Chapter 4
PUBLIC UTILITIES AND INFRASTRUCTURE

The City of Newark is a full-service utility provider, overseeing water, wastewater, and electricity to residents, businesses, industry, and the University of Delaware. The City also maintains and manages a stormwater-sewer system that channels and carries stormwater runoff from City streets to surface water or stormwater management facilities.

Newark Reservoir by Mel Brooks, Jr.

Source Water Protection

The Safe Drinking Water Act Amendments of 1996 mandated that each state develop a Source Water Assessment and Protection (SWAP) Program to protect public drinking water sources. The three basic components of all SWAP Programs include:

- Delineation of the boundaries of land areas most important to public water sources.
- Identification of the potential sources of contamination within those boundaries.
- Assessment of the susceptibility of the public water source to these contaminants.

Delaware's SWAP Program standards are in Title 7, Chapter 60, Subtitle VI, Section 6082 of the Delaware Code. The program is coordinated by the Department of Natural Resources and Environmental Control (DNREC) and the State Division of Public Health. DNREC developed the source-water assessments for most public water systems in Delaware, including Newark. Newark's assessments were updated on December 18, 2001 and May 1, 2002; the reports can be found at http://delawaresourcewater.org/assessments/.

Title 7, Chapter 60, Subtitle VI, Section 3 of the Delaware Code requires counties and municipalities with populations greater than 2,000, as determined by the most-recent census, to implement measures to protect sources of public drinking water within their boundaries. The City was required to adopt such measures.

In 1991, Newark adopted an ordinance amending the City's zoning and subdivision ordinances to protect the source water protection areas delineated on the "Source Water Protection Areas Map" (illustrated in Map 4-1 on page 34). Development in these areas must adhere to the criteria established in Newark's source water areas protection ordinance. The State is responsible for updating and

revising the source water protection areas maps. The City is responsible for applying the provisions of the source water protection ordinance to the areas identified in "Source Water Protection Areas Map" as adopted in this Plan or hereafter amended. Source water protection datasets can be found at https://den.dnrec.delaware.gov

Source Water Protection Areas

The City of Newark has three unique Source Water Protection Areas protecting the public water system. The zones are identified as either excellent recharge, wellhead or surface water protection areas.

Excellent Recharge Areas

Excellent recharge protection areas are lands consisting of highly permeable geological deposits necessary for the adequate recharge and health of the subsurface aquifer. An aquifer is an underground water bearing zone consisting of fractured rock or unconsolidated materials such as gravel, sand, or silt. Aquifer recharge occurs when precipitation infiltrates through the ground consequently replenishing, or "recharging", the aquifer and increasing the amount of groundwater available for beneficial use. Maintaining high quality groundwater is extremely important as roughly 40% of the drinking water produced by the City comes from wells installed into three different aquifers. To protect the excellent recharge areas the City's ordinance may require landowners to conduct hydrogeological studies to ensure adequate recharge is maintained. Additionally, restrictions prohibit any land use associated with the disposal of waste in these areas. Below ground or above ground storage of oil and petroleum products is also restricted, regulated, and requires approval. For the areas outside of the City municipal limits, development and various land use practices are subject to the New Castle County Code and review by the Resource Protection Area Technical Advisory Committee.

Wellhead Protection Areas

Wellhead protection areas are the surface and subsurface locations surrounding a well or wellfield through which contaminants are likely to reach the well or wellfield. The City of Newark uses 13 wells to provide drinking water to the public. Four of these wells are screened in a confined aquifer (Potomac aquifer). Four other wells are in the crystalline bedrock (Wissahickon formation). Five wells are located in the unconfined aquifer (Columbia aquifer). The City of Newark wells have been previously delineated as part of the New Castle County Water Resource Protection Area (WRPA) mapping efforts. Wells for the City of Newark fall into three distinguishable Class C wellhead WRPAs and one Class A wellhead WRPA. Class C wellhead WRPAs have been delineated by the Delaware Geological Survey (DGS) and DNREC through the interpretation of geologic and hydrologic reports and maps, water table maps, and professional judgment. Class A wellhead WRPAs are the area within a 300-foot radius circle around all public water supply wells that are classified as community, non-transient non-community, or transient non-community wells. The northernmost Class C wellhead WRPA (Laird Tract) contains the four wells that have been drilled into the fractured bedrock. The central Class C wellhead WRPA (North) contains seven wells that have been drilled into the coastal plain aquifers. The southernmost Class C wellhead WRPA (South) contains one well that was drilled into the unconfined aquifer of the coastal plain. Only one well for

