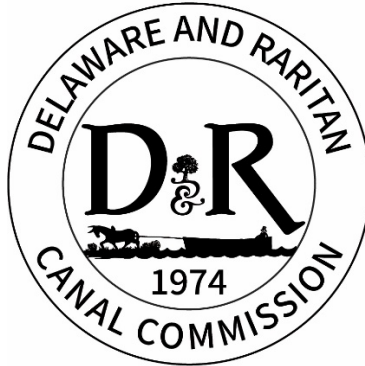


2018 ANNUAL REPORT
DELAWARE & RARITAN CANAL COMMISSION



John S. Loos, Vice Chairman
Honorable Catherine R. McCabe, Commissioner of Environmental Protection (*ex officio*)
Olivia Carpenter Glenn (Commissioner designee)
Julia Cobb Allen
Mary Alessio Leck, PhD.
Phillip Lubitz
Douglas H. Palmer
Bruce D. Stout, PhD.

John Hutchison, Executive Director

Delaware & Raritan Canal Commission 2018 Annual Report

Background:

The Delaware and Raritan Canal Commission is a state agency created pursuant to the “Delaware and Raritan Canal State Park Law of 1974” (N.J.S.A. 13:13A-1 et seq.) whose mission is to: prepare, adopt, and implement a master plan for the physical development of the Delaware and Raritan Canal State Park; review State and local actions that impact on the park to insure these actions conform as nearly as possible to the Commission’s master plan; and coordinate and support activities by citizens’ groups to promote and preserve the park.

The Commission works closely with the Department of Environmental Protection (DEP), Division of Parks and Forestry, State Park Service, which owns and manages the Delaware and Raritan Canal as a state park. The Commission also coordinates its activities with the New Jersey Water Supply Authority (NJWSA), which operates and maintains the vitally important water transmission elements of the canal, which provide 100 million gallons of drinking water daily for 1.5 million people in central New Jersey. Working together, the three agencies ensure that the environmental, recreational, historic and water supply resources of the Delaware and Raritan Canal are protected and preserved.

The Commission is comprised of the Commissioner of Environmental (*ex officio*), and eight residents from Middlesex, Somerset, Mercer and Hunterdon counties, who are appointed by the Governor, with the advice and consent of the State Senate. At present, the membership of the Commission has two vacancies, and the remaining six appointed Commissioners are serving in “holdover” status. Additionally, the Commission remains without an appointed Chairman selected by the Governor pursuant to subsection f. of N.J.S.A. 13:13A-11 since November 19, 2014. The Commission meets once a month to take formal action on development applications, and to make recommendations to staff about planning efforts. Commissioners appoint the Executive Director who serves at the pleasure of the Commission. Commissioners are also routinely involved with staff on many of the key issues addressed by the Commission.

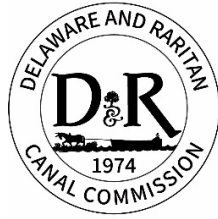
2018 Activities:

This report has been prepared in compliance with the provisions of N.J.S.A. 13:13A-11(i), which directs that “...[o]n or before December 31 in each year the commission shall make an annual report of its activities for the preceding calendar year to the Governor and to the Legislature.” This Annual Report provides a complete operating and financial statement covering the Commission’s operations for 2018.

Bylaws:

Pursuant to the provisions of N.J.S.A. 13:13A-12a., the Commission adopted updated Bylaws on April 18, 2018. The new bylaws provide a modern and transparent framework for the conduct of Commission business and establishes written procedures to guide the activities of Commission staff. The bylaws can be viewed by the public on the Commission website at <https://www.nj.gov/dep/drcc/pdf/drcc-bylaws.pdf>.

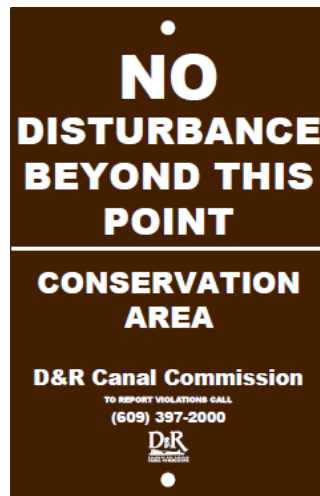
Commission seal: In 2018 the Commission adopted a new seal which incorporates parts of the logo used by the Commission since its inception, while adding the year of the Commission’s creation. The seal will be incorporated into Commission documents, envelopes and reports.



