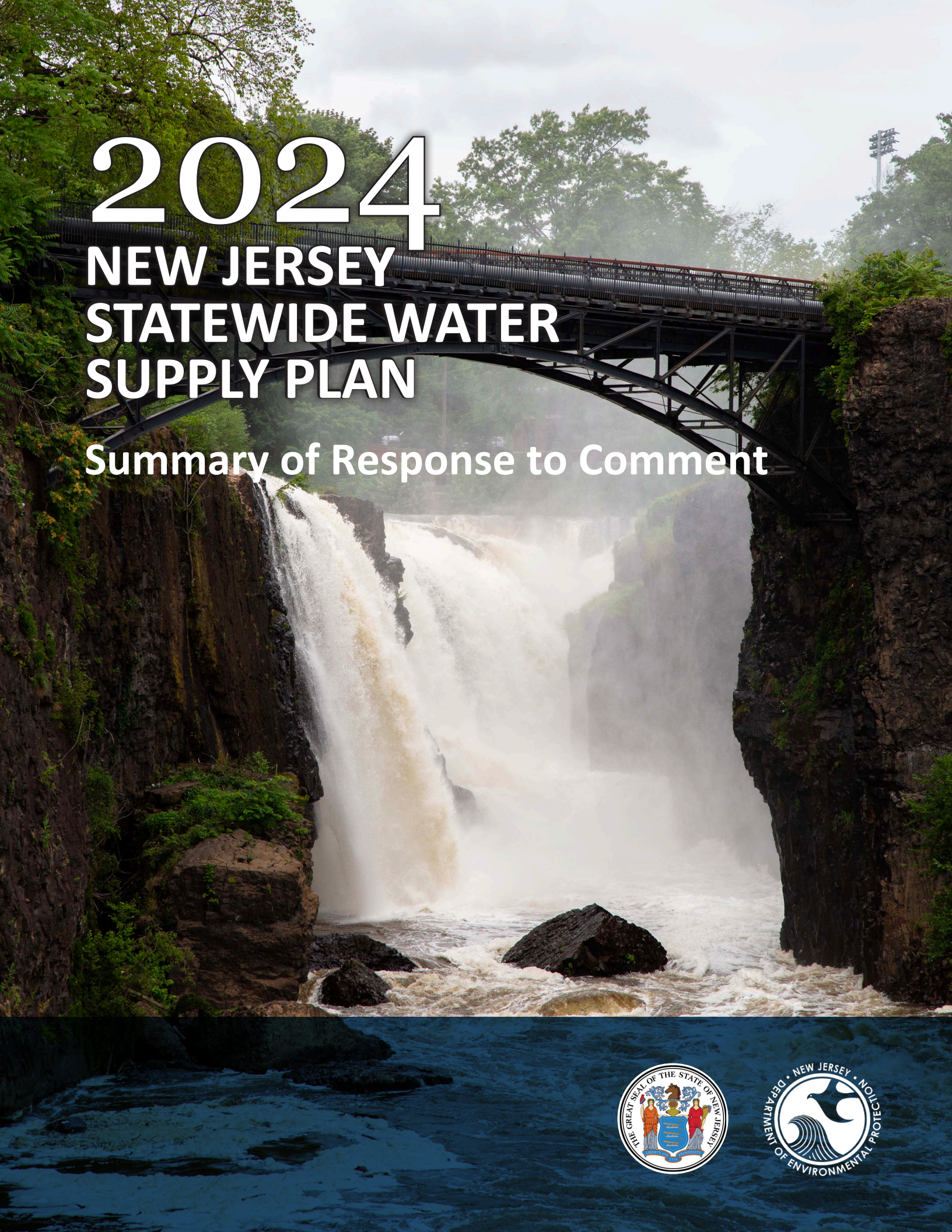

2024 NEW JERSEY STATEWIDE WATER SUPPLY PLAN

Summary of Response to Comment

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Draft Water Supply Plan Comments

The New Jersey Department of Environmental Protection (DEP) released the Draft 2024 New Jersey Statewide Water Supply Plan (Draft Plan) on February 26, 2024. Under the Water Supply Management Act, the Department is to "[c]onsider the comments made at [public] meetings, make any revisions to the proposed plan or proposed revisions and updates to the current plan as it deems necessary, and adopt the [New Jersey Statewide Water Supply Plan]." Accordingly, the DEP conducted an in-person public meeting on March 15, 2024, and a virtual public meeting on April 9, 2024. DEP also held two virtual meetings with New Jersey's regional planning entities and one virtual interagency meeting. At these meetings, DEP staff presented key aspects of the Draft Plan and received comments from the meeting participants. The public comment period for the Draft Plan concluded on April 26, 2024 and DEP received written comments from 58 commenters.

DEP also received assistance from current and former members and advisors of the Water Supply Advisory Council in developing the 2024 New Jersey Statewide Water Supply Plan (Final Plan).[1] The Water Supply Advisory Council is comprised of a volunteer group of professionals in the water resources field and is established under the Water Supply Management Act to advise DEP on the Water Supply Plan and other water supply resource issues.

This document summarizes the comments received and the changes incorporated into the Final Plan. Minor typographical and administrative changes throughout the Final Plan were also made but are not summarized here. DEP leadership and staff thank all those that attended a meeting and/or provided written comments for their valuable feedback. See the complete list of commenters at the end of this document.

OVERALL COMMENTS

DEP received several comments expressing support for the Draft Plan, including its expanded and comprehensive approach to water supply management. Commenters also expressed support for inclusion of topics in the Draft Plan such as climate change, emerging contaminants, resilience, environmental justice, and affordability. DEP acknowledges these comments and thanks commenters for their support and their efforts to share information regarding the public meetings and comment period on the Draft Plan.

The comments were grouped within this document into the following categories:

- Water Availability and Demand
- Emerging Contaminants

[1] See https://www.nj.gov/dep/watersupply/g_boards_wsac.html.