the City of Newark does not fall inside of a Class C wellhead WRPA. Well #19 has been delineated as having a 300-foot radius circle wellhead protection area. In regards to the City's ordinance, the wellhead protection areas have similar restrictions to the recharge protection areas. Additional restrictions call for all structures and paved areas to be at least 150 feet away from the wellhead and impervious surface coverage percentages to be limited to 10-50% depending on the land use. Additionally, the use, storage, treatment, or disposal of hazardous substances as defined in CERCLA §101(14) shall be prohibited, except that subject to the approval of the Public Works and Water Resources Director. For the areas outside of the City municipal limits, development and various land use practices are subject to the New Castle County Code and review by the Resource Protection Area Technical Advisory Committee.

Surface Water Protection Areas

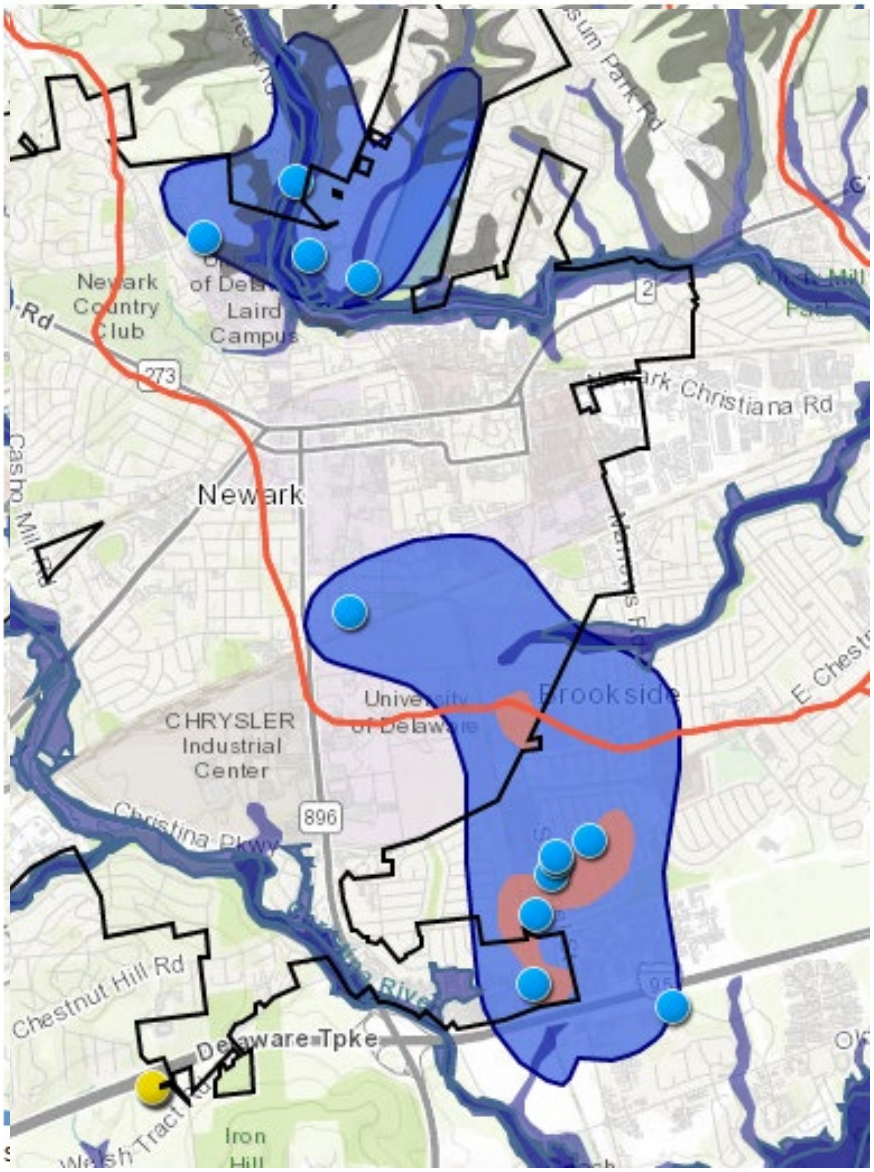
To protect the City's surface water source, the delineated source water protection area is the White Clay Creek watershed upstream of the intake of the Newark Reservoir and Curtis Water Treatment Plant. Theoretically, any potential source of contamination located within this area upstream of the intake could enter the White Clay Creek and flow into Newark's intake. It is important to note that the majority of the source water area for Newark is located in Pennsylvania. A small part of this source water area is in Maryland, but this area is only a fraction of a square mile in size, is undeveloped, and currently has little effect on the source water area. The delineated source water protection areas for surface water intakes have been separated into Level 1 and Level 2 areas. The Level 1 areas are the lands closest to the mainstream and its tributaries. These lands have the greatest impact on water quality. They include the Level 1A areas defined as the 100-year floodplain and erosion-prone slopes adjacent to the floodplain and the Level 1B areas defined as a buffer area of 200 feet on both sides of the stream. The erosion prone slopes are only designated on the Delaware portion of the watershed and were obtained from the New Castle County Water Resource Protection Area program developed years ago to protect public drinking water sources in New Castle County. The entire watershed area upstream of the intake is labeled as the Level 2 area. Potential contaminants in the Level 2 area are important to water quality, but their impacts will usually be less than those located in Level 1 areas because of the greater distance they must travel to enter a stream. The City protects its surface water source via regulation and restriction of various land use types and practices within the floodplain and erosion prone slope areas. Floodplains are regulated under City Zoning Code, Article XXVI, Special Provisions for Floodplains and Land Adjoining Floodplains. Erosion prone slopes are regulated under Chapter 27, Subdivisions, of the City's Municipal Code.

