

**SUSQUEHANNA RIVER BASIN COMMISSION  
4423 N. FRONT STREET  
HARRISBURG, PA 17110**

**BUDGET RECONCILIATION  
FY-2021**

**March 13, 2020**

# TABLE OF CONTENTS

|   |    |
|---|----|
| BUDGET FOR FISCAL YEAR 2021 .....   | 1  |
| CURRENT EXPENSE BUDGET FOR FISCAL YEAR 2021 .....   | 2  |
| COMPARATIVE STATEMENT OF REVENUES BY MAJOR SOURCES .....  | 3  |
| COMPARATIVE STATEMENT OF EXPENDITURES BY OBJECT .....   | 4  |
| MAJOR OBJECT CLASSIFICATION PERSONNEL SERVICES .....  | 5  |
| MAJOR OBJECT CLASSIFICATION EMPLOYEE BENEFITS .....   | 6  |
| MAJOR OBJECT CLASSIFICATION CONTRACTUAL SERVICES .....  | 7  |
| MAJOR OBJECT CLASSIFICATION SUPPLIES & OTHER.....   | 8  |
| MAJOR OBJECT CLASSIFICATION CAPITAL EXPENDITURES .....  | 9  |
| ALLOCATION BY PRIORITY MANAGEMENT AREA .....  | 10 |
| PRIORITY MANAGEMENT AREA A: SUSTAINABLE WATER DEVELOPMENT .....                                       | 11 |
| PRIORITY MANAGEMENT AREA B: WATER QUALITY .....   | 15 |
| PRIORITY MANAGEMENT AREA C: FLOODING .....  | 18 |
| PRIORITY MANAGEMENT AREA D: ECOSYSTEMS .....  | 20 |
| PRIORITY MANAGEMENT AREA E: CHESAPEAKE BAY.....   | 22 |
| PRIORITY MANAGEMENT AREA F: COORDINATION, COOPERATION, PUBLIC<br>INFORMATION AND ADMINISTRATION ..... | 23 |

# SUSQUEHANNA RIVER BASIN COMMISSION

## BUDGET FOR FISCAL YEAR 2021

### LEGAL CITATION:

|                |                              |
|----------------|------------------------------|
| New York:      | Laws of 1967, Chapter 785    |
| Pennsylvania:  | Session of 1968, Act No. 181 |
| Maryland:      | Acts of 1967, Chapter 391    |
| United States: | Public Law 91-575            |

This budget anticipates the receipt of both appropriations from the Commission's member jurisdictions and other revenues needed to support the continuing operations of the Commission. This includes short-term programs deemed necessary to achieve the purposes of the Susquehanna River Basin Compact (Compact) and the objectives and goals set forth in the SRBC Comprehensive Plan.

The Compact provides that the Commission may receive and accept such payments, appropriations, grants, gifts, etc., (Article 15, Section 15.1(a) 2) as may be made available to it by the member jurisdictions, or any other public or private corporation or individual, for use in furthering the purposes of the Compact.

Attached are schedules presenting this budget reconciliation in detail for Fiscal Year 2021, which covers the twelve month period beginning July 1, 2020. Comparative amounts for the budget reconciliation for Fiscal Year 2020 and the adopted budget for Fiscal Year 2021 are also included. All statements and explanations submitted herewith are true and correct to the best of our knowledge.

HEREBY APPROVED AND SUBMITTED BY:



Marcia E. Hutchinson  
Director, Administration & Finance

3-13-2020

Date



Andrew D. Dehoff  
Executive Director

March 13, 2020

Date

**SUSQUEHANNA RIVER BASIN COMMISSION**  
**BUDGET RECONCILIATION FOR FISCAL YEAR 2021**  
**(July 1, 2020 - June 30, 2021)**

|  | <b>General<br/>Fund</b> | <b>Water<br/>Management<br/>Fund (1)</b> | <b>Total</b>        |
|--|-------------------------|--|---------------------|
| <b>Revenues:</b>   |                         |  |                     |
| Member Jurisdictions                                     | \$ 1,365,000            |  | \$ 1,365,000        |
| Grants & Contractual                                     | 2,718,000               |  | 2,718,000           |
| Regulatory Program Fees                                  | 4,018,000               | \$ 4,250,000                             | 8,268,000           |
| Other Income   | 385,000                 | 1,230,000                                | 1,615,000           |
| <b>TOTAL REVENUES</b>                                    | <b>\$ 8,486,000</b>     | <b>\$ 5,480,000</b>                      | <b>\$13,966,000</b> |
| <b>Expenditures:</b>                                     |                         |  |                     |
| Personnel Services                                       | \$ 5,375,000            |  | \$ 5,375,000        |
| Employee Benefits  | 2,834,000               |  | 2,834,000           |
| Special Contractual Services                             | 1,408,500               |  | 1,408,500           |
| Travel & Subsistence                                     | 95,000                  |  | 95,000              |
| Commission Meetings & Public Hearings                    | 30,000                  |  | 30,000              |
| Communications, Postage                                  | 75,000                  |  | 75,000              |
| Rent – Equipment, Land & Buildings                       | 40,000                  |  | 40,000              |
| Printing, Reproduction & Advertising                     | 60,000                  |  | 60,000              |
| Software - License, Purchase & Maintenance               | 150,000                 |  | 150,000             |
| Repairs & Maintenance                                    | 157,000                 |  | 157,000             |
| Other Contractual Services                               | 185,000                 |  | 185,000             |
| Utilities, Janitorial                                    | 115,000                 |  | 115,000             |
| Supplies & Materials                                     | 275,500                 |  | 275,500             |
| Cowanesque/Curwensville Water Storage                    |                         | 900,000                                  | 900,000             |
| Billmeyer Quarry Water Storage                           |                         | 470,000                                  | 470,000             |
| Depreciation – Water Storage Rights                      |                         | 1,180,000                                | 1,180,000           |
| Capital Expenditures                                     | 170,000                 |  | 170,000             |
| <b>TOTAL EXPENDITURES</b>                                | <b>\$ 10,970,000</b>    | <b>\$ 2,550,000</b>                      | <b>\$13,520,000</b> |
| <b>EXCESS (DEFICIT) OF REVENUE<br/>OVER EXPENDITURES</b> | <b>\$ (2,484,000)</b>   | <b>\$ 2,930,000</b>                      | <b>\$ 446,000</b>   |
| Transfer from Water Management Fund                      | \$ 1,409,000 (2)        | (1,409,000)                              | -                   |
| Transfer from Fiscal Stabilization Fund                  | \$ 475,000 (3)          |  | \$ 475,000          |
| Transfer from Sustainable Water Resources Fund           | \$ 600,000 (4)          |  | \$ 600,000          |
| <b>TRANSFERS IN (OUT)</b>                                | <b>\$ 2,484,000</b>     | <b>\$ (1,409,000)</b>                    | <b>\$ 1,075,000</b> |
| <b>EXCESS (DEFICIT) AFTER FUND TRANSFERS</b>             | <b>\$ -</b>             | <b>\$ 1,521,000</b>                      | <b>\$ 1,521,000</b> |

(1) The Water Management Fund is designated for the financing of water supply related projects, including costs associated with the planning, engineering, design, and construction phases of new projects or the reformulation of existing projects, or any other project or study initiated by the Commission to address the cumulative impact of consumptive water use or otherwise to support low flow management in the Susquehanna River Basin. Revenue generated in excess of expenses is used to build the balance in the fund.

(2) Costs for employees who are working on Water Management Fund projects are paid through the General Fund and reimbursed from the Water Management Fund.

