

FY17 CPO Annual Operating Plan

DOC Strategic Plan Objective (if applicable)	5-Year Research Plan Goal: Objective - Target	NOAA Annual Guidance Memo Priority	NGSP Goal: Objective (if applicable)	OAR Strategic Plan	Performance (NOTE: Do not report Measure or Milestone Targets in the same row)		Measure or Milestone Targets (NOTE: Do not report Measure or Milestone Targets in the same row)			PRIMARY RESPONSIBILITY			NOAA gion (if applicable)	CI Partner (if applicable)	PERFORMANCE MEASURE and MILESTONE DESCRIPTIONS
					Measure (The monitoring of ongoing progress toward pre-established goals.)	Milestone (A distinct activity planned for completion on a scheduled date)	Target	Actual	Why was the target missed? When will the target be completed? What is the risk of missing the target?	Unit within LO/SO	Point of Contact	Responsible SES			
							17 Q4	17 Q4							
3.1 Advance understanding of environmental change	Climate: ESM - Develop seasonal outlooks	NWS: National Weather Service (NWS)	Climate_Scientific	Climate: Predictions	Annual number of Climate Program Office R&D products transitioned to a new stage (development, demonstration, or application)	22	22	This number is the result of the projects in the next tab, CPO R2A.	CPO	Neil Christerson	Wayne Higgins		NA	Transition research and development (R&D) capabilities to applications to reduce adverse effects of environmental events on people and property.	
3.1 Advance understanding of environmental change	Climate: Improve understanding - Assess climate induced changes	Org Excellence: Alignment of R&D to support NOAA (OAR)	Climate_Scientific	Climate: Variability and change	Improve climate understanding, prediction, and information through the selection of at least 50 new grants annually	50	78		CPO	Neil Christerson	Wayne Higgins		Numerous	CPO's external grant programs, including funding opportunities address key information needs related to climate research, modeling, and the impacts of climate change on communities, infrastructure, and economies.	
3.1 Advance understanding of environmental change	Climate: Improve understanding - Assess climate induced changes	Org Excellence: Alignment of R&D to support NOAA (OAR)	Climate_Scientific	Climate: Variability and change	Complete the CPO FY18 Federal Funding Opportunity (FFO) with at least 6 new competitions	6	8		CPO	Paul Hirschberg	Wayne Higgins		Numerous	CPO's external grant programs, including funding opportunities address key information needs related to climate research, modeling, and the impacts of climate change on communities, infrastructure, and economies.	
3.1 Advance understanding of environmental change	Climate: Improved assessments - Sustain assessments of the impacts and risks of climate	Org Excellence: Alignment of R&D to support NOAA (OAR)	Climate_Assessments	Climate: Inform & Support	Number of assessments or integrated plans developed or implemented across NOAA programs to enhance NOAA climate services.	2	5		CPO	Daniel Barrie	Wayne Higgins		Cooperative Institute for Climate and Satellites - North Carolina (CI-CS-NC)	This performance measure will demonstrate the role of formal climate change assessments in decisions to address climate change impacts by completing or having major contributions to assessments that are considered by business, government, or the public that affected decisions related to improved climate resilience	
3.1 Advance understanding of environmental change	Climate: Info/Tools - Improve communication	Org Excellence: Alignment of R&D to support NOAA (OAR)	Climate_Scientific	Climate: Inform & Support	Deliver the final draft of the interagency Climate Science Special Report				CPO	Dan Barrie	Wayne Higgins		Cooperative Institute for Climate and Satellites - North Carolina (CI-CS-NC)	This special report provides an update to the physical climate science presented in the Third National Climate Assessment (NCA3) released in 2014. The CSR provides updated climate science findings and projections, and is an important input to the authors of the next quadrennial NCA (NCA4), expected in 2018.	
3.1 Advance understanding of environmental change	Climate: Info/Tools - Improve communication	Org Excellence: Alignment of R&D to support NOAA (OAR)	Climate_Scientific	Climate: Inform & Support	Coordinate and contribute to the Initial draft of the fourth National Climate Assessment	X	X		CPO	Dan Barrie	Wayne Higgins		Cooperative Institute for Climate and Satellites - North Carolina (CI-CS-NC)	The National Climate Assessment summarizes the impacts of climate change on the United States, now and in the future. A team of hundreds of experts produce the report, which is extensively reviewed by the public and experts, including federal agencies and a panel of the National Academy of Sciences.	
3.1 Advance understanding of environmental change	Climate: Record - Observing Systems	Infrastructure: Utilization and Readiness of fleet (OWAO)	Climate_Scientific	Climate: State of system	Public release of the initial TPOS-2020 Report				CPO	David Legler	Wayne Higgins		Joint Institute for Marine and Atmospheric Research (JIMAR)	The TPOS 2020 Project will evaluate, and where necessary change, all elements that contribute to the Tropical Pacific Observing System (TPOS) based on a modern understanding of tropical Pacific science. The project aims for enhanced effectiveness for all stakeholders, informed by the development and requirements of the operational prediction models that are primary users of TPOS data.	
3.1 Advance understanding of environmental change	Climate: Obs - Integrate into short and long time scale models	Infrastructure: Utilization and Readiness of fleet (OWAO)	Climate_Scientific	Climate: State of system	Reduced error in Global Measurement of Sea Surface Temperature. (Degrees Celsius [°C])	0.50	Results delayed. See note.	A report on the SST GPRA Performance Metric Input Data Issues and Proposed Solutions: While expecting improvement in the SST Performance Metric (PM) starting in early 2017, the computed numbers showed continuously worsening SST PM numbers. Communications with the Global Drifter Program indicated this should not be the case. More investigations revealed that the input data stream - the GTS data collection prepared by NCEP for NCEI in abbreviated ASCII format, has been increasingly missing drifting buoy data. Further investigations revealed that the decrease has been caused by the GTS data distribution continuously switched from the ASCII format to the binary BUFR format starting in late 2016, with increasing numbers with time and decreasing number of data distributed in ASCII. To resolve this emerging issue, NCEI's COADS team started working with our international partners to directly ingest the BUFR format GTS data and build our capacity to decode them and parse them out for our and ICARDS use. Despite the regular normal work load with decreased labor force, we have achieved initial success with the BUFR data. This will be combined with the ASCII data stream with duplication elimination, and the combined data is to be used to compute the SST PM. For further improvement, we plan to utilize the Argo float data as well, as suggested by CPO's COCS panel discussion in May 2017. Other improvements would be to utilize the recovered ship calligns, a unique capacity built by the NCEI COADS team. Due to the above changes, we propose to temporarily put the reporting of the SST GPRA PM in hibernation mode, until we have a stabilized new system utilizing the above proposed improvements. This is because that although the SST GPRA PM has been continuously computed using the old system, it does not use all the data from the global observing systems and does not reflect the whole picture anymore. (Oct 19, 2017. Huan-Min Zhang & NCEI Marine In-Situ Team)	CPO	David Legler	Wayne Higgins		Cooperative Institute for Climate and Satellites—North Carolina (CI-CS-NC)	This measure is intended to document progress in accurately measuring the global sea surface temperature (SST) using in situ drifting buoys to verify that satellite SST data are accurate and representative. This reflects how improvements in ocean observations will decrease the uncertainty in global sea surface temperature measurements, which will ultimately play a role in calculations of the ocean-atmosphere exchange of heat and the heat storage in the global ocean. The sea surface, covering over 70% of the Earth surface, has a tremendous influence on global climate because it is where the atmosphere responds to the ocean via the transfer of heat either to or from the atmosphere. Since sea surface temperature is measured by buoys, ships, and satellites, this performance measure is well-suited as an indicator of the effectiveness of our integrated ocean observing system and the more accurate estimates of sea surface temperature will improve our ability to detect changes in the climate system. Success in this performance measure requires the maintenance and increase of in situ ocean sensors. The goal is to reach an indicator value of 0.3 degrees Celsius, which has been specified by the International Global Ocean Observing System (GOOS) as the required accuracy for measurement of sea surface temperature.	
