Chesapeake Bay Program
Science. Restoration. Partnership.

April 18, 2024

Climate-Smart Agricultural Practices

2024 CAST Webinar Series

Speakers

James Martin
Division of Soil and Water Conservation Director, Virginia Department of Conservation and Recreation

Helen Golimowski
Data Analyst, Devereux Consulting

Agenda

1. **Climate-Smart Dashboard**
   Demonstration of the information available on this USDA tool

2. **Climate-Smart BMPs in CAST**
   How to create a CAST scenario using climate-smart BMPs

3. **Carbon Reductions in CAST**
   Discuss the path forward for adding carbon reduction estimates to CAST

Context

- James Martin was involved with team that worked to obtain funding from USDA for climate-smart practices
- VA has an aggressive strategy for addressing climate change as part of the Bay TMDL, and strong mechanisms put in place to get cost-share funds to farmers
- VA is focused on targeting pasture and cropland, which many climate-smart practices can be applied to
- Other states are also receiving climate-smart grants

1

Climate-Smart Dashboard

Demonstration of the information available on this USDA tool

USDA's Partnerships for Climate-Smart Commodities Projects Overview

James Martin
Director, Division of Soil and Water Conservation
Virginia Department of Conservation and Recreation

USDA
U.S. DEPARTMENT OF AGRICULTURE

PARTNERSHIPS FOR CLIMATE-SMART COMMODITIES

- USDA announced the Partnerships for Climate-Smart Commodities opportunity in February 2022 offering $1 Billion in funding ($20 Billion in proposals received)
  - On September 14, 2022, Secretary Vilsack announced USDA would be investing up to $2.8 billion in 70 selected projects (first pool proposals from $5 million to $100 million)
  - On December 12, 2022, he announced $325 million would be invested in an additional 71 projects (second funding pool proposals from $250,000 to $4,999,999)
- Involvement of nearly 100 universities, including over 30 minority serving institutions
  - 11 projects with a Historically Black Colleges or Universities as the lead and 35 projects as major partners
  - 6 projects with Hispanic Serving Institutions as the lead and nearly 20 projects as major partners
- Over 20 tribes and tribal groups leading and partnering on many projects

PROJECTS BY AWARD SIZE*

71 Under $5M

22 $5-20M
25 $25M-45M
09 $50M-65M
14 $70M-95M

More than 60 million metric tons of carbon dioxide equivalent sequestered over the lives of the projects. This is equivalent to removing more than 12 million gasoline-powered passenger vehicles from the road for one year.

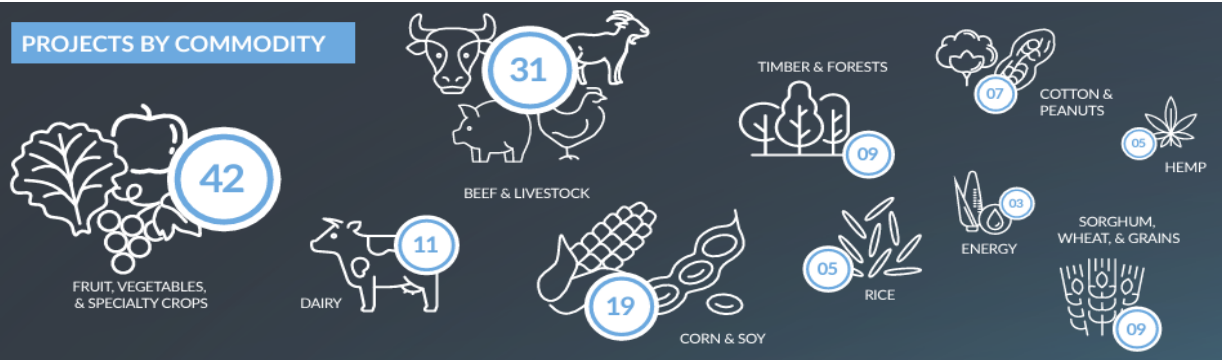
USDA
U.S. DEPARTMENT OF AGRICULTURE

PARTNERSHIPS FOR CLIMATE-SMART COMMODITIES

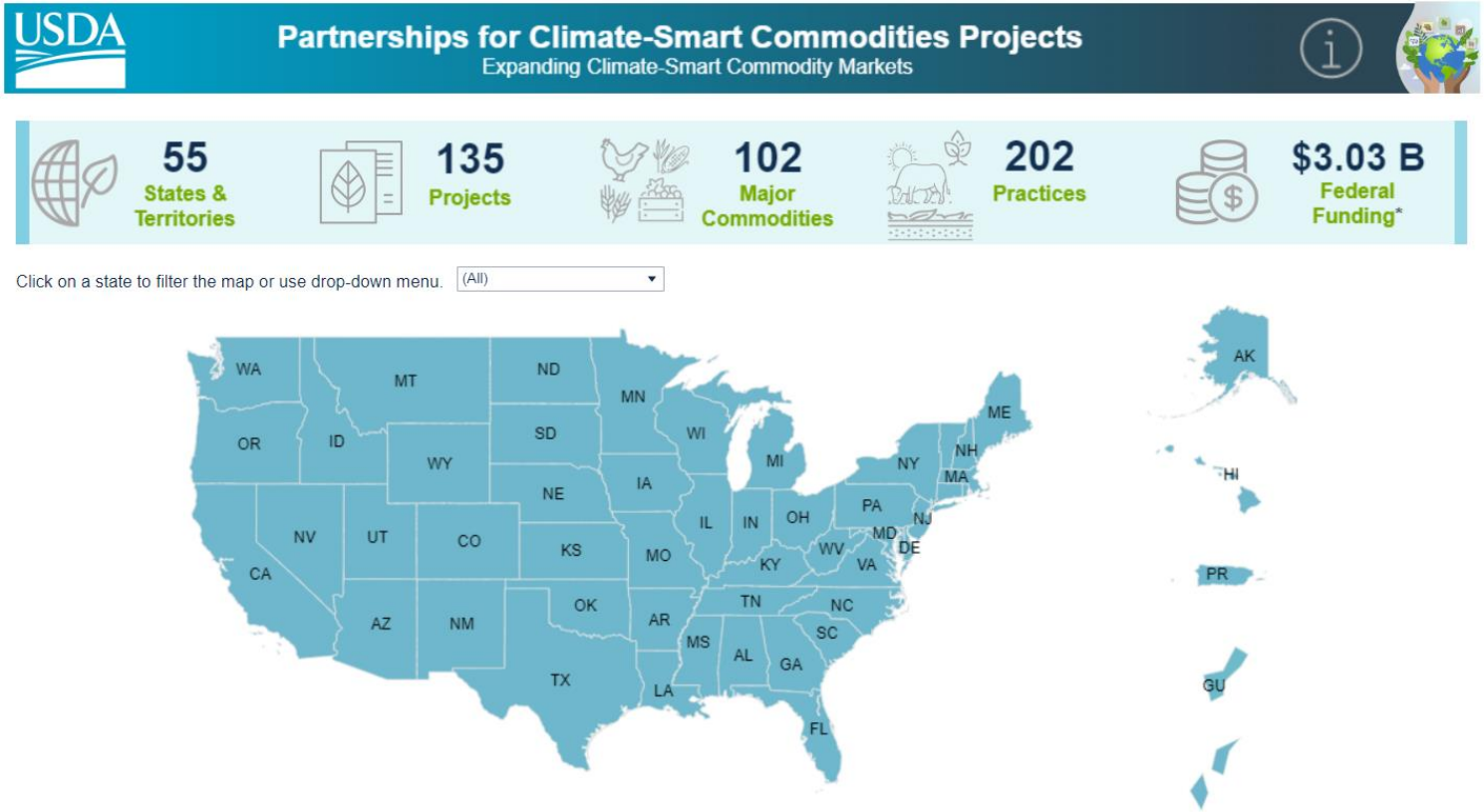
Funding provided through USDA's Commodity Credit Corporation

Pilot projects to provide incentives to producers and landowners to:

- Implement climate-smart production practices, activities, and systems on working lands
- Measure/quantify, monitor and verify the carbon and greenhouse gas (GHG) benefits
- Develop markets and promote the resulting climate-smart commodities.



https://publicdashboards.dl.usda.gov/t/FPAC_PUB/views/PartnershipsForClimate-SmartCommodities/Overview



Partnerships for Climate-Smart Commodities Projects

Expanding Climate-Smart Commodity Markets

7	45	65	141	$1.34 B
States & Territories	Projects	Major Commodities	Practices	Federal Funding*

Click on a state to filter the map or use drop-down menu. (Multiple values)

*Total funding for all projects that potentially impact this area, commodity(ies), practice(s) and project(s) as filtered.

COMMODITIES Search Commodities:

PRACTICES Search Practices:

LEAD PARTNERS Search Lead Partners:

USDA

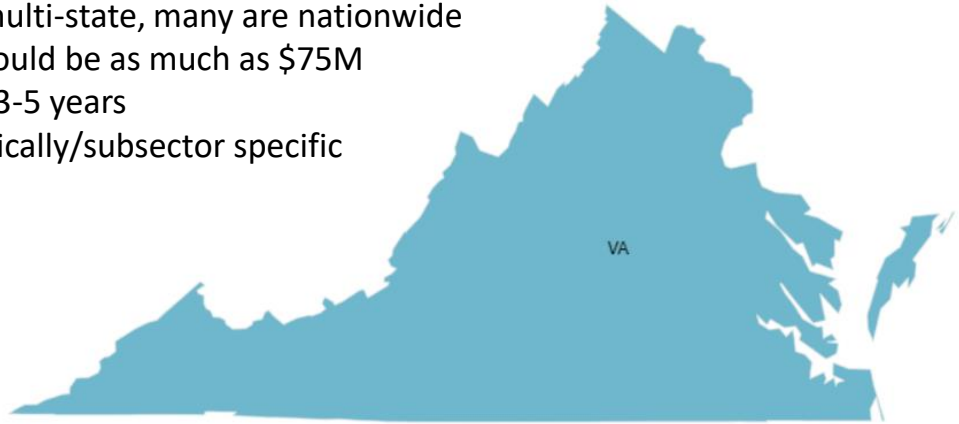
Partnerships for Climate-Smart Commodities Projects

Expanding Climate-Smart Commodity Markets

1	29	52	93	$902.47 M
States & Territories	Projects	Major Commodities	Practices	Federal Funding*

Click on a state to filter the map or use drop-down menu. Virginia

Most projects are multi-state, many are nationwide
Realistic VA share could be as much as $75M
Project range from 3-5 years
Many are geographically/subsector specific



*Total funding for all projects that potentially impact this area, commodity(ies), practice(s) and project(s) as filtered.

COMMODITIES Search Commodities:

PRACTICES Search Practices:

LEAD PARTNERS Search Lead Partners:

Download PDF

VA Polytechnic Institute and State University

Link to Project Enrollment Opportunities: https://www.allianceforcsa.org/

Short Summary: Expands markets for climate-smart Corn, Rice, Beef, Pork, Dairy, Other Crops & Livestock in AR, MN, ND, and VA and supports farmer implementation and monitoring of climate-smart practices.

Full Description:
The Alliance to Advance Climate-Smart Agriculture: Supporting Producers to Promote Productivity, Markets, and Environmental Benefits

This project will build climate-smart markets for a variety of agricultural commodities and help to make adopting climate-smart agriculture and forestry practices more economically viable for producers by compensating them at a rate that guarantees a reasonable return, with a price floor that surpasses costs. It also proposes to conduct research on consumer willingness to pay for climate-smart labels to help assess the private market and label effectiveness, and develop a national climate-smart agriculture and forestry certification model that can used with private sector purchasers. GHG impact is planned to be quantified using tools such as USDA's COMET and Field to Market's Fieldprint Calculator (for rice), which do not require extensive on-farm sampling. This project plans to use producer self-verification and select audits. Livestock pilots plan to include recommendations on verifying methane reductions using practical, scientific, and cost-effective methods, such as drones. The project plans to estimate impact based on statistical models rather than monitoring every field and adjust certificate values based on the determined accuracy of producers' self-verified GHG claims and level of additionality. The project plans to conduct research on consumer willingness to pay for various climate-smart labels to help assess the size of the private market and label effectiveness and develop a national climate-smart agriculture and forestry certificate model that can be used with private sector purchasers. The project plans to provide outreach for meaningful participation (at least 40%) by underserved producers through mechanisms such as funding allocations, minimum payments, and equity payment terms.

Lead Partner: Virginia Polytechnic Institute and State University
Other Major Partners: Arkansas Department of Agriculture*,**, Minnesota Board of Water and Soil Resources*,**, North Dakota Farmers Union*, Virginia Department of Conservation and Recreation*,**, Arkansas Rice Federation*, Agricultural Council of Arkansas*, Minnesota Soil Health Coalition*, Minnesota Farmers Union*, Minnesota State Cattlemen's Assoc.*, Natl. Assoc. of Conservation Districts*, National Black Growers Council*, Sustainable Food Lab*, Environmental Initiative*, Supporters of Agricultural Research (SoAR)*
Primary States Expected: AR, MN, ND, VA
Major Commodities: Corn, Rice, Beef, Pork, Dairy, Other Crops, Other Livestock

Approximate Funding Ceiling: $80,000,000

Approved Federal Funding: $80,000,000
Non-Federal Match: $20,849,855

Monitoring Highlights:
GHG impact is planned to be quantified using tools such as USDA's COMET and Field to Market's Fieldprint Calculator (for rice), which do not require extensive on-farm sampling. This project plans to use producer self-verification and select audits. Livestock pilots plan to include recommendations on verifying methane reductions using practical, scientific, and cost-effective methods, such as drones. The project plans to estimate impact based on statistical models rather than monitoring every field and adjust certificate values based on the determined accuracy of producers' self-verified GHG claims and level of additionality.

Marketing Highlights:
The project plans to conduct research on consumer willingness to pay for various climate-smart labels to help assess the size of the private market and label effectiveness and develop a national climate-smart agriculture and forestry certificate model that can be used with private sector purchasers.

Equity Highlights:
The project plans to provide outreach for meaningful participation (at least 40%) by underserved producers through mechanisms such as funding allocations, minimum payments, and equity payment terms.

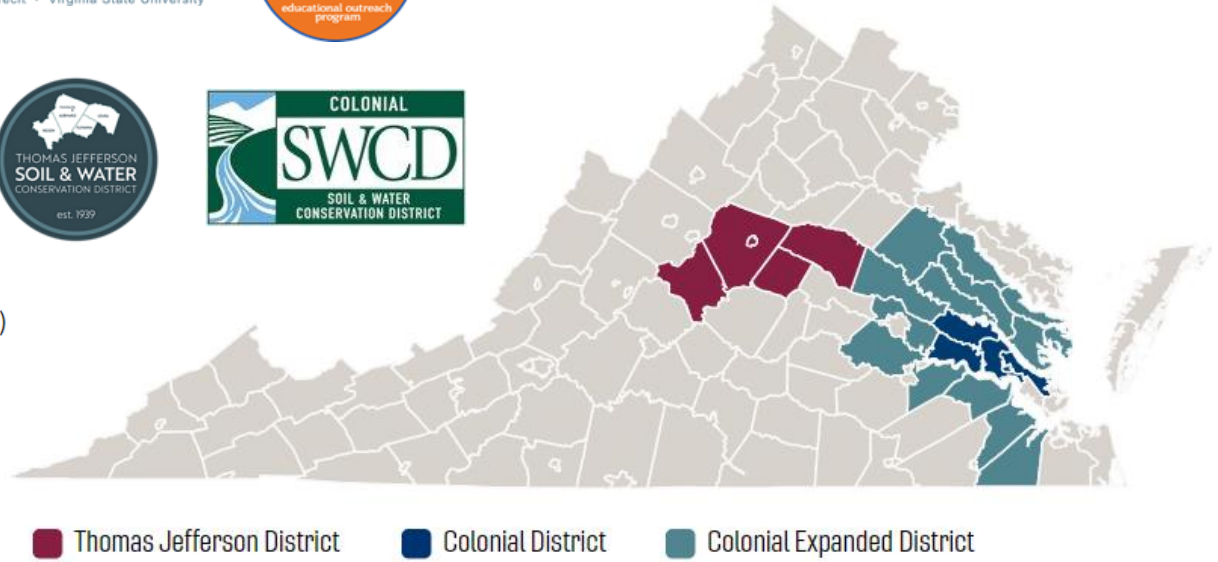
Avaliable Practices: CPA 102 Comprehensive Nutrient Management, 328 Conservation Crop Rotation, 329 Residue and Tillage Management - No-Till, 340 Cover Crop, 345 Residue and Tillage Management - Reduced Till, 367 Roofs and Covers, 381 Silvopasture, 390 Riparian Herbaceous Cover, 391 Riparian Forest Buffer, 449 Irrigation Water Management, 512 Pasture and Hay Planting, 528 Prescribed Grazing, 590 Nutrient Management, 592 Feed Management, 612 Tree/Shrub Establishment, 632 Waste Separation Facility, CCI-SL-6N Continuing Conservation Initiative Stream Exclusion with Narrow Width Buffer – Maintenance Practice, CCI-SL-6W Continuing Conservation Initiative Stream Exclusion with Wide Width Buffer – Maintenance Practice, WFA-CC: Whole Farm Approach – Cover Crop Bundle, WFA-NM: Whole Farm Approach – Nutrient Management Bundle

Alliance to Advance Climate-Smart Agriculture

https://www.allianceforcsa.org/partners/virginia/

Conservation Practice Standard

Conservation Crop Rotation (328)
Residue and Tillage Management, No Till (329)
Cover Crop (340)
Residue and Tillage Management, Reduced Till (345)
Silvopasture (381)
Riparian Herbaceous Cover (390)
Riparian Forest Buffer (391)
Filter Strip (393)
Nutrient Management (590)
Tree/Shrub Establishment (612)
Irrigation Water Management, Alternative Wetting and Drying (449)
Pasture and Hay Planting (512)
Prescribed Grazing (528)
Feed Management (592)



Alliance to Advance Climate-Smart Agriculture

PAYMENT OVERVIEW

$100 PER ACRE OR ANIMAL UNIT

2-320 ACRES OR AU

DIRECT PAYMENTS ISSUED BY VIRGINIA TECH ON A DEBIT CARD

RECEIVE 50%

of your payment upfront

25%

of your payment after implementation and verification

REMAINDER 25%

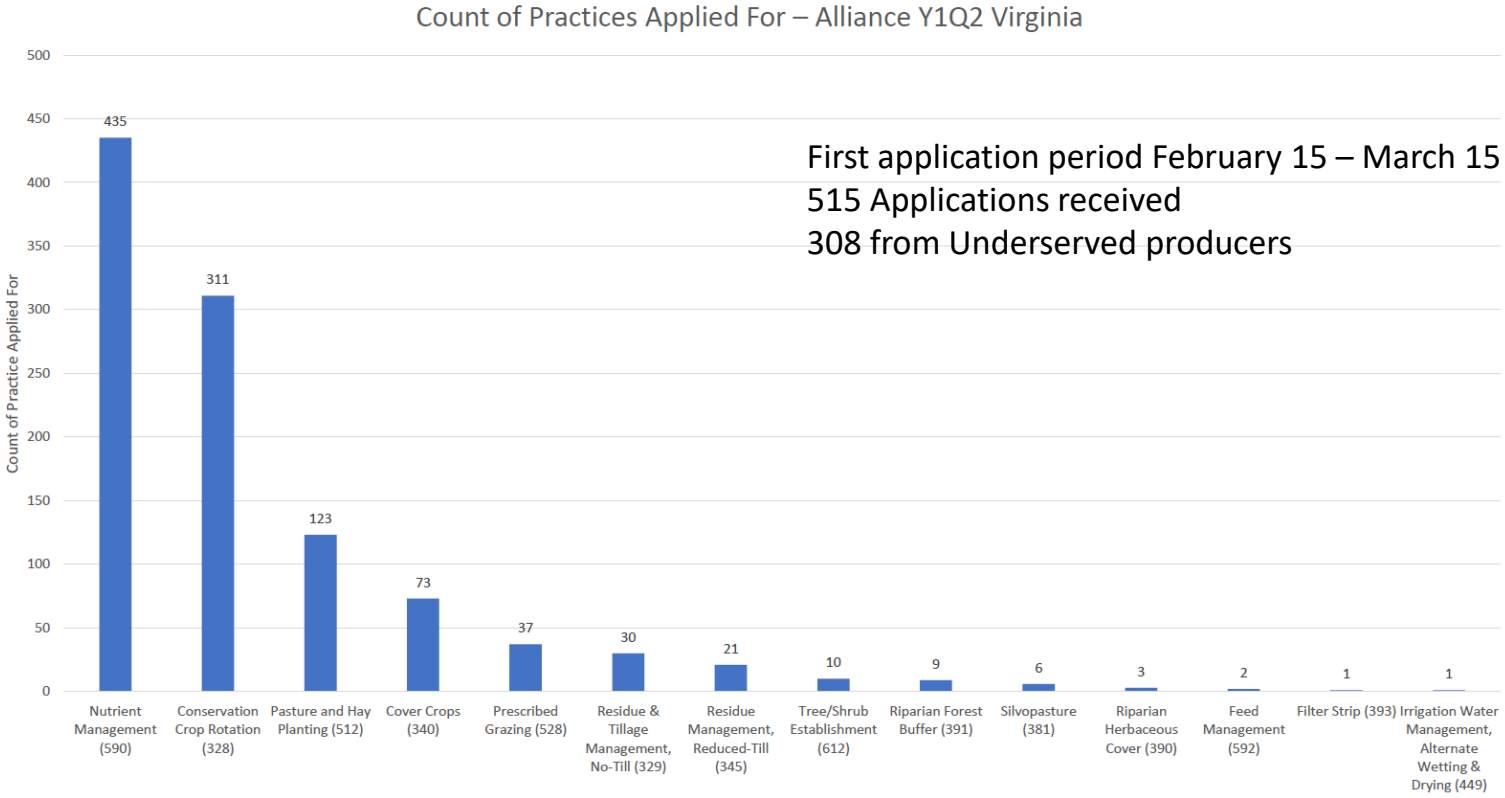
of your payment after final reporting

Alliance to Advance Climate-Smart Agriculture

JUSTICE40

This grant aims to enroll at least 40% Underserved or Minority Producers, which includes: women producers, small producers, limited resource producers, socially disadvantaged producers, veteran producers, beginning producers, and producers growing specialty crops, according to the USDA definition.

