INTERDEPARTMENTAL COMMITTEE FOR METEOROLOGICAL SERVICES AND SUPPORTING RESEARCH (ICMSSR)

WORKING GROUP FOR COASTAL ACT SUPPORT (WG/CAS)

Record of Actions 2019-1 Meeting

June 17, 2019 SSMC2 Room 7224

Office of the Federal Coordinator for Meteorology
Suite 7130, SSMC2, 1325 East West Highway,
Silver Spring, MD 20910

Approved: 07/22/2019

Attendees

Role	First Name	Last Name	Agency/Office
CoChair	Nicole	Kurkowski	NOAA/NWS
CoChair	Tony	Niles	USACE
Federal Coordinator	Michael	Bonadonna	OFCM
Executive Secretary	Jamese	Sims	OFCM
Member	Ali	Abdolali	NOAA/NWS
Member	Jonathan	Berkson	USCG
Member	Mike	Biggerstaff	Oklahoma U
Member	Athena	Clark	USGS
Member	Steve	DelGreco	NCEI
Member	Danny	Flack	Riverside
Rapporteur	Floyd	Hauth	OFCM/STC
Member	Victor	Hom	NOAA NWS
Participant	Sim	James	OFCM
Member	Anil	Kumar	NOAA/NWS
Member	Marc	Levitan	NIST
Member	Zaizhong	Ma	NOAA/NWS
Member	Stacy	Mackell	NOAA/NWS
Member	Hassan	Mashriqui	NOAA NWS
Member	Ed	Meyers	NOAA/NWS
Participant	Mark	Miller	NOAA/NWS
Member	Saeed	Moghimi	NOAA/NOS

Role	First Name	Last Name	Agency/Office
Member	Jamie	Rhome	NOAA/NWS
Member	Max	Schneider	NOAA/NWS
Member	Jane	Smith	USACE
Member	Roshan	Shrestha	NOAA/NWS
Member	John	Sokich	NOAA/NWS
Member	Kelly	Stroker	NOAA/NCEI
Member	Andre	Van der Westhuysen	NOAA/NWS
Member	Sergey	Vinogradov	NOAA/NOS
Member	Scott	Weaver	NIST

1. ADMINISTRATIVE REMARKS:

Dr. Jamese Sims (OFCM), Executive Secretary, provided administrative remarks, reviewed the meeting agenda, and conducted roll call.

Action Item review:

- 2018-1.1 and 1.3 are closed.
- 2018-1.2 will be closed following the presentation on ASOS today.

2. OPENING REMARKS FROM GROUP LEADERS

Nicole Kurkowski (NOAA/NWS) reviewed the NOAA COASTAL Act Process and provided a summary and status of FY16-19-Funded COASTAL Act Activities. She also covered the COASTAL Act "Named Storm Event Model" (NSEM)/Coastal Wind and Water Event Database (CWWED) timeline for each of the twelve sub-projects and the accomplishments and next steps for the sub-projects. General challenges that remain include surface observation density, reaching the 90% accuracy requirement in all locations at all times, NOAA and interagency partners currently being unable to meet statutory requirements for COASTAL Act response operations, and delays due to the government shutdown.

Members briefly discussed the examples shown for the availability of USGS wave observations for Harvey which had sparse wave observation coverage and Florence which had good wave observation coverage.

Anthony Niles (USACE) noted that he was looking forward to the updates on the progress being made on COASTAL ACT activities. He was also pleased with the collaborations on related research and development.

Athena Clark (USGS) noted her work as the USGS Coastal Storm Team coordinator. Her responsibilities include deploying wave sensors and collecting high water mark data.

Ms. Clark invited members to participate in the Aug 13-14 meeting with NHC and NWS at the USGS office in Norcross, Georgia. Meeting topics will include merging and updating high water mark methodology.

Ms. Clark explained the difference in the sparse versus good density of wave observations shown in the Harvey and Florence examples. Supplemental funds from Sandy were used to purchase

wave sensors for the North Carolina to Maine coasts and a long lead time on warnings for Florence favored good coverage. Coastal areas southward along the Atlantic and westward along the Gulf coast had many fewer wave sensors available because of the cost of sensors and the short lead time for Harvey led to sparse coverage.

