

**LEWES PLANNING COMMISSION
WATER WORKSHOP MEETING
February 21, 2019**

The Lewes Planning Commission Water Workshop meeting was held on **Thursday, February 21, 2019 from 4:00 P.M. until 6:30 P.M. in the Rollins Community Center's Lewes Conference Room** in accordance with proper notification with the following present: Mayor Becker and all members of Lewes City Council, all members of the Lewes Planning Commission with Chairman Drew McKay as moderator, and nearly 100 residents.

Lewes Planning Commission Vice Chair Kay Carnahan began the meeting at 4:00 P.M. by reading the list of today's presenters and topics.

Lewes Planning Commission Chairman Drew McKay stated this will be the first in a series of events by the Planning Commission on topics to address the future and to preserve the health, safety, and welfare of the community.

Chairman McKay stated the planning committee for this event were Vice Chair Kay Carnahan, Commissioner Sumner Crosby, and City Planning Consultant Savannah Edwards. We will begin with the first four speakers followed by questions, then the next four speakers followed by questions. The presenters will be here until 7:30 to continue taking questions and comments. Comments may also be submitted to the website.

TOPIC: Coastal Flood-Risk Mapping and Flood-Risk Management in the Lewes Area
Mike Powell, DNREC Division of Watershed Stewardship

Mr. Powell presented the following for discussion:

- ❖ Coastal flooding; Risk mapping; how communities manage flood risks with federal programs;
- ❖ Storm surge vs. watershed rainfall runoff; storm surge is the primary flood risk for Lewes thru Roosevelt Inlet; watershed at New Road and Canary Creek; FEMA floodplain maps for 100-year flood; flood elevation programs;
- ❖ Building code regulations; difference between federal minimum floodplain standards and higher local standards; Lewes Code for first floor freeboard at 18" and the impact of storm surge;
- ❖ Developing in high-risk areas is closely related to public safety; limiting floodplain fill can reduce impact on adjacent vulnerable locations;
- ❖ How these higher standards impact the Community Rating System and cost of flood insurance; credit is given for data management, higher regulatory standards, better flood warnings, and better maintenance of drainage;
- ❖ Flood risks are uncertain and will be increasing over time; minimal compliance with federal flood standards will result in high risks for flood damage and more expensive flood insurance.

TOPIC: Concepts of Coastal Resiliency and Managing Risks
Danielle Swallow, Delaware Sea Grant

Ms. Swallow spoke about strategies to reduce the risk of flooding with a decision-making framework for Lewes, including:

- ❖ Delaware is a state that regularly floods with the lowest elevation in the United States, flat terrain, and is a coastal state; natural flooding helps stabilize shorelines, promotes biological diversity, provides conveyance channels for water;
- ❖ Hazard flooding includes heavy precipitation events, coastal storms, storm surge, tidal flooding, and sea-level rise to be up two feet by 2050;
- ❖ Managing risks include changing climate, land use patterns, erosion, increase in hazard storms;
- ❖ Exposure to what is in the path of the flooding includes people, property, natural and built infrastructures;
- ❖ Vulnerability is if the person, property, or system is sensitive to flooding, and if it has the capacity to adapt and manage; the older, disabled, and lower-income population may have less capacity to adapt; does the land-use code add to or reduce vulnerability for property damage by building in the floodplain;
- ❖ Are the Greenways subject to environmental damage, maintaining the drainage basins;
- ❖ Exposure and vulnerability can be controlled with resilience planning; importance of flood insurance; every \$1 spent for mitigation saves \$6 in cost avoidance from flood loss.

Ms. Swallow presented potential framework endorsed by floodplain managers and National Association of Counties that includes a no-adverse impact approach. The practical application would include land-use and planning decisions when considering building in the floodplain. If the community's exposure and vulnerability cannot be avoided, can it be managed. When all property rights are being protected, liability is being reduced which will result in FEMA's Community Rating System classification to reduce insurance premiums for the community.

