., participation in Atlantic States Marine Fisheries Commission process).	NOAA	09/30/2011	Complete	FY 11 actions were completed. Monthly Executive Committee meetings discuss upcoming ASMFC agenda topics to consolidate Chesapeake Bay views / concerns. NCBO staff are contributing to several ASMFC technical teams and NCBO has developed a partnership with ASMFC to address development of new fisheries monitoring in the Bay.

Strategy Goal: *Fish & Wildlife*

FW 11. *Consider alternative fisheries management approaches.*

#	Action	Joint Lead(s)	Due Date	Status	Action Narrative
1	Identify and evaluate current management strategies in the Bay and use Sustainable Fisheries Goal Implementation Team to determine alternative approaches that can be applied in the Bay.	NOAA	09/30/2011	Not Started	Budget limited - plan was for workshop to identify, discuss, evaluate the various management strategies in place within Chesapeake Bay and explore alternatives and recommend steps forward.
2	Identify alternative management strategies being proposed and/or implemented in other regions. Develop process for evaluating and providing recommendations for application of appropriate alternative management approaches in the Bay.	NOAA	09/30/2011	Not Started	Budget limited - plan was for workshop to identify, discuss, evaluate the various management strategies in place within Chesapeake Bay and explore alternatives and recommend steps forward.

FW 12. *Support the Atlantic Coastal Fish Habitat Partnership (ACFHP)*

#	Action	Joint Lead(s)	Due Date	Status	Action Narrative
1	Identify and fund habitat restoration projects with objectives that overlap those of FWS Fisheries, NOAA fisheries, and Atlantic Coast Joint Venture	FWS	09/30/2011	Complete	FWS provided staff support to coordinate the request for applications for FY12 NFHAP funding, application review, and project ranking. FWS distributed FY11 NFHAP funding through grant agreements to projects outside of the Chesapeake Bay watershed (in Maine and South Carolina).
2	Develop a coastal decision support (prioritization) framework focused on habitat restoration for diadromous species	FWS	09/30/2011	Not Started	Dependent on receipt of new FY11 funds
3	Brief the ACFHP Steering Committee on the Strategy for Protecting and Restoring the Chesapeake Bay Watershed.	NOAA	03/31/2011	Complete	

Strategy Goal: *Fish & Wildlife*

FW 13. *Collect and organize information to help identify and prioritize areas to restore oyster habitat and populations.*

#	Action	Joint Lead(s)	Due Date	Status	Action Narrative
1	Organize existing habitat characterization and utilization data for candidate tributaries to inform the planning of future restoration projects. Note the link to SS13.	NOAA	06/30/2011	In Progress	Tributary-specific oyster restoration site assessment process completed and piloted on Harris Creek. NOAA and partner benthic habitat assessments and habitat assessment surveys in progress in CB are being integrated by NOAA into a GIS-based decision-support tool (i.e., Available Restorable Bottom Analysis Tool) to inform oyster restoration site selection, restoration design, and monitoring. Using this information, candidate tributaries baywide and tributary-specific restoration sites have been selected (e.g., Harris Creek). Available Restorable Bottom Analysis tool is being applied to the tributaries that are candidates for the next round of restoration activities to support future tributary and individual site selections.
2	Initiate the planning and design component of approximately 60 acres of reefs in the Piankatank River, VA; and targeted construction of approximately 10-20 acres of hard substrate at a site in Maryland.	DOD-USACE	09/30/2011	Complete	Decision document for Piankatank River Oyster Restoration is underway. Restored reefs in the Great Wicomico will be augmented in 2011 (see also FW2).
3	Note - for FY 2011 Action Plan, NOAA-specific actions to support FW13 are included in both FW 15 and FW 18.	NOAA	No Date		

FW 14. *Improve scientific information on selected freshwater species.*

#	Action	Joint Lead(s)	Due Date	Status	Action Narrative
1	USGS will work with FWS to assess impacts of pathogens, parasites, toxic contaminants, intersex conditions, and adverse effects in fish and wildlife in the Potomac Basin. Additional assessments of the Susquehanna including potential impacts of Marcellus Shale activities will begin in 2012.	No Lead Provided	09/30/2011	In Progress	USGS conducted sampling and assessed factors causing die-offs of fish in the Potomac and Susquehanna basins. Note, some work relates to toxic contaminants (WQ8)
2	Conduct drainage-level assessments of genetic differentiation (shad, brook trout, freshwater mussels) to help identify appropriate management units, which in turn guide restoration strategies in terms of location and scale	FWS	09/30/2011	In Progress	FWS Northeast Fishery Center Conservation Genetics Lab has completed drainage level assessments of genetic differentiation for American shad within the Susquehanna River and conducted assessments of genetic diversity for brook trout within numerous tributaries to the West Branch of the Susquehanna River. USGS conducting genetic studies of brook trout (see FW16).
3	Assess the vulnerability of sensitive karst habitats containing rare, threatened or endangered groundwater species (in 2011 in C&O Canal NHP).	NPS	9/30/2013	In Progress	Phase I comleted. Pase II to begin in FY11

Strategy Goal: *Fish & Wildlife*

FW 15. *Improve scientific information to support Bay-wide restoration efforts.*

#	Action	Joint Lead(s)	Due Date	Status	Action Narrative
1	Identify research and monitoring needs in Chesapeake Bay to effectively manage and restore living marine resources.	NOAA	09/30/2012	In Progress	Solicitation of fisheries and ecosystem-based management needs circulated through Fisheries Goal Implementation Team and Maryland Sea Grant Ecosystem Fisheries Coordinator. Research and Monitoring needs were provided and discussed at December 2010 Fisheries Goal Implementation Team. Priorities being finalized for inclusion in NCBO FFO. FFO competitive notice published and proposals received MArch 2011. All proposals underwent stringent technical merit review and management panel evaluation and ranking. A total of 17 projects have been submitted through NOAA Grants Management for awarding. Projects address blue crab, oyster restoration research, blue catfish, clam, striped bass, and ecosystem-based fishery management approaches.
2	Develop and implement fisheries science program to improve understanding of fisheries status and trends (multi-species research; Bay-wide monitoring and assessment). USACE to contribute data on oyster status and trends from its restoration sites. FWS to assess the impacts of pathogens, parasites and toxic contaminants on fish kills and intersex conditions in the Potomac watershed. FWS will monitor Atlantic sturgeon to determine preferred habitats and population trends; assess habitat suitability via side-scan sonar mapping of river bottoms	NOAA/DOD-USACE/FWS	09/30/2011	In Progress	NCBO FY2011 FFO was posted January 3, 2011. Full applications due 3/4/2011. Priorities include resident and coastal fisheries research, monitoring, and oyster restoration research. See narrative on Action 1. A total of 17 projects have been submitted through NOAA Grants Management for awarding. Projects address blue crab, oyster restoration research, blue catfish, clam, striped bass, and ecosystem-based fishery management approaches. USACE provided restoration data for the Great Wicomico to other Federal agencies. Lynnhaven River monitoring is scheduled for 4th Quarter.
3	Maintain phytoplankton and zooplankton monitoring network.	NOAA	09/30/2011	Complete	Plankton Monitoring Design Plan has been developed and workshop conducted to discuss management needs from such a program. Workshop was held in February 2011 and recommendations provided in final workshop report. In FY2011, NOAA conducted limited zooplankton sample collection and processing for a subset of the historical Chesapeake Bay stations to be used to help configure a long-term plankton survey for the Bay.

Strategy Goal: *Fish & Wildlife*

FW 16. *Establish watershed program for brook trout monitoring.*

#	Action	Joint Lead(s)	Due Date	Status	Action Narrative
1	Work with states to establish program for brook trout monitoring in the watershed. Coordinate habitat assessment, stream surveys, and long-term monitoring	NOAA/DOD-USACE	09/30/2011	Complete	In addition to NOAA funding FWS provided funding through the National FIsh Passage Program to TNC to develop a GIS based fish passage prioritization for the Chesapeake Bay. In addition to diadromous species, brook trout will be a focal species in prioritizing the removal of blockages to fish passage. USACE is working with the Fishery GIT to identify opportunities to monitor/restore brook trout in 4th Quarter.
2	USGS will work with FWS to determine if existing stream monitoring can be enhanced to address monitoring of habitat conditions for brook trout.	USGS	09/30/2011	In Progress	EBTJV Science and Data Committee'sChes Bay Ad hoc Subcommittee to recommend monitoring plan to CBP's STAR in Summer 2011

FW 17. *Improve monitoring of black duck food sources.*

#	Action	Joint Lead(s)	Due Date	Status	Action Narrative
1	USGS will work with FWS and the Black Duck Joint Venture to evaluate additional science needed for Chesapeake Bay. USGS will continue assessment of factors affecting seaducks in Chesapeake Bay.	USGS	09/30/2011	In Progress	FWS Migratory Birds program is working with partners to identify remotely sensed land use data sets that will allow for monitoring of changes in black duck food sources over time and with the Integrated Waterbird Management and Monitoring program to include landscape scale monitoring of wetland quality and food availability. FWS and USGS summarizied science needs (see FW 21 for information on USGS support on science for black duck habitat).USGS started a study of black duck feeding to support model development.

Strategy Goal: *Fish & Wildlife*

FW 18. *Use science to evaluate oyster restoration progress.*

#	Action	Joint Lead(s)	Due Date	Status	Action Narrative
1	Collect required habitat characterization, utilization and ecosystem services data for candidate tributaries. Conduct screening of sites restored using alternate substrates in Maryland to provide information to guide future use of alternate substrates. Monitor Oyster Projects in Lynnhaven, Great Wicomico. Continue native oyster restoration program in Maryland and Virginia. Note the link to WQ16, FW2, SS13 and SS15.	NOAA	09/30/2011	Complete	Habitat assessment surveys and analyses are complete in sanctuary areas targeted for 2011 (see FW2 & 13.); Multi-partner oyster population and reef habitat metrics team formed under the auspices of the Sustainable Fisheries Goal Implementation Team to set quantitative goals and determine monitoring needs - Metrics Team report completed including specific biological and structural measures for the evaluation of oyster restoration efficacy; Pre- and post-construction multibeam survey and 3-D modeling of alternative substrate trial complete; acoustic seafloor mapping surveys for monitoring of Lafayette River, VA oyster restoration project planned for December 2011. Screening of alternative substrate reefs in Severn River complete with reporting out to partner agencies and stakeholders underway.
2	Develop Habitat Assessment Team infrastructure to support information gathering and science development (primarily addresses Action FW18, link to WQ16, SS13, SS15).	NOAA	09/30/2011	complete	NOAA has completed the contracting process to update habitat assessment team infrastructure to support information gathering.
3	Support applied oyster restoration research.	NOAA	09/30/2011	In Progress	NOAA performing hydrographic survey and analysis support for evaluation of bar rehabilitation methods (e.g., alternate substrate research and 'bar cleaning' methods). NOAA is funding oyster research projects on stock assessment, ecosystem services and cow nose ray predation to grants for final approval.

Strategy Goal: *Fish & Wildlife*

FW 19. *Develop ecosystem models to support decision making.*

#	Action	Joint Lead(s)	Due Date	Status	Action Narrative
1	Provide initial results from the Chesapeake Atlantis Model (CAM) and begin applying CAM in 2011.	NOAA	09/30/2011	In Progress	Model Base map complete. Diet composition data matrix complete. Initial physics set for model (temperature & salinity). Initial nutrient concentrations established in close collaboration with EPA (Bay Program Office). Initial biomass estimated for all (56) groups. Migration & reproduction schedules currently being estimated for all groups. Above work prepares model for specific simulations to be determined.
2	Provide model results on the range of ecosystem effects of one invasive species (blue catfish), and develop/provide model results on other topics of concern based on feedback on model runs, management scenarios and other recommendations of the Sustainable Fisheries Goal Implementation Team.	NOAA	09/30/2011	Complete	Ecosystem model constructed to simulate Blue Catfish population with varying degrees of nutrient inputs and fishing pressures. Model results presented to scientific community (AFS), Blue Catfish Working Group of the Fisheries GIT, Fisheries GIT. Ecosystem model constructed to simulate menhaden population with varying degrees of water clarity and oxygen. Model results presented to the scientific community (AFS) and ASMFC.

