

TOWN OF SOUTH BETHANY SLR & SS Committee Meeting Minutes
Monday, June 29, 2015 at 1:00 PM
Location: South Bethany Town Hall

1. Call meeting to order	George Junkin
2. 1:00 to 2:00 conference call with Ram Mohan and Matt from Anchor to kick off grant project.	All
3. Discussion on Status of South Bethany's FEMA June 12 meeting.	All
4. Discussion on possible bulkhead height ordinance	All
5. Planning for public meetings/outreach in the fall	All
6. What should we be doing to improve our CRS rating?	All
10. Is there anything else that we should be doing?	All
11. Adjournment Planned to be no later than 3:00 PM	

Agenda Item 1. – George called the meeting to order at 1:00 PM. Present were 6 of the 7 members of the SLR & SS committee; George Junkin, Dick Oliver, Jay Headman, Frank McNeice, Jim Gross and Frank Weisgerber. Also present were four nonmembers of the Committee; Melvin Cusick (Town Manager), Wayne Schrader (Member of Council), Jack Whitney (Homeowner), Danielle Swallow (DNREC liaison for Delaware Coastal Management Assistant Grant Program) and Wendy Carey (Delaware Sea Grant, University of Delaware). Three people were present by conference call from Anchor QEA, LLC; Ram Mohan, Matt Henderson and Brandon Raymond.

Agenda Item 2. – Kick off Grant Project

- George started the kick off part of the meeting saying that he would be sending Anchor a copy of the contract that the Town of South Bethany has with DNREC for the grant.
- The statement of work (SOW) and all deliverables were discussed in detail so that it was clear where the Anchor responsibilities were and where the Town responsibilities were. That discussion follows for each SOW item and deliverable item. Note, the term “Vendor” is used interchangeably below between the Town of South Bethany and Anchor QED. Responsibilities for each party are defined below.

Task 1: Develop GIS Database and Select Scenarios and Evaluation Criteria

- a. **VENDOR shall develop a draft GIS database template that will enable the town to map infrastructure and assess its vulnerability to Sea Level Rise (SLR).**

Anchor already has from the Town

1. Bulkhead Elevations
 - a. 679 total; good coverage
2. Catch Basin Elevations
 - a. 114 total
 - b. 11 listed as either "Not Located" or "Gone"
 - c. Appear to be elevations of grate at street level.
3. Sanitary and Stormwater Manhole Elevations
 - a. 2 of each
 - b. Appear to be elevations of rim at street level.
4. Street Centerline Elevations
 - a. 533 total

Anchor still needs from the Town

1. Invert elevations of the catch basins and stormwater manholes. It looks like we were provided the elevations at street level. *The data that Anchor currently has are the grate elevation of each catch basin. The Town will measure the distance from the top of the grate to the invert and supply the data to Anchor.*
 2. Stormwater outfall invert elevations and locations. *The Town will measure the distance from the top of the bulkhead to the invert of the outfall and record the GPS location of the outfall. The Town will also supply the diameter for the outfall pipe.*
 3. Location and elevation information of ground-mounted electrical transformers. *The Town will see if this data are available from DELMARVA, if not the Town will survey or contract a vendor to survey the location of each transformer.*
 4. Elevation data along Coastal Hwy appears to be sparse or missing
 - a. Catch basins and Manholes *Anchor has the grate elevations for the catch basins on the west side of DE Rt. 1. The Town will measure the distance from the top of the grate to the inverts for these catch basins and supply the information to Anchor. The Town will survey or contract a vendor to survey the location and elevation for the catch basins in the Median and along the east side of DE Rt. 1. The Town will measure the distance from the top of the grate to the inverts for these catch basins.*
 - b. Street centerline elevations *The Town will supply to Anchor the as-built elevations for DE Rt. 1 for both the northbound and southbound lanes.*
- The Town will perform random checks on the elevations that Anchor currently has for bulkheads, streets and catch basin grates.
 - Anchor will send to the Town an Excel spread sheet that defines the data that Anchor needs. The Town will fill in the spread sheet with the data listed above.