3.1 Advance understanding of environmental change	Climate: Record - Observing Systems	Org Excellence: Alignment of R&D to support NOAA (OAR)	Climate_Scientific	Climate: State of system	Characterize the evolving state of the ocean/marine environment in the 2016 State of the Climate report	X	X		CPO	David Legler	Wayne Higgins		Numerous	Ocean, atmospheric, and ecosystem data and products supported by CPO and OAR are analyzed, assessed, and contributed to the annual State of the Climate Report.	
3.1 Advance understanding of environmental change	Climate: Record - Observing Systems	Org Excellence: Alignment of R&D to support NOAA (OAR)	Climate_Scientific	Climate: State of system	Complete the Annual (2016) Arctic Report Card				CPO	Jeremy Mathis	Wayne Higgins		Cooperative Institute for Arctic Research (CIFAR) Joint Institute for the Study of the Atmosphere and Ocean (JISAO)	The Arctic Report Card (www.arctic.noaa.gov/reportcard/) considers a range of environmental observations throughout the Arctic, and is updated annually. As in previous years, the 2015 update to the Arctic Report Card highlights the changes that continue to occur in both the physical and biological components of the Arctic environmental system.	
3.1 Advance understanding of environmental change	Climate: Improve understanding - Assess climate induced changes	Org Excellence: Alignment of R&D to support NOAA (OAR)	Climate_Scientific	Climate: Variability and change	Annual number of peer-reviewed publications related to climate understanding and prediction	400	1016		CPO	Neil Christerson	Wayne Higgins		Numerous	Note: This measure was revised 10.9.15 to include "peer reviewed" publications only, therefore the FY16 "actual" will likely be lower than FY15.	

FY17 CPO Annual Operating Plan					Performance		Measure or Milestone Targets			PRIMARY RESPONSIBILITY			NOAA gion (if applicable)	CI Partner (if applicable)	PERFORMANCE MEASURE and MILESTONE DESCRIPTIONS
DOC Strategic Plan Objective (if applicable)	5-Year Research Plan Goal: Objective - Target	NOAA Annual Guidance Memo Priority	NGSP Goal: Objective (if applicable)	OAR Strategic Plan	(NOTE: Do not report Measure or Milestone Targets in the same row)		(NOTE: Do not report Measure or Milestone Targets in the same row)			Unit within LO/SO	Point of Contact	Responsible SES			
					Measure (The monitoring of ongoing progress toward pre-established goals.)	Milestone (A distinct activity planned for completion on a scheduled date)	Target	Actual	When will the target be completed? What is the risk of missing the target?						
3.3 Strengthen the resilience of communities and regions	Climate: Key impacts - Advance activities focused on impacts of climate	Resilience: Operational services (NOS)	Climate_Services	Climate: Inform & Support	Number of states, and territories working with the National Integrated Drought Information System (NIDIS) to incorporate drought early warning information into their drought adaptation and mitigation planning.		17 Q4	17 Q4		CPO	Veva Deheza	Wayne Higgins	Cooperative Institute for Research in Environmental Sciences (CIRES)	The performance measure is based on the number of states and territories that partner with NIDIS to incorporate drought early warning information into their drought planning activities. Activities that count toward this measure include: local or regional drought planning/management groups; use of tailored information from the U.S. Drought Portal to establish drought indicators and set management triggers in state and territory drought adaptation and mitigation plans; and incorporation of information from basin specific drought monitors developed through the drought early warning information systems into either state and territory drought adaptation and mitigation plans or as part of state and territory drought planning and management groups.	
3.3 Strengthen the resilience of communities and regions	Climate: Key impacts - Advance activities focused on impacts of climate	Resilience: Operational services (NOS)	Climate_Services	Climate: Inform & Support	Competitions for existing RISA regions as they come up for competition (2 in FY17) to ensure the continuation and evolution of the RISA framework to address integrated research, regional needs, and NOAA's mission areas.					CPO	Caitlin Simpson	Wayne Higgins	CIMMS CIRES CIER CIMEC	NOAA's Regional Integrated Sciences and Assessments (RISA) program supports research teams that help expand and build the nation's capacity to prepare for and adapt to climate variability and change. Central to the RISA approach are commitments to process, partnership, and trust building. RISA teams work with public and private user communities.	
5.2 Support a customer service-oriented culture	Climate: Info/Tools - Improve communication	Org Excellence: Alignment of R&D to support NOAA (OAR)	Climate_Literacy	Climate: Inform & Support	10% growth per year in number of visits to NOAA Climate.gov Portal over previous year		10%	25%		CPO	David Herring	Wayne Higgins	NA	This performance measure will show the ongoing increase in the number of unique visits per month to the Portal. It indicates the growing value in terms of the number of new people accessing the information and tools on the website.	
5.2 Support a customer service-oriented culture	Climate: Info/Tools - Improve communication	Org Excellence: Alignment of R&D to support NOAA (OAR)	Climate_Literacy	Climate: Inform & Support	Percentage improvement in the Quality of Relationship between engagement personnel and the public they serve (This is a biennial measure)		77	77.5	77.5 is our average QoR score for FY17, which slightly exceeds target. Overall, Climate.gov exceeds the government website benchmark scores in the following categories: content, navigation, look and feel, and search.	CPO	David Herring	Wayne Higgins	NA	The best way for a federal science and services agency to understand its public, and to facilitate their understanding and use of its products and services, is to build and maintain relationships. The Quality of Relationship (QoR) instrument measures, and is comprised of, the following five elements: awareness, trust, satisfaction, use/usability, and control mutuality. Like the American Customer Satisfaction Index, the QoR instrument produces an index score from 0-100. The Climate Portal's initial "baseline" QoR score in FY12 was 72.6. Because it is both costly and time consuming to measure QoR, we plan to make updated measurements every other year, which gives us the intervening years to apply what we learn to the Portal's design, scope, and functionality before we begin the next measurement cycle. Our performance target will be to increase by 2 index point over the previous measure in subsequent years, as shown in this row (left).	
5.2 Support a customer service-oriented culture	Climate: Info/Tools - Improve communication	Org Excellence: Alignment of R&D to support NOAA (OAR)	Climate_Literacy	Climate: Inform & Support	10% growth per year in number of visits to the Climate Resilience Toolkit over previous year.		10%	76%		CPO	David Herring	Wayne Higgins	NA	This performance measure will show the ongoing increase in the number of unique visits per month to the Climate Resilience Toolkit website. It indicates the growing value in terms of the number of new people accessing the information and tools on the website.	
5.2 Support a customer service-oriented culture	Climate: Info/Tools - Improve communication	Org Excellence: Alignment of R&D to support NOAA (OAR)	Climate_Literacy	Climate: Inform & Support	Climate.gov: Develop a new model for climate workshops for formal and informal educators, to support implementation of new science standards in Earth system science.			X	Completed and implemented in Q4	CPO	David Herring	Wayne Higgins	NA	CPO hosts and participate in workshops to build better relationships with our publics, and to help them find and use data and information in climate-related decisions.	
5.2 Support a customer service-oriented culture	Climate: Info/Tools - Improve communication	Org Excellence: Alignment of R&D to support NOAA (OAR)	Climate_Literacy	Climate: Inform & Support	CRT: Develop and publish explanatory videos to guide Climate Explorer users through the appropriate use and interpretation of data provided through this interface.		X	X	Completed and published in Q4 of FY17	CPO	David Herring	Wayne Higgins	Cooperative Institute for Research in Environmental Sciences (CIRES)		
3.3 Strengthen the resilience of communities and regions	Climate: Info/Tools - Improve communication	Org Excellence: Alignment of R&D to support NOAA (OAR)	Climate_Literacy	Climate: Inform & Support	Climate Resilience Toolkit (CRT): Build a new 'Regions' section in the CRT, with corresponding regional virtual teams to review and populate each regional subsection. Publish at least 4 Regions in FY17.		X	X	Regions section built with 3 regions included; 4 new regions still to be added	CPO	David Herring	Wayne Higgins	NA	Purpose is to engage communities and businesses to use CRT region-focused information and tools to make resilience plans and act on those plans. Three major objectives of this region-focused effort: 1. Establish region theme teams. 2. Populate regional sections on the CRT 3. Scale up level of engagement using the CRT to address regional and local needs.	