Strategy Goal: *Fish & Wildlife*

FW 20. *Evaluate native bivalve restoration for water quality improvement.*

#	Action	Joint Lead(s)	Due Date	Status	Action Narrative
1	Complete literature review of relevant studies on the ability of tidal and nontidal (freshwater and estuarine) bivalves to enhance water quality. Where the literature review finds gaps, identify topic areas and funding needed to support new studies to evaluate the effect of native bivalves on Bay water quality.	NOAA	09/30/2011	In Progress	1. Got "associated organisms" data from MD fall oyster survey entered in Excel for 2005-2009, to estimate possible filtration by two mussels that often attach to oysters (dark false and hooked) 2. Identified three freshwater mussel experts at Partnership for the Delaware Estuary, USGS Northern Appalachian Laboratory, and White Sulphur Springs National Fish Hatchery (US FWS), who agreed to write the freshwater sections of the literature review, but none have sent any text yet. 3. Continued assembling relevant published studies. 4. Found several new published studies on dark false mussels and started using them on a paper about the 2004 irruption by that species in Chesapeake Bay, which shows what this action might achieve. 5. Circulated a 32-page draft of the white paper to the other 3 possible authors and some colleagues on May 13; one sent favorable comments on it. Have revised it some since then, but it still lacks the freshwater sections that FWS requested.
2	NOAA to identify possible pilot studies to test feasibility of different grow-out methods and for estuarine bivalve species.	NOAA	09/30/2011	In Progress	Pilot study ID will be based on results of literature review, and contingent on the availability of grow-out facilities, funding, methods, and materials. Action may be delayed because propagation methods and/or hatcheries that are willing to raise species not used for food have not been found for most of the candidate species.
3	Propagation of native freshwater mussels to restore freshwater bivalve communities critical to maintaining water quality and habitat in tributaries of the Bay	FWS	09/30/2011	Not Started	This work was dependent on the President's 2011 Budget and will not be initiated.

FW 21. *Assess quality of Black Duck habitat.*

#	Action	Joint Lead(s)	Due Date	Status	Action Narrative
1	Initiate research project to validate methods and estimates of energetic carrying capcity	FWS	09/30/2011	In Progress	
2	USGS will work with FWS and the Black Duck Joint Venture to evaluate additional science needed for Chesapeake Bay. USGS will continue assessment of factors affecting seaducks in Chesapeake Bay.	USGS	09/30/2011	In progress	USGS is working to summarize information on availability of existing habitats with bay refuge and island areas for wintering black ducks and also continuing seaduck studies on food availability. This work supports FW 8 and 9.

Strategy Goal: *Conserve Land*

CL 1. *Launch a Chesapeake Treasured Landscape Initiative.*

#	Action	Joint Lead(s)	Due Date	Status	Action Narrative
1	DOI will launch an initiative to expand land conservation and public access in priority Chesapeake landscapes in partnership with other federal agencies, state, local and private partners. Beginning in 2010, DOI will initiate the series of actions listed below to expand funding, better coordinate and target conservation efforts across federal agencies and initiate new strategies for conserving landscapes.	NPS	01/31/2011	Complete	Actions launched (see below).

CL 1.a *Increase Land & Water Conservation Fund allocations.*

#	Action	Joint Lead(s)	Due Date	Status	Action Narrative
1	Federal agencies will allocate final LWCF appropriations once Congress has completed action on the increases proposed in the President's FY2011 Budget.	NPS	01/31/2011	Complete	LWCF allocations were made based on final congressional adoption of FY2011 appropriations in spring 2011.
2	The President's Budget for fiscal year 2012 will propose funding levels for the Land & Water Conservation Fund.	NPS	03/31/2011	Complete	The President's Budget for FY12 proposed full funding of $900 million for LWCF.

CL 1.b *Create a public-private conservation funding partnership.*

#	Action	Joint Lead(s)	Due Date	Status	Action Narrative
1	Convene working session of federal and state agencies and nongovernmental organizations to create a public-private partnership to coordinate and leverage federal and possibly state conservation funding.	NPS	10/31/2010	Not Started	See action 2.
2	Develop a formal agreement between federal partners and a non-governmental organization on the relationship and scope of activities and conduct a pilot funding project.	NPS	02/28/2011	In Progress	Discussions initiated with National Fish and Wildlife Foundation (NFWF). NFWF is considering drafting elements of a possible proposal.

Strategy Goal: *Conserve Land*

CL 2. *Coordinate and target federal land conservation funding.*

#	Action	Joint Lead(s)	Due Date	Status	Action Narrative
1	Convene working session(s) of federal and state program managers for the Land & Water Conservation Fund, Forest Legacy, Coastal and Estuarine Land Conservation Program, Wetlands Reserve Program, Farm and Ranchlands Protection Program, Transportation Enhancements, North American Wetlands Conservation Act and the Readiness and Environmental Protection Initiative to address how to ensure conservation planning approaches and priorities are shared and coordinated across jurisdictions and programs in the Chesapeake Bay watershed.	NPS	12/31/2010	In Progress	April FLC meeting held to profile steps on land conservation and public access. Based on discussions at FLC opportunities for further coordination of land conservation efforts might best be supported as land conservation priority system is further developed (CL 9) and through collaboration in focused geographic areas. NPS will convene collaborative sessions toward these ends in late 2011 and early 2012.
2	FWS will protect priority forests and wetlands in the upper Pocomoke River watershed. FWS will also protect priority forests and wetlands in the Lower Potomac River watershed: including Mattawoman Creek, Nanjemoy Creek, Zekiah Swamp, and/or McIntosh Run	FWS	09/30/2011	In Progress	Administrative protection transactions are underway in specific instances where targeted funding has become avaiable through successful grant proposals. Formal preliminary project planning is underway within FWS, and is at various stages of development, in both Pocomoke and Potomac River watershed. Other draft protection proposals are being discussed with prospective partners.
3	Use the USDA Farm and Ranch Lands Protection Program in partnership with state, local, and tribal governments and non-governmental organizations to preserve working agricultural lands in the Chesapeake Bay Watershed.	NRCS	09/30/2011	Complete	NRCS easements that preserved acres of farmland in 2011. NRCS obligated funds for an additional easements that will preserve more acres of farmland when the agreements are closed. NRCS will continue to implement the Farm and Ranch Lands Protection Program in 2012.

Strategy Goal: *Conserve Land*

CL 2.a *Increase collaboration in the Coastal and Estuarine Land Conservation Program.*

#	Action	Joint Lead(s)	Due Date	Status	Action Narrative
1	NOAA's Office of Ocean and Coastal Resource Management will conduct a webinar or in person meeting with state Coastal and Estuarine Land Conservation Program (CELCP) leads to address the following goals: identification and prioritization of multi-state (border) parcels; consideration of regional priority acquisitions that would benefit the Bay; and ensuring that priority acquisitions at National Estuarine Research Reserve System sites are fully incorporated into statewide CELCP planning.	NOAA	03/31/2011	In Progress	A webinar with Chesapeake Bay states CELCP was scheduled for late October. Progress on the Conservation Lands mapping tool will be presented in addition to discussion of the specific commitments contained in this action.
2	Share regional CELCP priorities and individual state CELCP plans with all "Treasured Landscape" agency leads, including the National Park Service for inclusion into the GIS database developed to support CL-9.	NOAA	06/30/2011	Complete	A Baywide map depicting priorities of each of the federal land acquisitions was completed in the spring for a CBP FLC meeting.
3	Finalize all Chesapeake Bay state CELCP plans (NY and PA are already approved) by competing necessary reviews by NOAA's Office of Ocean and Coastal Resource Management.	NOAA	09/30/2011	In Progress	Virginia CELCP plan review is nearly completed and the plan is expected to be approved with minor changes. The Maryland plan will be submitted upon completion of a series of priority geospatial mapping exercises. Both plans are approvable in terms of existing data/substance, the last step of formal approval by OCRM has been delayed due to other CELCP priorities.

CL 2.b *Encourage consideration of Transportation Enhancements, Scenic Byways, and Recreational Trails programs to support land conservation.*

#	Action	Joint Lead(s)	Due Date	Status	Action Narrative
1	DOT will continue to work with state agencies administering Transportation Enhancements, Scenic Byways, and Recreational Trails programs to enhance understanding of program provisions and procedures, and eligibility requirements. DOT will work with NPS and other partners to ensure conservation approaches and priorities are shared and coordinated in the Chesapeake Bay watershed.	DOT	09/30/2011	In Progress	DOT has communicated with the States, and the States already are aware of funding programs that can be used for activities related to transportation that support land conservation. Transportation Enhancement and Recreational Trails Program funds are apportioned to the States by legislative formula; National Scenic Byways Program grants are discretionary and selected by DOT.

Strategy Goal: *Conserve Land*

CL 2.c *Conserve priority landscapes around defense installations.*

#	Action	Joint Lead(s)	Due Date	Status	Action Narrative
1	Identify locations where land conservation priorities of military bases, National Wildlife Refuges, National Parks and National Trails overlap and develop coordinated land conservation strategies.	NPS	09/30/2011	Not Started	NPS plans to arrange discussion with DoD in late 2011/early 2012 to scope initial steps for coordinating CAJO and DoD land protection priorities.
2	Revise guidance for the DOD Readiness and Environmental Protection Initiative program in 2011 to ensure Chesapeake Bay projects receive the extra credit for proposed projects that result in a title fee or easement purchase of significant landscape and areas of ecological and/or cultural value.	DOD-SERVICES	09/30/2011	In Progress	DoD is working with upper management within DoD to develop a system to where sites within the Bay watershed will receive extra credit points in order to help with ranking them as a higher priority projects for REPI funding. This action is in progress and should be instituted this FY as scheduled. In the meantime, REPI continues to be funded and projects within the Bay watershed are being targeted for priority when possible based on the current evaluation process.
3	Implement efforts to obtain conservation easements through DoD encroachment programs and other mechanisms such as mitigation projects that protects the ecosystem, historic resources and water quality while sustaining the military mission.	DOD-SERVICES	09/30/2011	In Progress	DoD has established programs such as Navy's Encroachment Work Groups (EWG) that are making these kinds of efforts a priority to both support the mission and support ongoing conservation initiatives. The EWGs are cross functional teams of individuals with various expertise (i.e. real estate, environmental, planning, legal, military, etc.). REPI will continue to be funded and DoD is working to give some priority to land conservation within the Bay watershed. DOD will do its part to support land conservation.

CL 3. *Conserve landscapes through National Park Service partnership areas.*

#	Action	Joint Lead(s)	Due Date	Status	Action Narrative
1	Collect existing data about identified high priority landscapes within national heritage areas and around units of the national park system. This information will be incorporated into the watershed-wide GIS system (CL.9).	NPS	09/30/2011	In Progress	Some limited data has been collected in association with development of the land conservation priority system (CL9). More complete data will be gathered at the system develops.
2	Protect lands within existing units of the National Park System. In 2011, at Catoctin Mountain Park, Prince William Forest Park and Fredericksburg & Spotsylvania Battlefield NMP.	NPS	09/30/2011	In Progress	Final 2011 appropriations included funding for land protection at Catoctin Mountain Park ($640,000) and Fredericksburg & Spotsylvania National Military Park ($500,000).

CL 3.a *Consider a new unit of the National Park System for Chesapeake Bay & Rivers.*

#	Action	Joint Lead(s)	Due Date	Status	Action Narrative
1	Convene representatives of the states' governors to explore the potential for a new unit of the National Park System focused on the Chesapeake and its rivers.	NPS	12/31/2010	In Progress	Initial conversations held spring 2010. No immediate next steps planned.

