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Re: NRDC and NJF Comments on *Proposed Priority System, Intended Use Plan, and Project Priority List for Federal Fiscal Year 2015*

Dear Mr. Chebra:

Thank you for the opportunity to comment on New Jersey's *Proposed Priority System, Intended Use Plan, and Project Priority List for Federal Fiscal Year 2015*. These comments are submitted by the Natural Resources Defense Council (NRDC) and New Jersey Future (NJF). NRDC works on behalf of more than 1.4 million members and online activists, including approximately 13,400 in New Jersey, to ensure a safe and healthy environment for all living things. With offices in New York, Washington, D.C., San Francisco, Los Angeles, Chicago, Montana, and Beijing, our staff of more than 400 lawyers, scientists, policy analysts, and others works to protect the environment and public health through advocacy and education. New Jersey Future is a nonprofit, nonpartisan organization that brings together concerned citizens and leaders to promote responsible land-use policies. The organization employs original research, analysis and advocacy to build coalitions and drive land-use policies that help revitalize cities and towns, protect natural lands and farms, provide more transportation choices beyond cars, expand access to safe and affordable neighborhoods and fuel a prosperous economy.

NRDC and NJF appreciate the steps that the New Jersey Department of Environmental Protection (NJDEP) has taken to support projects that utilize green infrastructure practices, such as reserving 50 percent of the available principal forgiveness funds for combined sewer overflow (CSO) projects that incorporate green infrastructure and for integrated water resources planning.¹ Additionally, we commend NJDEP for demonstrating transparency by including information

¹ IUP at 4.

regarding the projects on the 2015 Project Priority List and how they were scored according to the state's ranking system.

However, NJDEP must make improvements to the FFY15 Intended Use Plan (IUP) and the Clean Water State Revolving Fund (CWSRF) program to maximize investments in wastewater and stormwater utilities and increase their resilience to extreme weather and other climate change risks:

1. Measures that enhance a project's resilience to extreme weather and other climate change risks must be fully integrated into the project planning and design requirements and also must be better prioritized in the current priority system ranking methodology.
2. NJDEP should take full advantage of the opportunity to further support green infrastructure and water efficiency measures to enhance local sustainability and climate resilience through its implementation of the Water Resources Reform and Development Act of 2014 (WRRDA).

Thank you for considering these recommendations. Our detailed comments follow below.

Climate Resilience Should Be Fully Integrated into NJDEP's CWSRF Project Application and Ranking Processes

New Jersey is vulnerable to multiple climate change risks, including growing threats from more extreme storms, higher sea levels, and extreme heat.² As affirmed by the U.S. Global Change Research Program's recent National Climate Assessment, these changes in our climate are increasingly impacting communities through the Northeast.³ Across the region, temperatures have increased nearly 2°F, precipitation has increased by more than 10 percent, and sea levels have risen approximately 1 foot over the last century.⁴ Additionally, over the past 50 years, the Northeast has experienced the largest increase in extreme precipitation of any region in the U.S., with a more than 70 percent increase in the amount of precipitation falling during very heavy events.⁵

These trends also have been observed in New Jersey where the long-term trend is a 2.2°F per century increase in annual average temperature and a 9 percent increase in annual precipitation.⁶

² Georgetown Climate Center and Rutgers Climate Institute, *Understanding New Jersey's Vulnerability to Climate Change*, available at http://njadapt.rutgers.edu/component/docman/doc_download/75-nj-vulnerabilities?Itemid.

³ U.S. Global Change Research Program (USGCRP), "Northeast," available at <http://nca2014.globalchange.gov/report/regions/northeast>.

⁴ *Id.*

⁵ *Id.*

⁶ Rutgers Climate Institute, *State of the Climate: New Jersey* (2013), 3-5, available at <http://climatechange.rutgers.edu/resources/state-of-the-climate-new-jersey-2013>.