(New Commission Seal)

Conservation easement signage: In September, the Commission adopted standardized signage for situations where the marking of conservation easement area boundaries is required as a condition of approval of a project that affects a Commission-regulated stream corridor. The Commission’s regulations require applicants who propose projects within a stream corridor to preserve the corridor by executing a conservation easement. This easement requires the impacted corridor to revert to a natural state, and prohibits the creation of lawn, mowing and other activities. The Commission has employed various means of marking the corridors so that landscapers do not mow the vegetation and people do not undertake certain activities that negatively impact the corridor’s capacity to function as a buffer for the stream’s ecological health and as a natural area. These methods have included concrete monuments, post and rail fences, and signs of varying sizes containing language with different descriptions.

After conferring with other program elements within the DEP and reviewing signage requirements of other land use regulatory agencies, the Commission adopted a 12”x18” uniform sign that would be placed at 250-foot intervals, as well as at the corners of a property with flexibility to alter this arrangement as property or stream corridor conditions warrant.



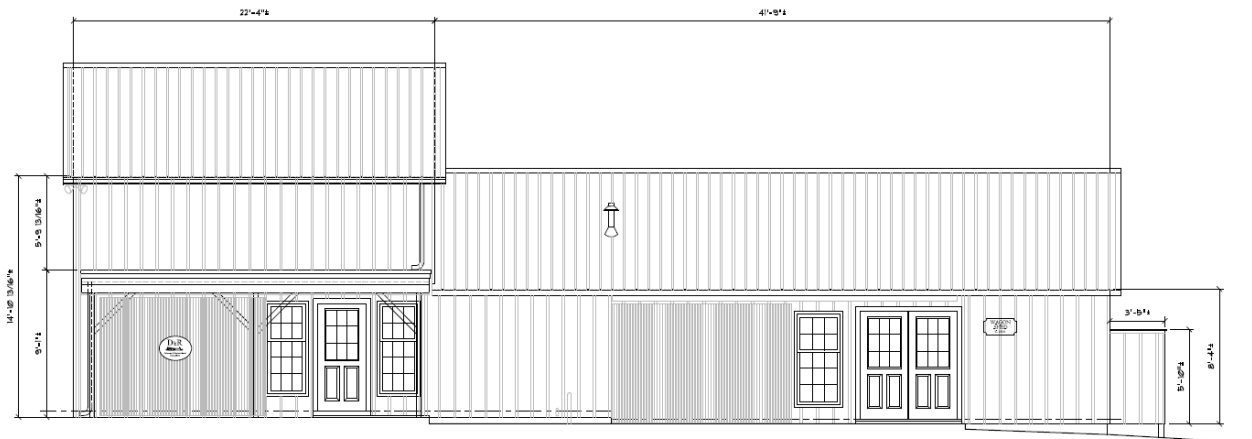
(Standardized Conservation Easement Signage)

The Commission staff thanks Maria Scimone of the DEP Communications staff for her assistance in creating the seal and conservation easement signage designs.

Operational Issues:

Continuing a process that began in 2017, Commission staff continues to address deferred maintenance issues and equipment upgrades that will improve the Commission’s ability to carry out its statutory mission. Improvements to the physical plant and information technology resources at the Commission’s office, located at the historic Prallsville Mills complex in Stockton, Hunterdon County. In July the office roof, which had been leaking for several years, was replaced with an historically-accurate standing seam metal roof.

In September, the DEP Office of Natural Resource Development retained an architectural consultant which began the design work for the replacement of the Commission office exterior siding, windows and doors. The replacement of exterior features will largely match what is in place now; however, the sliding windows of a modern design, which presently suffer from seal failure, would be replaced (subject to review and approval by the State Historic Preservation Office) with divided light windows that would match the other buildings at the Prallsville complex.



(Rendering of Commission Office exterior repair project)

Wi-Fi installation: Working with the DEP Office of Information Resource Management (ORM), the Commission office installed a Wi-Fi in June, allowing Commission staff to use the DEP network resources from anywhere within the office workplace. This improvement has been particularly useful to the

archiving of Commission files project and could in future permit Commissioners and staff to use remote devices during Commission meetings.

