

# FEMA FY 19 Kick-off: Kenai River Modeling and Mapping

May 1, 2020

## Action Items:

Item	Responsible	Due Date
Follow-up with USACE/NWS on 1-ft increment modeling	FEMA	13 May 2020
Model Notification Letters to Borough and Communities	FEMA/STARR II	29 May 2020
Comments and feedback on Scope of Work	Communities	5 June 2020

## Attendees:

Stephanie Presley, Seward/Bear Creek Flood Service Area	Crane Johnson, Alaska Pacific River Forecast Center
Jen Hester, City of Soldotna	Nathan Epps, USACE-Alaska District
Samantha Lopez, Kenai Peninsula Borough Floodplain Administrator	Lauren Oliver, USACE-Alaska District
Bobbi Lay, Kenai Peninsula Borough GIS	Wendy Shaw, FEMA Region 10
Elizabeth Appleby, City of Kenai	Ted Perkins, FEMA Region 10
Nancy Carver, River Center	Rynn Lam, FEMA Region 10
Morgan Aldridge, River Center	Karen Wood-McGuinness, FEMA Region 10
Sally Russell Cox, State of Alaska RiskMAP Coordinator	Matt Witosky, STARR II
Jimmy Smith, State of Alaska NFIP Coordinator	Matt Selzler, STARR II
Brent Nichols, State of Alaska Hazard Mitigation Officer	Joshua Crowley, STARR II

## Meeting Notes:

Wendy thanked everyone for joining virtually. The purpose of today's meeting is to kick-off the FY-19 Kenai River Modeling and Mapping project. The slides presented during the webinar were provided to the attendees via e-mail.

The updated mapping for 47 miles of the Kenai River will be accomplished in two phases: 1) U.S. Army Corps of Engineers – Alaska District multi-frequency hydrology and hydraulics and 1-ft increment modeling; and 2) STARR II modeling of the floodway and development of floodplain maps.

## History of Kenai River Floodplain Mapping

- The Kenai Peninsula Borough participates in the National Flood Insurance Program (NFIP); Cities of Soldotna and Kenai do not currently participate
- 1981: Original Flood Insurance Study (FIS) and mapping
- During coastal mapping update in 2016 – updates to the entire Kenai River was identified as a need but was not originally scoped.
  - Met with the Cities of Kenai and Soldotna at that time – comments were effective maps didn't reflect flood risk, maps and models are old
- Other entities showed interest in updating the modeling and mapping for the Kenai River: Weather Service for real-time inundation; USACE for survey and modeling
- Pulled resources in 2017 – FEMA/USACE funding to collect 113 river cross-sections
- In 2019 – Weather Service/Alaska Pacific River Forecast Center developed a model using the cross-sections and 2008 LiDAR – calibrated to the 1995 and 2012 events.

USACE Scope of Work

- Multi-frequency (10-yr, 25-yr, 50-yr, 100-yr and 500-yr) hydrology of Kenai River
- One-dimensional HEC-RAS model for 47 miles of Kenai River from Skilak Lake to Cook Inlet
- Water surface elevation and depth grids
- 1-ft increment inundation modeling to support Weather Service real-time inundation mapping
- Provide support for project team and community meetings

STARR II Scope of Work

- Review USACE model and develop floodway modeling and mapping for the 47 miles
- Develop draft and preliminary mapping products
- Provide support for project team and community meetings

Review of Non-Regulatory Products

- The Borough has a Risk Report from 2017 which included flooding, jokulhlaup, earthquake, and tsunami.
- The updated flood risk depth grids from this study can be incorporated to update risk database

NFIP Expectations

- Timelines for effective maps try to build in time for communities to update ordinances – but it's important to be aware of local requirements (number of council meetings, internal timelines for review and approval, etc.)
- The State of Alaska has a Model Ordinance that can be used to develop a local ordinance – Kenai and Soldotna will need to join the NFIP

Estimated Timeline

<u>Milestone</u>	<u>Projected End Date</u>
Modeling Completed (USACE)	Summer 2020
Modeling Completed – with Floodway (STARR II)	Spring 2021
Draft Floodplain Maps and Flood Risk Review Meeting	Summer 2021
Preliminary Maps	Spring 2022
CCO and Public Meeting	Summer 2022
Effective Date	Early 2023