NCEP Ocean Prediction Center (OPC) (April 22, 2011)			
	Planned Action	**Status**	**Target Time Frame (S/M/L)**
Work with NOS, expanding into Ecological Forecasting (MV1, MV2, CP1, CP4)	1) OPC is part of the "enabling" infrastructure 2) Contribute to NCEP-NOS operational ecological forecasting modeling Concept of Operations (CONOPS) 3) Will develop an EFS Concept of Services	1) NWS Strategic Plan (Service 20/20) 2) ConOps for operational modeling completed (April/May 2010) 3) 1st draft complete. Under further discussion w/ NWSHQ	1) Completed 2) Completed 3) Completed
Accelerate the development of GFE capability for service enhancements (PS1, PS2)	1) Enhance OPC-TAFB synergy, expand to include HFO. 2) Implement GFE for operations 3) Develop new operational paradigm in the gridded world.	1) Agreement with HFO and NWSEO achieved, RLC approval: Dec. 2010 2) GFE IOC in FY10; GFE-lite FY11Q3. 3) AWIPS-2 transition: FY11/FY12 4) Conceptual formulation of future operational paradigm under way	1) Completed 2) On-track 3) On-track 4) GFE FOC on AWIPS-2: FY12; New paradigm: FY12/13 (M/L)
Expansion of NDFD to include Marine Domain (IS5, IS6)	OPC is leading and coordinate NWS-wide "marine grids" effort involving OPC, TAFB, AR, and PR.	1) Establishing Marine grids 2) Implementing GFE in AWIPS-2	1) Completed. 2) FY12-13: GFE FOC(M-L)
Enhance its web development/technical development capability. (IS1, IS2, IS3, IS4, IS7)	1) The OAB GS-7 position is designated to be a primary in-house resource on web services. 2) OPC will ask work with NCO on centralized Web Service development/support approach 3) Leveraging partners to continue web enhancements	1) Upgraded a GS-13 in OAB 2) Hired Chris Juckins in OAB 3) Joint AR-OPC Arctic page to support marine operations	1) Completed. 2) Completed. 3) completed
Enhance R2O, O2R efforts (ST1, ST3)	1) Continue the ongoing R2O efforts with Navy, NESDIS, and NOPP partners. 2) Participating MISST-2 team w/ EMC	1) NCEP/Navy global HYCOM (NAVO) available for OPC 2) MISST-2 proposal successful 3) Develop an Ocean-Coastal modeling testbed at OPC	1) Competed 2) Completed. 3) The testbed conceptual framework FY11-12
Enhance the use of ensembles to incorporate uncertainty information (ST4, ST5, ST8)	1) An ensemble based probabilistic wind warning graphic product is under development 2) OPC will actively participating future ensemble model evaluation activities 3) Develop probabilistic forecast for beyond day-5	1) Prototype in FY10 2) OPC/HPC/EMC framework for model evaluation 3) Under development	1) Complete. 2) Ongoing-complete 3) FY12/13- (M/L)
Improving verifications (ST6)	Working with the verification branch (NWSHQ) to enhance verification capability using new data source, e.g., altimeter significant wave height measurements for high seas areas.	1) OPC is developing verification capability to use altimeter significant wave height for high seas areas 2) Posting monthly buoy verification on web 3) Work towards a gridded verification	1) Completed 2) On-track 3) Working with RTMA/URMA efforts to transition to gridded verification for offshore forecasts.

Enhance OPC's role in ocean Observations (ST7)	OPC will continue to engage EMC, NOAA (e.g., TPIO) and the international community (WMO, JCOMM) on observing requirements and evaluation, including WMO RRR	1) Leading NWS evaluation for OSCAT 2) Contributing to WMO RRR through leadership on JCOMM activities 3) Arctic in situ obs	1) Complete. 2) Complete. 3) Complete
Evolving staff skill sets toward future services (POC1, POC2, POC3)	1) Encourage staff to participate training on coastal oceanography and coastal marine ecosystems. 2) Integrate OFB and OAB activities toward a forecaster-developer paradigm in the future	1) Encourage staff participation of the UMD program. 2) Recruiting expertise including oceanography and other areas 3) Plan for forecaster-developer paradigm in the AWIPS-2 /IDSS era.	1) FY11 and beyond (S /M /L) 2) Significant progress (Siebers, Juckins) 3) AWIPS-2 training on-track

UCACN Report, Dec. 2011			
Engage Private Sector (through UMD, VIMS)	1) Visit VIMS, UMD 2) Ongoing efforts	1) Visit VIMS 2) Work with MARACOOS	Ongoing, long term
Expand EFS pilots beyond Sea Nettles	1) Collaborate with CSDL, IOOS on hypoxia; 2) Collaborate with NCCOS, NESDIS on disease pathogen (V. Vulnificus, FY13)	1) FY13 AOP plan for v.vulnificus 2) Active role in NOAA ecological forecasting roadmap implementation (Operational HAB service w/ NCCOS/COOPS)	1) completed 2) FY13
OPC SOO – through input from staff and partners	1) Engage staff 2) Engage partners (e.g., NOS, IOOS)	1)	
Further develop the visiting scientist program (VSP)	1) host students 2) establish COMT (testbed)	1) Ben Albright (Howard U., PhD student) 2) Establish the IOOS COMT 3) Host summer interns 4) Collaborate with RAs, e.g., MARACOOS 5) Host UMD student interns during fall and spring 6) Host marine forecast officer from Brazilian Navy	1) FY12-14 (S) 2) completed 3) Ongoing 4) Ongoing 5) Ongoing 6) Ongoing
Enhance dissemination (e.g., mobile web page)	1) Develop OPC mobile webpage	1) FY13 AOP	1) completed
Expand ensemble forecasting	1) Training forecasters 2) Leverage HPC expertise (Keith)	1) Develop probabilistic winds for days 6-7	1) Significant progress made 2) Establish verification in FY13
Building Gridded Infrastructure	1) GFE in operations 2) Develop hazard grids approach for OFF 3) Evolving service/operations paradigm under GFE 4) Develop high seas formatter/polygon warning paradigm 5) Develop graphic products for ECDIS	1) Experimental 2) Plan for after the move 3) Under development 4) Under development by OPC-TAFB-HFO-NCO 5) Planning and pilot w/ OCS, JCOMM	1) FY13 implementation (Q3) 2) FY13/14 completion 3) Under development 4) Leading JCOMM effort
Leadership/requirement setting in hydrodynamic modeling for coastal hazard warning/forecast/services	1) Through leadership in engaging COMT (testbed)	1) COMT established	1) On track
Emphasize “costs” in future product development	1) Develop extra-tropical storm surge products/services	1) ESTOFS	1) Complete, and continue improvement

