

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

**BUDGET RECONCILIATION  
FY-2024**

**JUNE 15, 2023**

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**SUSQUEHANNA RIVER BASIN COMMISSION**

**BUDGET FOR FISCAL YEAR 2024**

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 request in detail for Fiscal Year 2024, which covers the twelve month period beginning July 1, 2023. Comparative amounts for the budget reconciliation for Fiscal Year 2023 and the adopted budget for 2024 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

\_\_\_\_\_  
June 15, 2023  
Date

  
\_\_\_\_\_  
Andrew D. Dehoff  
Executive Director

\_\_\_\_\_  
June 15, 2023  
Date

**SUSQUEHANNA RIVER BASIN COMMISSION**  
**BUDGET FOR FISCAL YEAR 2024**  
**IN SUPPORT OF APPROVED PROGRAMMATIC ACTIVITIES**

The total expense budget request for Fiscal Year 2024 is \$24,558,500. The budget will support implementation of the Comprehensive Plan for the Water Resources of the Susquehanna River Basin and is allocated to the Plan's Priority Management Areas and administration as follows:

| <u>Percent of Total Budget</u>             |          |
|--|----------|
| I. PMA A. Water Supply                     | 36%      |
| II. PMA B. Water Quality                   | 14%      |
| III. PMA C. Flooding and Drought           | 17%      |
| IV. PMA D. Watershed Management            | 26%      |
| V. Administration, Coordination & Outreach | 7%       |
| <br>Total                                  | <br>100% |

Details of the proposed activities in each PMA and for Administration, Coordination & Outreach are presented starting on page 11, following detailed statements of Revenue Sources and Expenditures.

**SUSQUEHANNA RIVER BASIN COMMISSION**  
**BUDGET SUMMARY FOR FISCAL YEAR 2024**  
**(July 1, 2023 – June 30, 2024)**

|  | <b>General<br/>Fund</b> | <b>Water<br/>Management<br/>Fund (1)</b> | <b>Total</b>          |
|--|-------------------------|--|-----------------------|
| <b>Revenues:</b>   |                         |  |                       |
| Member Jurisdictions                                     | \$ 1,344,750            |  | \$ 1,344,750          |
| Grants & Other Contractual Agreements                    | 2,980,000               |  | 2,980,000             |
| Regulatory Program Fees                                  | 4,553,750               | \$ 4,700,000                             | 9,253,750             |
| Other Income   | 368,000                 | 2,465,000                                | 2,833,000             |
| <b>TOTAL REVENUES</b>                                    | <b>\$ 9,246,500</b>     | <b>\$ 7,165,000</b>                      | <b>\$16,411,500</b>   |
| <b>Expenditures:</b>                                     |                         |  |                       |
| Personnel Services                                       | \$ 6,025,000            |  | \$ 6,025,000          |
| Employee Benefits  | 3,335,000               |  | 3,335,000             |
| Special Contractual Services                             | 1,698,500               |  | 1,698,500             |
| Travel & Subsistence                                     | 55,000                  |  | 55,000                |
| Commission Meetings & Public Hearings                    | 30,000                  |  | 30,000                |
| Communications, Postage                                  | 80,000                  |  | 80,000                |
| Rent – Equipment Land & Buildings                        | 40,000                  |  | 40,000                |
| Printing, Reproduction & Advertising                     | 26,500                  |  | 26,500                |
| Software – License, Purchase & Maintenance               | 180,000                 |  | 180,000               |
| Repairs & Maintenance                                    | 121,500                 |  | 121,500               |
| Other Contractual Services                               | 180,000                 | 125,000                                  | 305,000               |
| Utilities, Janitorial                                    | 105,000                 |  | 105,000               |
| Supplies & Materials                                     | 285,000                 |  | 285,000               |
| Grant Awards   | 270,000                 | 9,400,000                                | 9,670,000             |
| Cowanesque/Curwensville Water Storage                    |                         | 1,000,000                                | 1,000,000             |
| Billmeyer Quarry Water Storage                           |                         | 35,000                                   | 35,000                |
| Depreciation – Water Storage Rights                      |                         | 1,207,000                                | 1,207,000             |
| Capital Expenditures                                     | 360,000                 |  | 360,000               |
| <b>TOTAL EXPENDITURES</b>                                | <b>\$ 12,791,500</b>    | <b>\$ 11,767,000</b>                     | <b>\$24,558,500</b>   |
| <b>EXCESS (DEFICIT) OF REVENUE<br/>OVER EXPENDITURES</b> | <b>\$ (3,545,000)</b>   | <b>\$ (4,602,000)</b>                    | <b>\$ (8,147,000)</b> |
| Transfer from Water Management Fund                      | \$ 2,070,000 (2)        | (2,070,000)                              | \$ -                  |
| Transfer from Fiscal Stabilization Fund                  | \$ 150,000 (3)          |  | \$ 150,000            |
| Transfer from Sustainable Water Resources Fund           | \$ 1,325,000 (4)        |  | \$ 1,325,000          |
| <b>TRANSFERS IN (OUT)</b>                                | <b>\$ 3,545,000</b>     | <b>\$ (2,070,000)</b>                    | <b>\$ 1,475,000</b>   |
| <b>EXCESS (DEFICIT) AFTER FUND TRANSFERS</b>             | <b>\$ -</b>             | <b>\$ (6,672,000)</b>                    | <b>\$ (6,672,000)</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. In FY-2022 the Commission launched a new grant program designed to support its Consumptive Use Mitigation Policy and is using accumulated reserves to fund the grant program. Grants and other projects and activities funded by the Water Management Fund are identified in the budget narrative starting on page 11.

(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-2024, the Commission will continue to review applications which were submitted to register these projects. See Page 12 "Grandfathered Water Use Registrations" for a complete description of the anticipated activities. Application review costs in excess of available funding will be covered by the Commission's Fiscal Stabilization Fund.

(4) Pursuant to Resolution 2016-06, monies in the Sustainable Water Resources Fund may be used to support projects and activities that the Commission finds necessary to support its mission as authorized under the Susquehanna River Basin Compact which do not have funding available through other sources. Specific projects and activities funded by the Sustainable Water Resources Fund are identified in the budget narrative starting on page 11.