- Climate Change
- Water Demands and Balances
- Modeling
- Protection and Planning
- Environmental Justice
- Water Quality
- Regional Planning
- Managing Uncertainty
- Feedback on Recommendations and Action Items
- Other Comments and Updates

WATER AVAILABILITY AND DEMAND

A commenter supported the Draft Plan's recommendation that Horizontal Directional Drilling undergo more scrutiny and tighter regulation. DEP acknowledges the comment and thanks the commenter for the support.

A commenter stated that the Draft Plan now more appropriately depicts that wastewater discharged to saltwater are "consumed." DEP acknowledges this comment and appreciates support for inclusion of this in the Final Plan.

A commenter provided support for DEP's efforts to accurately track water availability through the state and stated their belief that an accurate water balance analysis must be relied upon when considering new allocation approvals and Water Quality Management Plan Amendments. DEP agrees with this comment and the Final Plan recommends the incorporation of water supply reviews into the WQMP decision making process.

A commenter urged DEP to have a plan outlining how to most accurately monitor aquifer levels throughout New Jersey because of their direct impact on available water supply. The Final Plan notes baseline availability currently and into the future for confined aquifers in New Jersey. The Final Plan also estimates unconfined aquifer availability through the low flow margin analysis which examines availability at the HUC 11 level and includes both unconfined and surface water withdrawals within each HUC. DEP will continue to monitor and model groundwater and surface water in New Jersey to provide the best information available.

A commenter recommended that future iterations of calculated water availability include septic returns as septic systems are widely used in Northern New Jersey, where unconfined aquifers are recharged via septic systems. Assumptions of and estimates for domestic well septic returns are included in the stream low flow margin analyses which informs water supply planning. Calculations of detailed septic returns Statewide are not yet feasible for use in the Final Plan. DEP appreciates the recommendation and will explore the inclusion of such calculations in future water supply plans.

A commenter, while supporting the DEP's evaluation based on the HUC 11 in this Plan and its anticipation of utilizing smaller HUCs where the HUC 11 analysis demonstrates deficits, encouraged DEP to use HUC 14 as the base level of analysis independent of a find of deficit. DEP acknowledges this comment and will take it into consideration for future analysis. The Final Plan identifies the HUC12 as the next smaller drainage basin that will be used for future statewide assessments.

Commenters indicated that decisions made by DEP do not take into consideration the changes to water supply planning due to climate change and expressed concern over decisions that would put people or aquifers at risk. DEP intends to incorporate any new or updated or downscaled climate change data into its water availability models. The results of these models would be used to update future Water Supply Plans. Separately, DEP's decisions regarding water allocation permits must be made in accordance with the Final Plan and, when appropriate, utilize site-specific information.

A commenter requested DEP consider potential impacts of increased population and land development as a factor in monitoring water supply. The commenter suggested that the State preserve land and trees to help not overuse water sources. The Final Plan indicates DEP's intention to expand its planning activities to include a holistic and watershed-based approach to source water protection. These actions may also consider expansion or enhancement to the Source Water Assessment Program planning process. This would include both surface water and groundwater sources. The Final Plan also encourages the prioritization of funding sources to preserve open space upstream of drinking water intakes or in wellhead protection areas, including the use of Green or Blue Acres funds.

Commenters requested that the Plan address whether surface withdrawal thresholds in the Highlands Preservation Area should remain or be modified. DEP does not oversee diversions which fall below the thresholds designated in the Water Supply Management Act. However, estimates are made for some smaller diversions, such as domestic wells. These estimates are used in the Low Flow Margin method and other water availability planning assessments.

Changes related to this topic area in the Final Plan based on comments and principally covered in Chapter 2, include:

- Adding text that references the Merrill Creek Reservoir, recognizing it provides regional consumptive use "make-up" for low flow augmentation in the Delaware River during drought conditions.
- Updating text to more accurately describe the Delaware Basin Decree and operating agreement.
- Adding text that describes regional water supplies from the Delaware River Basin.
- Inclusion in Reference section of "Methods used to reconstruct historical daily streamflows in northern New Jersey and southeastern New York, water years 1922-2010," Scientific Investigations Report 2018-5068,[2] prepared in cooperation with the New Jersey Department of

[2] See https://doi.org/10.3133/sir20185068

Environmental Protection by R. Edward Hickman and Amy R. McHugh due to the results of that study being incorporated into the water supply models utilized in the Final Plan.

EMERGING CONTAMINANTS

Comments were received on the PFAS discussion in Chapter 2 questioning how DEP addressed the issue that some water systems use multiple sources of water, which are blended, and how well depth or region should be accounted for. The safe drinking water analysis provided in the Final Plan is new for a New Jersey water supply plan and can be considered preliminary. Where individual well or intake point of entry data was available it was used. Currently, the Department currently has limited authority to require individual and untreated source water quality data. Future water supply plans are anticipated to take this work further and these comments will be considered as that occurs. Recommendations in the Final Plan are made to require raw water/pre-treatment water quality data for many public supply sources.

Comments were received highlighting the public health concerns related to emerging contaminants, such as PFAS. Commenters recommended that DEP have contingency water supply planning in place, as discovery of contaminants may lead to temporary loss of supply while treatment is installed. Additionally, commenters recommended that DEP continue to study PFAS through tracking and a centralized database of information. DEP supports the redundancy for water supply systems as systems with access to alternative sources of water are less vulnerable to service interruptions resulting from issues such as the discovery of an emerging contaminants. The Final Plan includes a preliminary vulnerability assessment to identify systems which may become limited if supplies are limited. The Department will continue to examine this issue. DEP is currently collecting data through its regulated community on PFAS in support of both the federal and state Safe Drinking Water Acts. DEP appreciates the interest in this important initiative.

