



Hurricane Supplemental Overview

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Bipartisan Budget Act of 2018



ORF:

\$120,904,000, to remain available until September 30, 2019, as follows:

- (1) \$12,904,000 for repair and replacement of observing assets, Federal real property, and equipment;
- (2) \$18,000,000 for marine debris assessment and removal;
- (3) \$40,000,000 for mapping, charting, and geodesy services; and
- (4) \$50,000,000 to improve weather forecasting, hurricane intensity forecasting and flood forecasting and mitigation capabilities, including data assimilation from ocean observing platforms and satellites**

PAC:

\$79,232,000, to remain available until September 30, 2020, as follows:

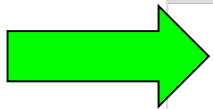
- (1) \$29,232,000 for repair and replacement of Federal real property and observing assets; and
- (2) \$50,000,000 for improvements to operational and research weather supercomputing infrastructure and for improvement of satellite ground services used in hurricane intensity and track prediction**



Approved Spend Plan



1	Accelerate Improvements in Weather Forecasting	18,440,000
2	Accelerate Improvements in Flood Forecasting & Mitigation	8,252,000
3	Accelerate Improvements in Hurricane Intensity Forecasting	10,548,000
4	Accelerate Data Asssimilation from Observations to Improve Forecasting	12,760,000
	Total	50,000,000



Project Plan Status

Task ID	Project Name	Budget	Recommend Approval - Ready to move to acquisition	
1	Accelerate Improvements in Weather Forecasting	18,440,000		
	A Labs and Cis	13,250,000		
	1 Accelerate Improvements in prediction of Extreme Precipitation	1,000,000		Yes
	2 Accelerate Improvements in Model Physics	4,000,000		Yes
	3 Accelerate the development of Common Infrastructure	3,000,000		Yes
	4a Accelerate NGGPS elements related to severe weather prediction, especially landfalling tropical storms and hurricanes - HAFS Moving nest development	1,300,000		No - Until workshop completed (Will be done prior to Thanksgiving)
4b Stand-alone Regional CAM Development	1,200,000	No - Until workshop completed (Will be done prior to Thanksgiving)		
5 Accelerate FV3-based ensemble prediction system	2,750,000	Yes		
B	JTTI	5,190,000		
	1 Enhance Operational MRMS to improve Model Initialization and forecaster situational awareness of Severe Weather	3,690,000	Yes	
	2 Accelerate Effective Communication of weather forecasts and warnings to decision makers	1,500,000	Yes	
2	Accelerate Improvements in Flood Forecasting & Mitigation	8,252,000		
	A NOS/IOOS - Regional Obs - IOOS support to integrated water level Modeling	1,252,000		Yes
	B NOS/COOPS Tampa Bay Improvements	250,000		Yes
	C NWS/STI - Improving Prediction of Inland Flooding	4,750,000		
	1 Accelerate Coupling NWM with ESTOFS	3,000,000		Yes
	2 Accelerate Flood Inundation mapping Improvements (HAND+DEMs)	1,750,000		Yes
D NWS/DIS - Ensure effective Dissemination of new and improved data and information	2,000,000	Yes		

Task ID	Project Name	Budget	Recommend Approval - Ready to move to acquisition	
3	Accelerate Improvements in Hurricane Intensity Forecasting	10,548,000		
	A Accelerate Improvements in Hurricane Intensity Forecasting	7,250,000		
	1 Accelerate Hurricane Forecast Improvement Plan	2,000,000		Yes
	2 Accelerate re-Engineering of Hurricane Analysis and Forecasting System (HAFS)	2,150,000		Yes
	3 Improve Storm Surge Modeling	1,650,000		Yes
	5 Accelerate Improvements in NHC Forecast Techniques	750,000		Yes
	6 Improve Seasonal Hurricane Forecasts	700,000		Yes
	B Sustained Ocean Observations	2,750,000		Yes
	C OMAO - Test and Evaluation of next-generation in-situ measurement systems	548,000		Yes
	4	Accelerate Data Asssimilation from Observations to Improve Forecasting		12,760,000
A OAR/Weather and Air Chemistry Research Labs: Accelerate Data Assimilation from observations to Improve Forecasting - convection allowing capabilities		1,250,000		
1 Optimize current observing system to improve prediction of extreme weather		750,000	Yes	
2 Observing System Simulation Experiments (OSSEs)		500,000	Yes	
B NWS/STI: Accelerate Data Assimilation from observations to Improve Forecasting - develop tools		7,000,000		
1 Mitigate drop outs in forecast skill; EFSO study		2,500,000	Not quite; need final agreement on SPA Support	
2 Accelerate development of JEDI infrastructure, testing and evaluation of assimilating new satellite data, global and CAM FV3-based data, and marine and hydrologic data		3,850,000	No, Needs final agreement on split out from over JEDI	
3 Observation Processing		650,000	Yes	
C NESDIS Product Development and Readiness		4,510,000		
2 Other STAR related JCSDA projects		1,000,000	No	
3 Contribution to JEDI Development	3,510,000	No		