**SUSQUEHANNA RIVER BASIN COMMISSION**

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

| <u>SOURCES</u>                              | <u>Budget<br/>Reconciliation<br/>FY 2023</u> | <u>Current<br/>Expense Budget<br/>FY2024</u> | <u>Budget<br/>Reconciliation<br/>FY2024</u> |
|---|--|--|---|
| Member Jurisdictions: (4)                   |  |  |   |
| New York                                    | \$ 259,000                                   | \$ 248,000                                   | \$ 259,000                                  |
| Pennsylvania                                | 205,000                                      | 739,750                                      | 739,750                                     |
| Maryland                                    | 346,000                                      | 493,000                                      | 346,000                                     |
| United States                               | -  | 493,000                                      | -   |
| <b>Subtotal – Member Jurisdictions</b>      | <b>\$ 810,000</b>                            | <b>\$ 1,973,750</b>                          | <b>\$1,344,750</b>                          |
| Other Income: (5)                           |  |  |   |
| Grants & Other Contractual<br>Agreements    | \$ 3,247,500                                 | \$ 2,000,000                                 | \$ 2,980,000                                |
| Regulatory Program Fees                     | 4,345,500                                    | 4,230,250                                    | 4,553,750                                   |
| Interest Income, Building Rental<br>& Other | 305,000                                      | 390,000                                      | 368,000                                     |
| <b>Subtotal – Other Income</b>              | <b>\$ 7,898,000</b>                          | <b>\$ 6,620,250</b>                          | <b>\$ 7,901,750</b>                         |
| <br><b>TOTAL ALL SOURCES</b>                | <br><b>\$ 8,708,000</b>                      | <br><b>\$ 8,594,000</b>                      | <br><b>\$ 9,246,500</b>                     |

(4) 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 final approved budgets.

(5) 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**

| <b>Class Titles</b>                           | <b>Budget<br/>Reconciliation<br/>FY 2023</b> | <b>Current<br/>Expense Budget<br/>FY 2024</b> | <b>Budget<br/>Reconciliation<br/>FY 2024</b> |
|---|--|---|--|
| Personnel Services                            | \$ 5,580,000                                 | \$ 6,115,000                                  | \$ 6,025,000                                 |
| Employee Benefits                             | 3,000,000                                    | 3,324,500                                     | 3,335,000                                    |
| <b>Subtotal – Personnel &amp; Benefits</b>    | <b>\$ 8,580,000</b>                          | <b>\$ 9,439,500</b>                           | <b>\$ 9,360,000</b>                          |
| Special Contractual Services                  | \$ 2,615,000                                 | \$ 1,121,500                                  | \$ 1,698,500                                 |
| Travel & Subsistence                          | 40,000                                       | 40,000  | 55,000                                       |
| Commission Mtgs. & Public Hearings            | 20,000                                       | 25,000  | 30,000                                       |
| Communications, Postage                       | 72,500                                       | 75,000  | 80,000                                       |
| Rent-Equip., Land & Buildings                 | 35,000                                       | 35,000  | 40,000                                       |
| Printing, Reproduction & Advertising          | 32,500                                       | 31,500  | 26,500                                       |
| Software Licenses, Purchases &<br>Maintenance | 165,000                                      | 165,000                                       | 180,000                                      |
| Repairs & Maintenance                         | 118,000                                      | 116,500                                       | 121,500                                      |
| Other Contractual Services                    | 165,000                                      | 180,000                                       | 180,000                                      |
| Utilities, Janitorial                         | 95,000                                       | 105,000                                       | 105,000                                      |
| <b>Subtotal – Contractual Services</b>        | <b>\$ 3,358,000</b>                          | <b>\$ 1,894,500</b>                           | <b>\$ 2,516,500</b>                          |
| Supplies/Other                                | \$ 402,500                                   | \$ 425,000                                    | \$ 555,000                                   |
| Capital Expenditures                          | \$ 285,000                                   | \$ 275,000                                    | \$ 360,000                                   |
| <b>TOTAL</b>                                  | <b>\$12,625,500</b>                          | <b>\$12,034,000</b>                           | <b>\$12,791,500</b>                          |

**SUSQUEHANNA RIVER BASIN COMMISSION**

**MAJOR OBJECT CLASSIFICATION  
PERSONNEL SERVICES**

| <b>Appropriation Class</b> | <b>Budget Reconciliation<br/>FY 2023</b> | <b>Current Expense<br/>Budget<br/>FY 2024</b> | <b>Budget Reconciliation<br/>FY 2024 <sup>(6)</sup></b> |
|----------------------------|--|---|---|
| Salaries                   | \$ 5,580,000                             | \$ 6,115,000                                  | \$ 6,025,000  |

**COMPARISON OF STAFFING  
FOR FISCAL YEAR 2024**

| <b>Departments</b>                 | <b>Current Expense Budget<br/>FY 2024</b> |              |              | <b>Budget Reconciliation<br/>FY 2024</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                          | 5   | 1            | 6            | 5  | 1            | 6            | 0                      | 0            | 0            |
| Administrative &<br>Staff Services | 9   | 1            | 10           | 9  | 1            | 10           | 0                      | 0            | 0            |
| Gov't/Public Affairs               | 2   | 0            | 2            | 2  | 0            | 2            | 0                      | 0            | 0            |
| Project Review                     | 13  | 2            | 15           | 13                                       | 2            | 15           | 0                      | 0            | 0            |
| Planning & Operations              | 7   | 0            | 7            | 7  | 0            | 7            | 0                      | 0            | 0            |
| Compliance                         | 9   | 1            | 10           | 9  | 1            | 10           | 0                      | 0            | 0            |
| Grant Programs                     | 17  | 1            | 18           | 16                                       | 1            | 17           | -1                     | 0            | -1           |
| <b>TOTAL</b>                       | <b>62</b>                                 | <b>6</b>     | <b>68</b>    | <b>61</b>                                | <b>6</b>     | <b>67</b>    | <b>-1</b>              | <b>0</b>     | <b>-1</b>    |

(6) The FY-2024 budget reconciliation includes 7.0% for salary increases and bonuses.

## SUSQUEHANNA RIVER BASIN COMMISSION

### MAJOR OBJECT CLASSIFICATION EMPLOYEE BENEFITS

| Appropriation Class                    | Budget<br>Reconciliation<br>FY 2023 | Current Expense<br>Budget<br>FY 2024 | Budget<br>Reconciliation<br>FY 2024 |
|--|-------------------------------------|--------------------------------------|-------------------------------------|
| Medical Insurance                      | \$ 725,000                          | \$ 789,500                           | \$ 900,000                          |
| Social Security - Commission Share     | 400,000                             | 450,000                              | 450,000                             |
| Worker's Compensation                  | 25,000                              | 25,000                               | 25,000                              |
| Employee Life Insurance                | 35,000                              | 25,000                               | 25,000                              |
| Unemployment Compensation              | 10,000                              | 10,000                               | 10,000                              |
| Recognition & Rewards                  | 25,000                              | 25,000                               | 25,000                              |
| Retirement Plan – Commission Share (7) | 1,780,000                           | 2,000,000                            | 1,900,000                           |
| <b>TOTAL</b>                           | <b>\$ 3,000,000</b>                 | <b>\$ 3,324,500</b>                  | <b>\$ 3,335,000</b>                 |

(7) Retirement employer contribution rate budgeted for FY-2024 is 31.5% of payroll.

