# 7.0 Utilities

# 7.0 UTILITIES
# MASTER PLAN RECOMMENDATION 7.1

**7.1: Plan for areawide water quality management, including implementation of the *Wastewater Management Plan (WMP) for Monmouth County* as part of the *Monmouth County Water Quality Management (WQM) Plan*, to serve the needs of residents and businesses in a way that supports economic development, particularly in Priority Growth Investment Areas (PGIAs), and conserves environmental resources that protect water quality and quantity.**

## Purpose

Under NJ Executive Order 67, the Monmouth County Board of Chosen Freeholders (MCBCF) was designated as the Water Quality Management Planning Agency for the county. The MCBCF delegates responsibility to the Monmouth County Planning Board (MCPB), which consequently formed an Amendment Review Committee (ARC) to provide technical review and recommendations. This recommendation allows the Division of Planning to continue water quality management planning efforts related to all potential impacts to water quality including nonpoint source pollution, protection of our water supplies, wastewater management, and stormwater control.

## Monmouth County Departments & Organizations Involvement

| | |
|---|---|
| Division of Planning | Develop and implement the *WMP for Monmouth County* as part of the *Monmouth County WQM Plan;* prepare and implement the *Monmouth County WQM Plan;* continue to process amendments and revisions to the *Monmouth County WQM Plan* through the ARC; review municipal master plan utility elements for consistency with county plans; assist municipalities and other county departments with wastewater planning efforts and their preparation of applications for amendments to county plans; work with other counties where sewer service crosses county boundaries; conduct outreach to the public regarding wastewater management planning issues and initiatives. |
| MCPB | Recognize the *Monmouth County WQM Plan* and the *WMP for Monmouth County* as consultative and supportive documents of the *Monmouth County Master Plan.* |
| Park System (MCPS) | Confer with MCPB on wastewater management planning efforts for parks and recreation areas. |
| Health Department | Assist with the coordination of wastewater management planning issues that could potentially affect public health. |
| Division of Economic Development | Promote development and new infrastructure investments in PGIAs that support economic development and expansion in the county, in accordance with recommendations found in the *Monmouth County Comprehensive Economic Development Strategy (CEDS) (2014).* |

## Other Project Stakeholder Involvement

| | |
|---|---|
| NJ Department Environmental Protection (NJDEP) | Coordinate review of amendments to the *Monmouth County WQM Plan* and the *WMP for Monmouth County.* |
| Municipalities | Create municipal master plan utility elements; prepare or review applications for amendments, revisions, and modifications to *WMP for Monmouth County.* |
| Utility Authorities | Coordinate *wastewater management plans* and the review of amendments, revisions, or modifications with the Division of Planning for service or franchise areas within the county. |
| Other Counties | Coordinate with MCPB on projects that overlap jurisdictions or are located along the county borders. |

*Swimming River Water Treatment Plant, Colts Neck* *Source: Brittany Ashman*

## Master Plan Goals, Principles, & Objectives (GPOs) Relating to 7.1

| | GOAL 1 | | | GOAL 2 | | | | GOAL 3 | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| PRINCIPLES | 1.1 Comprehensive Planning | 1.2 Coordination | 1.3 Planning Approach | 2.1 Environmental Resources | 2.2 Farmland Preservation | 2.3 Arts, Culture, & Historic | 2.4 Preservation Investments | 3.1 Vibrant & Sustainable Communities | 3.2 Community Preservation | 3.3 Housing | 3.4 Economic Development | 3.5 Agricultural Development | 3.6 Recovery & Resiliency | 3.7 Growth Investments |
| OBJECTIVES | | | | | | | | | | | | | | |
| A. | ● | | ● | | | | | | | | | | | ● |
| B. | | ● | | ● | | | | | | | | | | ● |
| C. | | | | | | | | | | | ● | | | ● |
| D. | ● | ● | | | | | | | | | | | | ● |
| E. | ● | ● | | ● | | | | | | | ● | | | |
| F. | | ● | | ● | | | ● | ● | | | | | | ● |
| G. | | ● | | ● | | | | | | | ● | | | |
| H. | | | | ● | | | | | | | | | | |
| I. | | ● | | ● | | | | | | | | | | ● |
| J. | | ● | | | | | | | | | | | | |
| K. | | | | | | | | ● | | | | | | |
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| M. | | | | | | | | | | | | | | |
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## Implementation Strategy

- Monitor proposed changes to NJDEP Statewide WQM Planning rules.
- Revisions necessary to the *Monmouth County WQM Plan*, as a result of rule revision, should be addressed and submitted to the NJDEP for approval.
- Proposed amendments to the *WMP for Monmouth County* will be reviewed and processed according to adopted procedures, and with coordination of State review.
- Monitor the *New Jersey Statewide Water Supply Plan (1996)* for changes and the potential impacts of those changes on Monmouth County.
- Continue to monitor the water quality aspects of stormwater management planning.

**Strongest Associated Master Plan Elements**

# 7.0 UTILITIES
# MASTER PLAN RECOMMENDATION 7.2

**7.2: Encourage adoption of municipal and regional stormwater management plans that support sound stormwater management initiatives and green Best Management Practices (BMPs).**

*Swimming River Water Treatment Plant, Colts Neck* *Source: Brittany Ashman*

## Purpose

On February 11, 2004, the Monmouth County Board of Chosen Freeholders (MCBCF) designated the Monmouth County Planning Board (MCPB) as the county review agency for stormwater plans and ordinances, which consequently created the Stormwater Technical Advisory Committee (STAC) comprised of Monmouth County Departments, representatives of related outside agencies, and the building community. The purpose of the STAC is to review and comment on municipal plans and ordinances and to make recommendations to the MCPB. Recommendation 7.2 allows the Division of Planning staff to continue stormwater management planning efforts and to act as staff to the STAC.

## Monmouth County Departments & Organizations Involvement

| | |
|---|---|
| Division of Planning | Continue to work with municipalities, county departments, other related agencies, and the New Jersey Department of Environmental Protection (NJDEP) to monitor and encourage green BMPs and stormwater management planning; review proposed revisions to municipal stormwater management plans and ordinances for consistency with county plans; assist the Department of Public Works and Engineering on their watershed and stormwater related initiatives, as requested. |
| Department of Public Works and Engineering | Provides staff membership to the STAC. |
| Health Department | |
| Mosquito Control Division | |
| Environmental Council (MCEC) | The MCEC is represented on the STAC and assists in related education and outreach efforts. |

## Other Project Stakeholder Involvement

| | |
|---|---|
| NJDEP | Establish BMPs for stormwater management; continue to work with the county on approval of municipal and regional stormwater management plans. |
| Freehold Soil Conservation District | Serve on the STAC; continue to work with Division of Planning on regional projects and outreach and education efforts, as needed. |
| Other Counties | Work in partnership on regional watershed/stormwater projects that overlap jurisdiction or that cross county borders. |
| New Jersey Shore Builders Association | Serves as a member of the STAC. |

## Master Plan Goals, Principles, & Objectives (GPOs) Relating to 7.2

| | GOAL 1 | | | GOAL 2 | | | | GOAL 3 | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| PRINCIPLES | 1.1 Comprehensive Planning | 1.2 Coordination | 1.3 Planning Approach | 2.1 Environmental Resources | 2.2 Farmland Preservation | 2.3 Arts, Culture, & Historic | 2.4 Preservation Investments | 3.1 Vibrant & Sustainable Communities | 3.2 Community Preservation | 3.3 Housing | 3.4 Economic Development | 3.5 Agricultural Development | 3.6 Recovery & Resiliency | 3.7 Growth Investments |
| OBJECTIVES A. | | ● | | ● | | | | | | | | | ● | |
| B. | | ● | | | | | | | | | | | | ● |
| C. | | | | | | | | | | | ● | | | ● |
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| E. | ● | ● | | ● | | | | | | | ● | | | |
| F. | | ● | | ● | | | | ● | | | | | ● | |
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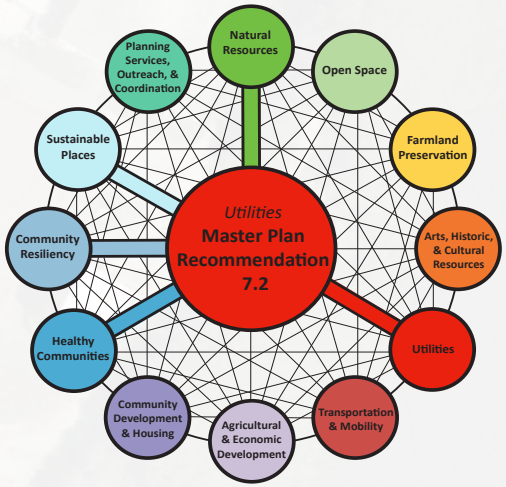
## Implementation Strategy

- The Division of Planning will monitor proposed changes to the Stormwater Management Rules of the New Jersey Administrative Code (N.J.A.C.) 7:8.
- Proposed revisions or amendments to municipal stormwater management plans or ordinances will be processed according to adopted procedures and brought to the STAC for review and comment.