A commenter had a question on whether the reference in the Draft Plan around the risk analysis performed to show how systems that rely on surface water sources could be stressed by demands associated with neighboring systems responding to any sort of contaminant issues, such as a PFAS MCL violations. When referenced in the Final Plan, the NJ PFAS MCLs were used, not the recently adopted and lower federal ones. Work in this area is ongoing and will benefit greatly as more data is obtained.

Comments were received requesting that a plan be in place to protect vulnerable communities from emerging contaminants and that DEP focus treatment efforts on regions experiencing higher concentrations of PFAS, hold polluters accountable, prioritize PFAS in future Integrated Water Quality Assessment reports, and continue to study the extant of PFAS in water supplies. DEP broadly agrees and has already incorporated PFAS sampling into many of its environmental monitoring programs, such as the Surface Water Monitoring program and Ambient Groundwater Quality Networks. With these additional data points, DEP hopes to improve understanding of PFAS occurrences statewide. DEP is dedicated to protecting the States' drinking water by implementing both the Federal and State Safe

Drinking Water Acts, as indicated in the Final Plan. This includes PFAS and all other regulated compounds in New Jersey.

A commenter stated that it is imperative that paying for remediation of emerging contaminants not naturally occurring be viewed as the responsibility of the industries creating the pollution, not the responsibility of water and sewer customers. Additionally, the commenter requested clarification on whether DEP or the water/sewer utilities will be responsible for new sampling requirements. While water utilities were not generally responsible for the discharge of PFAS and other emerging contaminants into the environment such as occurred through manufacturing and other industrial uses of such substances, the utilities are accountable to ensure that the water they provide to customers meets standards, and that their customers are informed as to the quality of their water. Therefore, sampling for emerging contaminants, as well as legacy contaminants, remains the responsibility of the permittee or public water system in question. At the same time, legal remedies may be available to water suppliers against the companies responsible for such contamination to seek reimbursement for the costs of required sampling and treatment.

A commenter supported the inclusion of US Environmental Protection Agency's proposed PFAS standards in maps in the Draft Plan and urged DEP to take the next steps to identify and plan out how to best assist utilities with the funding and support they may need to address PFAS contamination. DEP agrees that there is much important work to be done to meet the challenges proposed by emerging contaminants, including PFAS compounds. DEP remains committed to furthering this work and supporting funding initiatives that benefit those that need assistance, including through its partnership with the New Jersey Infrastructure Bank and optimizing the use of available federal funding.

A commenter expressed concern over the ability of New Jersey's treatment facilities to meet new water quality standards for emerging contaminants and the need to upgrade water quality treatment capabilities before scientific evidence warrants new standards be implemented. DEP supports the timely upgrade of water treatment facilities for all emerging contaminants. The nature of these compounds and the scientific research do not always allow for treatment to be upgraded before detection. Science is always evolving and DEP must also evolve from a regulatory standpoint as well.

A commenter stated that more focus and effort need to be done to thoroughly clean up contaminated sites and protect the water supply from chemicals. Throughout the Final Plan, DEP has declared and emphasized its commitment to enforcing the stipulations of both the federal and state Safe Drinking Water Acts. The Department will continue to oversee and partner with EPA where appropriate on remediation of contaminated sites and in recent years, DEP has also commenced legal action against the polluters for cleanup and reimbursement of State funds where appropriate. Separate legal remedies may be available to water suppliers against the companies responsible for such contamination to seek reimbursement of the costs of required sampling and treatment.

CLIMATE CHANGE

A commenter noted the importance of addressing climate change and building resilience and recommended green infrastructure as a solution to build resilience and reduce flooding. DEP acknowledges the comment and thanks the commenter for the support.

Several commenters noted the Draft Plan's inclusion of the potential impacts of climate change on water supply, including projections for rainfall, groundwater recharge, temperature, sea level rise, and erratic weather. Commenters were supportive of this effort, while also having recommendations for future water supply planning. DEP acknowledges the comments and thanks the commenters for the support.

A commenter suggested further discussion of the potential impact of saltwater intrusion on water supplies. DEP is committed to further analysis and understanding of climate change issues impacting water supply in New Jersey and this includes saltwater intrusion and inundation.

Commenters stated that while the Draft Plan outlines the need for further research and modeling, it does not consider other actions DEP and other agencies are taking and how they could inform the Final Plan. The commenter provides several examples, such as robust contingency planning by water infrastructure system owners, enhanced municipal climate-change related vulnerability assessments that include identification of applicable systems, analysis of when to "relocate" versus "refortify" water infrastructure, and inclusion of proposed and adopted DEP resilience rules and permits. The Final Plan is the first New Jersey water supply plan to incorporate climate change. While significant analysis and recommendations are included based on best available science, the work is preliminary and DEP is committed to updating and improving the climate change assessments in future plan updates. The Final Plan includes an analysis of wells/intakes within 5 ft of mean sea level and identifies actions owners should take to prevent the migration of saltwater into potable aquifers. These suggestions will be considered as that work evolves in relevant policies, protocols or regulations. Further, DEP acknowledges the relationship between its NJPACT regulations and the requirements of the Final Plan.

A commenter recommended that the Final Plan create a climate-resilient water investment framework that addresses where and when to "relocate vs. fortify." The New Jersey Water Bank has developed a guidance document[3] to ensure that funded projects meet resilience guidelines. Water utilities seeking to develop projects, even if not seeking Water Bank funding, should consider the recommendations from the Guidance document to avoid future impacts from climate change and extreme weather events.

A commenter agreed with DEP's recommendations concerning climate change's impact on water supply and urged public investment be made to harden infrastructure against the risk of increased precipitation and sea level rise. DEP acknowledges this comment and thanks the commenter for their support of

[3] Building Resilient Water Infrastructure: Climate Change Guidance for New Jersey's Clean Water & Drinking Water State Revolving Funds (April 2023) (https://dep.nj.gov/wiip/resilience/).

public investment initiatives. DEP also acknowledges that the State Revolving Fund (SRF) is a possible funding source for eligible resilience projects.