(3) The Commission's regulations provide that certain withdrawals and consumptive uses that are in excess of the Commission's regulatory thresholds do not require Commission approval if they predated regulations and certain other conditions are met. In FY-21 the Commission will continue to implement new regulations which require the registration of these projects. See page 11 "Registration of Grandfathered Projects" for a complete description of the anticipated activities. Implementation costs in excess of the registration fee will be covered by a transfer from the Commission's Fiscal Stabilization Fund.

(4) FY-21 expenses that will be covered by the Commission's Sustainable Water Resources Fund include: technical assistance to small public water suppliers (\$100,000), fee waivers granted to small public water suppliers (\$140,000), legacy mining feasibility studies (\$200,000), and internally developed water resource studies and other projects (\$160,000).

**SUSQUEHANNA RIVER BASIN COMMISSION**

**GENERAL FUND  
COMPARATIVE STATEMENT OF REVENUES  
BY MAJOR SOURCES**

| <b>SOURCES</b>                              | <b>Budget<br/>Reconciliation<br/>FY 2020</b> | <b>Current<br/>Expense<br/>Budget<br/>FY 2021</b> | <b>Budget<br/>Reconciliation<br/>FY 2021</b> |
|---|--|---|--|
| Member Jurisdictions: (5)                   |  |   |  |
| New York                                    | \$ 259,000                                   | \$ 253,325  | \$ 259,000                                   |
| Pennsylvania                                | 237,000                                      | 759,925   | 760,000                                      |
| Maryland                                    | 346,000                                      | 506,625   | 346,000                                      |
| United States                               | -  | 506,625   | -  |
| <b>Subtotal - Member Jurisdictions</b>      | <b>\$ 842,000</b>                            | <b>\$ 2,026,500</b>                               | <b>\$ 1,365,000</b>                          |
| Other Income: (6)                           |  |   |  |
| Grants & Contractual                        | \$ 1,995,000                                 | \$ 1,945,375                                      | \$ 2,718,000                                 |
| Regulatory Program Fees                     | 4,224,000                                    | 4,014,000   | 4,018,000                                    |
| Interest Income, Building Rental &<br>Other | 342,000                                      | 385,000   | 385,000                                      |
| <b>Subtotal - Other Income</b>              | <b>\$ 6,561,000</b>                          | <b>\$ 6,344,375</b>                               | <b>\$ 7,121,000</b>                          |
| <b>TOTAL ALL SOURCES</b>                    | <b>\$ 7,403,000</b>                          | <b>\$ 8,370,875</b>                               | <b>\$ 8,486,000</b>                          |

(5) In accordance with the Susquehanna River Basin Compact, Section 14.3( c), member jurisdictions are requested to include the apportioned amounts set forth in the current expense budget in their respective budgets next to be adopted, subject to such review and approval as may be required by their respective budgetary processes. Amounts included in the budget reconciliation reflect appropriations included in approved or proposed budgets.

(6) Income from other sources is estimated on the basis of past experience and authorized programs.

**SUSQUEHANNA RIVER BASIN COMMISSION**  
**COMPARATIVE STATEMENT OF EXPENDITURES**  
**BY OBJECT**

| Class Titles                                  | Budget<br>Reconciliation<br>FY 2020 | Current<br>Expense<br>Budget<br>FY 2021 | Budget<br>Reconciliation<br>FY 2021 |
|---|-------------------------------------|---|-------------------------------------|
| Personnel Services                            | \$ 5,000,000                        | \$ 5,325,000                            | \$ 5,375,000                        |
| Employee Benefits                             | 2,765,000                           | 2,897,000                               | 2,834,000                           |
| <b>Subtotal – Personnel &amp; Benefits</b>    | <b>\$ 7,765,000</b>                 | <b>\$ 8,222,000</b>                     | <b>\$ 8,209,000</b>                 |
| Special Contractual Services                  | \$ 690,000                          | \$ 600,000                              | \$ 1,408,500                        |
| Travel & Subsistence                          | 100,000                             | 85,000                                  | 95,000                              |
| Commission Mtgs. & Public Hearings            | 27,000                              | 25,000                                  | 30,000                              |
| Communications, Postage                       | 86,000                              | 86,000                                  | 75,000                              |
| Rent-Equip., Land & Bldgs.                    | 40,000                              | 40,000                                  | 40,000                              |
| Printing, Reproduction & Advertising          | 40,000                              | 40,000                                  | 60,000                              |
| Software Licenses, Purchases &<br>Maintenance | 150,000                             | 150,000                                 | 150,000                             |
| Repairs & Maintenance                         | 162,000                             | 172,000                                 | 157,000                             |
| Other Contractual Services                    | 170,000                             | 205,000                                 | 185,000                             |
| Utilities, Janitorial                         | 115,000                             | 115,000                                 | 115,000                             |
| <b>Subtotal – Contractual Services</b>        | <b>\$ 1,580,000</b>                 | <b>\$ 1,518,000</b>                     | <b>\$ 2,315,500</b>                 |
| Supplies/Other                                | \$ 265,500                          | \$ 295,500                              | \$ 275,500                          |
| Capital Expenditures                          | \$ 440,000                          | \$ 200,000                              | \$ 170,000                          |
| <b>Total</b>                                  | <b><u>\$ 10,050,500</u></b>         | <b><u>\$ 10,235,500</u></b>             | <b><u>\$10,970,000</u></b>          |

**SUSQUEHANNA RIVER BASIN COMMISSION  
MAJOR OBJECT CLASSIFICATION  
PERSONNEL SERVICES**

| <b>Appropriation Class</b> | <b>Budget<br/>Reconciliation<br/>FY 2020</b> | <b>Current Expense<br/>Budget<br/>FY 2021</b> | <b>Budget<br/>Reconciliation<br/>FY 2021 <sup>(7)</sup></b> |
|----------------------------|--|---|---|
| Salaries                   | \$ 5,000,000                                 | \$ 5,325,000                                  | \$ 5,375,000  |

**COMPARISON OF STAFFING  
FOR FISCAL YEAR 2021**

| <b>Departments</b>                 | <b>Current Expense Budget<br/>FY 2021</b> |              |              | <b>Budget Reconciliation<br/>FY 2021</b> |              |              | <b>Change ( + Or - )</b> |              |              |
|------------------------------------|---|--------------|--------------|--|--------------|--------------|--------------------------|--------------|--------------|
|                                    | <b>Prof.</b>                              | <b>Cler.</b> | <b>Total</b> | <b>Prof.</b>                             | <b>Cler.</b> | <b>Total</b> | <b>Prof.</b>             | <b>Cler.</b> | <b>Total</b> |
| Executive                          | 3   | 1            | 4            | 4  | 1            | 5            | 1                        | 0            | 1            |
| Administrative &<br>Staff Services | 7   | 2            | 9            | 7  | 2            | 9            | 0                        | 0            | 0            |
| Gov't/Public Affairs               | 1   | 0            | 1            | 2  | 0            | 2            | 1                        | 0            | 1            |
| Technical Programs                 | 2   | 0            | 2            | 2  | 0            | 2            | 0                        | 0            | 0            |
| Project Review                     | 14  | 2            | 16           | 12                                       | 2            | 14           | -2                       | 0            | -2           |
| Planning & Operations              | 6   | 0            | 6            | 8  | 0            | 8            | 2                        | 0            | 2            |
| Compliance                         | 10  | 2            | 12           | 9  | 1            | 10           | -1                       | -1           | -2           |
| Grant Programs                     | 17  | 1            | 18           | 15                                       | 1            | 16           | -2                       | 0            | -2           |
| <b>Total</b>                       | <b>60</b>                                 | <b>8</b>     | <b>68</b>    | <b>59</b>                                | <b>7</b>     | <b>66</b>    | <b>-1</b>                | <b>-1</b>    | <b>-2</b>    |

(7) The FY-2021 budget reconciliation includes 3% for performance-based increases and bonuses, and 3% for cost of living increases.