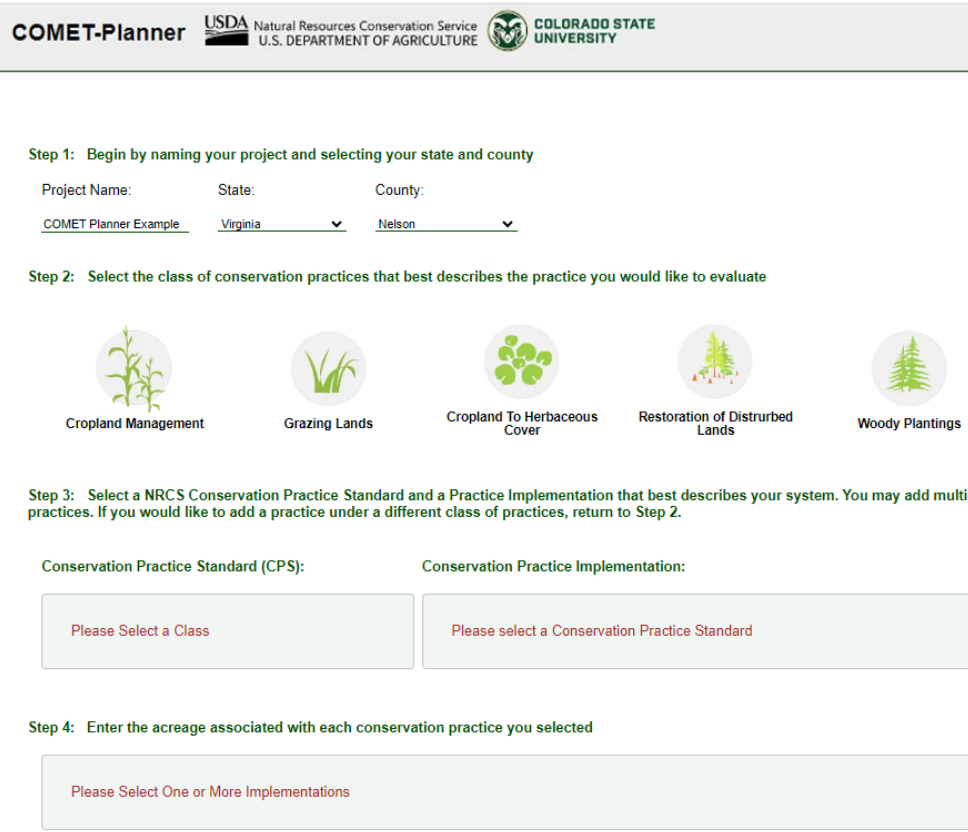
Alliance to Advance Climate-Smart Agriculture



First application period February 15 – March 15
515 Applications received
308 from Underserved producers

Estimation of Carbon Benefits

http://comet-planner.com/



How are your carbon sequestration and greenhouse gas emission reduction estimates calculated?
Emission reduction coefficients were largely derived using a sample-based approach and model runs in COMET-Farm, which utilizes USDA entity-scale greenhouse gas inventory methods. Coefficients were generalized by multi-county regions defined by USDA Major Land Resource Areas. Emissions estimates represent field emissions only, including those associated with soils and woody biomass as appropriate, and do not include off-site emissions, such as those from transportation, manufacturing, processing, etc. More information on quantification methods can be found in the COMET-Planner Report

Each emission reduction is calculated using the following equation:
Emission reduction = Area (acres) * Emission Reduction Coefficient (ERC)

Recommended Use of COMET-Planner:
This evaluation tool is designed to provide generalized estimates of the greenhouse gas impacts of conservation practices and is intended for initial planning purposes. Site-specific conditions (not evaluated in this tool) are required for more detailed assessments of greenhouse gas dynamics on your farm. Please visit COMET-Farm if you would like to conduct a more detailed analysis.

Estimation of Carbon Benefits

http://comet-planner.com/

COMET-Planner Report: Approximate Carbon Sequestration and Greenhouse Gas Emission Reductions

Project Name: COMET Planner Example

State: Virginia

County: Nelson

NRCS Conservation Practices	Acreage	Carbon Dioxide	Nitrous Oxide	Methane	Total CO2 Equivalent
Grazing Management to Improve Rangeland or Non-Irrigated Pasture Condition	100	6	9	0	15
Reduced Till to No Till or Strip Till on Non-Irrigated Cropland	100	27	3	0	30
Add Non-Legume Seasonal Cover Crop (with 25% Fertilizer N Reduction) to No-Till Non-Irrigated Cropland	100	16	8	0	24
Totals	300	49	20	0	69

2

Climate-Smart BMPs in CAST

How to create a CAST scenario using climate-smart BMPs

USDA Natural Resources Conservation Service
U.S. DEPARTMENT OF AGRICULTURE

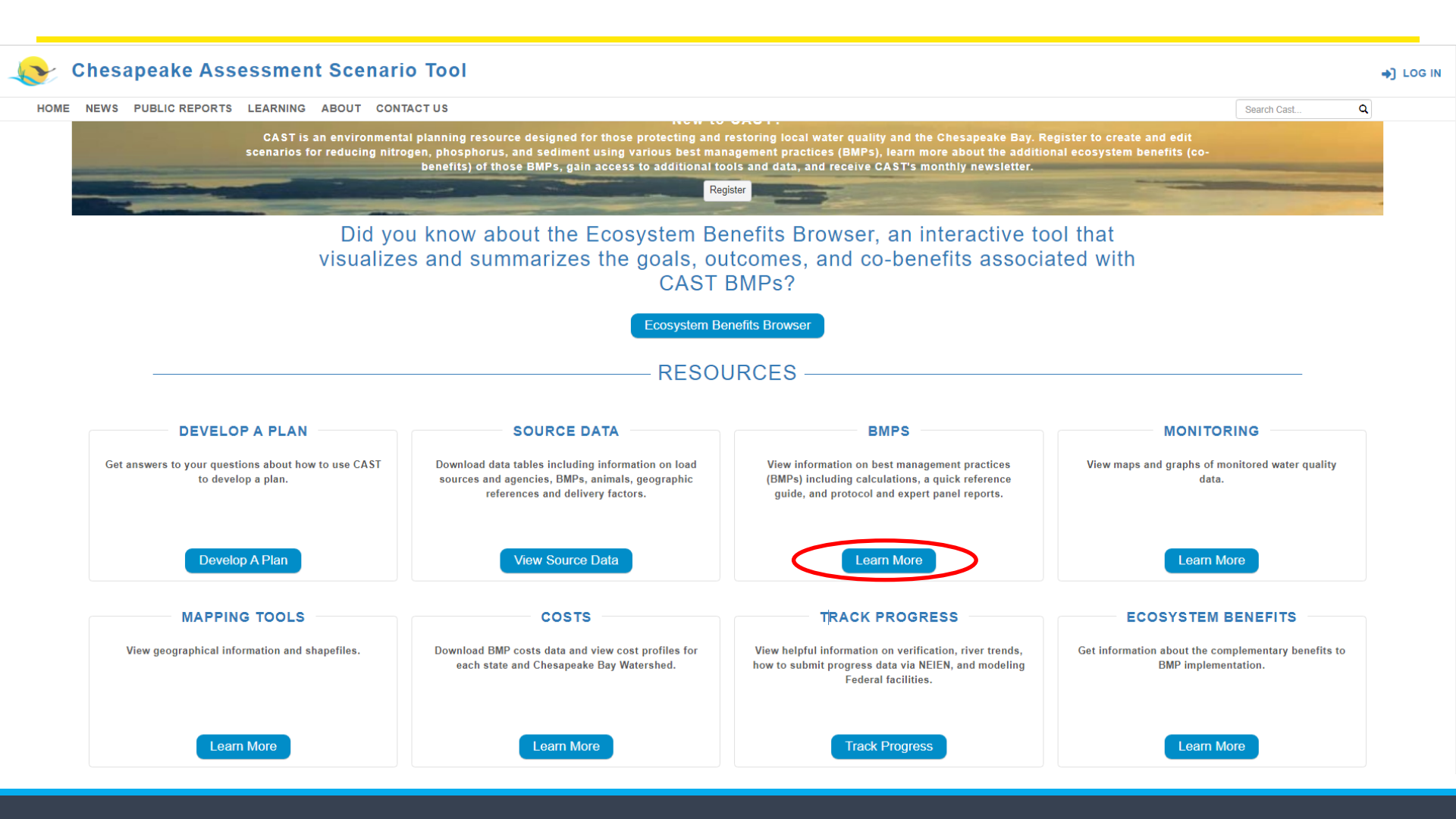
Climate-Smart Agriculture and Forestry (CSAF) Mitigation Activities List for FY2024

Highlighted activities have been added to the list in FY2024.
*Noted activities are added to the list as "provisional."[1]

Mitigation Categories [5]	Code	Conservation Practice Standard Name[2] [3] (practice unit)	Code	Conservation Stewardship Program (CSP) Enhancement Activities
Soil Health	327	Conservation Cover (acres)	E327A	Conservation cover for pollinators and beneficial insects[2]
			E327B	Establish Monarch butterfly habitat
	328	Conservation Crop Rotation (acres)	E328A	Resource conserving crop rotation
			E328B	Improved resource conserving crop rotation
			E328E	Soil health crop rotation
			E328F	Modifications to improve soil health and increase soil organic matter
			E328N	Intercropping to improve soil health
			E328Q	Perennial grain crop conservation rotation
	329	Residue and Tillage Management, No Till (acres)	E329A	No till to reduce soil erosion
			E329B	No till to reduce tillage induced particulate matter
			E329C	No till to increase plant-available moisture
			E329D	No till system to increase soil health and soil organic matter content
			E329E	No till to reduce energy
	332	Contour Buffer Strips (acres)	None Available	
	336	Soil Carbon Amendment (acres)*	None Available	
	340	Cover Crop (acres)	E340A	Cover crop to reduce soil erosion
			E340B	Intensive cover cropping to increase soil health and soil organic matter content
			E340C	Use of multi-species cover crops to improve soil health and increase soil organic matter
			E340D	Intensive orchard/vineyard floor cover cropping to increase soil health
			E340F	Cover crop to minimize soil compaction
			E340G	Cover crop to reduce water quality degradation by utilizing excess soil nutrients
			E340H	Cover crop to suppress excessive weed pressures and break pest cycles
			E340I	Using cover crops for biological strip till
			E340J	Cover crop to improve moisture use efficiency and reduce salts
	345	Residue and Tillage Management, Reduced Till (acres)	E345A	Reduced tillage to reduce soil erosion
			E345B	Reduced tillage to reduce tillage induced particulate matter
			E345C	Reduced tillage to increase plant-available moisture
			E345D	Reduced tillage to increase soil health and soil organic matter content
			E345E	Reduced tillage to reduce energy use

NRCS Climate-Smart Agricultural Practices

https://www.nrcs.usda.gov/sites/default/files/2023-10/NRCS-CSAF-Mitigation-Activities-List.pdf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Download data tables including information on load sources and agencies, BMPs, animals, geographic references and delivery factors.
View Source Data
BMPS
View information on best management practices (BMPs) including calculations, a quick reference guide, and protocol and expert panel reports.
Learn More
MONITORING
View maps and graphs of monitored water quality data.
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View geographical information and shapefiles.
Learn More
COSTS
Download BMP costs data and view cost profiles for each state and Chesapeake Bay Watershed.
Learn More
TRACK PROGRESS
View helpful information on verification, river trends, how to submit progress data via NEIEN, and modeling Federal facilities.
Track Progress
ECOSYSTEM BENEFITS
Get information about the complementary benefits to BMP implementation.
Learn More

BMP Calculations

Understanding how BMPs are calculated will help the user maximize their load reductions. The following topics are addressed in Section 6 Best Management Practices of the Model Documentation: BMP types, BMP groups and sequence of calculation, overlapping and mutually exclusive BMPs, calculation steps with example calculations, and tips for maximizing load reductions.

Reports

Each BMP is developed following a Protocol that was approved by the Chesapeake Bay Program Partnership. The Protocol and detailed reports for each BMP are available at the links below. A quick reference guide for BMPs provides general information about some BMPs and how they function within the Chesapeake Bay Program reporting and modeling structure. This Guide provides a single place to learn key information about a selection of BMPs.

- Protocol for the Development, Review, and Approval of Loading and Effectiveness Estimates for Nutrient and Sediment Controls in the Chesapeake Bay Watershed Model.
- Expert Panel reports. Click on the publications tab for published reports.
- Pasture Management/Grazing Report
- Simpson Weammert-Lane 2009 Report with detailed documentation of many BMPs.
- BMP Reference Guide
- Manure BMP Fast Facts
- Manure Treatment Techologies Fast FAQs
- Credit for Conservation Landscaping

Stream Restoration Protocols 2 and 3-Legacy Sediment and Raising the Streambed

We are providing a calculator to assist with determining the load reduced for the Stream Restoration Protocol 3. This calculator provides the pounds of TN, TP, and TSS with inputs provided by you from the flow duration curves, baseflow discharge, channel discharge, and discharge at the maximum treatable floodplain depth. You can then enter these pounds into your scenario using Add BMPs or uploading a file.

Stream Calculator

Unified Stream Restoration Guide

NRCS Practice Names and Codes

A crosswalk of NRCS practice names and codes to the CAST BMP name may be helpful in selecting the CAST BMP that best represents your management action.

- USDA Practices, NEIEN, and CAST BMPs

For deliberative purposes only. These may be helpful in selecting the CAST BMP that best represents your management action
Updated 1/3/2022

Data Sources
NRCS data shared with USGS through a Memorandum of Understanding dated 2020 through 2025. NRCS data were taken from the National Planning and Agreements Database (NPAD). Data include those BMPs cost-shared by NRCS, funded by FSA but administered by NRCS technical staff, and NRCS conservation technical assistance. Conservation Technical Assistance is *any* practice that is recommended by NRCS, meets NRCS technical standards, and is not funded by USDA.

FSA data are shared with USGS through a separate Memorandum of Understanding.

All FSA and NRCS practices are included. Not all FSA and NRCS practices provide a water quality benefit or are accepted by the Chesapeake Bay Program for the Annual Progress Report. The practice names are those that were present in the Chesapeake Bay Watershed from the year 2006 to the present.

The NEIEN data were downloaded from CAST and is the version used for the 2021 Progress Assessment. The CAST BMP data were copied from the CAST Source Data table.

Tables
There is one table that shows the relationship among NRCS conservation practices, NEIEN BMP names, and CAST BMP names. A similar table exists for FSA data. The NRCS and FSA information is color-coded pink, NEIEN is color-coded green, and CAST is color-coded blue. Each table includes the following:

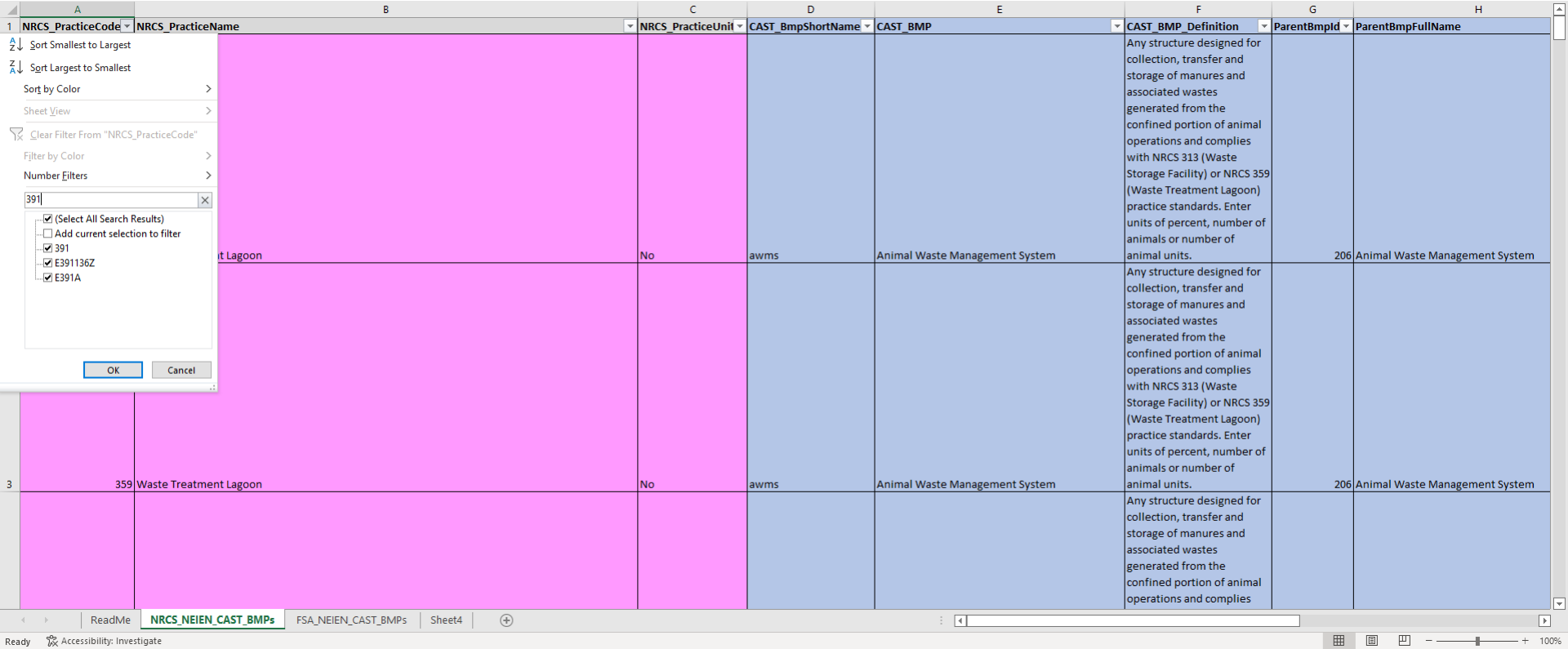
- NRCS or FSA practice code, name, and unit
- NEIEN BMP name, status, measurement unit, and credit duration
- CAST sector, BMP name, measurement unit, and if the BMP is considered official

NRCS and FSA practice names and codes include all the NRCS BMPs reported in the Chesapeake Bay Watershed.

The BMPs that are mapped in the NEIEN Appendix to CAST BMPs are included. Where BMPs in the NEIEN status column are marked as "release", they are included in the CAST progress scenarios. NRCS BMPs that have a NEIEN status of "retired" or "draft" are recorded in NEIEN but not credited in CAST. The Chesapeake Bay Program requires that BMPs be verified. The NEIEN credit duration reflects the frequency with which BMPs must be inspected for Bay Program verification purposes.

	A	B	C	D	E	F	G	H
1	NRCS_PracticeCode	NRCS_PracticeName	NRCS_PracticeUnit	CAST_BmpShortName	CAST_BMP	CAST_BMP_Definition	ParentBmpId	ParentBmpFullName
2	359	Waste Treatment Lagoon	No	awms	Animal Waste Management System	Any structure designed for collection, transfer and storage of manures and associated wastes generated from the confined portion of animal operations and complies with NRCS 313 (Waste Storage Facility) or NRCS 359 (Waste Treatment Lagoon) practice standards. Enter units of percent, number of animals or number of animal units.	206	Animal Waste Management System
3	359	Waste Treatment Lagoon	No	awms	Animal Waste Management System	Any structure designed for collection, transfer and storage of manures and associated wastes generated from the confined portion of animal operations and complies with NRCS 313 (Waste Storage Facility) or NRCS 359 (Waste Treatment Lagoon) practice standards. Enter units of percent, number of animals or number of animal units.	206	Animal Waste Management System
						Any structure designed for collection, transfer and storage of manures and associated wastes generated from the confined portion of animal operations and complies		

ReadMe | NRCS_NEIEN_CAST_BMPs | FSA_NEIEN_CAST_BMPs | Sheet4


A
B
C
D
E
F
G
H
NRCS_PracticeCode
NRCS_PracticeName
NRCS_PracticeUnit
CAST_BmpShortName
CAST_BMP
CAST_BMP_Definition
ParentBmpId
ParentBmpFullName
Sort Smallest to Largest
Sort Largest to Smallest
Sort by Color
Sheet View
Clear Filter From "NRCS_PracticeCode"
Filter by Color
Number Filters
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(Select All Search Results)
Add current selection to filter
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Animal Waste Management System
Any structure designed for collection, transfer and storage of manures and associated wastes generated from the confined portion of animal operations and complies with NRCS 313 (Waste Storage Facility) or NRCS 359 (Waste Treatment Lagoon) practice standards. Enter units of percent, number of animals or number of animal units.
206
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3
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ReadMe
NRCS_NEIEN_CAST_BMPs
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Sheet4
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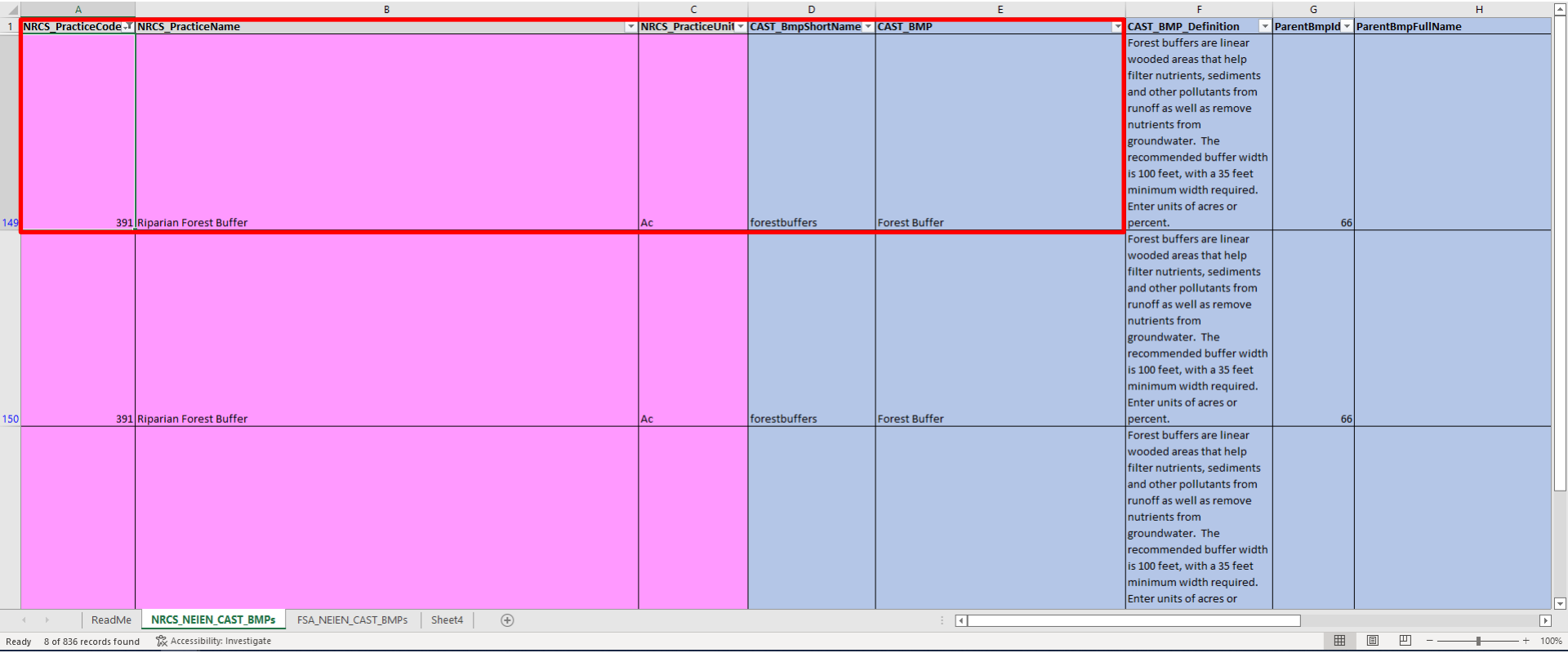