3.1 Advance understanding of environmental change	Climate: ESM - Develop seasonal outlooks	NWS: National Weather Service (NWS)	OA_HighPerOrg	Climate: Inform & Support	Develop and execute the CPO components of the FY17 OAR-NWS Weather-Water-Climate and FY17 OAR-NESDIS Service Level Agreements.		X	X		CPO	Paul Hirschberg	Wayne Higgins	NA	NWS and OAR signed a Memorandum of Understanding (MOU) establishing a new/improved framework for the NWS Climate Services Program and OAR Climate Program Office (CPO) to advance end-to-end climate services - research, transition, and operational delivery (R2O). An annual Service Level Agreement (SLA) codified FY15 funding provided by OAR to NWS in support of the MOU.	
3.1 Advance understanding of environmental change	Climate: Info/Tools - Improve communication	Org Excellence: People, teams, and tools (DUS-O)	OA_HighPerOrg	Climate: Inform & Support	Issue CPO Annual Report for FY16				Completed and delivered in Q2	CPO	David Herring	Wayne Higgins	NA	This report will give an overview of CPO's achievements in FY16.	
5.1 Empower and engage employees	Climate: Info/Tools - Improve communication	Org Excellence: Alignment of R&D to support NOAA (OAR)	OA_HighPerOrg	Climate: Inform & Support	Support early-career scientists. Select new fellows for both the PACE and NOAA Climate and Global Change (C&G) Postdoctoral Fellowship Programs. Host Hollings Fellows and Sea Grant Fellows.			Partial completion	Due to budget constraints, CPO was unable to fully fund a class of 8-10 new fellows in FY17 but completed its obligations to the graduating class and committed to funding a reduced new class of fellows.	CPO	James Todd	Wayne Higgins	NA	This is a Diversity and Inclusion milestone that was submitted to OAR. PACE -- PostDocs Applying Climate Expertise -- is a postdoctoral fellowship program to grow the pool of scientists qualified to transfer advances in climate science and climate prediction into climate-related decision framework(s) and decision tools. The purpose of the NOAA Climate and Global Change Postdoctoral Fellowship Program is to help create and train the next generation of leading researchers needed for climate studies; it endeavors to attract recent PhDs with research interests in areas relevant to the NOAA climate science and services program. The Sea Grant Knauss Fellowship provides educational and professional experience to graduate students who have an interest in ocean, coastal and Great Lakes resources and in the national policy decisions affecting those resources. The Ernest F. Hollings Undergraduate Scholarship Program provides support and multidisciplinary learning experiences for under-graduate students interested in pursuing research, public service, or teaching careers in the oceanic and atmospheric sciences.	
5.1 Empower and engage employees	Climate: Info/Tools - Improve communication	Org Excellence: People, teams, and tools (DUS-O)	OA_HighPerOrg	Climate: Inform & Support	Complete data collection and analysis for the CPO Workforce Plan, and develop a management tool that incorporates CPO-wide job duty information, knowledge management and succession planning					CPO	Shannon Louie	Wayne Higgins	NA	This is a Diversity and Inclusion milestone considering information to promote diversity in hiring decisions and succession planning.	
5.1 Empower and engage employees	Climate: Info/Tools - Improve communication	Org Excellence: People, teams, and tools (DUS-O)	OA_HighPerOrg	Climate: Inform & Support	Develop and support diversity and inclusion committees and implement FY17 Diversity and Inclusion actions described in the plan for committees.		X	X		CPO	Neil Christerson	Wayne Higgins	NA	Sub-committees include: Diversity Training, Professional Development, Team Building, Improving communication and transparency, Inclusion of non-Feds, Outside of the office Activities and Incorporating D/I principles into the FCO.	
5.2 Support a customer service-oriented culture	Climate: Info/Tools - Improve communication	Org Excellence: Alignment of R&D to support NOAA (OAR)	OA_HighPerOrg	Climate: Inform & Support	Process 100% of CPO grants by June 30			X		CPO	Eric Locklear	Wayne Higgins	NA		
5.2 Support a customer service-oriented culture	Climate: Info/Tools - Improve communication	Org Excellence: Alignment of R&D to support NOAA (OAR)	OA_HighPerOrg	Climate: Inform & Support	Property is accounted for as evidenced by a reported inventory accuracy rate of at least 85-95% with no more than 5% of accountable property designated as not found or missing.		X	X		CPO	Eric Locklear	Wayne Higgins	NA		

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DOC Strategic Plan Objective (if applicable)	5-Year Research Plan Goal: Objective - Target	NOAA Annual Guidance Memo Priority	NGSP Goal: Objective (if applicable)	OAR Strategic Plan	(NOTE: Do not report Measure or Milestone Targets in the same row)		(NOTE: Do not report Measure or Milestone Targets in the same row)								
Please use the pull-down menu to select the objective	Please use the pull-down menu to select the objective	Please use the pull-down menu to select the objective	Please use the pull-down menu to select the objective	Please use the pull-down menu to select the objective	Measure (The monitoring of ongoing progress toward pre-established goals.)	Milestone (A distinct activity planned for completion on a scheduled date)	Target	Actual	Why was the target missed? When will the target be completed? What is the risk of missing the target?	Unit within LO/SO	Point of Contact	Responsible SES			
							17 Q4	17 Q4							
3.1 Advance understanding of environmental change	Climate: Info/Tools - Improve communication	Org Excellence: Alignment of R&D to support NOAA (OAR)	Climate_Scientific	Climate: Inform & Support		Support the Global Framework for Climate Services by co-leading the execution of a transboundary workshop under NACSP that is leading to improvements in climate services for drought and wildfires and the development of manuscripts.				CPO	Meredith Muth	Wayne Higgins		NA	Lead activities for the North American Climate Services Partnership, including manuscripts on lessons learned for transboundary collaboration on climate services
3.1 Advance understanding of environmental change	Climate: Record - Observing Systems	Org Excellence: Alignment of R&D to support NOAA (OAR)	Climate_Scientific	Climate: Inform & Support		Installation of co-located GPS for 8 GLOSS tide-gauge stations (5 in the US and 3 internationally).	X	Milestone Not Met	Reliant on funds from NOS who was unwilling to commit to the project	CPO	Emily Smith	Wayne Higgins		NA	
3.1 Advance understanding of environmental change	Climate: Key Impacts - Advance activities focused on impacts of climate	Org Excellence: Alignment of R&D to support NOAA (OAR)	Climate_Scientific	Climate: Inform & Support		Complete the draft of the Arctic Research Program Strategic Plan	X	Milestone Not Met	This has been moved to a deliverable for FY18. There was too much uncertainty in the budget this year to complete the draft strategic plan.	CPO	Jeremy Mathis	Wayne Higgins		Cooperative Institute for Arctic Research (CIAR) Joint Institute for the Study of the Atmosphere and Ocean (JISAO)	
3.1 Advance understanding of environmental change	Climate: Key Impacts - Advance activities focused on impacts of climate	Org Excellence: Alignment of R&D to support NOAA (OAR)	Climate_Scientific	Climate: Inform & Support		New Ocean relevant indicators added to USGCRP system		Milestone partially met	CPO work toward this milestone is complete (submission package sent through USGCRP and approved by IndIWG); milestone not met due to actions required by entities outside CPO.	CPO	Jennifer Salem Arrigo	Wayne Higgins		NA	USGCRP, ICF has delayed adding new indicators to the system. Ocean relevant indicators have been submitted by NOAA through the USGCRP IndIWG working group, submission has been reviewed and signed off on by IndIWG; action is now with ICF and the Asheville TSU to implement in the system. Take home: our work toward this milestone is complete (submission package sent through USGCRP and approved by IndIWG); milestone not met due to actions required by entities outside CPO.
3.1 Advance understanding of environmental change	Climate: Key Impacts - Advance activities focused on impacts of climate	Org Excellence: Alignment of R&D to support NOAA (OAR)	Climate_Scientific	Climate: Inform & Support		Commence FIREX related research activities with instrument testing and measurements of fire emission factors at the Missoula Fire Science Laboratory.				CPO	Ken Mooney	Wayne Higgins		Cooperative Institute for Research in Environmental Sciences (CIRES)	The Fire Influence on Regional and Global Environments Experiment (FIREX) is a field campaign designed to understand and predict the impact of North American fires on the atmosphere and to support better land management to help prevent them from occurring.