File archiving, storage and scanning: In 2018 the Commission retained a temporary employee, Tiffany Bennett, who has undertaken the task of archiving project files dating to the inception of the Commission's land use regulatory program in 1980, and ensuring that these public records are maintained pursuant to the records retention schedules required by the Division of Archives and Records Management (DARM) in the Department of State, and in conformance with applicable State and federal codes, regulations, and statutes of limitation.

At the end of November, a total of 479 boxes of files had been collated, boxed pursuant to DARM requirements and archived at the DEP central warehouse in Trenton. This project has allowed the Commission to remove the files from the Prallsville Mills complex, which, due to its proximity to the Delaware River and Wickecheoke Creek, is vulnerable to flooding. By removing the files from the Commission offices and removing the cabinets that they were stored in, the interior "breakaway" walls installed in the office can be activated in the event of a flood.

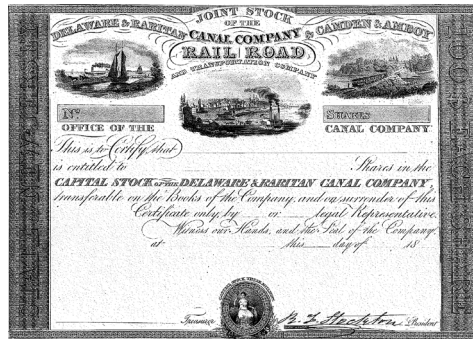
Using a reader loaned from DEP OIRM, Commission staff also began another initiative to copy the contents of 154 3.5-inch "floppy" disks containing staff reports and other work product from the 1990s and early 2000s. The 1,793 documents that were not otherwise corrupted or stored in unsupported formats were copied onto the DEP shared drive. The information on the disks, which include older engineering and staff reports, will help staff fill gaps in the Commission database, which has many number references to projects for which there are no paper files.

Commission website: In August, the Commission's new website IP address was implemented in keeping with our status as a government agency (<https://www.nj.gov/dep/drcc/>). The Commission staff continues to work with DEP OIRM to revise and improve the 1990s-era Commission website, and staff has collated a considerable amount of content for the new website, which should be unveiled in 2019.

Custodial services contract: The Commission's custodial arrangements, which were a legacy of the prior rental agreement between the DEP and the Delaware River Mill Society, were concluded. The Commission entered into a contract with ACCSESS NJ, the State contract vendor for custodial services. ACCSESS NJ is the State's designated Central Non-Profit Agency (CNA), administering the State set-aside contract for people with disabilities under the State Use Law for Rehabilitation Facilities. They hold several State contracts covering thousands of products and nearly a dozen individual services. The services are provided by community rehabilitation programs located throughout the State.

Preservation of historic documents/artwork: The Commission possesses many documents and other materials that relate to the historic significance of the Delaware and Raritan Canal. These materials include reports, maps, artwork, financial papers, architectural drawings and engineering plans that detail the canal's importance to the history of the State of New Jersey. Unfortunately, many of these documents have suffered from the impact of age and inappropriate storage. Commission staff began an effort to rectify this situation in 2018. An 1849 copy of the Delaware and Raritan Canal Company's regulations for vessels using the canal that was displayed in the Executive Director's office was successfully removed from its acidic cardboard backing, mounted on acid-free rag and placed in a frame under ultraviolet light-resistant glass. Similarly, a stock certificate of the Canal "Joint Company" from the 1830s, which was

attached to an acidic board with indeterminant type of glue was repaired, remounted and placed in a new frame.



(Joint Company \$100 stock certificate)

Regulatory Program:

The “Delaware and Raritan Canal State Park Law of 1974” directs the Commission to preserve and protect the Delaware and Raritan Canal as a historic and natural resource, as well as a water supply system for much of central New Jersey. In furtherance of this statutory mandate, the Commission was given regulatory authority to protect the Delaware and Raritan Canal State Park from new development which “may cause an adverse impact on the park including drainage, esthetic and ecological factors.” To that end, the Commission reviews development projects within a designated “Review Zone” established by administrative regulations promulgated at N.J.A.C. 7:45 for their impact on the following:

- 1) Stormwater drainage and water quality;
- 2) Stream corridors;
- 3) Visual, historic and natural quality; and
- 4) Traffic.