	A	B	C	D	E	F	G	H
1	NRCS_PracticeCode	NRCS_PracticeName	NRCS_PracticeUnit	CAST_BmpShortName	CAST_BMP	CAST_BMP_Definition	ParentBmpId	ParentBmpFullName
149	391	Riparian Forest Buffer	Ac	forestbuffers	Forest Buffer	Forest buffers are linear wooded areas that help filter nutrients, sediments and other pollutants from runoff as well as remove nutrients from groundwater. The recommended buffer width is 100 feet, with a 35 feet minimum width required. Enter units of acres or percent.	66	
150	391	Riparian Forest Buffer	Ac	forestbuffers	Forest Buffer	Forest buffers are linear wooded areas that help filter nutrients, sediments and other pollutants from runoff as well as remove nutrients from groundwater. The recommended buffer width is 100 feet, with a 35 feet minimum width required. Enter units of acres or percent.	66	
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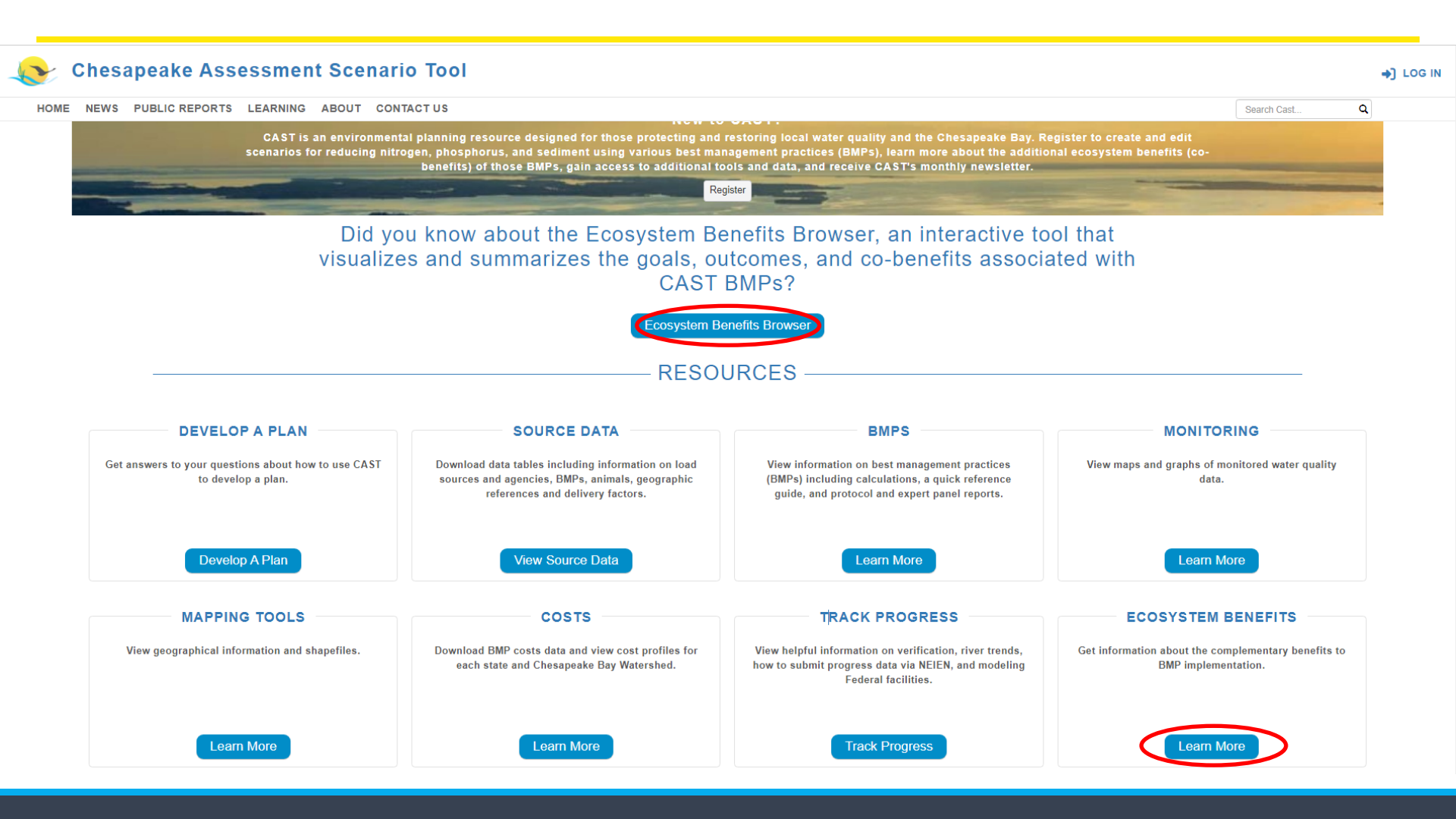
ReadMe | NRCS_NEIEN_CAST_BMPs | FSA_NEIEN_CAST_BMPs | Sheet4

Ready 8 of 836 records found Accessibility: Investigate 100%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Download data tables including information on load sources and agencies, BMPs, animals, geographic references and delivery factors.
View Source Data
BMPS
View information on best management practices (BMPs) including calculations, a quick reference guide, and protocol and expert panel reports.
Learn More
MONITORING
View maps and graphs of monitored water quality data.
Learn More
MAPPING TOOLS
View geographical information and shapefiles.
Learn More
COSTS
Download BMP costs data and view cost profiles for each state and Chesapeake Bay Watershed.
Learn More
TRACK PROGRESS
View helpful information on verification, river trends, how to submit progress data via NEIEN, and modeling Federal facilities.
Track Progress
ECOSYSTEM BENEFITS
Get information about the complementary benefits to BMP implementation.
Learn More

Chesapeake Assessment Scenario Tool

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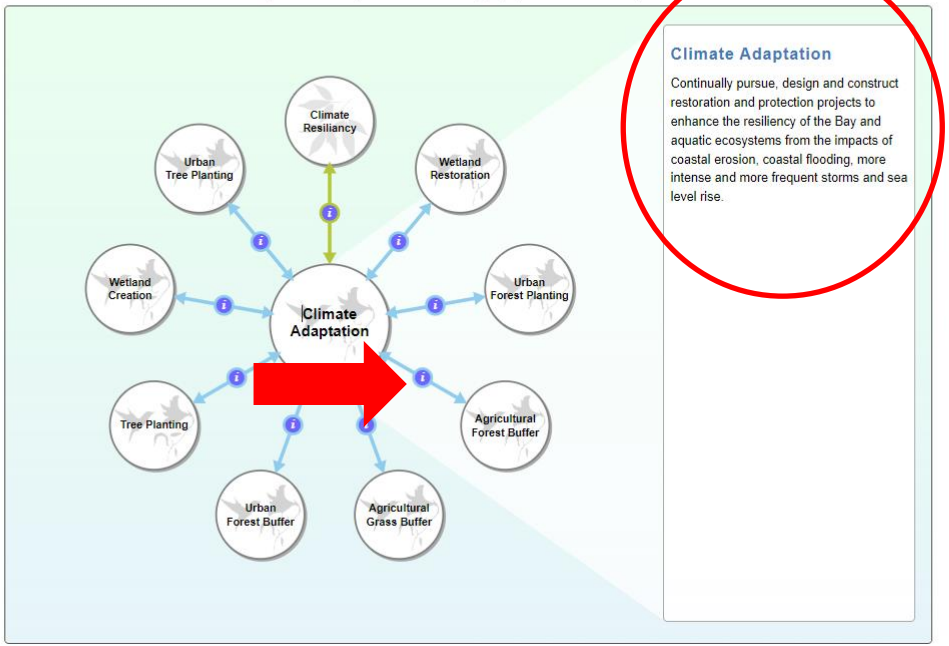
Ecosystem Benefits Browser

Click on the topic bubbles to explore. Click on the linkages (i) to view the relationship between elements.



Climate Adaptation

Continually pursue, design and construct restoration and protection projects to enhance the resiliency of the Bay and aquatic ecosystems from the impacts of coastal erosion, coastal flooding, more intense and more frequent storms and sea level rise.

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Goals

- Vital Habitats
- Stewardship
- Water Quality
- Climate Resiliancy
- Toxic Contaminants
- Healthy Watersheds
- Land Conservation
- Sustainable Fisheries

Outcomes

- Tree Canopy Outcome
- Diversity
- Local Leadership
- 2025 WIP
- Climate Adaptation
- Community Stewardship
- Toxic Contaminants Policy and Prevention
- Healthy Watersheds

CoBenefit Bmps

- Wetland Restoration
- Urban Forest Planting
- Agricultural Forest Buffer
- Agricultural Grass Buffer
- Urban Forest Buffer
- Tree Planting
- Impervious Surface Reduction
- Wetland Creation

Ecosystem Benefits Browser

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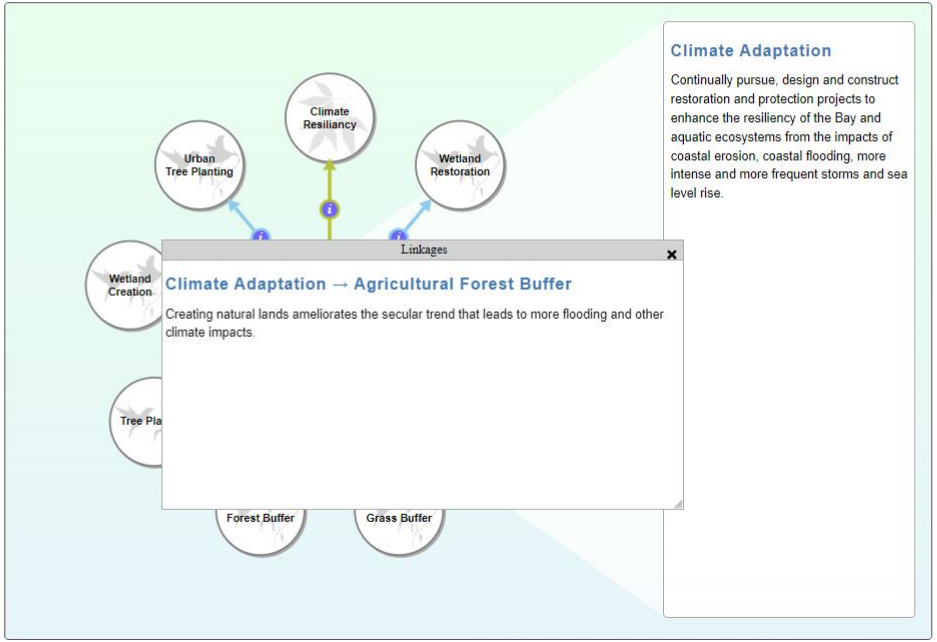