3.1 Advance understanding of environmental change	Climate: Record - Observing Systems	Org Excellence: Alignment of R&D to support NOAA (OAR)	Climate_Scientific	Climate: Predictions		Advance week-3 to seasonal forecast capability by initiating new research projects and a new S2S Prediction Task Force	X	X		CPO	Heather Archambault	Wayne Higgins		NA	The Subseasonal to Seasonal (S2S) Prediction Task Force to advance NOAA's and the Nation's capability to model and predict sources of S2S predictability. The ultimate goal of this initiative is to help close the gap in prediction skill and products between traditional weather and seasonal lead times.
3.1 Advance understanding of environmental change	Climate: Info/Tools - Improve communication	Org Excellence: Alignment of R&D to support NOAA (OAR)	Climate_Scientific	Climate: Inform & Support		Through US CLIVAR partnership, support the international US AMOC Science Meeting for understanding of the current state of AMOC science, identifying scientific gaps, and development of plans to fill those gaps. Disseminate the meeting report publicly.	X	X		CPO	Sandy Lucas	Wayne Higgins		Cooperative Institute for Marine and Atmospheric Studies (CIMAS)	
3.3 Strengthen the resilience of communities and regions	Climate: Info/Tools - Improve communication	Org Excellence: Alignment of R&D to support NOAA (OAR)	Climate_Literacy	Climate: Inform & Support		Contribute to and support the development of a climate and fisheries dashboard for the northeast region.				CPO	Adrienne Antoine	Wayne Higgins		NA	As part of the Climate Impacts on Fish, a two year project was funded in FY16 to support the development of a climate and fisheries dashboard for the NE. The project was funded in FY16 and work started in FY17. The research project will be completed by the end of FY18.
3.3 Strengthen the resilience of communities and regions	Climate: Info/Tools - Improve communication	Org Excellence: Alignment of R&D to support NOAA (OAR)	Climate_Literacy	Climate: Inform & Support		Develop new Urban section on the Climate Resilience Toolkit				CPO	Nancy Beller-Simms	Wayne Higgins		NA	
3.3 Strengthen the resilience of communities and regions	Climate: Info/Tools - Improve communication	Org Excellence: Alignment of R&D to support NOAA (OAR)	Climate_Scientific	Climate: Inform & Support		Complete a baseline vulnerability and impact assessment focused on livelihoods and communities in Bihar, India, and initiate the development of an experimental tailored sub-seasonal and seasonal climate information report, based on the assessment, in partnership with regional, national and local organizations in India.	X	Partial	Due to some issues involving our local partners, some of the work has been delayed until FY18. Baseline data has been collected from livelihood surveys of 6600 households in 264 villages of two drought-prone and 2 flood-prone districts in Bihar. An additional 264 surveys were conducted of village leaders to gain insights at the village level. Initial assessment of survey data has been completed. The analysis is informing the production of tailored seasonal and sub-seasonal climate, and weather products for the four districts.	CPO	Lisa Vaughan	Wayne Higgins		NA	In partnership with the Regional Integrated Multi-Hazard Early Warning System for Africa and Asia (RIMES), the India Meteorological Department, and Agricultural Extension agents based in Bihar, the experimental tailored sub-seasonal and seasonal climate information will be provided to select villages in the 4 Bihar districts, beginning just before the onset of the 2018 summer monsoon, and continuing through the monsoon period. Analysis of all the data collected, along with the "intervention" of climate information provided will be used to produce both a vulnerability assessment and an assessment of the impact on livelihoods of the tailored climate information provided.

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OAR Corporate Priorities			OAR Strategic Plan			(NOTE: Do not report Measure or Milestone Targets in the same row)										(NOTE: Do not report Measure or Milestone Targets in the same row)										PRIMARY RESPONSIBILITY										PERFORMANCE MEASURE AND MILESTONE DESCRIPTIONS													
Primary	Secondary (if applicable)	Measure (The monitoring of ongoing progress toward pre-established goals.)	Milestone (A distinct activity planned for completion on a scheduled date)	Quarterly Cumulative	Cumulative Across Years	Why was the target missed? When will the target be completed? What is the risk of missing the target?	18 Q1	18 Q2	18 Q3	18 Q4	19 Q1	19 Q2	19 Q3	19 Q4	20 Q1	20 Q2	20 Q3	20 Q4	21 Q1	21 Q2	21 Q3	21 Q4	22 Q1	22 Q2	22 Q3	22 Q4	Unit within LUSO	Point of Contact	Responsible SES	NOAA Region (if applicable)	O Partner (if applicable)	PERFORMANCE MEASURE AND MILESTONE DESCRIPTIONS																	
Workforce	Program Mgmt	Please use the pull-down menu to select the objective.	No less than 80% of CPO mission-critical positions covered by CPO workforce Plan.																								CPO	Ben DeKagelo	Wayne Higgins		This is an SES-required milestone. The Climate Program Office (CPO) will improve its Workforce Plan to pursue 100% of mission-critical vacancies are filled, defined, and consistent with OAR goals and activities. Mission critical positions are those that must be filled in order for the agency to perform its core mission. CPO could not achieve its mission without all of its employees.																		
Environmental info	Long-term obs	Climate Inform & Support	Complete the Annual (2017) State of the Climate Report																								CPO	David Lagler	Wayne Higgins		CPO directly supports the development and production of the BAMS State of the Climate Report. Ocean, atmospheric, and ecosystem data and products supported by CPO and OAR are analyzed, assessed, and contributed to the Report.																		
Program Mgmt	Environmental info	Support select about districts' implementation of the climate-related new science education standards in FY18 by leveraging the educational investments in the CLEAN collection, Climate geo, and related partner projects.	Property is accounted for as evidenced by a reported inventory accuracy rate of at least 85-95% with no more than 5% of accountable property designated as not found or missing																								CPO	Eric Locklear	Wayne Higgins																				
Environmental info	Partnerships & Cooperative agreements	Stakeholder Communicative science	Support select about districts' implementation of the climate-related new science education standards in FY18 by leveraging the educational investments in the CLEAN collection, Climate geo, and related partner projects.																								CPO	Frank Nagold	Wayne Higgins	Cooperative Research in Environmental Sciences (CRES)	The Climate Literacy and Energy Awareness Network (CLEAN) Portal was launched in 2016 as a National Science Foundation (NSF) Pathways project. It is led by the science education expertise of FTFC, the Institute for Research in Environmental Science (IRES) at the University of Colorado Boulder, and the Science Education Resource Center (SERC) at Carleton College. As of 2012, CLEAN has been specified to NOAA's climate goal part. CLEAN's primary effort is to award the collection of climate and energy science educational resources and to support a community of professionals committed to improving climate and energy literacy.																		
Partnerships & Cooperative agreements	Environmental info	Climate Inform & Support	Plan and execute the first Global Heat Health Information Network (GHHN) Forum in partnership with the Global Framework for Climate Services (GFCSS).																								CPO	Julie Trajic	Wayne Higgins		GHHN Forum scheduled for Dec 17-20, 2018 (Q1 FY19) in Hong Kong. We had to push the date to December at the request of our local hosts and some of our key participants.																		
Weather forecasting & climate predictions	Partnerships & Cooperative agreements	Climate State of system	Plan and execute the biennial North American Drought Monitor (NADM) Forum with the North American Climate Services Partnership (NACSP) for a joint meeting in 2018.																								CPO	Meredith Muth	Wayne Higgins		The North America Drought Monitor (NADM) is a cooperative effort between drought experts in Canada, Mexico and the United States to monitor drought across the continent on an ongoing basis. The NADM is based on the highly successful U.S. Drought Monitor (USDM), and as such, is being developed to provide an ongoing comprehensive and integrated assessment of drought throughout all three countries. The NACSP is an innovative trilateral partnership between the U.S., Mexico and Canada. This partnership was established to respond to an increasing demand for accessible and timely scientific data and information in order to make informed decisions and build resilience in our communities.																		
