

Mitigation Committee Minutes

November 30, 2022

1. WELCOME AND CALL TO ORDER

2. ROLL CALL

Committee Members

D. Preston Lee, P.E., Chairperson
Austin Calaman, BPW General Manager
Bob Heffernan
Sumner Crosby
Barbara Curtis
Mark Prouty
Candace Vessella, City Council ex-officio

Others

Thomas Panetta, BPW
Robin Davis, BPW
Sharon Sexton, BPW
Nick Carter
Kimberly Bellere, BPW
Kristina Keller, BPW
Aaron Mushrush, Cape Gazette

3. REVISIONS OR DELETIONS TO THE AGENDA

None

4. APPROVAL OF AUGUST 21, 2022, AND OCTOBER 5, 2022, MITIGATION MINUTES.

Mr. Heffernan suggested editing the October 5, 2022 minutes to include a clarification on page two where the minutes refer to the estimate of a cost of a quarter of million dollars. The minutes should add that Mr. Calaman corrected the estimate cost to around two million dollars.

ACTION: *Mr. Crosby motioned to approve the August 21, 2022, and October 5, 2022, mitigation minutes with the change mentioned to the October 5, 2022, minutes. Ms. Curtis seconded the motion, which passed unanimously. Minutes to be submitted to the BPW Board.*

Mr. Lee stated that the Board would be accepting GHD's report on the long-range planning of the wastewater treatment facility (WWTF) at the special meeting later that day. A workshop will be scheduled. President Panetta stated that GHD will present the report. Postcards will be sent to ratepayers for notice of the public workshop. Nick Carter questioned the next steps and the city council's involvement. BPW will be making the autonomous decision.

5. REVIEW BPW MAJOR ASSET MAPPING REGARDING FEMA 2015 FLOOD DESIGNATIONS, PROPOSED UPGRADE SCHEDULES, ETC.

Mr. Davis created a spreadsheet with the BPW assets, location, flood elevation designation, x and y points, longitude and latitude, and a comment section. IT will be going to shoot the actual elevations of the assets. Some assets have a split designation for the flood plain. Looking at the map, all the structures are outside of the flood zone. Ms. Curtis questioned what are the x and y points. Mr. Crosby stated that the x and y points are GIS coordinates. Mr. Lee suggested adding recommendation of what and when to upgrade the asset. New installation would be built to the new recommended standard. Mr. Lee suggested that assets at AE6 and AE7 flood elevation be upgraded by 2030. All other assets at AE8 and above would be upgraded by 2035. Assets could possibly have a particular circumstance that would increase the criticality and the priority of upgrading. Mr. Crosby stated that the actual bottom elevations of assets will be needed to help determine the criticality and vulnerability. Mr. Crosby suggested having the land surface elevation where access is important.

Mr. Calaman stated that the BPW is self-insured for pollution and flood and is entertaining a policy for pollution and flood insurance. The spreadsheet information can be utilized for obtaining an insurance proposal. Parametric insurance utilizes thresholds and once the threshold is met, it is an automatic policy payout. Mr. Crosby stated that there is an opportunity for gauging within the city and would be more beneficial than the tidal gauge. Mr. Lee questioned if the city is aware of parametric insurance. Mr. Calaman stated that the insurance is new. HMS gave a presentation. Mr. Crosby stated that as sea level rises, the frequency of the storm events increases as well. Mr. Calaman stated that parametric insurance is based off data not damage. If the threshold level was hit, then the policy pays out.

Mr. Heffernan stated that the spreadsheet does not indicate priority and recommends including the criticality in the spreadsheet. Mr. Lee agrees and suggested ranking or color coding the assets.

Mr. Prouty questioned the cost of the insurance compared to a pro-rated loan to harden the equipment. Mr. Lee stated that the finance committee will be looking at the financial aspect of the insurance. President Panetta stated that insurance would still be needed whether asset has been hardened. Mr. Prouty questioned FEMA. President Panetta stated that payout from FEMA would be 1-2 years. With FEMA, there is a lot of administrative bureaucracy associated. Mr. Calaman stated that University of Delaware offered a class on grant writing for federal grants. As grants come to fruition, University of Delaware will assist with the grant writing.

Mr. Lee stated that the next steps are to meet with the mayor and city manager and to update them on the mitigation committee's progress.

Mr. Crosby questioned if there are relationships between lines on the spreadsheet and will there be a domino effect if there was a failure. Mr. Calaman confirmed that there are relationships between assets. Mr. Crosby questioned if there is value in capturing the interdependencies. Mr. Calaman stated that there is a flow diagram.

Mr. Davis is hopeful that IT will be able to capture the elevation numbers by next meeting.