A commenter recommended DEP consider changes in demand during record heat and extrapolate from that data set or utilize data from southern states. The Final Plan is New Jersey's first water supply plan to focus on climate change. Future updates to the Plan will further expand and improve upon the assessments and these comments will be considered.

A commenter suggested that changes in snowpack be added to the discussion regarding the amount of Delaware River water that reaches New Jersey. DEP agrees that the amount of snowpack and the timing of retention/melt can impact water supply in the upper Delaware Basin, but in NJ snowpack is a much less significant element of water supply. The Final Plan does include snow as a portion of total precipitation in New Jersey. There are aspects of the land phase modeling that will incorporate this in future updates where it is anticipated that snowpack will be specifically evaluated.

A commenter stated that flood mitigation should be addressed in the Final Plan. The Water Supply Management Act directs DEP to develop a Water Supply Plan that is focused primarily on water supply (quantity available for use) and demand topics. While flooding does impact water supplies from a quantity, quality, and infrastructure perspective, the issue raised by the commenter of development and increased flooding is best addressed by other programs at DEP, such as the Watershed and Land Management Program, which has programs directly related to flood engineering and climate resilience design.[4]

A commenter recommended DEP work with the New Jersey Office of Emergency Management and the Infrastructure Bank to fund projects that increase water systems' resilience to climate change. DEP regularly works with both the New Jersey Office of Emergency Management and the Infrastructure Bank on a number of important programs including climate change resilience and will continue to do so.

Changes related to this topic area in the Final Plan based on comments and principally covered in Chapter 3, include:

- Additional details about basin-scale interstate water resource management in the Delaware River Basin

WATER DEMANDS AND BALANCES

A commenter suggested that allocations be provided for irrigation of agricultural land, including during drought periods. Agricultural certification regulations do not allow for drought period specific limits; however, water availability in drought conditions is considered when agricultural certification limits are set. Additionally, the Department has identified several agricultural intensive regions which require more detailed analysis and potential recommendations for management.

[4] See https://dep.nj.gov/wlm/drec/flood-engineering/.

Commenters indicated that the agriculture community has been very active in water conservation with new irrigation equipment and register opposition to the use of water meters on agricultural operations and would rather use recent studies on agriculture water use to seek better methods to estimate water usage for crop irrigation. The commenter recommended a task force to study the issue further. DEP is committed to better understanding water withdrawals for agricultural irrigation in New Jersey. Regional planning in areas of high agricultural irrigation will examine this issue further and provide possible solutions. Stakeholder involvement by entities based in these regional areas, including the agricultural community, will be essential.

A commenter requested that agricultural land be acknowledged for its ability to provide open land for the replenishment of water to aquifers, even with a larger percentage of consumptive loss for this type of water use. While land use/land cover is one factor that is used to determine recharge, there are many others such as soil type, slope and climate that also contribute. Recharge is further complicated by the crop type and irrigation method and efficiency. These factors make it very difficult to quantify state scale benefits of agricultural land use. DEP is developing models that may help clarify the net effect of recharge on agricultural land use.

A commenter requested that a grower should be allowed to apply for an agricultural water certification allocation at the same time their well driller applies for permit to drill a well. An agricultural certification may be requested before a well is drilled. This request must identify an aquifer and approximate volume of water and there must be adequate hydrogeologic data available to determine if the water will be available.

A commenter encouraged DEP to explore methods to incentivize infrastructure investment to increase water administratively available for public supply in areas with water system deficits or areas with less than 10 million gallons per day availability by 2050. Additionally, the commenter believes DEP should account for allocations that are likely never to be utilized in calculating availability. DEP may reduce water allocations where a reasonable demonstrated need has not been shown and has formally reduced limits upon permit renewals. Additionally, both current and allocated water availability scenarios are considered to account for unused allocations during water supply planning assessments.

A commenter provided several comments on allocation, including the need to provide potable water for emergency military increases in training operations and irrigation for current and future agricultural needs. DEP has an existing process in place to request an allocation for future need. Permit owners can provide a future need analysis to justify an allocation increase. The forecast period is limited to the life of the permit but permit modification requests can be made at any time.

A commenter noted the increasing trend in consumptive water use from landscape irrigation and requested that effort be made to quantify withdrawals from small private irrigation wells that fall below regulatory withdrawal thresholds. The small private irrigation wells described by the commenter typically do fall below DEP regulatory thresholds that would require their permitting or reporting of

water use data to DEP. Previous Department research has shown these individual small diversions (e.g. domestic wells and irrigation for livestock) to be relatively small compared to overall watershed withdrawals, but they can have impacts at the very local scale. Additionally, when groups of small wells are owned and operated by entities, such as home owners associations, DEP requires permitting and reporting of withdrawals when regulatory thresholds are met. Planned focus areas of regional planning initiatives to address potential water supply issues will likely make efforts to better understand how these types of wells may impact the region of focus.

A commenter suggested stricter enforcement of existing water conservation measures to help ensure a robust water supply for the State. DEP will take this into consideration.

A comment was received indicating that the Plan should include more detail on the current withdrawals by public and private wells to provide a more holistic and accurate look at current and projected status of water supply. The Final Plan provides information on withdrawals by both public and private wells. In the case of private wells, due to numerous wells being drilled prior to permit requirements, the total number of private wells and associated water use must be estimated. The Final Plan does include estimates of private well withdrawals at the 1990 block group level. Further enhancements to this data will be considered for future plan updates.

A commenter noted that some areas of New Jersey are unique and do not conform to traditional population forecasting metrics, providing Lakewood Township and some surrounding areas as an example. The Final Plan suggests many opportunities for further regional planning. Lakewood Township and its surrounding areas are already featured in Appendix I, which can be considered a preliminary analysis that may be further expanded on in the future.