# SUSQUEHANNA RIVER BASIN COMMISSION

## MAJOR OBJECT CLASSIFICATION CONTRACTUAL SERVICES

| Appropriation Class                   | Budget<br>Reconciliation<br>FY 2023 | Current Expense<br>Budget<br>FY 2024 | Budget<br>Reconciliation<br>FY 2024 |
|---------------------------------------|-------------------------------------|--------------------------------------|-------------------------------------|
| Fees, Financial Services              | \$ 50,000                           | \$ 53,500                            | \$ 53,500                           |
| Fees, Legal & Investigative Services  | 20,000                              | 20,000                               | 20,000                              |
| Fees, Cooperative Programs            | 50,000                              | 52,000                               | -                                   |
| Fees, Research & Laboratory Services  | 100,000                             | 170,000                              | 170,000                             |
| Fees, Computer Services Other         | 20,000                              | 20,000                               | 20,000                              |
| Other Services – Professional (8)     | 2,375,000                           | 806,000                              | 1,435,000                           |
| Travel & Subsistence                  | 40,000                              | 40,000                               | 55,000                              |
| Commission Meetings                   | 15,000                              | 15,000                               | 20,000                              |
| Public Hearing Expenses               | 5,000                               | 10,000                               | 10,000                              |
| Communications Expenses               | 57,500                              | 60,000                               | 65,000                              |
| Postage                               | 15,000                              | 15,000                               | 15,000                              |
| Rent – Land, Buildings & Equipment    | 35,000                              | 35,000                               | 40,000                              |
| Printing & Reproduction               | 30,000                              | 30,000                               | 25,000                              |
| Advertising                           | 2,500                               | 1,500                                | 1,500                               |
| Software Purchase, License & Maint.   | 165,000                             | 165,000                              | 180,000                             |
| Repairs & Maint. – Building & Grounds | 60,000                              | 55,000                               | 60,000                              |
| Repairs & Maint. – Office Equipment   | 3,000                               | 1,500                                | 1,500                               |
| Repairs & Maint. – Auto Equipment     | 15,000                              | 20,000                               | 20,000                              |
| Repairs & Maint. – Lab Equipment      | 40,000                              | 40,000                               | 40,000                              |
| Insurance                             | 140,000                             | 155,000                              | 155,000                             |
| Dues & Memberships                    | 25,000                              | 25,000                               | 25,000                              |
| Electric, Heat, Water & Sewage        | 70,000                              | 75,000                               | 75,000                              |
| Janitorial Service                    | 25,000                              | 30,000                               | 30,000                              |
| <b>TOTAL</b>                          | <b>\$ 3,358,000</b>                 | <b>\$ 1,894,500</b>                  | <b>\$ 2,516,500</b>                 |

(8) The FY-2024 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 2023 | Current Expense<br>Budget<br>FY 2024 | Budget<br>Reconciliation<br>FY 2024 |
|------------------------------|-------------------------------------|--------------------------------------|-------------------------------------|
| Office Supplies              | \$ 20,000                           | \$ 20,000                            | \$ 20,000                           |
| Automotive Supplies (9)      | 25,000                              | 40,000                               | 40,000                              |
| Janitorial Supplies          | 2,500                               | 2,500                                | 2,500                               |
| Computer Supplies            | 50,000                              | 40,000                               | 40,000                              |
| Laboratory Supplies          | 100,000                             | 100,000                              | 100,000                             |
| Subscriptions & Publications | 10,000                              | 10,000                               | 10,000                              |
| Moving & Recruiting Expenses | 5,000                               | 2,500                                | 2,500                               |
| Staff Training & Seminars    | 50,000                              | 50,000                               | 50,000                              |
| Grant Awards (10)            | 120,000                             | 140,000                              | 270,000                             |
| Miscellaneous                | 20,000                              | 20,000                               | 20,000                              |
| <b>TOTAL</b>                 | <b>\$ 402,500</b>                   | <b>\$ 425,000</b>                    | <b>\$ 555,000</b>                   |

(9) Also includes fuel costs

(10) Grants awarded under the Commission's Small Grants Programs – see page 12 for more details

**SUSQUEHANNA RIVER BASIN COMMISSION**

**MAJOR OBJECT CLASSIFICATION  
CAPITAL EXPENDITURES**

| <b>Appropriation Class</b>   | <b>Budget<br/>Reconciliation<br/>FY 2023</b> | <b>Current Expense<br/>Budget<br/>FY 2024</b> | <b>Budget<br/>Reconciliation<br/>FY 2024</b> |
|------------------------------|--|---|--|
| Computer Equipment           | \$ 45,000                                    | \$ 35,000                                     | \$ 55,000                                    |
| Automotive Equipment (11)    | 75,000                                       | 75,000  | 80,000                                       |
| Office Furniture & Fixtures  | 5,000  | 5,000   | 5,000  |
| Scientific & Laboratory (12) | 160,000                                      | 160,000                                       | 220,000                                      |
| <b>TOTAL</b>                 | <b>\$ 285,000</b>                            | <b>\$ 275,000</b>                             | <b>\$ 360,000</b>                            |

(11) Two Commission vehicles will be replaced in FY-2024.

(12) In FY-2023 and FY-2024 the Commission will replace data loggers, which are a component of its Continuous In-stream Monitoring Network. The Commission will also replace six continuous in-stream monitoring units in FY-2024.

## PRIORITY MANAGEMENT AREA A: WATER SUPPLY

**Goal:** Water supply is sufficient to meet diverse demands.

**Vision:** All users of the Basin’s water resources have reliable, conflict-free, and sustainable water supply for current and future generations, even as demographic, economic, and climate conditions evolve.

### Programs

#### **AREA A: Water Supply**

|   |                     |
|---|---------------------|
| Regulation of Water Users – Permits .....                             | \$ 1,560,000        |
| Regulation of Water Users – ABR .....                                 | 365,000             |
| Regulation & Policy Updates .....                                     | 210,000             |
| Compliance and Enforcement .....                                      | 1,600,000           |
| Grandfathered Water Use Registrations .....                           | 200,000             |
| Hydroelectric Project Regulation and Relicensing .....                | 43,000              |
| Susquehanna Water Use Network .....                                   | <u>70,000</u>       |
| <b>Subtotal – General Fund/Fiscal Stabilization Fund</b>              | <b>\$ 4,048,000</b> |
| Water Level Monitoring Grant Program .....                            | 150,000             |
| Public Water Supply Assistance Initiative .....                       | 160,000             |
| Project Sponsor Assistance Initiative .....                           | <u>100,000</u>      |
| <b>Subtotal – Sustainable Water Resources Fund</b>                    | <b>\$ 410,000</b>   |
| Cumulative Water Use & Availability Study .....                       | 195,000             |
| Hydrologic Model Updates .....  | 40,000              |
| Consumptive Use Mitigation Grant Program Administration.....          | 375,000             |
| Consumptive Use Mitigation Grants – Demand Modification Projects..... | 3,770,000           |
| Consumptive Use Mitigation Grants – Water Supply Projects.....        | <u>85,000</u>       |
| <b>Subtotal – Water Management Fund</b>                               | <b>\$ 4,465,000</b> |
| <b>TOTAL PMA A: WATER SUPPLY</b>                                      | <b>\$ 8,923,000</b> |

#### **Activities which will be conducted under Priority Management Area A: Water Supply**

##### **Funding Provided by the General Fund/Fiscal Stabilization Fund:**

**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).

**Regulation & Policy Updates** - The Commission continuously reviews and periodically proposes updates to its regulations and policies which are designed to provide clarity to project sponsors, target only the most appropriate activities, and improve efficiency and effectiveness of regulatory reviews.