Mr. Carter stated that a system is only as good as it's weakest link and the sludge bins are below the flood plain level. Mr. Lee stated that the spreadsheet includes all assets except for the WWTF. President Mr. Panetta stated that there is a section in the GHD Long-range planning report that addresses elevations of the WWTF.

Mr. Crosby suggested labeling the assets with a description. Mr. Davis stated any asset with a number is a pump station. Mr. Davis will add "pump station" to the description where needed.

6. DISCUSSION OF THE EMERGENCY RESPONSE PLAN OF THE HOWARD SEYMOUR WASTEWATER TREATMENT FACILITY.

The mitigation committee members reviewed the emergency response plan (ERP) for the WWTF. Ms. Curtis stated that the ERP was prepared by Inframark, the contractor that runs the WWTP, and is generic. The ERP does not mention the marsh or the canal. Ms. Curtis stated that the specific comments she submitted to the mitigation committee could be passed on to Inframark.

Ms. Curtis questioned:

- In section 3 the description of the emergency alarm system is vague.
- In section 5, Emergency Evacuation Procedures, workers are to meet in the breakroom before evacuating. Would an outdoor location be better? Mr. Heffernan stated this would be to obtain a head count. President Panetta stated that there is usually an alternative assembly point. Ms. Curtis stated that if there is a flooding situation, cars being moved to American Legion Road is not ideal.
- In section 7, the names for the emergency team were not filled in.
- In section 12 the ERP mentions covering openings with plywood. Is plywood in stock? Would other material be better? Is there confidence that the critical equipment is sufficiently connected to the power supply? In flooding situations, what are the implications of shutting off the power to the WWTF and does this also include the power to the pumpstations? If flow is stopped, what is the procedure to notify residents? This will take coordination with the city. Are frac tanks available and other emergency containment available? Are there are instances where access to a rescue boat will be needed? Mr. Calaman stated that in the instance of overflow, the old clarifier is available. The generator cycles through every Wednesday at 10am to ensure everything is connected at all facilities.
- There should be a checklist for bomb threats. Are tracing calls a possibility? President Panetta stated that this would be done through the police department. Ms. Curtis questioned how threats by text are handled and if this would call for a different procedure.
- In section 17, reaction to severe work accidents, the ERP states to only discuss the incident with the "company". Does the company include the BPW, police, hospital officials, etc.? Who is responsible for notifying families? BPW should endorse as a policy. For all emergencies, there should be a designated spokesperson.
- Section 18, the emergency contacts are out of date.

Mr. Heffernan suggested that the ERP be updated and checked at least once a year to make sure that the current information. Mr. Lee stated that the contacts are office numbers and suggested adding the cell phone number of the individual.

Mr. Heffernan questioned the plan for a chlorine emergency. Mr. Lee stated that there is a separate chlorine emergency plan. Mr. Calaman stated the water plant is a little different because chlorine gas is being used.

Mr. Lee stated that comments will be passed onto Inframark.

7. DISCUSSION OF BPW ENVIRONMENTAL PROGRAMS AND POLICIES TO ENCOURAGE PUBLIC ACCEPTANCE AND IMPLEMENTATION OF “GREEN” TECHNOLOGIES AND PRACTICES.

Mr. Lee provided a list of potential policies/programs and conservation support.

BPW policies and programs:	Conservation Support Programs
<ul style="list-style-type: none">• Increased Purchasing of Renewable Energy	<ul style="list-style-type: none">• Household/Commercial Solar Panels
<ul style="list-style-type: none">• Advanced Metering Infrastructure (AMI)	<ul style="list-style-type: none">• Household/Commercial Storage Batteries
<ul style="list-style-type: none">• Time of use Electric Invoicing	<ul style="list-style-type: none">• Electric Vehicles and Charging Stations
<ul style="list-style-type: none">• Solar Arrays	<ul style="list-style-type: none">• Electric Heat Pumps
<ul style="list-style-type: none">• Peak-Shaving Batteries	<ul style="list-style-type: none">• LED Light Bulbs
<ul style="list-style-type: none">• Household Hazardous Waste Collection	<ul style="list-style-type: none">• Energy Star Appliances
	<ul style="list-style-type: none">• Home Energy Star Performance Evaluations
	<ul style="list-style-type: none">• Low Flow Plumbing Fixtures
	<ul style="list-style-type: none">• Mitigation Guidance for Homeowners

Mr. Crosby stated that it seems that there are several municipalities working towards electrifying the domestic appliances and questioned if the system could handle the demand. Mr. Lee stated that moving to more electric use is the initiative of the electric industry. President Panetta stated that converting from oil to electric is the right thing to do environmentally but it adds more load to the grid. Sergeant Lundy did a load study for the BPW and took in account the standard grid growth. In Lewes because of the new construction and renovation, the percentage of oil or natural gas is not that significant compared to other communities. EVs are the bigger concern now and is something the BPW is monitoring. Other states are striving for all electric by 2035 but have done nothing to support grid or generation. Mr. Lee stated that nationally this is a problem. The entire grid system is not set up to support this mass electrification.