**Strongest Associated Master Plan Elements**

# 7.0 UTILITIES
# MASTER PLAN RECOMMENDATION 7.3

**7.3: Review the *New Jersey Statewide Water Supply Plan (1996)* for accuracy, monitor water supply issues, and provide recommendations to address discrepancies.**

## Purpose

The New Jersey Department of Environmental Protection (NJDEP) prepared an update to the *New Jersey Statewide Water Supply Plan*, but has not published the draft for review and comment. The Division of Planning will continue to monitor water supply management planning efforts at the state level and work with regional partners on initiatives that would benefit the residents and businesses in Monmouth County. Since several economic, environmental, and social changes have occurred since the adoption of the current plan in 1996, it is appropriate to undertake a full review of the *New Jersey Water Supply Plan*.

## Monmouth County Departments & Organizations Involvement

| | |
|---|---|
| Division of Planning | Within the context of the *Monmouth County Water Quality Management (WQM) Plan;* continue to monitor state water supply plans, efforts, and initiatives for potential impacts to the county; consider the development of a water supply plan for Monmouth County as a component of the *Monmouth County WQM;* review municipal master plan utility elements for consistency with county plans; monitor the water supply plans of local purveyors and review for consistency with the county plans; coordinate projects that overlap jurisdictions or are located along county borders. |
| Health Department (MCHD) | Assist with the coordination of water supply issues that could potentially affect public health. |
| Department of Public Works and Engineering | Assist with the coordination of water supply planning. |

## Other Project Stakeholder Involvement

| | |
|---|---|
| NJDEP | Prepare the *New Jersey Statewide Water Supply Plan* update. |
| Municipalities | Work with the county and state agencies on any water supply plan for the county. |
| Water Purveyors | Work with the county and state agencies on any water supply plan for the county. |
| Local Health Departments | Work with the MCHD in assisting local health departments on water supply issues that could potentially affect public health. |

*Swimming River Water Treatment Plant, Colts Neck* *Source: Brittany Ashman*

## Master Plan Goals, Principles, & Objectives (GPOs) Relating to 7.3

| | GOAL 1 | | | GOAL 2 | | | | GOAL 3 | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| PRINCIPLES | 1.1 Comprehensive Planning | 1.2 Coordination | 1.3 Planning Approach | 2.1 Environmental Resources | 2.2 Farmland Preservation | 2.3 Arts, Culture, & Historic | 2.4 Preservation Investments | 3.1 Vibrant & Sustainable Communities | 3.2 Community Preservation | 3.3 Housing | 3.4 Economic Development | 3.5 Agricultural Development | 3.6 Recovery & Resiliency | 3.7 Growth Investments |
| OBJECTIVES | | | | | | | | | | | | | | |
| A. | ● | | | ● | | | | ● | | | | | | ● |
| B. | | ● | | ● | | | | | | | | | | ● |
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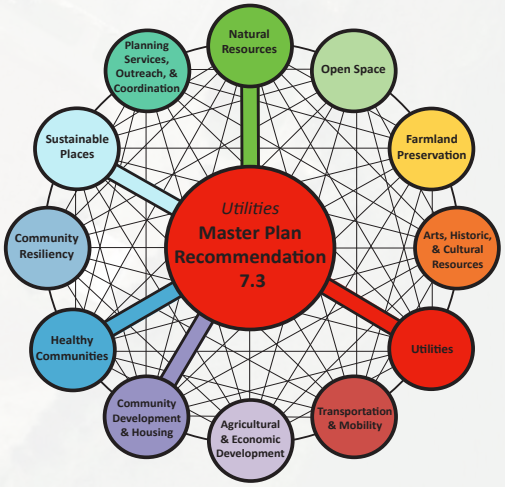
## Implementation Strategy

- Monitor the *New Jersey Statewide Water Supply Plan* for changes and the potential impacts of those changes on Monmouth County.

- Advise the Monmouth County Planning Board (MCPB) on issues concerning water supply planning that could potentially impact Monmouth County.




**Strongest Associated Master Plan Elements**

# 7.0 UTILITIES
# MASTER PLAN RECOMMENDATION 7.4

**7.4: Work with other county departments and agencies to create and implement a comprehensive energy plan that promotes a culture of responsible energy use that optimizes efficiency, hardens infrastructure, and reduces both energy use and costs.**

## Purpose

The Monmouth County Board of Chosen Freeholders (MCBCF) recognizes counties can play an important role in reducing emissions and improving efficiency through policy areas such as transportation, land use, economic development, and outreach, as well as by making operational changes to county facilities. In 2013, the MCBCF designated a Monmouth County Energy Committee to develop 1, 5, and 10-Year Plan Project Lists to implement energy reduction measures at county facilities. The Division of Planning was tasked with helping coordinate these plans. Recommendation 7.4 allows the Division of Planning staff to continue to work with the Monmouth County Energy Committee to implement energy-related tasks of the *Monmouth County Strategic Plan (2009)*.

### Monmouth County Departments & Organizations Involvement

| | |
|---|---|
| Division of Planning | Continue to work with other county departments on the Monmouth County Energy Committee and the staff advisory group; spearhead efforts to secure and manage additional grants to fund needed county energy projects; work with the County Energy Committee to identify 1, 5, and 10-Year Energy Plan Project Lists; assist the Department of Public Works and Engineering and Park System, as requested, with energy related initiatives and grants. |
| Department of Public Works and Engineering | Provide staff to the Monmouth County Energy Committee and the staff advisory group. |
| Purchasing Division | Provide staff membership to the Monmouth County Energy Committee. |
| Park System (MCPS) | Provide staff membership to the Monmouth County Energy Committee and the staff advisory group. |

### Other Project Stakeholder Involvement

| | |
|---|---|
| New Jersey's Clean Energy Program | Provide clean energy grants and assist with implementation. |