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Goals

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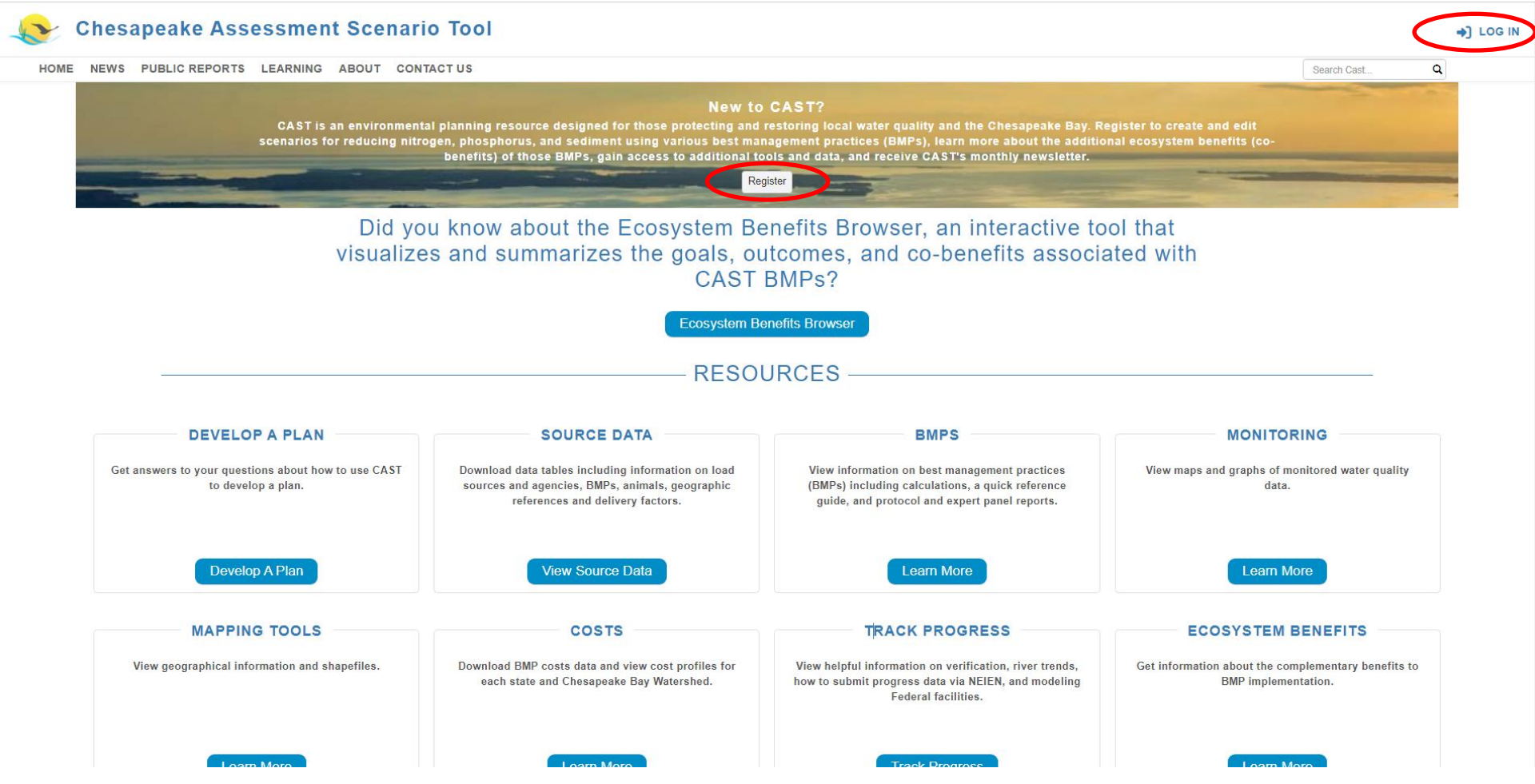
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View helpful information on verification, river trends, how to submit progress data via NEIEN, and modeling Federal facilities.
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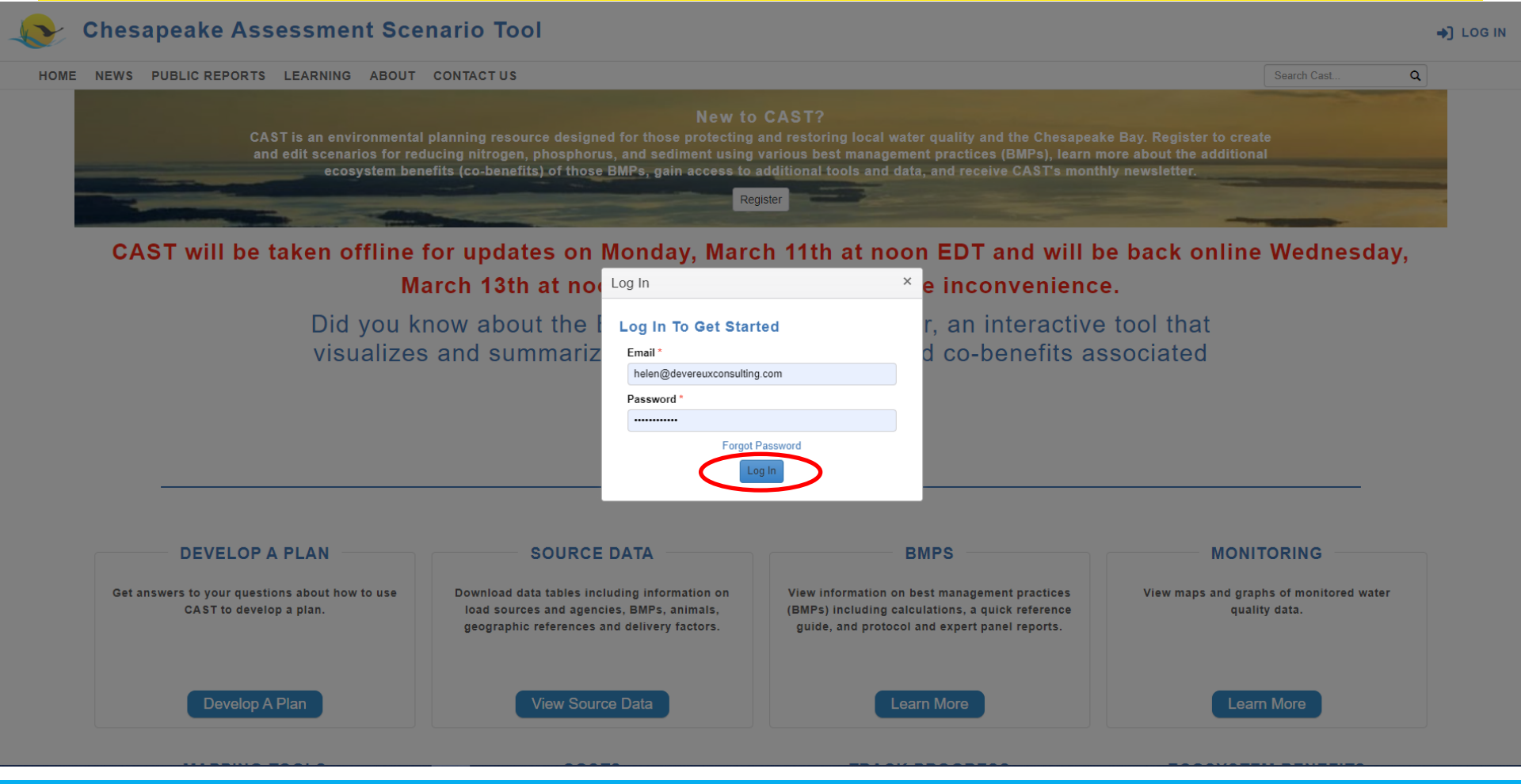
Get information about the complementary benefits to BMP implementation.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CAST will be taken offline for updates on Monday, March 11th at noon EDT and will be back online Wednesday,
March 13th at noo
e inconvenience.
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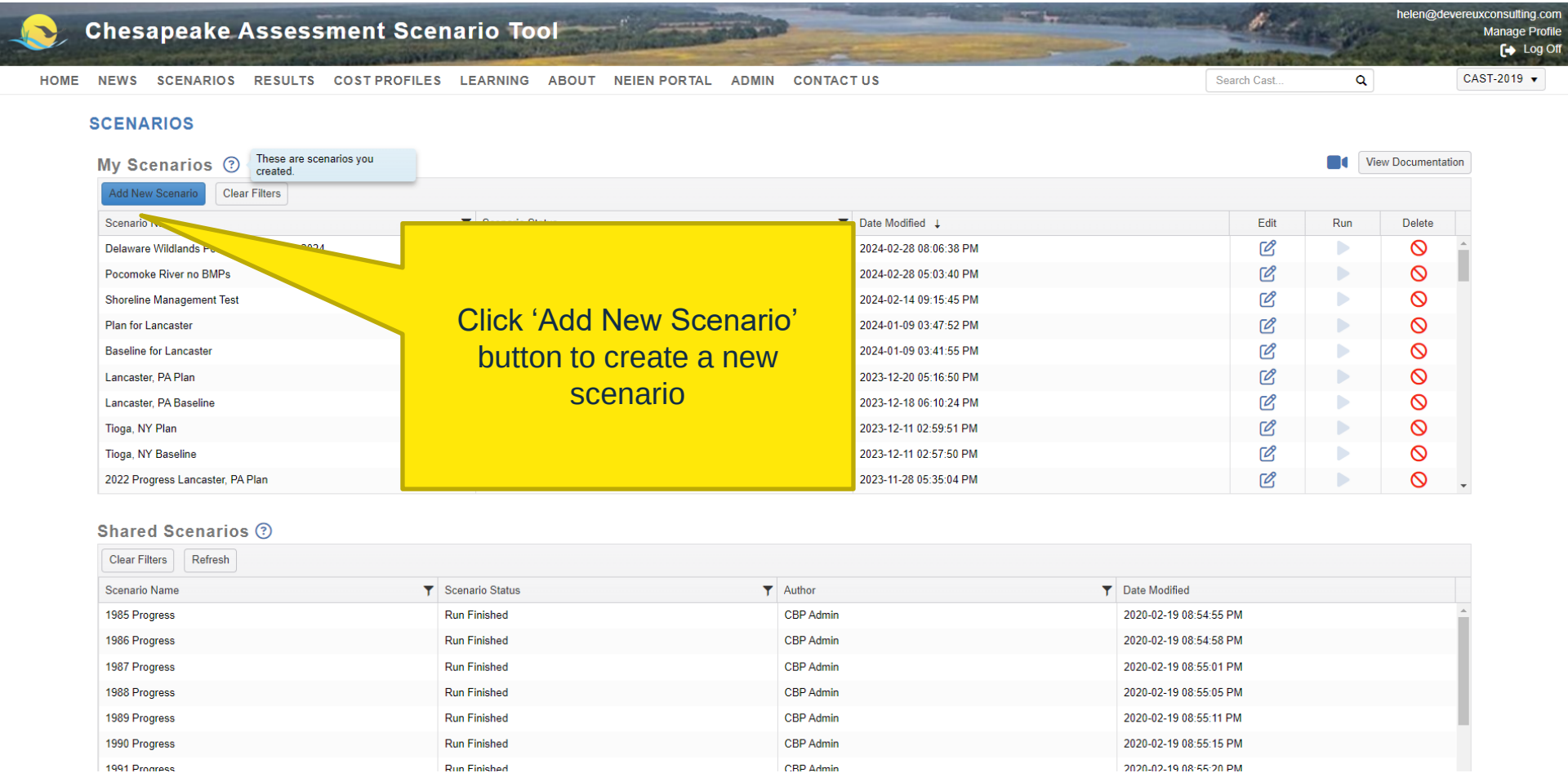
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2024-02-28 08:06:38 PM
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2024-02-28 05:03:40 PM
Shoreline Management Test
2024-02-14 09:15:45 PM
Plan for Lancaster
2024-01-09 03:47:52 PM
Baseline for Lancaster
2024-01-09 03:41:55 PM
Lancaster, PA Plan
2023-12-20 05:16:50 PM
Lancaster, PA Baseline
2023-12-18 06:10:24 PM
Tioga, NY Plan
2023-12-11 02:59:51 PM
Tioga, NY Baseline
2023-12-11 02:57:50 PM
2022 Progress Lancaster, PA Plan
2023-11-28 05:35:04 PM
Click 'Add New Scenario' button to create a new scenario
Shared Scenarios
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Scenario Name
Scenario Status
Author
Date Modified
1985 Progress
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2020-02-19 08:54:55 PM
1986 Progress
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2020-02-19 08:54:58 PM
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2020-02-19 08:55:01 PM
1988 Progress
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Run Finished
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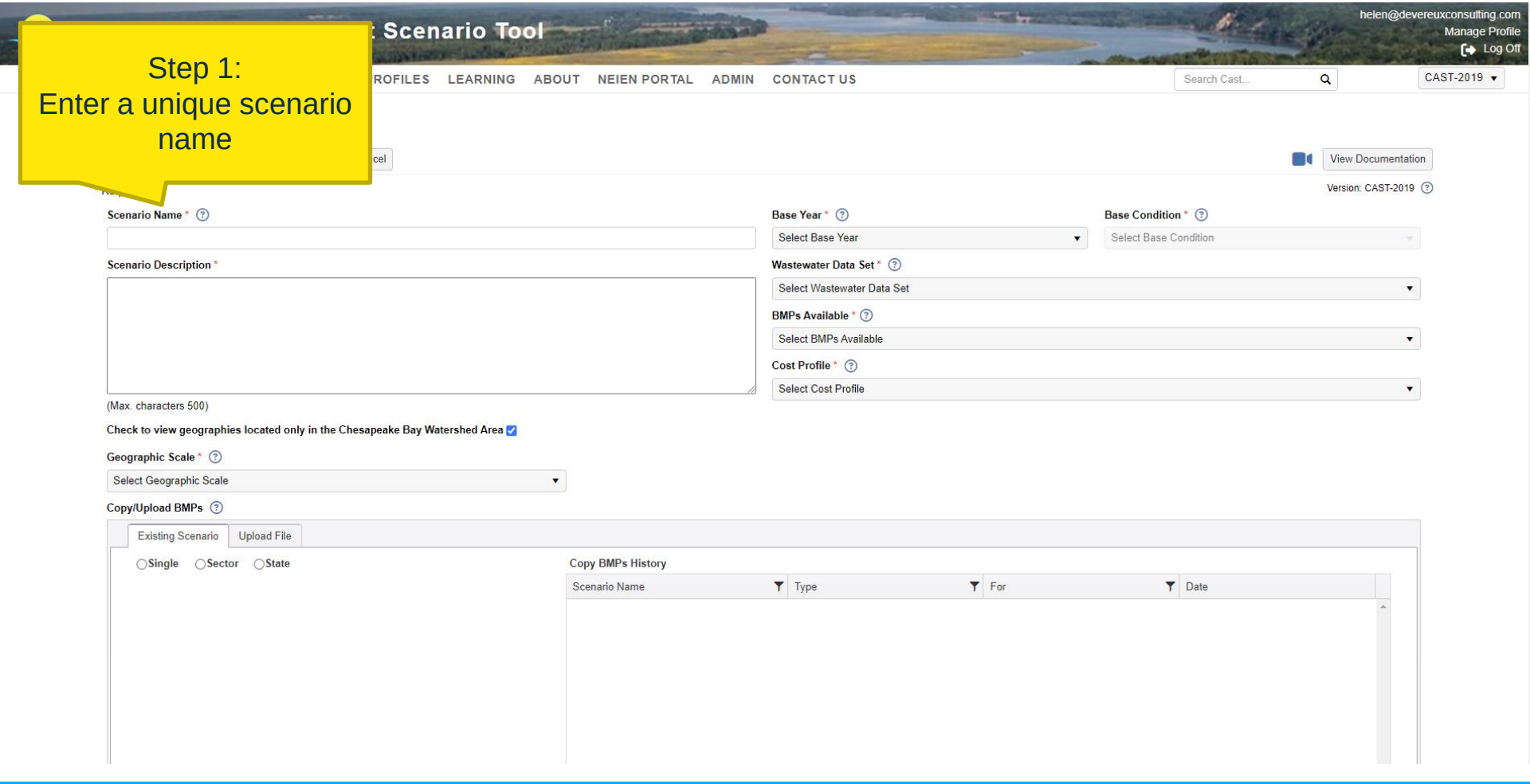
Step 1:
Enter a unique scenario name
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cel
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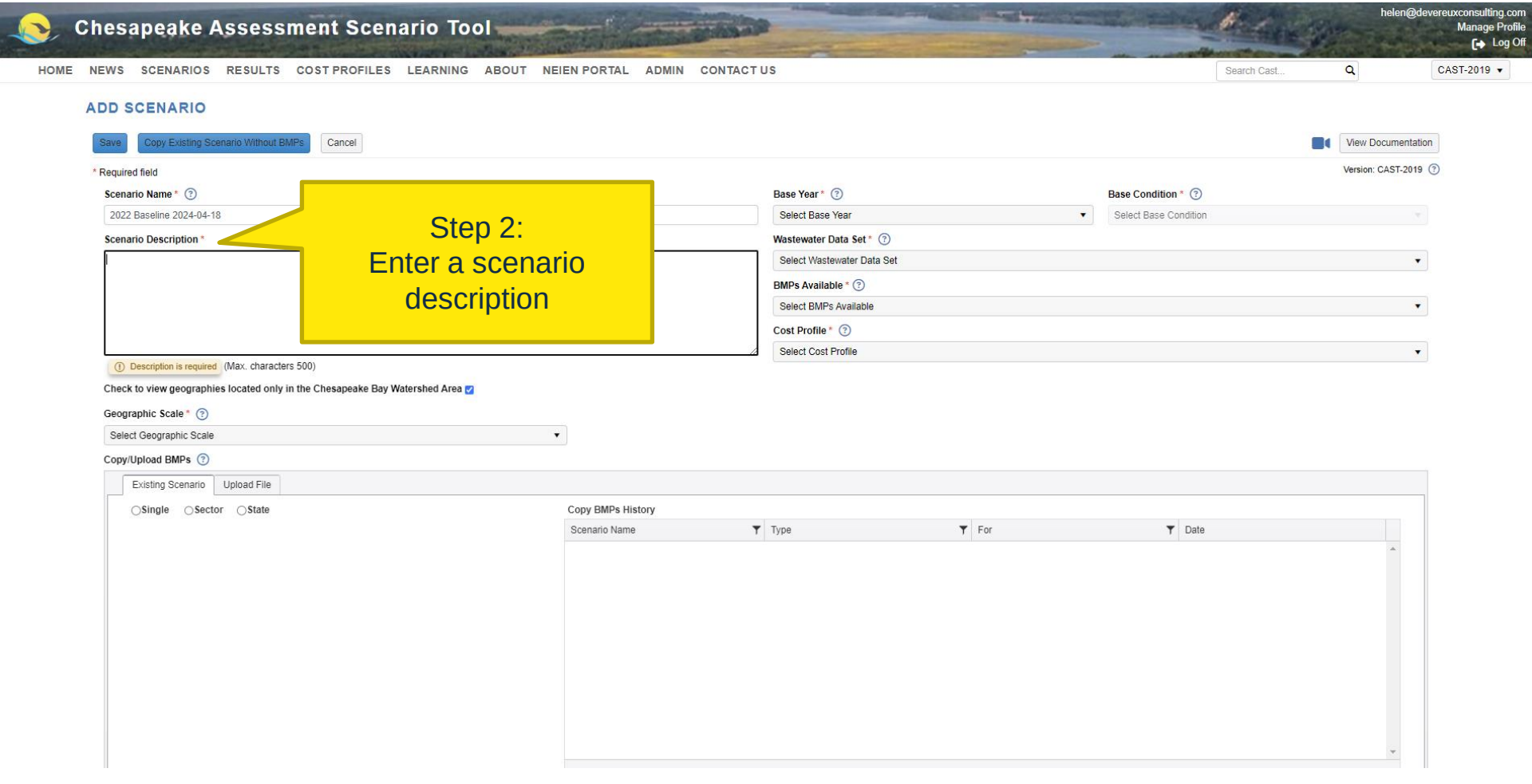
Version: CAST-2019
Scenario Name *
Base Year *
Select Base Year
Base Condition *
Select Base Condition
Scenario Description *
Wastewater Data Set *
Select Wastewater Data Set
BMPs Available *
Select BMPs Available
Cost Profile *
Select Cost Profile
(Max. characters 500)
Check to view geographies located only in the Chesapeake Bay Watershed Area
Geographic Scale *
Select Geographic Scale
Copy/Upload BMPs
Existing Scenario
Upload File
Single
Sector
State
Copy BMPs History
Scenario Name
Type
For
Date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Save
Copy Existing Scenario Without BMPs
Cancel
View Documentation
* Required field
Version: CAST-2019
Scenario Name *
2022 Baseline 2024-04-18
Scenario Description *
Step 2:
Enter a scenario description
Description is required
(Max. characters 500)
Base Year *
Select Base Year
Base Condition *
Select Base Condition
Wastewater Data Set *
Select Wastewater Data Set
BMPs Available *
Select BMPs Available
Cost Profile *
Select Cost Profile
Check to view geographies located only in the Chesapeake Bay Watershed Area
Geographic Scale *
Select Geographic Scale
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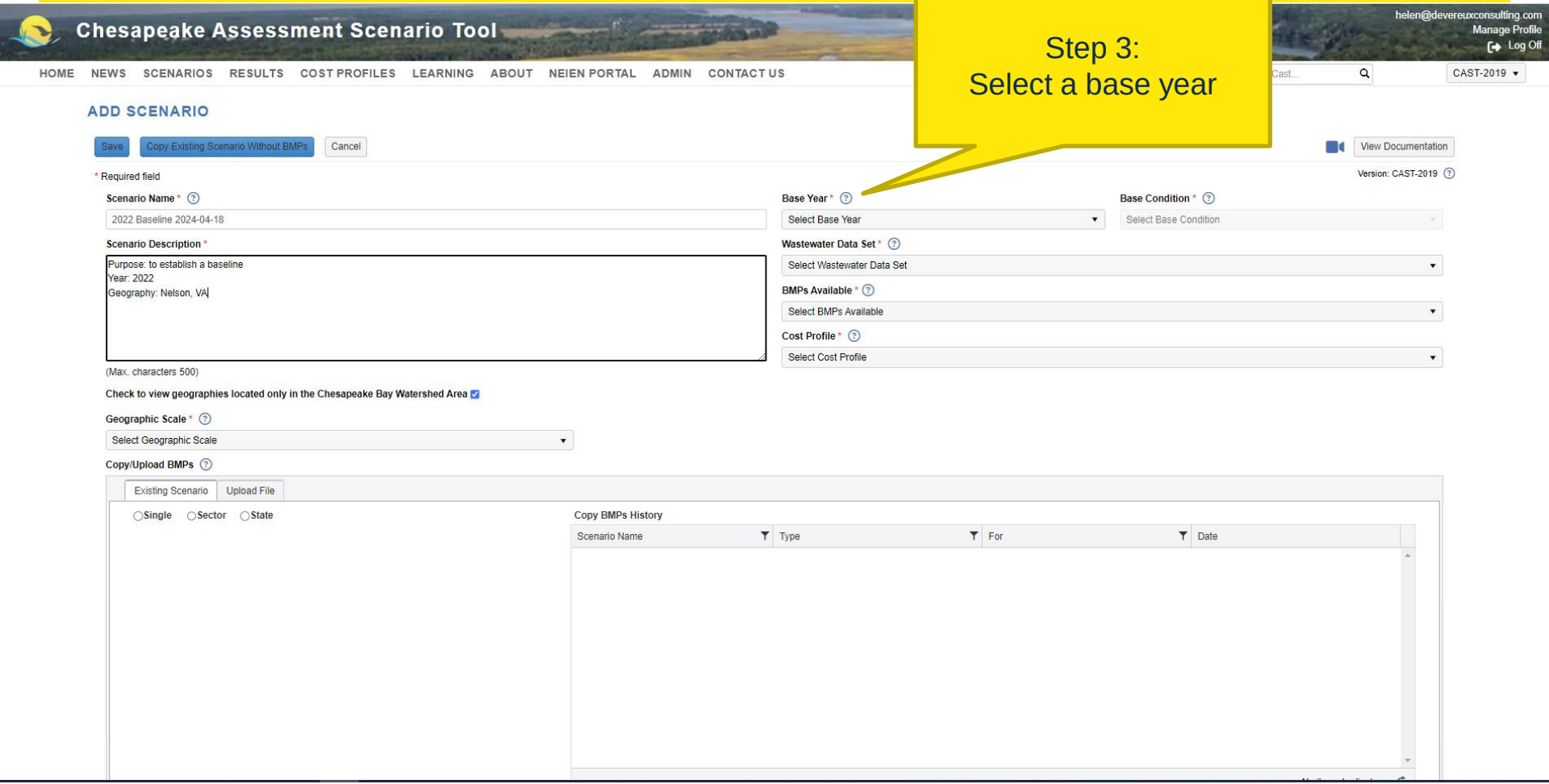
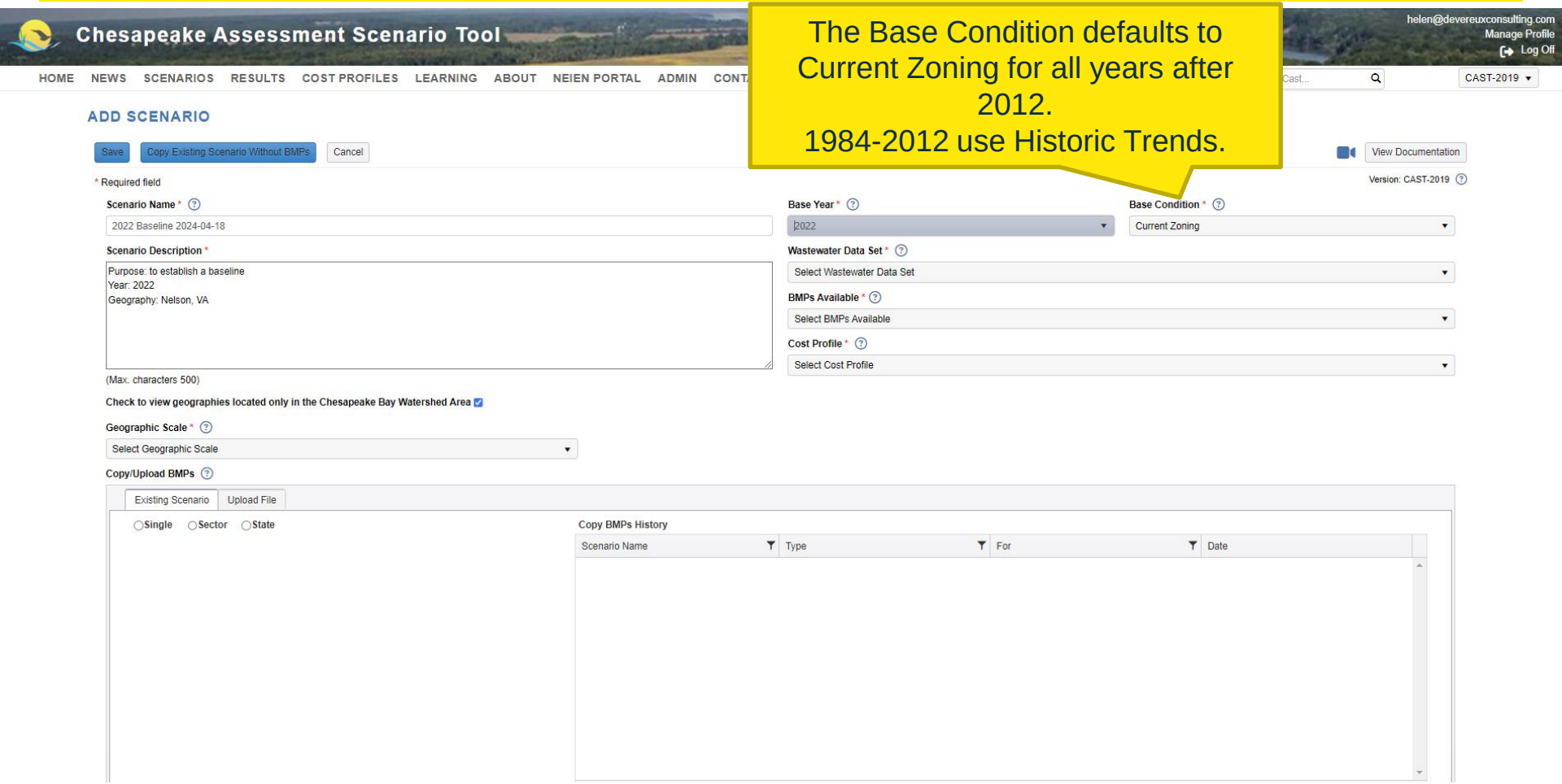
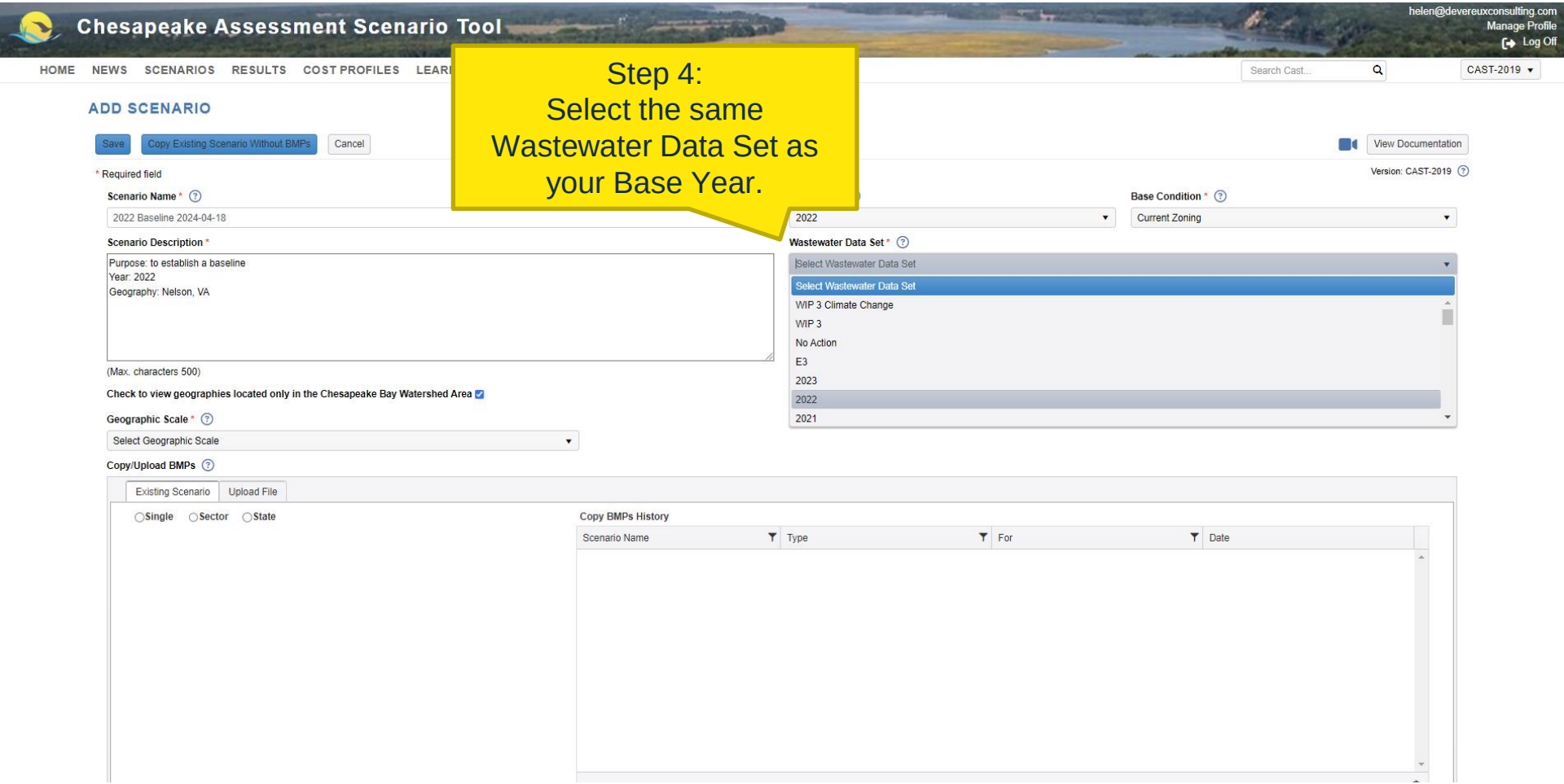