Ms. Curtis questioned what is the percentage of the source of electric in Lewes, in terms of coal, oil-fired, etc.? Mr. Calaman stated that the BPW meets and exceed what the Public Service Commission requires. BPW has generation from wind, natural gas, and solar. President Panetta stated that Delaware is behind on renewable energy requirements. Mr. Calaman stated that the NRG plant is staying available until the transmission lines are built and those affected will be paying to maintain the plant in cold shut down.

Mr. Calaman stated that at the next Board meeting, the new net metering legislature will be discussed. The BPW follows state legislation. The new legislation has increased the amount of net metering that would be allowed on the system but takes away any overages. Previous years, the customer would be paid the overage at the end of the year. Now customers are not reimbursed and the overage is assumed by the utility company. Mr. Crosby questioned if there is value of storage at the household level. There are utility companies that are subsidizing the installation of batteries for houses with higher-than-normal consumption. EVs can charge a vehicle with that battery storage.

Ms. Curtis recalled reading a few years ago that fuel cells were a source for community power. President Panetta stated that General Electric installed the first fuel cell prototype, and it went online last month in New York. There is a lot of experimentation. Hydrogen may be clean, but the generation of hydrogen causes that same issue of burning oil. Mr. Lee stated that wind power is another clean source of power.

President Panetta stated that Texas is the forefront of large windfarms and generates at nighttime when there is no demand.

Mr. Crosby would like to define Conservation Support Program. Mr. Lee stated that a Conservation Support Program is a policy or a program that would help conserve energy. It is a general term.

Mr. Prouty suggested adding programs for the removal of carbon dioxide from the atmosphere by the planting of trees, etc. Spray irrigation fields should have many trees around.

Mr. Crosby stated that high water usage is an issue. Mr. Crosby suggested encouraging clear scaping, lower water demand, etc. Mr. Calaman stated that irrigation peaks the system and purple pipe would have been beneficial. Mr. Prouty stated that having just one water tank makes him nervous. Mr. Calaman stated that the BPW is working towards a second tank. Mr. Crosby suggested sending a notice about water use and landscaping. Ms. Sexton stated that July is water conservation month, and an infographic is sent to customers.

President Panetta stated that planting trees hardwood trees are the best for absorbing carbon dioxide and in the city's jurisdiction. Regarding purple pipe, this is great in areas of drought. President Panetta suggested promoting cisterns for irrigation. Mr. Crosby stated that a cistern tank is not an easy addition to an existing house/property. President Panetta stated that it depends on the layout of the house/property.

Mr. Calaman suggested incentivizing time of use. Mr. Calaman stated that the No Wipes in the Pipes needs to be added to the list. Mr. Lee stated that the BPW recently collaborated with the hospital regarding the No wipes in the Pipes initiative.

Mr. Crosby referred to the mitigation guidance for homeowners and suggested that it may be worthwhile coordinating with the city. Mr. Lee stated that the plan is to meet with the city to coordinate mitigation efforts.

Ms. Curtis would like to see more rain gardens and suggested that the BPW have demonstrations on BPW/city property. Mr. Lee stated that Canal Front Park is a rain garden. Mr. Crosby stated that there is value in making the public more aware of this function. Mr. Lee stated that there is a sign in the flower beds. Ms. Curtis suggested a program for the expansion of wetlands for stormwater management and prevent those from trying to build in the wetlands. Ms. Vessella stated that this would fall under the regulations for the city building department.

Ms. Curtis suggested that undergrounding the most vulnerable electric areas should be a BPW policy. Mr. Lee stated that the BPW does have an existing policy that all new lines will be underground. Ms. Curtis is concerned that there may be existing areas that constantly have issues. President Panetta stated that in Florida there is a push to underground entire communities.

Ms. Curtis suggested that there should be consideration of incentives to encourage homeowners to participate in conservation programs.

Mr. Carter referred to four different fecal contaminations in Rehoboth Beach ocean last summer. Mr. Carter questioned if there was contamination in the canal or on Lewes Beach and is there a monitoring program. President Panetta stated that there was an issue with stormwater retention at the end of

Rehoboth Avenue. There was testing done and it was determined to be animal fecal matter, not human. In Lewes, there was an incident a few years ago, that was also animal-based runoff.

Mr. Carter referred to a previous meeting with the mayor and city council and the Greater Lewes Civic Coalition. It was discussed that it is a constitutional right for a farmer to sell land to be developed and there is no way to stop the development. Mr. Carter is concerned with the increased development and the increased effluent. Mr. Calaman stated that the daily flows are available on WWTF reports on the website, are posted monthly. Mr. Carter questioned what the average daily flow is and is averaged over a period of time. Mr. Calaman stated that the daily average is a 30-day rolling average. Mr. Carter is concerned that during the summer, the daily flow could be well above capacity, not the average. Mr. Lee stated that the daily maximum and minimum is reported.