Water Supply

In 2015, the City withdrew 775 million gallons from its White Clay Creek intake and 505 million gallons from its wellfield, well within the City's allocation permit of 1.8 billion gallons and 1.5 billion gallons, respectively.

As seen in the City's 2015 water usage, there is not a considerable amount of expansion of supply that needs to be done to be able to meet future demand. Although it is fortunate that very slow growth of resident population is expected, the proposed plan does not address water used by students, who compose approximately 34% of the City's total population when they are present.

Map 4-1: City of Newark Water Resource Protection Areas (WRPAs) (2022 Update)



https://www.arcgis.com/home/webmap/viewer.html?webmap=62692700ca9448b2b1da32a5116ed6d8&extent=-76.0209,39.2965,-74.4828,39.8544

For additional information, the City's *Water Resources Protection Regulations* are found in Chapter 30, Article VII of the City of Newark Code, and can be accessed through the links below:

https://library.municode.com/de/newark/codes/code_of_ordinances?nodeId=CD_ORD_CH30WA_ARTVIIWAREPRRE

The Public Works and Water Resources (PWWR) Department continually monitors water supply lines and water quality. Moreover, City regulations prohibit the discharge of harmful and toxic liquids, vapors, and materials into Newark's sanitary sewers. Heavy metal concentration is also specifically limited by ordinance; pretreatment standards and facilities are also specified. In addition, new septic systems are not permitted in the city. Newark's *Subdivision and Development Regulations* also include strict erosion- and sediment-control standards, which are designed to minimize land disturbance, runoff, and erosion during construction. Uncontrolled runoff and erosion can have obvious and direct negative impacts on Newark's creeks and streams. The *Subdivision and Development Regulations* also include specific standards to ensure that new developments have properly designed and installed water systems and sanitary sewer systems that will not result in discharges into Newark's streams. The PWWR Department also monitors new development proposals in terms of their impact on the City's water-supply aquifers, located in the southeastern and northern portions of the City, based on Newark's *Water Resources Protection Regulations*, which were adopted in 1991. In addition, the Department reviews development proposals to assure compliance with all the applicable provisions of the *Delaware Code*, Title 7, Part VI, Conservation Natural Resources, Chapter 60, Environmental Control, subchapter VI, "Source Water Protection," which is incorporated in this plan by reference.