- The Town will supply to Anchor the USACE drawings for the reconstructed dunes and will supply actual measurements of the dune profiles before and after storm events that were made by the USACE
- Anchor will populate the master database with the data listed above.
- Anchor will send to the Town a list of potential vendors that rent survey equipment.

b. VENDOR shall populate the database with topographic surveys, bathymetric data, tide data, elevation data, updated FEMA flood maps, and other publicly available data.

- Anchor will obtain LIDAR data for the topographic survey to use with the data supplied by the Town from the elevation surveys.
- The bathymetric data required will be supplied by the Town. This will consist of the canal cross sections based on the pre-dredge and post-dredge surveys performed by Merestone Consultants, Inc., for the Town of South Bethany Maintenance Dredging Project dated April 2008 and July 2008 respectively. The Town will do some random checks to verify that the data are still accurate.
- The Town will send Anchor web links to tide data for gages at South Bethany, Fenwick Island, Indian River, Lewis and Ocean City. Danielle Swallow has supplied a list of web links that will be attached to these minutes.
- Elevation data are discussed above.
- The Town will send to Anchor pdf files that contain the existing FIRM for South Bethany (2005) and the preliminary FIRM which may become effective in the fall of 2016. A web link to the maps on a FEMA site will also be sent to Anchor.
- No other publicly available data were identified at this time.
- The Town confirmed that there have been few, if any, bulkheads raised since the survey was performed.

c. VENDOR shall compare sea level rise models and flood predictions for southern Delaware, obtain technical input from state and federal agencies, and select a range of scenarios to evaluate risk.

- Using the data listed above Anchor will develop a draft for a selected range of scenarios to evaluate risk with rationale for the selected range of scenarios.
- The Town will review the scenarios and rationale used by Anchor to arrive at their final comments to Anchor.
- Anchor will include the selected scenarios along with the Town's comments in Deliverable #1 listed below.

d. VENDOR shall review the types of critical infrastructure in the town and prioritize them according to criteria such as their importance to safety, quality of life, and the future operation of the town.

- Candidates for “critical infrastructure” may include but are not limited to roads, bulkheads, storm drains, ground mounted electrical transformers and dunes.
- Anchor will develop a draft for the above with rationale for prioritization for the selections.
- The Town will review Anchor recommendations and give comments to Anchor for their consideration and action.
- Anchor will include the final recommendations in Deliverable #1 listed below.

e. Based on the prioritization, VENDOR shall select 4 or more types of infrastructure to be formally assessed under this project.

- The Town will review the Anchor recommendations and give comments related to the selection of the four types of infrastructure to be formally assessed.
- Anchor will include the Town comments and the final Anchor recommendations in Deliverable #1 listed below.

Deliverable #1: Chosen SLR Scenarios and Infrastructure. One (1) electronic copy of chosen SLR scenarios, including methodology for choosing them and infrastructure reviewed, the criteria used for selection, and priority ranking

- Anchor is responsible for this deliverable to the Town of South Bethany.
- The Town of South Bethany is responsible to forward this deliverable to DNREC.

Task 2: Conduct Sea Level Rise Inundation Mapping

- VENDOR shall run a GIS-based model that simulates the effects of SLR over various scenarios and timeframes. This model shall depict the degree of inundation expected for each type of infrastructure being evaluated.
- VENDOR shall produce a final technical report containing inundation maps, risk analysis, findings, and recommendations for next steps.

Deliverable #2: Final Technical Report and Inundation Maps: One (1) electronic copy of the final technical report including maps depicting SLR inundation scenarios for South Bethany

Deliverable #3: GIS Layers: One (1) electronic copy of associated GIS Inundation layers

- Anchor is totally responsible for this task and deliverables. The results from this GIS-based model are based on the data and the decisions made in Task 1 above.
- The Town of South Bethany is responsible to forward this deliverable to DNREC.