Strategy Goal: *Conserve Land*

CL 3.b *Identify high priority landscapes along National Trails.*

#	Action	Joint Lead(s)	Due Date	Status	Action Narrative
1	Identify high priority landscapes along the route of the Captain John Smith Chesapeake National Historic Trail as a focus for land conservation efforts; publish landscape and site criteria and priority locations in the trail comprehensive management plan in 2010, and incorporate into watershed-wide GIS system (CL.9).	NPS	12/31/2010	Complete	CMP published in 2010 identifies broad landscape priorities. NPS is developing land conservation strategy and segment plans in 2011 to further refine criteria and priority landscapes.
2	High priority landscapes are being identified using GIS along the route of the Star-Spangled Banner National Historic Trail as a focus for land conservation efforts; landscape and site criteria and priority locations will be included in draft trail comprehensive management plan in 2011and incorporated into watershed-wide GIS system (CL.9).	NPS	09/30/2011	In Progress	CMP under development.
3	Complete a corridor gap analysis identifying needed trail connections for the Potomac Heritage National Scenic Trail network in Northern VA and explore options for conducting similar analyses in other trail regions. Incorporate information in watershed-wide GIS system (CL9).	NPS	06/30/2011	Complete	Through a cooperative agreement between NPS and the Northern Virginia Regional Commission (NVRC), staff of the NVRC, local jurisdictions and the NPS have completed a Trail corridor analysis, obtained cost estimates to complete high-priority local projects, and completed a summary report on a workshop to identify actions to close gaps in the Trail network within the Northern Virginia tidal Potomac River corridor. Relevant documents are available at http://www.novaregion.org/index.aspx?nid=299.

CL 3.c *Coordinate NPS conservation actions with FWS refuge partnerships.*

#	Action	Joint Lead(s)	Due Date	Status	Action Narrative
1	Develop a memorandum of understanding between NPS and FWS for coordination of National Wildlife Refuge conservation partnerships and planning and investments for the Captain John Smith Chesapeake National Historic Trail, Star-Spangled Banner Historic Trail and the Chesapeake Bay Gateways and Watertrails Network.	NPS	10/31/2010	Complete	MOU signed October 2010.

Strategy Goal: *Conserve Land*

CL 4. *Achieve mutual conservation goals through National Wildlife Refuge partnerships.*

#	Action	Joint Lead(s)	Due Date	Status	Action Narrative
1	Fund one FTE to coordinate activities in Virginia with a focus on land conservation in the Rappahannock and James River basins	FWS	09/30/2011	Complete	Funding redirected in absence of new FY11 funds to hire planner position for this purpose. Position hired March 2011
2	Implement approved land conservation strategies, using new and existing partnerships, along the Nanticoke River in Maryland and the Rappahannock River in Virginia. Acquire up to 1200 acres in fee title and through wildlife conservation easements.	FWS	09/30/2011	In Progress	FWS Coastal Program working with Maryland Action Team on grant applications.
3	Fund one FTE at Potomac Refuge complex to work with partners along the Potomac River in Virginia to develop conservation corridors, plan for sustainable shorelines, plan/mplement forest management practices	FWS	09/30/2011	Not Started	pending receipt of new FY11 funding

CL 5. *Develop a Bay wide strategy to reduce the loss of farms and forests.*

#	Action	Joint Lead(s)	Due Date	Status	Action Narrative
1	See item CL 5.a	NRCS	No Date		

CL 5.a *Develop a strategy to consider incentives for preservation of agricultural land and forest land*

#	Action	Joint Lead(s)	Due Date	Status	Action Narrative
1	Convene a working group to further develop strategies for preserving working lands. This will consider reports and recommendations anticipated later in 2010, including a report under development by the Chesapeake Bay Commission and the Chesapeake Conservancy.	FS	09/30/2011	Complete	A coordinating group of NRCS, FS, and NPS met to plan Strategy; and will convene stakeholders in 2012 to further develop Strategy.
2	NRCS, USFS, and NPS, in concert with the states and other partners, will lead an analysis that identifies optimum locations for conservation easements on working lands. The analysis will consider where easements should be located to obtain the biggest environmental benefit. This work will be coordinated with actions CL 8 and CL 9, ultimately integrating priorities into the watershed-wide land conservation system (CL9).	NRCS	09/30/2011	In Progress	Initial meetings have occurred between NRCS, FS, and NPS. In addition NRCS easement program managers from the six Bay states have met to discuss completion of this action; however further work is required. Key data layers have been identified, and work will continue in 2012.

Strategy Goal: *Conserve Land*

CL 6. *Support creation and expansion of protected coastal and marine areas.*

#	Action	Joint Lead(s)	Due Date	Status	Action Narrative
1	NOAA will meet and work with state, federal and other partners to identify opportunities for the creation and management of new protected area sites in the Chesapeake Bay, as well as invite current marine protected areas (MPAs) from the region to join the national system of MPAs.	NOAA	09/30/2011	Complete	Effort is on-going, work complete for FY 11. NOAA is continuing collaborative efforts with state, federal and other partners to identify and gather support for possible new protected area sites. Support letter for Mallows Bay to be considered for future National Marine Sanctuary designation from Sen. Cardin, Sen. Mikulski and Rep. Hoyer to Dr. Lubchenco on Nov 16, 2010; response letter back to each of them from Dr. Lubchenco on Jan. 31, 2011 pledging that NOAA will continue informal discussions with the state of MD and Charles County regarding future possibilities for Mallows Bay.
2	NOAA will support and enhance existing state and federal Marine Protected Area Programs in the Chesapeake Bay region by providing access to training, technical assistance, and competitive MPA Partnership Grants.	NOAA	09/30/2011	Complete	Effort is on-going, work complete for FY 11. RFP for MPA Partnership Grants issued 10/10; no responses from Chesapeake Bay Programs recieved. Mid Atlantic Fishery Management Council nominated four federal fisheries sites, canyons protected for tilefish habitat, that became part of the national system MPAs in February 2011. These include Oceanographer Canyon, Lydonia Canyon, Veatch Canyon and Norfolk Canyon.

CL 7. *Provide community assistance for landscape conservation.*

#	Action	Joint Lead(s)	Due Date	Status	Action Narrative
1	Deliver coordinated community assistance for identification, assessment and conservation of priority landscapes; priority landscapes for 2011 will be along high priority segments of the Captain John Smith Chesapeake National Historic Trail.	NPS	09/30/2011	In Progress	Initial work in progress along James River segment of CAJO.
2	Convene federal and state partners to assess current technical assistance capabilities and gaps, and identify ways to improve local government and land trust access to assistance providers and capacity building support.	NPS	09/30/2011	Not Started	Action delayed; funding associated with this task and requested in the President's budget was not provided in final FY11 appropriations.

CL 8. *Identify culturally significant and ecologically important landscapes.*

#	Action	Joint Lead(s)	Due Date	Status	Action Narrative
1	Convene working team of federal, state and non-governmental partners to develop a scope, approach and initial resources for conducting landscape surveys to identify landscapes of cultural significance to different communities and the region.	NPS	02/28/2011	In Progress	NPS organized team of partners to explore one aspect of this action - identification of indigenous cultural landscapes. Team has met and developed overall concept. Further action on landscape surveys in general is delayed due to budget constraints.
2	Initiate pilot landscape survey.	NPS	09/30/2011	Not Started	Further action on landscape surveys in general is delayed due to budget constraints.

Strategy Goal: *Conserve Land*

CL 9. *Establish watershed-wide GIS-based land conservation targeting system.*

#	Action	Joint Lead(s)	Due Date	Status	Action Narrative
1	Convene working session(s) of federal agency partners, states and non-governmental organizations to develop a scope for the system and the mechanisms to put the system into place beginning in 2011.	NPS	12/31/2010	Complete	Action team convened November 2010; drafted initial guidance for scope of work. USGS/NPS project team now carrying out initial scoping and development activities. NPS reconvened Action Team on April 1 2011 to review a prototype system. Follow-up steps are underway; specifically including exploring potential partnerships for building out the system.
2	Begin to develop GIS targeting system based on agreed upon scope and existing information. USGS will establish a decision-support specialist for land conservation to develop products to help users understand the implications of different conservation options. USGS will also provide results from improved land-change model to help assess vulnerability of lands to development. This will be a prototype for DOI national effort.	USGS	03/31/2011	In Progress	USGS and NPS began development of a prototype land conservation system and presented it to federal partners and states. Limited improvements were achieved for remainder of 2011 and exploring a partnership with NatureServe to increase capabilities of the system.
3	See actions related to WQ1b (Bay Tracking and Accounting System and the National Environmental Information Exchange Network) and WQ7 (tracking and reporting systems for agricultural conservation practices).	EPA	09/30/2011	In Progress	This is an ongoing project. Formed an interagency steering committee. Developed a prototype system.

CL 9.a *Improve monitoring of land use changes.*

#	Action	Joint Lead(s)	Due Date	Status	Action Narrative
1	USGS will work with EPA to begin development of a long-term land-change analysis framework for conserved lands by federal partners (and states, NGOs). [Need input from EPA]	USGS	No Date	In Progress	USGS is working to update information in Chesapeake protected lands database.

CL 9.b *Describe land-cover change to evaluate progress toward land conservation.*

#	Action	Joint Lead(s)	Due Date	Status	Action Narrative
1	USGS will analyze where priority lands are lost to development (based on land-cover information produced in CL 9a) and work with CBP partners on implications for progress toward meeting land conservation goal. Planning approach will start in 2011 but in-depth analysis will not begin until 2012.	USGS	09/30/2011	In Progress	NPS and USGS are working up with partners on approach to assess progress toward land conservation goal.

Strategy Goal: *Conserve Land*

CL 10. *Develop integrated transportation, land use, housing and water infrastructure plans setting forth smart growth and environmental stewardship visions.*

#	Action	Joint Lead(s)	Due Date	Status	Action Narrative
1	Work with partners and provide continued technical assistance to further promote environmentally sustainable transportation and development as part of integrated regional planning. Number of plans initiated, TIGER grants, HUD Sustainable Communities Planning Grants or EPA Smart Growth awards.	DOT	09/30/2011	In Progress	In October 2010, DOT and Department of Housing and Urban Development (HUD) announced projects that would receive joint funding under the HUD Sustainable Community Challenge Grants and DOT TIGER II planning grants. These programs together are intended to foster integrated approaches to planning for housing, jobs and transportation. DOT has obligated its funding under the DOT TIGER II planning grant program. Planning projects in the Chesapeake Bay Watershed include the Hull St. Corridor Revitalization in VA and the Ranson-Charles Town Green Corridor Revitalization project in VW, DOT, HUD and EPA created the Partnership for Sustainable Communites to encourage interagency cooperation and ensure all three agencies best invest limited Federal resources in projects that are well-coordinated and planned. In addition, DOT's financial and technical support for metropolitan transportation planning also can contribute to integrated planning.

CL 11. *Develop a plan to expand public access.*

#	Action	Joint Lead(s)	Due Date	Status	Action Narrative
1	Convene working session(s) of federal agency partners, states and non-governmental organizations to develop scope and process for drafting a regional strategy designed to inform and guide expansion of Chesapeake watershed public access. Along with Statewide Comprehensive Outdoor Recreation Plans, the access strategy will be used to focus federal, state and local funding for public access expansion.	NPS	11/30/2010	Complete	NPS convened Public Access Action Team on October 21, 2010. Members represent state and federal agencies and nonprofit organizations with interest in and oversight for public access planning and development.
2	Initiate development of regional public access strategy based on scope; strategy to be completed by 2012.	NPS	01/31/2011	In Progress	NPS staff have organized and reviewed all input collected through the public participation process. All state and publically identified suggestions for new public access have been entered into the online tool, providing a visual and spatial representation of the information received. Action team members, representing the watershed states and DC are currently reviewing the suggested sites. NPS staff have developed an outline for the plan, insuring all pieces articulated in the strategy are included. Action team meeting is scheduled for Nov 1.

