Activity / Key Action Objectives	Strategy(ies) Addressed (#)	Annual Action Step(s)/Milestones	Activity Lead and Collaborators	Activity Requirements	Supporting Resources / Existing Work / Dependencies	Metrics – Expected Outcome and Target Date
Tsunami Source Database Development	1.1.1 Identify and address gaps in tsunami source characterization and modeling	- Generate metadata for collected tsunami sources - Integrate GIS/KML/figures illustrating source dimensions - Finalize database format, definitions, metadata, and attachments (GIS, figures) - Finalize and incorporate PTHA and Powell Center sources - Determine final location of database and facilitate transfer - Incorporate PTHA sources	MMS, MES	- CA lead - Perform work through MMS meetings	- Leverage USGS Powell Center work - California grant dependency to support finalizing the database structure and format (e.g., an Excel spreadsheet)	2021 – Continue to update development of the source database schema/attributes. This is a multi-year activity.

NCEI DEM Development (Continued)	1.1.2 Complete inundation and evacuation maps for all unmapped U.S. coastal communities	Prioritize and develop four Digital Elevation Models (DEMs) for partner use. Conduct a gap assessment for future DEM requests.	MMS	- MMS group activity - NCEI lead	- This work is pre-funded by NWS to NCEI.	2024 - Development of Alaska DEMs.
Probabilistic Tsunami Hazard Assessment (PTHA) White Paper	1.1.1: Identify and address gaps in tsunami source characterization and modeling. 1.2.1: Complete assessments of population exposure, vulnerability, and evacuation potential to tsunami hazards. 1.2.2: Support the development and appropriate use of tsunami loss estimation methods and tools, such as Hazus and the National Risk Index	Develop a white paper document for NTHMP use: Part 1: PTHA Fundamentals. Part 2: PTHA application within the National Tsunami Hazard Mitigation Program (NTHMP). Seek funding to support the development of PTHA across the NTHMP.	MMS	MMS Activity	No dependency	White paper on PTHA for NTHMP Partners.

PTHA Training for Education and Outreach (E&O)	2.1.2: Develop, update, and disseminate consistent outreach materials. 1.2.2: Support the development and appropriate use of tsunami loss estimation methods and tools, such as Hazus and the National Risk Index	Develop less technical material to explain PTHA models to a wider non-expert audience.	MMS, MES	MMS lead activity with MES		Establish a working group. Use NTHMP whitepapers as a basis for
Artificial Intelligence/Machine Learning (AI/ML) for Modeling	1.1.1: Identify and address gaps in tsunami source characterization and modeling.	Establish an AI/ML working group. Identify speakers for capacity building within NTHMP.	MMS	MMS lead	no dependency	Group Established. Number of Speakers on AI/ML at MMS meetings.
Modeling Benchmarking Workshop	1.1.1: Identify and address gaps in tsunami source characterization and modeling.	Initiate planning for workshop and funding search.	MMS	East Coast and Oregon Lead	Currently seeking funding from NSF to support benchmark development.	Host Identified. Establish Organizing Committee. Identify specific topics/workshop goals.

Sediment Transport Modeling	1.1.1: Identify and address gaps in tsunami source characterization and modeling.	Work group to discuss sediment transport modeling research, review existing approaches. Workshop incorporation sediment transport into the tsunami inundation modeling was hosted; reports and publications and continued advancement in sediment transport modeling continues	MMS	East Coast Lead WA support	No dependency	Publications on sediment transport; sediment transport use cases.
Wave Arrival Time Guidance	1.1.3 Identify and address tsunami hazard assessment and product requirements that support the maritime industry	Finalize wave arrival time technical guidance Develop end user products and educational material	MMS MRPWG	TIGER Task Team Lead	No dependency	Guide published to partners. Due This year.

Removed/Ending Activities

The final report on Wave Arrival is anticipated as soon as possible.

The Landslide PTHA work (Grilli) is also fundamentally complete; consideration should be given to expanding this methodology to other partners. (Activity removed for now.)

Possible Addition for future Work Plans:

Moderate tsunami waves arriving faster than large scale models forecast→ time rather than wave height