Step 3:
Select a base year



The Base Condition defaults to Current Zoning for all years after 2012.
1984-2012 use Historic Trends.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Step 4:
Select the same Wastewater Data Set as your Base Year.
Save
Copy Existing Scenario Without BMPs
Cancel
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* Required field
Version: CAST-2019
Scenario Name *
2022 Baseline 2024-04-18
2022
Base Condition *
Current Zoning
Scenario Description *
Purpose: to establish a baseline
Year: 2022
Geography: Nelson, VA
(Max. characters 500)
Wastewater Data Set *
Select Wastewater Data Set
Select Wastewater Data Set
WIP 3 Climate Change
WIP 3
No Action
E3
2023
2022
2021
Check to view geographies located only in the Chesapeake Bay Watershed Area
Geographic Scale *
Select Geographic Scale
Copy/Upload BMPs
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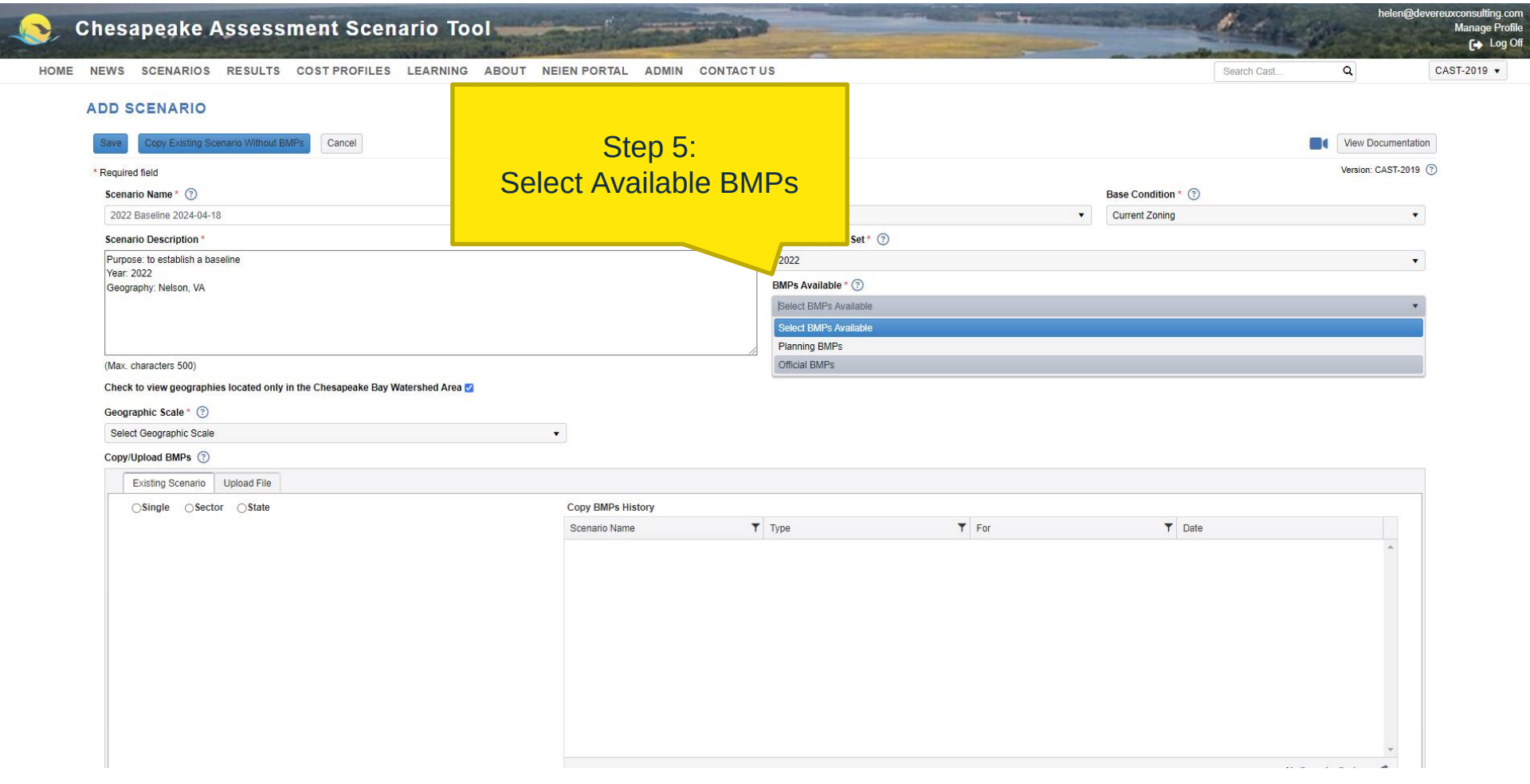
Single
Sector
State
Copy BMPs History
Scenario Name
Type
For
Date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Step 5:
Select Available BMPs
Save
Copy Existing Scenario Without BMPs
Cancel
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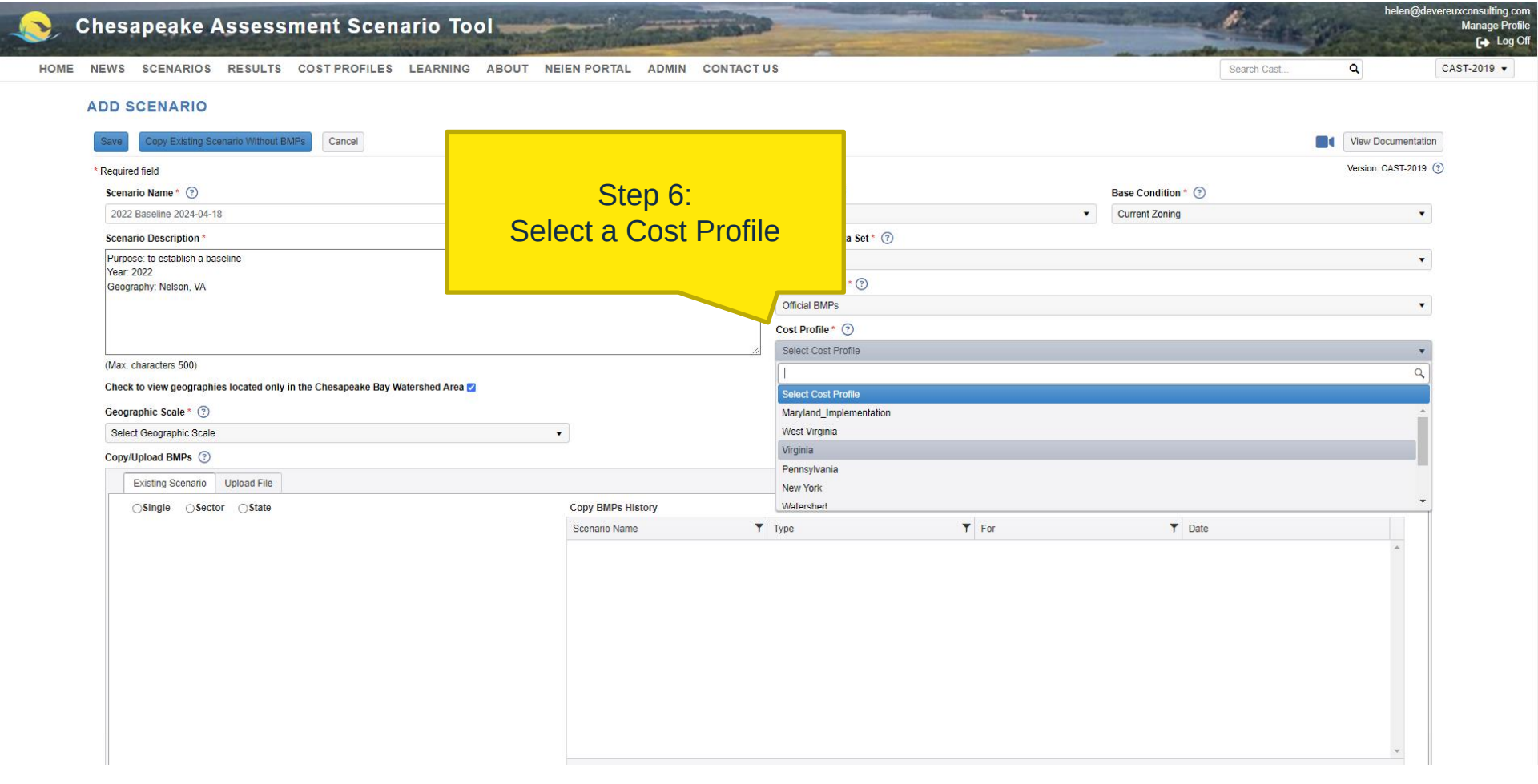
* Required field
Version: CAST-2019
Scenario Name *
2022 Baseline 2024-04-18
Base Condition *
Current Zoning
Scenario Description *
Purpose: to establish a baseline
Year: 2022
Geography: Nelson, VA
Set *
2022
BMPs Available *
Select BMPs Available
Select BMPs Available
Planning BMPs
Official BMPs
(Max. characters 500)
Check to view geographies located only in the Chesapeake Bay Watershed Area
Geographic Scale *
Select Geographic Scale
Copy/Upload BMPs
Existing Scenario
Upload File
Single
Sector
State
Copy BMPs History
Scenario Name
Type
For
Date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* Required field
Version: CAST-2019
Scenario Name *
2022 Baseline 2024-04-18
Base Condition *
Current Zoning
Scenario Description *
Purpose: to establish a baseline
Year: 2022
Geography: Nelson, VA
(Max. characters 500)
Official BMPs
Cost Profile *
Select Cost Profile
Select Cost Profile
Maryland_Implementation
West Virginia
Virginia
Pennsylvania
New York
Check to view geographies located only in the Chesapeake Bay Watershed Area
Geographic Scale *
Select Geographic Scale
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State
Copy BMPs History
Scenario Name
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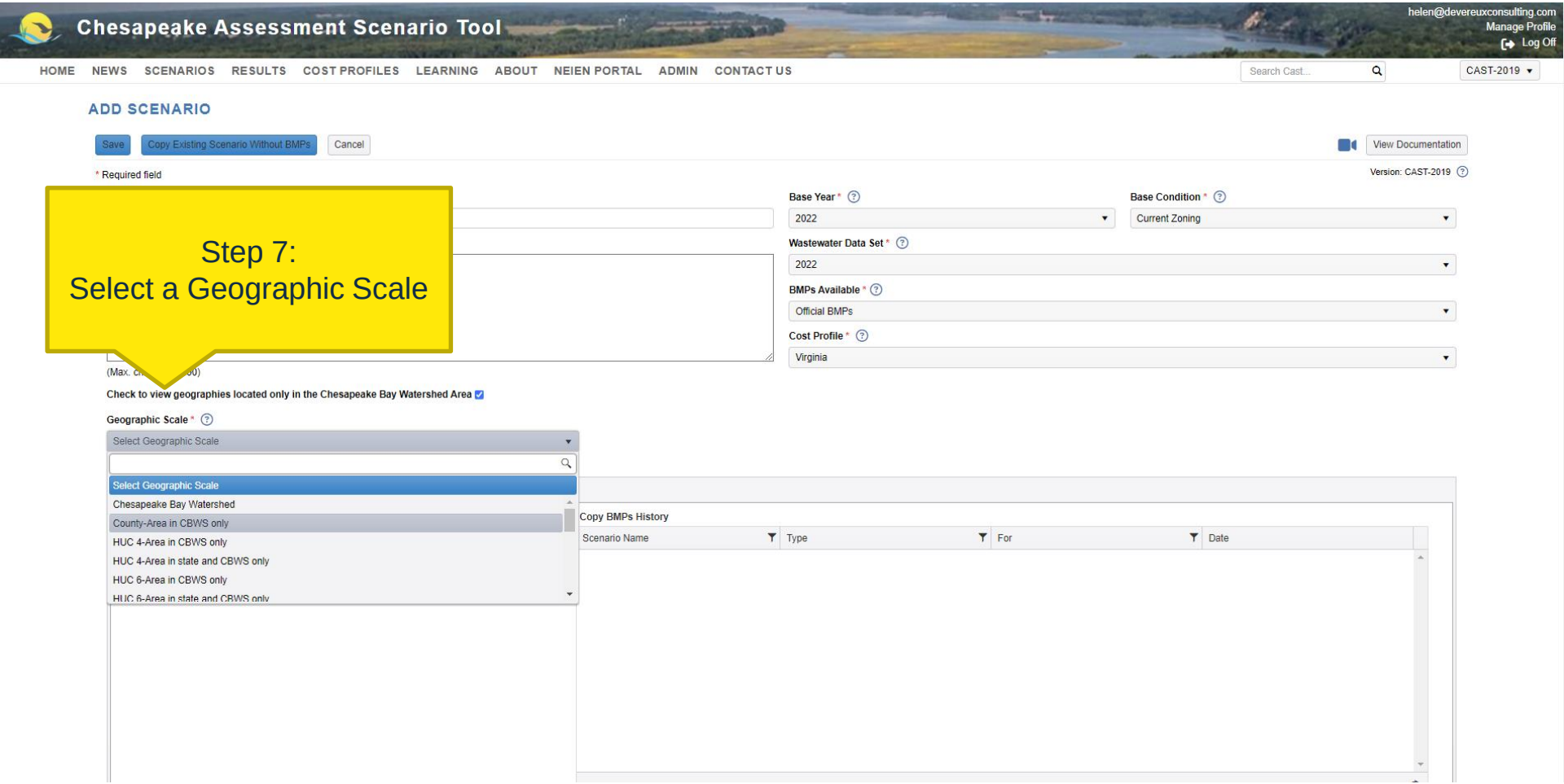
For
Date
Step 6:
Select a Cost Profile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Save
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Step 7:
Select a Geographic Scale
Base Year *
2022
Base Condition *
Current Zoning
Wastewater Data Set *
2022
BMPs Available *
Official BMPs
Cost Profile *
Virginia
Check to view geographies located only in the Chesapeake Bay Watershed Area
Geographic Scale *
Select Geographic Scale
Select Geographic Scale
Chesapeake Bay Watershed
County-Area in CBWS only
HUC 4-Area in CBWS only
HUC 4-Area in state and CBWS only
HUC 6-Area in CBWS only
HUC 6-Area in state and CBWS only
Copy BMPs History
Scenario Name
Type
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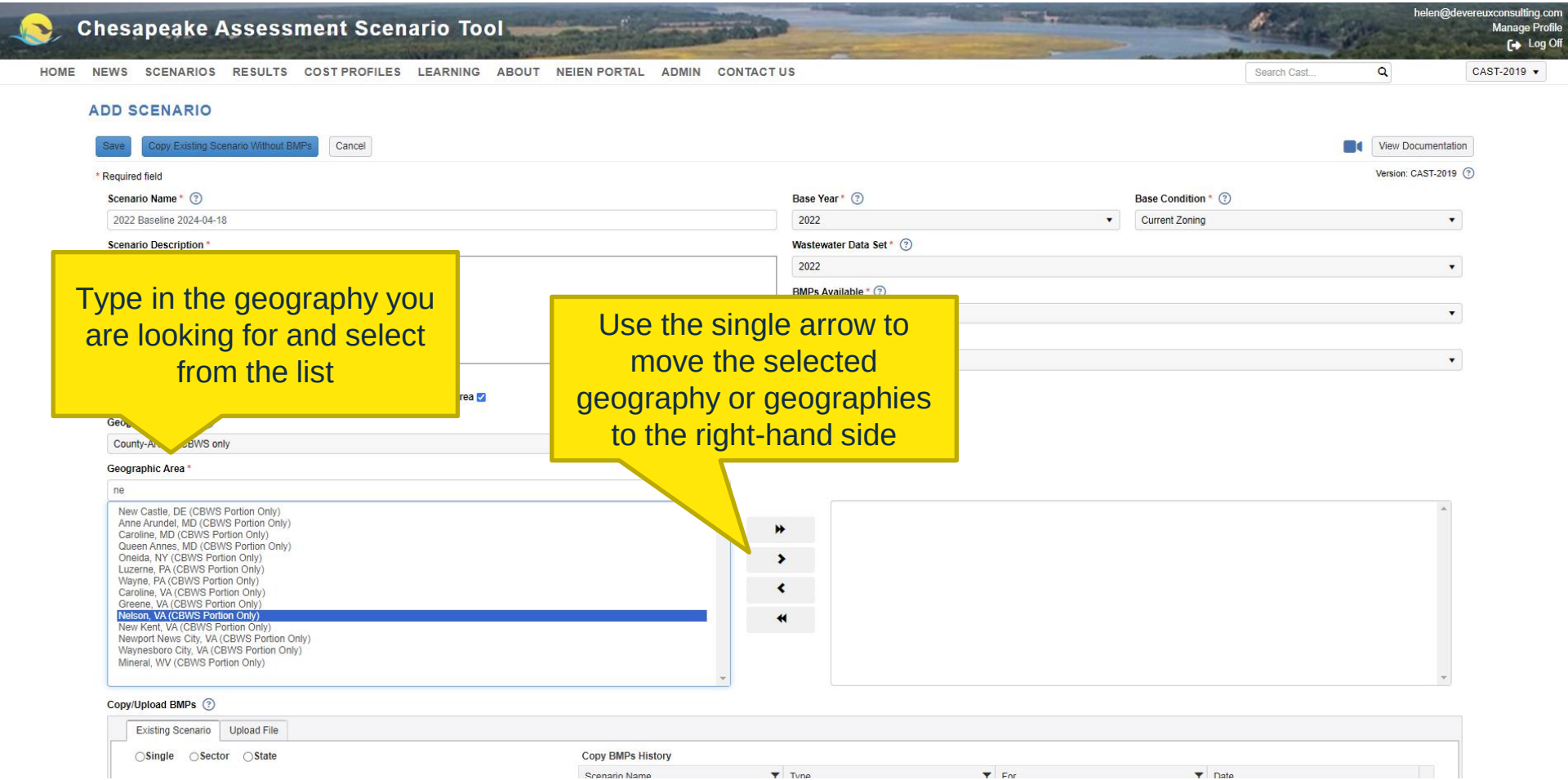
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Version: CAST-2019
Scenario Name *
2022 Baseline 2024-04-18
Base Year *
2022
Base Condition *
Current Zoning
Scenario Description *
Wastewater Data Set *
2022
BMPs Available *
Type in the geography you are looking for and select from the list
Use the single arrow to move the selected geography or geographies to the right-hand side
Geographic Area *
ne
New Castle, DE (CBWS Portion Only)
Anne Arundel, MD (CBWS Portion Only)
Caroline, MD (CBWS Portion Only)
Queen Annes, MD (CBWS Portion Only)
Oneida, NY (CBWS Portion Only)
Luzerne, PA (CBWS Portion Only)
Wayne, PA (CBWS Portion Only)
Caroline, VA (CBWS Portion Only)
Greene, VA (CBWS Portion Only)
Nelson, VA (CBWS Portion Only)
New Kent, VA (CBWS Portion Only)
Newport News City, VA (CBWS Portion Only)
Waynesboro City, VA (CBWS Portion Only)
Mineral, WV (CBWS Portion Only)
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Upload File
Single
Sector
State
Copy BMPs History
Scenario Name
Type
For
Date

ADD SCENARIO

Save | Copy Existing Scenario Without BMPs | Cancel

View Documentation

* Required field

Version: CAST-2019

Scenario Name *

2022 Baseline 2024-04-18

Scenario Description *

Purpose: to establish a baseline
Year: 2022
Geography: Nelson, VA

(Max. characters 500)

Base Year *: 2022

Base Condition *: Current Zoning

Wastewater Data Set *: 2022

BMPs Available *: Official BMPs

Cost Profile *: Virginia

Check to view geographies located only in the Chesapeake Bay Watershed Area

Geographic Scale *: County-Area in CBWS only

Geographic Area *

ne

New Castle, DE (CBWS Portion Only)
Anne Arundel, MD (CBWS Portion Only)
Caroline, MD (CBWS Portion Only)
Queen Annes, MD (CBWS Portion Only)
Oneida, NY (CBWS Portion Only)
Luzerne, PA (CBWS Portion Only)
Wayne, PA (CBWS Portion Only)
Caroline, VA (CBWS Portion Only)
Greene, VA (CBWS Portion Only)
New Kent, VA (CBWS Portion Only)
Newport News City, VA (CBWS Portion Only)
Waynesboro City, VA (CBWS Portion Only)
Mineral, WV (CBWS Portion Only)

Nelson, VA (CBWS Portion Only)