*Swimming River Water Treatment Plant, Colts Neck* *Source: Brittany Ashman*

### Master Plan Goals, Principles, & Objectives (GPOs) Relating to 7.4

| | | GOAL 1 | | | GOAL 2 | | | | GOAL 3 | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | PRINCIPLES | 1.1 Comprehensive Planning | 1.2 Coordination | 1.3 Planning Approach | 2.1 Environmental Resources | 2.2 Farmland Preservation | 2.3 Arts, Culture, & Historic | 2.4 Preservation Investments | 3.1 Vibrant & Sustainable Communities | 3.2 Community Preservation | 3.3 Housing | 3.4 Economic Development | 3.5 Agricultural Development | 3.6 Recovery & Resiliency | 3.7 Growth Investments |
| OBJECTIVES | A. | ● | | | | | | | | | | | | | |
| | B. | ● | ● | | | | | | | | | | | | |
| | C. | ● | ● | | | | | | | | | | | | |
| | D. | ● | | | | | | | | | | | | | |
| | E. | | | | | | | | | | ■ | | | | |
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| | I. | ■ | | ■ | | ■ | ■ | ■ | | ■ | ■ | | ■ | ■ | |
| | J. | ■ | ● | ■ | ■ | ■ | ■ | ■ | | ■ | ■ | ■ | ■ | ■ | |
| | K. | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ● | ■ | ■ | ■ | ■ | ■ | ■ |
| | L. | ■ | ■ | ■ | ■ | ■ | ■ | ■ | | ■ | ■ | ■ | ■ | ■ | ■ |
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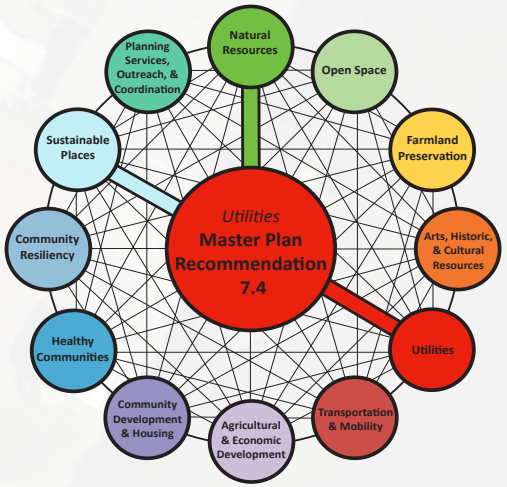
## Implementation Strategy

- Consider implementing feasible recommendations from the reports prepared under the 2014 Local Government Energy Audit Program (LGEA) and consider applying for future funding cycles.

- Continue to work with the Monmouth County Energy Committee to update the 1, 5, and 10-Year Energy Plan Project Lists and other initiatives, as directed.




**Strongest Association to Master Plan Elements**

# 7.0 Utilities

## 7.1 Introduction

Public utilities are business enterprises, public-service corporations, or quasi-governmental authorities that provide a government regulated essential community service. These services may include regional sewage collection, treatment and discharge; the collection, storage, treatment and distribution of potable water on a regional scale; provision of telecommunications and/or paid television service; and the development, transmission and distribution of energy resources, such as electricity and natural gas.

The New Jersey Board of Public Utilities (BPU) is the state agency with authority to oversee that utility service is provided in a way that is safe and adequate; and that these services are available at reasonable, non-discriminatory rates to all members of the public. The BPU is also charged with developing and regulating a competitive, economically cost effective energy policy that promotes responsible growth and clean renewable energy sources while maintaining a high quality-of-life in NJ. Some counties hold a level of jurisdiction over certain utilities.

Monmouth County is charged with preparing specialized regional documents related to the planning and management of water and water quality, specifically water supply, stormwater control, and wastewater management. *Master Plan* Objective 1.2C promotes achieving the goals of the *Monmouth County Strategic Plan (2009)*, which calls for environmentally safe measures and practices in all aspects of county operations and policies, explicitly with actions geared toward energy management. The county has chosen to work cooperatively with state agencies, municipalities and other stakeholders to reduce greenhouse gas emissions, increase energy efficiency, and explore the use of alternative sources of energy at county facilities. These examples show how the Division of Planning's regional utility planning and management tasks are consistent with *Master Plan* Goals, Principles, and Objectives.

Natural gas, electric power, cable/broadband, and telephone/internet are the other major utilities available in the county. Telephone, cellular phone, internet, and television service, including both cable and satellite, are available from a wide range of providers, due in part to Monmouth County's location within the New York Metropolitan area. Although the county does not have an active role with these utilities, they are important to the economic growth of the region and should be monitored to ensure that sufficient service is provided to the appropriate areas without negatively impacting the environmentally sensitive areas within the county.

## 7.2 Existing Conditions

### 7.2.1 Advisory Committees

**Amendment Review Committee (ARC):** The New Jersey Water Quality Planning Act, N.J.S.A. 58:11A-1 et seq. authorizes the state to delegate to certain agencies the ability to develop, adopt, update, and amend Areawide Water Quality Management Plans. The Monmouth County Board of Chosen Freeholders is a Designated Planning Agency, and through the passage of Resolution #96-143, they delegated wastewater management planning responsibilities to the Monmouth County Planning Board. In turn, the Planning Board passed Resolution #97-11 creating the ARC to review and recommend action on potential amendments. Over the years, roughly 60 amendment proposals have come to the county for review. Some were returned without prejudice, some were withdrawn, some were modified to become consistent, and several were rolled into the *Wastewater Management Plan (WMP) for Monmouth County (2012 DRAFT)*. Approximately 25% were adopted as separate amendments by the New Jersey Department of Environmental Protection (NJDEP). Monthly meetings of the ARC are scheduled each year, but the committee only meets as needed. During 2015, the committee met seven times.

**Stormwater Technical Advisory Committee:** In 2004, the county Stormwater Review Process was established through N.J.A.C. 7:8-4.4 requiring counties to approve, conditionally approve, or disapprove municipal stormwater management plans and ordinances. This rule essentially requires each county to serve as a regional facilitator for stormwater management planning. On February 11, 2004, the Monmouth County Board of Chosen Freeholders designated the Monmouth County Planning Board as the county review agency for Municipal Stormwater Management Plans. The Planning Board in turn passed Resolution #04-08 created the Stormwater Technical Advisory Committee for the purpose of reviewing municipal stormwater management plans and ordinances and making recommendations for action. This committee no longer meets regularly, but is appointed each year in case a municipality chooses to amend their plan or ordinance.

**County Energy Committee**: Under the direction of the Board of Chosen Freeholders, county staff has been working for several years to reduce energy use, costs, and emissions. A Monmouth County Energy Committee was formed in 2013 to further work begun by previous energy stakeholder groups and green teams. This committee is chaired by a Freeholder and comprised primarily of Monmouth County Department Heads. It meets as needed to review potential grant applications and products; energy-related plans, policies, and alternatives; and the county's 1, 5, and 10-Year Energy Plan Project Lists.

### 7.2.2 Supportive Reports and Guiding Documents

**Monmouth County Water Quality Management (WQM):** In addition to preparation of a *Statewide Water Quality Management Plan*, which was adopted in 1985, the state designated 12 Areawide Water Quality Management Planning Areas, each with their own Areawide Water Quality Management Plan (AWQMP). The *Water Quality Management Plan for Monmouth County* was prepared by the NJDEP and adopted on September 4, 1980. These regional plans are used by the NJDEP and designated planning agencies to determine appropriate water quality management planning activities. Components of the *1980 Water Quality Management Plan for Monmouth County*, as prescribed by the Federal Clean Water Act, include water quality and environmental analyses; point and nonpoint source pollution control plans; discussions of area population, economy and land use; and an implementation plan that considers legal, institutional, and financial issues. As a Designated Planning Agency, Monmouth County will be responsible for the preparation of a new *WQM Plan* for Monmouth County. The first step is the preparation and adoption of a *Wastewater Management Plan (WMP) for Monmouth County*, under the NJDEP Statewide Water Quality Management Planning rules: N.J.A.C. 7:15.

Division of Planning staff undertook several years of planning and negotiation with the sewer service providers and municipalities, and submitted a first draft *WMP for Monmouth County* to the NJDEP in 2003. Subsequent drafts were submitted under the 1994 rules in February 2004 and December 2006. In July 2008, the NJDEP revised their rules, but notified Monmouth County that because they were in process, the plan could be submitted using a mix of the requirements that were in place at the time of the first submission and the requirements of the newly adopted rules. Therefore, additional negotiations with the utility authorities, municipalities, and the NJDEP were required. A revised draft was submitted in September 2009 and a public meeting was held in August 2010. Following review of comments received at the 2010 meeting, another draft was prepared in April 2010 and a formal public hearing was held on June 6, 2011. A final submission was made to the NJDEP in March 2012 incorporating modifications that resulted from the public comment period. In August 2012, the county was notified that the State Attorney General's Office determined the *WMP for Monmouth County* could not be adopted as submitted, due to 2008 rule changes that could not be grandfathered as NJDEP staff previously thought. The major stumbling block was the rule requirement that all municipalities adopt certain NJDEP model

ordinances, which several Monmouth County municipalities considered unacceptable.