**SUSQUEHANNA RIVER BASIN COMMISSION**

**MAJOR OBJECT CLASSIFICATION  
EMPLOYEE BENEFITS**

| <b>Appropriation Class</b>             | <b>Budget<br/>Reconciliation<br/>FY 2020</b> | <b>Current<br/>Expense<br/>Budget<br/>FY 2021</b> | <b>Budget<br/>Reconciliation<br/>FY 2021</b> |
|--|--|---|--|
| Medical Insurance                      | \$ 800,000                                   | \$ 800,000  | \$ 745,125                                   |
| Social Security-Commission Share       | 370,000                                      | 400,000   | 375,000                                      |
| Workmen's Compensation                 | 25,000                                       | 25,000  | 25,000                                       |
| Employee Life Insurance                | 40,000                                       | 42,000  | 42,000                                       |
| Unemployment Compensation              | 5,000  | 5,000   | 5,000  |
| Recognition & Rewards (8)              | 25,000                                       | 25,000  | 26,875                                       |
| Retirement Plan - Commission Share (9) | 1,500,000                                    | 1,600,000   | 1,615,000                                    |
| <b>Total</b>                           | <b>\$ 2,765,000</b>                          | <b>\$ 2,897,000</b>                               | <b>\$ 2,834,000</b>                          |

(8) Budget for employee rewards & recognition programs budgeted separately at .5% of salaries beginning with FY-2020 budget reconciliation.

(9) Retirement employer contribution rate budgeted for FY-2021 is 30% of payroll.



## SUSQUEHANNA RIVER BASIN COMMISSION

### MAJOR OBJECT CLASSIFICATION CONTRACTUAL SERVICES

| Appropriation Class                           | Budget<br>Reconciliation<br>FY 2020 | Current<br>Expense<br>Budget<br>FY 2021 | Budget<br>Reconciliation<br>FY 2021 |
|---|-------------------------------------|---|-------------------------------------|
| Fees, Financial Services                      | \$ 40,000                           | \$ 50,000                               | \$ 60,000                           |
| Fees, Legal & Investigative Services          | 25,000                              | 25,000                                  | 25,000                              |
| Fees, Cooperative Programs                    | 50,000                              | 50,000                                  | 68,000                              |
| Fees, Research & Laboratory Services          | 160,000                             | 160,000                                 | 170,000                             |
| Fees, Computer Services Other                 | 15,000                              | 15,000                                  | 25,000                              |
| Other Services - Professional <sup>(10)</sup> | 400,000                             | 300,000                                 | 1,060,500                           |
| Travel & Subsistence                          | 100,000                             | 85,000                                  | 95,000                              |
| Commission Meetings                           | 22,000                              | 20,000                                  | 25,000                              |
| Public Hearing Expenses                       | 5,000                               | 5,000                                   | 5,000                               |
| Communications Expenses                       | 71,000                              | 71,000                                  | 60,000                              |
| Postage                                       | 15,000                              | 15,000                                  | 15,000                              |
| Rent - Land, Buildings & Equipment            | 40,000                              | 40,000                                  | 40,000                              |
| Printing & Reproduction                       | 35,000                              | 35,000                                  | 55,000                              |
| Advertising                                   | 5,000                               | 5,000                                   | 5,000                               |
| Software Purchase, License & Maint.           | 150,000                             | 150,000                                 | 150,000                             |
| Repairs & Maint.-Bldg. & Grounds              | 40,000                              | 50,000                                  | 50,000                              |
| Repairs & Maint.-Office Equip.                | 2,000                               | 2,000                                   | 2,000                               |
| Repairs & Maint.-Auto. Equip.                 | 25,000                              | 25,000                                  | 25,000                              |
| Repairs & Maint.-Lab. Equip.                  | 95,000                              | 95,000                                  | 80,000                              |
| Insurance                                     | 140,000                             | 175,000                                 | 160,000                             |
| Dues & Memberships                            | 30,000                              | 30,000                                  | 25,000                              |
| Electric, Heat, Water & Sewage                | 80,000                              | 80,000                                  | 80,000                              |
| Janitorial Service                            | 35,000                              | 35,000                                  | 35,000                              |
| <b>Total</b>                                  | <b>\$ 1,580,000</b>                 | <b>\$ 1,518,000</b>                     | <b>\$ 2,315,500</b>                 |

(10) The FY-2021 budget includes agreements with independent contractors. The Executive Director is authorized by the resolution adopting this budget to execute any and all agreements up to the total amount budgeted for contractors for the fiscal year.

**SUSQUEHANNA RIVER BASIN COMMISSION**

**MAJOR OBJECT CLASSIFICATION  
SUPPLIES and OTHER**

| Appropriation Class          | Budget<br>Reconciliation<br>FY 2020 | Current<br>Expense<br>Budget<br>FY 2021 | Budget<br>Reconciliation<br>FY 2021 |
|------------------------------|-------------------------------------|---|-------------------------------------|
| Office Supplies              | \$ 30,000                           | \$ 38,000                               | \$ 30,000                           |
| Automotive Supplies (11)     | 40,000                              | 40,000                                  | 40,000                              |
| Janitorial Supplies          | 5,000                               | 5,000                                   | 5,000                               |
| Computer Supplies            | 20,000                              | 20,000                                  | 20,000                              |
| Laboratory Supplies (12)     | 100,000                             | 105,000                                 | 100,000                             |
| Miscellaneous Supplies       | 3,000                               | 3,000                                   | 3,000                               |
| Subscriptions & Publications | 2,500                               | 2,500                                   | 2,500                               |
| Moving & Recruiting Expenses | 5,000                               | 5,000                                   | 5,000                               |
| Staff Training & Seminars    | 50,000                              | 50,000                                  | 50,000                              |
| Miscellaneous                | 10,000                              | 20,000                                  | 20,000                              |
| <b>Total</b>                 | <b>\$ 265,500</b>                   | <b>\$ 288,500</b>                       | <b>\$ 275,500</b>                   |

(11) Also includes fuel costs

(12) Includes replacement parts for sondes

**SUSQUEHANNA RIVER BASIN COMMISSION**

**MAJOR OBJECT CLASSIFICATION  
CAPITAL EXPENDITURES**

| <b>Appropriation Class</b>   | <b>Budget<br/>Reconciliation<br/>FY 2020</b> | <b>Current<br/>Expense<br/>Budget<br/>FY 2021</b> | <b>Current<br/>Budget<br/>Reconciliation<br/>FY 2021</b> |
|------------------------------|--|---|--|
| Computer Equipment           | \$ 70,000                                    | \$ 70,000   | \$ 70,000  |
| Automotive Equipment (13)    | 40,000                                       | 75,000  | 40,000   |
| Office Furniture & Fixtures  | 5,000  | 5,000   | 5,000  |
| Scientific & Laboratory (14) | 325,000                                      | 50,000  | 55,000   |
| <b>Total</b>                 | <b>\$ 440,000</b>                            | <b>\$ 200,000</b>                                 | <b>\$ 170,000</b>  |

(13) One Commission vehicle will be replaced in FY-2021.

(14) In FY-2020 the Commission completed a four year project to upgrade its Remote Water Quality Monitoring Network.