Copy/Upload BMPs

Existing Scenario | Upload File

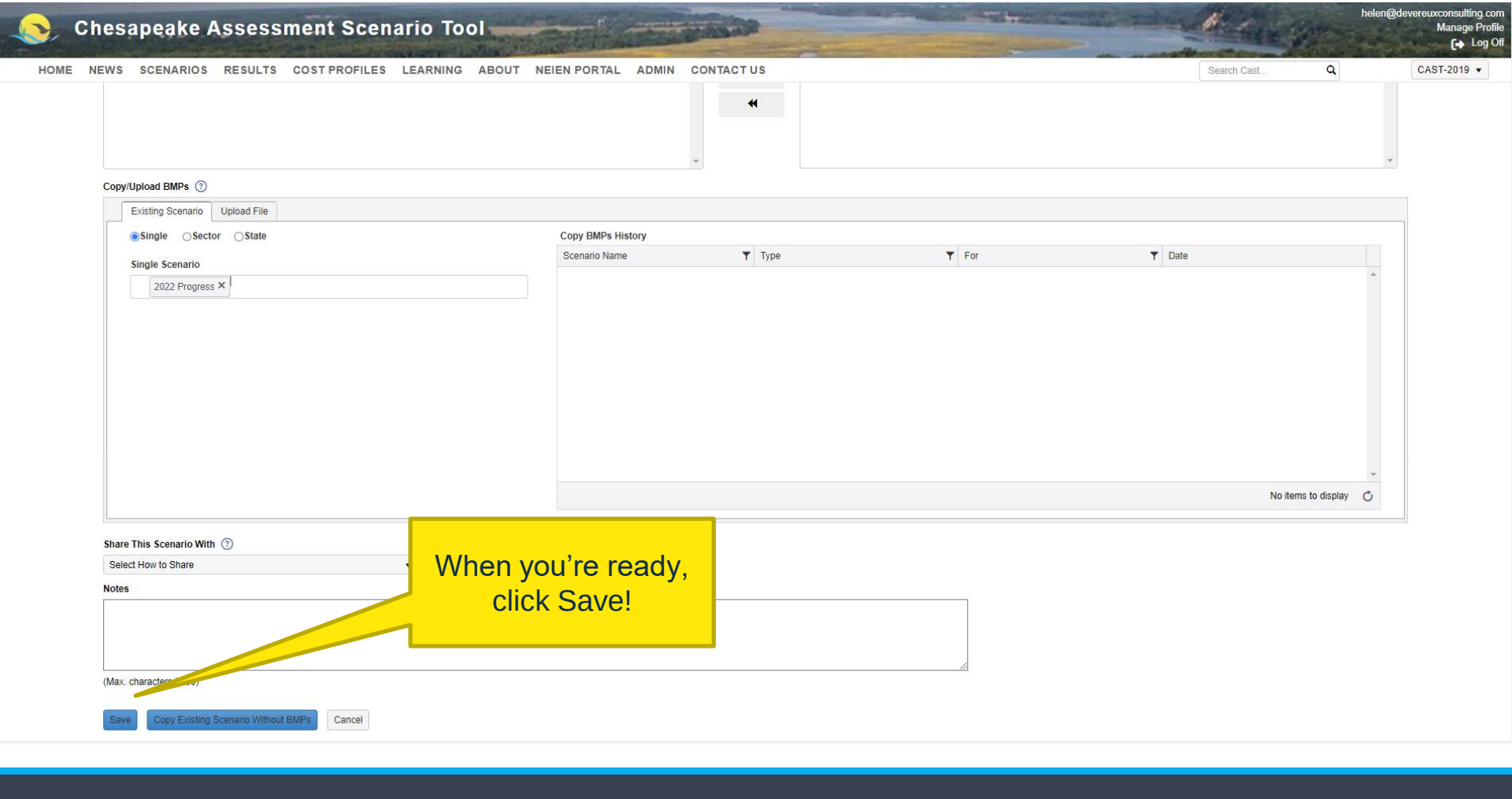
Single | Sector | State

Copy BMPs History

Scenario Name	Type	For	Date

Scroll Down to Copy/Upload BMPs

- Select Single to copy BMPs from another scenario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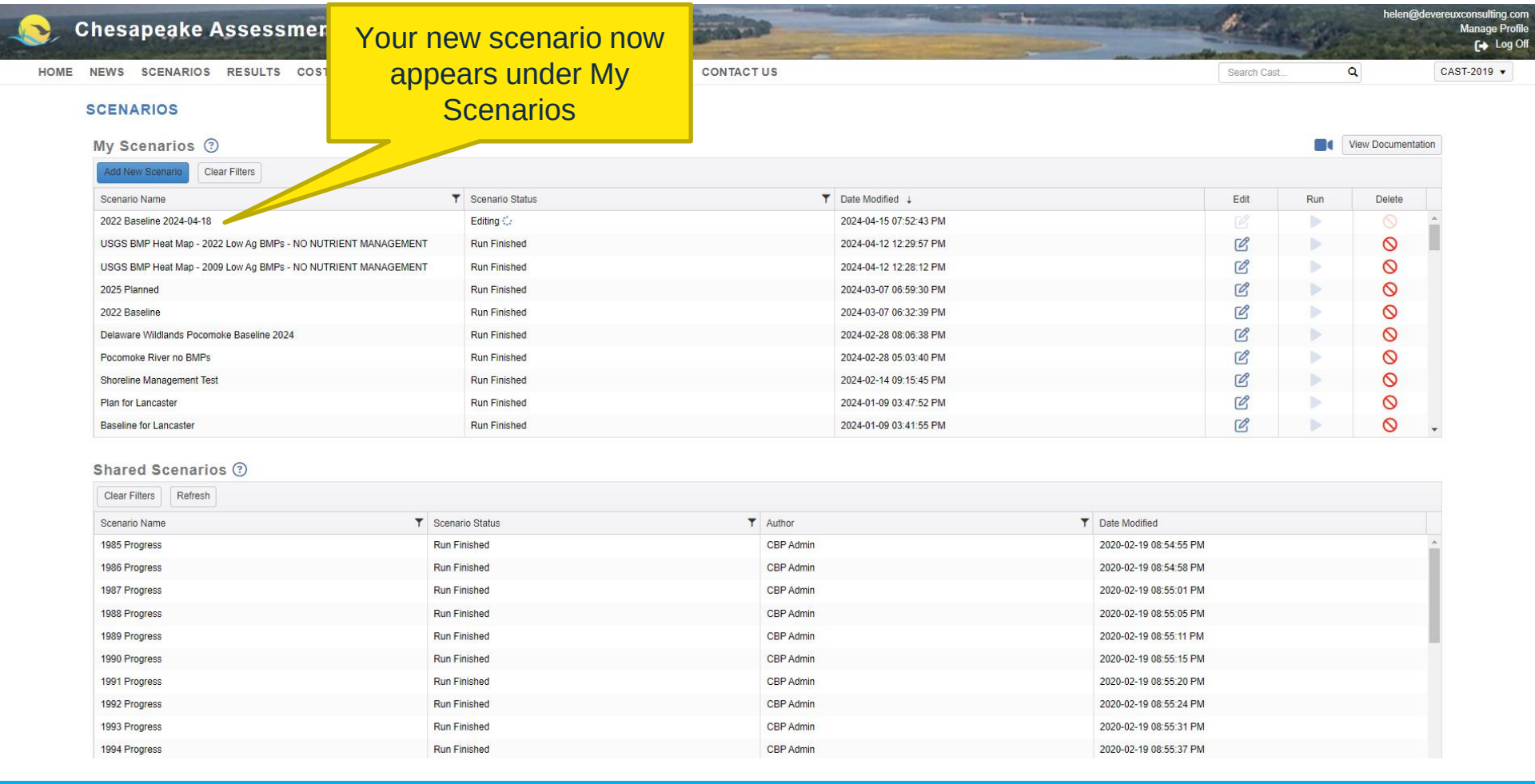
State
Single Scenario
2022 Progress
Copy BMPs History
Scenario Name
Type
For
Date
No items to display
Share This Scenario With
Select How to Share
Notes
(Max. characters
When you're ready, click Save!
Save
Copy Existing Scenario Without BMPs
Cancel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Scenario Name
Scenario Status
Date Modified
Edit
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Delete
2022 Baseline 2024-04-18
Editing
2024-04-15 07:52:43 PM
USGS BMP Heat Map - 2022 Low Ag BMPs - NO NUTRIENT MANAGEMENT
Run Finished
2024-04-12 12:29:57 PM
USGS BMP Heat Map - 2009 Low Ag BMPs - NO NUTRIENT MANAGEMENT
Run Finished
2024-04-12 12:28:12 PM
2025 Planned
Run Finished
2024-03-07 06:59:30 PM
2022 Baseline
Run Finished
2024-03-07 06:32:39 PM
Delaware Wildlands Pocomoke Baseline 2024
Run Finished
2024-02-28 08:06:38 PM
Pocomoke River no BMPs
Run Finished
2024-02-28 05:03:40 PM
Shoreline Management Test
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2024-02-14 09:15:45 PM
Plan for Lancaster
Run Finished
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Baseline for Lancaster
Run Finished
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Date Modified
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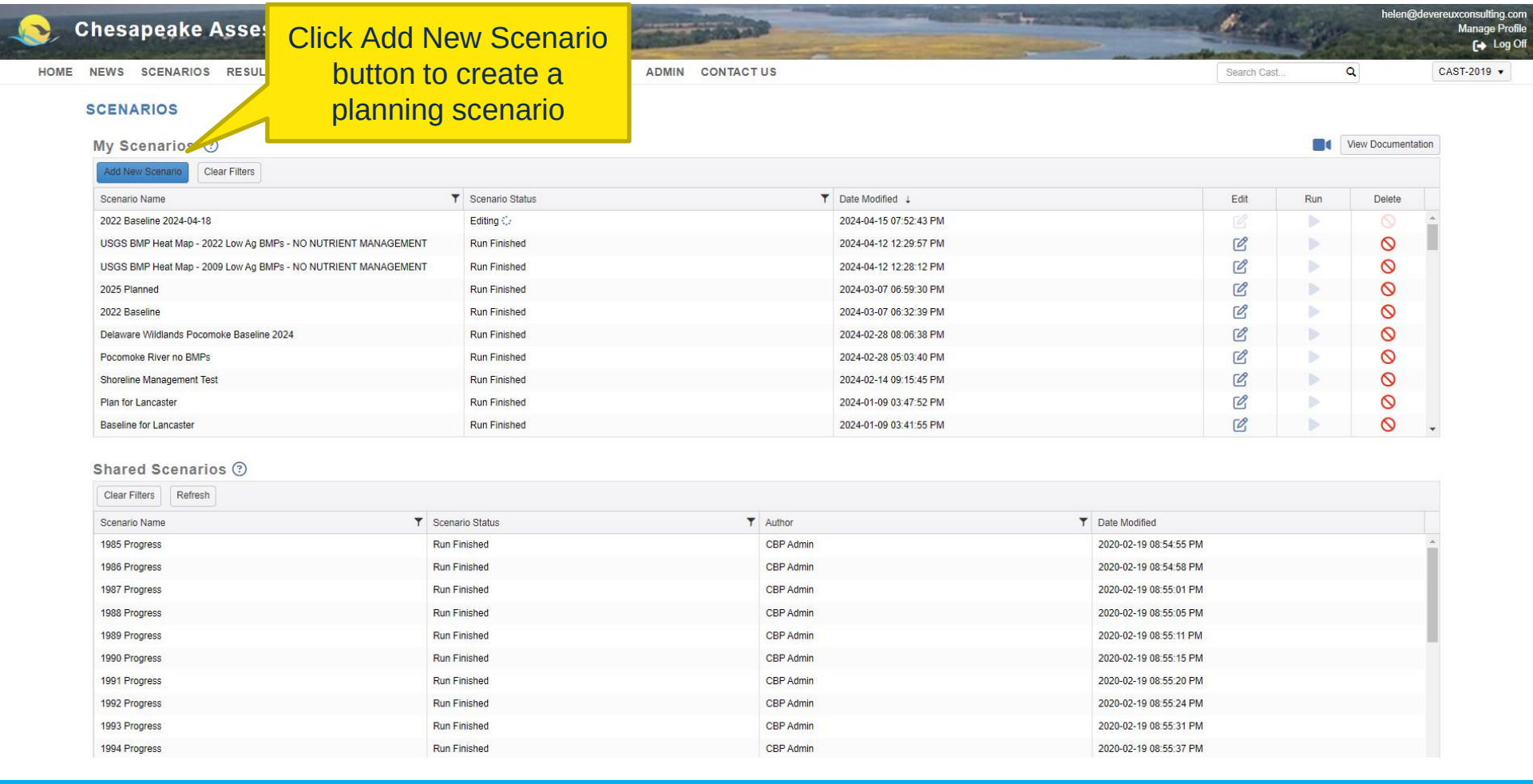
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2024-04-15 07:52:43 PM
USGS BMP Heat Map - 2022 Low Ag BMPs - NO NUTRIENT MANAGEMENT
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Run Finished
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Delaware Wildlands Pocomoke Baseline 2024
Run Finished
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Plan for Lancaster
Run Finished
2024-01-09 03:47:52 PM
Baseline for Lancaster
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Author
Date Modified
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Run Finished
CBP Admin
2020-02-19 08:55:01 PM
1988 Progress
Run Finished
CBP Admin
2020-02-19 08:55:05 PM
1989 Progress
Run Finished
CBP Admin
2020-02-19 08:55:11 PM
1990 Progress
Run Finished
CBP Admin
2020-02-19 08:55:15 PM
1991 Progress
Run Finished
CBP Admin
2020-02-19 08:55:20 PM
1992 Progress
Run Finished
CBP Admin
2020-02-19 08:55:24 PM
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CBP Admin
2020-02-19 08:55:31 PM
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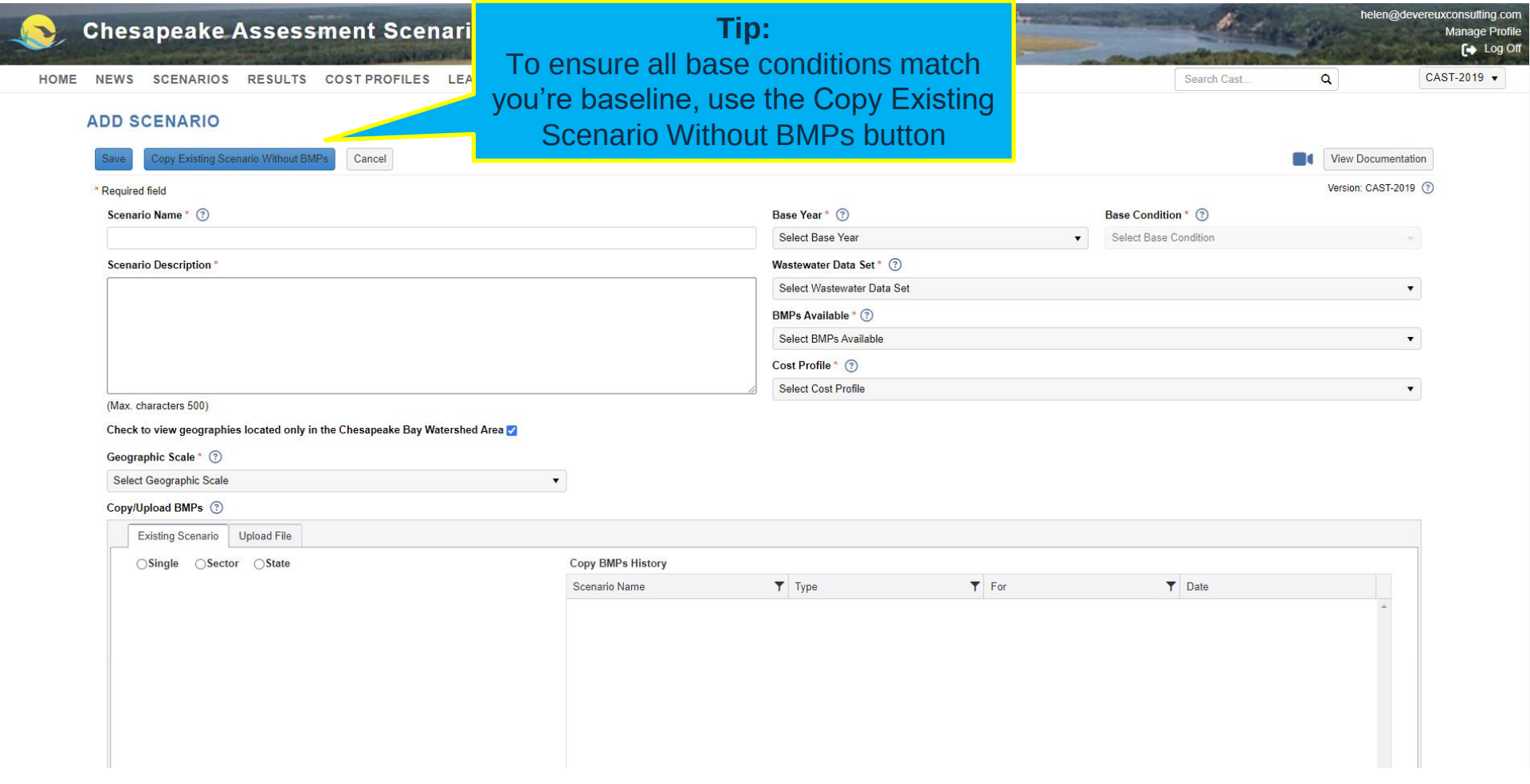
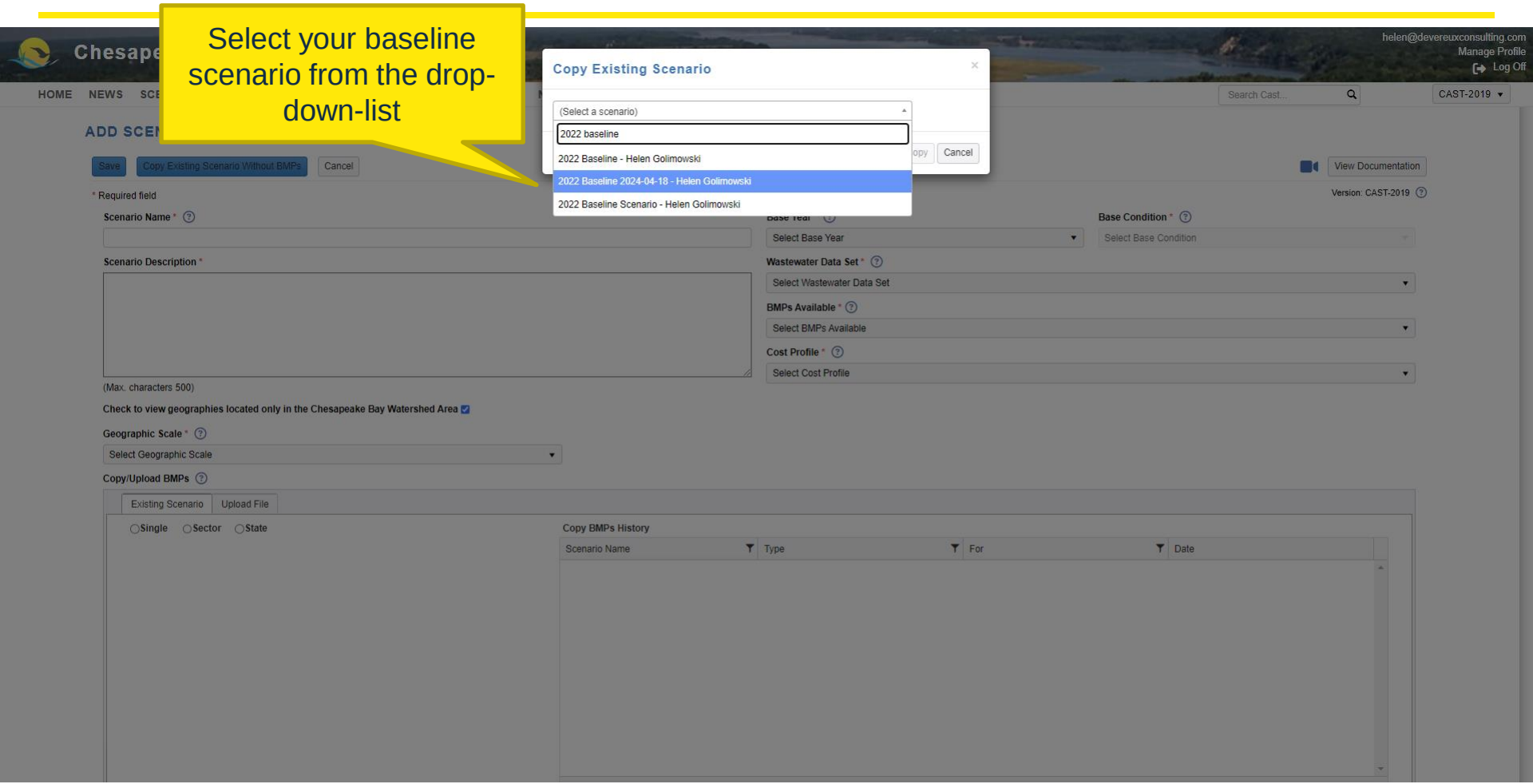
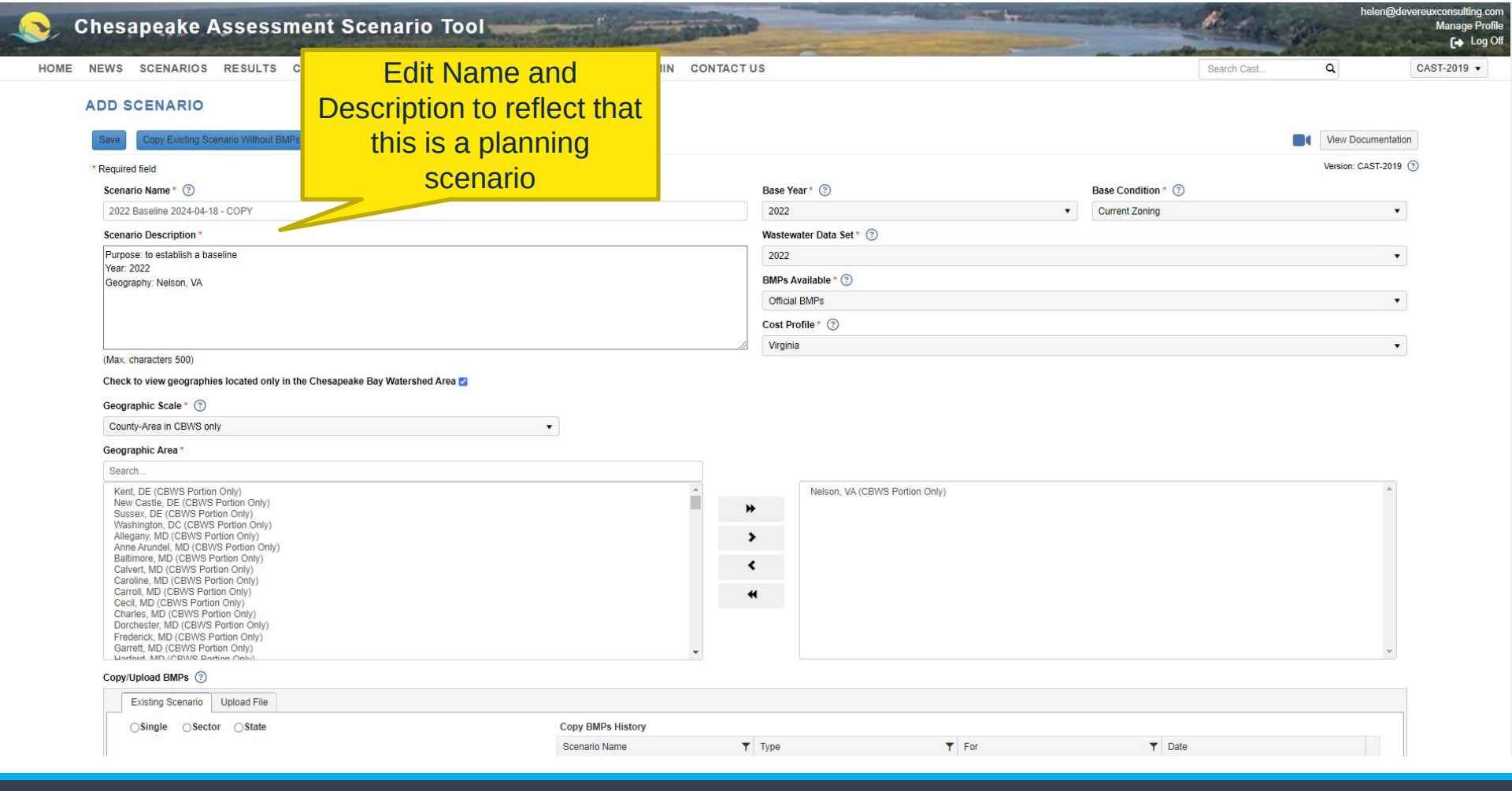
Run Finished
CBP Admin
2020-02-19 08:55:37 PM