On January 17, 2012, P.L. 2011, c203 was signed into law allowing the bifurcation of Future Wastewater Service Area (FWSA) maps from WMPs to be adopted and amended separately. Monmouth County chose to pursue that option and the Monmouth County Future Wastewater Service Area (FWSA) Map was adopted by the NJDEP on April 11, 2013. When P.L. 2011, c203 was set to expire, the legislature passed bills that resulted in P.L. 2013, c188. This law continued to allow for the adoption of site-specific amendments, modifying the thresholds to activities that have a planned wastewater flow of less than 50,000 gallons per day, or that propose a new or expanded sewer service area less than 100 acres in size. Once amendments are adopted by the NJDEP, the Monmouth County FWSA Map is revised and posted on the Monmouth County Wastewater Management Plan Map Viewer.

The NJDEP announced in 2013 that they were again planning to make significant revisions to the water quality planning rules, as the AWQMP rules were set to expire in May 2015. County staff recommended that the *WMP for Monmouth County* application be left open while awaiting publication of the draft rule changes, however, on February 2, 2015, the NJDEP chose to officially deactivate the county's open amendment application for the *WMP*, meaning that an entirely new plan submission would be necessary. The NJDEP continued to plan sweeping changes and published a rule proposal on October 19, 2015. At this time Monmouth County is awaiting the adoption of the new rule before proceeding with the preparation of a new document. The Monmouth County FWSA Map is, however, still valid and after the new NJDEP rule is adopted, amendments to the map will once again be able to be entertained.

**Stormwater Management Plans:** NJDEP's Municipal Stormwater Regulation Program was developed under the U.S. Environmental Protection Agency's Phase II stormwater regulations, as mandated by the federal Clean Water Act. The NJDEP established four categories of New Jersey Pollutant Discharge Elimination System (NJPDES) general stormwater permits: Tier A municipalities, Tier B municipalities, Public Complex, and Highway Agency permits. Tier B municipalities tend to be rural and less populated municipalities. In Monmouth County, only Interlaken, Roosevelt, and Upper Freehold are Tier B communities. The other 50 municipalities are classified as Tier A.

All NJ municipalities were required to adopt municipal stormwater management plans and ordinances. The plans are mandated to include structural and nonstructural management strategies that meet the goals of N.J.A.C. 7:8 and to comply with the requirements detailed in subsection 4 of that rule. These plans address stormwater related water quality, water quantity, and groundwater recharge issues. The plans discuss the chosen design and performance standards; preventative and corrective maintenance measures; evaluation of future land use impacts; and recommend compliance measures. Counties were given plan review authority by the NJDEP. By June of 2011 all 53 Monmouth County municipalities had adopted municipal stormwater management plans and ordinances approved by the county. Municipalities are required to file annual reports with the NJDEP and to reexamine the municipal stormwater management plan at each reexamination of their master plan, in accordance with N.J.S.A. 40:55D-89. If revisions were found to be necessary, the municipality is required to submit the proposed plan and ordinance amendments to the county review agency for approval.

NJAC 7:8 also provides for regional stormwater management planning processes, including the development of a regional planning committee; designation of a Lead Planning Agency; the required elements of a Regional Stormwater Management Plan; and the development of a strategy for implementation. Although regional stormwater management planning committees have been formed, plans have been

drafted and projects have been implemented, Monmouth County has not, at this time, been forwarded any Regional Stormwater Management Plans to review and formally adopt as part of the *WQM Plan* under the requirements of both NJAC 7:8-3.9 and NJAC 7:15. Despite this, the NJDEP has provided some implementation funding.

**New Jersey Statewide Water Supply Plan:** The Statewide Water Supply Management Act (P.L. 1981, c.262) mandated the planning for and management of water resources to ensure adequate current and future water supply needs. The rules at N.J.A.C. 7:19 govern the management of water supply, diversions, use permits, droughts, and water emergencies. There is no specific role for counties in the water supply permitting process, however an Areawide Water Quality Management Plan is expected to address water supply issues so at some future time the county will be expected to analyze regional water supply issues. The current *New Jersey Statewide Water Supply Plan* was adopted by the NJDEP in 1996. A draft plan update was prepared by NJDEP staff, but never released.

During the summer of 2015, much of New Jersey saw little rainfall and the water reserves in reservoirs, ground water supplies, and the base flow in streams were all significantly decreased. As a result, on September 23, 2015, NJDEP issued a drought watch for 12 New Jersey counties, including Monmouth. Previously, in 2010, there was a statewide drought watch and in 2002 there was a statewide drought emergency with mandated water use restrictions. With these factors in mind, and reduced precipitation again experienced in the spring of 2016, the MCEC passed a resolution in May calling for the NJDEP to produce an update to the New Jersey Water Supply Plan. In June, the Monmouth County Planning Board passed Resolution #2016-09 concurring with the MCEC. Later that month the Monmouth County Board of Chosen Freeholders passed a similar Resolution #2016-0578. One month later, on July 25, 2016, another drought watch was issued for parts of northern and central New Jersey. Even the outdated 1996 Water Supply Plan called for updated drought management planning. Twenty years later, a new Statewide Water Supply Plan is necessary to determine the sustainability of New Jersey's water supplies.

**Energy Planning:** Energy planning at the state level was accomplished through the adoption of the *New Jersey Energy Master Plan (2011)*, which encourages the expanded use of clean renewable energy technologies, such as solar and wind electric power generation; expanded use of natural gas in place of less clean burning fuels; and reduced energy consumption. During the summer of 2015, NJDEP collected public comments on the 2011 plan. The *New Jersey Energy Master Plan Update* was released in December 2015. The update documents the changes that have been implemented since 2011 including the implementation of many clean energy initiatives across the state. It also discusses the significant impacts that Superstorm Sandy had on the energy distribution system and added a new section in the plan aimed at protecting critical infrastructure; improving emergency preparedness and response; and creating long-term financing for resiliency improvements. The plan also discusses the importance of micro-grid technologies and distributed energy resources for the future.

**Solar Carport Canopy adjacent to the Monmouth County Agricultural Building in Freehold constructed during 2011**
Source: Ann Waters

**Jersey Central Power & Light**
**Infrastructure Investment Campaign**

Jersey Central Power & Light (JCP&L), a subsidiary of FirstEnergy Company, serves over a million NJ residents. Over the past few years, JCP&L has re-emphasized its commitment to safe, reliable power through an infrastructure investment campaign. This campaign intends to enhance and maintain a strong electrical system to help meet future load growth. Completed initiatives include:

- Built a new 10.2 mile 35.4 kV transmission line in Howell
- Expanded the Eaton Crest Substation in Eatontown
- Began construction of a new 16 mile 230 kV transmission line between the Larrabee Substation in Howell and the Oceanview Substation in Neptune, via the Atlantic Substation in Colts Neck, with planned upgrades to the substations.
- Upgraded the Atlantic Substation 34.5kv terminal in Colts Neck
- Built a new 1.8 mile 34.5kV line in Eatontown Borough

Additionally JCP&L upgraded nearly 100 distribution circuits to enhance reliability by adding or replacing poles, installing fusing, replacing or adding lightning arrestors, replacing crossarms, and installing animal guards. Aforementioned projects intend to increase transmission reliability and capacity in addition to providing redundancy and operational flexibility. Their hard work has paid off with the company posting its best service reliability numbers in 13 years during 2015, including an 18% reduction in the number of customer outages compared to 2014.

In 2015, the New Jersey Conference of Mayors recognized JCP&L as the "Business Leadership of the Year Honoree" for their continuing efforts to establish strong working relationships with local officials and community leaders.