**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 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.

**Grandfathered Water Use Registrations** - 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”. In FY-2024, the Commission will continue to review applications received to register grandfathered projects with the Commission. Once registration is complete, grandfathered projects will report water withdrawal and consumptive use data to the Commission. Costs may also include assistance to registrants for monitoring/metering equipment.

**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 in the Susquehanna River Basin. 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, National Environmental Policy Act document reviews, Section 401 Water Quality Certificate conditions, license requirement implementation, etc. throughout the relicensing processes.

**Susquehanna Water Use Network** – The Commission will develop a website that will provide Commission and member state agency water use permit information already available to the Commission in a dashboard format. This application will allow review of all known, reported water use data regardless of the permitting or registering agency, and will display reported water use trends for selected facilities and sources in graphical format. The website will facilitate improved water management of the Basin by allowing for better aligned water use data in terms of project locations, attribute information, reported water use tracking and compliance, and identification of data gaps.

**Funding Provided by the Sustainable Water Resources Fund:**

**Water Level Monitoring Grant Program** – In FY-2024 the Commission will continue the groundwater level monitoring grant program started in FY-2022. Water level measurements in a supply well often can be a primary source of information about the characteristics of an aquifer and the influence that a project’s groundwater withdrawal has on the aquifer. Collecting and maintaining a record of routine water level data during ongoing withdrawals develops a valuable resource of operational water level data. Because the Commission recognizes the importance of water level measurements, the Commission developed this grant program to assist projects with purchasing, installing or maintaining water level monitoring equipment. The grant program offers grant awards not to exceed \$2,500 per source, with a facility cap of \$7,500 per year, to qualifying facilities.

**Public Water Supply Assistance Initiative** – Through this initiative Commission staff provide both general and focused education and system-specific guidance to small municipal water supply project sponsors 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 or purchasing equipment, and initial review of short-term data collection activities.

**Project Sponsor Assistance Initiative** – This effort is an extension of the Public Water Supply Assistance Initiative described above. Staff will provide technical assistance, including meeting prior to water withdrawal applications being submitted, to small financially-challenged project sponsors to facilitate the completion of the Commission’s aquifer testing and application requirements.

## **Funding provided by the Water Management Fund:**

**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-2024, staff will maintain and update the water use database, develop future water use and availability projections, evaluate additional refinements to the tool, and conduct more detailed analyses in priority watersheds.

Additionally, the Commission will seek assistance from the U.S. Geological Survey in conducting an assessment of existing groundwater recharge information for the basin, in order to assess temporal and spatial gaps/needs for performing updated baseflow separations for reference gages. The updated information will be used to supplement existing groundwater recharge information used for groundwater availability analyses. The work to be performed by the USGS in FY-2024 is expected not to exceed \$50,000.

**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.

**Consumptive Use Mitigation Grant Program Administration** – The Commission’s Consumptive Use Mitigation Grant Program was established to accelerate implementation of on-the-ground projects to mitigate for consumptive use, especially during critical low flow periods and droughts. The grant program focuses on soliciting and funding consumptive use mitigation projects within priority watersheds in the basin. Costs for administration of the grant program, grant management software implementation, and the Commission’s annual solicitation for proposals and review and selection of projects it will fund are included.

**Consumptive Use Mitigation Grants - Demand Modification Projects** –A focus of the grant program is identification and funding for demand modification projects that result in increased water conservation, recycling, and reuse. Grant payments for demand modification projects are estimated at \$3,730,000 for FY-24.

**Consumptive Use Mitigation Grants - Water Supply Projects** – Another focus of the grant program is identification and funding for water supply projects that can enhance supply and reliability/resiliency during drought. Grant payments for water supply projects are estimated at \$75,000. Administration and oversight of selected projects is estimated at \$10,000.

## PRIORITY MANAGEMENT AREA B: WATER QUALITY

**Goal:** Waters throughout the Basin exhibit good quality.

**Vision:** The waters of the Basin meet or exceed water quality standards and are able to support desired water supply, aquatic life, and recreational uses.

### Programs

#### **AREA B: Water Quality**

|  |                         |
|--|-------------------------|
| Subbasin Surveys .....   | \$ 70,000               |
| Large Waters Assessment .....  | 65,000                  |
| National Aquatic Resource Surveys .....  | 90,000                  |
| Enhanced Basin Research .....  | 95,000                  |
| Total Maximum Daily Loads and Advanced Restoration Support .....               | 150,000                 |
| Total Maximum Daily Load Development .....                                     | 45,000                  |
| Monitoring and Assessment of Lakes .....                                       | 60,000                  |
| Surface Water Quality Monitoring and Potable Water Supply Use Assessment ..... | 50,000                  |
| Lower Susquehanna Source Water Protection Program .....                        | 85,000                  |
| Water Quality Restoration and Protection .....                                 | 50,000                  |
| Chesapeake Bay Non-Tidal Network Monitoring .....                              | 410,000                 |
| Chesapeake Bay WIP Support .....   | 115,000                 |
| Harmful Algal Bloom Studies .....  | 25,000                  |
| Morris Run Abandoned Mine Drainage Treatment Plant .....                       | 880,000                 |
| Moshannon Creek AMD Development Project .....                                  | 135,000                 |
| Continuous In-stream Monitoring Network .....                                  | <u>625,000</u>          |
| <b>Subtotal – General Fund/Fiscal Stabilization Fund</b>                       | <b>\$ 2,950,000</b>     |
| Legacy Mining Feasibility Studies .....  | 215,000                 |
| Continuous In-stream Monitoring Network Data Logger and Sonde Replacement....  | <u>210,000</u>          |
| <b>Subtotal – Sustainable Water Resources Fund</b>                             | <b>\$ 425,000</b>       |
| <br><b>TOTAL PMA B: WATER QUALITY</b>  | <br><b>\$ 3,375,000</b> |

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

##### **Funding Provided by the General Fund:**

**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. The Commission will analyze probabilistic data that were collected in FY-2023 in the Middle Susquehanna Subbasin. A probabilistic sample design will be applied in the West Branch Susquehanna Subbasin in FY-2024. The data and findings collected as part of this program will provide information to PADEP for use in the 305(b) portion of their Integrated Reports.