Strategy Goal: *Conserve Land*

CL 11.a *Identify public access needs and opportunities along National Trails.*

#	Action	Joint Lead(s)	Due Date	Status	Action Narrative
1	Identify public access needs and opportunities along the Captain John Smith Chesapeake National Historic Trail in the trail comprehensive management plan; incorporate in regional public access strategy.	NPS	12/31/2010	Complete	NPS has included public access needs and opportunities cited in CAJO CMP in the inventorying process of regional public access strategy. Currently, all data is being analyzed.
2	Identify public access needs and opportunities along the Star Spangled Banner NHT in the trail comprehensive management plan; incorporate in regional public access strategy.	NPS	09/30/2011	Complete	NPS has included public access needs and opportunities identified in STSP water trail plan in the inventorying process of regional public access strategy. Currently, all data is being analyzed.
3	Incorporate information from corridor gap analyses performed along Potomac Heritage National Scenic Trail described in CL.3.b.	NPS	09/30/2011	In Progress	NPS met with National Capital Region staff to discuss participation in Regional Public Access Action Team, which will help facilitate information and data sharing and analysis. Baseline inventory data is being updated, and public access gaps and opportunities are being identified.

CL 12 *Prioritize funding for public access development.*

#	Action	Joint Lead(s)	Due Date	Status	Action Narrative
1	Revise criteria for Chesapeake Bay Gateways and Watertrails Network grants to set public access development as a priority funding focus for 2011.	NPS	3/1/2011	Complete	Criteria revised to prioritize public access site development for FY11. Solicitation issued 3/01/2011; application deadline 4/4/2011.
2	Issue 2011 grants for public access development through Chesapeake Bay Gateways and Watertrails Network grants program.	NPS	05/31/2011	Not Started	Solicitation issued 3/01/2011; application deadline 4/4/2011. Nineteen applications received requesting $1.6 million. CBGN funding zeroed out in FY11 budget; therefore no awards made. Applications on hold pending future funding.
3	Convene meeting of state and federal fund managers to coordinate public access funding.	NPS	04/30/2011	Not Started	Scheduled as part of Regional Public Access Strategy - to combine review of draft strategy with funding discussion - scheduled for Nov 1. Additional follow up may be required for more focused discussion.

Strategy Goal: *Citizen Stewardship*

CS 1. *Expand Chesapeake conservation corps workforces.*

#	Action	Joint Lead(s)	Due Date	Status	Action Narrative
1	Convene working session(s) of partners to expand existing conservation corps workforces that create jobs and carry out conservation and restoration projects in priority watersheds. Coordinate development of a proposed strategy for expanding corps programs.	NPS	09/30/2011	In Progress	NPS has hired an SCA position to coordinate the development of a funding strategy. NPS has distributed NPS youth funding to successful corps program partners to expand workforces this summer and into the school year. A draft presentation and program model for expanding corps programs has been developed and will be shared with key stakeholders and action team members for input.

CS 2. *Expand master watershed stewards program.*

#	Action	Joint Lead(s)	Due Date	Status	Action Narrative
1	Convene working session(s) of partners to determine how best to expand the existing model master watershed stewards program and to develop an expansion plan and methods for measuring progress.	EPA/NPS	09/30/2011	In Progress	Progress is being made. Meetings have occured with partners, both as a group and one on one to gather their input as we move through the process of determining how best to expand the existing model master watershed developing a process for expanding model programs, stewards programs and to develop an expansion plan and methods for measuring progress.

CS 3. *Prioritize citizen stewardship in Small Watershed Grants program.*

#	Action	Joint Lead(s)	Due Date	Status	Action Narrative
1	Revise criteria for Small Watershed Grants Program to make citizen stewardship-based projects a priority funding category in 2011.	EPA/NPS	10/31/2010	Complete	Federal partners provided feedback to NFWF on SWG RFP. RFP prioritized citizen stewardship as a key implementation strategy.

CS 4. *Expand outreach to private forest landowners.*

#	Action	Joint Lead(s)	Due Date	Status	Action Narrative
1	Work through state partners to expand forest stewardship outreach to citizens in targeted areas.	FS	09/30/2011	In Progress	Working with Penn State Cooperative Extension, Virginia Cooperative Extension & West Virginia Division of Forestry on outreach events for small acreage woodland owners; Offering training to region's watershed groups to enable them to organize and conduct their own woodland management workshops; Partnering with UMD Extension and Maryland Forest Association to offer 5 regional workshops throughout the state. Additional targeted outreach will take place in 2012.
2	Expand Forestry for the Bay website capabilities to feature video and webinar technology.	FS	03/31/2011	Complete	Website has been updated with video streaming and other improvements.

Strategy Goal: *Citizen Stewardship*

CS 5. *Enhance visitor experiences and stewardship.*

#	Action	Joint Lead(s)	Due Date	Status	Action Narrative
1	Create new interpretive, educational, and wildlife observation opportunities at four Chesapeake Bay refuges (Eastern Shore of VA, Mason Neck, Rappahannock, and Blackwater)	FWS	09/30/2011	Not Started	pending receipt of new FY11 funding
2	Convene working team of partner agencies and organizations to define "meaningful Chesapeake visitor experiences" and propose approach for measuring progress in enhancing those experiences.	NPS	09/30/2011	In Progress	Inventory of NPS programs that promote/increase visitor experiences is being conducted.
3	Develop new interpretive media and visitor information for sites along key segments of Captain John Smith Chesapeake NHT and Star-Spangled Banner NHT.	NPS	09/30/2011	In Progress	Completed Interpretive Plan for STSP; providing interpretive assistance workshops in cooperation with Maryland Historical Trust in 10 regions along the STSP. Developing James River Segment Plan for CAJO (see CS 6 below).

CS 6. *Build long-term local partnerships for engaging communities and citizens along national trails.*

#	Action	Joint Lead(s)	Due Date	Status	Action Narrative
1	Convene partners to plan for long-term stewardship, sustainable tourism and landscape conservation along two high potential route segments of the Captain John Smith Chesapeake NHT.	NPS	09/30/2011	In Progress	NPS carrying out segment planning process for CAJO James River segment. Convened focus groups with range of partners and stakeholders in March 2011; draft plan anticipated by mid-summer 2011. NPS completed six workshops with STSP stakeholders in DC, VA and MD in April 2011 to seek input on proposed alternatives for STSP management. The Advisory Council and Byway Advisory Council convened in August and September and will meet in October to review resource protection, conservation and visitor experience priorities provided in the draft CMP.

Strategy Goal: *Citizen Stewardship*

CS 7. *Initiate robust elementary and secondary environmental literacy initiative.*

#	Action	Joint Lead(s)	Due Date	Status	Action Narrative
1	Create inventory of partner agency activities related to student environmental education programs (CS.7.a), educator training, tools, and resources (CS.7.b) and green schools (CS.7.c).	NOAA	09/30/2011	Complete	NOAA has inventoried the programs of agencies that have major environmental literacy activities. Inventory will be continually updated with current information.
2	Conduct stakeholder meeting to assess needs and interest of broader education community. Conduct partner meeting.	NOAA	09/30/2011	Complete	A meeting was held on March 23 that included representatives from 10 Federal agencies, state departments of education/natural resource agencies, and state affiliates of the North American Association for Environmental Education. Working groups were established in the areas of students, educators, and school infrastructure and grounds.
3	Complete draft literacy plan.	NOAA	09/30/2011	Complete	Federal agencies finalized the draft goals, outcomes, and strategies at a meeting on September 15th. The draft plan was sent out for partner review on October 17th and released for informal public comment on November 2nd at the Mid Atlantic Elementary and Secondary Environmental Literacy Summit.

CS 7.a *Support and enhance outdoor student environmental education programs.*

#	Action	Joint Lead(s)	Due Date	Status	Action Narrative
1	NOAA's actions to support CS.7.a are captured in CS.7 actions (above) for the FY 2011 Action Plan.	NOAA	09/30/2011	Complete	See planning activities above. The NOAA B-WET Program also completed its FY 2011 competitive review process and has recommended funding for all continuing awards totaling $1.6M. In addition, the NOAA Chesapeake Bay Office provided funding to support two projects that advance the systemic environmental literacy objectives of the Executive Order.
2	NPS will provide funding and technical assistance to park, national trail and Chesapeake Bay Gateways and Watertrails Network partners to create and enhance student environmental programs and multi-discipline resources.	NPS	09/30/2011	In Progress	Educational Curriculum and a new Education Center were completed at Mount Harmon Plantation in the summer of 2011. This included a new Chesapeake Curriculum packet for teachers that integrates environmental and historical themes. The Parks and People Foundation completed a new Environmental Educational Resource Curriculum for use along the Gywnns Falls Trail in Baltimore City. Other projects are in progress. In FY2012 there was not assistance funding available through the Gateways Network.

Strategy Goal: *Citizen Stewardship*

CS 7.b *Provide high-quality professional development, tools, and resources for educators.*

#	Action	Joint Lead(s)	Due Date	Status	Action Narrative
1	NOAA's actions to support CS.7.b are captured in CS.7 actions (above) for the FY 2011 Action Plan.	NOAA	09/30/2011	Complete	The NOAA ESTC has offered 4 workshops focused on climate science and methods for incorporating that climate science into educational programming. These workshops were over subscribed and received largely very positive feedback. The ESTC has also facilitated professional development opportunities at the National Centers for Environmental Prediction for Chesapeake Bay Foundation educators, and a Plankton Monitoring Network workshop for educators and watershed organizations. During the fall of 2011 the ESTC will be offering workshops on the Bay's keystone species and science communication. In 2011 NCBO began initiated the development of a regional STEM (Science, Technology, Engineering and Math) Coalition. The coalition will bring together Government and Academic partners to create a network of STEM education providers focused on delivering environmental STEM programming and related professional development.
2	NPS and partners will provide multiple professional development sessions with the introduction of new tools and resources related to the Chesapeake Campaign of the War of 1812, including a Virtual Educational Resource Center developed with Maryland Public Television.	NPS	09/30/2011	In Progress	Five workshops were held by the end of the 2010-2011 school year in partnership with school districts along the STSP trail. Funding has been secured to completed 9 workshops in for teachers as well as 3 workshops for life-long learners at locations along the STSP trail during the 2011-2012 school year. The Virtual Resource centeer as well as several other resource development projects should be complete by June 2012. A sub committee for Professional Development has been formed to help make recommendations as part of the larger environmental literacy plan.

CS 7.c *Encourage the creation and maintenance of green schools, including schoolyard habitat and green facilities programs.*

#	Action	Joint Lead(s)	Due Date	Status	Action Narrative
1	Reinvigorate FWS schoolyard habitat program throughout the Chesapeake Bay by leveraging increased investment with other partners	FWS	09/30/2011	In Progress	
2	Provide unique environmental education opportunities for students at Presquile NWR in partnership with James River Association. Create new overnight educational facilities using green infrastructure concepts, and work with schools to translate learning accomplished on the refuge with projects on school grounds, such as recycling, energy conservation, and creating habitat	FWS	09/30/2011	In Progress	

Strategy Goal: *ENV. Markets*

EM 1. *Establish a market for trading pollutant reduction credits for nutrients and sediments in support of the water quality goals in the TMDL.*

#	Action	Joint Lead(s)	Due Date	Status	Action Narrative
1	Work with States to develop and finalize common performance standards for and elements of offset and trading programs; establish offsets for new or increasing discharges of N and P for appendix to Bay TMDL in December 2010.	EPA	09/30/2011	In Progress	EPA is reviewing all state trading and offset programs using Section 10 and Appendix S of the TMDL. This review will be released in Fall 2011.
2	Establish Trading mechanism for existing discharges of N and P to meet load and wasteload allocations established in Bay TMDL	EPA	09/30/2011	Complete	An alternative future scenario workshop is scheduled for mid Sept 2011. Will inform future Chesapeake Bay land use scenarios.