Task 3: Grant Coordination and Reporting

- a. VENDOR shall coordinate all grant activities with their Delaware Coastal Programs staff liaison and will provide an opportunity for Delaware Coastal Programs to provide technical assistance and participate in meetings, as appropriate.
- b. VENDOR shall coordinate all grant activities with the Town Council and Sea Level Rise Committee, as appropriate.
- c. VENDOR shall submit progress reports each quarter starting on or before June 30, 2015 for the project duration, or until March 15, 2016, whichever is first. Each quarterly report shall include a description of all grant task activities during the quarter, funds expended, milestones achieved, and any issues encountered that may delay final deliverables. Quarterly reports shall also attach completed deliverables when appropriate and timely.
- d. VENDOR shall track and provide documentation of the required 1:1 in kind and/or cash match.
- e. VENDOR shall submit a match report for in-kind contributions identifying the person(s) performing work on the project (generally or specifically, depending on activity), dates and activity/work conducted, and cost of activity or hourly rate, as applicable. Paid receipts and invoices shall be submitted for documentation of cash match. The match report shall be due at the time of the final report.

Deliverable #4: Quarterly Reports. One (1) electronic quarterly report each quarter as outlined above

Deliverable #5: Match Documentation. One (1) electronic copy of detailed project match documentation as outlined above

- Task 3 is totally the Town's responsibility. The Town will use deliverables from Anchor and inputs from Anchor where appropriate.
- Danielle suggested that the first quarterly report could slip since we have only been turned on for less than a month. George said that he would submit a short report that says we were turned on, we got Anchor under contract and that we had our kick off meeting.
- George distributed the sheets that are to be used for match documentation and told everyone to keep track of their hours.
- Anchor stated that their schedule would have to change as a result of the late issuance of the Grant and the Contract. The Town would like to have the first public meeting no later than October 2015 (prior to the completion of the study) and will discuss a possible

project extension with DNREC later when the time-line to complete the project study is more clear. Public feed-back before the final report is issued is very desirable.

Task 4: Public Outreach

- a. VENDOR shall keep town residents and stakeholders informed of the project through one or more mailings and newspaper coverage of the vulnerability assessment.
- b. VENDOR shall hold up to two public meetings on this SLR vulnerability assessment. One meeting shall be timed to solicit feedback from residents and stakeholders prior to the drafting of the final report.
- c. VENDOR shall make every effort to schedule meetings during months when a greater number of residents are in town.

Deliverable #6: Outreach materials. One (1) electronic copy of mailing(s) and newspaper coverage of project

Deliverable #7: Meeting Summaries. One (1) electronic copy of write up summarizing public meeting(s), including number of attendees and types of comments received

- Task 4 is totally the Town's responsibility. The Town will use deliverables from Anchor and inputs from Anchor where appropriate.
- There was a lot of discussion here relative to schedule.
 - They best times for public meetings are in May and September. Due to the late turn on there will be little data available from Anchor in September and the contract has a March 15, 2015 finish date.
 - The Town plans to have a public meeting in late September or early October. At this meeting the grant objectives and the status of the Anchor work will be presented along with other SLR & SS topics such as
 - Educate community on current and preliminary FIRM
 - Educate community that raising houses is good
 - Educate community relative to flood Insurance issues (reasons rates are going up and ways to decrease rates)
- The Town will use mailings to solicit feedback from residents and stakeholders prior to the final report.