Legend:	Not Applicable	Removed (Budget = 0)	Ready to move to acquisition	Almost/not quite ready	Still needs coordination
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Planning Schedule



Milestone	Date	Status
Appropriation	2/7/2018	Completed
NOAA Submitted draft Spend Plan to DOC/OMB/Congress	Late February	Completed
Spend Plan Approved by OMB and Congress	Q3FY18	Completed
Training Workshops (budgeting, reporting requirements)	9/25/2018 9/27/2018	Completed
OWAQ/STAR/STI Directors approve work plans	9/15/2018 Q1 FY19	Delayed
Service Level Agreement (SLA)	Q1 FY19	Planned
Final approval of work plans by AA	Q1 FY19	Planned
Initiate grant and contract actions (RFA published 11/08)	Q1 FY19	Started
Obligate and execute 95% of funds (additional milestone)	Q3 FY19	Planned
Complete obligation of funds	Q4 FY19	Planned



Management and Oversight Teams



- **Executive Oversight Team Leads (OAR, NWS, NESDIS)**
 - John Cortinas, Ming Ji, Harry Cikanek
- **Program Management Oversight Team**
 - Mark Vincent, Frederick Toepfer, Tim Schneider, Kevin Garrett, Jim Sullivan
- **Support Oversight Team**
 - Segayle Thompson, Eric Locklear, Michelle Chawlk, Larry Evans, Tammie Herrin, Ericka Rosier, Nysheema Lett, Meka Laster, Shanie GalEdd, Tim Snyder, Danielle Tillman, Tristan Dietz, Kandis Boyd, Tamara Battle, Brenda Alford
- **Grants Management Division (GMD)**
 - Raishan Peterson, William Ball, Brenda Valentine, Nadia Musa



Execution of Projects



- Plans need to clearly distinguish between ongoing efforts and Hurricane Supplemental efforts
- Hurricane Supplemental comes with stringent reporting requirements
 - monthly reporting required
- Grant and contracting actions will need to be new (segregated from existing tasks)
- Cannot use existing CI vehicles to fund the University PIs
 - Funds will be transferred to Labs/Centers from NWS/STI and OAR/OWAQ
 - Funds going to Univ PIs will utilize the non-competitive RFA vehicle
 - The universities submitting to the RFA will work with the project leads to apply through the RFA process
 - Labs/centers conducting work directly can use funds on Federal salaries
- AGO has committed to expediting HSUP funds; execute funds by the end of Q2FY19
- Ensure Jet (Hurricane research) HPCC remains active so development can begin



Current Status of RFA



- Expected to post any day now...
- Additional Guidance may be forthcoming for Federal Project Leads for each project/sub/project.
- Federal Project leads should identify their respective University counterparts as Principal Investigators.
- The PIs will be responsible for working with the project leads to prepare applications for submission to the RFA.
- Principal Investigators should expect to submit applications as soon as possible
- Non-competitive - only identified University PI's will be eligible to apply
- Deadlines: Initial PI proposal submission - 15 Dec 2018 through 15 April 2019



Hurricane Supplemental Overview Bottom Line



- Supplemental funding enables significant acceleration of priority HFIP and UFS/SIP activities
 - Development of next-generation Hurricane observing and forecast technology (HAFS)
 - Atmospheric and oceanic data assimilation
 - NGGPS Physics
 - Community Infrastructure (obsproc, UPP, CROW, V&V, NEMS, coupling, and CCPP framework)
- Need clearly defined proposals with schedules, milestones, deliverables, and resources for the overall HAFS plan
- Integrate accelerated activities in the updated SIP annex