Water Treatment

The department is responsible for the maintenance and operations of all the equipment and facilities for surface water treatment, nine active water supply wells, and a groundwater-treatment plant to ensure that the water quality meets the standards of the State of Delaware Division of Public Health. The water-treatment process includes aeration, filtration, chlorination, lime addition, iron sequestering, and fluoridation. Water is supplied by the South Well Field Treatment Plant and the Newark Water Treatment Plant. The South Well Field Treatment Plant removes iron and manganese from several wells that the city uses depending upon demand. The Newark Water Treatment Plant draws water from the White Clay Creek. During droughts and periods where the water quality in the creek is unsuitable for treatment, the City draws its water from the Newark Reservoir. The reservoir holds approximately 318 million gallons and is designed to supply Newarkers during a 90-day drought—the longest drought on record.

Water Distribution

The water distribution system provides water services to more than 34,210 customers, including 31,454 full time residents and University students. More than 1.24 billion gallons of water is pumped by six booster pumping stations through 150 miles of pipe and nine finished water tanks annually to serve more than 10,000 water-service connections, of which there are more than 1,300 commercial and industrial accounts. Average daily water usage in the city is approximately 3.5 million gallons per day (mgd). The City's maximum daily production is approximately 6 mgd. A 2008 project at the Newark Water Treatment Plant brought the total capacity of that plant to 5 mgd. When this project was completed, the total system capacity, including the South Well Field and backup wells in the Laird tract, provided a total production capacity in excess of 8.5 mgd—well above current daily usage.

Flow and pressure in the city is good, with few exceptions. The sum of groundwater allocations for the City is more than 1.5 billion gallons per year, enough to cover the expected demand over 20 years without relying on any surface water supply. While water availability for future development is clearly adequate, new projects may require system improvements to convey water to the site in some cases. Developers, of course, are responsible for all improvements associated with and made necessary by their projects.

Wastewater

The department transports over 2.2 billion gallons of wastewater annually through the city's 95 miles of sewer-distribution lines. The City operates a wastewater-collection system that conveys sewage to the New Castle County interceptors located at city limits. Sewage is treated at a regional wastewater-treatment plant located in the City of Wilmington. Under the City's agreement with New Castle County, which transmits sewage to Wilmington, City of Newark sewage is regulated for quality. The majority of Newark's local sewer lines are capable of conveying additional flow. Generally, infill developments in older sections of the city may require system improvements to adequately convey wastewater generated by the development if it is significantly more than the previous use.

Stormwater Management

The PWWR Department oversees the stormwater system–capacity evaluation and develops detailed recommendations for system expansion and capital-maintenance projects through the City's annual Capital Improvements Program. Utilizing the Capital Program departmental review system, the Planning and Development Director and Planning Commission must review the proposed projects prior to Council's approval to evaluate Program recommendations in light of the City's short-range land-use and development projections. The PWWR Department maintains detailed records showing all storm-drainage and stormwater management facilities.

Also, regarding the City's stormwater and drainage system, the PWWR Department is responsible for Newark's compliance with the EPA's National Pollutant Discharge Elimination System (NPDES) Permit Program. Newark has been designated a Phase II city under this program based on its population. The City has received a five-year NPDES permit from DNREC and is currently preparing to receive a draft of its next five-year permit. The City intends to improve stormwater quality based on its submitted permit, addressing the six required EPA permit Minimum Control Measures (MCM). Once the requirements for Total Maximum Daily Loads (TMDLs) are finalized by DNREC, these requirements will be incorporated into the City's stormwater management–quality program, as mandated by DNREC.