**SUSQUEHANNA RIVER BASIN COMMISSION**  
**ALLOCATION BY PRIORITY MANAGEMENT AREA**  
**FOR FISCAL YEAR 2021**

The total expense budget request for Fiscal Year 2021 is \$13,520,000. The budget will support the Commission's programs as follows:

Percent of Total Budget

|      |  |      |
|------|--|------|
| I.   | Sustainable Water Development                            | 58%  |
| II.  | Water Quality  | 9%   |
| III. | Flooding   | 3%   |
| IV.  | Ecosystems   | 9%   |
| V.   | Chesapeake Bay   | 6%   |
| VI.  | Coordination, Cooperation, Public Information and Admin. | 15%  |
|      | Total  | 100% |

# PRIORITY MANAGEMENT AREA A: SUSTAINABLE WATER DEVELOPMENT

**Desired Result**

To regulate and plan for water resources development in a manner that maintains economic viability, protects instream users, and ensures ecological diversity; and meets immediate and future needs of the people of the basin for domestic, municipal, commercial, agricultural and industrial water supply and recreational activities.

**Programs**

**AREA A: Sustainable Water Development**

|  |                     |
|--|---------------------|
| Regulation of Water Users - Permits.....                   | \$ 1,416,500        |
| Regulation of Water Users - ABR.....                       | 282,000             |
| Compliance and Enforcement .....                           | 1,225,000           |
| Registration of Grandfathered Projects .....               | 475,000             |
| Drought Planning & Coordination .....                      | 80,000              |
| General Hydrologic Studies .....                           | 40,000              |
| Cumulative Water Use and Availability Study.....           | 131,500             |
| Cowanesque/Curwensville Reservoir Operations .....         | 2,070,000           |
| Consumptive Use Mitigation Planning .....                  | 305,000             |
| Hydrologic Model Updates .....                             | 27,000              |
| Low Flow Augmentation Operations .....                     | 45,000              |
| Public Water System Assistance Initiative .....            | 260,000             |
| Billmeyer Quarry Consumptive Use Mitigation Project.....   | 542,500             |
| Consumptive Use Mitigation Pilot.....                      | 240,000             |
| Climate Change Studies.....                                | 30,000              |
| Low Flow Protection Policy Implementation Refinements..... | 50,000              |
| Low Flow Monitoring Project.....                           | 40,000              |
| Hydrologic Conditions Monitoring Tool.....                 | 40,000              |
| USACE Reservoirs Environmental Flow Study.....             | 63,000              |
| Octoraro Consumptive Use Mitigation Study.....             | 305,000             |
| County Public Water Supply Forecasts .....                 | 50,000              |
| DCNR Lakes Environmental Flow Study.....                   | 67,000              |
| Hydroelectric Project Regulation & Relicensing .....       | 113,500             |
| <b>Total</b>   | <b>\$ 7,898,000</b> |

**Activities which will be conducted under Priority Management Area A: Sustainable Water Development**

**Regulation of Water Users – Permits** – Commission staff will review and make recommendations on appropriate actions to take on applications, modifications and renewals for water withdrawal and consumptive uses.

**Regulation of Water Users – ABR** - This expedited Approval-by-Rule process is used by companies interested in using a source of water that has already been approved for use (e.g., a public water supply) or a source that is of lesser quality (e.g., wastewater discharge, mine water).

**Compliance and Enforcement** - The Commission requires metering at all withdrawal sites to document daily quantities of water which have been withdrawn or used. Metering data are reported quarterly by project sponsors online. Staff use the data to monitor approval conditions such as protective passby flows. The Commission’s compliance program also includes field inspection of approved projects both during construction and periodically during the term of the approval, and enforcement actions against companies that fail to gain Commission approval or violate the terms and conditions of approvals. These costs also include the cost of maintaining the Sayre, Pennsylvania office.

**Registration of Grandfathered Projects** – The Commission’s regulations provide that certain withdrawals and consumptive uses that are in excess of the Commission’s regulatory thresholds do not require Commission approval if they predated regulations and certain other conditions are met. This exemption is referred to as “grandfathering”. Grandfathered projects have not reported withdrawal or consumptive use data to the Commission, which hampers its ability to effectively manage the water resources of the Basin. The process for grandfathered projects and the Commission to determine the grandfathered amount is an expensive, inefficient and time consuming process that very often leads to inconclusive results given the scarcity of historical data. In FY-2021, the Commission will continue to implement new regulations which require grandfathered projects to register with the Commission, receive a definitive determination of a grandfathered quantity, and to report water withdrawal and consumptive use data. Funding for the program is provided by the Commission’s Fiscal Stabilization Fund.

**Drought Planning & Coordination** - The Commission established a basin-wide Drought Coordination Plan with its member jurisdictions to promote consistency when determining, responding to and informing the public of droughts, and convenes the Drought Coordinating Committee as drought conditions emerge to share information and identify possible response actions. Staff will continue to consult with the Drought Coordinating Committee during drought conditions and will revise the Drought Coordination Plan and related implementation tools as needed.

**General Hydrologic Studies** - Commission staff are continually monitoring basin hydrologic conditions and improving hydrologic datasets and tools to guide regulatory and planning decision making. Specific efforts include monitoring flood/drought conditions and associated mitigation operations, maintaining a comprehensive stream gage database containing basin characteristic and streamflow statistic data, improving passby flow determination datasets and spreadsheet tools, preparing low flow forecasts for Conowingo Pond Management Workgroup meetings, enhancing ecosystem flow recommendations compliance tool, etc.

**Cumulative Water Use and Availability Study** - This study, which was initially completed in 2016, compiled a comprehensive, basin-wide water use data library and refined procedures for computing existing and projected cumulative consumptive water use at the project and watershed scales. Staff determined sustainable water availability limits for watersheds throughout the basin, and developed a GIS-based tool for automating the cumulative water use and availability analysis and illustrating results to inform regulatory and planning activities. In FY-2021, staff will maintain and update the water use database, evaluate additional refinements to the tool, and conduct more detailed analyses in priority watersheds.

**Cowanesque/Curwensville Reservoir Operations** - The Commission owns water supply storage at Cowanesque and Curwensville Lakes. Costs include depreciation of water storage rights (\$1,131,000), and operating and maintenance costs for Cowanesque and Curwensville Lakes (\$900,000). The Commission’s share of the operating and maintenance costs for Cowanesque Lake are passed through to Exelon and Talon.

**Consumptive Use Mitigation Planning** – Staff will continue to implement recommendations in the Consumptive Use Mitigation Plan related to the evaluation of water storage and low flow augmentation release potential within the basin including USACE reservoirs, state/private lakes, abandoned mine pools, and other feasible sources. Staff will also finalize and implement a Consumptive Use Mitigation Policy to provide guidance regarding the determination of an acceptable manner of mitigation to be provided by project sponsors whose consumptive use is subject to review and approval and to memorialize contemporary consumptive use mitigation criteria utilized by the Commission in formulating and implementing consumptive use mitigation projects.

**Hydrologic Model Updates** – Commission staff will continue to make necessary updates and refinements to our existing basin-wide OASIS hydrologic model. Improvements will include updated software, hydrologic records, demand data, and project operations as well as model documentation, training, and support.

**Low Flow Augmentation Operations** – The Commission continues to monitor hydrologic conditions throughout the basin and coordinate closely with partner agencies, particularly with respect to low flow events and operational triggers at consumptive use mitigation and environmental restoration projects. These projects currently include Curwensville Lake, Whitney Point Lake, Lancashire 15 Abandoned Mine Drainage Treatment Plant, Cresson Abandoned Mine Drainage Treatment Plant, and Billmeyer Quarry.