Members asked whether sensors could be shipped to storm threatened coastal areas. Shipping cost may be an issue. Information will be provided to members about the availability of wave sensors. See Action Item 2019-1.1.

3. ASOS INSTRUMENT STATUS and FUTURE PLANS

Mr. Mark Miller, Director of the Surface & Upper Air Division, presented an overview of the ASOS instrument status during high wind events and described future plans for upgrades.

The Automated Surface Observing System (ASOS) is the nation's primary system for collecting and reporting surface weather observations. The system's data is used for aviation operations, weather forecasting, climate modeling, and issuance of severe weather warnings. The original ASOS was designed in 1989–1991 and fielded 1991–1999.

The ASOS network is comprised of sensors at NWS, USAF, Navy and FAA locations. There is a perception that ASOS observations are lost during hurricane events. Their main vulnerability during hurricanes is infrastructure (i.e., loss of power and communications at the site).

Mr. Miller described the problems related to power and communication outages, and noted that in most cases of outages the latest 12 hours of observations can be retrieved (storage capacity).

Due to the age of the ASOS operating system, components of ASOS hardware are reaching obsolescence. A Service Life Extension Program (SLEP) has been established to upgrade Acquisition Control Unit/Data Collection Platform (ACU/DCP) processing to modern capabilities (shared with FAA and DOD) and upgrade to IP-based communications (NWS only). The upgrade to ASOS processing will also increase onboard storage for retrieval of past ASOS data if communications goes down. There is no set schedule for this upgrade program because of software challenges.

This presentation closed Action Item 2018 – 2.2.

4. DEBRIEF of FEMA/NOAA MEETINGS and NEXT STEPS

The NOAA COASTAL Act Team led by Nicole Kurkowski provided an overview of the FEMA/NOAA COASTAL Act Formula Briefings that occurred April 5, 2019 and June 13, 2019. These meetings addressed the Named Storm Event Model (NSEM), 90% accuracy requirements methodology, and Coastal Wind and Water Event Database (CWWED).

The April 5 meeting topics included a NOAA Update, NOAA's 90% methodology, a CWWED demo and FEMA's update on their formula. As a result of the meeting, FEMA and NOAA have agreed to meet on a monthly-to-bi-monthly basis.

The June 13 meeting included a review of FEMA's "Data Requirements for the COASTAL Formula", accuracy description, FEMA feedback on CWWED, the estimated timeframe FEMA expects to notify NOAA of indeterminate loss, and next steps.

NOAA is responsible for the hazard data for the FEMA formula to include peak wind gust speed and direction, water elevation, and significant wave height. Other data required in the FEMA formula include structure characteristics, and building properties associated with flood and wind.

FEMA clarified they do not require NOAA to provide 3-second wind gust estimates; rather FEMA will derive those values based on NOAA's 15-second wind gust data. Furthermore, FEMA clarified they are not expecting NOAA to provide aerodynamic surface roughness; rather, FEMA will calculate this value from NOAA's calculation of wind direction.

The FEMA POC for 90% accuracy methodology was identified and is responsible to work with NOAA to define "accuracy" for hazard data and determine how best to depict accuracy (e.g. as a timeseries).

A series of slides were shown that outlined NOAA's proposed approach to assessing and depicting 90% accuracy.

A FEMA POC was also identified for working with NOAA on updating the CWWED. More specifically, NOAA is seeking FEMA's input on the CWWED GWS display, formatting of data, pre-defined spatial resolution, and how FEMA envisions accessing the data (machine-to-machine).

For next steps, NOAA will:

- Coordinate with FEMA POC(s) for 90% accuracy and CWWED.
- Provide a dataset to FEMA for one location at the same time resolution (wind and water level).
- Request a future joint storm exercise (e.g. 2017 storm), for discussion at next meeting.
- Continue monthly-to-bi-monthly discussions.