Current Schedule in Contract

Task	2015											2016					
	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun
Contract Permission to Start																	
PO to Anchor																	
Kick off Meeting with Anchor																	
Task 1																	
Develop GIS Database																	
Select Scenarios																	
Select Evaluation Criteria																	
Task 2: Conduct SLR Inundation Mapping																	
Task 3																	
Grant Coordination																	
Quarterly Reports																	
Final Report																	
Task 4: Public Outreach																	

Proposed schedule that meets the current finish date of March 15, 2016

Task	2015											2016					
	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun
Contract Permission to Start																	
PO to Anchor																	
Kick off Meeting with Anchor																	
Task 1																	
Develop GIS Database																	
Select Scenarios																	
Select Evaluation Criteria																	
Task 2: Conduct SLR Inundation Mapping																	
Task 3																	
Grant Coordination																	
Quarterly Reports																	
Final Report																	
Task 4: Public Outreach Meetin and mailings																	

- The above is the schedule that both Anchor and the Town are committed to.
- Both Anchor and the Town took an action item to attempt to compress the schedule so that Task 1 is completed by the end of September so that that data may be used in the public meeting in the September/October timeframe.
- Mailings will be used to solicit feedback from residents and stakeholders prior to the final report.

At 2:00PM the kick off meeting was finished and Anchor signed off of the conference call.

At this point George pointed out that SLR & SS had \$3,000 allocated for this grant in this year's Town budget and that so far only \$1,224 had been identified to be spent. This left about \$1,800 that could be used to hire a survey vendor. George suggested we could probably get a survey vendor for less than \$1,500 for one day's work to perform the elevation surveys that are required in Task 1 above. Frank McNeice made a motion that we hire a vendor to do the elevation survey task. Jim Gross seconded the motion and all committee members present voted in favor of the motion.

Jack Whitney volunteered to contact Delmarva Power to see if he could obtain location and elevation data for the electrical transformers that are at ground level.

George is to ask Anchor for an Excel spreadsheet that shows the locations and elevations of the catch basins. The Town will use this to add the invert data.

Agenda Item 3. Discussion of June 12 FEMA Meeting

- George reported
 - Presenters at the meeting were FEMA, USACE, DNREC and the FEMA Mapping Contractor.
 - Rationale and analysis were presented for why the ocean front went from VE 10 to VE 13.
 - USACE presented the design for the reconstructed dune and that it was Designed to provide the maximum net economic benefit; not to a specific design storm (i.e. 50-yr or 100-yr return period event).
 - FEMA used the 2005 beach profile for their analysis.
 - FEMA presented USACE data to show dune profiles before and after storm events.
 - FEMA did not consider the reconstructed dune since there is no guarantee that there will be funding for maintenance
 - The insurance information presented was of a general nature and included
 - Insurance rates are mandated by congress to go up at least 5% and not more than 18%. There are a lot of caveats and exceptions to this rule.
 - A surcharge has been added that is independent of risk. The surcharge is \$25 for a primary residence. The surcharge is \$250 for a second home. This is an annual charge.
 - An **up to** 40% discount can be obtained for a \$10,000 deductible policy.
 - The more freeboard you have the lower the insurance rate.
 - All homeowners in South Bethany get a 10% discount due to the Town's CRS rating.
- Jim Gross asked about the report that the Town's consultant supplied relative to the probability that an appeal would be successful.
- George responded
 - Verbally the consultant communicated to the Mayor that VE 10 was not viable but this was not in the report and has not been confirmed.
 - In the report the consultant suggested using a different beach erosion profile and over topping condition which could potentially lower the base flood elevations.
- Jim asked what happens next
- George responded
 - The consultant has finished what the Town contracted him to do.

- The consultant advised that his company could not work on an appeal since they were getting a contract with FEMA that could cause a conflict of interests.
- The town has sent the consultant's report to the Ocean front homeowners and to the consultant that the homeowners have hired.

Agenda Item 4 – Bulkhead height ordinance.

- George asked if the committee was still in favor of going to Council with the recommendation to amend the code to allow homeowners to have an option to increase their bulkheads up to one (1) foot above the road adjacent to their lot.
- Frank Weisgerber was concerned that homeowners would then bring dirt in that would then cause rain water runoff into their neighbors lot
- George and Jack Whitney pointed out that the code is already set up to handle water runoff. The homeowner must have swales along the property line, graded towards the road where the Town then must handle the stormwater.
- The committee was in agreement that George should go forward with the recommendation to Council. George stated that the Town could work out the issues and it would have to be sent to the C&C committee regardless for review before a new ordinance could be tabled at Council.