Ms. Swallow also reviewed the State Executive Order 41, which states new structures and infrastructure built in floodplains should be avoided if possible; following higher standards; the importance of green infrastructure with buffers and forests. *Ms. Sparrow* read the updated floodplain building codes from the City of Houston added after the destruction by Hurricane Harvey.

Ms. Swallow stated being resilient takes a proactive, forward-thinking approach to planning.

TOPIC: Coastal Groundwater Status and Trends
Scott Andres, Delaware Geological Survey

Mr. Andres stated the Delaware Geological Survey provides research results and service to Delaware regarding earth resources, geology, hydrology, and natural hazards. Also, providing a resource for planning and assessments.

Mr. Andres spoke about coastal resiliency and coastal sustainability for Lewes including:

- ❖ Water table for assessment of groundwater; depth to water table under wet conditions in Lewes;
- ❖ Map showing Savannah Road, Lewes/Rehoboth Canal, and Delaware Bay shoreline water table;
- ❖ Geographic Information System for high-level assessment and modeling;
- ❖ Showing what happens during the lunar high tide period with the water table elevation trending upward; State of Delaware has adopted a sea-level rise planning scenario which shows amount of change rises rapidly after 2045;
- ❖ Water table responds with sea-level rise; as the water table moves up, pressure from ocean water is pushed inland for a water movement of the saltwater from the ocean;
- ❖ Three sea-level planning curves; if water table exceeds land surface it will impact soil, agricultural productivity, water and sewer lines, underground electric utilities, bridge and road foundations; windmills and pumping stations are needed for infrastructure to retain use of the land.

TOPIC: Nature-based Solutions
Sarah Cooksey, Delaware Nature Conservancy

Ms. Cooksey began with a review of the Conservancy's Mission Statement which includes preserving the land and waters; active sustainable agriculture program on the Eastern Shore; climate change; Wilmington's urban program; connect people with nature.

Ms. Cooksey's discussion included:

- ❖ Coastal resiliency and managing risks from coastal hazards, storms, rising ground water table, hurricanes; identify the risks and solutions to take action;
- ❖ Delaware has a beach nourishment program; create, restore, and protect natural features;
- ❖ Coastal Strongholds help with coastal resiliency and allow plants and animals to migrate inland for biodiversity purposes; plans are needed for increased tidal wetlands;
- ❖ The piping plover is nesting at Fowlers Beach for the first time; restoration was completed at Prime Hook Beach; living shoreline as a nature-based solution.

Questions

Judy Rolfe, Lewes, asked the developers and architects currently involved with development within the City limits to please stand. Tim Willard, attorney for applicant with a request before the Planning Commission, was present.

Q. Is beach nourishment sustainable?

- A. *Mike Powell* stated this depends on factors too difficult to forecast into the future including the availability of high-quality sand for use on the beaches; increase costs of sand; new technology may become available regarding sand sources and the practices used.
- A. *Ms. Cooksey* stated communities need to plan in order to make good choices.

Q. Donna, Camp Arrowhead Road, stated with all the additional building in Lewes and Rehoboth, the infrastructure has not changed to prevent the destruction of the forests with 100-year-old trees. Everyone needs to attend the Sussex County Council meetings. Houses were recently built on Camp Arrowhead Road, and for the first time in 16 years, there was flooding in one yard up to the front door of the house. Who is approving so much developing without proper planning?

- A. *Chairman McKay* stated one reason for this meeting is concern by the Planning Commission and Mayor and City Council regarding impact on the environment from development and to learn new and creative solutions to address future problems.

Chairman McKay asked *Ms. Cooksey* to explain 'Environmental Justice'.

Q. Has there been a study of the impact to the Rehoboth and Indian River Bays? Most of the damage from Hurricane Sandy in New Jersey was to the inland bays.