EM 2. *USDA will lead, in coordination with EPA and other federal agencies, an interdepartmental Environmental Market Team to coordinate efforts in establishing an environmental market infrastructure for the Chesapeake Bay.*

#	Action	Joint Lead(s)	Due Date	Status	Action Narrative
1	Lead interdepartmental team to develop protocols, tools and guidance for the establishment of water quality and other environmental markets.	USDA/OEM	09/30/2011	In Progress	Team was formed and has met monthly since July 2010. Team established and adopted a Charter for operation and a detailed work plan for 2011 and is working on a work plan for 2012. Team has hosted internal workshops for team members on the Bay TMDL, Market Infrastructure development, Mitigation Banking, Conservation Banking, and potential for marine markets.
2	In concert with Sec 2709 of the 2008 Farm Bill, determine performance thresholds needed to achieve baselines and create eligibility for nutrient credit generation from non-point sources, recommend practical verification protocols for water quality and other environmental markets, and standards for design of a registry for tracking a variety of environmental credits.	USDA/OEM	12/31/2010	Complete	EMT produced a discussion paper outlining issues related to baseline eligibility requirements for water quality credits under the TMDL and submitted to the FLC. On behalf of the EMT, OEM has compiled background information on verification protocols and begun the framework development for a credit registry. EMT hosted a stakeholder workshop in June to focus on registry structure and operation. A white paper on environmental registries was produced by OEM on behalf of EMT after this workshop. OEM has also worked closely with the World Resources Institute to complete a nutrient calculation tool for trading based on NRCS developed farm-scale models.
3	Evaluate existing Federal Agency authorities and roles in creating demand for and supporting the infrastructure and operation of environmental trading markets in order to ensure unified actions to promote environmental markets.	USDA/OEM	04/30/2011	Complete	Survey questions and inventory structure developed by OEM and approved by EMT. Survey distributed to Federal agencies on 3/25. Responses came back in May. Compilation and interpretation of results occurred in May and a brief summary was compiled.

Strategy Goal: *Climate*

CC 1. *Identify communities that are vulnerable to the impacts of climate change.*

#	Action	Joint Lead(s)	Due Date	Status	Action Narrative
1	NOAA will build regional capacity to deliver effective climate information (e.g., regional trainers).	NOAA	09/30/2011	Complete	Some initial work compelted for FY 11 - the action will be ongoing. Status reports on first round of funding received and analyzed. Funding for second round delayed due to appropriation - second round now planned for FY12, pending Congressional appropriation.
2	Analyze the results of NOAA community climate change adaptation projects conducted in FY 2010, and, depending on outcome of such review and the availability of funding, initiate a second round of funding by January 2011, targeting selected communities.	NOAA	01/31/2011	In Progress	Effort completed in FY 11
3	NOAA and USGS will evaluate the operational use of the Chesapeake Inundation Prediction System.	NOAA/USGS	09/30/2011	Not Started	Additional funds proposed in the President's budget were not received. This activity was not be started in 2011.

CC 2. *Demonstrate and implement effective restoration planning in face of land elevation change and sea level rise.*

#	Action	Joint Lead(s)	Due Date	Status	Action Narrative
1	Final guidance document ("Sea Level Rise Impacts on Tidal Wetland Habitat Restoration") released to restoration partners (11/30/10).	NOAA	11/30/2010	In Progress	Draft guidance document was released to partners on 11/30/2010. NOAA will assess the guidance during a year-long test phase prior to finalizing.
2	Provide modernized heights completed for Poplar Island, update tidal datums for Poplar Island and functional nested 3D circulation model for Poplar Island. USGS/FWS will summarize results from Blackwater Refuge to show how sea-level rise projections were used for wetland planning. (USGS funding reflected in CC3)	NOAA/USGS/FWS	03/31/2011	In Progress	NOAA - Height modernization completed, tidal datums published and nested 3D circulation model completed. USGS - Additional funds proposed in the President's budget were not received. This activity was not started in 2011.
3	Continue ongoing efforts to train local partners in using geodetic techniques to provide high-accuracy coastal elevations and to monitor elevation change.	NOAA	09/30/2011	Complete	Geospatial infrastructure for Sentinel Sites training was conducted for Region 5 USFWS staff at the NGS Corbin Training facility in April 2011
4	USACE to use climate change simulations to address issues related to potential impacts of sea level rise and changing precipitation patterns. Use monitoring data from Poplar Island and Mid-Bay to assist in idnetifying and assessing risks.	No Lead Provided	No Date		

Strategy Goal: *Climate*

CC 3. *Identify and assess risk to key tidal and coastal habitats from potential impacts of changing climatic conditions and rising sea level.*

#	Action	Joint Lead(s)	Due Date	Status	Action Narrative
1	USGS will conduct vulnerability study of coastal wetlands to sea-level rise during 2011-2015. FY2011 activities include working with NOAA and other agencies to compile tide datum and sea-level rise information to compare to predictions of sea-level rise in selected areas of Chesapeake Bay. USGS will work with FWS to coordination potential vulnerability studies in the North Atlantic Conservation Cooperative with those in Chesapeake Bay.	USGS	09/30/2011	In Progress	A Limited amount of existing activity on a regional sea-level rise project was done at Blackwater NWR and Dyke Marsh. New work based on increased funds in the President's 2011 budget was not started.
2	NOAA will initiate data efforts in 2011 to support work in FY 2012. Efforts in 2011 include compilation of available coastal elevation datasets (to be available 2nd Q FY 2012), identification of key coastal habitats for evaluation (to be available 4th Q FY 2012), and analysis of available land elevation change data (CORS, SETs; to be available 2nd Q FY 2013)	NOAA	6/30/2012	In Progress	NOAA - compilation of available SET and CORS datasets will begin in FY12
3	USACE to use climate change simulations to address issues related to potential impacts of sea level rise and changing precipitation patterns. Use monitoring data from Poplar Island and Mid-Bay to assist in idnetifying and assessing risks.	DOD-USACE	09/30/2011	Complete	Monitoring data from Poplar Island and Mid-Bay to assist in identifying and assessing risks.

Strategy Goal: *Climate*

CC 4. *Identify and assess risk to key watershed habitats from potential impacts of climate and land change.*

#	Action	Joint Lead(s)	Due Date	Status	Action Narrative
1	Develop bird population-habitat models to assess current capability to support bird populations	FWS	09/30/2011	Not Started	pending receipt of new FY11 funding
2	USGS will begin improvement of Chesapeake Land-Change model to improve vulnerability assessments for climate and land-cover change. USGS will also focus on integrating results using exisitng models of climate-change scenarios on water quality loads and streamflow in the Bay watershed. The USGS will also work with FWS for using land-change model to help develop bird-habitat models (see action 1) and working with Landscape Conservtion Cooperatives to coordiante watershed studies, and with NPS on vulnerability models for birds (action 4) and USFS on forest landscapes (action 3).	USGS	09/30/2011	In Progress	Progress was made on improving the land cover information and models to help predict chages in streamflow. Water quality predictions were dependant on increased funds in the President's 2011 budget and were not started.
3	The Northern Forest Futures project will provide modeled impacts of climate and land use change on forested landscapes, including impacts and interaction of global change/ forest stressors (elevated CO2, N deposition, Ozone, Climate, Land use) on forest ecosystems in CBW using predictive modeling.	FS	09/30/2011	In Progress	The Northern Forest Futures Project (NFFP) seeks to estimate forest composition, structure, and extent across the 20-state NRS region of the Upper Midwest and Northeastern United States. Influencing these projections will be large-scale estimates of land use change and combinations of IPCC scenarios and GCM models used by the RPA. Draft state reports have been prepared and are under review by the state forestry agencies at this time. The projections and analysis is scheduled for completion in December 2012.
4	NPS is funding a project to be led by the Smithsonian Insititution to develop vulnerability models for birds in the Northeast and Chesapeake Bay Region (*Carried out with FY10 Funds)	NPS	09/30/2012	In Progress	Project has begun.

Strategy Goal: *Climate*

CC 5. *Enhance federally-supported research to improve and streamline vulnerability assessments.*

#	Action	Joint Lead(s)	Due Date	Status	Action Narrative
1	Increase federally supported research on adaptation and assessing vulnerability in the Chesapeake Bay watershed. For example, NOAA research continuing in FY 2011 includes assessing fish habitats in the Chesapeake Bay in relation to other embayments nationally and in relation to human activity in the coastal zone, and assessing the effects of ocean acidification on resource species common to the Chesapeake Bay.	NOAA	09/30/2011	Complete	The assessment of fish habitats was conducted on a more general, national scale, and the comparison is considered complete for purposes of the FY 11 action plan. A general summary of fish habitat health within Chesapeake Bay was assessed as part of a nation-wide effort by the National Fish Habitat Program (NFHAP). The NFHAP 2010 report depicted bays and estuaries throughout the U.S. that were considered at high risk for fish habitat degradation and why. The report is a general overview of the most at risk and low risk water-bodies. the report identifies Chesapeake as one of seven regions in the U.S. with the highest risk fish habitats based on the 2010 NFHAP report (NFHB 2010).
2	The USGS and NOAA will also work with CBP STAC and STAR to consider highest priority research activities for the Chesapeake Bay and its watershed. A priority list of needs will be released in 2012. The USGS will coordinate with the DOI Landscape Conservation Cooperatives on common research activities. NOAA will explore the development of a Climate and Societal Interactions (CSI) program Request for Proposals for FY 2012 focused on adaptation and assessing vulnerability in the Chesapeake Bay watershed.	USGS	09/30/2011	In Progress	USGS has been coordinating with STAR and LCC's on mutual information needs for the Chesapeake. Additional activities were dependant on the President's 2011 budget and were not conducted in 2011. NOAA Climate Program Office (CPO) is in the process of finalizing the FY12 funding opportunities and information regarding these funding opportunities will be known in quarter 4.
3	Support existing activities related to climate change in the Chesapeake Bay (e.g., CSI-Coasts SLR decision support tool developed by the Conservation Fund (http://www.chesapeakeadaptation.org/) and the CSI-Coasts supported tools and resources webpage on the NOAA Coastal Services Center adaptation website).	NOAA	09/30/2011	Complete	An on-line sea level rise decision support tool is available at ww.chesapeakeadaptation.org, providing publicly accessible information on sea level rise impacts to the environment, people and infrastructure and wildlife, as well as providing information on adaptation. The on-line information was produced in partnership wit the Conservation Fund, National Geographic, MDNR, Virginia Coastal Zone Program, NOAA and others.

Strategy Goal: *Climate*

CC 5.a *Provide land use change data. [Land cover change data]*

#	Action	Joint Lead(s)	Due Date	Status	Action Narrative
1	Produce updated C-CAP (Coastal Change Analysis Program) land cover analysis for the Chesapeake Bay coastal counties. Note that distribution of 2011 C-CAP land cover and change products (along with 1996, 2001, and 2006 analysis dates) through NOAA's Digital Coast website (http://www.csc.noaa.gov/digitalcoast/) will be an FY 2012 action.	NOAA	09/30/2011	In Progress	Updated 2011 C-CAP product nearing completion for MD, VA, DE coastal counties. Distribution of 2011 C-CAP land cover and change products (from 1996, 2001, 2006 and 2011 analysis dates) will be coordinated with USGS in an FY 2012 action.
2	In 2010, USGS released updated land-cover data for 5 year increments from the mid-1980's through 2005. The USGS will plan with NOAA its next release of land-cover information for the 2010/2011 time period. [USGS funds reflected under SS8]	USGS	09/30/2011	In Progress	USGS is working with NOAA to formulate plans for the 2011 land cover data set.