In addition, the rate of sea level rise along the state's coast has exceeded the regional and global averages due to the subsidence of coastal areas as water levels rise.⁷

As global emissions of heat-trapping gases continue to grow, these trends will only intensify. Average regional temperatures are projected to rise 4.5°F to 10°F by the 2080s, with significant increases in the frequency, intensity, and duration of heat waves.⁸ Similarly, the frequency of heavy downpours is projected to increase as well.⁹ Furthermore, sea level along the New Jersey coast is projected to rise 7 to 16 inches in the coming decades, 13 to 28 inches by mid-century, and 30 to 71 inches by the end of the century.¹⁰

Wastewater and stormwater utilities in New Jersey are particularly vulnerable to these impacts. According to the U.S. Environmental Protection Agency (EPA), wastewater utilities in the Northeast will face challenges from low flow conditions, altered water quality, flooding from high flow events and coastal storm surge, and loss of coastal ecosystems.¹¹ Specifically, heavy rainfall events and coastal storm surges present challenges for water management and flood control infrastructure; increase flooding risks for treatment plants and other facilities; and jeopardize service reliability.¹² Wastewater infrastructure is particularly at risk from flooding due to the low elevation at which these facilities are generally located.¹³

NJDEP's CWSRF program must fully recognize the risks that climate change poses for the state's wastewater and stormwater utilities and integrate consideration of resiliency measures into the project application and ranking processes.

Climate Resiliency in the Project Planning and Design Requirements

As part of the planning and design documents required for submission by project applicants,¹⁴ NJDEP should require applicants to provide information on the water efficiency, green infrastructure, and flood resiliency measures that were evaluated during the planning process, any such measures that are included in the project, and if there are none, justification for why such measures are excluded. These measures help communities address existing water quality and water supply needs while also helping to build resilience to longer-term climate risks.

⁷ *Id.* at 6.

⁸ USGCRP, note 3.

⁹ *Id.*

¹⁰ Kenneth G. Miller, Robert E. Kopp, Benjamin P. Horton, James V. Browning, and Andrew C. Kemp, "A geological perspective on sea-level rise and its impacts along the U.S. mid-Atlantic coast," *Earth's Future* (2013), doi:10.1002/2013EF000135.

¹¹ U.S. Environmental Protection Agency (EPA)-Climate Ready Water Utilities, "Climate Region Brief > Northeast," *Adaptation Strategies Guide for Water Utilities* (2012), 40, available at <http://water.epa.gov/infrastructure/watersecurity/climate/upload/epa817k11003.pdf>.

¹² U.S. EPA 2012 at 67.

¹³ *Id.*

¹⁴ IUP at 10.

Further, as detailed in the attached documents, there is ample legal authority to implement these policies; a number of states are already using these approaches or similar ones; and there are many examples of wastewater utilities that have successfully used (or are currently using) water conservation strategies to reduce water demand and the costs of wastewater infrastructure.

Water Conservation and Efficiency

Water conservation and efficiency techniques can increase resilience to climate change risks such as increased drought, decreased precipitation, and declining snowpack. These measures also reduce water demand, improve the reliability of existing water supplies, delay capital expenditures for new water infrastructure, and reduce energy demands associated with the treatment and transport of water and wastewater. As discussed further in a recent NRDC issue brief (also attached), *Waste Less, Pollute Less: Using Urban Water Conservation to Advance Clean Water Act Compliance*, water efficiency measures also can help utilities cost-effectively comply with Clean Water Act standards.¹⁵ Measures that curtail indoor water use, such as water-efficient fixtures and appliances, reduce strain on sewage collection and treatment systems, thereby improving pollution control performance and reducing compliance costs. Measures that supplement local water supply by capturing rainwater for reuse or to recharge groundwater, or that use native landscaping to reduce outdoor water demand, also cost-effectively reduce stormwater pollution and sewer overflows.