**Public Water System Assistance Initiative** – Through this initiative Commission staff provide both global and focused education and system-specific guidance to small public water systems that meet eligibility requirements, lack financial and technical capabilities, and are subject to Commission groundwater withdrawal regulations. Staff also provide technical assistance related to groundwater withdrawal application process and aquifer testing requirements, and hydrogeologic guidance to assist in the development, management and protection of groundwater sources. Assistance also includes requirements related to satisfying post-approval conditions, including technical assistance, loaning equipment, and initial review of short-term data collection activities. Project review application fee waivers are also provided to select systems. Funding for this initiative is provided by the Commission’s Sustainable Water Resources Fund.

**Billmeyer Quarry Consumptive Use Mitigation Project** – Staff partnered with Lancaster County Solid Waste Management Authority (LCSWMA) to assess the feasibility of using Billmeyer Quarry as a source of consumptive use mitigation for the lower Susquehanna River during low flow periods. Numerous studies were conducted including rare, threatened and endangered species surveys, eradication of invasive quagga mussels, and a pumping test to evaluate quarry storage, impacts to other water users, and quarry recharge. In December 2018, the Commission entered into a water storage agreement with LCSWMA for the use of up to 425 million gallons of stored water in Billmeyer Quarry for consumptive use mitigation. During FY-2021 staff will continue to implement the project operations plan (pending low flow conditions) and conduct ongoing monitoring related to aquatic invasive species and groundwater levels. Costs also include \$470,000 for payments due to LCSWMA under the Water Storage Agreement, and depreciation of water storage rights of \$49,000.

**Consumptive Use Mitigation Pilot** - The Commission strives to encourage and undertake consumptive use mitigation projects through the administration of its regulatory program and its own activities funded by consumptive use mitigation fee payments. This includes pursuit of traditional water storage and low flow augmentation projects, as well as alternative methods including water conservation and reuse, groundwater recharge, and water quality improvements. This pilot will focus on identifying and developing an alternative consumptive use mitigation project within a priority watershed in the basin.

**Climate Change Studies** – There is a high degree of uncertainty regarding future climate projections related to water resources. Fortunately, the Susquehanna River Basin was selected as one of four case study watersheds to be investigated in the Hyperion Project. This project, run by leading climate science experts across the country, aims to develop new high-quality regional climate data specifically targeted to support stakeholder needs. The Hyperion Project is scheduled to be completed in 2020. A second phase of the project is underway with a component focused on evaluating the 1960s Northeastern United States drought under future climate conditions. Both research projects will provide valuable climate science insight and data for informing the Commission’s water resources planning and management efforts.

**Low Flow Protection Policy Implementation Refinements** – In 2012, the Commission adopted a Low Flow Protection Policy (LFPP) outlining the factors and process for making passby flow and conservation release determinations related to withdrawal approvals. Commission staff recently completed an assessment focused on evaluating the implementation of the LFPP in order to document lessons learned and identify areas for improvement. Implementation refinements will entail ongoing updates to water use databases and improved methods for informing withdrawal limits.

**Low Flow Monitoring Project** – The Commission strives to maintain focused research efforts on low flow management in light of consumptive use mitigation obligations and ecosystem flow needs. Implementation of the proposed study plan will be collaborative effort incorporating past results to direct monitoring in targeted areas of interest. Staff will combine water availability tools and an understanding of water challenged and potentially stressed areas across the basin with ecosystem flow questions regarding water quality and aquatic ecosystems to provide greater insight for improved policy making and enhance scientific understanding.

**Hydrologic Conditions Monitoring Tool** – Staff will work to develop a basin-wide Hydrologic Conditions & Project Operations Tracking Tool to (1) monitor existing hydrologic conditions consistent with indices outlined in the Commission’s Drought Coordination Plan, Draft Low Flow Operations Protocol, and Low Flow Protection

Policy and (2) track quantitative trigger thresholds linked to drought status, consumptive use mitigation and low flow augmentation releases, and passby flow and conservation release requirements.

**USACE Reservoirs Environmental Flow Study** – Under the Planning Assistance to States (PAS) Program, staff will partner with the United States Army Corps of Engineers (USACE) on a study to assess environmental flows at federal reservoirs in the basin. Significant changes have occurred in the 6 major subbasins since the initial construction of the 15 USACE operated projects. Furthermore, despite recent advances in environmental flow science, no specific study has been conducted to evaluate opportunities for improving environmental flows at each USACE reservoir in the basin. The study will culminate in the development of a scoping plan for updating water control plans at applicable reservoirs.

**Octoraro Consumptive Use Mitigation Study** – Chester Water Authority’s (Authority) right to divert up to 30 million gallons per day (mgd) from the Octoraro Reservoir and 30 mgd from the Susquehanna River is recognized in the Commission’s Comprehensive Plan as an authorized pre-Compact diversion. Over the years, the Authority has expanded its service area beyond that proposed when the applications and associated permits for the 60 mgd were issued. These expansions are not covered by the pre-Compact authorization and have been subject to Commission review, approval, and mitigation requirements. The Authority is currently considering organizational changes that may lead to a loss of grandfathered water use for their pre-Compact diversion and additional consumptive use mitigation obligations. The purpose of this study is to identify project operation and water quality improvement alternatives that would adequately mitigate the Authority’s diversion and consumptive use in accordance with standards outlined in the Commission’s regulations. Assistance will be provided by a contractor at a cost not to exceed \$125,000.

**County Public Water Supply Forecasts** – Commission staff will continue to work with county-level planning agencies to best assess and plan for existing and future water supply demands. Many counties are currently modifying or creating water resource management plans, and need technical assistance from the agencies that provide oversight for water withdrawals and use in order to best accommodate growth and prevent conflicts, as well as preserve areas that provide for critical recharge to the hydrologic system. In return, the Commission gains valuable insight with regards to land use planning and growth areas that help project future water use. Activities will include, but are not limited to, providing information on water use and availability, exchanging information on growth patterns, analyzing potential areas of concern with respect to competing demands and limits on water availability, and assisting county staff with developing materials to educate stakeholders.

**DCNR Lakes Environmental Flow Study** – The purpose of this study is to assess opportunities for enhancing environmental flows at Pennsylvania Department of Conservation and Natural Resources (DCNR) lakes in the Susquehanna River basin and addressing related goals and objectives cited in DCNR’s Climate Change Adaption and Mitigation Plan. Specifically, the Plan expresses a desire to 1) evaluate the operation of each dam and determine impacts downstream when water levels are reduced; 2) examine measures to compensate for low flows such as releasing compensation flow downstream to address conservation or recreation impacts; 3) develop and/or retrofit state park lakeshore infrastructure to be adaptable to changing pool depths; and 4) conduct water releases that mimic historical and natural variability. Additionally, the Plan summarizes strategies focused on improving conditions within watersheds upstream of DCNR lakes. These efforts entail restoration of riparian buffers, increasing stream thermal cover, management of invasive species, erosion and sediment control, and increasing overland flow retention leading to increased groundwater infiltration.

**Hydroelectric Project Regulation and Relicensing** - The Commission will continue to be actively engaged with partner agencies and stakeholders in the relicensing of hydroelectric projects located on the Susquehanna River. In FY-21 applications for Colliersville, York Haven, and Conowingo facilities will be reviewed. Key resource issues of focus typically include environmental flows, fish passage, water quality, sediment/nutrient management, etc. Staff have and will continue to coordinate with partner agencies and stakeholders on study requests, study plan/report reviews, comment letters, National Environmental Policy Act document reviews, Section 401 Water Quality Certificate conditions, etc. throughout the relicensing processes.