Mr. Carter stated that if the BPW continues to annex more property and serve more homes within the territory, the volume of sewage is going to grow. President Panetta stated that the long-range plan does take growth in account until 2050.

Mr. Carter is concerned with the location of the plant. President Panetta stated that the long-range planning report addresses the low location of the WWTF. Mr. Carter stated that the cost of land seems to be a barrier and that the state owns a lot of land. Mr. Calaman recommends attending the presentation on the WWTF long-range planning.

Mr. Heffernan questioned when the Board will adopt what the mitigation committee has discussed, such as design standards. Mr. Lee stated that the Board is aware of what the migration committee is working on, and recommendations will be presented to the Board. Mr. Heffernan stated that if the recommendations are adopted, then those design standards would need to be revised as time goes on. President Panetta stated that FEMA eventually will need to update the flood maps and projections. Mr. Crosby stated that FEMA does not provide projections but instead work off historical data. At a state presentation, Mr. Crosby was told that the state does not use FEMA.

Ms. Curtis questioned the reference to state land. Mr. Lee stated that the WWTF report is a high-level report and GHD looked at all available land within a given radius. President Panetta added that there is criteria that land has to meet and a lot of state owned land is marsh.

Mr. Carter questioned if the BPW in favor of further annexation. Mr. Lee stated that annexation is a city issue.

Ms. Vessella questioned where to find the Inframark reports. The reports are posted every month under the regular board meeting agenda. Mr. Calaman stated that the minimum and maximum flows are recorded over 30 days.

8. IDENTIFY POTENTIAL FUTURE TOPICS FOR THE MITIGATION COMMITTEE.

Mr. Prouty is concerned with water coming into the system during flooding through home fixtures. This is not addressed in the WWTF long-range planning report and should be addressed.

Mr. Prouty stated that the report does not include a decrease in cost for selling the site. Mr. Calaman stated that the site is one parcel, but through the MOU the site will be subdivided. President Panetta stated that once an option is chosen then there would be more detail. Mr. Crosby stated that the WWTF is the old site of the city dump, changes the economic value of the site.

Mr. Crosby stated that I&I (Infiltration & Inflow) in the system will happen regardless of where the WWTF is. Mr. Prouty stated that flooding is more concerning. Toilets and shower drains will be covered with sea water. Pump stations and the WWTF will be pumping in sea water. Mr. Crosby suggested elevating fixtures to a minimum level. Mr. Prouty stated that this would be similar to the design elevations for the BPW assets. Mr. Prouty suggested adding back flow or check valve equipment. Mr. Calaman questioned at what point is the system shut down, if water is reaching toilet fixtures. Mr. Prouty stated that shutting down pump stations may be the solution, because waste is not being produced, if residents have evacuated. Mr. Davis stated that on the beach side of town, the older homes have floor drains at ground level. New regulations do not allow basements below floodplain. Mr. Crosby stated that the flooding into the older homes is feasible. President Panetta stated that flooding of the home fixtures falls to the city mitigation and deals with the building code.

Mr. Heffernan stated that the BPW needs a defined plan to shut the system down by zones. President Panetta stated that the BPW is looking to update the BPW Emergency Plan. Mr. Crosby stated that the asset list will be beneficial to emergency plan. Mr. Crosby agrees that some mitigation of the home fixtures falls to the city but could also be included in the conservation list to encourage to homeowners.

Mr. Calaman stated that it has been discussed to add a more robust SCADA system to the pump stations. Currently using a cell system that calculates flow base off run time. Based off flow, saltwater intrusion could be detected.

President Panetta stated that major rain events will be an issue. Mr. Crosby stated that the older bungalows are purchased, and big homes are built with impervious blocks and exacerbates the flooding. Mr. Lee stated that this is not as significant factor compared to sea-level rise and major rain events. Mr. Crosby stated that with sea-level rise, ground water will rise and stay risen and will accommodate less stormwater. Mr. Lee stated that the BPW is doing a stormwater study with the city. Mr. Lee stated the BPW can tighten the system but cannot control what is in resident basements. Mr. Crosby is concerned with water that is sitting and trying to find its way to the sea. Mr. Prouty stated that a control system of the pump stations may be the answer.

9. SCHEDULE NEXT MEETING.

Next mitigation committee meeting will be held 9:30 am on January 11th.

10. ADJOURNMENT.

ACTION: *Mr. Crosby motioned to adjourn. Mr. Prouty seconded the motion, which passed unanimously.*

Mr. Lee adjourned the meeting.

Respectfully Submitted

Sharon Sexton

Executive Assistant