In light of the City's policy regarding the municipal responsibility for long-term maintenance of stormwater management retention and/or detention basins in single-family developments, the Department will continue to closely scrutinize these aspects of development proposals to insure that proposed site plans include adequate access for City maintenance and repair and, perhaps most importantly, maintenance-free or low-maintenance design.

The *Delaware Sediment and Stormwater Regulations* have been revised and became effective on January 1, 2014. A three-step plan review process is now prescribed in the regulations. Proposed

development projects must submit a Stormwater Assessment Study for the project limits of disturbance and hold a project application meeting with the reviewing delegation agency as the first step, prior to submitting stormwater calculations or construction drawings, which are the second and third steps, respectively. Resulting from the project application meeting, a Stormwater Assessment Report will be completed by the reviewing agency and the developer and forwarded to the City. This Stormwater Assessment Report will rate the anticipated engineering effort necessary to overcome certain stormwater assessment items such as soils, drainage outlets, and impervious cover. The Sediment and Stormwater Program recommends that the City consider the ratings from the Stormwater Assessment Report in making a decision to issue preliminary approval for any development request by incorporating the Stormwater Assessment Report as a required element when a plan is submitted into the municipal preliminary plan approval process.

Hillside Park Stormwater Drainage Pond (2022 Update)

In 2021, the City of Newark completed construction on a new stormwater detention pond in the newly established Hillside Park. The location is the former site of the University of Delaware's Rodney dorm complex. Much of the surrounding neighborhoods were built in the 1950s and 60s, before it was understood that the implementation of stormwater management tools improved stormwater quality and reduced flooding. Rather, many neighborhoods were designed with pipes to only divert water away to the creeks as quickly as possible.

The Hillside Park pond intercepts water coming from above the watershed, in the Oaklands and Nottingham Green neighborhoods, and slowly releases the water into the downstream system. Approximately 70 acres of land drain into the pond. Before the pond was available, the downstream system would often become overwhelmed, flooding areas of South Main Street and creating even more problems further downstream. (1)

Remediation Sites and Brownfields

A brownfield is a property for which the expansion, redevelopment, or reuse may be complicated or hindered by the presence (or potential presence) of a hazardous substance, pollutant, or contaminant. Thirty-four (34) remediation projects, either past or current (including brownfields), exist within the city limits of Newark. The City of Newark supports the productive use of these idle properties by providing "new" areas for economic development, primarily in former industrial/urban areas with existing utilities, roads, and other infrastructure. Prior to transfer of property ownership, a Phase I Environmental Site Assessment should be conducted by the developer. A Phase I Assessment investigates past uses on the property and seeks evidence of possible contamination. If a Phase I Assessment raises reason for concern, then a more detailed investigation should be conducted. DNREC's Remediation Section can aid in investigating, remediating, and redeveloping brownfield sites.

Electric Utility Service

The City operates its own electric distribution utility to provide electric services to commercial and residential customers within the city limits. Power is purchased on the wholesale power market through the Delaware Municipal Electric Corporation (DEMEC) of which Newark is one of eight full requirements municipal members within the state of Delaware. Several outgoing distribution

circuits at 34.5kv, 12.5kv and 4kv (being phased out) distribute power throughout the city. Over 12,000 customers are supplied power through these lines from distribution transformers, which reduce the voltage to levels appropriate for end users. The responsibilities of the Electric Department include the maintenance of substation sites, substation units, circuit breakers, transformers, and more than 165 miles of electric distribution lines. In addition to maintenance requirements, new power lines, substations, and underground electric utilities are constructed and installed to expand services to new customers. All of the City's electricity originates at one substation. While back up transformers and circuits serve to reduce the incidence, frequency and duration of outages, the city is currently focused on developing a separate substation connected to the regional transmission system for additional redundancy and reliability.

By operating its own electric service, the City is able to provide a reliable, efficient service at rates that are typically lower than the rates of private power companies. The average estimated monthly electric utility payment for Newark utility customers is $149. By comparison, the average estimated monthly utility payment for residents in all surrounding areas of northern New Castle County and Wilmington is $159. (Note: Electric rates reflect a seasonal average of monthly rates for residential customers consuming 1,000 kWh per month.)