UCACN Site Visit, July 15, 2013 (Included participation by NHC and EMC/MMAB			
Necessary ocean science leadership is missing within the OPC. OPC does not have a Science Operations Officer (SOO) on staff. Having a SOO would greatly enhance progress on all levels. The SOO should be a scientist with skill sets that are broad based, including ocean, atmosphere, and ecology.	Advocate for a SOO position within OPC	Assure NCEP Director is aware of staffing needs	Ongoing, long term. NCEP Director is aware of OPC resource limitation which must be treated within the larger personnel context.
The plan for ecological modeling that engages all line offices of NOAA is a very positive approach that should yield many opportunities for OPC to take a partnered leadership role. As the academic community has developed very promising 3---D, t ecological models, it has relied on physics based, 3---D, t hydrodynamic models which serve as the hydrodynamic backbone for the eco-models. As such, the most advanced hydrodynamic models should be employed so that the eco-models will be as good as they can be.	Assure that NOAA is aware of the most advanced hydrological models and advocate for usage	Assure that NOAA Ecological Forecasting Roadmap Portfolio lead has information regarding the most advanced hydrodynamic models.	Complete. OPC's role is to facilitate ecological forecasts with NOS having the primary hydrodynamic modeling responsibility. OPC has briefed the NOAA Ecological Forecasting Roadmap Portfolio Manager on this issue.
The goal to enhance user engagement is an important one. Travel restrictions have made outreach more difficult. The use of "Go---To---Meeting" or similar web---based meeting and webinar technologies should be explored as a workaround.	Use web based meeting technology to facilitate user engagement	OPC should purchase/use web based technologies for user engagement	Complete/ongoing. Purchase for Linux/Windows software made and used for user engagement. OPC also expanded social media use for user outreach.
Accurate storm surge modeling should be a priority. The use of SLOSH and ADCIRC causes serious problems and a move to more physics---based modeling should be insisted upon by OPC. SLOSH and ADCIRC are types of models that are not based on fluid mechanically correct physics, the models will produce incorrect, albeit nice---looking, results. This overarching goal should be brought to the attention of the Director of NCEP and the NWS. This has been a topic of concern since the 2009 and the 2004 reports. These reports should be revisited. They were written by true, well established modeling experts.	OPC should assure that the NOAA Storm Surge modelling team is aware of the existing reports.	OPC should request the reports from the UCACN so they can be forwarded to the responsible parties.	OPC has requested the reports (12/2013) and will forward them to NHC and the NCEP Director.

Running ensembles with ADCIRC seems to be a goal for NHC. More thinking should be given to balance fast running models that produce inaccurate realizations with slower running but hydrodynamically complete, full physics models that provide more accurate results, and thus better guidance and confidence. There are several full physics models running in the academic community. Those results should be brought into NHC ensemble machinery.	OPC should assure that NHC and the NOAA Storm Surge Team have the information from UCACN.	OPC should assure that both NHC and the NOAA Storm Surge Team are aware of the UCACN recommendations.	Complete. OPC's role in storm surge is limited, especially with regard to tropical storm surge. OPC informed both the NHC and the NOAA Storm Surge Team of the UCACN recommendations.
There is pressure on OPC to support emergency situations when they arise. That activity has many pitfalls and OPC is encouraged to proceed deliberately and again to use the best model systems available. Because of the high visibility and potential cost in lives and property, one misstep, even under the well recognized pressure of "getting a quick result", can undermine the credibility of the entire OPC if it is wrong. OPC must use the best science and not take ill---advised short---cuts.	OPC should assure that NHC and the NOAA Storm Surge Team have the information from UCACN.	OPC should assure that both NHC and the NOAA Storm Surge Team are aware of the UCACN recommendations.	Complete. OPC's role in storm surge is limited, especially with regard to tropical storm surge. OPC informed both NHC and the NOAA Storm Surge Team of the UCACN recommendations.
Plans for 2014 and beyond presented by OPC are most impressive. The list now is a long, flat, heterogeneous list mixing annual operating plan items with strategic vision items. It would be more impactful if it were rewritten into a task like format, organizing like topics, prioritizing goals, and including metrics for success and a timeline for completion.	OPC should prioritize the tasks and give a timeline for completion.	FY14 Annual Operating Plan items should be prioritized and given a timeline for completion.	Partially complete. All FY14 Annual Operating Plan items have been prioritized and given a timeline for completion.