The Review Zone is further divided into two subzones. Review Zone “A” is the area within 1,000 feet on either side of the center line of the canal, except in the Municipality of Princeton, where the west bank of Carnegie Lake shall be the boundary of Zone A, and where the Raritan River is within 1,000 feet, its furthest bank being the boundary. Review Zone “B” is based upon sub-watersheds located in central New Jersey that impact the Delaware and Raritan Canal. The Commission’s regulatory jurisdiction encompasses approximately 400 square miles of land area located in central New Jersey.

Developments that are defined as “major” projects under the Commission’s regulations (projects that involve the cumulative coverage since January 11, 1980 of one-quarter acre or more of impervious surface, or the disturbance of one acre of land) must meet the Commission’s standards for managing stormwater runoff quantity and quality. In addition, a project of any size that is proposed in Zone A is reviewed for its visual, historic and natural quality impact upon the Delaware and Raritan Canal State Park. The Commission also reviews certain projects that are within one mile of the park for their traffic impact. The Commission also requires the preservation of corridors along the major streams that enter the park. Through its regulatory program, the Commission holds conservation easements on over 5,000 acres of

land that provides flood storage, improves water quality of major streams that enter the canal, and provides habitat for wildlife.

The Commission staff, consisting of three full-time employees and two part-time engineers, reviewed a total of 269 projects in calendar year 2018. Of these reviews, 103 were deemed complete by staff and presented to the Commission for formal action; 66 were General Permit Authorizations issued by the Executive Director in accordance with Subchapter 5 of N.J.A.C. 7:45, and 100 were jurisdictional determinations. The overall number does not include 167 staff reports responding to deficient applications and recommending the submission of additional information necessary to determine administrative completeness, as well as the many informal reviews and pre-application meetings the Commission staff participated in with the regulated community to determine whether projects were administratively complete and therefore ready for Commission review.

Conservation Easement Acreage Preserved: Stream corridors are critical to improving and maintaining water quality entering the Delaware and Raritan Canal and canal park; they allow these areas to store and mitigate stormwater that may contribute to flooding. N.J.A.C. 7:45-9.5 direct applicants for individual permits that impact upon a Commission-regulated stream corridor to take whatever measures are necessary to ensure that those corridors will be preserved, and to prevent future encroachments in the stream corridor. The Commission's regulations further provided that at a minimum, such measures shall include easements, deed restrictions, or other measures satisfactory to the Commission. In furtherance of this regulatory mandate, the Commission requires conservation easements on stream corridor buffers for approved projects.

The easements along stream corridors that flow into the Delaware and Raritan Canal State Park stipulate the responsibility of the landowner to not develop the land, often require the planting of native vegetation, and often impose "no-mowing" and other landscape maintenance restrictions. Easement documents are filed with the clerk of the county in which the permitted project is located, and run with the land, meaning that the environmental protections automatically transfer with the property when the property is transferred to a different owner.

The Commission's stream corridor protections and easement program have resulted in one of the largest protected riparian corridors in New Jersey. Approximately 5,000 acres of stream corridor have been preserved and hundreds of acres of native plant restorations have been undertaken under the Commission's direction to date -- an accomplishment undertaken at no cost to the State taxpayer. In 2018 the Commission executed easements which added an additional 110,473 square feet (2.56 acres) of stream corridor easements to those which have been preserved since the inception of the Commission's regulatory program in 1980.

Mitigation Donations Collected: The Commission's regulations regarding waivers of strict compliance with its regulations at N.J.A.C. 7:45-12.6(d)2 provide that if the Commission finds, based on the project applicant's submissions, that a proposed new discharge of stormwater into waters or conduits that flow into the Delaware and Raritan Canal cannot be treated to meet the Commission's water quality standards, and that a lower treatment standard is appropriate, the applicant shall include in its project a cash donation to a mitigation bank administered by the NJWSA to be used for water quality improvement

projects for the Delaware and Raritan Canal with the equivalent mitigation benefits. In 2018, the Commission accepted two such donations related to projects which obtained waivers of strict compliance with its water quality standards.