Commenters stated that the Draft Plan should examine the ecological and other environmental impacts of the use of transfers through interconnections. Potable water interconnections are key components of resilience and emergency response planning. Purveyors who also have water allocation permits are required to submit transfer data to DEP. Additionally, the Low Flow Margin method which evaluates water exports and imports on a HUC11 drainage basin scale includes this reported transfer data. The allocation permitting process requires that site specific evaluations occur. The Final Plan identifies several action items related to ensuring that existing interconnections are maintained and that needed ones are constructed.

A request was made to include a map of Watershed Management Areas (WMAs). WMA boundaries are included in Chapter 4 figure 4.24 in the Final Plan. The Department's has several on-line GIS tools that map watersheds, including NJ-GeoWeb (https://dep.nj.gov/gis/nj-geoweb/).

MODELING

A commenter offered support for the Draft Plan's use of computer forecasting/modeling software, such as RiverWare, to inform reservoir operations. DEP acknowledges the comment and thanks the commenter for the support.

A commenter encouraged DEP to continue updates to the New Jersey Water-Transfer Data Model and to make this data easily accessible to the public to help improve planning by both the private and public sector. DEP acknowledges the comment and thanks the commenter for the support of this initiative. The Final Plan references the online tool "New Jersey Water Withdrawal Summary Data Viewer" which allows GIS-web based access to some New Jersey Water-Transfer Data Model data.

A commenter asked whether it would be more accurate for the Low Flow Margin methodology to examine the Metedeconk River as a system rather than on an individual HUC 11 basis. This Plan modified the LFM method to consider HUC11 results at the watershed scale. Refer to Chapter 2 and Appendix A for additional information. The Low Flow Margin analysis included in the Final Plan is intended for use as a planning tool to be used in an initial assessment of Statewide water use by HUC 11. This assessment aids in identifying regional areas to be targeted for further regional planning, which may include larger areas than in the initial HUC 11 size used in the Low Flow Margin analysis.

Commenters stated that the use of a three-year average for peak demand does not adequately reflect the most stressed time periods for New Jersey's water supply, including accounting for climate change, and their belief that it may result in greater impacts of drawdown in certain regions of the State. The Low Flow Margin analysis and its three-year peak demand calculation is intended as an initial screening analysis for planning purposes and does not constrain future actions by DEP. DEP intends to utilize this screen to target regional areas in need of further water supply planning. These regions will likely undergo more rigorous assessment to further determine impacts and needs. Additionally, the analysis will be updated periodically to assess the most current data available.

A commenter indicated that the analysis of water resource availability using the technique related to watersheds fails to evaluate the water resource availability of northeast New Jersey. The Final Plan acknowledges the need for application of different modeling techniques for different water source types. The Low Flow Margin analysis is not used by DEP in the assessment of surface water associated with the reservoir systems like those of northeast New Jersey. Chapter 6 of the Final Plan focuses on regional planning initiatives and highlights the Northeastern Region as a key area for future work and detailed planning which would assess many of the items raised by the commenter.

A commenter suggested that DEP and the United States Geological Survey (USGS) should examine the potential use of Analytic Element Method (AEM) groundwater flow and saltwater interface modeling software such as AnAqSim and similar AEM models for the future-looking studies described in the Draft Plan. DEP continues to partner with the USGS in groundwater modeling. Sea level rise and saltwater

intrusion into New Jersey's aquifers are both topics discussed in the Final Plan and ones in which continued analysis and modeling is anticipated as DEP implements and updates the Final Plan.

A commenter was encouraged by the inclusion in the Draft Plan that further research into modeling that can incorporate weather forecasting into drought management scenarios will also be useful. The Final Plan is focused on water quantity and specifically potential impacts from drought on water availability. Forecast informed reservoir operations or FIRO methods are being evaluated by DEP and future plan updates may incorporate this or similar modeling techniques into their drought management assessments.

PROTECTION AND PLANNING

Commenters supported DEP's efforts to implement requirements of the Water Quality Accountability Act (WQAA) and annual water loss audits. A commenter encouraged DEP to enhance its standards and make water loss audit results publicly available. DEP acknowledges these comments and appreciates the support for the initiative.

A comment was received that supported DEP for its water conservation efforts through reducing non-revenue water. DEP acknowledges this comment and appreciates the support.

Comments were received on DEP's policy regarding the beneficial reuse of water, including treated effluent from wastewater treatment plants. Comments were mixed with some supporting increased use of MAR and some opposed primarily due to water quality concerns. Comments about excessive cost were also mentioned. DEP has maintained a MAR program for many decades and ensured that permittees meet all applicable standards and permit conditions. DEP recently conducted a self-assessment of its MAR permitting process to address those same concerns, and through that process has developed a strategy which would be protective of both public health and the value that MAR provides for regional water supply resilience. DEP's policy on beneficial reuse encourages permittees to evaluate what types of beneficial reuse, such as golf course spray irrigation or closed loop non-contact cooling water, would be possible in its service area. These evaluations, which are outlined in the Technical Manual for Reclaimed Water for Beneficial Reuse, should include public health, economic, scientific, energy, engineering and environmental considerations. DEP will continue to administer the MAR program as it is an important aspect of its water supply strategy.

A commenter urged DEP to protect natural areas, especially wetlands, that protect water resources. Chapter 5 of the Final Plan highlights the importance of DEP's Source Water Assessment Program (SWAP). Another commenter encouraged DEP to expand the SWAP process to ensure that non-degradation standards afforded by Category One designations are upheld. Past Source Water Assessments identified the importance of regulating land use activities to protect sources of potable supply for both ground and surface water resources. As part of its larger drinking water quality protection efforts, DEP is developing an expanded and more integrated Source Water Assessment

process. The revised program is also envisioned to integrate the goals of the SWAP into some of the established water quality protections programs that are active in the DEP.