Long-term obs	Environmental info	Climate Inform & Support	Complete an assessment of methane emissions data collection from U.S. oil and gas production.																								CPO	Monika Kopacz	Wayne Higgins		ACA has funded an academy report that addresses the topic of methane emissions which is due to be published in the spring of 2018. ACA focuses on quantifying emissions of greenhouse gases, aerosols, and their precursors, as well as their atmospheric impacts from various shale plays. In the past several years, ACA has funded numerous projects focused on oil & gas emissions, complementary to ongoing NOAA/VIMS efforts in quantifying emissions from oil & gas extraction across the Nation, and their impacts on air quality and climate.																		
Weather forecasting & climate predictions	Environmental info	Stakeholder Communicative science	Inform and expand partnerships (add 2 new partners outside of NOAA) of the Water Resources Dashboard through GSN-sponsored decision support research and activities.																								CPO	Nancy Bell-Strom	Wayne Higgins		Water resource managers and urban planners can use this dashboard to access maps and data that help them monitor the potential for extreme precipitation and drought in their regions. The Water Resources Dashboard page is dynamic: the scope and content of dashboard entries are driven by input from users. In FY18 GSN Program Manager attended the American Planning Association Water and Planning Summit as well as the Drought Summit and attended Water Utility Climate Alliance training. Meetings have been scheduled for FY19 with new partners: FEMA, EPA as well as several NGOs.																		
Social & Behavioral Research	Environmental info	Climate Inform & Support	Issue the Climate Program Office 2018-2020 Report																								CPO	David Herring	Wayne Higgins		This report will give an overview of CPO's achievements in FY18.																		
Long-term obs	Environmental info	Climate State of system	Percentage improvement in the Quality of Relationship between engagement personnel and the public they serve. (This is a biennial measure)																									CPO	David Herring	Wayne Higgins		The best way for a federal science and services agency to understand its public, and to facilitate their understanding and use of its products and services, is to build and maintain relationships. The Quality of Relationship (QoR) instrument measures, and is comprised of, the following five elements: awareness, trust, satisfaction, usability, and control/mastery. Like the American Customer Satisfaction Index, the QoR instrument produces an index score from 0-100. The Climate Portal's initial "baseline" QoR score in FY12 was 72.6. Because it is both costly and time consuming to measure QoR, we plan to make updated measurements every other year, which gives us the intervening years to apply what we learn to the Portal's design, scope, and functionality before we begin the next measurement cycle. Our performance target will be to increase by 2 index point over the previous measure in subsequent years, as shown in this row (left).																	
Long-term obs	Environmental info	Climate State of system	Reduced error in Global Measurement of Sea Surface Temperature (Degree Celsius [C]) to improve understanding of the environment.																									CPO	David Lagler	Wayne Higgins		This measure is intended to document progress in accurately measuring the global sea surface temperature (SST) using in situ drifting buoys to verify that satellite SST data are accurate and representative. This reflects how improvements in ocean observations will decrease the uncertainty in global sea surface temperature measurements, which will ultimately play a role in calculations of the ocean-atmosphere exchange of heat and the heat storage in the global ocean. The sea surface, covering over 70% of the Earth's surface, has a tremendous influence on global climate because it is where the atmosphere responds to the ocean's transfer of heat either to or from the atmosphere. Since sea surface temperature is measured by buoys, ships, and satellites, this performance measure is well suited as an indicator of the effectiveness of our integrated ocean observing system and the more accurate estimates of sea surface temperature will improve our ability to detect changes in the climate system. Success in this performance measure requires the maintenance and increase of in situ ocean sensors. The goal is to reach an indicator value of 3 degrees Celsius, which has been specified by the International Global Ocean Observing System (GOOS) as the required accuracy for measurement of sea surface temperature.																	
Environmental info	Partnerships & Cooperative agreements	Stakeholder Communicative science	10% growth in number of visits to Water Resources Dashboard over previous year. (Note: FY18 is the baseline year for this measure.)																									CPO	Nancy Bell-Strom	Wayne Higgins		This performance measure will show the ongoing increase in the number of unique visits per month to the Water Resources Dashboard. It indicates the growing value in terms of unique of new people accessing the water resources information and tools on the website.																	
Environmental info	Weather forecasting & climate predictions	Climate Variability	Annual number of Climate Program Office peer-reviewed publications advancing climate understanding, predictions, and delivery of information to communities.																									CPO	Nail Christerson	Wayne Higgins		This measure tracks the results of many CPO awards as reflected in publications that result from those awards, thus advancing the science and development in CPO's priority areas.																	

FY19 CPO Annual Operating Plan										Performance Targets and Actuals										Primary Responsibility					
Milestone or Measure?		IF Measure, which type?	Performance Measure or Milestone	Description	FY-19 Q1		FY-19 Q2		FY-19 Q3		FY-19 Q4		FY-20 Quarterly Targets				Future Annual Targets				Point of Contact	Responsible SES			
Milestone [1]	Measure [2]	Cumulative Across Years			Target	Actual	Target	Actual	Target	Actual	Target	Actual	Why was the target missed? When will the target be completed? What is the risk of missing the target?	FY-20 Q1	FY-20 Q2	FY-20 Q3	FY-20 Q4	FY-21	FY-22	FY-23			FY-24	FY-25	
✓			Complete the 2018 State of the Climate Report	CPO directly supports the development and production of the BAMS State of the Climate Report. Oceanic, atmospheric, and ecosystem data and products supported by CPO and OAR are analyzed, assessed and contributed to the Report.	☐	☐	☐	☐	☐	☐	☑	☑	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	David Herring	Wayne Higgins	
✓			Organize and implement a network-wide RISA investigators meeting	This milestone will foster greater collaboration across the 11 RISA teams spread out across the U.S. as well as ensure discussions of current and future priorities for NOAA, the RISA teams, and our partners.	☐	☐	☐	☐	☑	☐	☑	RISA meeting was held Sept 18-20 (Q4), hosted by the Pacific RISA in Honolulu, HI. Planning and logistics were largely completed in Q3, however the shutdown delayed several key activities, including securing the venue.	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	Caitlin Simpson	Wayne Higgins	
✓			Expand NOAA Water Resources Dashboard to also target small and mid-sized water utilities and communities, as identified in a recent Dashboard user needs assessment	This expanded role was identified during a recent Dashboard user needs assessment and reflects growing value of the Dashboard to new and different types of users nationwide.	☐	☐	☐	☐	☐	☐	☑	☑	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	Nancy Beller Sims	Wayne Higgins	
✓			Increase use and understanding of climate information for inclusion in short and long-term municipal planning.	Results from studies will document thresholds associated with climate extremes in the municipal water resources sector (Shulski) and identify means for integrating climate change data into local plans to address increased extreme, high-precipitation events causing increased urban and riverine flooding (Schwab).	☐	☐	☐	☐	☐	☐	☑	☑	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	Nancy Beller Sims	Wayne Higgins	
✓			Fund cross- COCA and SARP grants to support water resource challenges within the coastal zone.	Results will include development of a community of practice with new PIs and relevant NOAA participants (e.g., NWS and Sea Grant).	☐	☐	☐	☐	☐	☑	☑	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	Inne Antoine and Nancy Beller	Wayne Higgins	
✓			Development of a preliminary global Chikungunya Risk Forecast for use in the security sector	Chikungunya is an emerging and re-emerging vector-borne disease that poses risk to civilian populations in endemic regions and to deployed Department of Defense (DoD) personnel and US citizens who travel outside of the US. This forecast product will be integrated into an existing app utilized by agencies in the defense sectors called CHiRisk App.	☐	☐	☐	☐	☑	☑	☑	☐	This was a 2 year project supported with FY18 funds. Preliminary forecast has been developed and will be presented in a seminar at NOAA on October 2, 2019. Project will continue into FY20.	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	Lisa Vaughan	Wayne Higgins
✓			Hold ESSM Council Meeting to bring together key CPO partners and stakeholder (internal and external to NOAA) to discuss science priorities and partnership strategies.	The meeting report will inform CPO's strategic direction, particularly the ESSM's research priorities and partnership strategies over the next 1-5 years; Participants will produce a set of potential topics for joint research initiatives with multiple partners (including other programs, labs, Cooperative Institutes, etc.) to leverage capabilities and strengths, and address research gaps	☑	☑	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	Jin Huang	Wayne Higgins	
✓			The MAPP S2S Prediction Task Force organizes an AGU's Journal of Geophysical Research- Atmospheres and Geophysical Research Letters special collection titled "Bridging Weather and Climate: Subseasonal-to-Seasonal (S2S) Prediction and publish key manuscripts reflective of research area leadership based on previously funded research	This special collection helps bring together the broad community performing S2S R&D to share their work and accomplishments in furthering understanding of sources of predictability and utility of various forecast systems. The papers in this special collection serve as a metric of program success and milestone for S2S science.	☐	☐	☐	☐	☐	☐	☑	☑	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	Annarita Mariotti	Wayne Higgins	