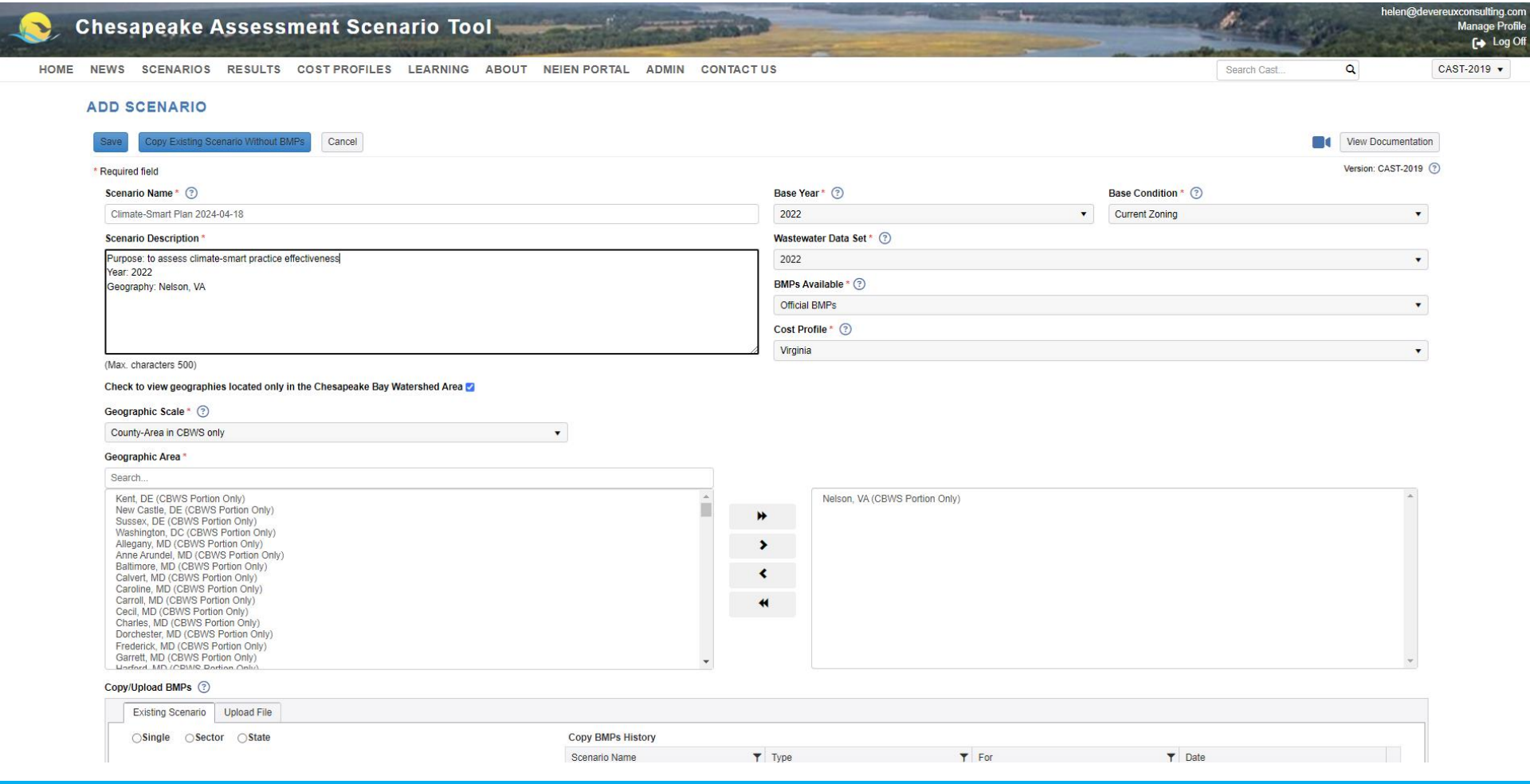


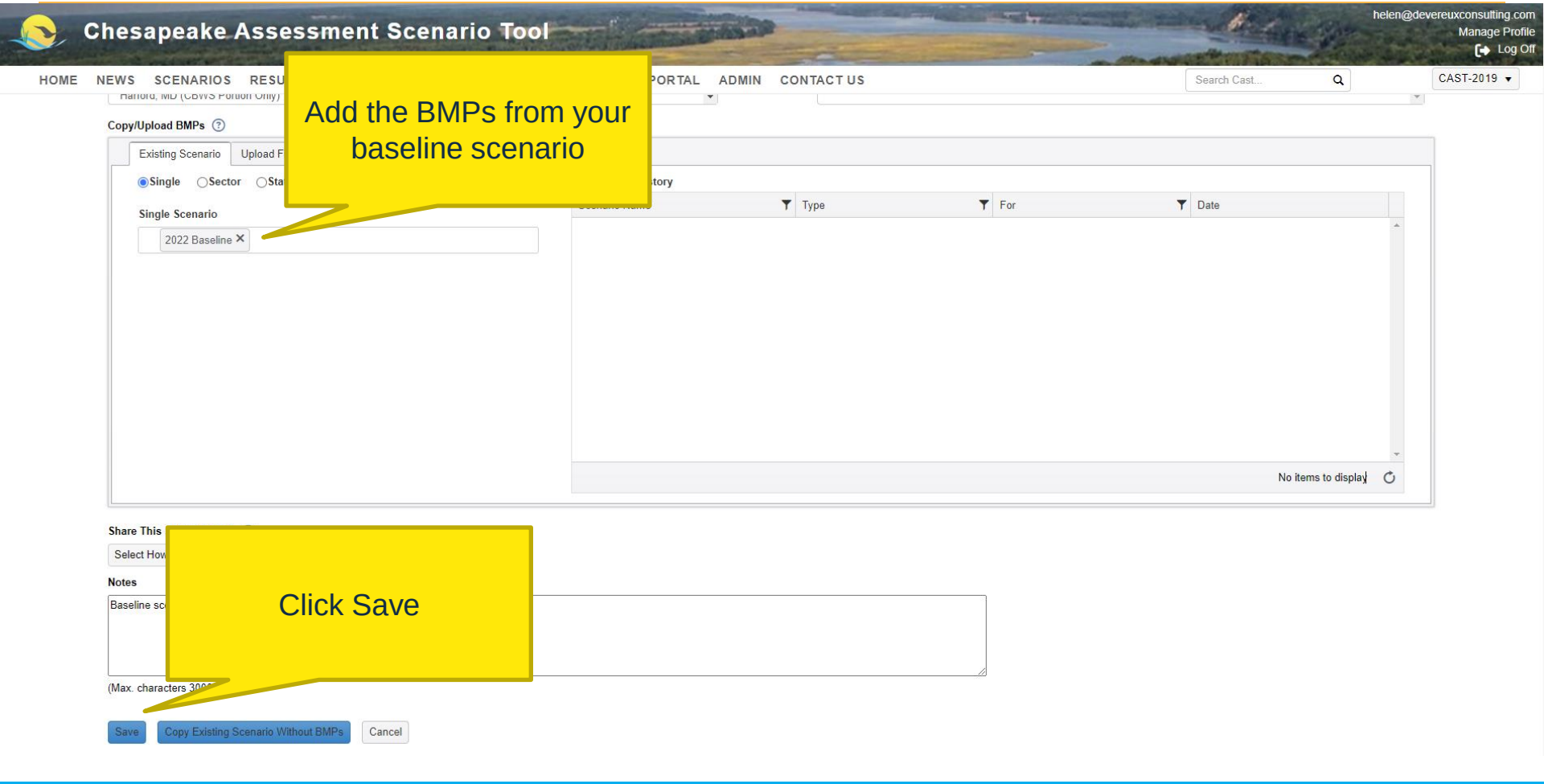
Tip:

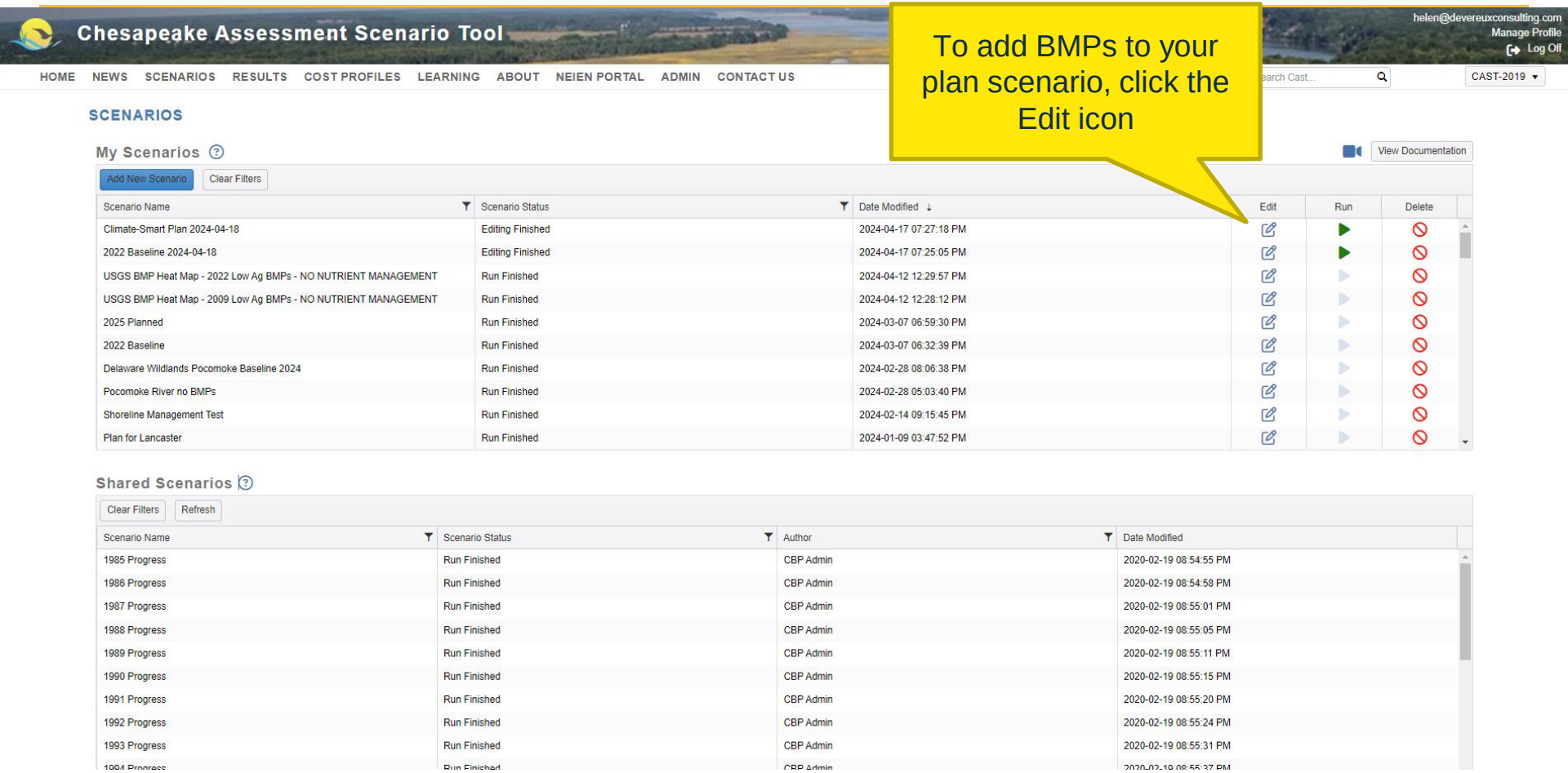
To ensure all base conditions match you're baseline, use the Copy Existing Scenario Without BMPs button


Select your baseline scenario from the drop-down-list
Copy Existing Scenario
(Select a scenario)
2022 baseline
2022 Baseline - Helen Golimowski
2022 Baseline 2024-04-18 - Helen Golimowski
2022 Baseline Scenario - Helen Golimowski
Cancel
helen@devereuxconsulting.com
Manage Profile
Log Off
HOME
NEWS
CAST-2019
ADD SCEN
Save
Copy Existing Scenario Without BMPs
Cancel
View Documentation
* Required field
Version: CAST-2019
Scenario Name *
Scenario Description *
(Max. characters 500)
Check to view geographies located only in the Chesapeake Bay Watershed Area
Geographic Scale *
Select Geographic Scale
Base Year *
Select Base Year
Base Condition *
Select Base Condition
Wastewater Data Set *
Select Wastewater Data Set
BMPs Available *
Select BMPs Available
Cost Profile *
Select Cost Profile
Copy/Upload BMPs
Existing Scenario
Upload File
Single
Sector
State
Copy BMPs History
Scenario Name
Type
For
Date


Chesapeake Assessment Scenario Tool
helen@devereuxconsulting.com
Manage Profile
Log Off
HOME
NEWS
SCENARIOS
RESULTS
CONTACT US
Search Cast...
CAST-2019
Edit Name and Description to reflect that this is a planning scenario
ADD SCENARIO
Save
Copy Existing Scenario Without BMPs
View Documentation
* Required field
Version: CAST-2019
Scenario Name *
2022 Baseline 2024-04-18 - COPY
Scenario Description *
Purpose: to establish a baseline
Year: 2022
Geography: Nelson, VA
(Max. characters 500)
Base Year *
2022
Base Condition *
Current Zoning
Wastewater Data Set *
2022
BMPs Available *
Official BMPs
Cost Profile *
Virginia
Check to view geographies located only in the Chesapeake Bay Watershed Area
Geographic Scale *
County-Area in CBWS only
Geographic Area *
Search...
Kent, DE (CBWS Portion Only)
New Castle, DE (CBWS Portion Only)
Sussex, DE (CBWS Portion Only)
Washington, DC (CBWS Portion Only)
Allegany, MD (CBWS Portion Only)
Anne Arundel, MD (CBWS Portion Only)
Baltimore, MD (CBWS Portion Only)
Calvert, MD (CBWS Portion Only)
Caroline, MD (CBWS Portion Only)
Carroll, MD (CBWS Portion Only)
Cecil, MD (CBWS Portion Only)
Charles, MD (CBWS Portion Only)
Dorchester, MD (CBWS Portion Only)
Frederick, MD (CBWS Portion Only)
Garrett, MD (CBWS Portion Only)
Nelson, VA (CBWS Portion Only)
Copy/Upload BMPs
Existing Scenario
Upload File
Single
Sector
State
Copy BMPs History
Scenario Name
Type
For
Date


Chesapeake Assessment Scenario Tool
helen@devereuxconsulting.com
Manage Profile
Log Off
HOME NEWS SCENARIOS RESULTS COST PROFILES LEARNING ABOUT NEIEN PORTAL ADMIN CONTACT US
Search Cast...
CAST-2019
ADD SCENARIO
Save
Copy Existing Scenario Without BMPs
Cancel
View Documentation
* Required field
Version: CAST-2019
Scenario Name *
Climate-Smart Plan 2024-04-18
Scenario Description *
Purpose: to assess climate-smart practice effectiveness
Year: 2022
Geography: Nelson, VA
(Max. characters 500)
Base Year *
2022
Base Condition *
Current Zoning
Wastewater Data Set *
2022
BMPs Available *
Official BMPs
Cost Profile *
Virginia
Check to view geographies located only in the Chesapeake Bay Watershed Area
Geographic Scale *
County-Area in CBWS only
Geographic Area *
Search...
Kent, DE (CBWS Portion Only)
New Castle, DE (CBWS Portion Only)
Sussex, DE (CBWS Portion Only)
Washington, DC (CBWS Portion Only)
Allegany, MD (CBWS Portion Only)
Anne Arundel, MD (CBWS Portion Only)
Baltimore, MD (CBWS Portion Only)
Calvert, MD (CBWS Portion Only)
Caroline, MD (CBWS Portion Only)
Carroll, MD (CBWS Portion Only)
Cecil, MD (CBWS Portion Only)
Charles, MD (CBWS Portion Only)
Dorchester, MD (CBWS Portion Only)
Frederick, MD (CBWS Portion Only)
Garrett, MD (CBWS Portion Only)
Nelson, VA (CBWS Portion Only)
Copy/Upload BMPs
Existing Scenario
Upload File
Single
Sector
State
Copy BMPs History
Scenario Name
Type
For
Date


Chesapeake Assessment Scenario Tool
helen@devereuxconsulting.com
Manage Profile
Log Off
HOME
NEWS
SCENARIOS
PORTAL
ADMIN
CONTACT US
Search Cast...
CAST-2019
Add the BMPs from your baseline scenario
Copy/Upload BMPs
Existing Scenario
Single
Sector
Single Scenario
2022 Baseline
Type
For
Date
No items to display
Share This
Notes
Baseline sc
Click Save
Save
Copy Existing Scenario Without BMPs
Cancel