## PRIORITY MANAGEMENT AREA B: WATER QUALITY

### Desired Result

To support the existing and designated uses of all water bodies by achieving water quality that meets or exceeds standards.

### Programs

#### AREA B: Water Quality

|  |           |                  |
|--|-----------|------------------|
| Subbasin Surveys .....   | \$        | 100,000          |
| Large Waters Assessment .....  |           | 65,000           |
| Total Maximum Daily Loads for Impaired Stream Reaches .....            |           | 175,000          |
| Source Water Protection and Interstate Water Security Activities ..... |           | 80,000           |
| Water Quality Restoration and Protection.....                          |           | 40,000           |
| Nonpoint Source BMP Monitoring .....                                   |           | 35,000           |
| Legacy Mining Feasibility Studies.....                                 |           | 200,000          |
| Continuous In-stream Monitoring Network.....                           |           | 535,000          |
| <b>Total</b>   | <b>\$</b> | <b>1,230,000</b> |

#### Activities which will be conducted under Priority Management Area B: Water Quality

**Subbasin Surveys** - The Commission has been conducting water quality and biological surveys of streams in each of the six major subbasins on a rotating basis. Subbasin Surveys involve collection of chemical, biological, and physical data. Subbasin-scale watershed assessments provide valuable macroinvertebrate, water quality, physical habitat, and discharge information to interested federal, state, and local parties located within the targeted subbasins. In FY-21, the Commission will be reporting on probabilistic data collected in the New York portions of the Basin (Chemung and Upper Susquehanna Subbasin), which will provide valuable information to New York State for use in 305(b) portion of the next Integrated Report. In FY-21, the Commission will collect data at probabilistic sites within the Middle Susquehanna Subbasin.

**Large Waters Assessment** – In 2002, the Commission conducted a pilot study to determine appropriate methods to assess the biological conditions of large rivers in the Susquehanna River Basin. In subsequent years, the large river assessment program was expanded to include biological and water quality monitoring at approximately 25 stations on the mainstem Susquehanna River and along sections of the West Branch Susquehanna River, the Juniata River, the Chemung River, as well as the series of reservoirs on the Lower Susquehanna River. The Commission also continues to coordinate with the states and USEPA, as well as integrate source water protection monitoring activities to enhance protection of public drinking water supplies that rely on the main stem Susquehanna River and its major tributaries. Ongoing focus for FY-2021 will be the major rivers and reservoirs in the Lower subbasin, including monitoring invasive species such as snakehead, blue catfish, flathead catfish, and gizzard shad; vulnerable species such as the Chesapeake Logperch; and migratory species targeted for restoration such as American eel and American shad.

**Total Maximum Daily Loads for Impaired Stream Reaches** - The federal Clean Water Act requires that certain impaired waters be included on a Section 303(d) list for each state. After USEPA approves the state lists, TMDLs must be prepared for the listed waters. The Commission will coordinate with its member jurisdictions regarding TMDL and Section 303(d) issues, including the TMDL issues associated with the Chesapeake Bay restoration effort. The Commission also will assist the states in developing TMDLs. TMDL work in each member jurisdiction will be performed in accordance with the jurisdiction's development plan; with the Commission developing TMDLs on streams affected by urban runoff, agriculture, and other causes of impairment. The Commission will coordinate closely with the appropriate agencies on the Commission's TMDL activities. Underway since FY-2015, the

Commission has continued its close coordination with PADEP on a pilot project for TMDL alternatives in the Chiques Creek watershed, referred to as Alternative Restoration Planning (ARP). Focus in FY-2021 will include coordination of stakeholder groups, various watershed monitoring activities, including operation and maintenance of two real-time continuous in-stream monitoring (CIM) stations, as well as documentation of best management practice (BMP) implementation and compilation of monitoring results. The Commission also will continue support of on-going TMDL activities in the Octoraro watershed in south-central Pennsylvania.

**Source Water Protection and Interstate Water Security Activities** - Staff will continue to support implementation of regional source water protection management measures for the majority of large public water supply systems within the Lower Susquehanna River Basin. Staff will also continue to operate, maintain, and provide data for the Early Warning System for public water suppliers, which was established by the Commission in 2003, and expanded in 2018. Staff also will continue to provide 24/7 support to members of PADEP's Spill Response unit to furnish, real-time condition modeled estimates of travel time between suspected contaminant plumes and water supply intake features. In FY-2021, the Commission will continue to organize and formalize aspects of the Lower Susquehanna Source Water Protection Partnership through increased data and information sharing, development of technical and issue steering committees, and promotion of awareness among members/affiliates about topical issues.

**Water Quality Restoration & Protection** - The Commission has long collaborated on inter-agency and other stakeholder organization partnerships to restore water quality and related ecosystem functions as the result of legacy mining impacts. Commission staff will continue to pursue and coordinate mine drainage restoration projects and related issues, as well as strengthen existing and develop new partnerships aimed at restoring/protecting water resources that are challenged by agricultural land use, stormwater management, and other development activities.

As warranted, Commission staff will furnish technical support related to site and watershed-scale restoration and protection in the form(s) of:

- collecting habitat and water quality data,
- completing biological community surveys,
- compiling historic data inventories,
- analyzing long-term water quality monitoring data for pollutant trends & loads,
- evaluating CIM data according to PADEP Eutrophication Cause Determination protocol that defines nutrients as a cause of stream impairment,
- designing site and watershed monitoring approaches,
- partnering for stakeholder outreach/education workshops, and/or,
- preparing concept-level site remediation plans.

Staff also will assist by coordinating among agencies and stakeholder groups to advance specific projects and/or initiatives aimed at elevating awareness or promoting support for restoration and protection activities.

**Nonpoint Source Best Management Practices Monitoring** – The Commission will continue its monitoring program that targets Best Management Practices (BMP) projects implemented to address nonpoint source pollution from urban and agricultural lands. This monitoring program is a partnership with local municipalities, landowners, watershed stewardship groups, and others that seeks to:

- Precisely monitor BMPs in effort to discern improvements to aquatic resource conditions,
- Develop information, knowledge, and perspective related to cost and effectiveness of on-going BMP operation & maintenance (O&M) activities, and
- Promote findings within the broader NPS pollutant management stakeholder community that expresses eagerness for information that relates BMP implementation to aquatic resources.

In addition to site-specific BMP monitoring activities, in FY-21 Commission staff will pursue data analytics in collaboration with the Natural Resource Conservation Service (NRCS) to evaluate predictor – response variables at HUC-12 subwatershed scale by combining SRBC's in-stream monitoring data (i.e., response variables) with agriculture BMP data (i.e., predictor variables).

**Legacy Mining Feasibility Studies** – Dollar-for-dollar, the remediation of legacy coal mine impacts has consistently demonstrated tangible and positive investments in terms of natural resources service and function uplift. Over the years, tightening federal and state budgets have given funding priority to “shovel-ready” abandoned mine land and abandoned mine drainage (AML and AMD) projects, which has made it increasingly difficult to obtain funding to support the investigation, feasibility, design, permitting, and even certain types of implementation (e.g., soil decompaction & amendment, land-clearing, etc) activities necessary to complete such projects. In FY-2021, the Commission will provide funding from its Sustainable Water Resources Fund to support investigation, design, permitting, and certain related activities to ensure a steady progression of shovel-ready AML/AMD projects exists. Engineering services not to exceed \$40,000 will be provided by an independent contractor. The Commission also anticipates contributions to partner agencies and organizations of \$18,000.