**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 main stem 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. Focus for FY-2024 will be the non-wadable rivers throughout the entire Basin. A probabilistic sample design will be used that captures 8-10 locations and includes: water chemistry parameters, instantaneous water quality indicators, macroinvertebrates, fish, and eDNA measurements.

**National Aquatic Resource Surveys** – The EPA National Aquatic Resource Survey Program is a nation-wide initiative to sample aquatic resources in a statistically-relevant and categorical process. The Commission participates in the National Lakes and National Rivers and Streams Assessment components (NLA, NRSA, respectively) according to EPA’s schedule of rotation. Since inception of the National Aquatic Resource Survey Program, the Commission has participated in NLA and NRSA sampling in the Basin as well as within one or more of the state jurisdictions of the Basin. In FY-2024, the Commission will survey up to 10 NRSA sites in Pennsylvania and New York.

**Enhanced Basin Research** - The Commission has spent decades collecting chemical, physical, and biological data in the Basin as part of numerous monitoring projects that have been funded by Section 106, member state funding, and/or internal funding. In addition, other state and federal agencies have been collecting data within the Basin as part of separate monitoring projects while striving to reach their own goals. Combination datasets offer the potential for analyses on temporal and spatial scales that surpass the individual project objectives for which the data were originally collected. Beginning in FY-2017, SRBC’s collective dataset was re-structured and augmented with GIS information to leverage knowledge gained in specific areas for more efficient use to characterize Basin resources and enhance scientific understanding overall. While much of SRBC’s focus in early fiscal years of the project emphasized compilation and structural enhancements of the dataset, SRBC staff also began to use the dataset to study an array of other issues and for FY-2024 Enhanced Basin Research includes: (i) continued refinement of SRBC’s Water Quality Index tool; (ii) on-going integration of high-resolution meteorologic, LiDAR/bathymetric, in-stream/in-lake CIM data, and eDNA; (iii) further exploration of relationships and processes between nutrient enrichment, excess sediment, and aquatic community functions; and, (iv) analyses of CIM and other data resources to independently validate and explore PADEP’s Eutrophication Cause Determination protocol as well as inform Chesapeake Bay Program Partner Science and Technical Advisory Committee work groups focused on Local Watershed Monitoring and Nutrient and Sediment Load Reductions for Abandoned Mine-related restoration activities.

**Total Maximum Daily Loads and Advanced Restoration Plan Support** – Partnerships forged over many decades between the Commission and stakeholders in the Chiques Creek and Octoraro Creek watersheds, including flood resiliency and agricultural outreach efforts, uniquely qualify the Commission to serve in both leadership and liaison roles with stakeholder groups comprised of representatives from local government, citizen-based watershed groups, industry, and academia in these two watersheds.

The Commission will continue to closely coordinate with PADEP’s Central Office and Southcentral Regional Office in support of the multi-year Advanced Restoration Plan implementation in the extensively-impaired Chiques Creek watershed. This effort involves participation and leadership on multiple work groups and steering committees formed as part of the Chiques Creek Agency Effort, Penn State University’s Chiques-Conewago-Conoy Creek comprehensive watershed improvement framework, as well as Lancaster County’s Chesapeake Bay Watershed Improvement Plan Phase 3. Support includes pre- and post- BMP implementation monitoring, modeling of pollutant loading sources and their impacts, nutrient pollutant-reduction scenario models, periodic updates to the inventory of pollutant-reduction opportunities, and operation and maintenance of two real-time continuous in-stream monitoring stations. The Commission will also continue to collect data with regard to proposed dam removals in the watershed and monitor effects.

For the Octoraro Creek watershed, the Commission will also continue to coordinate with core partners including the Alliance for Chesapeake Bay, Octoraro Watershed Association, Lancaster and Chester County Conservation Districts, Chester Water Authority, the Lancaster Clean Water Partners, as well as PADEP through work group participation, technical and logistical support, data/information sharing, and stakeholder group outreach. The Commission will continue to provide operation and maintenance of two real-time continuous in-stream monitoring stations. And will pursue interests in evaluation of the Chester Water Authority Reservoir and its impacts to the stream health.

**Total Maximum Daily Load Development** – The Commission will support PADEP’s efforts to satisfy Clean Water Action Section 303(d) and Section 305(b) requirements through development of up to four TMDLs. Development will include assimilation of existing data, watershed reconnaissance and source characterization, reference watershed selection, model development for both reference and impaired watersheds, etc.

**Monitoring and Assessment of Lakes** – The Commission will also PADEP by completing monitoring and assessment of up to five lakes. Activities include completion of monitoring protocols training and quality assurance audits, implementation of monitoring protocols and assessment methods, and development of final assessment reports.

**Surface Water Quality Monitoring and Potable Water Supply Use Assessment** – The Commission will also complete surface water quality monitoring and potable water supply use assessment for the Beaverdam Branch Watershed and the Little Juniata Watershed. Assessments will include completion of monitoring protocols training and quality assurance audits, implementation of monitoring protocols and assessment methods, and development of final assessment reports.

**Lower Susquehanna Source Water Protection Program** - 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 also will 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. Staff also anticipates trial testing an enhanced travel time model interface that is currently being developed for the Commission by Harrisburg University. In FY-2024, the Commission will continue to organize and formalize aspects of the Lower Susquehanna Source Water Protection Partnership through promotion of awareness among members/affiliates about topical issues, as well as participation in regional and national source water protection collaborative efforts and activities.

**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.

**Chesapeake Bay Non-Tidal Network Monitoring** - 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 and samples from a target of two storm/high flow events per season will be collected from the five (5) long-term monitoring sites on the Susquehanna River at Towanda and Danville, 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 22 additional sites in Pennsylvania, New York, and Maryland. The Commission will continue to work with its member states, USEPA, USGS, and other partners to maintain and optimize information obtained from the monitoring network to support state tributary strategies and the overall Chesapeake Bay cleanup effort. The Commission will also continue to analyze flow-normalized concentrations, loads, and trends annually and update a web-enabled story map.

**Chesapeake Bay WIP Support** – Staff will provide technical, logistical, and administrative support for the PADEP Chesapeake Bay Office and serve in a lead role in terms of modeling pollutant reductions using the Chesapeake Assessment Scenario Tool (CAST) on behalf of County Action Plan coordinators and their PADEP counterparts. Staff also will provide technical and GIS assistance to PADEP to support information exchange and messaging between PADEP, EPA and stakeholder groups engaged toward pollution reduction activities. Staff will serve in the chairmanship role for a committee aimed at broadening and enhancing a Chesapeake Bay regional Freshwater Mussel Partnership.