✓			A meeting report synthesizing outcomes from the first ever NOAA General Modeling Meeting and Fair, for which MAPP staff was the leading organizer as part of NOAA's Unified Modeling Committee	The General Modeling Meeting was the first major effort to bring together the disparate modeling activities happening across NOAA to share best practices and seek collaborations. A report describing the organization of and outcomes from the meeting will be published.	☐	☐	☑	☑	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	Annarita Mariotti	Wayne Higgins	
✓			Complete key synthesis paper outlining climate factors affecting future conditions for living marine resources and coastal sea level of great interest to NMFS and NOS (Marine Task Force)	MAPP's Marine Prediction Task Force is working on synthesis papers to share a coordinated sense of the predictability sources available for prediction of marine ecosystems and coastal high water levels, as well as observational needs for monitoring of these systems and improved understanding.	☐	☐	☐	☐	☐	☐	☑	☑	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	Annarita Mariotti	Wayne Higgins	
✓			Conduct FIREX Field Campaign	Final phase of FIREX encompassing the aircraft and ground program will be undertaken, leading to quantification of emissions for western wildfires and their impact.	☐	☐	☐	☐	☐	☐	☐	☑	☑	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	Monika Kopacz	Wayne Higgins
✓			Completion, public release of, and coordination around NCA4	The National Climate Assessment is a Congressionally-mandated report required to be produced every four years and provides a national assessment of the climate science and the impacts of climate change and variability on the U.S.	☐	☑	☑	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	Dan Barrie	Wayne Higgins
✓			Plan and Execute Global Heat Health Information Network Forum	The forum is intended to engage the global heat health community to identify critical research and operational needs	☑	☑	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	Juli Tritanji	Wayne Higgins
✓			Process 100% of CPO grants by Q3	Processing CPO grants by June 30 is critical to meeting NOAA grants deadlines and supporting CPO's research and development areas.	☐	☐	☐	☐	☑	☑	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	Orlando Epps	Wayne Higgins
✓			Execute CPO FY19 staffing plan		☐	☐	☐	☐	☐	☐	☑	☑	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	Orlando Epps	Wayne Higgins
✓			Update and finalize CPO Strategic Vision		☐	☐	☑	☐	☑	☑	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	Orlando Epps	Wayne Higgins
✓			Complete Climate and Global Change Post Doc Program Review (UCAR) (Q1)	The purpose of the program is to cultivate and train the next generation of climate researchers to deal with the copious amounts of data gathered by NOAA and other agencies and address global issues. This program has a demonstrably high return on investment; program alumni have become leaders in the field of climate science at NOAA, other government agencies, and academia.	☑	☑	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	Dan Barrie	Wayne Higgins
✓			Represent U.S. positions on the reform process for the Global Framework for Climate Services (GFCS) at the Intergovernmental Board on Climate Services (IBCS) Management Committee Meeting (Q1), and WMO Congress (Q3)		☐	☐	☐	☐	☑	☑	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	Meredith Muth	Wayne Higgins

<input checked="" type="checkbox"/>			Complete the CPO FY19 Federal Funding Opportunity (FFO)	CPO's external grant programs, including funding opportunities, address key information needs related to climate research, modeling, and the impacts of climate change on communities, infrastructure, and economies.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Paul Hirschberg	Wayne Higgins
<input checked="" type="checkbox"/>			Lead CPO, OAR, NOAA and interagency contributions to 1-2 AMAP assessments and work products	This milestone reflects CPO's role in international collaboration pertaining to management of the Arctic region. AMAP is one of 6 working groups under the Arctic Council, of which the US is a member. AMAP monitors and assesses the impact of climate change and contaminants and produces research products to inform decision making by member governments.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Ben DeAngelo	Wayne Higgins
<input checked="" type="checkbox"/>			Co-chair the NOAA Education Council's Education for Community Resilience Community of Practice with the NOAA Education Community, partners and grantees to identify and share effective education practices that support resilience and support transfer amongst NOAA and partners.		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Frank Niepold	Wayne Higgins
<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>		Percentage growth in number of visits to Water Resources Dashboard over previous year	This performance measure will show the ongoing increase in the number of unique visits per month to the Water Resources Dashboard. It indicates the growing value in terms of the number of new people accessing the water resources information and tools on the website. In addition, there will be an effort to include small and mid-sized water communities in a revised version of the Dashboard	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	5%	-27.40%		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Nancy Beller Sims	Wayne Higgins
<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>		Number of states, and territories working with the National Integrated Drought Information System (NIDIS) to incorporate drought early warning information into their drought adaptation and mitigation planning.	The performance measure is based on the number of states and territories that partner with NIDIS to incorporate drought early warning information into their drought planning activities. Activities that count toward this measure include: local or regional drought planning/management groups; use of tailored information from the U.S. Drought Portal to establish drought indicators and set management triggers in state and territory drought adaptation and mitigation plans; and incorporation of information from basin-specific drought monitors developed through the drought early warning information systems into either state and territory drought adaptation and mitigation plans or as part of state and territory drought planning and management groups.	-	-	-	-	-	-	39	40		-	-	-	40	40	40	40	40	40	40	40	Veva Deheza	Wayne Higgins
<input checked="" type="checkbox"/>	<input type="checkbox"/>		Number of experimental heat products on NIHHS website	The NIHHS Website will be used to test and secure feedback on experimental heat products and information	-	-	-	-	1	1	1	1		-	-	-	-	-	-	-	-	-	-	-	Juli Trtanj	Wayne Higgins
<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>		Percentage growth per year in number of visits to the Climate Resilience Toolkit over previous year.	This performance measure will show the ongoing increase in the number of unique visits per month to the Climate Resilience Toolkit website. It indicates the growing value in terms of the number of new people accessing the information and tools on the website.	-	-	-	-	-	-	5%	35%		-	-	-	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	David Herring	Wayne Higgins
<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>		Percentage growth per year in number of visits to NOAA Climate.gov Portal over previous year.	This performance measure will show the ongoing increase in the number of unique visits per month to the Portal. It indicates the growing value in terms of the number of new people accessing the information and tools on the website.	-	-	-	-	-	-	5%	51%		-	-	-	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	David Herring	Wayne Higgins
<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>		Annual number of new research awards to improve climate understanding, prediction, and information.	CPO's external grant programs, including funding opportunities address key information needs related to climate research, modeling, and the impacts of climate change on communities, infrastructure, and economies.	-	-	-	-	-	-	50	83		-	-	-	50	50	50	50	50	50	50	50	Neil Christerson	Wayne Higgins
<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>		Annual number of Climate Program Office peer-reviewed publications advancing climate understanding, predictions, and delivery of information to communities.	This measure tracks the results of the many CPO awards as reflected in publications that result from those awards, thus advancing the science and development in CPO's priority areas. In FY19 this will not include OOMD (GOMO).	-	-	-	-	-	-	500	550		-	-	-	500	500	500	500	500	500	500	500	Neil Christerson	Wayne Higgins
<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>		Number of assessment reports or integrated plans developed or implemented across NOAA programs to enhance NOAA climate services.	This performance measure shows CPO's major contributions to and completion of assessments and demonstrates the role of formal published climate change assessments in decisions to address climate change impacts. Business, government, and the public use these assessments to improve their climate understanding, decision making and resilience. [Northern Plains Drought Assessment,	-	-	-	-	-	-	4	5		-	-	-	4	4	4	4	4	4	4	4	Ben DeAngelo	Wayne Higgins
<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>		Annual number of advances in climate and weather research and information products transitioned to a new stage (development, demonstration, or application) to improve earth system understanding and provide information to private and public sectors.	CPO supports research and development projects within NOAA and with external partners to be transitioned to operations and applications to advance NOAA's mission areas and reduce adverse effects of environmental events on people and property. Note: Due to transition of S2S and Obs, CPO target for R2X transitions was reduced from 10 to 6.	-	-	-	-	-	-	6	6		-	-	-	7	7	7	7	7	7	7	7	Neil Christerson	Wayne Higgins

FY20 CPO Annual Operating Plan Milestones																		
Milestone	What performance measure does this contribute to, if any?	Mapping				Current Year Reporting												Point of Contact
		OAR Strategic Goals	NOAA level AOP	O&M action	Lab / Program Review action	FY-20 Q1			FY-20 Q2			FY-20 Q3			FY-20 Q4			
						Target	Actual	Why was the target missed? When will the target be completed? What is the risk of missing the target?	Target	Actual	Why was the target missed? When will the target be completed? What is the risk of missing the target?	Target	Actual	Why was the target missed? When will the target be completed? What is the risk of missing the target?	Target	Actual	Why was the target missed? When will the target be completed? What is the risk of missing the target?	
