Sea Level Rise Subcommittee – Meeting of 2-28-2018

Members present: Leffler, Mezzanotte, Jordan, Campbell, Sullivan, Pumphrey, Schroeder, Kotz, Cheney, Conner

Will Conner introduced representatives of Weston & Sampson, an environmental engineering consulting company specializing in planning for the management of nuisance, surge, and precipitation caused flooding. They presented work they have done in Boston and in the Church Creek neighborhood of West Ashley. Their approach is to use dynamic modeling rather than bathtub models. These incorporate a wide range of variables. The modeling partners of this firm then use Monte Carlo simulations to generate probabilities of flood height and duration for fairly small, specific locations within their study area. This permits detailed analysis of how to prevent flooding or to improve flood resilience. The committee members discussed with them how Weston & Sampson might go about developing a flood management plan for Kiawah. Take away points:

- They have 3 phases of work: (1) Climate scenario selection (2) Vulnerability & Risk Analysis (3) Adaptation Strategies
- Probably better to work with Levine on climate scenario selection and mapping.
- W&S may be good to use on the other 2 phases - provided that they do not dwell on things that are in good shape (but rather confirm that they are in good shape and have good plans). Major areas where Kiawah needs help are roads (particularly Parkway & Governors), ponds & drainage, salt marsh issues & adaptation, and, perhaps, electricity, phones, & Internet.
- Kiawah has fragmented responsibilities making an overall contract difficult (who pays for what).
- Their incremental adaptation approach that enables future improvements to take advantage of earlier work can be good - provided that a lot of money is not wasted on short term fixes (for example, get the Parkway and Governors to the height needed for the next 50 years now & don't redo road height a number of times over the next 50 years). The big areas where good, long-term plans are needed are roads, pond system and drainage.
- The mayor expressed a need for setting expectations of guests and residents and managing public safety issues associated with various storm and water events. More detailed information from the mayor about the need and his concerns would be helpful. Phase 1 and 2 work on Climate/weather Event Scenarios and Vulnerability & Risk Analysis can help address these

needs. This work coupled with predictive/dynamic computer models might provide good immediate insight on which communication/actions should be initiated - by the Town or others- for specific weather events.