**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. Additionally, Commission staff are working with a research team at Harrisburg University on a pilot project to pair satellite-based multispectral sensor measurements with in-lake chlorophyll and turbidity data to explore relationships that may predict precursor conditions that ultimately trigger HAB events.

**Morris Run Abandoned Mine Drainage Treatment Plant** – In FY-2022 and FY-2023 the Commission assisted Pennsylvania’s Department of Environmental Protection, Bureau of Abandoned Mine Reclamation (BAMR) with the engineering design of an active treatment plant that will remediate principle mine drainage sources in the Tioga River watershed. In FY-2024 the Commission will continue to assist BAMR with completing the design and preparing a bid package for the treatment plant as well as engineering design oversight. Costs include the engineering design contractor and design review contractor (\$725,000).

**Moshannon Creek AMD Development Project** – Moshannon Creek’s abandoned mine drainage restoration has always been considered unattainable due to its pollution impairment which is caused by significant legacy coal and clay mining impacts. This view began to change in 2020 when the Commission and Moshannon Creek Watershed Association completed a watershed assessment that considered the entire Moshannon Creek Watershed. This project, funded by a grant with PADEP, will focus on identifying the main AMD pollution discharges surrounding Osceola Mills, install instrumentation that will allow for real-time flow analysis, complete comparative sampling of those discharges over a hydrologic year, and identify a piece of property nearby that could be obtained to house an active treatment plant. Costs include \$35,000 for support from the Commission’s engineering support contractor.

**Continuous In-stream Monitoring Network** – In early 2010, in the Marcellus Shale Gas Play portion of the Susquehanna River Basin, the Commission launched what has grown to be a 60+ station real-time 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 20 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. DCNR funding supports O&M and data analytics at 9 CIM stations that are located on State-owned lands.

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.

**Funding Provided by the Sustainable Water Resources Fund:**

**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-2024, funding will 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 \$15,000 will be provided by an independent contractor.

**Continuous In-stream Monitoring Network Data Logger and Sonde Replacement** - The datalogger and communication relay components of the Commission’s real-time CIM network were fielded more than 10 years ago and the hardware is reaching its functional lifespan. The Commission began to replace dataloggers throughout the real-time CIM network in FY-2022 and FY-2023; the remainder of datalogger replacement will occur in FY-2024. The Commission will also replace continuous in-stream monitoring sondes which are reaching end-of-life at six stations.

## PRIORITY MANAGEMENT AREA C: FLOODING AND DROUGHT

**Goal:** Communities are more resilient to flooding and drought.

**Vision:** Basin communities will be prepared for and equipped to mitigate the effects of flooding and drought in a changing climate, minimizing loss of life and property, economic disruption, and adverse environmental impacts.

### Programs

#### AREA C: Flooding and Drought

|  |                     |
|--|---------------------|
| Flood Coordination.....                                      | \$ 100,000          |
| Tri-County Flood Warning System .....                        | 50,000              |
| Flood Studies .....  | 45,000              |
| Susquehanna Flood Warning & Response System .....            | 75,000              |
| Middle Susquehanna Flood Mitigation Project .....            | 60,000              |
| Silver Jackets .....   | 50,000              |
| General Hydrologic Studies .....                             | 45,000              |
| <b>Subtotal – General Fund/Fiscal Stabilization Fund</b>     | <b>\$ 425,000</b>   |
|  |                     |
| Climate Change Studies and Research .....                    | 65,000              |
| <b>Subtotal – Sustainable Water Resources Fund .</b>         | <b>\$ 65,000</b>    |
|  |                     |
| Cowanesque/Curwensville Reservoir Operations .....           | 2,205,000           |
| Consumptive Use Mitigation Planning .....                    | 230,000             |
| Low Flow Augmentation Operations .....                       | 60,000              |
| Drought Monitoring .....                                     | 60,000              |
| Drought Management Strategy Update .....                     | 110,000             |
| Consumptive Use Mitigation Grants – Project Operations ..... | 775,000             |
| Billmeyer Quarry Consumptive Use Mitigation Project .....    | 188,000             |
| <b>Subtotal – Water Management Fund</b>                      | <b>\$ 3,628,000</b> |
|  |                     |
| <b>TOTAL PMA C: FLOODING AND DROUGHT</b>                     | <b>\$ 4,118,000</b> |

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

##### **Funding Provided by the General Fund:**

**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-2024, costs for the project include maintenance of the cameras and data portal.

**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. Staff will assist the United States Army Corps of Engineers (USACE) with the Juniata Subbasin Flood Study. In addition, the Commission will continue to leverage a long standing partnership with NOAA National Weather Service by continuing work to operationalize recent advancements to the National Water Model and related flood inundation map projects.

**Susquehanna Flood Warning & Response System** – Originally developed to serve riverine communities protected by the Wyoming Valley Levee System, SRBC, in partnership with USACE and others, completed Version 1.0 of the Susquehanna Flood Warning and Response System. The online tool provides expected damages associated with various levels of flooding as well as response actions related to forecast stage. This project will expand the functionality and accessibility of Version 1.0 by developing additional reporting features and incorporating additional communities with available inundation map libraries. Providing a tool such as this, to community officials and stakeholder agencies, facilitates hazard mitigation planning, flood event response, and recovery after an event.

**Middle Susquehanna Flood Mitigation Project** – The Commission will assist the Pennsylvania Emergency Management Agency (PEMA) with hazard mitigation planning in the Susquehanna River Basin. Through funds obtained by PEMA from the Federal Emergency Management Agency’s Flood Mitigation Assistance Program, PEMA and the Commission will focus on ten Pennsylvania counties in the Middle Susquehanna and West Branch subbasins. The project will develop mitigation strategies and obtain data to prioritize, select and develop a minimum of five projects eligible for annual FEMA grant funding. Commission staff will coordinate outreach and provide technical assistance to PEMA and other key stakeholders. The Commission’s technical assistance will include assessing county plans, including Hazard Mitigation Plans. Staff will also provide GIS and flood modeling support. Ultimately, the implemented projects will help ensure Basin communities are more resilient to flooding under existing conditions, as well as any changing conditions brought about by climate change, and advance the Commission’s mission for reducing flood damage to communities.

**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.

**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 tools, preparing low flow forecasts for key stream gages that drive project operations, enhancing ecosystem flow recommendations compliance tool, etc.