**Continuous In-stream Monitoring** – In early 2010, in the Marcellus Shale Gas Play portion of the Susquehanna River Basin, the Commission launched what has grown to be a 63-station continuous in-stream monitoring (CIM) project known as the Remote Water Quality Monitoring Network (RWQMN) that makes water quality indicator data publicly accessible in real-time through the Commission’s web interface. In addition to the RWQMN, the Commission operates approximately 25 CIM stations throughout the Basin in support of various projects, partner initiatives, and data needs. The Commission’s CIM program is supported by a blend of revenue sources that include internal resources as well as contracts with member jurisdiction agencies such as the Pennsylvania Department of Conservation and Natural Resources (DCNR) and PADEP, USEPA Clean Water Act and other grant-funded projects, and private industry.

In addition to the core water quality indicators, select stations are equipped with sensors that measure water level, chloride, nitrogen, and/or incident sunlight. Staff perform scheduled and trouble-shoot maintenance actions on CIM equipment as well as collect supplemental data/information such as aqueous chemistry, stream discharge, biologic community (benthic macroinvertebrate, fish, periphyton community), and habitat information. Data developed through the Commission’s CIM projects support a growing myriad of aquatic science applications by members of the Commission as well as analysts in numerous other organizations – the Commission’s CIM program is nationally and internationally recognized for its unparalleled scientific value.

In FY-2021, the Commission will enter its second decade of support to DCNR for O&M and data analytics at 10 CIM stations that are located on State-owned lands.

## PRIORITY MANAGEMENT AREA C: FLOODING

### Desired Result

To prevent loss of life and significantly reduce future damages from floods within the basin through an integrated system of structural and nonstructural flood damage reduction measures.

### Programs

#### **AREA C: Flooding**

|                                      |           |                |
|--------------------------------------|-----------|----------------|
| Flood Coordination.....              | \$        | 120,000        |
| Tri-County Flood Warning System..... | \$        | 30,000         |
| Flood Mapping Pilot.....             |           | 30,000         |
| Flood Studies.....                   |           | 75,000         |
| Flood Warning System Update.....     |           | 35,000         |
| Stormwater Management .....          |           | 50,000         |
| Silver Jackets.....                  |           | 30,000         |
| <b>Total</b>                         | <b>\$</b> | <b>370,000</b> |

#### **Activities which will be conducted under Priority Management Area C: Flooding**

**Flood Coordination** – Commission staff will facilitate existing partnerships and work to develop new partnerships at the federal, state and community level that leverage available resources to provide flood risk reduction techniques and technology to impacted communities across the basin. Focusing on community based needs, partnerships will plan, design, and implement solutions to facilitate understanding and response to flood events. Additionally, staff will be responsive to media, legislative, and general request for flood related information and products.

**Tri-County Flood Warning System** – Commission staff, under a Federal Emergency Management Agency (FEMA) grant, conducted a pilot project in Huntingdon, Lancaster, and Dauphin Counties focused on developing camera-based flood warning systems. The project will enhance situational awareness through a variety of pathways including existing mobile technologies, cellular based camera imagery, and a web-based data portal. In FY-2021, costs for the project include maintenance of the cameras and data portal.

**Flood Mapping Pilot** – This pilot project will seek to utilize recently developed Geographic Information System methodologies in concert with output from National Oceanic and Atmospheric Administration’s (NOAA) National Water Model to produce “on the fly” flood mapping readily disseminated to emergency managers and the general public in near real-time. This product differs from a traditional static flood inundation map library in that the map product does not require a NWS River Forecast Point to provide a frame of reference and will display flood inundation based on forecast discharge related to a specific rainfall forecast.

**Flood Studies** –The persistent challenge of flooding in basin communities requires appropriate mitigation planning to minimize ongoing risks to life and property. The Commission will be responsive to partner requests for assistance relative to hydraulic and hydrologic studies that seek to characterize the nature and extent of flood risk within the basin. Efforts typically include river bathymetry surveys, hydraulic structure surveys, stormwater facility surveys, hydrologic analyses and modeling, flood mapping quality assurance reviews, technical report preparation, etc.

**Flood Warning System Update** - Originally developed in partnership with the USACE, the Susquehanna Flood Warning and Response System provided community officials and emergency managers with an ArcGIS tool to evaluate potential damages associated with and necessary response to a forecast flood. Time has rendered the original tool unusable and updated inundation mapping was completed after the 2011 floods. This update will modernize the tool and attempt to provide online dissemination. USACE will be primarily responsible for updating the tool and the Commission will be leading the development of online dissemination. The final product will provide critical response data to manage floods as well as a rapid damage assessment form.

**Stormwater Management** – Commission staff will provide technical support to counties and municipalities with identifying opportunities to improve stormwater management through structural and non-structural management practices to best manage increasing challenges associated with stormwater and nuisance flooding. Support will include, but is not limited to, providing guidance on development of educational/guidance materials for stakeholder implementation, technical assistance with developing stormwater reduction strategies, support for prioritizing and implementing best management practices in critical areas, and coordination support among local, state and federal interests.

**Silver Jackets** – Commission staff will continue to seek leveraged solutions for flood mitigation projects through coordination with Silver Jackets teams in the basin. The Silver Jackets effort is spearheaded by the USACE and involves multiple federal and state agencies with a common mission of protecting life and property during flood events. Statewide teams typically compete for pilot projects that match team member funds to USACE funds to complete mitigation projects.

## PRIORITY MANAGEMENT AREA D: ECOSYSTEMS

### Desired Result

To achieve healthy ecosystems that provide groundwater and surface water of sufficient quality and in adequate supply to support abundant and diverse populations of aquatic, riparian, and terrestrial organisms, as well as human use.

### Programs

#### AREA D: Ecosystems

|   |                     |
|---|---------------------|
| American Eel Restoration.....           | 60,000              |
| Aquatic Resource Surveys .....          | 48,000              |
| Harmful Algal Blooms.....               | 35,000              |
| Cedar Run Operations & Maintenance..... | 12,000              |
| Stream Biological Assessments .....     | 13,000              |
| Tioga River Active Treatment Plant..... | 950,000             |
| Water Resources Studies.....            | 100,000             |
| <b>Total</b>                            | <b>\$ 1,218,000</b> |

#### Activities which will be conducted under Priority Management Area D: Ecosystems

**American Eel Restoration** - Migration of historically-abundant American eels to and from the basin has been restricted by the presence of dams and hydroelectric projects on the Lower Susquehanna River since the early 1900s. Additionally, populations of the basin's formerly most prevalent freshwater mussel species, which relies on American eel as a host species for part of its life cycle. In 2008, the US Fish and Wildlife Service began a limited, but successful, eel reintroduction program. Begun in FY-16, the Commission embarked on a long-term study aimed at discerning changes to freshwater ecosystem traits following reintroduction of American eels in specific sub-watersheds, including evaluations of shifts in fish and macroinvertebrate community composition, re-establishment of mussel populations, and water quality improvements.

**Aquatic Resource Surveys** - As part of our surface water withdrawal application process, staff perform aquatic resource surveys. The surveys include fish and macroinvertebrate sampling, invasive species survey, habitat assessment, water quality testing and hydrologic parameter testing. ARS findings support the Commission's Project Review Program. Moreover, ARS data and related research efforts enhance the Commission's understanding of potential impacts due to water withdrawal activities and such data are used to verify the effectiveness of passby flow requirements.

**Harmful Algal Blooms** - Populations of certain algae and bacteria can grow explosively and cascade into various environmental, ecological, and even human health problems. The Commission is partnering with an interagency work group in Pennsylvania to exchange information and cultivate more thorough understanding of measures to protect, preempt, predict, and mitigate impacts that arise from HABs. Commission staff will explore precursor conditions expected to trigger HABs with geographical focus on data obtained within the Lower Susquehanna Subbasin.