In addition, electric revenues account for about 36% of the City's net revenue, while Electric Department operations use only about 9% of the city budget. Therefore, the extra revenues stay in the community by means of a general fund margin transfer which heavily offsets the need for higher taxes. This hometown power model provides great advantages when compared to for-profit utility providers where the substantial margin funds would go to stockholders instead of the local community in the form of services. Newark also benefits from the opportunity to self-serve city facilities such as street lights, pump stations, traffic signal, etc. at its wholesale rate.

A new 15-year Electric Service Agreement (ESA) was entered into with the University of Delaware in 2013 providing long-term revenue stability from our largest customer and some rate relief to the University associated with subsidies of residential customers identified in our most recent cost of service rate study. While we fully expect to maintain the current ESA relationship with the University following the term of the current agreement, the city's electric revenue concentration risk (UD accounts for approximately 28%, or about $14 million of our annual electric utility revenue) is mitigated by its ownership and investment in distribution assets. Newark will remain the owner of the retail distribution system.

The Electric Department participates in the annual development of the City's Capital Improvements Program. The Department recommends specific system-wide capacity and capital-maintenance projects for consideration by the Planning Commission and ultimate Council approval. To accomplish this task, the Department maintains a sophisticated GIS computer-based system that records all transmission lines, transformers, substations, poles, streetlights, and aerial facilities. Project-specific infrastructure recommendations are made through the Planning and Development Department's coordinated development-review process and, where necessary, are incorporated into the City's development agreements.

City Renewable Energy Sources

McKees Park is a 3.91-acre brownfield site off East Cleveland Avenue that was redeveloped into a 244.8-kilowatt solar farm. This behind-the-meter renewable power source serves all residents by reducing the City's peak power demand, lowering the wholesale cost of power, generating solar renewable energy credits, bringing locally produced green energy to the City's electric users, and reducing the City's carbon footprint. The 900-panel array produces enough electricity to power approximately 26 to 36 homes, depending on the season.

In 2013, City Council voted to enter into a contract with Delaware-based solar-energy contractor Solair, LLC, to construct the solar facility. Funding assistance was also provided by the Delaware Municipal Electric Corp (DEMEC) to finance the project through purchasing the system's Solar Renewable Energy Certificates (SRECs) for a 20-year term. The *Delaware Renewable Portfolio Standard* requires every retail seller of electricity in Delaware to meet an annually escalating percentage of electricity needs from renewable resources. As of 2020, approximately 18.5% of the City's power was derived from renewable energy sources (wind and solar). The *Sustainable Newark Plan* adopted by Council in 2019, set the City's target to procure renewable generation resources for our distributed electric mix to at least 30% by 2025, 65% by 2035, and 100% as soon as possible but no later than 2045.

The City is also investing in additional solar infrastructure to provide approximately 1,376 kW of new solar generation on City buildings and land that will be used to fulfill some of the need to source RECs once these projects are fully completed. These projects include:

- Municipal Center: Rooftop solar on City Hall and Police Department (111.5 kW)
- George Wilson Center: Rooftop solar (46 kW)
- Field Operations Complex: Rooftop solar on Building #1(56.9 kW) and Building #2 (228.2 kW)
- Newark Reservoir: Field adjacent to the reservoir (429.3 kW)
- McKees Solar Park: Expansion of existing solar (between 200 and 504.9 kW*)

*Final kW output still being calculated and discussed with DEMEC and HelioScope. If the output is 504.9 kW, the inflows and outflows for this project will remain fixed. If fewer solar panels can be added to McKees than previously thought, the inflows from solar energy and outflows associated with panel installation will decrease.

Newark's Renewable Energy Programs (2022 Update)

The City of Newark is striving to become a more sustainable community by establishing goals related to how they provide electric power to customers. In 2019, Council adopted the Sustainable Newark: The City of Newark's Plan for Sustainability which includes a goal to procure renewable generation resources for our distributed electric mix of at least 30% by 2025, 65% by 2035, and 100% as soon as possible but no later than 2045. Currently, only about 18.5% of the City's power is derived from renewable energy (solar and wind).