Specifically, NJDEP should require projects that propose new conveyance systems or to expand the capacity of existing conveyance systems to do the following:

- (i) Evaluate water conservation alternatives;
- (ii) Include any such measures that reduce the net capital/operating costs of the project; and
- (iii) Incorporate the resulting flow reductions into the design of the overall project.

NJDEP likewise should ensure that designs of new, replacement, and expanded wastewater infrastructure are based on the most current data and projections of per capita water demand. Due in large part to national plumbing fixture efficiency standards, there is already a downward trend in per capita household water use.¹⁶ New national standards that are being phased-in over

¹⁵ NRDC, *Waste Less, Pollute Less: Using Urban Water Conservation to Advance Clean Water Act Compliance* (2014), available at <http://www.nrdc.org/water/clean-water-act-urban-conservation.asp>.

¹⁶ There has been a significant nationwide decline in residential water use over the last 30 years; a typical single-family household in 2008 used 11,678 gallons less water annually (*i.e.*, 32 gallons less per day) than an identical household did in 1978. The installation of water-efficient indoor appliances and fixtures – such as those meeting standards set by the 1992 Energy Policy Act – are the predominant factor explaining this decrease. This suggests that wastewater flows, for the typical single-family household, have likewise decreased substantially during this period. See Thomas D. Rockaway, Paul A. Coomes, Joshua Rivard, and Barry Kornstein, “Residential water use trends in North America,” *Journal AWWA*, 103, 2 (2011): 76-89.

the next several years (e.g., for washing machines) will accelerate this downward trend.¹⁷ Consequently, NJDEP should ensure that outdated assumptions of domestic water use (and subsequent demand for wastewater services) are not being used when reviewing and approving funding applications.

Green Infrastructure

As NJDEP is well aware, green infrastructure uses soils and vegetation in the built environment to absorb runoff close to where it falls, limiting flooding and sewer backups.¹⁸ These techniques restore or mimic natural conditions, allowing rainwater to infiltrate into the soil or evapotranspire into the air. Green roofs, rain gardens, roadside plantings, porous pavement, and rainwater harvesting not only reduce flooding and protect water quality, they also transform rainwater from a source of pollution into a valuable resource. Further, these practices help to literally green the urban landscape, cool and cleanse the air, enhance water supplies, reduce asthma and heat-related illnesses, cut heating and cooling energy costs, create urban oases of open space, and enhance property values.¹⁹

Projects intended to reduce sewer overflows or improve stormwater management that propose the use of “hard” or “gray” infrastructure should be required to do the following:

- (i) Evaluate the costs, savings, and effects of green infrastructure measures that reduce the amount of stormwater entering sewer systems;
- (ii) Include all cost-effective green infrastructure measures; and
- (iii) Consider the reduction in stormwater entering sewer systems due to green infrastructure in the overall project design.

¹⁷ Currently, in single-family homes, nearly 20 percent of all the water used indoors is for washing clothes. As of 2011, water-efficient Energy Star labeled clothes washers achieved over 60 percent of new washer sales. A washer meeting these new specifications will use about half as much water as the typical top loader it will replace. When new regulatory standards for clothes washers take full effect in 2018, all new washers will meet or exceed today’s Energy Star efficiency levels. Moreover, as of 2011, toilets that meet EPA’s voluntary WaterSense efficiency standards – which are more stringent than the 1992 federal requirements – comprised the majority of sales for tank-type toilets. At least four states have already mandated their use. Lastly, the bodies that write model building codes for state adoption have added new provisions to their 2015 model codes that would further decrease indoor water usage, including insulation requirements for hot water distribution piping. See Ed Osann, “Waiting for Hot Water,” available at http://switchboard.nrdc.org/blogs/eosann/waiting_for_hot_water.html and “Our Web Poll results: Waiting for hot water is the real national pastime,” available at http://switchboard.nrdc.org/blogs/eosann/our_web_poll_results_show_that.html#comment49649. The cumulative effect of these changes is that, as existing fixtures and appliances are replaced over the years and decades ahead, existing trends in decreased indoor water use can be expected to continue, or even accelerate. See Mengshan Lee, Berrin Tansel, and Maribel Balbin, “Urban Sustainability Incentives for Residential Water Conservation: Adoption of Multiple High Efficiency Appliances,” *Water Resources Management*, 27, 7 (2013): 2531-2540.