A commenter suggested DEP use watershed-based source water collaboratives to provide regional forums for knowledge sharing and discussion for any proposed enhancements to the Source Water Assessment Program (SWAP). DEP agrees that collaboratives are important for providing regional forums for knowledge sharing and dialogue and will take this into consideration with respect to any revisions or expansions to its SWAP.

A commenter recommended that DEP avoid re-starting a cross-programmatic review process for wetlands impacts to the extent that it creates a new wetlands impact study. DEP is currently reviewing this process.

A commenter noted that recent legislation requires municipal housing elements to conduct an analysis of consistency with the State Development and Redevelopment Plan and requested that the Final Plan consider this. Other commenters requested that the Final Plan be updated when the State Development and Redevelopment Plan is released. DEP has been engaged in the State Development and Redevelopment Plan process and has offered its feedback during recent planning sessions. Future updates of the Plan will incorporate revised water demand from forecasted population growth.

A commenter requested that DEP ensure that capacity is upgraded in areas targeted by the State Development and Redevelopment Plan for growth, as well as areas under consideration for new affordable housing units. DEP will continue to analyze the need for infrastructure to ensure water supply resilience throughout New Jersey. Areas of growth and areas of known water supply deficit are targeted within the Final Plan for additional planning, focused on a targeted regional level. DEP intends to continue this planning process to address any current and potential future shortfalls to water supply.

Commenters stated that disconnecting water quality decision making from water supply can lead to water resource management problems and that DEP should work to re-implement water supply reviews into the Water Quality Management Program decision making promises. When assessing water supply, DEP is committed to consideration of how water quality can impact a given supply. Traditionally, the Plan has been primarily focused on water quantity. For the first time, the Final Plan has incorporated a broader assessment of water quality and how quality can impact quantity and supply. While this assessment is preliminary, DEP plans to continue this expansion in its water supply planning efforts on an ongoing basis.

A commenter disagreed with DEP's stated interest to re-implement water supply reviews into the Water Quality Management Planning (WQMP) decision-making process. DEP acknowledges the clear link between water supply and water quality. Consideration of water supply in the WQMP process is a stated recommendation of the Final Plan. These comments will be taken into consideration as DEP considers the overall process, changes and impacts.

A commenter stated that the term “unaccounted water” was abandoned by the American Water Works Association in 2002 and replaced with the term “non-revenue water.” The commenter also provided recommendations from the American Water Works Association for the use of Key Performance Indicators for non-revenue water. DEP has outlined its strategy for how to leverage the existing authority it has from "unaccounted-for water" and incorporated the American Water Works Association Water Loss Audit in its proposed rulemaking for the Water Quality Accountability Act (WQAA).

Commenters requested that a recommendation be added to create a schedule of civil administrative penalties pursuant to the Water Quality Accountability Act (WQAA) and increased enforcement of the Act. DEP acknowledges these comments and will continue to enforce its regulatory requirements through its administration of the WQAA and the eventual adoption of its recently proposed rules.

A commenter recommended more transparent alignment with the Delaware River Basin Commission with respect to criteria for conducting water audits under the Water Quality Accountability Act (WQAA). DEP notes that the WQAA applies to community water systems with more than 500 service connections. With the smallest systems subject to the WQAA having a population of approximately 2,000 persons, and typical individual water use of 80 gallons per day, this would align to a water system using more than 160,000 gallons a day, which is still greater than the DRBC criteria. Further details are available in the Department’s proposed rule incorporating the WQAA and water loss audits.

A commenter requested more oversight and accountability between DEP and the Delaware River Basin Commission (DRBC) with respect to new surface and groundwater withdrawals. DEP and DRBC have entered into an administrative agreement to ensure that both New Jersey and DRBC regulations are met with any allocation decisions made where boundaries overlap.

A commenter suggested Statewide water loss training and technical assistance programs for water utilities. Additionally, the commenter encouraged DEP to verify water audit data and consider providing verified validators to utilities. DEP will consider these suggestions, to ensure that water utilities are better prepared to submit water loss audits with satisfactory data quality.

A commenter emphasized the need to further analyze, protect or enhance diverted water from the D&R Canal during flooding events. Periodic breaches in the D&R Canal and overflow from the Canal to the Raritan and Millstone Rivers and the Rivers to Canal do occur but surrounding infrastructure is able to address these events and mitigate impacts. Additionally, emergency response plans are in place if needed. The Department routinely communicates with the New Jersey Water Supply Authority and its contract customers when a water quality event has the potential to impact the Canal.

A commenter raised concerns over the plan to drain the reservoirs on Garrett Mountain, including New Street Reservoir, and replace them with water storage tanks. Levine, New Street, and Great Notch Reservoirs are uncovered finished water storage reservoirs which were designed solely for water supply. As of 2009, these reservoirs must be addressed either by covering or replacing with tanks.

A commenter asked DEP to consider market or other pressures on supply that could arise from the scarcity of water in Midwestern and Western states. DEP acknowledges this concern. While there has been documented concern over unrestricted use of water in some states[5], New Jersey is fortunate to have a robust regulatory framework protecting its residents' current and future water supply needs thanks to the foresightedness of the Water Supply Management Act. This framework gives New Jersey the tools it needs to have a water budget and ensure any water diversions are appropriate, serving the needs of the State. However, ongoing efforts remain necessary to ensure that these programs remain protective and continue to meet the needs of New Jerseyans first.