#### **Funding Provided by the Sustainable Water Resources Fund:**

**Climate Change Studies** - The Commission’s new Comprehensive Plan outlines climate change as a cross-cutting challenge that will need to be addressed throughout the Susquehanna River Basin. Staff will continue to assess regional climate projections and their implications to future hydrologic conditions in both surface water and groundwater settings. The Basin’s member jurisdictions’ published policies and guidance on climate change and environmental justice will be used to inform the relevant climate change objectives within the Commission’s Comprehensive Plan, and will prevent duplication of efforts with those of our member jurisdictions. And we will continue to participate in the HyperFacets climate research project funded by the Department of Energy, run by leading climate science experts across the country. All of this work will provide valuable climate science insight and data for informing the Commission’s water resources planning and management efforts.

## **Funding Provided by the Water Management Fund:**

**Cowanesque/Curwensville Reservoir Operations** - The Commission owns water supply storage at Cowanesque and Curwensville Lakes. Costs include depreciation of water storage rights (\$1,169,000), and operating and maintenance costs for Cowanesque and Curwensville Lakes (\$1,000,000). The Commission's share of the operating and maintenance costs for Cowanesque Lake are passed through to Constellation Generation, LLC and Talon Generation, LLC.

**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 implement the Consumptive Use Mitigation Policy which provides 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 memorializes contemporary consumptive use mitigation criteria utilized by the Commission in formulating and implementing consumptive use mitigation projects. Engineering support will be provided by the Commission's professional engineering contractor at a cost not to exceed \$100,000.

**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.

**Drought Monitoring** – 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.

**Drought Management Strategy Update** – The Commission's Drought Coordination Plan describes the Commission's drought management authority, drought watch, warning, and emergency stages, monitoring data and criteria for determining drought stage, and drought response actions by the Commission and partner agencies. Since adoption of the plan in 2000, monitoring networks have changed, data portals have improved, new drought indicators have emerged, and climate science research has provided new insights. Accordingly, there is a need to update the Commission's drought monitoring, early warning, and management procedures and tools to increase drought preparedness in the Basin.

**Consumptive Use Mitigation Grants – Project Operations** - The Commission's Consumptive Use Mitigation Grant Program was established to accelerate implementation of on-the-ground projects to mitigate for consumptive use, especially during critical low flow periods and droughts. This includes project operations that result in improved reservoir, conjunctive use, and drought operations. Grant payments for project operations projects funded by the grant program are estimated at \$765,000 for FY-24.

**Billmeyer Quarry Consumptive Use Mitigation Project** – 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-2024, staff will continue to implement the project operations plan (pending low flow conditions) and conduct ongoing monitoring related to aquatic invasive species, harmful algal blooms, and groundwater levels. Costs include \$35,000 of interest for payments due to LCSWMA under the Water Storage Agreement, and depreciation of water storage rights of \$38,000. In FY-24 the Commission will also pay a \$50,000 annual standby fee to a pumping contractor. Should low flow conditions require activation of pumping, the Executive Director is authorized to initiate pumping operations and pay the pumping contractor according to the price per day schedule included in the contract approved by the Commissioners.

## PRIORITY MANAGEMENT AREA D: WATERSHED MANAGEMENT

**Goal:** – Watersheds exhibit a healthy and sustainable balance between land and water management.

**Vision:** - Integrated land use and water management practices allow watersheds to function in a natural and sustainable manner to protect and improve the quantity and quality of water resources in the Basin.

### Programs

#### **AREA D: Watershed Management**

|   |                     |
|---|---------------------|
| American Eel Restoration .....  | \$ 45,000           |
| Dam Removal Study .....   | \$ 20,000           |
| Conowingo Watershed Implementation Plan – Financing Authority .....             | <u>220,000</u>      |
| <b>Subtotal – General Fund/Fiscal Stabilization Fund</b>                        | <b>\$ 285,000</b>   |
|   |                     |
| Eels in the Classroom .....   | 40,000              |
| Stormwater Management .....   | 40,000              |
| Small Watersheds Grant Program .....  | 200,000             |
| Water Resource Studies.....   | <u>145,000</u>      |
| <b>Subtotal – Sustainable Water Resources Fund</b>                              | <b>\$ 425,000</b>   |
|   |                     |
| DCNR Reservoir Environmental Flow Enhancements .....                            | 55,000              |
| Kehm Run Dam Removal & Restoration Project .....                                | 95,000              |
| Critical Aquifer Recharge Area Pilot Projects .....                             | 60,000              |
| Integrated Watershed Management .....   | 150,000             |
| Octoraro Consumptive Use Mitigation Study .....                                 | 390,000             |
| Consumptive Use Mitigation Grants – Environmental & Water Quality Projects..... | <u>4,870,000</u>    |
| <b>Subtotal - Water Management Fund</b>   | <b>\$ 5,620,000</b> |
|   |                     |
| <b>TOTAL PMA D: WATERSHED MANAGEMENT</b>  | <b>\$ 6,330,000</b> |

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

##### **Funding Provided by the General Fund:**

**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, have plummeted. In 2008, the US Fish and Wildlife Service began a limited, but successful, eel reintroduction program. Begun in FY-2016, 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.

**Dam Removal Study** – The Chiques Creek watershed in Lebanon and Lancaster counties, Pennsylvania, contains numerous mill dams. This watershed has been heavily studied by the Commission over the past several years and was the focus of a comprehensive effort to isolate nutrient and sediment sources within the watershed, determine and implement methods to reduce these inputs, and monitor effectiveness. The Commission installed water quality monitoring sondes in this watershed in 2015 and is currently supplementing that data with additional data collection efforts.

One of these sondes is located a couple hundred feet downstream from the Roller Mill Dam on Chiques Creek, which is scheduled to be removed in the near future. The Commission has developed a study to collect stream channel measurements at several fixed transects above and below the dam, combined with water quality and biological sampling events. Collection of baseline measurements along Chiques Creek started in Fall 2020 and will continue until dam removal occurs, when post-removal measurements will be collected. Comparable measurements are being collected along Little Chiques Creek, where the Cove Park Mill Dam was removed in 2019.

**Conowingo Watershed Implementation Plan – Financing Authority** – The Conowingo Watershed Implementation Plan (CWIP) is a road map toward achieving a “pollution diet” like those in place for the entire Chesapeake Bay watershed. One of the keys to the CWIP was establishing a financing authority to manage restoration activity and funding associated with the CWIP effort, a role that was designated to the Commission. In FY-2023 the Commission negotiated a Memorandum of Understanding with the Maryland Department of the Environment to develop processes and procedures to serve as the financing authority for funds the State of Maryland allocated to implement its requirements under the CWIP. In FY-2024 the Commission anticipates that it will develop and distribute a request for proposals which will be used to select and fund projects on behalf of Maryland.