Develop formaldehyde (HCHO) product from NOAA-20 satellite's OMPS instrument, an experimental trace gas product that could be transitioned to operations by NESDIS in the future, and used as a proxy for reactive chemistry and aerosol formation in the atmosphere			<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>											x	x	Monika Kopacz
Implement process for NOAA's role in NCA5			<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>											x	x	Dan Barrie
Complete State of the Climate Report for 2019			<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>											x	x	
Marine Prediction Task Force research results in a forecast framework to test outcomes from research project advances. This will inform the development of NMFS and NOS predictions.			<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>											x	x	Dan Barrie
Model Diagnostics Task Force transitions leadership, development, and coordination of software package from NCAR to GFDL, increasing NOAA ownership and use of the diagnostics and derivative software.			<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>											x	x	Dan Barrie
Principal investigators publish special collection based on MAPP-funded research, which advances S2S predictability and prediction methodologies			<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>											x	x	Annarita Mariotti
Principal investigators collect observations of air-sea interactions during the intensive observation period (IOP) of the ATOMIC field campaign. (06 January to 15 February, 2020)		Make Forecasts Better	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>				x	X								Sandy Lucas
Hold quarterly meetings of the CVP-TPOS Pre-Field Modeling Studies principal investigators to ensure the development of coordinated activities in support of TPOS process studies		Drive Innovative Science	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>											x	x	Sandy Lucas
Fund research projects that will generate 7 or more observation-modeling collaborations to advance model improvement, development, and validation (initiate new research program that links obs to modeling...)			<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>											x	x	Ginny Selz
Provide report from program review panel that evaluates last 5 years of program and provides recommendations on areas of opportunity for advancement in future			<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>											x	x	Ginny Selz
Hold annual ESSM Community Workshop and Council Meeting to discuss "Earth System Science Research to Enhance Resilience to Extreme Heat" by bringing together key CPO partners and stakeholder (internal and external to NOAA).			<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	x	x											Jin Huang
Develop strategy for National Soil Moisture Monitoring Network		Make Forecasts Better	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>											X	x	Veva Deheza
Hold NOAA One Health workshop to develop strategy for future heat health activities.		Make Forecasts Better	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>											X		This workshop has been postponed until fall 2020 due to COVID19 and will be held virtually. Date is TBD.
Deliver six regional decision support water workshops		Make Forecasts Better	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>											X	X	Nancy Beller-Simms
Expand NOAA Water Resources Dashboard to also target small and mid-sized water utilities and communities, as identified in a recent Dashboard user needs assessment and results from utility meetings also in FY2020			<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>											X	X	Nancy Beller-Simms
Develop NWM-based drought monitor product for CONUS			<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>											X	X	Veva Deheza
Expand impact of Water Resources Dashboard through results of workshops			<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>											X	X	Nancy Beller-Simms
Develop and implement OAR component to the William M Lapenta NWS Student Internship Program to host 4 students in OAR programs/labs			<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>							x	x					Wayne Higgins

FY20 CPO Annual Operating Plan Measures

Performance Measure	Description	Current Year Reporting					Future Annual Targets					Point of Contact
		FY-20 Q3		FY-20 Q4			FY-21	FY-22	FY-23	FY-24	FY-25	
		Target	Actual	Target	Actual	Why was the target missed? When will the target be completed? What is the risk of missing the target?						
Annual number of CPO peer reviewed publications	The annual number of peer reviewed publications is an indicator of productivity and relevance and is tracked using on-line resources. Peer review is one of the important procedures used to ensure that the quality of published information meets the standards of the scientific and technical community.			500	600		500	500	500	500	500	Neil Christerson
R2A Index: Annual number of advances in climate and weather research and information products transitioned to a new stage (development, demonstration, or application) to improve earth system understanding and provide information to private and public sectors.	CPO supports research and development projects within NOAA and with external partners to be transitioned to operations and applications to advance NOAA's mission areas and reduce adverse effects of environmental events on people and property.	0	0	7	7		7	7	7	7	7	Neil Christerson
Number of states, and territories working with the National Integrated Drought Information System (NIDIS) to incorporate drought early warning information into their plans	The performance measure is based on the number of states and territories that partner with NIDIS to incorporate drought early warning information into their drought planning activities. Activities that count toward this measure include: local or regional drought planning/management groups; use of tailored information from the U.S. Drought Portal to establish drought indicators and set management triggers in state and territory drought adaptation and mitigation plans; and incorporation of information from basin-specific drought monitors developed through the drought early warning information systems into either state and territory drought adaptation and mitigation plans or as part of state and territory drought planning and management groups.			40	40		40	40	40	40	40	Veva Deheza
Increase NOAA Climate.gov content views by 5% over previous year.	We will aggregate the number of times Climate.gov-produced content is viewed across all our publicly accessible platforms to produce an aggregate metric of monthly views each quarter. In addition to individual page views on Climate.gov web pages, we will also count page views of "spin-off" products such as CLEAN, Climate Explorer, Esri Story Maps, and newsletters. We will also count Social Media Views (Twitter, Facebook, Instagram) and the number of visits to Wikipedia pages where we have placed Climate.gov visualizations. We will compile counts of views from FY19 to serve as our new baseline, and we'll produce quarterly reports of our performance compared our target (5% growth over baseline) in FY20.			5%	8%		5%	5%	5%	5%	5%	David Herring
Annual number of new research awards to improve understanding	CPO's external grant programs, including funding opportunities address key information needs related to climate research, modeling, and the impacts of climate change on communities, infrastructure, and economies.			50	105		50	50	50	50	50	Neil Christerson
Number of assessment reports developed or implemented	This performance measure shows CPO's major contributions to and completion of assessments and demonstrates the role of formal published climate change assessments in decisions to address climate change impacts. Business, government, and the public use these assessments to improve their climate understanding, decision making and resilience. [Northern Plains Drought Assessment,			4	4		4	4	4	4	4	Ben DeAngelo

FY21 CPO Annual Operating Plan Milestones		Mapping				Current Year Reporting												Point of Contact
Milestone	What performance measure does this contribute to, if any?	OAR Strategic Goals	NOAA level AOP	O&M action	Lab / Program Review action	FY-21 Q1		FY-21 Q2			FY-21 Q3			FY-21 Q4				
						Target	Actual	Target	Actual	Why was the target missed? When will the target be completed? What is the risk of missing the target?	Target	Actual	Why was the target missed? When will the target be completed? What is the risk of missing the target?	Target	Actual	Why was the target missed? When will the target be completed? What is the risk of missing the target?		