100% Renewable Energy Fee

In 2021, Council amended the City Code to create a new optional renewable energy fee for all electric customer classifications. The new rate automatically applies to all new electric accounts created after

May 26, 2021, and existing customers can opt into this program if they so choose. The fee is set on a charge per kilowatt-hour (kWh), and the revenue derived from this fee is used to purchase renewable energy credits (RECs) of sufficient quantity to cover all usage from accounts that have opted to participate in the program. The RECs will then be retired on behalf of those customers.

RECs will come from wind, solar, and other eligible energy resources as defined in §352, Title 26 of the Code of the State of Delaware. This is the same requirement used for RECs included in the Municipal Renewable Portfolio Standard (MRPS) program. RECs charged against the program would be only those RECs needed to close the gap between the MRPS renewable percentage minimum and 100%.

There is a default hierarchy of preference for jwhere to source RECs. The hierarchy, in descending order of preference, is:

1. Generation from City of Newark owned assets.
2. Generation from DEMEC member communities.
3. Generation from Delaware municipalities.
4. Generation from within the State of Delaware, including its coastal waters.
5. Generation from within the States of Maryland, Pennsylvania, and New Jersey, including the coastal waters of each state.
6. Generation from within the PJM Market (Pennsylvania, New Jersey, Maryland – and also now serves Delaware, Illinois, Indiana, Kentucky, Michigan, North Carolina, Ohio, Tennessee, Virginia, West Virginia, and the District of Columbia).
7. Other grid-interconnected sources

Purchases will be generally made in alignment with the above order while also taking into consideration REC prices. (2)

Plan Goals and Action Items: Public Utilities

Provide high-quality services to residents and businesses, as well as to efficiently accommodate future growth.

Strategic Issues:

- Management and funding of electric infrastructure to accommodate future growth and the development of the STAR Campus.
- Management and funding of stormwater infrastructure to address flooding issues.
- Source water protection to ensure the quality and supply of surface water and groundwater.
- Meeting new state and federal environmental quality regulations.
- Developing Newark's Renewable Energy Programs to achieve the City of Newark's goal to procure 100% renewable generation resources from the distributed electric mix by no later than 2045.

Community Vision: **Sustainable**

Goal 1	**Maintain and improve the City's existing utility and infrastructure system (water, wastewater, electric, and stormwater) so it will adequately meet the needs of current and future residents and businesses as well as the University.** Maximizing the existing utility and infrastructure systems for water, wastewater, electric, and stormwater is the most environmentally and economically *sustainable* approach to providing reliable service.

Action Item 1

Develop a Full Asset Inventory and Management System of existing treatment and distribution resources to proactively address aging infrastructure and impacts of future developments. A comprehensive inventory and management system would advance Newark as a "Sustainable Community" by creating a systematic approach to replacing aging infrastructure and a predictive model for how growth and development will affect existing conditions.

2022 Status: On-going

Partnering agencies:
Department of Public Works and Water Resources
University of Delaware Water Resources Agency

Action Item 2

Leverage partnerships to improve water quality and reduce flooding. The City advances its vision as a "Sustainable Community" by coordinating with local, state, federal, and regional planning agencies to address water-quality and flooding issues regionally and to improve conditions within the City.

2022 Status: On-going. In 2021, the City of Newark completed construction of Hillside Park at the location of the former Rodney dorm site. The seven-acre site is a multi-faceted park that provides

stormwater management to the surrounding neighborhoods, reducing flooding and increasing water quality. More information can be found in this chapter on page 35.

Partnering agencies:
Department of Public Works and Water Resources
University of Delaware Water Resources Agency
United Water
DNREC
Brandywine Conservancy
New Castle County Conservation District
State of Maryland
Commonwealth of Pennsylvania
United States Department of Agriculture (USDA)

Action Item 3

Develop a sustainable funding source to manage stormwater infrastructure. The City should evaluate approaches to create a sustainable funding source in order to optimize resources to reduce damage and inconvenience from flooding, promote aquifer recharge, and minimize degradation.