**Funding Provided by the Sustainable Water Resources Fund:**

**Eels in the Classroom** – This project leverages Commission expertise and broader efforts to restore eel populations. Commission staff currently work with more than 20 school districts and have a growing wait list of schools willing and experienced to join this program. Preference is given to school districts located in environmental justice areas. Participant schools are allotted a nominal number of juvenile American eels (~8 to 10), and students raise them in the classroom from fall through spring, then release the fish to local streams. Through this project students are taught eel ecology, the value and importance of aquatic connectivity, ecosystem function and migratory fish restoration. Commission staff will furnish instructional material to teachers and participate in eel release activities for a subset of classrooms.

**Stormwater Management** – Commission staff will provide technical support to agencies as well as provide technical and regulatory coordination assistance to municipalities 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/outreach 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.

**Small Watersheds Grant Program** – In FY-2024 the Commission will launch a small grant opportunity to support the work of non-profit watershed groups throughout the basin of up to \$5,000 per grant award. Eligible projects may include signage and educational materials, in-stream and stream-side cleanup of trash and debris, stream side plantings and rain/community gardens. Total funding available for these grant awards is \$150,000.

**Water Resource Studies** – On an annual basis the Commission seeks proposals from its staff for studies/projects that further the mission and work of the organization. FY-2024 studies include the study of stream salinization causes, mapping the migration of invasive fish species using eDNA, and an assessment of flow reduction effects on aquatic communities.

**Funding Provided by the Water Management Fund:**

**DCNR Reservoir Environmental Flow Enhancements** – 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.

**Kehm Run Dam Removal and Restoration Project** – In 2020, SRBC and American Rivers partnered to remove a high hazard dam on Kehm Run in York County, Pennsylvania. The full project consists of removing the dam structure and appurtenances, restoring the associated stream channel, floodplain, and wetlands and addressing adjacent stormwater issue to decrease sedimentation and enhance groundwater recharge. The project is being completed in three phases: 1) dewatering and initial dam breach, 2) removal of remaining dam and pipe, and 3) restoring stream channel, floodplain, wetlands, and stormwater features. In FY-24 staff will engage with Skelly and Loy, the selected design engineer, to complete the post-dam removal environmental restoration design and permitting for the project site at an estimated cost of \$50,000.

**Critical Aquifer Recharge Area Pilot Projects** – Groundwater recharge is the primary means of ensuring water is available to refill aquifers and support base flow to streams. Different geologic materials, structures, or surficial land use impact these conditions. This project aims to identify areas of the basin that provide greater recharge and baseflow support and are critical to maintaining adequate water supply to restore/improve hydrologic resiliency. Upon identification, Commission staff, in partnership with organizations such as the Upper Susquehanna Coalition, the Upper Susquehanna Conservation Alliance, North Central PA Conservancy and similar partners, will develop and implement preservation, restoration, or enhancement projects at preferred locations. Protecting and enhancing critical aquifer recharge and baseflow support to streams will help provide drought resiliency, enhance water quality and preserve the water supply for the future.

**Integrated Watershed Management** - The Commission will conduct an assessment of sustainable water availability and use for the Wiconisco, Mahantango, Pine and Deep watersheds with special focus on the region's importance with respect to agricultural potato production. The assessment will characterize the hydrologic and aquatic ecosystem conditions within the watershed, in order to assess for any potential impacts due to irrigation and other uses during low flow conditions. The work will also provide assistance to the several agricultural operations that may need to seek Commission approval for withdrawals in the watershed, and costs may also include direct assistance to those operations for monitoring water withdrawals and irrigation practices. Contractor costs of \$30,000 are included.

The Commission will also conduct an assessment of sustainable water availability and use for the Little Conestoga watershed, with a sub-focus on the Swarr Run tributary. The watershed overall faces challenges associated with agriculture and urbanization with past/ongoing water quality and quantity impacts, while also experiencing increased water demands.

**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. Recent service area expansions are not covered by the pre-Compact authorization and have been subject to Commission review, approval, and mitigation requirements. The Commission's work will identify project operation and water quality improvement alternatives that would adequately mitigate the Authority's diversion and consumptive use.

In addition, \$200,000 in funding will be made available to support the development of water quality best management practice projects in identified priority locations within the Octoraro Creek watershed. The Commission will also provide \$20,000 for an Amish Liaison program that will be administered by Alliance for Chesapeake Bay. The Amish Liaison program coordinates members of the local Plain Sect community who will work with technical service providers to promote, solicit, and deliver agriculture conservation practices and BMPs in the Upper Octoraro watershed. Total funding to be provided for BMP implementation and the Amish liaison program is \$220,000.

**Consumptive Use Mitigation Grants - Environmental & Water Quality Projects** – The Commission’s Consumptive Use Mitigation Grant Program was established to accelerate implementation of on-the-ground projects to mitigate for consumptive use, especially during critical low flow periods and droughts. This includes environmental and water quality improvements that result in increased groundwater recharge, wetland and stream restoration, mine drainage treatment, stormwater management, and floodplain restoration. Grant payments for environmental and water quality projects funded by this grant program are estimated at \$4,830,000 for FY-24.

## ADMINISTRATION, COORDINATION AND OUTREACH

The Commission’s 2021 Comprehensive Plan focuses on the four Priority Management Areas (PMAs) presented in this budget: Water Supply, Water Quality, Flooding and Drought, and Watershed Management. The 2021 Comprehensive Plan also includes two cross-cutting themes that enable and support achievement of PMA goals: coordination and outreach to partners and the public, which plays an important role through all four PMAs, and technology and data analytics, which will expand water resources management capabilities in all areas. The Commission is also cognizant of the overarching influence of climate change and the importance of environmental justice, and will look to address these challenges to improve management as conditions change and support more equitable treatment of Basin communities.

### Programs

#### **Administration, Coordination and Outreach**

|  |                     |
|--|---------------------|
| Watershed Coordination and Outreach Functions and Activities ..... | \$ 500,000          |
| Comprehensive Plan and Water Resources Program .....               | 55,000              |
| General Program Administration .....                               | 772,500             |
| Technology and Data Analytics .....                                | <u>485,000</u>      |
| <b>Total</b>   | <b>\$ 1,812,500</b> |

#### **Activities which will be conducted under Administration, Coordination and Outreach**

**Coordination and Outreach** - Coordination and outreach to partners and the public are essential and mandated responsibilities of the Commission. The purpose of coordination 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. Outreach efforts will focus on communication and education to river basin communities and stakeholders of the challenges and opportunities in water resources management, and will be enhanced to ensure disadvantaged and underserved communities have the opportunity and ability to provide feedback on the Commission’s activities.

**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-2024, the Commission will continue to implement the updated 2021 Comprehensive Plan. Staff will also prepare an annual update to the Water Resources Program.

**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 and elected officials. This budget category also includes costs for the Commission’s administrative personnel and programs, such as executive, finance, human resources and government relations.

**Technology and Data Analytics** - 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. Costs for FY-24 also include routine technology upgrades to servers and laptop computers.