Monmouth County has been pursuing similar energy saving efforts, primarily through the county Energy Committee. The 1, 5, and 10-Year Energy Plan Project Lists help focus energy related county facility projects. Monmouth County has been very successful in receiving grants for energy related projects that over the past several years have funded such projects as the installation of solar roof and canopy units; energy audits of multiple county facilities; installation of energy saving devices in numerous county buildings; and the replacement of several chillers, boilers, and other HVAC equipment.

## 7.3 Emerging Issues and Long Range Challenges

**7.3.1 Coordinating Investments for Infrastructure:** The 2.0 Land Use Element outlines Public Investment Areas. Infrastructure investments for such utilities as public sewer and water should be prioritized for the Priority Growth Investment Areas (PGIA) and Priority Reinvestment Sites or Areas (PRA). See the Framework for Public Investment discussion in the Land Use Element for PGIA and PRA criteria.

**7.3.2 Infrastructure Deficit:** System capacity, aging infrastructure, and resiliency planning are the challenges facing our local wastewater utilities. Older systems often suffer from infiltration of groundwater through cracked or broken infrastructure. Some treatment plants or collection systems are near capacity. Hurricane Irene (2011) and Superstorm Sandy (2012) caused significant damage to several wastewater facilities where pump stations and operating systems were in low-lying areas that were flooded during one or both storms (see subsequent discussion on Wastewater Utility Restoration and Resiliency Improvements). The upcoming DRAFT W*astewater Management Plan (WMP) for Monmouth County* will discuss some of these issues in more detail as they apply to specific treatment facilities.

**7.3.3 Stormwater Management Limitations**

**Local Control:** In NJ, stormwater runoff from impervious surfaces is generally handled on a site-specific basis or as part of roadway

networks. In other parts of the country, Stormwater Utilities have been formed to ensure a stable source of funding for management and treatment of stormwater. While NJ has enacted legislation relative to stormwater management, and stormwater utilities have been considered several times, the necessary legislation is not yet in place that would enable the development of a stormwater utility in this state. Unless that changes, municipalities will continue to hold a level of responsibility through their management plans and ordinances.

**Continuous Maintenance Demands:** Hurricane Irene and Superstorm Sandy hit Monmouth County with some of the worst flooding imaginable. Streams and lakes overflowed their banks, numerous roads were closed due to flooding, and storm drainage systems were overwhelmed. Homes, businesses, and infrastructure suffered significant damage in some areas. Managing stormwater during extreme storm events has become both an Emerging Issue and a Long Range Challenge. Maintenance of existing stormwater systems; dredging of local lakes and ponds that become silted from sediment transport; and the implementation of both new and old best management practices are extremely important for the improvement of the natural and piped systems ability to manage stormwater.

**Figure 7.1: 2010 Water Use by Category in Millions of Gallons Per Day**

| Category | Monmouth County | New Jersey |
|---|---|---|
| **Public Supply** | 68.21 | 1,080.10 |
| **Domestic** | 5.72 | 98.34 |
| **Industrial** | 1.83 | 83.27 |
| **Irrigation** | 3.87 | 137.64 |
| **Livestock** | 0.09 | 0.98 |
| **Mining** | 0.17 | 8.64 |
| **Thermo-electric Power** | 0.00 | 513.29 |
| **Totals** | **79.89** | **1,922.25** |

Source: http://nj.usgs.gov/infodata/wateruse.html

**7.3.4 Water Quality Vulnerability:** In December 2004, the NJDEP completed source water assessments for all public water supplies to determine each system's potential vulnerability to contamination from such possible threats as radon, pathogens, nutrients, volatile organic compounds, pesticides, inorganics, radionuclides, and disinfection byproduct precursors. The results varied by water supply system and are available on the NJDEP website, searchable by municipality. It must be noted that the level of susceptibility to contamination does not indicate the presence of contamination, only the potential threat.

**7.3.5 Water Quantity Deficits**: The NJDEP regularly analyzes the quantity of available water for each public water supply and publishes the deficit/surplus on their website. As of January 2016, eight public water supply systems in Monmouth County were showing deficits. Deficits may be due to available water supply limits, water demand, or limitations in the system or treatment capacity.

The most recent (2010) county compiled data is available from the U.S. Geological Survey (USGS). Monmouth County ranked 12th in total water use by NJ County. Citing a 2010 served population of 630,380, USGS estimated that Monmouth County used 28.54 million gallons per day (mgd) from groundwater sources and 51.35 mgd from surface water sources for a total water usage of 79.89 mgd. When calculated per person, Monmouth County was ranked 7th lowest in water use. Figure 7.1: 2010 Water Use by Category in Millions of Gallons Per Day breaks down the categories of water use for Monmouth County and NJ.

**7.3.6 Growing Number of Energy Strategies:** Proposals for wind farms, offshore liquid natural gas (LNG) facilities, and hydraulic fracturing of rock to extract natural gas in adjacent states fill the news. Decommissioning aging nuclear power plants is a reality to be dealt with. Natural gas, oil, and electric transmission deficiencies, proposed routes and interconnections tend to be controversial, while most people do recognize the need for adequate and resilient systems. Emerging energy technologies include a return to small, localized power generation (e.g. small wind and fuel cells); expanding electric storage capacity in the grid through batteries or other means; improving smart grid technology; and expanding solar energy production through the development of new materials (e.g. solar roofing and solar roadways). Monmouth County should continue to monitor evolving energy technologies, sources, and proposals to determine their impacts on existing systems and identify opportunities they may present for both county government and the private sector. Changes in this field are rapid and can be both beneficial and destabilizing.

**7.3.7 Evolving Technologies:** One Long Range Challenge for the communications industry stems from the rapidly evolving technologies in this field. Through the *Monmouth County Comprehensive Economic Development Strategy (CEDS) (2014)*, the Division of Economic Development is planning to reach out to area providers to discuss the challenges facing the communications industry and the plans of local service providers for future expansion or upgrades. The county should monitor the evolving communications/broadband technologies to make sure that Monmouth County is up-to-date in this vital and rapidly changing area and at the same time supports the continuation of service to all segments of the population. The availability of robust broadband capacity is essential to attracting and supporting the kind of high tech businesses that can provide high paying jobs in Monmouth County.

**7.3.8 Long Range Challenges:** Some of the Long Range Challenges identified by Working Groups that will impact the county beyond the lifecycle of this *Master Plan* are:

- *Water Quality Management Plan*: Completion of a comprehensive *WQM Plan* for Monmouth County will continue to be delayed until the NJDEP makes necessary changes to the existing water quality management rules. The Division of Planning continues to seek adoption of a *Wastewater Management Plan (WMP) for Monmouth County*.
- *Cost Prohibitive Upgrades*: Older infrastructure inhibits the resiliency and long-term sustainability of some of the county's utilities, but the cost to upgrade, replace, and/or bury aboveground utilities is prohibitive.
- *Lacking a State Water Supply Plan Update*: During the 1980s, a study of groundwater availability and usage in certain aquifers led the NJDEP to designate Critical Water Supply Management Areas. Much of Monmouth County was in Critical Water Supply Management Area #1, which stretched from the eastern shore to the vicinity of County Route 527 in Freehold and Manalapan Townships. Saltwater intrusion into the aquifers was a very real threat. The opening of the Manasquan Reservoir in 1990 significantly reduced groundwater withdrawals from the affected aquifers and over the past 15 years groundwater levels have been recovering with the shift to greater surface water withdrawals. However, until an updated New Jersey Water Supply Master Plan is released, it will be difficult to know if there is a sufficient supply of potable water for current and planned future uses and if these sources will remain safe.