CC 5.b *Provide projections of land use changes.*

#	Action	Joint Lead(s)	Due Date	Status	Action Narrative
1	The USGS will use information from EPA, state, and county planning agencies to improve forecasts of urban change using the Chesapeake Land Change Model. [USGS funds reflected under SS8]	USGS	09/30/2011	In Progress	USGS is analyzing info from EPA, states, and counties to improve forecasts of urban land change. USGS will host an alternative Futures Scenario Workshop.
2	Create a subset of nationwide county-level population projections for the Bay Watershed	EPA	09/30/2011	Complete	An alternative future scenario workshop is scheduled for mid Sept 2011. Completed a trend projection through 2025. Will inform future Chesapeake Bay land use scenarios.

CC 5.c *Assist states and local communities with topographic data.*

#	Action	Joint Lead(s)	Due Date	Status	Action Narrative
1	USGS will provide improved access to digital elevation information (LiDAR) and work with states to compile and acquire improved elevation data near coastal areas of Chesapeake Bay and its tidal tributaries.	USGS	09/30/2011	In Progress	USGS geospatial data contacts worked with states in Mid-Atlantic area to improve access to LiDAR information.

Strategy Goal: *Climate*

CC 6. *Develop tools and training to provide states, local communities, and resource managers with effective climate adaptation planning and implementation resources.*

#	Action	Joint Lead(s)	Due Date	Status	Action Narrative
1	NOAA will hold "Public Issues in Conflict Management" training in Virginia in FY 2011 and continue to host the "Mid-Atlantic Forum on Coastal Climate Adaptation" website.	NOAA	12/31/2010	Complete	NOAA's Coastal Services Center (CSC) held this training session in Richmond, VA on October 13-14, 2010. Participant reviews were 100% on prepared speakers and communicating concepts, reflect the success of this training. CSC continues to maintain the "Mid-Atlantic Forum on Coastal Climate Adaptation" website, which supports sharing information about stakeholders in the region. On March 3rd, NOAA's Coastal Services Center (CSC) conducted "Roadmap for Adapting to Coastal Risk" training for the Metropolitan Washington Council of Governments. On March 30th and 31st, NOAA's Coastal Services Center (CSC) helped facilitate four Sea Level Rise listening sessions in Hampton Roads, VA.
2	Provide technical support to Maryland’s efforts to consider climate change in coastal habitat conservation decisions.	NOAA	09/30/2011	In Progress	NOAA's Coastal Services Center continues to provide technical support to Maryland's efforts to consider cliamte change in coastal habitat conservation decisions.
3	USGS will begin to synthesize information and provide selected results of coastal wetland vulnerability studies and water-quality changes in the Bay watershed. Initial results will be provided in 2012 and 2013 though the USGS COAST decision tool and summary WWW-based products (funds in SS5)	USGS	09/30/2011	Not Started	This activity was dependent on increased funding in President's 2011 budget and was not started.

Strategy Goal: *Climate*

CC 6.a *Strategic land use decision support*

#	Action	Joint Lead(s)	Due Date	Status	Action Narrative
1	Conduct pilot evaluation of wetlands, forests and streams to identify protection and restoration opportunities.	EPA	09/30/2011	In Progress	Work is progressing on this project. Not likely completed by Sept 2011. EPA has been assisting Frederick County in preparing a wetlands analysis and the MD DNR has been assisting Frederick County in preparing a forest analysis. Both of these analyses are in support of the pilot evaluation to identify protection and restoration opportunities.
2	Create a vulnerability assessment to guide Frederick County, MD with strategic land-use decisions and address Ches. Bay goals	EPA	09/30/2011	In Progress	Work is progressing on this project. Will not be completed by Sept 2011. (Please note that the commissioners in Frederick County have changed as a result of the election (since the beginning of the project) and there has been a reorganization in county offices. Also, the county staff are working on the TMDL, which has a higher priority than this project. However, the county is still committed to the project and have intentions of completing the assessment and incorporating it into the county plan. Region III is committed to the project and intends to continue to support the county and to work with our partners to complete the project.).

Strategy Goal: *Climate*

CC 6.b *Adapting wetland restoration techniques.*

#	Action	Joint Lead(s)	Due Date	Status	Action Narrative
1	NOAA is recommending work with partners University of Maryland to investigate sediment and nutrient impacts on Chesapeake Bay tidal marshes in response to land use and climate change. Work would include sediment and nutrient input/output, measurement of sediment/erosion in wetlands, and comparing those data to LIDAR (LIght Detection And Ranging) topography to model impact on marshes. This work can be combined with the initial Poplar Island work discussed for FY 2011 in CC2 to provide input to adaptation of wetland restoration techniques in FY 2012. This will be coordinated with NOAA and USGS actions under coastal vulnerability studies (CC3). NOAA funding in FY 2011 to support this action included with CC.5.	NOAA	09/30/2011	Complete	FY 11 anticipated progress is complete for this three year project (project ongoing). NOAA/CPO has funded a three year project on the Chesapeake Bay, led by Principal Investigators at the University of Maryland system, and titled "Integrating Climate Change into Restoration of the Chesapeake Bay Watershed." The research is designed to ask how stressors associated with climate and land use changes (e.g., stream flow, turbidity, temperature) influence the function of stream and wetland ecosystems. The work will develop conceptual models of the factors controlling the restoration of nutrient uptake, sediment removal, and biodiversity in streams and freshwater wetlands of the Coastal Plain and Piedmont physiographic regions of the Chesapeake Bay watershed
2	USACE to use Poplar Island case studies and subsequent guidance to assist in assessing changes to wetland restoration techniques.	DOD-USACE	09/30/2011	Complete	
3	USGS will summarize existing results from Poplar Island studies and Blackwater Refuge to contribute to wetland restoration planning. FWS will use results of studies in adaptive management context in FY12 and beyond. USGS will work closely with NOAA and University of MD on new coastal vulnerability studies (funds under CC3) and relation to wetland restoration.	USGS	09/30/2011	Not Started	This activity was dependent on increased funding in President's 2011 budget and was not started.

Strategy Goal: *Climate*

CC 7 *Improve monitoring of climate change impacts in the Bay and watershed.*

#	Action	Joint Lead(s)	Due Date	Status	Action Narrative
1	The USGS and NOAA will collaborate with partners to refine partner needs to improve climate effects monitoring in the Bay and its watershed. Initial actions in FY2011 will be to work through STAR and STAC to refine monitoring priorities and present how the needs would be part of the Chesapeake Bay Program Monitoring Alliance.	USGS	09/30/2011	Not Started	This activity was dependent on increased funding in President's 2011 budget and was not started.
2	FS will examine climate change impacts on landscapes and human health, including urban to rural gradient studies, climate change plots, carbon flux information, and pollen studies.	FS	09/30/2011	In Progress	Forest Inventory and Analysis plots include climate change data gathering. The new annualized design for FIA includes site measurements every five years. In the Baltimore 5 county area, a special project was conducted that provided for an intensification of sampling to determine forest conditions along the urban to rural gradient.
3	NOAA will compile the projects supported by academic partners and the work of the Regional Climate Centers to assess the ongoing monitoring and data compilation capabilities supported by NOAA in the watershed. NOAA will also explore a demonstration project to illustrate how existing independent data can be integrated with larger regional data sets to produce climate adaptation tools to address a specific question and portion of the watershed.	NOAA	09/30/2011		

CC 7.a *Implement the Climate Effects Network.*

#	Action	Joint Lead(s)	Due Date	Status	Action Narrative
1	USGS will pursue opportunities with the DOI agencies to enhance climate effects monitoring in the Bay watershed. Initial efforts will focus on carbon-flux monitoring in the Potomac River.	USGS	12/31/2010	Not Started	This activity was dependent on increased funding in President's 2011 budget and was not started.

CC 7.b *Develop monitoring framework for streams.*

#	Action	Joint Lead(s)	Due Date	Status	Action Narrative
1	Develop with Maryland a montioring framework to detect climate change responses in stream biota.	EPA	09/30/2011	In Progress	The more general monitoring framework on site selection through a vulnerability assessment is being conducted now and will be completed by the end of this Quarter, or potentially the beginning of next quarter, and the specific application of this framework to Maryland will be completed by the first or second quarter of 2012.

Strategy Goal: *Climate*

CC 7.c *Develop a complementary estuarine monitoring network.*

#	Action	Joint Lead(s)	Due Date	Status	Action Narrative
1	Produce guidelines for establishing vertical control within the National Estuarine Research Reserve System (NERRS) (1st Q FY11) by coordinate with Federal (USGS) and State partners to record and document best practices for the development of high accuracy vertical control network within the NERRS. Conduct training on geodetic and tidal datum techniques.	NOAA	12/31/2010	Complete	Guidelines for establishing vertical control within the National Estuarine Research Reserve System (NERRS) are complete. Training on geodetic and tidal datum techniques has been accomplished for VA NERR staff .
2	Complete geodetic control network (2nd Q FY11) at VA NERR, MD NERR (Jug Bay component) and conduct work to build local vertical control networks at MD NERR Jug Bay component (4th Q FY 11).	NOAA	09/30/2011	Complete	Work to complete geodetic control network at VA NERR has been accomplished at 4 VA Sites, as well as Jug Bay in MD.
3	Evaluate tide station information, specifically evaluate existing tidal and water level information at Jug Bay and VA sites and provide recommendations for enhanced water level products.	NOAA	09/30/2011	Complete	Guidelines for determining local water levels in the National Estuarine Research Reserve System (NERRS) and linking to tidal datums were written by a team of NGS, CO-OPS, and NERRS staff. The document was completed in September. Public comment will be incorperated by Jan. 1, 2012.

CC 8. *Ensure monitoring results are integrated and available to assess effectiveness and adjust management actions as necessary.*

#	Action	Joint Lead(s)	Due Date	Status	Action Narrative
1	USGS will begin dialogue with EPA in developing a method to provide climate monitoring results once requirements for a network have been developed.	EPA/USGS	09/30/2011	Not Started	This activity was dependent on increased funding in President's 2011 budget and was not started.
3	NOAA will hold two workshops to conduct knowledge assessments on drought and the Chesapeake Bay. These assessments will serve as the basis for establishing a Chesapeake Bay Regional Drought Early Warning Information System (Chesapeake - RDEWS), including assessment of how low flow alters water quality on the Susquehanna River and assessment of drought related data and monitoring gaps in the Susquehanna, James and Potomac Rivers. This is part broader National Integrated Drought Information System.	NOAA	09/30/2011	In Progress	Both workshops are being planned and will take place in FY12.

Strategy Goal: *Climate*

CC 9. *Integrate climate change adaptation into the Chesapeake Bay Program.*

#	Action	Joint Lead(s)	Due Date	Status	Action Narrative
1	USGS will support integration of climate information by hiring a climate coordinator. The coordinator will help form a CBP entity (workgroup) that will work to supply information to CBP Goal Teams and develop synthesis products of selected findings to provide implications for CBP goals. In addition, NOAA will establish a detailee position to coordinate within NOAA and contribute to overall interagency climate coordination for the program. NPS will also hire two individuals to coordinate on climate (see CC12).	NOAA/USGS	09/30/2011	Not Started	This activity was dependent on increased funding in President's 2011 budget and was not started.
2	Identify climate change information and services support from the NOAA's proposed National Climate Service keystone partners in the region, such as the Northeast Regional Climate Center.	NOAA	09/30/2011	Not Started	Pending funding to identify detail assignment for coordinating this action

CC 10. *Conduct technical performance review of agencies' climate response effectiveness.*

#	Action	Joint Lead(s)	Due Date	Status	Action Narrative
1	The Chesapeake Bay Program's Scientific and Technical Advisory Committee will lead an annual performance review of effectiveness of monitoring, restoration, conservation, and research activities for adapting to and mitigating climape change effects.	EPA	09/30/2011		NOAA has not begun discussions with EPA or STAC on this task because of budget constraints.