Agenda Item 5 – Public meetings and outreach

- Danielle Swallow was concerned that the public meeting might occur before Anchor had developed the recommendations that would allow homeowners to give feedback prior to the final report.
- The consensus was that the public meeting had to be held at least by early October and the status of the Anchor work would be presented along with other SLR & SS issues. The Town would use mailings to solicit feedback from residents and stakeholders prior to the final report.

Agenda Item 6. – At this time the committee plans to focus on education to increase the CRS rating. Jay Headman was tasked to review the CRS Handbook to see if there was any “low hanging fruit” that the Town could exploit.

Agenda Item 7 – It was getting late and there were no other suggestions on what additional things the committee should be doing.

Agenda Item 8 – The meeting adjourned at 3:10 PM.

Links supplied by Danielle Swallow are on the next two pages

Online Resources

Sea Level Rise and Climate Change Information

Sea Level Rise Vulnerability Assessment for the State of Delaware

<http://de.gov/slrva>

Recommendations for Adapting to Sea Level Rise in Delaware

<http://de.gov/slradaptplan>

Delaware Climate Impact Assessment

<http://www.dnrec.delaware.gov/energy/Pages/The-Delaware-Climate-Impact-Assessment.aspx>

Delaware Sea Level Rise Interactive Inundation Mapping Tool

<http://de.gov/slrmap>

<http://firstmap.gis.delaware.gov/inundation>

Climate Resilience Evaluation & Awareness Tool (CREAT)

A software tool created by the EPA to assist drinking water and wastewater utility owners and operators in understanding potential climate change threats and in assessing the related risks at their individual utilities.

<http://water.epa.gov/infrastructure/watersecurity/climate/creat.cfm>

Climate Central Surging Seas Portal

<http://sealevel.climatecentral.org/ssrf/delaware>

NOAA Digital Coast's Sea Level Rise and Coastal Flooding Impacts Mapping Tool

<http://www.csc.noaa.gov/slr/viewer>

Georgetown Law's Adaptation Tool Kit for Sea Level Rise and Coastal Land Use

<http://www.georgetownclimate.org/resources/adaptation-tool-kit-sea-level-rise-and-coastal-land-use>

Delaware Sea Grant's Natural Hazard and Climate Change Adaptation Tool Kit for Delaware Communities

<http://www.deseagrant.org/products/natural-hazard-and-climate-change-adaptation-tool-kit-delaware-communities>



Online Resources

Presentations and Course Materials will be made available online at:

<http://de.gov/floodreadycommunityresources>

Weather and Coastal Hazards

Delaware Floodplain and Drainage Committee website (S.B. 64 information)

<http://www.dnrec.delaware.gov/swc/Pages/FloodplainandDrainageCodeWorkGroupCommittee.aspx>

U.S. Geological Survey - Delaware's Daily Streamflow Conditions

<http://waterdata.usgs.gov/de/nwis/rt>

Delaware Environmental Observing System

<http://www.deos.udel.edu/>

Delaware Coastal Flood Monitoring System

<http://www.coastal-flood.udel.edu>

FEMA Coastal Construction Manual: Principles and Practices of Planning, Siting, Designing, Constructing, and Maintaining Residential Homes in Coastal Areas

<https://www.fema.gov/media-library/assets/documents/3293>

Delaware Homeowners Handbook to Prepare for Natural Hazards

<http://www.deseagrant.org/products/delaware-homeowners-handbook-prepare-natural-hazards>

National Flood Insurance Rate Maps - New Castle County

<http://maps.riskmap3.com/DE/NewCastle>

National Flood Insurance Rate Maps - Kent County

<http://maps.riskmap3.com/DE/Kent>

National Flood Insurance Rate Maps - Sussex County

<http://maps.riskmap3.com/DE/Sussex>