¹⁸ See NJDEP, “Green Infrastructure in New Jersey,” available at <http://www.nj.gov/dep/gi>.

¹⁹ NRDC, “The Multiple Benefits of Green Infrastructure Solutions,” *Rooftops to Rivers II* (2011), 13-16, available at <http://www.nrdc.org/water/pollution/rooftopsii/files/rooftopstoriversII.pdf>.

Flood Resiliency

We fully support NJDEP’s development of flood protection guidance to ensure that projects receiving public funding are made resilient to current and future flood risks.²⁰ However, projects only will be made resilient to flooding if NJDEP ensures that CWSRF project applicants are designing and constructing projects that adhere to the elevation requirements. Accordingly, we urge NJDEP to provide careful oversight and scrutiny of candidate projects to ensure compliance with the necessary design criteria. Further, to raise awareness of these new requirements, Section B of the IUP (“Planning/Design Requirements”) should be modified to include a reference to the state’s recently developed flood protection guidance. As discussed in the attached NRDC publication, *Using State Revolving Funds to Build Climate-Resilient Communities*, the robust and uniform application of NJDEP flood elevation requirements to all CWSRF projects also would be consistent with Presidential Executive Order 11988, which requires that projects receiving federal funding avoid the 500-year floodplain, if possible, or provide protection to the 500-year flood level.²¹

In light of the substantial flooding experienced in recent years and the reality that climate change and sea level rise are exacerbating coastal flooding risks, NJDEP also must require project applicants to assess potential sea level rise risks for their projects, taking into account both sea level rise projections and the intended service life of project components. A critical component of this effort will be to develop guidance for project applicants on how to assess potential sea level rise risks.²² By doing so, NJDEP can help to ensure that public funds are being invested in projects that fully consider current and future climate change risks.

Climate Resiliency in the Priority System Ranking Methodology

The existing CWSRF ranking methodology encourages projects to implement green infrastructure and/or water or energy efficiency improvements by awarding an additional 50 priority points.²³ Similarly, the ranking methodology awards an additional 100 priority points to projects from municipalities where sustainable community strategies and/or plans—such as those that reduce water consumption, increase water efficiency and reuse, and require consideration of green infrastructure—have been adopted.²⁴ We support NJDEP’s efforts to reward projects that include water efficiency, energy efficiency, and green infrastructure through the ranking methodology. Yet, NJDEP also should award additional priority points to other climate

²⁰ See NJDEP, *Infrastructure Flood Protection Guidance and Best Practices* (2014), available at <http://www.nj.gov/dep/watersupply/pdf/guidance-ifp.pdf>.

²¹ NRDC, *Using the State Revolving Funds to Build Climate-Resilient Communities* (2014), available at <http://www.nrdc.org/globalwarming/state-revolving-funds.asp>.

²² See, e.g., California Coastal Commission, *Draft Sea-Level Rise Policy Guidance* (2013), available at http://www.coastal.ca.gov/climate/slr/guidance/CCC_Draft_SLR_Guidance_PR_10142013.pdf.

²³ IUP at 25.

²⁴ *Id.* at 23.

resiliency measures, such as those that reduce a project’s vulnerability to flood risks. Examples of these types of measures include relocating facilities to less hazardous areas, elevating critical mechanical and electrical systems, and using natural infrastructure systems to mitigate risks from flooding. NJDEP can refer to Attachment 1 of the IUP (“Projects Eligible Under the DRAA”) for examples of some flood risk mitigation measures that should be eligible for additional priority points.²⁵

NJDEP Must Maximize Implementation of WRRDA Provisions

As referenced in the IUP,²⁶ the Water Resources Reform and Development Act of 2014 (WRRDA) made several significant changes to the Federal Water Pollution Control Act (FWPCA), which is the federal statute that governs the implementation of the CWSRF program.²⁷ These changes will place water efficiency-related conditions of eligibility on CWSRF financial assistance and allow for direct support of water conservation and stormwater management projects through grants and low-cost loans.