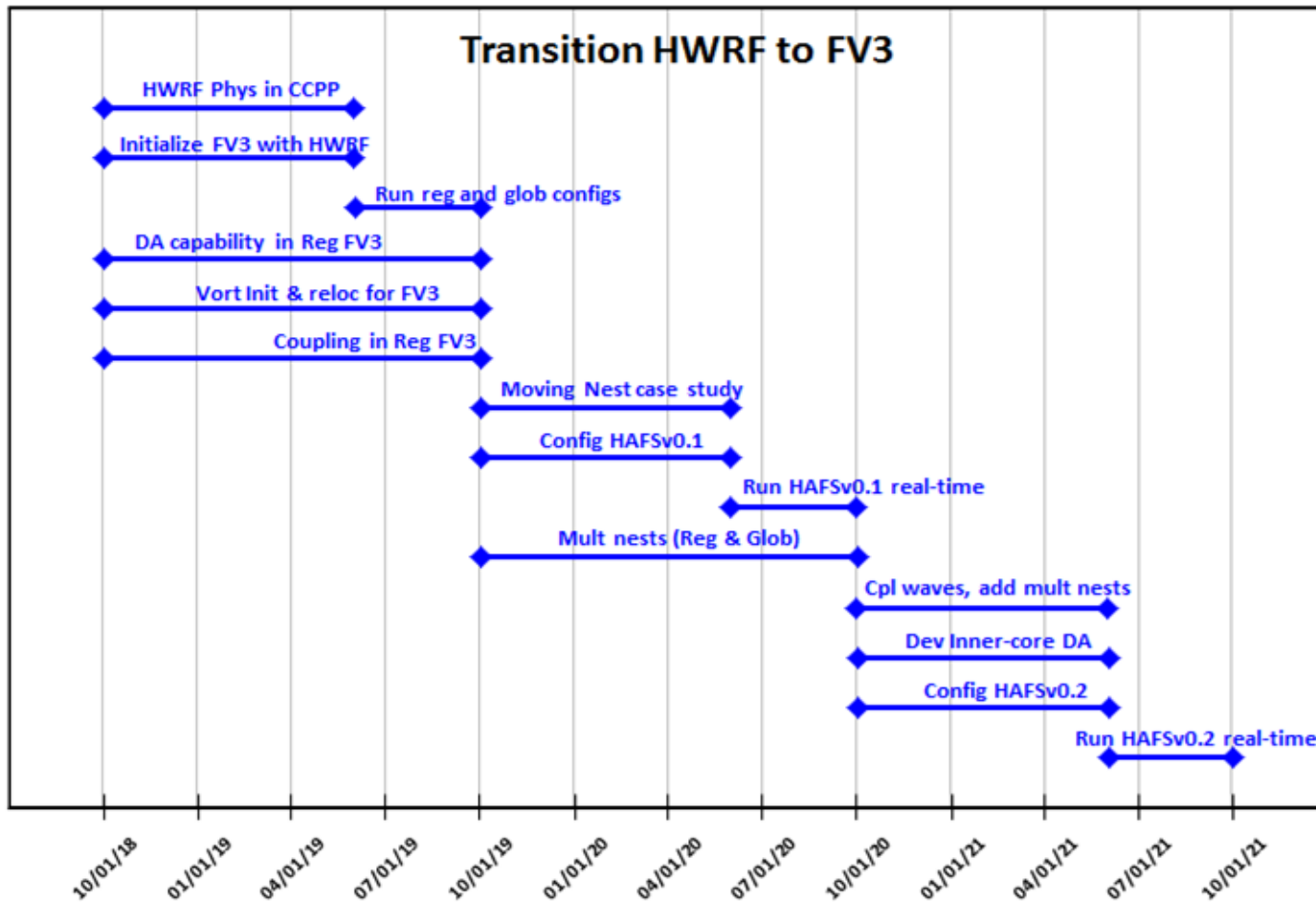
HAFS Participating Supplemental Projects



- 1A3: *Accelerate Development of Common Infrastructure (GSD/NESII)*
- 1A4: *Accelerate NGGPS elements related to severe weather prediction, especially landfalling tropical storms and hurricanes (AOML)*
- 3A1: *Accelerate Hurricane Forecast Improvement Plan (AOML)*
- 3A2: *Accelerate re-Engineering of Hurricane Analysis and Forecasting System (EMC)*
- 4A1: *Optimize current observing system to improve prediction of extreme weather (AOML)*
- 4A2: *Observing System Simulation Experiments (AOML)*



Timelines for HWRF transition to FV3 (proj. 1A-4 & 3A-2)



Need to ensure all HAFS development projects get incorporated in the overall multi-year schedule



Questions?