**Cedar Run Operations & Maintenance** - As on-going support for an innovative pilot BMP project to manage urban stormwater in a karst setting that was built in 2016, Commission staff will continue to monitor water quality, estimate treated volume, and oversee O&M activities.

**Stream Biological Assessments** - As a member of a National Fish & Wildlife Foundation (NFWF)-funded partnership, Commission staff will conduct stream biological assessments as well as participate in steering committee and work group activities as part of a multi-year, comprehensive watershed management strategy in the Conoy, Conewago, and Chiques Creek watersheds in Lancaster County, Pennsylvania.

**Tioga River Active Treatment Plant** - An approximately 20-mile stretch of the Tioga River has long-standing impairment status owing to pollution from AMD within the watershed. Under contract to PADEP Bureau of Abandoned Mine Reclamation, the Commission will oversee Engineering Design activities for an active treatment plant (ATP) that will remediate the remaining principle mine drainage sources in the watershed, thereby fostering recovery of the Tioga River and enhancing downstream aquatic resources in the Chemung River. Through a request for proposals process, a design contractor will be selected at a cost not to exceed \$800,000.

**Water Resources Studies** – On an annual basis the Commission seeks proposals from its staff for studies/projects that further the mission and work of the organization. In FY-2021 the Commission, through funding provided by its Sustainable Water Resources Fund, will continue to support such studies, including: (1) Extension of research begun in FY-20 to inform sample collection, processing, and quantification methods to characterize *microplastics* in stream water, in partnership with Penn State University; and (2) Use of environmental DNA (eDNA) for sentinel monitoring to detect aquatic invasive species (AIS; round goby and northern snakehead) in the Upper Susquehanna Subbasin in New York State, in partnership with New York State Department of Environmental Conservation, United States Fish & Wildlife Service, and the Catskill Regional Invasive Species Partnership.

## PRIORITY MANAGEMENT AREA E: CHESAPEAKE BAY

### Desired Result

To manage the water resources of the Susquehanna River Basin to assist in restoring and maintaining the Chesapeake Bay so it meets or exceeds applicable water quality standards and supports healthy populations of living resources, including oysters, crabs, fish, waterfowl, shore birds, and underwater grasses.

### Programs

#### AREA E: Chesapeake Bay

|   |           |                |
|---|-----------|----------------|
| Chesapeake Bay Program Monitoring and Water Quality Trends Analysis ..... | \$        | 610,000        |
| Chesapeake Bay TMDL Support.....  | \$        | <u>170,000</u> |
| <b>Total</b>  | <b>\$</b> | <b>780,000</b> |

#### Activities which will be conducted under Priority Management Area E: Chesapeake Bay

**Chesapeake Bay Program Monitoring and Water Quality Trends Analysis** - This program was initiated in FY-1985, and provides data that are critical for calibration of the Chesapeake Bay watershed model and evaluation of tributary strategy activities. Monthly samples, baseflow samples and daily or more frequent samples during a minimum of five storms will be collected from the six (6) long-term monitoring sites on the Susquehanna River at Towanda, Danville, and Marietta, the Juniata River at Newport, the West Branch Susquehanna River at Lewisburg and the Conestoga River at Conestoga. Monthly and storm samples also will be collected at the 21 additional sites in Pennsylvania, New York, and Maryland that were established in FY-2004, FY-2005, and FY-2012. The Commission will continue to work with its member states, USEPA, and other partners to expand the monitoring network to support state tributary strategies and the overall Chesapeake Bay cleanup effort.

The Commission will use the data to analyze and update information from the long-term water quality monitoring program for the non-tidal tributaries in the Susquehanna River Basin. Data from newly established monitoring sites in Pennsylvania and New York will also be summarized for future trends analysis. The data and analysis will help demonstrate progress in meeting cap loads for the Susquehanna River Basin.

**Chesapeake Bay TMDL Support** – Staff will provide assistance to PADEP in fulfilling tasks pursuant to the Bay Agreement between USEPA and the member jurisdictions. The scope of the Commission’s activities includes, but is not limited to: coordination and technical support for development/implementation of County-wide action plans related to Pennsylvania’s Phase III Watershed Implementation Plan (WIP3); CAST model forecasts based on two-year BMP milestones; and, technical advisory support to WIP3 stakeholder, sector work groups, expert panels, as well as policy/program outreach activities.



## PRIORITY MANAGEMENT AREA F: COORDINATION, COOPERATION, PUBLIC INFORMATION AND ADMINISTRATION

### Desired Result

To maximize available human resources and achieve common and complementary management objectives by the Commission, its member jurisdictions and others; to promote the planning and management of the basin's water resources in the most efficient manner possible; to inform the public on the Commission's water management responsibilities; and to enhance the public's access to Commission information and decision making procedures.

### Programs

#### **Area F: Coordination, Cooperation, Public Information and Administration**

|   |           |                  |
|---|-----------|------------------|
| Watershed Coordination Functions and Activities.....                  | \$        | 507,000          |
| Comprehensive Plan and Water Resources Program .....                  |           | 155,000          |
| General Program Administration .....                                  |           | 864,650          |
| Information Technology and Geographic Information Systems (GIS) ..... |           | 497,350          |
| <b>Total</b>  | <b>\$</b> | <b>2,024,000</b> |

#### **Activities which will be conducted under Priority Management Area F: Coordination, Cooperation, Public Information and Administration**

**Watershed Coordination Functions and Activities** - Coordination is an essential and mandated responsibility of the Commission. The purpose of the program is to minimize duplication of efforts, maximize limited resources and reduce conflicts among federal, state and local governments sharing responsibility for management of the basin's water resources. Specific coordination activities include management of the Water Quality Advisory Committee (WQAC) and the Water Resources Management Advisory Committee (WRMAC), and coordination with state and federal agencies such as the USACE, USEPA, USGS and the NWS. Commission staff are also active participants in agency-sponsored programs, coalitions, and working groups including, yet not limited to: Susquehanna River Anadromous Fish Restoration Cooperative (SRAFRC), the Mid-Atlantic Panel on Aquatic Invasive Species (MAPAIS), and the Pennsylvania Wildlife Action Plan Advisory Committee.

**Comprehensive Plan and Water Resources Program** - The Compact states that the Commission shall develop and adopt, and may from time to time review and revise, a Comprehensive Plan for the immediate and long range development and use of the water resources of the basin. It also asserts that the Commission shall annually adopt a Water Resources Program, based upon the Comprehensive Plan, consisting of the projects and facilities which the Commission proposes to be undertaken by the Commission and by other authorized governmental and private agencies, organizations, and persons during the ensuing six years or such other reasonably foreseeable period as the Commission may determine. In FY-2021 the Commission will complete a substantial update to the Comprehensive Plan to coincide with the halfway mark of the 100 year duration of the Compact. Staff will also prepare an annual update to the Water Resources Program for FY-2021.

**General Program Administration** - Internal and external meetings occur that do not relate directly to specific Commission programs. In addition, time is spent on program development, budgeting, periodic program summaries, annual reports, and responses to our signatory members. This budget category also includes costs for the Commission's administrative personnel and programs, such as executive, finance, and human resources.

**Information Technology and Geographic Information Systems (GIS)** - The importance of the Commission's information technology systems continues to grow. The Commission will continue to enhance our proprietary systems and Internet-based databases, and will strive to make increasing amounts of data available electronically via our website, including both water quality and water quantity data. We will also work to develop new systems and processes to share data internally and externally. In FY-2021 the Commission will replace outdated laptops and critical portions of its network at a cost of approximately \$70,000.