## 7.4 Utilities Stakeholder Actions and Efforts

### 7.4.1 Monmouth County Efforts

**Wastewater Management Plan (WMP):** Work on a new draft *WMP for Monmouth County* is proceeding slowly while the wastewater

**Wastewater Utility Restoration and Resiliency Improvements**

Bayshore Regional Sewerage Authority (BRSA), located in Union Beach serves approximately 83,000 people living in Aberdeen, Hazlet, Holmdel, Keansburg, Keyport, Matawan, Union Beach and Marlboro. When Superstorm Sandy hit in 2012, the entire 24-acre treatment plant was inundated with three feet of bay water. Critical facilities were damaged, rendering the plant inoperable. A state of emergency was declared and the necessary immediate repairs were performed to allow the facility to function safely. However, long-term repairs and resiliency improvements were still needed. Financing in the amount of $28 million from the New Jersey Environmental Infrastructure Trust was secured in the form of a low-interest, short-term bridge loan provided in advance of anticipated federal disaster aid. This allowed BRSA to begin their much needed restoration and resiliency project in May 2015. The project has three phases: 1) restoration of key facilities, such as the primary incinerator and pump stations, 2) flood-proofing existing structures, and 3) mitigation measures, such as raising equipment above flood hazard elevations. Work is scheduled to be completed by September 2016.

**Aerial view of BRSA Facility**
Source: BRSA

Another victim of Sandy, the Southern Monmouth Regional Sewerage Authority (SMRSA), with a treatment facility in Wall, serves Belmar, Brielle, Lake Como, Manasquan, Sea Girt, Spring Lake, Spring Lake Heights and part of Wall. In 2006, the authority recognized the threat that hurricanes and nor'easters posed to coastal facilities. Looking for a safe and resilient alternative for the typical pump station with subsurface components, Authority Officials decided to test a mobile trailer pump station to replace their aging Sea Girt facility. The trailer housed the most sensitive equipment and could be moved out of harm's way if a storm threatened the area. Secondary, sacrificial electrical and control systems were put in place that would remain onsite to power a portable generator and temporary transfer switch. After the storm passed, the trailer could be moved back and reconnected, reducing downtime and returning the facility to normal operation within hours.

After Superstorm Sandy passed, SMRSA evaluated their facilities and determined that several of their pump stations experienced significant damage. The Sea Girt pump station, however, functioned as planned and was fully operational shortly after the storm passed. Today, with the help of FEMA Public Assistance Grants, SMRSA is making improvements to their facilities including the installation of a mobile trailer at the Pitney pump station.

community awaits adoption of the proposed rule changes. Meanwhile staff is actively working with the municipalities and sewerage authorities to ensure the adopted Monmouth County FWSA Map accurately reflects existing sewer service areas and approved NJPDES permits. Water quality education and monitoring continues at the county level through the efforts of the Monmouth County Health Department and at the Division of Planning, primarily through the NJDEP Watershed Ambassador Program.

**Regional Facilitator:** Over the years, Monmouth County has been involved in a number of regional watershed or stormwater management planning efforts as a lead agency or partner. Regional partnerships have been formed for, among other areas, Parkers Creek, Deal Lake, and the Metedeconk River watersheds. Monmouth County has acted as the Lead Planning Agency for projects in the Many Mind Creek and Wreck Pond watersheds. Working regionally provides many environmental and economic benefits for stormwater management.

**Clean Energy Improvements:** Through the State Clean Energy Program, Monmouth County received two rounds of energy audit grant funding that paid for review and recommendations of the energy systems in over 30 county buildings, including several park facilities, the Monmouth County Courthouse, and the Monmouth County Correctional Facility. Numerous improvements have been made ranging from installing more efficient lighting to replacing HVAC systems and installing rooftop and ground mounted solar energy systems. In November 2013, the Monmouth County Energy Committee developed a list of short, medium, and long-term project targets to continue moving forward with their energy savings goals.

### 7.4.2 Utility Partners

There are numerous utility providers operating throughout the county. Figure 7.2: Utilities by Municipality lists the major local providers by municipality for sewer, water, electric, gas, and cable. During this *Master Plan* planning process, staff from the Environment and Sustainability Section of the Division of Planning invited stakeholders interested in utility planning, including representatives of various utility providers, to offer their valuable input on goals, objectives, trends, and strategies for sound utility planning and management. The impact of recent significant storm events on utility service within the county was heavily discussed during these meetings, as was the need for greater storm resiliency and funding for improvement projects.

After Hurricane Irene and Superstorm Sandy, the BPU requested that all utilities harden their infrastructure system against future storm events, enhancing service, reliability and resiliency throughout the various networks and systems. During 2014 Jersey Central Power & Light (JCP&L), a First Energy Corporation, made over 160 infrastructure improvements at a cost of approximately $250 million. As a result the company announced a 17% reduction in the year's average outage duration when compared to 2013. Projects in Monmouth County included a $15 million substation expansion project benefiting the Red Bank-Tinton Falls area; $1.2 million substation improvements in Manalapan; tree-trimming throughout the service area; and installation of new equipment that automatically transfers customers to adjacent circuits in the event of an outage.

Since 2008, New Jersey Natural Gas (NJNG) has spent more than $800 million on system upgrades, much of which occurred after Sandy. NJNG now has the least leaks per mile of any gas service provider in the state. More safety improvements and system enhancements are being planned in Monmouth County including a second feed to the Sea Bright-Monmouth Beach peninsula. The Southern Reliability Link (SRL) will provide a second feed into the NJNG system for customers in Monmouth, Ocean, and Burlington County. The lessons learned from Superstorm Sandy point to the need for an additional feed to protect customer service should the primary feed from the Texas Eastern line be disabled or shut down. After NJNG agreed to modify the originally

| Figure 7.2: Utilities by Municipality<br>Major Utility Providers, Where Service is Available | | | | | |
|---|---|---|---|---|---|
| Municipality | Sewer (1) | Water (2) | Electric | Natural Gas | Cable |
| **Aberdeen** | BRSA | NJAW, Aberdeen, and Matawan | JCP&L | NJNG | Cablevision |
| **Allenhurst** | TOSA | NJAW | JCP&L | NJNG | Comcast |
| **Allentown** | Allentown | Municipal Water Dept. | PSE&G | PSE&G | Cablevision |
| **Asbury Park** | APWQC | NJAW | JCP&L | NJNG | Cablevision |
| **Atlantic Highlands** | TOMSA via AHH | Municipal Water Dept. | JCP&L | NJNG | Comcast |
| **Avon-by-the-Sea** | TNSA | Municipal Water Dept. | JCP&L | NJNG | Cablevision |
| **Belmar** | SMRSA | Municipal Water Dept. | JCP&L | NJNG | Cablevision |
| **Bradley Beach** | TNSA | NJAW | JCP&L | NJNG | Cablevision |
| **Brielle** | SMRSA | Municipal Water Dept. | JCP&L | NJNG | Cablevision |
| **Colts Neck** | n/a | Earle, Freehold Township, and SBWC | JCP&L | NJNG | Cablevision |
| **Deal** | TOSA | NJAW | JCP&L | NJNG | Comcast |
| **Eatontown** | TRWRA | Fort Monmouth and NJAW | JCP&L | NJNG | Comcast |
| **Englishtown** | WMUA | Municipal Water Dept. | JCP&L | NJNG | Cablevision |
| **Fair Haven** | TRWRA | NJAW | JCP&L | NJNG | Comcast |
| **Farmingdale** | MRRSA | Municipal Water Dept. | JCP&L | NJNG | Cablevision |
| **Freehold Borough** | MRRSA | Municipal Water Dept. | JCP&L | NJNG | Comcast |
| **Freehold Township** | MRRSA and WMUA | UW and Municipal Water Dept. | JCP&L | NJNG | Cablevision |
| **Hazlet** | BRSA | Shorelands | JCP&L | NJNG | Comcast |
| **Highlands** | TOMSA via AHH | NJAW | JCP&L | NJNG | Comcast |
| **Holmdel** | BRSA | Shorelands and NJAW | JCP&L | NJNG | Comcast |
| **Howell** | MRRSA | NJAW-SR and Parkway | JCP&L | NJNG | Cablevision |
| **Interlaken** | TOSA | NJAW | JCP&L | NJNG | Cablevision |
| **Keansburg** | BRSA | Municipal Water Dept. | JCP&L | NJNG | Cablevision |
| **Keyport** | BRSA | Municipal Water Dept. | JCP&L | NJNG | Cablevision |
| **Lake Como** | SMRSA | Municipal Water Dept. | JCP&L | NJNG | Cablevision |
| **Little Silver** | TRWRA | NJAW | JCP&L | NJNG | Comcast |
| **Loch Arbour** | TOSA | NJAW | JCP&L | NJNG | Comcast |
| **Long Branch** | LBSA | NJAW | JCP&L | NJNG | Comcast |
| **Manalapan** | WMUA | UW and Gordons Corner | JCP&L | NJNG | Cablevision |
| **Manasquan** | SMRSA | Municipal Water Dept. | JCP&L | NJNG | Cablevision |