One project (DRCC #16-4954) involved an application by the New Jersey Transit Corporation to construct a new flood resilient Service and Inspection Facility and storage tracks for at their existing County Yard rail yard in the City of New Brunswick, Middlesex County. Although the Commission recognized the compelling public need to construct such a facility, the project increased Total Suspended Solids (TSS) loadings by 25,400 pounds annually. In consultation with the NJWSA, the Commission staff identified water quality projects that could be undertaken in the Cedar Grove Brook, which is one of only four natural stream systems that flow into the Delaware and Raritan Canal along its 60-mile course from the Delaware River north of Trenton to the Raritan River in New Brunswick. Cedar Grove Brook is also located in the same watershed management area as the proposed transit yard project. The Commission determined that it was appropriate to permit the transit yard project to proceed, conditioned upon a \$425,000 donation to the NJWSA. This donation will permit the NJWSA to undertake a series of water quality improvement projects in the Cedar Grove Brook that would reduce TSS loadings into the Delaware and Raritan Canal by 402,000 pounds annually, thereby providing a 16:1 mitigation benefit ratio that significantly offsets the impact of the transit project.

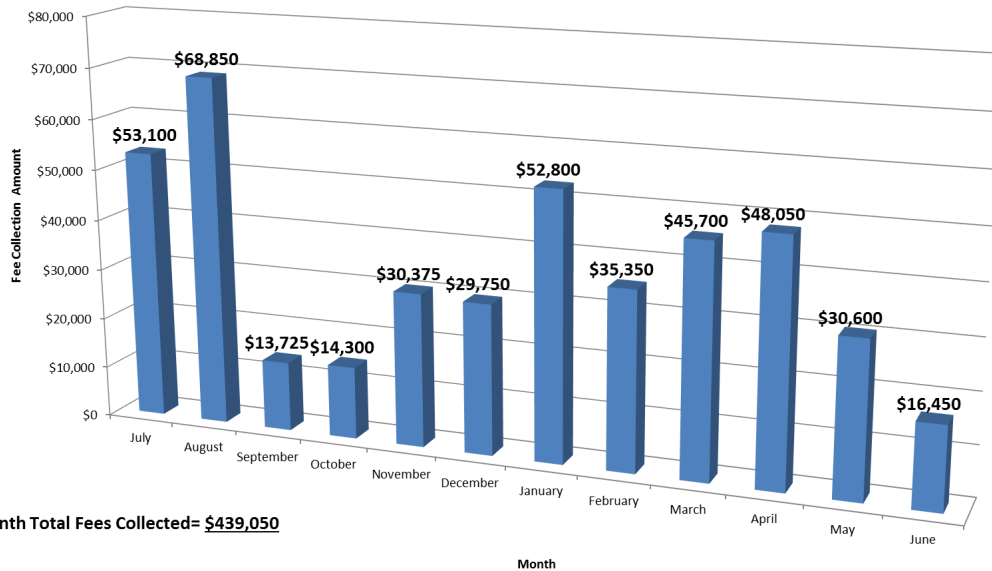
The second mitigation donation involved a project in Lawrence Township, Mercer County (DRCC #18-4337A) which intruded upon the stream corridor of the Little Shabakunk Creek. In this case, the applicant was required by the Commission to provide a donation in the amount of \$50,000 to the NJWSA to undertake or cause to undertake the water quality improvement project providing for the remediation of the failed septic system at the Port Mercer Canal House. The failed septic system is in the same watershed management area as the project and has had a direct impact upon water quality in the Delaware and Raritan Canal.

The Port Mercer Canal House is an historically important building which was built during the canal's period-of-significance (1830-1934) and is listed on the State and National Registers of Historic Places. The house was built in the 1830s next to the swing bridge over the Delaware and Raritan Canal and provided a home for the bridgetender and his family. The first floor of the house presently serves as headquarters for the Lawrence Historical Society, while the second floor had until been rented as an apartment. Remediation of the failed septic system will allow this historically significant structure to be occupied, kept in good repair, economically viable and accessible to the public.