5. NOAA EFFORTS on DATA AGREEMENTS

Nicole Kurkowski (NOAA) and the Coastal Wind and Water Event Database (CWWED) team provided an update on data agreement efforts.

The NOAA CWWED team has developed the CWWED and GIS-based Web Services (GWS) v0.1, with the capability to ingest data, as a federated (and physical/virtual) database. The NOAA COASTAL Act program manager and the CWWED team will initiate discussions on data agreements internally to populate the internal data spreadsheet and gather information to prepare CWWED ingest for future coordination with covered data providers.

Ms. Kurkowski described the proposed content of data agreements and the process for requesting review/update of the COASTAL Act Data Protocol Annex to the Federal Plan for Disaster Impact Assessments and initiating NOAA COASTAL Act discussions with data providers on Data Agreements.

NOAA plans to request covered data for 2017, 2018 storms and for exercises during 2019, 2020, 2021 hurricane seasons. She closed by providing a list of NOAA COASTAL Act POCs for Data Agreements.

Members agreed to coordinate on requests for covered data as noted above and OFCM will assist with the request for review/update of the Protocol Annex to the Federal Plan for Disaster Impact Assessments. See Action Items 2019-1.2 -1.5.

6. OPEN DISCUSSION

Members discussed and clarified the definition of covered data, expressed concerns about funding timelines and about identifying where future covered data will be collected. The FEMA representative requested to be part of the USGS Coastal Storm Team coordination calls. It was

also noted that a representative from the National Science Foundation should be a part of the COASTAL Act discussions and invited to the next WG/CAS meeting. See Action 2019-1.6.

7. CLOSING

The Working Group leaders provided closing remarks and thanked meeting participants. Dr. Jamese Sims (OFCM) will coordinate with members on Action Items from this meeting and solicit topics for the next meeting. See Action Item 2019-1.7. The next meeting is tentatively scheduled for November 19.

WORKING GROUP FOR COASTAL ACT SUPPORT

(WG/CAS)

Action Items

WG/CAS Action Item 2019-1.1. Provide information to WG-CAS members regarding availability of wave sensors (coordinates for sensor deployment locations along the coast) and the process for requesting shipment to areas under hurricane threat, if applicable (e.g. USGS).
Responsible Office: DHC/data providers
Due Date: August 30, 2019.

WG/CAS Action Item 2019-1.2. (a) OFCM to coordinate a review/update of the COASTAL Act Data Protocol annex to the Federal Plan for Disaster Impact Assessments to ensure membership and data tables are up-to-date. (b) POCs for all member organizations are provided to NOAA to coordinate on data agreements.
Responsible Office: OFCM
Due Date: September 30, 2019.

WG/CAS Action Item 2019-1.3. OFCM to assist in coordination between DHC/data providers and NOAA in the provision of storm data for (a) the following 2017 and 2018 storms: Irma, Harvey, Maria, Michael, Florence, and Lane and (b) the 2019, 2020, and 2021 hurricane seasons.
Responsible Office: DHC/data providers
Due Date: August 30, 2019 (a)

WG/CAS Action Item 2019-1.4. DHC/data providers to provide information to WG-CAS members regarding what data error information is available for their respective data, sensors, post processing, etc.
Responsible Office: DHC/data providers
Due Date: August 30, 2019.

WG/CAS Action Item 2019-1.5. OFCM to update the WG-CAS and DHC listserv (including the removal of Karsten Shein and Mike Bilder; inclusion of kelly.stroker@noaa.gov, stephen.delgreco@colorado.edu, and nicole.kurkowski@noaa.gov).
Responsible Office: OFCM
Due Date: July 5, 2019.

WG/CAS Action Item 2019-1.6. Invite NSF to provide representative/member for CAS activities/meetings.
Responsible Office: OFCM
Due Date: September 30, 2019.

WG/CAS Action Item 2019-1.7. Solicit topics for next CAS meeting.
Responsible Office: OFCM
Due Date: October 1, 2019.