## Figure 7.2: Utilities by Municipality (continued)

| Municipality | Sewer (1) | Water (2) | Electric | Natural Gas | Cable |
|---|---|---|---|---|---|
| **Marlboro** | BRSA and WMUA | Municipal Water Dept. | JCP&L | NJNG | Cablevision |
| **Matawan** | BRSA | Municipal Water Dept. | JCP&L | NJNG | Cablevision |
| **Middletown** | TOMSA and FH | Gateway and NJAW | JCP&L | NJNG | Comcast |
| **Millstone** | n/a | n/a | JCP&L | PSE&G | Cablevision |
| **Monmouth Beach** | TRWRA | NJAW | JCP&L | NJNG | Comcast |
| **Neptune Township** | TNSA | NJAW | JCP&L | NJNG | Cablevision |
| **Neptune City** | TNSA | NJAW | JCP&L | NJNG | Cablevision |
| **Ocean** | TOSA | NJAW | JCP&L | NJNG | Cablevision |
| **Oceanport** | TRWRA | NJAW | JCP&L | NJNG | Comcast |
| **Red Bank** | TRWRA | NJAW and Municipal Water Dept. | JCP&L | NJNG | Comcast |
| **Roosevelt** | Roosevelt | Municipal Water Dept. | JCP&L | PSE&G | Comcast |
| **Rumson** | TRWRA | NJAW | JCP&L | NJNG | Comcast |
| **Sea Bright** | TRWRA | NJAW | JCP&L | NJNG | Comcast |
| **Sea Girt** | SMRSA | Municipal Water Dept. | JCP&L | NJNG | Cablevision |
| **Shrewsbury Borough** | TRWRA | NJAW | JCP&L | NJNG | Comcast |
| **Shrewsbury Township** | TRWRA | NJAW | JCP&L | NJNG | Comcast |
| **Spring Lake** | SMRSA | Municipal Water Dept. | JCP&L | NJNG | Cablevision |
| **Spring Lake Heights** | SMRSA | Municipal Water Dept. | JCP&L | NJNG | Cablevision |
| **Tinton Falls** | TNSA and TRWRA | NJAW | JCP&L | NJNG | Comcast |
| **Union Beach** | BRSA | NJAW | JCP&L | NJNG | Cablevision |
| **Upper Freehold** | Allentown | Aqua NJ | JCP&L and PSE&G | PSE&G | Cablevision |
| **Wall** | SMRSA and MRRSA | NJWSA and Municipal Water Dept. | JCP&L | NJNG | Cablevision |
| **West Long Branch** | TRWRA | NJAW | JCP&L | NJNG | Comcast |

Notes: (1) Not all municipalities are entirely within sewer service areas. The listing of a sewer service provider only indicates that some part of the municipality is served. Small individual treatment systems were not listed. (2) Listing a water purveyor does not indicate that the entire municipality has access to a public water supply system. Only water systems that serve populations over 500 are listed, unless the entire municipal population is less.

Data sources: Monmouth County Future Wastewater Service Area Map adopted April 11, 2013; NJDEP Data Miner; NJDEP Source Water Assessment Program; New Jersey Natural Gas, Company; Jersey Central Power and Light Company; Public Service Electric and Gas Company; and Cable NJ- New Jersey Cable Telecommunications Association.

Provider Abbreviations: 1) Sewer: Allentown - Allentown Borough Sewerage Treatment Plant, APWQC - Asbury Park Water Quality Control Facility, AHH - Atlantic Highlands-Highlands Regional Sewerage Authority, BRSA - Bayshore Regional Sewerage Authority, FH - Fort Hancock Wastewater Treatment Plant, Earle - NWS Earle Treatment Facility, LBSA - Long Branch Sewerage Authority, MRRSA - Manasquan River Regional Sewerage Authority, Roosevelt - Roosevelt Borough Sewerage Treatment Plant, SMRSA - South Monmouth Regional Sewerage Authority, TOMSA - Township of Middletown Sewerage Authority, TNSA - Township of Neptune Sewerage Authority, TOSA - Township of Ocean Sewerage Authority, TRWRA - Two Rivers Water Reclamation Authority, and WMUA - Western Mouth Utilities Authority. 2) Water: Aqua - Aqua NJ - Hamilton Square; Earle - NWS Earle; Gateway - Gateway National Recreation Area Water; Gordons Corner - Gordons Corner Water Company; NJAW - New Jersey American Water Company; NJWSA - New Jersey Water Supply Authority; Parkway - Parkway Water Company; Shorelands - Shorelands Water Company; SBWC - S.B. Water Company; and UW - United Water. 3) Electric and Gas: JCP&L - Jersey Central Power and Light Company; NJNG - New Jersey Natural Gas Company; and PSE&G - Public Service Electric and Gas. 4) Cable: Cablevision - Cablevision Systems Corporation and Comcast - Comcast Cable Communications

proposed SRL route, the Monmouth County Board of Chosen Freeholders adopted Resolution #2015-0112 strongly supporting the SRL pipeline project, "as it will directly benefit our residents, businesses, municipalities, county and state with natural gas service, which has become exponentially more important in the wake of Superstorm Sandy." Improvements and service expansions are not limited to energy service conveyors and providers. Upgrades are currently being proposed by Gordon's Corner Water Company and the Marlboro Township Harbor Road Water Treatment Facility, among others.

Raising structures in flood zones can impact utility service connections. The New Jersey Department of Community Affairs (NJDCA) has issued the Elevation of Single Family Homes Notice and Guidance Document to address the issue of proximity to high voltage powerlines. The NJDCA has also issued Guidance on Electrical Meter Placement in a Designated Flood Zone to advise builders, architects, and property owners of requirements related to placing elevated electrical meters. Property owners should also contact their service provided to determine if further modifications are required.

### 7.5 Additional Resources and Funding Opportunities

The 7.0 Utilities Element Recommendation Summaries provide a list of resources for utility related information on a local, regional, state, and federal level. There are a number of state and federal programs available for funding infrastructure improvements, but funding levels and the focus of projects to be funded changes periodically.