Financial Information:

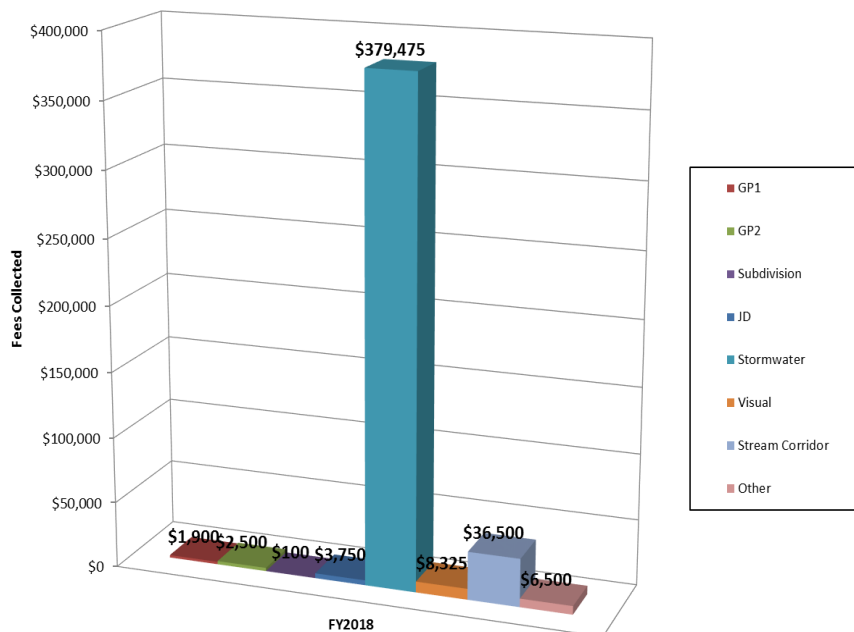
During Fiscal Year 2018, which ended on June 30, 2018, the Commission collected \$439,050 in total revenue from project application fees. The following chart details the amount of monthly fee collections:

12-Month FY2018 Budget Report (July 2017 to June 2018) on DRCC Fee Collection



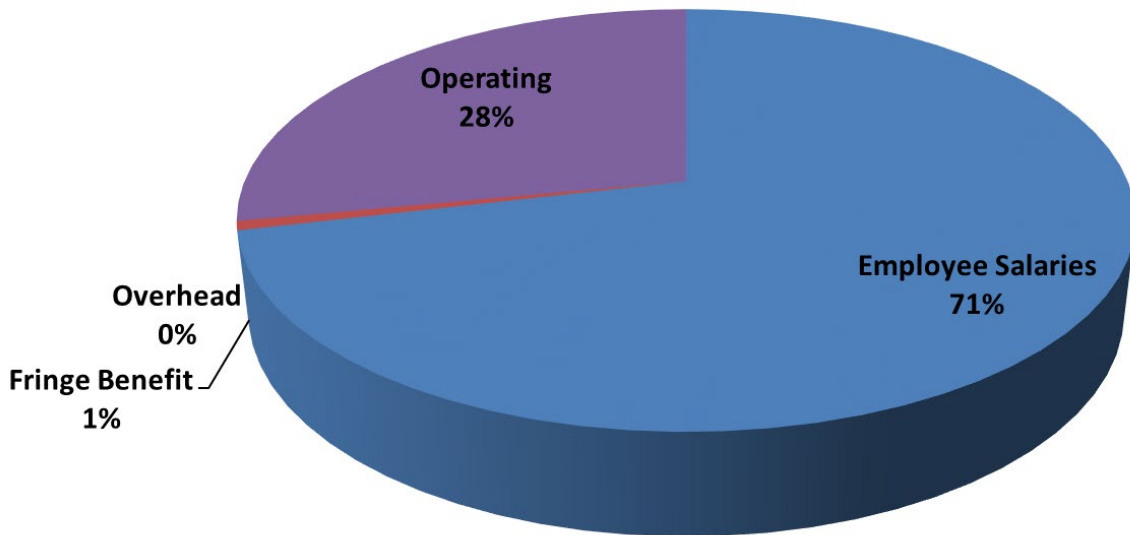
Commission fees are predominantly collected for the review of stormwater applications and stream corridor impact, but also include the review of visual, historic and natural quality impacts of proposed projects, traffic impact review, jurisdictional determinations, general permits and subdivisions. The following chart reflects the specific amount of fees collected for each category of review in FY2018.