Process 100% of CPO grants by Q3	Annual number of new research awards to improve climate understanding, prediction, and information.	Drive Innovative Science	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>							X	X					Orlando Epps
Execute CPO FY21 staffing plan and develop CPO FY22 staffing plan			<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>										X	X		Orlando Epps
Complete the CPO FY22 Notice of Federal Funding Opportunity (NOFO)	Annual number of new research awards to improve climate understanding, prediction, and information.	Drive Innovative Science	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>							X	X					Paul Hirschberg
Expand William M Lapenta Internship to all OAR labs and programs	Support students at all levels and early career professionals to grow the next generation of scientists		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>										X	X		Wayne Higgins
Create developmental opportunity for at least one student in NCAS-M to engage in OAR research	Support students at all levels and early career professionals to grow the next generation of scientists		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	X	X											Wayne Higgins
Develop plan based on CPO OHCA to address (i) intraoffice communication issues and (ii) diversity, equity and inclusion in CPO by leveraging CPO's human capital to reach underserved K12 students			<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	X	X											Wayne Higgins
Complete report on governance structure for conduct of climate intervention studies		Drive Innovative Science	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>			X	X									Ben DeAngelo
Strengthen language in NOFO to facilitate more robust Diversity and Inclusion outcomes, including efforts to quantify impacts; and implement new harassment reporting requirement.	Annual number of new research awards to improve climate understanding, prediction, and information.		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>							X	X					Ben DeAngelo
Complete the CPO components of the Service Level Agreements with NWS and with NESDIS, which supports advances in NOAA climate information, services and products		Detect Changes in the Ocean and Atmosphere	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>										X	X		Paul Hirschberg
Launch comprehensively redesigned U.S. Drought Portal - drought.gov.		Make Forecasts Better	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	X	X											Veva Deheza
Implement updated 3-year Strategic Action Plans (SAPs) in all 9 NIDIS regional drought early warning systems.		Make Forecasts Better	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>										X	X		Veva Deheza
As part of the Urban Atmosphere priority: 1. Support analysis of COVID lockdown area measurements 2. Develop estimate of pollutant emissions (and their decline) in different U.S. cities 3. Develop, disseminate and archive anthropogenic and biospheric flux inventories		Detect Changes in the Ocean and Atmosphere	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>										X	X		Monika Kopacz
Complete field phase of AEROMMA: collect data, hold data workshop, present, publish and transition first results		Drive Innovative Science	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>							X		This field campaign was postponed to 2023 due to COVID-19				Monika Kopacz
Commence projects analyzing COVID lockdown era (Spring-summer 2020) impacts on the atmosphere across the US		Detect Changes in the Ocean and Atmosphere	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>										X	X		Monika Kopacz
Establish new competitive grants program on earth's radiation budget and climate intervention research	Annual number of new research awards to improve climate understanding, prediction, and information.	Drive Innovative Science	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>			X	X									Jin Huang
Hold NOAA-DOE Precipitation Processes and Predictability Workshop		Make Forecasts Better	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	X	X											Jin Huang
Convene a Task Force on the topic of climate sensitivity to explore model estimates of climate sensitivity and use model analysis to advance and improve modeling platforms. NOAA will co-lead the Task Force.		Detect Changes in the Ocean and Atmosphere	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>										X	X		Dan Barrie
Organize the fourth Drought Task Force, with NOAA leadership, to serve the science goals of the National Integrated Drought Information System.		Make Forecasts Better	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>										X	X		Dan Barrie
Support 7 observation-modeling collaborations to improve the use of NOAA data in NOAA models		Make Forecasts Better	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>										X	X		Ginny Selz
Complete report on the paleoclimate focus of the program that evaluates last 5 years of COM program's partnership with NESDIS and provides recommendations on areas of opportunity for advancement in future		Drive Innovative Science	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>										X	X		Ginny Selz
Convene Atmospheric Boundary Layer studies principal investigators to ensure that new observational-based datasets, and associated methods are optimal for the NOAA modeling community's use		Detect Changes in the Ocean and Atmosphere	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>										X		The meeting to discuss and optimize datasets and models was deferred to FY22 due to COVID related limitations on travel and on meeting logistics.	Ginny Selz
Support, plan, and execute, in partnership with US CLIVAR, a community-led workshop that focuses on Tropical Pacific observing needs to advance process understanding and representation in coupled models		Make Forecasts Better	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>										X		Postponed indefinitely due to COVID.	Sandy Lucas
Organize and host a series of at least 7 webinars focused on the Years of Maritime Continent Field Campaigns and Modeling Studies.		Drive Innovative Science	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>							X	X					Sandy Lucas
Increase by 25% the number of educational programs and collaborations with existing educational programs that support Climate Resilience efforts in their communities.			<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>										X	X		Frank Niepold

FY21 CPO Annual Operating Plan Measures		Mapping					Past Year Actuals			Current Year Reporting								Future Annual Targets					Point of Contact			
Performance Measure	Description	DOC SP	NOAA AOP	APPR	CJ	OAR Strategic Goal	FY-21 Q1		FY-21 Q2		FY-21 Q3			FY-21 Q4			FY-22	FY-23	FY-24	FY-25	FY-26					
							Target	Actual	Target	Actual	Target	Actual	Why was the target missed? When will the target be completed? What is the risk of missing the target?	Target	Actual	Why was the target missed? When will the target be completed? What is the risk of missing the target?										
Annual number of Climate Program Office-supported peer-reviewed publications advancing climate understanding, predictions, and delivery of information to communities.	The annual number of peer reviewed publications is an indicator of productivity and relevance and is tracked using on-line resources. Peer review is one of the important procedures used to ensure that the quality of published information meets the standards of the scientific and technical community.	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>											500	533				500	500	500	500	500	Neil Christerson
RZA Index: Annual number of advances in climate and weather research and information products transitioned to a new stage (development, demonstration, or application) to improve earth system understanding and provide information to private and public sectors.	CPO supports research and development projects within NOAA and with external partners to be transitioned to operations and applications to advance NOAA's mission areas and reduce adverse effects of environmental events on people and property.	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>											5	5				5	5	5	5	5	Neil Christerson
Number of states, and territories working with the National Integrated Drought Information System (NIDIS) to incorporate drought early warning information into their plans	The performance measure is based on the number of states and territories that partner with NIDIS to incorporate drought early warning information into their drought planning activities. Activities that count toward this measure include: local or regional drought planning/management groups; use of tailored information from the U.S. Drought Portal to establish drought indicators and set management triggers in state and territory drought adaptation and mitigation plans; and incorporation of information from basin-specific drought monitors developed through the drought early warning information systems into either state and territory drought adaptation and mitigation plans or as part of state and territory drought planning and management groups.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>											42	43				42	42	42	42	42	Veva Deheza
Increase Climate.gov content views by 5% over previous year	We will aggregate the number of times Climate.gov-produced content is viewed across all our publicly accessible platforms to produce an aggregate metric of monthly views each quarter. In addition to individual page views on Climate.gov web pages, we will also count page views of "spin-off" products such as CLEAN, Climate Explorer, Esri Story Maps, and newsletters. We will also count Social Media Views (Twitter, Facebook, Instagram) and the number of visits to Wikipedia pages where we have placed Climate.gov visualizations.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>											5%	46%				5%	5%	5%	5%	5%	David Herring
Annual number of new research awards to improve climate understanding, prediction, and information.	CPO's external grant programs, including funding opportunities address key information needs related to climate research, modeling, and the impacts of climate change on communities, infrastructure, and economies.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>											50	79				50	50	50	50	50	Neil Christerson
Number of assessment reports or integrated plans developed or implemented across NOAA programs. (e.g. NCA, Arctic Report Card, IPCC, AMAP, SOTC, NIDIS, etc.)	This performance measure shows CPO's major contributions to and completion of assessments and demonstrates the role of formal published climate change assessments in decisions to address climate change impacts. Business, government, and the public use these assessments to improve their climate understanding, decision making and resilience. [Northern Plains Drought Assessment,	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>											4	10				4	4	4	4	4	Ben DeAngelo
Support students at all levels and early career professionals to grow the next generation of scientists	Preparing the next generation of scientists to enter the workforce, either at NOAA or elsewhere in the field, is one of NOAA's most critical, but rewarding endeavors. CPO will contribute to this effort by supporting post-secondary education students through programs such as the Hollings and EPP scholarships, William Lapenta internships, AMS Fellows, SOARS, etc, and support early career professionals through the Climate and Global Change post doctoral program, Knauss Fellowship, and other opportunities.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>											20	54				20	20	20	20	20	Wayne Higgins
Fund at least four new projects from FY21 solicitations that directly advance CPO's Risk Area goals (inundation, marine ecosystems, heat, water resources)		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>											4	4									Dan Barrie
Number of RISA-informed plans and policies		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>											11		Need to verify after 10/11 when S. Bath returns			11	11	11	11	11	Sean Bath