CC 11. *Predict potential changes in pollution loads due to climate change.*

#	Action	Joint Lead(s)	Due Date	Status	Action Narrative
1	In FY2011 USGS will focus on integrating results of climate change scenarios on water quality loads and streamflow in the Bay watershed. [USGS comment: consider putting this in QW12 and SS12]	USGS	09/30/2011	Not Started	This activity was dependent on increased funding in President's 2011 budget and was not started.
2	Make available Initial results of scenario development of future water quality under changing climate and land-use conditions for 20 watersheds	EPA	No Date	In Progress	This is an ongoing project and the first of several projects. USGS has given us future climate data. We are working with STAC and Penn State to produce climate change scenarios using six different global climate models. We anticipate a presentation of the findings in Fall 2011.

Strategy Goal: *Climate*

CC 12. *Develop adaptation strategies to manage vulnerable habitats and public infrastructure on federal lands to increase resiliency to climate change impacts.*

#	Action	Joint Lead(s)	Due Date	Status	Action Narrative
1	Develop watershed management plan for the Blackwater River in Maryland in partnership with Maryland Audubon Society in conjunction with ongoing watershed management planning on the Transquaking River. The focus will be on increasing adaption and resilience of watershed habitats and wildlife to sea level rise, and improving the quality of water entering the Bay	FWS	09/30/2011	In Progress	watershed management planning process is in motion, involving local community interests and using Refuge CCMP as guidance
2	NPS will hire two climate change adaption coordinators in FY11 that will devote a portion of their duties to collaborate with other federal, state and NGO partners in developing adaptation strategies to deal with climate change issues impacting the natural and cultural resources throughout the Chesapeake watershed, including in urban landscapes. The positions will work in collaboration with the North Atlantic LCC, USGS Climate Science Center and NCR Center for Urban Ecology and climate change coordinators being established for the CBP.	NPS	09/30/2011	In Progress	NPS Northeast Region Climate Change position will be duty stationed at the Univ. of Rhode Island. The postion is currently in classification.

CC 13. *Integrate climate response into federal growth and development programs and strategies.*

#	Action	Joint Lead(s)	Due Date	Status	Action Narrative
1	Collaborate with NGOs to support integration of climate change adaption and greenhouse gas mitigation into Smart Growth and Sustainable Community strategies.	EPA	09/30/2011	Complete	Staff from the Montgomery County Planning Department have been trained on how to use the INDEX planning model to evaluate the greenhouse gas implications of project design and location within their Sector Planning Process. This capability is an essential step in connecting the Counties formal land use approval authority to it's goals related to land use in the County Climate Protection Plan. The test case was a large redevelopment near FDA's campus in White Oak, near US Highway 29, north of the Capital Beltway. The contractor has worked with County staff to evaluate several alternative site plans and delivered a final report on the results.

CC 14. *Coordinate with other national initiatives to enhance federal mitigation efforts in the Bay watershed.*

#	Action	Joint Lead(s)	Due Date	Status	Action Narrative
1	Create a Bay-watershed subset of emissions data collected by large emitters of greenhouse gases.	EPA	12/30/2011	In Progress	Greenhouse Gas Reporting Program data received on 9/30/11, and is now being processed/verified. Completion of this action dependent upon finalization of data.

Strategy Goal: *Science*

SS 1. *Expand scientific coordination and capabilities of the Chesapeake Bay Program.*

#	Action	Joint Lead(s)	Due Date	Status	Action Narrative
1	USGS will work with EPA and other federal agencies and CBP partners to develop a plan to evolve the Scientific, Technical Assessment and Reporting (STAR) team to have increased federal and partner capabilities to address CBP science needs. NOAA will coordinate with the science support structure for the Sustainable Fisheries Goal Implementation Team.	NOAA/USGS	12/31/2010	Complete	The STAR action report is complete. USGS, NOAA, and EPA are working to implement report recommendations to transform STAR.
2	Reorganize and focus CBP Scientific, Technical assessment and Reporting (STAR) efforts to coordinate program science activities	EPA	09/30/2011	In Progress	Recommendations are being carried forward from the first quarter work plan development. Cross cutting topical meetings through STAR have been conducted (e.g. Tidal-Nontidal WG meeting in conjunction with the Water Quality Goal implementation Team April 13) and plans for additional meetings are slated for the 4th quarter (e.g. Revision to indicators for the Bay Barometer per the new organization structure may involve new partner contributions as well as the Stream Habitat Health meeting being planned for Spring 2012).

SS 2. *Establish decision support specialists.*

#	Action	Joint Lead(s)	Due Date	Status	Action Narrative
1	USGS will establish decision-support specialists for land conservation and water quality in 2011. The specialists will interact respective Goal Implementation teams of the CBP.	USGS	03/31/2011	Not Started	Will not be done because funds not provided in Congressional 2011 appropriation.

Strategy Goal: *Science*

SS 3. *Improve communication products.*

#	Action	Joint Lead(s)	Due Date	Status	Action Narrative
1	Work with UMCES and other regional institutions, and the CBP STAR to translate scientific findings and illustrate impacts of management decisions.	EPA	09/30/2011	Complete	All 2010 scientific findings illustrating the impacts of mangement decisions were released to the public by Aug 2011.
2	USGS will focus on WWW-based products to summarize science to support the TMDL and watershed implementation plans in 2011 and additional products for fish health; andsea-level rise and habitat	USGS	09/30/2011	In Progress	WWW features for watershed monitoring results were completed in May to support CBP Bay Barometer. Selected drafts for other topics will be done in 2012.
3	Work with the University of Maryland's EcoCheck program to demonstrate capabilities in science communications to Chesapeake Bay Program partners to better leverage partnership.	NOAA	09/30/2011	Complete	In addition to the work with EcoCheck, NOAA (NCCOS) also developed a summary report highlighting its research activities as away to communicate to the scientific community about the wealth of existing ecological data on Chesapeake Bay. The report provides baseline information to support future water quality assessment, habitat and ecological modeling and pollution assessment in the Chesapeake Bay Success of both State and Federal efforts in achieving goals set forth in the EO will depend on having relevant, sound information regarding the ecology and function of the system as the basis of management and decision making.

SS 4. *Review and improve CBP science approaches.*

#	Action	Joint Lead(s)	Due Date	Status	Action Narrative
1	Support for CBP Scientific and Technical Advisory Committee to review key science approaches and recommend improved science activities.	EPA	09/30/2011	Not Started	No funding currently available.
2	EPA will establish a Chesapeake Bay Analysis and Synthesis Center to facilitate the formation of synthesis teams of scientists and managers to focus on addressing key environmental issues in the Bay and watershed and providing answers to the most pressing problems facing the Bay	EPA	03/31/2011	Not Started	No Synthesis Center, however, STAR is working within its Tidal and Nontidal WGs to initiate select watershed syntheses with the best available resources. A Synthesis Action Team was planned for being established as an outcome of the April 13 TMAW+NTWG_WQGIT meeting held by STAR. The Team should be established either the latter half of calendar year 2011 or early 2012. The first team has been established since the Oct 2011 STAR Topical Meeting (Case Studies Team) which is looking at cases of management actions and impacts detected in monitoring data.

Strategy Goal: *Science*

SS 5. *USGS and NOAA will ensure scientific tools, data, and computer model results are available.*

#	Action	Joint Lead(s)	Due Date	Status	Action Narrative
1	USGS will provide selected water-quality results to support the TMDL through the Chesapeake Online Adaptive Support Toolkit (COAST). USGS will work with EPA on how best to summarize results from SPARROW models and nontidal water-quality network to support TMDL implementation and with NRCS in priority watersheds.	USGS	03/31/2011	In Progress	USGS sediment SPARROW model results are available through COAST. Additional interaction with WQ GIT and USDA and States on new SPARROW results was started and will continue in 2012. USGS also worked on forest mapper with USFS and land conservation tool with NPS.
2	NOAA will participate in relevant discussions and workshops to ensure its Digital Coast capabilities, tools, training and data are recognized by the Chesapeake Bay partners.	NOAA	09/30/2011	Complete	Data distribution discussions are continuing; Elevation, Shoreline and Land Cover (and other) data available through the Digital Coast, as well as tools and training.
3	EPA will make the underlying computer code for all its Bay TMDL related models and tools readily accessible to partners and stakeholders through the Chesapeake Community Modeling Program website.	EPA	06/30/2011	In Progress	This is an ongoing effort. Models used for the Dec 2009/2010 TMDL were completed and available on-line prior to the end of the TMDL comment period. The 5.3.2 Watershed Model to be used in the development of the Phase II WIP's is available online.

SS 6. *EPA, working with Chesapeake Bay Program partners, will establish ChesapeakeStat.*

#	Action	Joint Lead(s)	Due Date	Status	Action Narrative
1	EPA, working with USGS, NOAA, FWS, the US Navy and other partners and taking into consideration the recommendations of the ChesapeakeStat Action Team will enhance the ChesapeakeStat website to improve accountability features and capacity to support Partnership decision making.	EPA	09/30/2011	In Progress	Website work is ongoing to enhance accountability features and add decision support information and tools. A new Implementation Workgroup was formed to work with the Goal Implementation Teams to implement the adaptive management framework.

Strategy Goal: *Science*

SS 7. *Improve modeling used for restoration activities and assessing impacts of climate change.*

#	Action	Joint Lead(s)	Due Date	Status	Action Narrative
1	Conduct demonstration of the Habitat Priority Planner tool to consider applicability for NOAA activities.	NOAA	09/30/2011	Complete	NOAA Coastal Services Center Habitat Priority Planner/Sea Level Affecting Marshes Model webinar demonstration delivered 4/28/2011
2	USGS is improving SPARROW models for water quality (see WQ10). Initial recommendations to improve models for impacts of climate change will be in the STAR report and addressed under USGS climate vulnerability studies. This will include definition of priority model needs for other CBP goals (Fish, Wildlife, Habitat) [USGS funds reflected under WQ10] and working to improve land-change model (funds under WQ 1c).	USGS	12/31/2010	In Progress	Initial ideas on new science needs for the Goal Teams are in the STAR action team report (this was the 12/31/10 deadline). Draft results from the revised SPARROW models for nutrients will be available in Fall 2011.
3	FWS will develop bird population-habitat models to assess current capability to support bird populations	FWS	09/30/2011		

SS 8. *Establish a Chesapeake Monitoring Alliance.*

#	Action	Joint Lead(s)	Due Date	Status	Action Narrative
1	The initial approach for establishing a monitoring alliance will be in the STAR report recommendations. The STAR will be reorganized in 2011 to establish a monitoring alliance.	EPA/NOAA/USGS	12/31/2010	Complete	STAR report was completed and contained recommendations for establishing Alliance. NOAA, EPA, and USGS are establishing action team to implement alliance.
2	The USGS, EPA, and NOAA will support the alliance by approaching national programs within their respective agencies to have enhanced aspects of programs carried out within Chesapeake Bay and its watershed (see next action). The agencies will coordinate on how information from the monitoring alliance will be stored in the Data Enterprise (action SS 13).	EPA/NOAA/USGS	09/30/2011	In Progress	A team was selected during spring 2011 but no subsequent meetings have occurred.
3	USGS will continue existing land-cover monitoring for analysis of the Bay watershed. USGS will work with EPA and NOAA to begin development of long-term land-cover monitoring and analysis framework for 2012 and later years. USGS will initiate improved monitoring of impervious land cover change to support TMDL, tracking and to explain water-quality change.	USGS	09/30/2011	In Progress	USGS is working with NOAA and EPA to plan long-term land monitoring land change monitoring. USGS is also continuing current National Land Cover monitoring though LANDSAT.
4	Continue long-term monitoring of indicator species at National Parks in the Chesapeake Watershed; work with monitoring alliance to share monitoring data.	NPS	09/30/2011	Complete	The NPS Northeast Region Inventory and Monitoring Programs Mid-Atltantic Network has shared information collected in its Vital Signs Monitoring program with federal, state and local agencies as requested. Data sets collected and made available include air resources, breeding birds, forest vegetation, weather and climate, and water quality and quantity.