12-Month FY2018 (July 2017 to June 2018) DRCC Fee Collection Breakout



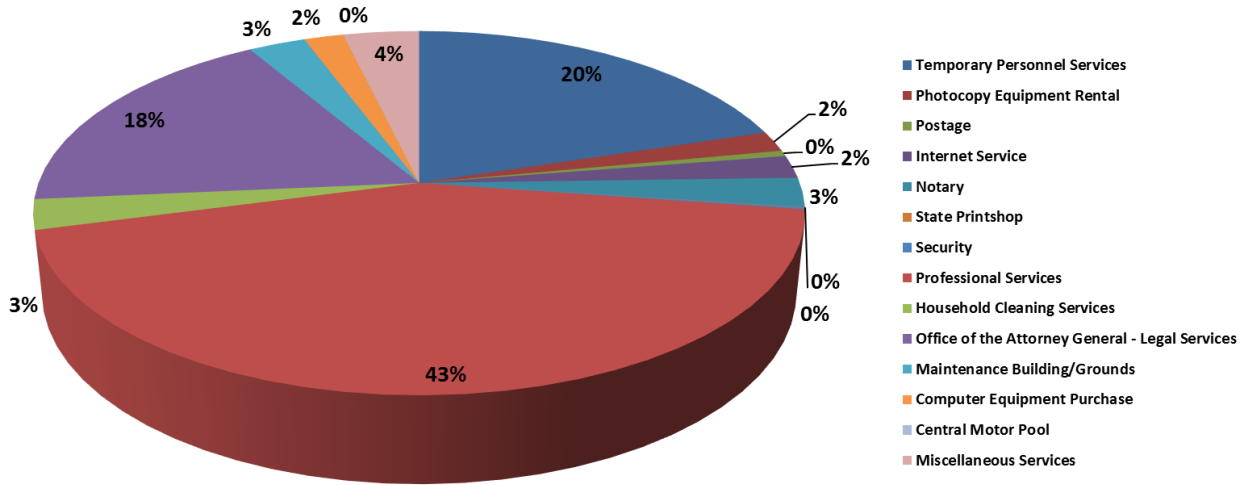
The Commission expended a total of \$284,030 in FY 2018. The Commission expenditures in FY 2018 can be earmarked for salary costs and operating costs as noted in the following table and chart:

Table 1: FY2018 Commission Total Expenses	
SALARY COSTS	
Employee Salaries	\$202,483
Employee Fringe Benefits	\$1,979
Departmental Administrative Overhead (Indirect)	\$0
OPERATING COSTS	\$79,568
Total Expenditures	\$284,030



The \$79,568 in Commission Operating Expenses for FY2018 are detailed in the following table and chart.

Table 2: FY2018 Commission Operating Expenses		
Temporary Personnel Services	\$16,048	20%
Photocopy Equipment Rental	\$1,452	2%
Postage	\$413	1%
Internet Service	\$1,608	2%
Notary	\$2,074	3%
State Printshop	\$26	0%
Security	\$118	0%
Professional Services	\$34,668	43%
Household Cleaning Services	\$2,130	3%
Office of the Attorney General - Legal Services	\$14,276	18%
Maintenance Building/Grounds	\$2,238	3%
Computer Equipment Purchase	\$1,554	2%
Central Motor Pool	\$15	0%
Miscellaneous Services	\$2,947	4%
Total	\$79,568	



Notable Commission Projects/Actions:

- The Commission welcomed DEP Division of Parks and Forestry Director Olivia Carpenter Glenn as its newest member. Director Glenn serves on the Commission as Commissioner McCabe's representative, oversees a division of over 400 employees and is responsible for 450,000 acres of land that includes State parks, forests, historic sites and natural lands.
- At a special Commission meeting held on February 14, 2018, the Commission unanimously adopted a resolution to authorize the Executive Director to take any action necessary in cooperation with the DEP to request that the Federal Energy Regulatory Commission reconsider the January 19, 2018 issuance of a Certificate of Public Convenience and Necessity issued to the PennEast Pipeline Company. The Commission also authorized the Executive Director to enter into any agreements with the DEP, other agencies and interested non-profit organizations necessary to protect the property interests of the Commission and the thoughtful regulatory measures enacted pursuant to the "Delaware and Raritan Canal State Park Law of 1974."
- The Commission staff provided technical and regulatory support to the Superintendent of Delaware and Raritan Canal State Park to address chronic flooding issues on Main Street (State Highway Route 29) in Stockton Borough. With the support of Stockton Borough, the New Jersey Department of Transportation (NJDOT) and DEP cleared debris and removed obstructions from stormwater devices and a tributary that drains into the canal.
- Under the leadership of Commissioner Stout, the Joint Commission/NJDOT Bridge Task Force continued to resolve design issues arising from repair and replacement projects for the bridges over the canal. Following consultation with the Delaware and Raritan Canal Master Plan Advisory Committee, the Commission approved a series of six goals that the Commission believes should govern the repair or replacement of canal bridges:
 - I. Maintain and preserve *in situ* the historic elements of existing canal bridges, especially the remaining swing bridges.
 - II. Preserve the "look and feel" of historic bridges by using appropriate materials and colors when undertaking repairs. "Look and feel" can be replicated by examining historic pictures of the original bridges to be used as a guide. Develop a consensus on design standards for bridge decking, the transition of guardrails from the roadway to the bridge, and pedestrian-activated crossings that accomplish this goal.
 - III. Maintain 36-inch minimum freeboard below all canal bridges for boating and NJWSA maintenance activities.
 - IV. Encourage NJDOT to undertake proactive maintenance of existing historic bridges so that emergent repairs are less frequent.
 - V. Provide pedestrian-activated crosswalks where needed.
 - VI. Following a period where each bridge project is examined individually, create a memorandum of agreement (MOA) similar that would allow bridge projects to proceed under a Commission General Permit No. 1.

The proposed NJDOT project to replace of the Alexander Street/Road bridge over the canal in Mercer County would serve as a prototype, the design feature of which would then be memorialized into the MOA, which in turn would guide future projects. As 2018 came to a close,

a consensus was being formed between the Commission and NJDOT on issues such as the design of guiderails, abutments and pedestrian walkways.

- The Commission approved a project to provide for the resurfacing of the Delaware and Raritan Canal State Park Multipurpose Trail with a dense grade aggregate. The aggregate material provides a compact and resilient surface that allows the path to be maintained for all recreational uses.
- The Commission continued to work with the DEP, the NJWSA and the many canal stakeholders to implement the authority's comprehensive plan to address the emerging threat posed by the spread of the invasive aquatic plant hydrilla (*Hydrilla verticillata*) in the Delaware and Raritan Canal. Known as the "The Perfect Weed" because of its tolerance to varied water conditions, easy reproduction, and difficulty to control, hydrilla was introduced to the United States in the 1950's as an aquarium plant. Hydrilla can form dense mats that can choke water flow, clog culverts and pipes, and has been documented to alter water chemistry -- pH, dissolved oxygen, and temperature. If unmanaged, Hydrilla has the potential to reduce water flow in the canal by up to 85%, and clog or damage water intakes. Since the canal has several spillways along its length where water enters neighboring waterbodies, hydrilla could be introduced into the Delaware River, the Assunpink Creek, the Millstone River and the Raritan River. The introduction or further spread into these water bodies would be ecologically catastrophic and have significant impacts on water supply and recreation.

In accordance with the NJWSA's comprehensive aquatic plant management plan developed in 2017, the second year of hydrilla management was completed in September 2018. During the aquatic plant survey conducted in September 2018, no hydrilla plants or fragments were found within the Delaware and Raritan Canal. Hydrilla tuber sampling documented a 97-99% decrease since the 2016 sampling season. While these results are encouraging, hydrilla is extremely persistent and resilient. Tubers remain in the sediment in the canal, and a re-infestation is highly probable if management is not continued. Accordingly, the NJWSA-led management program, with annual modification, will continue for the foreseeable future with collaborative support from the Commission, the DEP and the canal's stakeholder community.

Conclusion: Although challenges remain with regard to appointments, information technology, records storage and physical plant issues, 2018 saw steady progress in improving the operations and effectiveness of the Delaware and Raritan Canal Commission. The Commission looks forward to collaborating with the Murphy Administration and Commissioner McCabe in 2019 as it fulfills its statutory mission to preserve and protect the environmental, recreational, water supply and historic resources that comprise the Delaware and Raritan Canal.