2022 Status: Complete. In 2017, Council approved the adoption of a stormwater utility, which launched in 2018. All property owners, whether residential, business, non-profit, government or institutional, pay a fee each month, based on the property's amount of impervious area, to support stormwater activities. The fee raises approximately $1.7 million each year to improve the City's stormwater system and facilities.

Partnering agencies:
Department of Public Works and Water Resources
University of Delaware Water Resources Agency
The development community

Action Item 4:

Create a centralized database in a GIS Mapping System for all utilities. Using the data recorded through the full asset inventory, GIS mapping creates a visual model that enables the City to more effectively manage its existing resources, focus on problem areas, and better predict future development needs.

2022 Status: On-going

Partnering agencies:
Department of Public Works and Water Resources

Community Vision: **Sustainable**

Goal 2	**Ensure that City utilities meet or exceed all federal and state environmental-quality demands.** Meet all federal and state environmental-quality regulations and, where feasible, implement best practices that go beyond what is required.

Action Item 5

Meet or exceed new state and federal requirements of the National Pollutant Discharge Elimination System (NPDES) permit and Stormwater Management Plan. As authorized by the Clean Water Act, the NPDES permit program controls water pollution by regulating point sources that discharge pollutants into waters of the United States. Point sources are discrete conveyances such as pipes or manmade ditches. Individual homes that are connected to a municipal system, use a septic system, or do not have a surface discharge do not need an NPDES permit; however, industrial, municipal, and other facilities must obtain permits if their discharges go directly to surface waters. The NPDES permit program is administered by the State of Delaware.

2022 Status: The City continues to meet or exceed all state and federal requirements.

Partnering agencies:
Department of Public Works and Water Resources
Delaware Water Resources Agency
DNREC

Action Item 6

Meet or exceed Delaware's new Sediment and Stormwater regulations. The revised *Delaware Sediment and Stormwater Regulations* have a goal of reducing stormwater runoff for the rainfall events up to the equivalent one-year storm, 2.7 inches of rainfall in 24 hours. Runoff reduction encourages runoff to infiltrate back into the soil as in the natural predevelopment system and results in pollutant removal and stream protection. Best management practices that encourage infiltration or reuse of runoff, such as porous pavements, rain gardens, rain barrels and cisterns, green roofs, open vegetation swales, and infiltration systems should continue/expand for new development sites with the City. Furthermore, the City may wish to consider policies such as limiting land disturbance on new development projects, limiting impervious surfaces by allowing narrower street widths, reducing parking requirements, and allowing pervious sidewalk materials.

2022 Status: The City continues to meet or exceed all state and federal requirements.

Partnering agencies:
Department of Public Works and Water Resources
Delaware Water Resources Agency
DNREC

Action Item 7 **(2022 Update)**

Implement the *Goals* and ***Actions*** **of "Theme 1" from Sustainable Newark: The City of Newark's Plan for Sustainability (2019).** In order to respond to and help mitigate climate change, "Theme One" of Newark Sustainability Plan focuses on transitioning the City's electric utility to 100% renewable energy sources in an equitable manner and decreasing Newark's greenhouse gas (GHG) emissions. Goals include increasing renewable generation resources for its distributed electric mix to reach 100% renewables by 2045 or sooner, as well as preparing a GHG emission inventory to establish a baseline and track progress to reduce the GHG emissions to net zero by 2060. Additional information on the Newark Sustainability Plan can be found in Chapter 7, and at the link below:

https://newarkde.gov/1067/Newark-Community-Sustainability-Plan

Partnering agencies:
Department of Electric
Department of Finance
Delaware Municipal Electric Corporation (DEMEC)

Sources:

1. Delaware Live; Goodby, Rodney dorms. Hello, Hillside Park's play areas, fishing, trail; Dec 20, 2021. https://delawarelive.com/goodbye-rodney-dorms-hello-hillside-park-with-play-areas-fishing-trail/
2. Newark's Renewable Energy Program. https://newarkde.gov/1193/Newarks-Renewable-Energy-Program