

Meeting Notes
Town of Madison Planning & Engineering /CT DEEP Coastal Road Flooding
September 11, 2019

Attending: David Anderson, Madison Planning Dept., John Iennacho, Engineering/DPW, David Kozak, CT DEEP

Road reconstruction life cycle planning is ~ 30 years. Therefore, for road flooding management/road reconstruction-elevation planning purposes, a reasonable SLR planning horizon should be at least 30 years (if using SLAMM results it may be most appropriate to use Year 2055 results for planning).

Although SLAMM forecasts that the # of miles of road expected to flood from tidal flooding at least every 90 days will double from existing ~ .40 miles to .85 miles, this increase in tidal flooding is relatively modest compared to several other coastal communities, like Fairfield and Guilford.

Reviewed SLAMM's existing conditions flooding / year 2025 projected road flooding results for tidal flooding (flooding from astronomical events only occurring at least every 90 days) which were generally confirmed as accurate for 4 'neighborhoods' that are projected by 2040 to be local frequent flooding 'hot-spots' at: Circle Beach, Garnett Park Road area, East River/Route 1 near Guilford border, Surf Club area (see attached graphic for description of 2040 projected road flooding from extreme high tide inundation). However, existing coastal flooding in Fence Creek (?) neighborhood that staff believe (?) results from tidal rather than storm flooding was not identified by SLAMM as currently occurring.

Town staff are supportive of enhancing existing SLAMM road flooding data to include roadflooding depth estimates and creating additional flooding frequency intervals within SLAMM's current flood recurrence interval of: 'floods between every 90 days and 10 years.'

Roads identified for reconstruction/capital improvements are vetted through a process including reviews by Town Capital Improvement Committee, Town staff (with First Selectman) and the Board of Finance.

Need direction from State agencies/academia on SLR rates and other technical guidance on how to plan for SLR/road flooding. Town plans to use CT DEEP policy of planning for an upper bound of ~20" SLR by 2050s unless otherwise informed by updates to existing projections of future sea level elevation change along CT's coast.

Need improved coordination of coastal resilience outreach and education efforts currently provided by State agencies, academics and other organizations to avoid conflicting information, planning guidance/standards, that would result in 'streamlined' public outreach services. For example, CT Sea Grant and CT DEEP were unaware of each other's recent coastal resilience outreach efforts to Town of Madison this week. CIRCA also provides information/outreach, and

if information/message differs among organizations, and it can be confusing to many. when alternative advice/data sources are being offered.

John inquired about the vertical accuracy of the Lidar data used to produce SLAMM tidal flooding frequencies and if re-running SLAMM road flooding analysis using more recent/accurate 2016 Lidar data would provide more reliable projected road flooding results. Dave K. offered to provide John with info. on Lidar used to produce SLAMM existing results (**vertical accuracy ranged from 5-15 cm depending on data source, as described in [CT SLAMM Final Report p. 14](#)**) and accuracy of CT 2016 Lidar data to be used in next application of SLAMM being investigated in cooperation with CT DOT (**waiting for response from CT CLEAR staff**).

It may be helpful to provide towns with a template they can use to help evaluate/score alternative road flood-proofing projects to produce relative cost: benefit ratios for alternative future road flooding resilience projects (i.e., road elevations). Possible **criteria** to consider (in addition to road reconstruction cost) include: **projected road flooding frequency, length of flooded road segment, road flooding depths, traffic volumes, sole neighborhood access, # of residents served by road, part of emergency access/egress/evacuation route, total grand list value of area served, road traffic/service classification (e.g. local, neighborhood collector, arterial, etc.)**.

David Anderson is willing to do limited 'ground-truthing' of SLAMM's projected 2025 (existing conditions) road tidal flooding to further evaluate accuracy of SLAMM results if given direction on when/where to inspect road flooding during future predicted extreme high tide events (i.e. tidal water flood elevations approximating at least 90 day recurrence interval flooding).

Town of Madison Coastal Road Flooding by 2040 (SLR = ~18 " by 2055)