Changes related to this topic area in the Final Plan based on comments and principally covered in Chapter 5, include:

- Revising text regarding the Highlands Act rules and its application to water allocation permits and water supply diversion sources.
- Adding language to indicate that water efficiency and water loss management supports energy efficiency throughout the entire water and wastewater supply chain.
- Revisions to text describing the legal and operational framework through which adaptive management of the shared water resources of the Delaware River Basin has occurred.
- Removal of hydrant flushing as an example of real loss for non-revenue water.
- Revising text to include “premise plumbing and fixtures” as potential areas where lead is found.
- Revising text to remove “treated” before drinking water, as this is already accounted for as drinking water is treated water.

ENVIRONMENTAL JUSTICE

Commenters supported the increased environmental justice considerations in the Draft Plan, including the recommendations of establishing a permanent Low-Income Household Water Assistance Program (LIHWAP) program across New Jersey and the inclusion of a representative of the environmental justice community on the Water Supply Advisory Council. Commenters believe that it is essential to ensure that lower-income communities are provided with the funding and resources to enable them to meet water supply issues. DEP acknowledges these comments and appreciates the support.

A commenter offered support for the Draft Plan’s inclusion of the important role of public outreach and education in water supply planning. DEP acknowledges this comment and appreciates the support.

WATER QUALITY

A commenter indicated strong support for the mandatory removal of all lead and galvanized service lines and encouraged DEP to undertake more vigorous enforcement. DEP is actively administering the recent amendments to the New Jersey Safe Drinking Water Act which obligate the removal of all lead and galvanized service lines by community water systems by 2031. More information can be found here.

[5] See https://www.nytimes.com/interactive/2023/11/24/climate/groundwater-levels.html.

A commenter indicated that some water utilities have been able to certify they have no lead service lines and that this should be associated with minimizing any sampling related to that. While lead service lines are the dominant source of lead in drinking water, they are not the only source of lead in drinking water. The Department has observed many cases of public water systems which do not have lead service lines but have still exceeded the lead action level due to lead being present in solder, or older fixtures. However, water systems that continually have low, or no detections, of lead in their lead and copper sampling may be able to reduce sampling frequency.

A commenter requested that the Plan cite the increase in nitrate in the 1990s that jeopardized the Passaic Valley Water Commission's intake. DEP acknowledges this legacy challenge and funds real-time water quality monitoring. This data is utilized to make short- and long-term operational decisions to reduce nitrate loading.

REGIONAL PLANNING

Commenters supported DEP's approach of regional planning and use of existing Watershed Management Areas. Commenters recommended DEP provide additional guidance on a regional approach and assistance in facilitating the formation of regions to address water-related challenges, including via Watershed Management Areas. DEP acknowledges these comments and appreciates the support.

A commenter indicated that additional analysis is needed in Northeast New Jersey to assess the use of existing infrastructure to provide diversions or pumped storage. The Final Plan acknowledges the limitations of the Low Flow Margin (LFM) analysis and notes the need for application of different modeling techniques for different water source types. Specifically, many surface water diversions have minimum passing flow or flow by restrictions set via permit conditions to prevent the diversion from lowering stream flows below this minimum threshold. Chapter 6 focuses on regional planning initiatives and highlights the Northeastern region as a key area for future work and detailed planning, which would assess many of the issues raised by the commenter.

A commenter emphasized the importance of supporting local food production through water resource protection. Chapter 6 of the Final Plan notes the need for additional regional planning in the Southwestern region of New Jersey, an important food production area of the State. A major component of the regional planning analysis should focus on improved understanding of agricultural demands, present and future. Additionally, the Water Supply Management Act identified the need for water withdrawal regulations specific to agricultural which addresses their unique water needs.

Changes related to this topic area in the Final Plan based on comments and principally covered in Chapter 6, include:

- Revisions to text describing diversions from the Delaware and Raritan Canal.
- Clarification on the location of the Passaic Valley Water Commission water treatment facility.

MANAGING UNCERTAINTY

A commenter stated that the Plan should recognize drought management tools developed by Hansan and Schorr and accepted by the New Jersey Board of Public Utilities. DEP acknowledges these are utilized as part of the suite of drought management tools.

Changes related to this topic area in the Final Plan and principally covered in Chapter 7, based on comments, include:

- Revisions to text to better describe the result of replacement of aging or failing distribution mains, as prioritized through a water loss audit, real losses will be expected to decline as well, thereby reducing overall "demands."

FEEDBACK ON RECOMMENDATIONS AND ACTION ITEMS

A commenter supports the transition of the Final Plan into an online interactive document, such as a story map, to illustrate the findings and communicate updates following its publication. DEP acknowledges this comment and appreciates the support.

Commenters recommended that the Final Plan focus on tangible activities and the development of a timeline, benchmarks and progress reports for implementation of the Final Plan. DEP appreciates the comment and agrees that timely implementation of the Final Plan is necessary for progress to be made. Many areas of the Final Plan are already underway, for instance climate change assessments and drought modeling are ongoing areas where DEP is continuously engaged. DEP is also currently assessing water supply resilience in the Northeast region of New Jersey, with a focus on infrastructure and asset management concerns. Finally, DEP plans to begin many of the regional planning initiatives noted in Chapter 6 immediately upon the release of the Final Plan.

A commenter recommended that DEP consider a yearly review of the Final Plan and measures to disseminate information about the Final Plan to municipal and utility leaders. DEP intends to develop more interactive functionality of the Plan in the future, such as online tools, through which underlying data would be updated more frequently and be generally more accessible to local decision makers. DEP also intends to update the Plan's underlying data on an annual basis, though policy and plan recommendations would likely remain on the 5-year update cycle.

Commenters raised the prospect of operating permits for drinking water systems. Certain aspects of water system operations are currently permitted by DEP, including withdrawals, discharges, and treatment. DEP acknowledges that an encompassing review and approval of such activities would facilitate earlier detections of problems in systems that may have underlying operational and maintenance issues that could pose a public health risk. This subject is discussed in more detail in Chapters 5 and 8 of the Final Plan.