**Federal**

- U.S. Energy Information Administration (EIA)
- U.S. Environmental Protection Agency (USEPA)
  - Clean Energy Incentive Program
  - Energy and the Environment
  - Climate and Energy Resources for State, Local, and Tribal Governments
  - National Pollutant Discharge Elimination System (NPDES)

**State**

- New Jersey Department of Environmental Protection (NJDEP)
  - The New Jersey Environmental Infrastructure Financing Program
  - Air Quality, Energy and Sustainability
  - Division of Water Supply and Geoscience
    - Drinking Water State Revolving Fund
  - Division of Stormwater Management
  - Division of Water Quality
    - Clean Water New Jersey
    - Water Pollution Management Element
    - New Jersey Pollution Discharge Elimination System (NJPDES)
  - Water Quality Management Planning
- Green Infrastructure in New Jersey
- New Jersey's Clean Energy Program (NJCEP)
- State of New Jersey Board of Public Utilities

**County and Local**

- Monmouth County Improvement Authority

**Nonprofits, Research Centers, and Other Stakeholders**

- New Jersey Future
  - *Stormwater Utilities A Funding Solution for New Jersey's Stormwater Problems (2014)*
- Rutgers New Jersey Agricultural Experiment Station
  - Green Infrastructure Guidance Manual for New Jersey
  - Green Infrastructure for Sustainable Communities
  - Rain Garden Manual of New Jersey
- State and Local Energy Efficiency Action (SEE Action) Network
- University of New Hampshire Stormwater Center
- Energy Research Council
- Rutgers Energy Institute

### 7.6 Master Plan Recommendations and Stakeholder Strategies

Four *Master Plan* recommendations and numerous Stakeholder Strategies emerged from meetings and conversations with Board of Chosen Freeholders and Working Group stakeholders:

#### Master Plan Recommendations

**Recommendation 7.1: Plan for areawide water quality management, including implementation of the *Wastewater Management Plan (WMP)* for Monmouth County as part of the *Monmouth County Water Quality Management (WQM) Plan*, to serve the needs of residents and businesses in a way that supports economic development, particularly in Priority Growth Investment Areas (PGIAs), and conserves environmental resources that protect water quality and quantity.** The process developed in the 1990s should continue with the Monmouth County Planning Board (MCPB) and its Amendment Review Committee (ARC) handling the day-to-day technical review of amendments, maintenance of the Monmouth County Future Wastewater Service Area (FWSA) Map; and, once the New Jersey Department of Environmental Protection's (NJDEP) wastewater management rules are adopted, drafting a new *WMP for Monmouth County* in consultation with the municipalities, utility authorities, and applicable state and regional entities. This recommendation further allows the Division of Planning to continue water quality management planning efforts related to all potential impacts to water quality including nonpoint source pollution, protection of our water supplies, wastewater management, and stormwater control.

**Recommendation 7.2: Encourage adoption of municipal and regional stormwater management plans that support sound stormwater management initiatives and green Best Management Practices (BMPs).** Division of Planning staff is encouraged to continue stormwater management planning and outreach efforts and to act as staff to the Stormwater Technical Advisory Committee. Should municipalities prepare amendments to their adopted stormwater management plans and ordinances, county review of those modifications would be required. Regional stormwater management plans require coordination with the county and should be reviewed for adoption as part of an *Areawide Water Quality Management Plan*.

**Recommendation 7.3: Review the *New Jersey Statewide Water Supply Plan (1996)* for accuracy, monitor water supply issues, and provide recommendations to address discrepancies.** Water supply planning for Monmouth County falls within the purview of areawide water quality management planning. The New Jersey Department of Environmental Protection (NJDEP) has been working on a new statewide water supply plan for several years but has not published a draft for review and comment. As a result of the many land use, economic, and technological changes that have occurred since adoption of the *State Water Supply Master Plan*, it may be necessary to the Areawide Water Quality Management Planning process to conduct a review of the 1996 plan against more current data, rather than to wait for a new state plan to be adopted. The Division of Planning should also continue to monitor water supply management planning efforts at the state level and work with regional partners on initiatives that would benefit county residents and businesses.

**Recommendation 7.4: Work with other county departments and agencies to create and implement a comprehensive energy plan that promotes a culture of responsible energy use that optimizes efficiency, hardens infrastructure, and reduces both energy use and costs.** Counties can play an important role in reducing greenhouse gas emissions through policy areas such as transportation, land use, economic development, and outreach, as well as by making operational changes to county facilities. Division of Planning staff should continue to support and participate in the Monmouth County Energy Committee initiatives including the preparation and updating of 1, 5, and 10-Year Energy Plan Project Lists; developing plans for implementation of

energy reduction measures at county facilities; and coordinating with other county departments on grant application preparation and implementation to support the energy related and cost saving goals of the *Monmouth County Strategic Plan (2009).* Furthermore, the Division of Planning should encourage the use of green technologies and designs through educational programs and outreach to the municipalities.

### Stakeholder Strategies

#### General

- Monitor evolving technologies and sources to determine their impacts on existing systems and identify opportunities they may present for both county government and the private sector.
- Encourage land use planning decisions that are compatible with existing utility capacity and services.
- Encourage rehabilitation of existing utility system infrastructure with environmentally sound innovative technologies, improvements, and upgrades that will increase efficiency and improve service.
- Encourage coordination between all levels of government to strengthen regional stormwater management.
- Support the use of alternative, renewable energy resources such as geothermal, solar, hydro, tidal, and wind power.
- Encourage the development of micro-grid technologies and distributed energy resources
- Promote New Jersey Government Energy Aggregation (NJGEA), which gives municipalities the ability to aggregate their energy usage and receive the lowest possible price of energy for their residents.
- Encourage municipal stormwater planning strategies to reduce surface water pollution

#### Natural Resources

- Protect watershed water quantity and quality through the use of innovative technologies for water conservation and wastewater treatment.
- Encourage land use planning techniques that advance the protection of headwaters, wellhead protection zones, groundwater recharge areas, and other locations that have an impact on downstream and downgradient water quality or supply.
- Discourage interbasin transfers of water.

#### Open Space

- Ensure necessary utility infrastructure investments support diverse active recreational facilities to meet the needs of county residents and visitors.

#### Farmland Preservation

- Support agricultural use of alternative and sustainable energy sources to power farm residences, buildings, and irrigation pumps.
- Ensure the county's agricultural industry has access to sound reliable utility systems required to advance green BMPs.

#### Arts, Historic, & Cultural Resources

- Support necessary infrastructure investments that encourage the preservation and development of a community's art, cultural, and historic resources.
- Integrate utility infrastructure improvements in historic districts in ways that preserve and even enhance the district's character.

#### Transportation & Mobility

- Promote the reduction of transportation related fossil fuel dependence and greenhouse gas emissions.
- Support the extension of the NJ TRANSIT North Coast Line's electric trains south of the Long Branch Train Station and/or the expanded use of dual-mode locomotives.
- Promote the installation of electric charging stations for electric vehicles, where feasible.
- Promote installation of fueling stations and other accommodations for all alternative fuel vehicles.

**Agricultural & Economic Development**

- Support the expansion of communication systems, such as broadband internet access, into underserved, rural areas to facilitate economic development.
- Encourage the local development of new green energy industries while sustaining existing businesses that support energy conservation and related green technologies.

**Community Development & Housing**

- Promote residential discharge to groundwater systems, where feasible.
- Prioritize Community Development Block Grant (CDBG) projects based on energy efficiency, the use of BMPs, and their location proximate to existing utilities and infrastructure.

**Healthy Communities**

- Encourage municipalities to consider energy-related issues when developing or revising their zoning and land use policies.
- Ensure the provision of adequate levels of utility service to maintain safe and vibrant communities.

**Community Resiliency**

- Encourage improvements to existing utility infrastructure that are necessary to advance post hazard mitigation and overall resiliency.
- Support utility improvements recommended in the Monmouth County Office of Emergency Management's *Multi-Jurisdictional Natural Hazard Mitigation Plan (2015)*.
- When replacing utility infrastructure located in Special Flood Hazard Areas (SFHAs) and floodprone locations prone to flood events, consider the use of technologies and/or construction methods that will better withstand future storm events, such as raising utilities above the Base Flood Elevation (BFE).
- Promote the installation of underground wires to reduce damage to utility services during storm-related events, where feasible.
- Encourage utility companies to invest in more storm and weather resilient energy distribution systems that lessen service disruption and decrease down time.

**Sustainable Places**

- Support environmentally sound upgrades to old, insufficient, or inefficient utility systems that improve future service within a sustainable level of capacity.
- Encourage distributed energy generation solutions that improve system efficiency, reliability, and resiliency.
- Encourage stormwater infiltration for groundwater recharge, where feasible.

**Planning Services, Outreach, & Coordination**

- Encourage water resource conservation through education, emerging technologies, and reuse of recaptured wastewater.
- Share energy saving lessons learned at the county level with our municipalities, school districts, businesses, and residents.