- A. *Mr. Andres* stated there is an initiative to update the hydrodynamic and water-quality simulators to predict what will happen to the inland bays regarding sea-level rise, changes in land use, and polluting activities in the surrounding watershed. There are plans for surveys of the hydraulics in the Indian River Inlet, but funding is an issue. Lewes has a contract with AECOM to examine the impact of developments regarding flooding and sea-level rise in the area.

Jessica Watson, Sussex Conservation District

Topic: Stormwater Management

Ms. Watson provided an overview of the Sussex Conservation District:

- ❖ Permits are required for any developing that disturbs 5,000 square feet; DNREC also oversees the program; all plans are reviewed for compliance with regulations including sediment and erosion control and stormwater management impacting the watershed;
- ❖ Inspecting the project for compliance with the plan; maintenance inspection, outreach and technical assistance; plans are reviewed for stormwater facilities to be installed on the site; how the land use change will impact the watershed and downstream properties;
- ❖ Changes in the regulations as of February 11, 2019; checklists for the designers and developers through the process; data being used is current and does not include future sea-level rise;
- ❖ Stormwater ponds mitigate the impact in the watershed due to change in land use and increase in impervious cover; ponds are designed for the 10-and-100-year storms; types of ponds include: Wet ponds, dry ponds, infiltration ponds, underground systems used in shopping centers; importance of green practices;
- ❖ Another responsibility is enforcement with violation letters sent, building permits withheld, referral to DNREC for fines;
- ❖ Critical that the pond is working and cleared of any debris to remain in working order to prevent flooding with the appropriate storage volume;
- ❖ Encourage the use of vegetative buffers; additional resources are available on the website.

Andrew Lyons, George, Miles & Buhr

Topic: Emergency Planning and Stormwater Management

Mr. Lyons discussed the following:

- ❖ Infrastructure planning and checking new construction to be sure past mistakes are not repeated; grading of sites for the two types of developments; impact on drainage to other properties when the last homes are built in the development;
- ❖ Individual community requirement for inspection of the grading plan before the Certificate of Occupancy is issued; inspect floodplain elevations; City, Federal, and State Code regulations are met before going to the commissions for approval.

Darrin Gordon, General Manager Lewes Board of Public Works

Topic: Wellhead Protection and Ways to Manage Saltwater Infiltration

Mr. Gordon presented the following:

- ❖ Map of Lewes showing areas where water is provided by BPW and areas where discussions on providing service continue; wellfield area outside the City limits; major aquifers including the Columbia aquifer; excellent recharge area; wellhead protection area; Lewes/Rehoboth watershed;
- ❖ There is a set of rules from Sussex County that protects the water source by limiting what is built in the area; discussion about building a shopping center in the wellhead protection area; a new medical center is now being built with all runoff being brought to the middle of the property for 100% recharge; City engineers have inspected the construction;
- ❖ Saltwater intrusion; the water source has no signs of intrusion; zone of dispersion; impact of sea-level rise; changes made after the saltwater intrusion in 1955; no new wells are permitted in Lewes; rules for geothermal wells;
- ❖ BPW annual Consumer Confidence Report on the water quality; monitoring of the water to check the well source for water protection.

Tyler Brown, DNREC Division of Wetlands and Subaqueous Lands

Topic: Wetlands Definitions and Explanation of Regulations

Mr. Brown presented the following for discussion:

- ❖ National Wetland Inventory Map; State Swamp Map;
- ❖ Wetlands and subaqueous lands are located within the City limits of Lewes; permits are needed for anything that would impact the beaches or State-regulated wetlands; definition of State-regulated wetlands; Federal wetlands are regulated by the Army Corps of Engineers;
- ❖ State-regulated wetlands are mainly tidal wetlands and no building is permitted; fresh-water wetlands located inland are not regulated by DNREC;
- ❖ Always check with the DNREC office for any questions about wetlands on properties since the maps are not always accurate; DNREC will do an inspection of the property for State-regulated wetlands; evaluations are available for State-jurisdiction of streams on properties; this office will issue notices of violations and fines.