Strategy Goal: *Science*

SS 9. *Coordinate regional water monitoring with national networks.*

#	Action	Joint Lead(s)	Due Date	Status	Action Narrative
1	NOAA and USGS will approach the Integrated Ocean Observing System (IOOS) and associated programs will coordinated through the alliance. USGS will also focus on increased coordination for monitoring with USGS National Steam Information Program, National Water-Quality Assessment Program, and Toxics Substances Hydrology. Note for NOAA that this coordination with IOOS will be conducted via action SS8.	USGS	09/30/2011	In Progress	USGS met with National Water Quality Assessment Program (NAWQA) to coordinate NAWQA cycle 3 monitoring and potential for enhanced activities in the Chesapeake Bay watershed. Increased activities are dependant on the FY2012 funding.
2	EPA will ensure national survey work is coordinated with regional and state efforts.	EPA	06/30/2011	In Progress	CBPO coordinates with USGS on the nontidal monitoring network which has regional elements on the national surface water quality monitoring network.

SS 10. *Increase monitoring by state, local, and non-governmental partners.*

#	Action	Joint Lead(s)	Due Date	Status	Action Narrative
1	EPA will provide expanded grant, technical, and program development support to state programs and others as resources are available, to systematically expand their tidal and watershed monitoring networks.	EPA	09/30/2011	In Progress	CBPO is funding the nontidal water quality monitoring network to expand by 18 stations including sites in Washington DC in an effort to enlist them as full partners in the network. Additional funding is being added to MD and VA 117e grants to support an additional cruise to capture critical time periods increasingly shown to be sensitive and responsive to nutrient load and climate changes in the maintstem Bay.
2	EPA will develop partnership guidance documents that define quality assurance requirements for a monitoring program to become a partner in the Monitoring Alliance.	EPA	09/30/2011	In Progress	Within CBPO monitoring group we are discussing what information we would like from a monitoring alliance. A pilot project is getting underway to support a test of the Data Enterprise. The nontidal team & dissolved oxygen team have met three times with the contractor. Recommendations and findings are under review.
3		No Lead Provided	No Date		

Strategy Goal: *Science*

SS 11. *Improve monitoring of climate change impacts.*

#	Action	Joint Lead(s)	Due Date	Status	Action Narrative
1	USGS and NOAA will interact with proposed agency activities to improve climate monitoring in the bay and its watershed. USGS will work with the DOI Climate Effects network to assess potential for increased monitoring within the Bay watershed and NOAA will approach programs in the proposed NOAA Climate Service. [USGS funds reflected under CC7]	USGS	09/30/2011	Not Started	USGS activities to improve climate monitoring were not done in 2011 becuase of Congressional cuts to USGS Climate programs.
2	NOAA, USGS, and NPS will coordinate publication of guidelines for monitoring wetland surface elevation change using Surface Elevation Table technology (aligns with actions in CC7).	NOAA/USGS/NPS	9/30/2012	In Progress	Have begun discussions with NPS and USGS. On track for completion end of FY12.
3		NOAA	09/30/2011		

SS 13. *Improve management of environmental information through a Data Enterprise.*

#	Action	Joint Lead(s)	Due Date	Status	Action Narrative
1	Initiate the design and development of the Chesapeake Bay Data Enterprise system to share scientific data between partners.	EPA	09/30/2011	In Progress	Recommendations and findings have been received from the contractor for nontidal water quality and dissolved oxygen data flows.
2	NOAA will identify existing activities and coordinate with EPA lead, participate in EPA-led Data Enterprise formative discussions, and will suggest refinements as appropriate to scope of customers (e.g., modelers) for Data Enterprise. NOAA will finalize the Chesapeake Bay Ecosystem Integrated Information System Oyster Restoration data tool and demonstrate that tool to the Chesapeake Bay Program Sustainable Fisheries Goal Implementation Team.	NOAA	Complete	Complete	NOAA, EPA, USGS, and Chesapeake bay program completed a series of meetings to generate recommendations on design of the Data Enterprise. The recommendations address general design considerations for integrating NOAA continuous, fixed-station, dissolved oxygen data into the Data Enterprise alongside VA, MD, and other sources. Beta version of Oyster Data Tool has been developed and presented to the Fisheries GIT.
3	USGS will work with EPA to ensure the data enterprise includes information to support all the CBP goals (in addition to water quality). USGS will improve access to information through COAST and National Water Information System (NWIS).	USGS	09/30/2011	In Progress	USGS has had meetings with EPA and NOAA and an action team is looking at better approaches for managing water quality data

Strategy Goal: *Science*

SS 14. *Improve indicators of environmental conditions.*

#	Action	Joint Lead(s)	Due Date	Status	Action Narrative
1	Establish Alignment Action Team to work with state partners to improve environmental indicators to better reflect outcomes. Each agency that is lead or co-lead on an environmental outcome in the Strategy will coordinate with partners to review and improve environmental indicators as needed.	EPA	09/30/2011	In Progress	Alignment team (with jurisdiction partners) was established and proposed a four-stage path forward over the next two years, using the CBP Goal Implementation Teams to align interests, priorities, and efforts of federal and jurisdictional partners. The partners agreed to: update/refresh C2K and streamline commitments; ensure a set of shared priorities; clarify governance; design efficient operational structure for collaboration; and, enable effective communication of Partnership's refreshed goals, outcomes and accomplishments. The proposal was approved by FLC and later by the Executive Council on July 11, 2011. Implementation has begun. This process will be ongoing until the EC meets in 2013.
2	Baltimore Ecosystem Study (BES) Group will continue to develop high resolution data coverage and assessments, including social and economic data, for urban areas for use in having as a possible future comprehensive indicator (sustainable development and ecological indicators).	FS	09/30/2011	In Progress	Ongoing social science research in the metro area as part of the Baltimore Ecosystem Study. Baltimore is one of two urban Long Term Ecological Research sites in the country.

SS 15. *Create case studies of targeted restoration activities.*

#	Action	Joint Lead(s)	Due Date	Status	Action Narrative
1	USGS and NOAA will begin to synthesize information on selected restoration studies. USGS will focus 2011 and 2012 efforts on water quality studies in small watersheds to help information the TMDL implementation. NOAA will focus initially on habitat restoration in the estuary, specifically pre-restoration mapping surveys (see FW.2) in FY 2012 will be compared with post-restoration surveys and monitoring to evaluate and document progress in selected tributaries.	NOAA/USGS	09/30/2012	In Progress	NOAA--Baseline benthic habitat mapping (high resolution hydrographic surveys) in support of oyster restoration is underway; baseline habitat utilization surveys have not started. USGS is working to begin summary of water-quality findings from key USGS studies as part of CBP effort to summarize lessions learned on water-quality response to BMPs.

Strategy Goal: *Science*

SS 16. *Explain the factors affecting progress toward restoration goals and the effects of management actions.*

#	Action	Joint Lead(s)	Due Date	Status	Action Narrative
1	USGS and EPA will begin analysis to explain water quality on the Potomac River in 2011 and expand to other basins in 2012-2016.[USGS funds reflected under WQ17] (see water quality actions for more details).	USGS	09/30/2012	In Progress	USGS is conducting planning for explaining factors affecting water quality in nontidal areas on the Eastern Shore and Potomac basin. Eastern Shore report will be done in 2012 and Potomac report in 2012-2013. This is being done through STAR to include collaboration with tidal water-quality change also.
2	NOAA will conduct analysis of factors affecting selected fish species in the Bay (see Fish and Wildlife actions).	NOAA	09/30/2011	In Progress	
3	NOAA will assess conditions affecting navigation and maritime trade. Contingent on final allocation of ship resources and funding, NOAA will acquire hydrographic survey data in the Lower Bay in 2011 to updated navigation products. NOAA will complete acquiring hydrographic survey data for planned project in lower Bay.	NOAA	09/30/2011	In Progress	Coast Survey planned to survey areas in central and lower Chesapeake Bay encompassing a total of 47 square nautical miles (snm); slightly larger than the size of Nantucket, MA. Coast Survey exceeded its target by adding additional resources to survey in the Chesapeake Bay to survey a total of 60 snm. The additional areas surveyed were Coast Surveys effort to support the President's Executive Order to restore the Chesapeake Bay.

SS 17. *Assess new threats to the Bay and its watershed.*

#	Action	Joint Lead(s)	Due Date	Status	Action Narrative
1	USGS will focus on new threats from emerging contaminants (see FW14, WQ8) and combined impacts of land use and climate change on water quality in the watershed habitats (see CC 4). [USGS funds reflected under WQ8, FW14]	USGS	09/30/2012	In Progress	USGS is focused on summarizing results of toxic contamiants and fish health from the Potomac and Susquehanna basins.
2	In FY 2011, NOAA will focus its efforts to assess new threats to the Chesapeake Bay on using ecological forecasting techniques - see actions associated with WQ.10.c.	NOAA	09/30/2011	In Progress	Implementation of ecological forecasting techniques continue. This activity will be successfully completed by the end of Q4.

Strategy Goal: *Implementation & Accountability*

IA 1. *Align FLC and CBP Functions*

#	Action	Joint Lead(s)	Due Date	Status	Action Narrative
1	Support for efforts to align federal actions, roles and functions with CBP partnership actions, roles and functions	EPA	Ongoing	In Progress	The FLC and Executive Council approved (July 11, 2011) a four-stage path forward over the next two years—using the CBP Goal Implementation Teams—to: update/refresh C2K and streamline commitments; ensure a set of shared priorities; clarify governance; design efficient operational structure for collaboration; and, enable effective communication of Partnership's refreshed goals, outcomes and accomplishments.
2	Support for coordination and implementation of overall strategy and coordination and facilitation of the Chesapeake Bay Partnership, including support to science, citizens and local government advisory committees, and interagency committees.	EPA	Ongoing	In Progress	EPA continues to serve as the lead coordinating partner, providing ongoing support for coordination and facilitation of the Program, advisory committees, goal implementation teams and inter-agency committees. GIT chairs meeting scheduled for the Fall.

IA 2. *Develop Federal Milestones to Track Progress Toward Goals*

#	Action	Joint Lead(s)	Due Date	Status	Action Narrative
2	Federal agencies will also consult and collaborate with the states and District to develop appropriate two-year milestones for the outcomes outlined in this strategy beyond those for water quality.	FLC	04/30/2011	In Progress	

IA 3. *Develop Annual Action Plan*

#	Action	Joint Lead(s)	Due Date	Status	Action Narrative
1	The FLC will develop the fiscal year 2012 action plan based on funding proposed in the President's Budget for fiscal year 2012.	FLC	04/30/2011		

IA 4. *Develop Annual Progress Report*

#	Action	Joint Lead(s)	Due Date	Status	Action Narrative
1	The FLC will develop tracking mechanisms for reporting on progress made during fiscal year 2011 to support the Fiscal Year 2011 Progress Report, which will be prepared and published in early 2012.	FLC	09/30/2011		

IA 5. *Establish Independent Evaluation*

#	Action	Joint Lead(s)	Due Date	Status	Action Narrative
1	Develop a process that will include independent evaluation mechanisms as part of the adaptive management cycle and annual progress report.	FLC	09/30/2011		

Strategy Goal: *Implementation & Accountability*

IA 6. *Institute Adaptive Management*

#	Action	Joint Lead(s)	Due Date	Status	Action Narrative
1	Establish a regular cycle for reviewing activities, progress against goals and timelines outlined in the strategy.	FLC	09/30/2011		
2	USGS will work with NOAA and other agencies to employ ecosystem-based adpative management to provide science for targeting, monitoring, and evaluation of management actions and ecosystem improvements (see stregthen science section for more information and funding).	USGS	09/30/2011	In Progress	A proposal describing science needs has been prepared. Additional activities are dependent on increased funding in President's 2011 budget and will not be started