Specifically, beginning in FY 2016, CWSRF applicants will be required to “ha[ve] selected, to the maximum extent practicable, a project or activity that maximizes the potential for efficient water use, reuse, recapture, and conservation, and energy conservation...”²⁸ While EPA has chosen to defer development of guidance on this provision until FY 2015, we strongly encourage NJDEP to make the necessary revisions, such as those previously described for the project application process, to begin implementation of this new requirement as soon as possible.

Further, projects for managing and reusing stormwater, recycling wastewater, and that reduce the need for wastewater treatment through water conservation and reuse measures are now specifically called out by Congress as eligible for funding assistance,²⁹ codifying a practice that is already allowed under EPA guidance. Additionally, water efficiency and stormwater management projects are now eligible for loan forgiveness and negative interest loans (essentially, grants) under the CWSRF, not just low-interest loans.³⁰ In the implementation of these provisions, NJDEP should continue to prioritize green infrastructure projects and integrated water resources planning in CSO communities (through the dedication of 50 percent of total available principal forgiveness funds for these projects) while also prioritizing MS4 communities subject to TMDL Waste Load Allocations for funding. NJDEP also should make the necessary regulatory revisions to establish that eligible government entities can receive funding to implement stormwater management measures and water conservation, efficiency, and reuse projects at both publicly- and privately-owned properties. As such, a city would be eligible to

²⁵ *Id.* at 29-31.

²⁶ *Id.* at 3.

²⁷ Water Resources Reform and Development Act of 2014, Public Law No. 113-121, Sections 5002-5003.

²⁸ 33 U.S.C. §§ 1382(b)(13)(B).

²⁹ 33 U.S.C. §§ 1383(c)(5), (6), (9).

³⁰ 33 U.S.C. §§ 1383(i)(1)(B).

receive CWSRF assistance to make loans or grants, or offer other rebates or incentives, to city residents and business owners for the installation of green infrastructure (e.g., rebates to cover the cost of rain garden installation, grants for large-scale impervious area retrofits) and water conservation measures (e.g., water-efficient appliances, water-efficient plumbing fixtures and landscapes). In fact, there are several examples of cities, such as New York City and Syracuse, that implement grant programs that directly pay for the installation of green infrastructure practices on private property.³¹

WRRDA also requires a loan recipient for a project that involves the repair, replacement, or expansion of treatment works to develop and implement a fiscal sustainability plan (FSP), which requires the evaluation and implementation of water and energy conservation efforts among other components.³² NJDEP should apply this requirement broadly to all project applicants and require at a minimum that they submit a FSP to NJDEP for review and approval before final payment is made.

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³¹ NRDC, “Chapter 4. Policy Recommendations for Local, State and National Decision-makers,” *Rooftops to Rivers II* (2011), 36-37, available at <http://www.nrdc.org/water/pollution/rooftopsii/files/rooftopstoriversII.pdf>.

³² 33 U.S.C. §§ 1383(d)(1)(E)(i)(III).

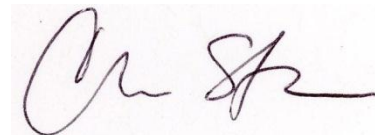
In conclusion, we commend NJDEP for taking initial steps to support green infrastructure measures. However, we urge NJDEP to adopt the recommendations set forth above to ensure that limited CWSRF dollars are allocated wisely and efficiently and support a wider range of resiliency measures, thereby achieving the greatest possible benefit for the state and its residents. If you should have any questions, please do not hesitate to contact us.

Sincerely,



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Attachments (2)