Chairman McKay stated Chris Bason of the Center for Inland Bays could not attend today due to illness.

Jeanine O'Donnell, State Farm Insurance

Topic: Flood Insurance, Storm Insurance (How to Protect Yourself and Your Property)

Ms. O'Donnell presented the following information:

- ❖ Interior water claims from broken pipes, hot water heaters, washing machine hoses are usually covered under the policy; sewer and drain backups are not; exterior water claims;
- ❖ Flood damage; 1" of water causes \$25,000 in damage; average flood claim is \$90,000; homeowners' insurance does not cover flood damage; the need for flood insurance;
- ❖ Most of this area is mapped as a preferred zone; cost approximately \$532 per year for permanent resident and \$700 for seasonal and secondary homeowners; hazard area costs are based on elevation.

QUESTIONS:

Q. Chairman McKay asked if enforcement is available through DNREC or Sussex Conservation to stop a development not in compliance with regulations or codes. Can a developer be stopped when not in a wetland area?

- A. *Mr. Brown* stated the environment protection officer can issue a stop-work order when there is development into the wetlands.
- A. *Ms. Watson* stated if Sussex Conservation could not gain compliance, they would refer the project to DNREC for enforcement action and possible fines. The preference is to have the project back in compliance and not stopped.

Q. Chairman McKay asked Mr. Gordon about the amount of water available, and what is the impact from planned developments on the water supply. Does the BPW have a projection of how much development it would be able to support in the future.

A. *Mr. Gordon* stated current capacity is at 55%. With the additional construction, BPW still has the capacity to serve. The map shows estimates of EDUs required and all are available. Other storage and wells are being considered with the costs to be covered by impact fees and costs from developers.

Q. Councilman Morgan asked if the design plan for stormwater ponds, which are now for 100-year floodplain, may be changed to 500-year floodplain.

A. *Ms. Watson* stated there are no plans to elevate the requirements to the 500-year level.

Q. Is it possible to have the wellheads annexed into the City limits?

A. *Mr. Gordon* stated there have been discussions about annexation of Cape Henlopen High School into the City, which would create a contiguous contact with the City to annex the wellheads.

Q. When a water retention pond is placed in a development, who is responsible for the maintenance and to determine what is the minimum depth for it to be functional.

A. *Ms. Watson* stated the pond is inspected when it goes to the HOA from the developer. It then becomes the responsibility of the HOA to maintain, and help is available from the Conservation District if technical assistance is needed. Green technology with bioswales may also be installed to check the water quality. To comply with stormwater regulations, if the development has access to a tidal discharge, it would not be required to build a pond.

Q. As there is more development and parking in the area of the wellheads, will there be a risk to the water quality from leaking antifreeze, oil, deicing salts, and trash.

A. *Mr. Gordon* said this would be a risk to the water quality. There is also an issue with concerns about the salt and brine on the roads.

Q. Are there guidelines from the County regarding invasive plants and improvements to the buffers in the stormwater ponds?

A. *Ms. Cooksey* stated she is on a newly appointed commission called the Native Species Commission that will encourage the use of native plants in new developments. Information is also available on the DNREC webpage.

Chairman McKay asked the presenters what changes they would recommend to the code or regulations and answers included:

1. Improve all grading plans.
2. Annex wellheads into the City and consider a policy for security.
3. Improve the Community Rating System.
4. Increase buffer and fill regulations.
5. Control development and consider the impact on the community.
6. Update the State tidal wetland maps.
7. Bonds to fund green infrastructure projects; living shoreline.
8. Standards for road and bridge projects regarding flood risk for the lifetime of the project.
9. Increase buffers and wetlands.

Chairman McKay stated all PowerPoint Presentations from tonight are available on the website.

Respectfully submitted,

Jackie Doherty, Recording Secretary
Lewes Planning Commission