A commenter recommended the addition of the Leakage Emissions Initiative, which seeks to quantify the impact that unmanaged leakage has concerning avoidable carbon emissions. DEP thanks the commenter for highlighting this initiative. While it appears to have promise as a concept for better addressing the externalities created by water loss, DEP is not currently prepared to promote or evaluate this new initiative more formally in its Final Plan. The next iteration of the Water Supply Plan may include a more formal evaluation of this initiative.

A commenter requested that the Final Plan make more recommendations related to lawn watering. DEP has consistently recommended lawn watering only two times per week in its recent drought related press releases, and in coordination with water utilities seeking to mitigate excessive demands. As more scientific consensus emerges on future drought severity and frequency, DEP will consider this recommendation in future Plan updates.

A commenter stated that the State should do more to aggregate collected data in a manner that makes the data more accessible to all. DEP has undertaken several data management modernization projects related to both drinking water and wastewater interests. As these projects are completed, DEP will enable public access to these databases, as applicable. Many of the existing public facing data summary tools are highlighted throughout the plan.

A commenter indicated that the Plan must be prepared by a licensed Professional Engineer. A professional engineer license is required for some activities, but New Jersey law does not require the use of a Professional Engineer to develop a water supply plan. Planning, and specifically water supply planning, can be conducted by a range of qualified scientists, planners, and engineers. All of whom contributed to this Plan.

OTHER COMMENTS AND UPDATES

A commenter requested a review of the percentage of water demand increase for the Brick Township Municipal Utilities Authority. Calculations were re-examined based on existing data and support the noted 34% water demand increase between 2011 and 2020.

A commenter indicated that a referenced document in Appendix I (Metedeconk River Watershed Protection & Restoration Plan) had the wrong publication date. DEP notes that the referenced document notes a publication date of 2021.

The following are other changes made from the Draft Plan to the Final Plan:

- Use of “Highlands Commission” was replaced with “Highlands Council.”
- Text in Appendix A was updated to reflect that the Highlands Council has responsibility for the calculation of water availability in those watersheds location in the Highlands Region.
- Text in Appendix B was updated to clarify Brick Township Municipal Utilities Authority water sources.

COMMENTORS

The Department appreciates feedback Water Supply Advisory Council Members listed below.

Name	Represented Interest	Council Role
Stephen Blankenship (Chair)	Public Water Company	Member
Chris Andreasen (Vice-Chair)	Investor-owned Water Company	Member
Norman Nelson, P.E., C.M.E. (Vice-Chair)	Industrial and Commercial Water Users	Member
Kareem Adeem	Municipal or County Water Company	Member
Jennifer Coffey	Private Watershed Protection Associations	Member
Jay Long	Golf Course Superintendents	Member
Dr. Taha Marhaba	Academia	Member
Donald Shields	Investor-owned Water Company	Member
Dave Specca	Agricultural Community	Member
Darren Stanker	Nursery, Landscape and Irrigation Contractors	Member
Howard Woods	Residential Water User	Member
Emmanuel Charles	Unites States Geological Survey	Advisor
Tim Eustace	North Jersey District Water Supply Commission	Advisor
Alex Fiore	Unites States Geological Survey	Advisor
Mike Kammer	Board of Public Utilities	Advisor
Ken Klipstein	New Jersey Water Supply Authority	Advisor

The Department thanks the following members of the public for their input.

Name	Affiliation
Keith Bennett	Grass Roots Turf Products
Gina Berg	NJ Pinelands Commission
Drew Blackwell	Cavanaugh & Associates, P.A.
Ron Burke	Alliance for Water Efficiency
Pam Bush	Delaware River Basin Commission
Brian Carr	New Jersey Section of the American Water Works Association
Allen Carter	New Jersey Farm Bureau
Wanna Chin	
Michel Cuillerier	
Kelley Curran	NJ Highlands Council
Rachel Davis	Waterspirit
Tim Eustace	North Jersey District Water Supply Commission
Alex Fieure	US Geological Survey
Paula Figueroa-Vega	Jersey Water Works
Margaret Gallos	Association of Environmental Authorities
Amy Goldsmith	Clean Water Action
Barbara Goun	NJ Department of Health
Stanley Greberis	
Susan Grogan	NJ Pinelands Commission
Nick Homyak	
Daniel Hornickel	Township of Pemberton
James Humpheries	NJ Highlands Council
Margaret Hunter	New Jersey American Water
Robert Karl	Brick Township Municipal Utility Authority
Robert Kecskes	
Bill Kibler	Rarian Headwaters Association
Ken Klipstein	NJ Water Supply Authority
Vera Lazar	
Elizabeth Limbrick	NJ Economic Development Authority
Grant Lucking	New Jersey Builders Association

Name	Affiliation
Terry Maguire	Pascack Valley Mayor's Association
Matthew McCann	Delaware Riverkeeper Network
Charles McLane	
Allison McLeod	New Jersey League of Conservation Voters
Suzanne Millan	
Andrew Morris	Alliance for Water Efficiency
Marianne Noonan	
Doug O'Malley	Environment New Jersey
Diana Palmieri	
Teresa Palumbo Miller	
Anthony Patire	
Michael Pisauro	The Watershed Institute
Donna Rendeiro	NJ Office of Planning Advocacy
Jaclyn Rhoades	Pinelands Preservation Alliance
Elliot Ruga	New Jersey Highlands Coalition
Ann Schnakenberg	
Paul Schorr	
Sharon Sigethy-Coughlin	
Lindsey Sigmund	New Jersey Future
Brady Smith	
Chris Sotiro	Climate Revolution Action Network
Robert Tallon	Crafts Creek Watershed Association, Spring Hill Brook WA and Columbus NJ Grange
Steven Tambini	Delaware River Basin Commission
Lisa Tracy	
Maya van Rossum	Delaware Riverkeeper Network
Shawn Vena	
Maria Weatherspool	
Lee Widman	