Chesapeake Assessment Scenario Tool
helen@devereuxconsulting.com
Manage Profile
Log Off
HOME
NEWS
SCENARIOS
RESULTS
COST PROFILES
LEARNING
ABOUT
NEIEN PORTAL
ADMIN
CONTACT US
Search Cast...
CAST-2019
To add BMPs to your plan scenario, click the Edit icon
SCENARIOS
My Scenarios
View Documentation
Add New Scenario
Clear Filters
Scenario Name
Scenario Status
Date Modified
Edit
Run
Delete
Climate-Smart Plan 2024-04-18 Editing Finished 2024-04-17 07:27:18 PM
2022 Baseline 2024-04-18 Editing Finished 2024-04-17 07:25:05 PM
USGS BMP Heat Map - 2022 Low Ag BMPs - NO NUTRIENT MANAGEMENT Run Finished 2024-04-12 12:29:57 PM
USGS BMP Heat Map - 2009 Low Ag BMPs - NO NUTRIENT MANAGEMENT Run Finished 2024-04-12 12:28:12 PM
2025 Planned Run Finished 2024-03-07 06:59:30 PM
2022 Baseline Run Finished 2024-03-07 06:32:39 PM
Delaware Wildlands Pocomoke Baseline 2024 Run Finished 2024-02-28 08:06:38 PM
Pocomoke River no BMPs Run Finished 2024-02-28 05:03:40 PM
Shoreline Management Test Run Finished 2024-02-14 09:15:45 PM
Plan for Lancaster Run Finished 2024-01-09 03:47:52 PM
Shared Scenarios
Clear Filters
Refresh
Scenario Name
Scenario Status
Author
Date Modified
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1986 Progress Run Finished CBP Admin 2020-02-19 08:54:58 PM
1987 Progress Run Finished CBP Admin 2020-02-19 08:55:01 PM
1988 Progress Run Finished CBP Admin 2020-02-19 08:55:05 PM
1989 Progress Run Finished CBP Admin 2020-02-19 08:55:11 PM
1990 Progress Run Finished CBP Admin 2020-02-19 08:55:15 PM
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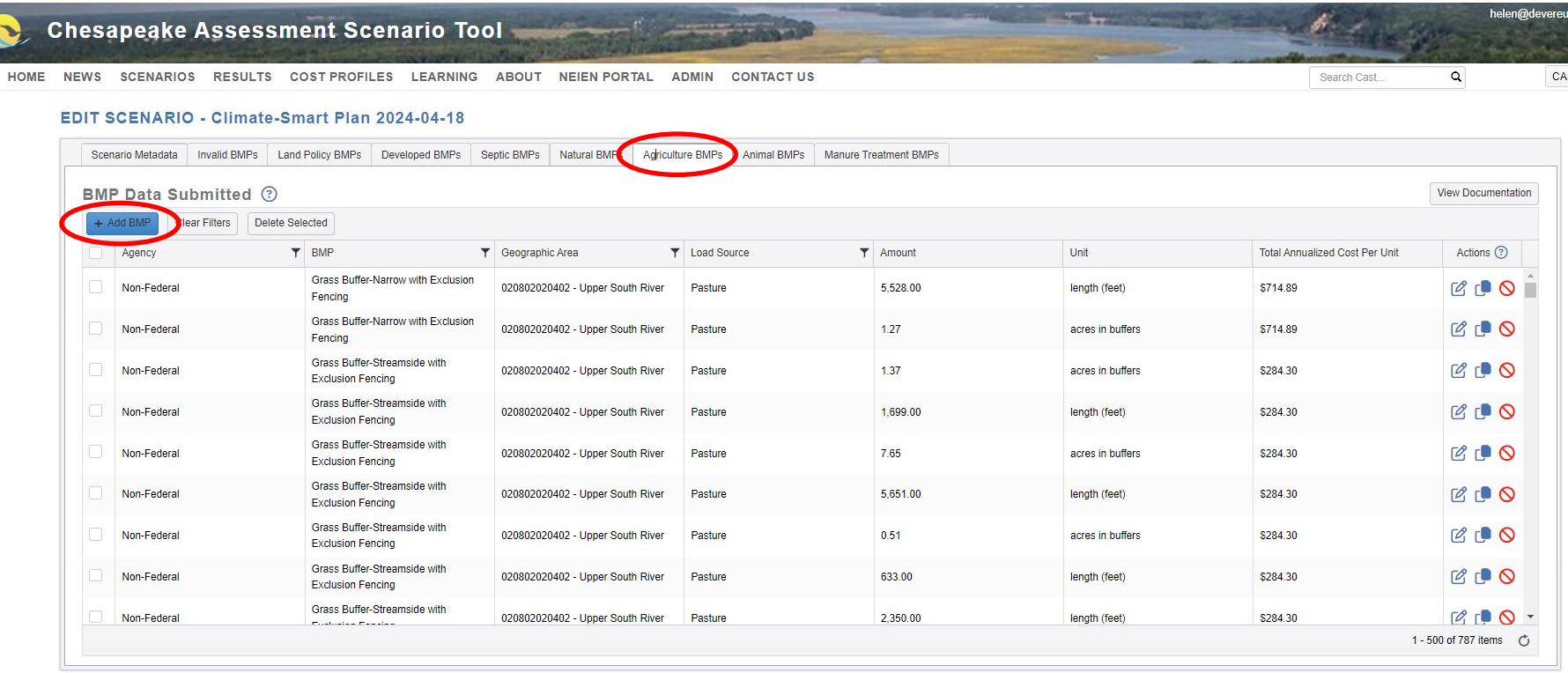
Chesapeake Assessment Scenario Tool
helen@devereuxconsulting.com
Manage Profile
Log Off
HOME NEWS SCENARIOS RESULTS COST PROFILES LEARNING ABOUT NEIEN PORTAL ADMIN CONTACT US
Search Cast...
CAST-2019
EDIT SCENARIO - Climate-Smart Plan 2024-04-18
Scenario Metadata
Invalid BMPs
Land Policy BMPs
Developed BMPs
Septic BMPs
Natural BMPs
Agriculture BMPs
Animal BMPs
Manure Treatment BMPs
BMP Data Submitted
View Documentation
+ Add BMP
Clear Filters
Delete Selected
Agency
BMP
Geographic Area
Load Source
Amount
Unit
Total Annualized Cost Per Unit
Actions
Non-Federal
Grass Buffer-Narrow with Exclusion Fencing
020802020402 - Upper South River
Pasture
5,528.00
length (feet)
$714.89
Non-Federal
Grass Buffer-Narrow with Exclusion Fencing
020802020402 - Upper South River
Pasture
1.27
acres in buffers
$714.89
Non-Federal
Grass Buffer-Streamside with Exclusion Fencing
020802020402 - Upper South River
Pasture
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acres in buffers
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Non-Federal
Grass Buffer-Streamside with Exclusion Fencing
020802020402 - Upper South River
Pasture
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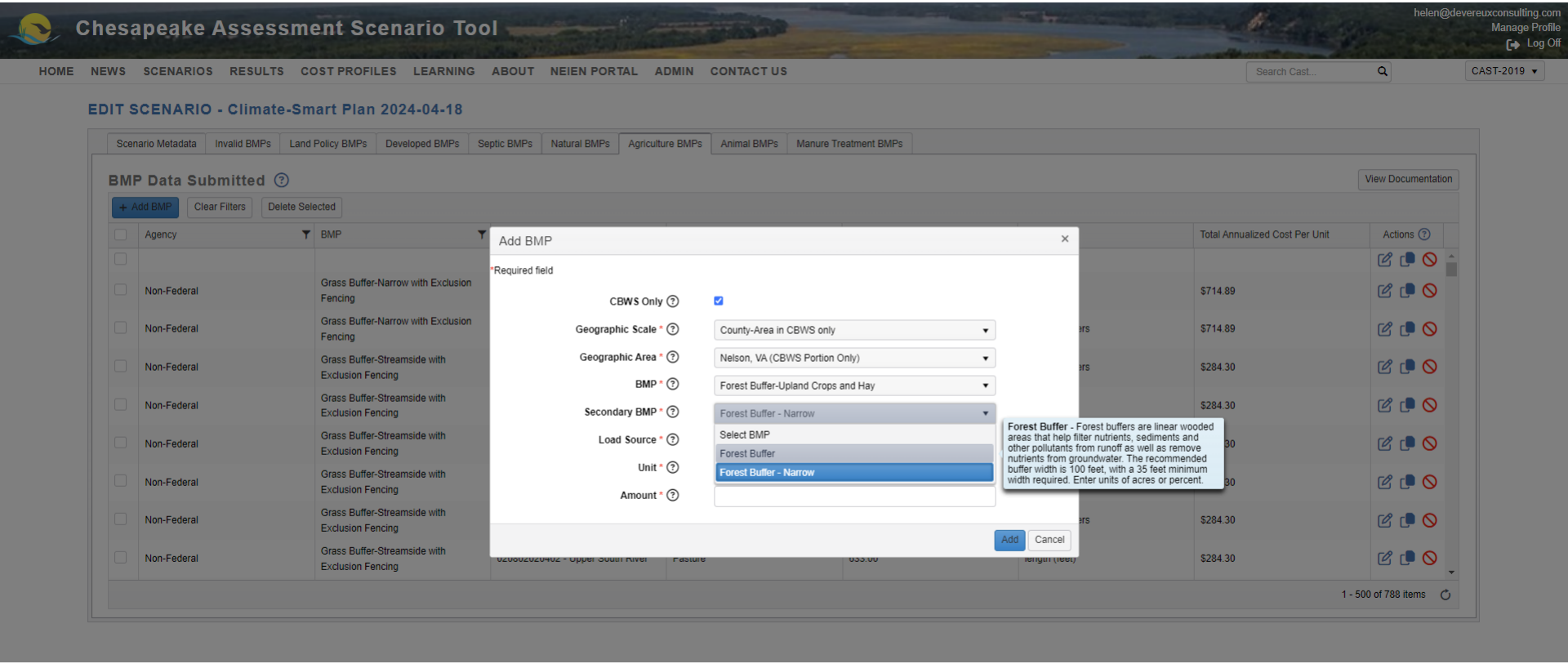
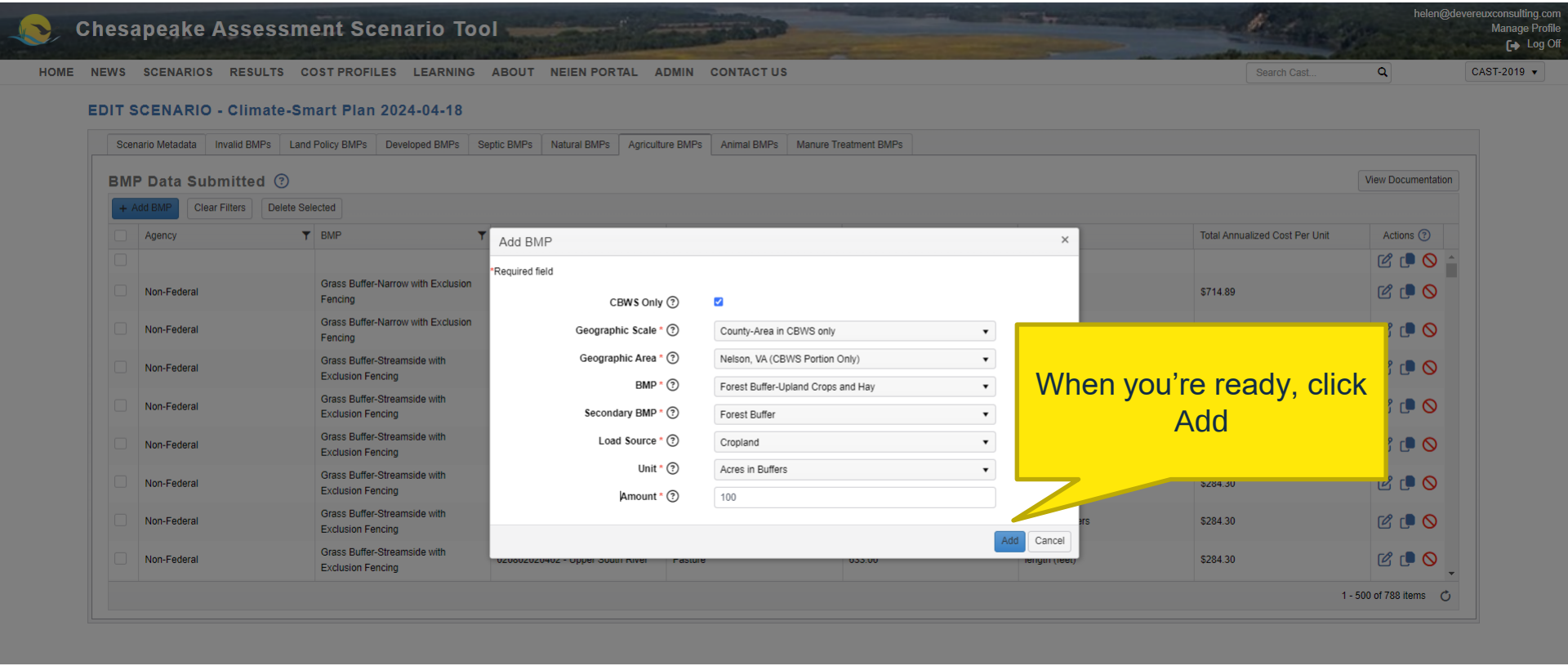
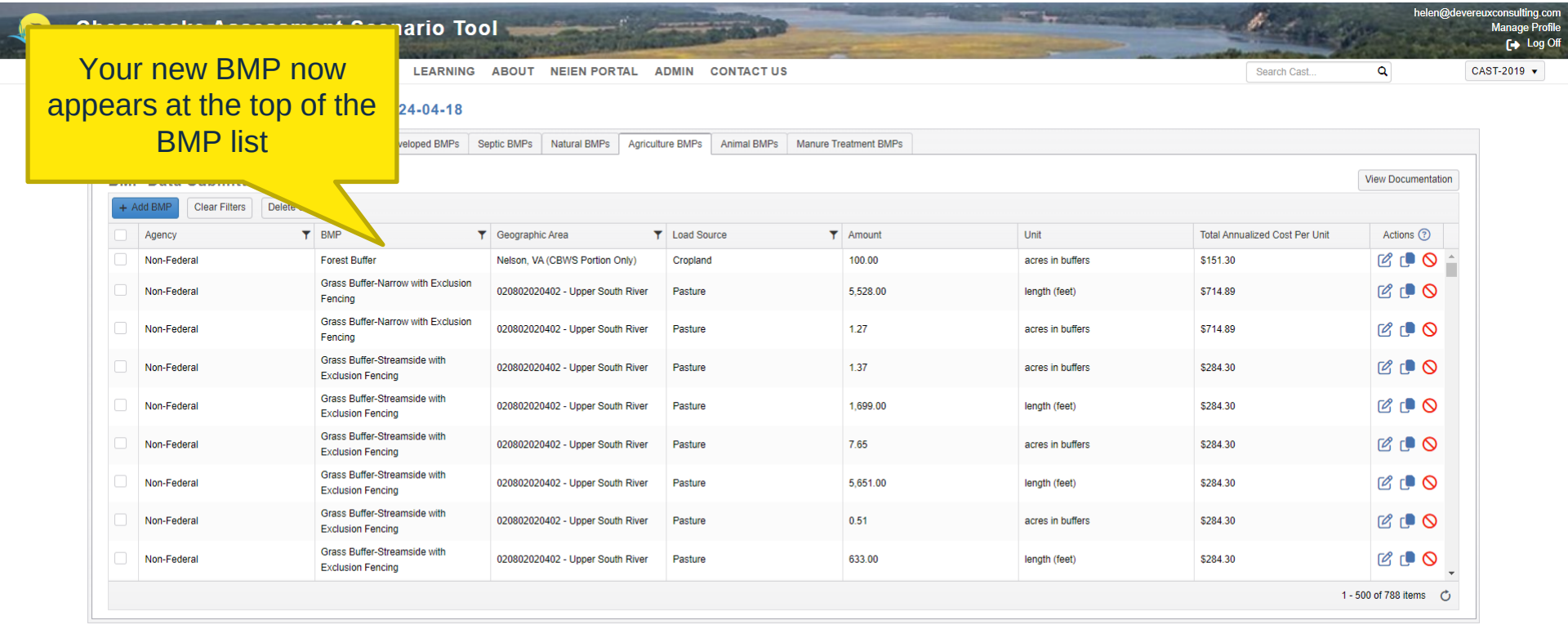
length (feet)
$284.30
Non-Federal
Grass Buffer-Streamside with Exclusion Fencing
020802020402 - Upper South River
Pasture
7.65
acres in buffers
$284.30
Non-Federal
Grass Buffer-Streamside with Exclusion Fencing
020802020402 - Upper South River
Pasture
5,651.00
length (feet)
$284.30
Non-Federal
Grass Buffer-Streamside with Exclusion Fencing
020802020402 - Upper South River
Pasture
0.51
acres in buffers
$284.30
Non-Federal
Grass Buffer-Streamside with Exclusion Fencing
020802020402 - Upper South River
Pasture
633.00
length (feet)
$284.30
Non-Federal
Grass Buffer-Streamside with
020802020402 - Upper South River
Pasture
2,350.00
length (feet)
$284.30
1 - 500 of 787 items

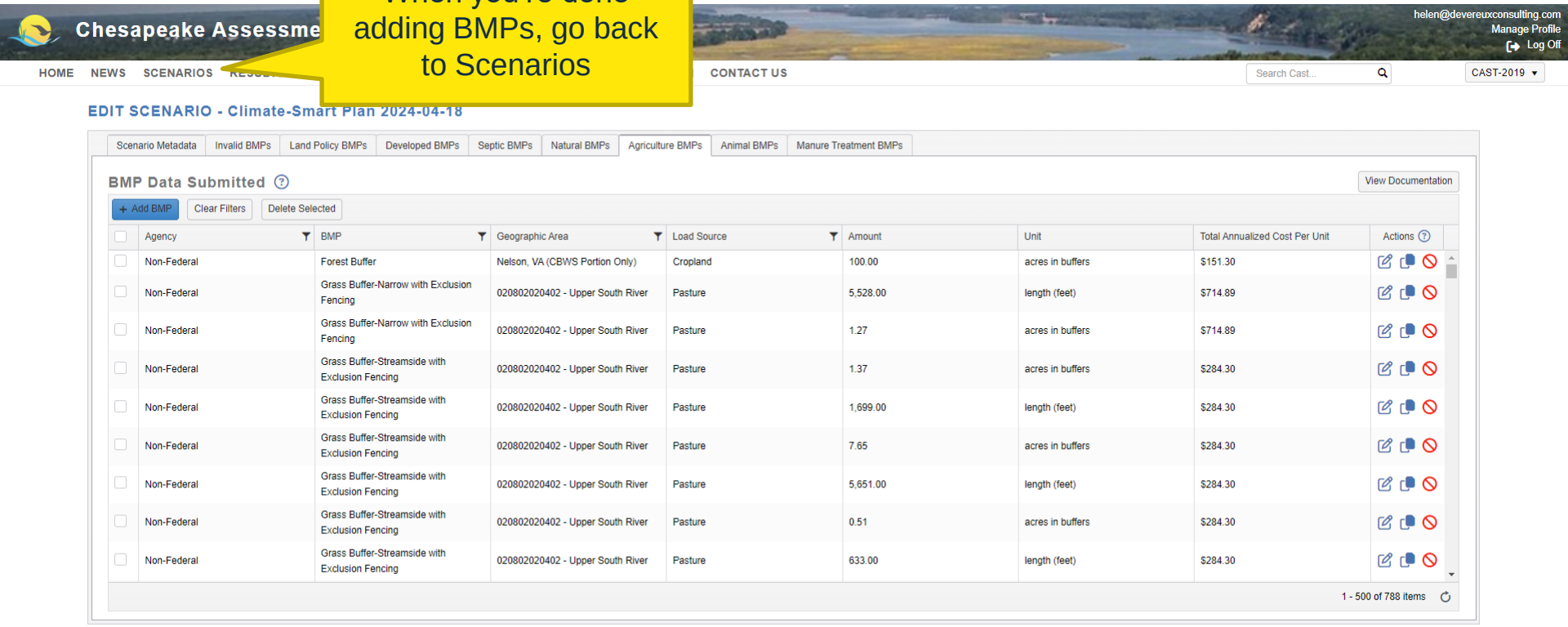

Chesapeake Assessment Scenario Tool
helen@devereuxconsulting.com
Manage Profile
Log Off
HOME NEWS SCENARIOS RESULTS COST PROFILES LEARNING ABOUT NEIEN PORTAL ADMIN CONTACT US
Search Cast...
CAST-2019
EDIT SCENARIO - Climate-Smart Plan 2024-04-18
Scenario Metadata Invalid BMPs Land Policy BMPs Developed BMPs Septic BMPs Natural BMPs Agriculture BMPs Animal BMPs Manure Treatment BMPs
BMP Data Submitted
View Documentation
+ Add BMP
Clear Filters
Delete Selected
Agency
BMP
Total Annualized Cost Per Unit
Actions
Non-Federal
Grass Buffer-Narrow with Exclusion Fencing
$714.89
Grass Buffer-Narrow with Exclusion Fencing
$714.89
Grass Buffer-Streamside with Exclusion Fencing
$284.30
Grass Buffer-Streamside with Exclusion Fencing
$284.30
Grass Buffer-Streamside with Exclusion Fencing
Grass Buffer-Streamside with Exclusion Fencing
Grass Buffer-Streamside with Exclusion Fencing
$284.30
Grass Buffer-Streamside with Exclusion Fencing
$284.30
1 - 500 of 788 items
Add BMP
*Required field
CBWS Only
Geographic Scale *
County-Area in CBWS only
Geographic Area *
Nelson, VA (CBWS Portion Only)
BMP *
Forest Buffer-Upland Crops and Hay
Secondary BMP *
Forest Buffer - Narrow
Load Source *
Unit *
Amount *
Select BMP
Forest Buffer
Forest Buffer - Narrow
Forest Buffer - Forest buffers are linear wooded areas that help filter nutrients, sediments and other pollutants from runoff as well as remove nutrients from groundwater. The recommended buffer width is 100 feet, with a 35 feet minimum width required. Enter units of acres or percent.
Add
Cancel

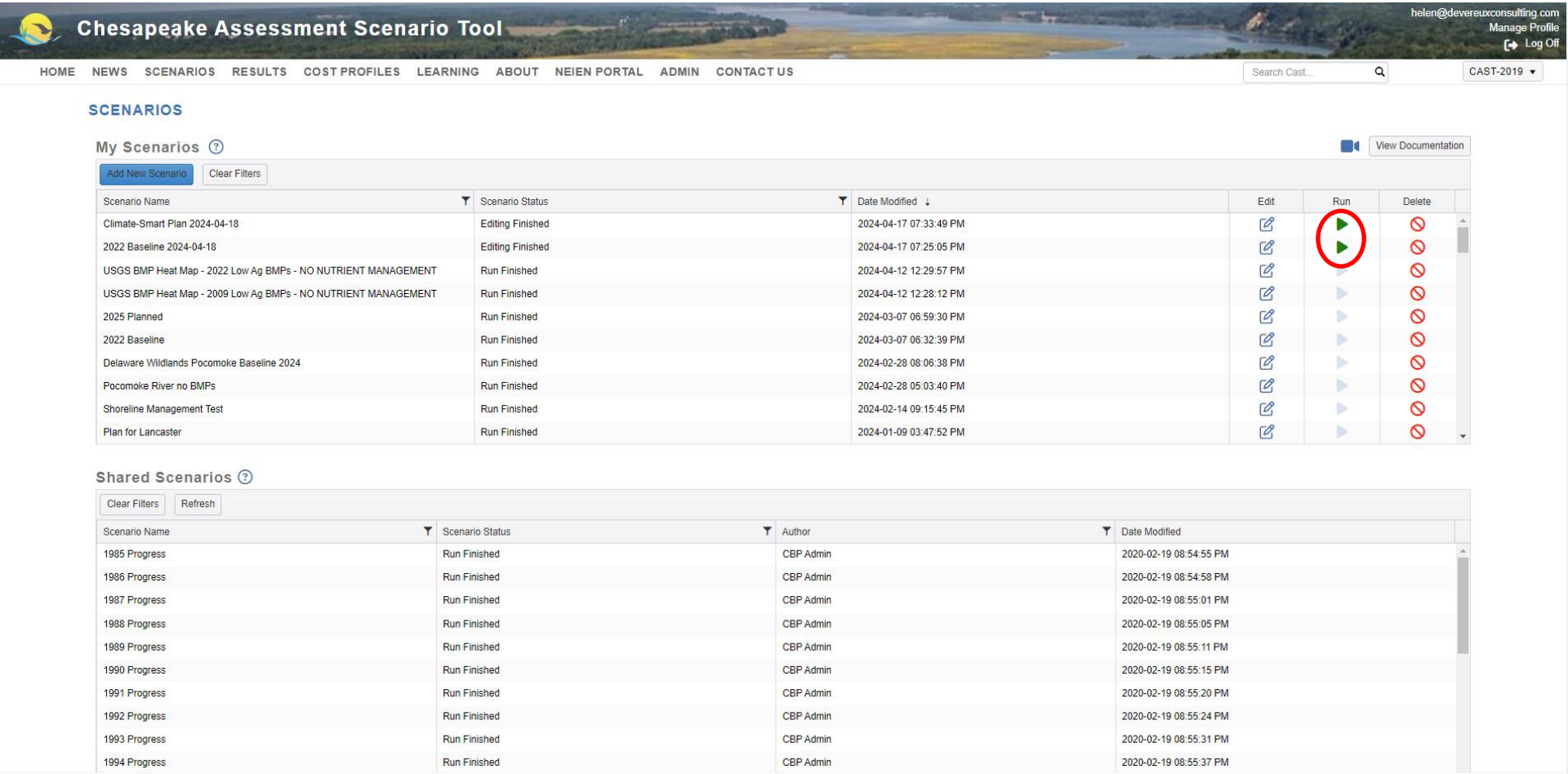

Chesapeake Assessment Scenario Tool
helen@devereuxconsulting.com
Manage Profile
Log Off
HOME NEWS SCENARIOS RESULTS COST PROFILES LEARNING ABOUT NEIEN PORTAL ADMIN CONTACT US
Search Cast...
CAST-2019
EDIT SCENARIO - Climate-Smart Plan 2024-04-18
Scenario Metadata Invalid BMPs Land Policy BMPs Developed BMPs Septic BMPs Natural BMPs Agriculture BMPs Animal BMPs Manure Treatment BMPs
BMP Data Submitted
View Documentation
+ Add BMP
Clear Filters
Delete Selected
Agency
BMP
Total Annualized Cost Per Unit
Actions
Non-Federal
Grass Buffer-Narrow with Exclusion Fencing
$714.89
Non-Federal
Grass Buffer-Narrow with Exclusion Fencing
Non-Federal
Grass Buffer-Streamside with Exclusion Fencing
Non-Federal
Grass Buffer-Streamside with Exclusion Fencing
Non-Federal
Grass Buffer-Streamside with Exclusion Fencing
Non-Federal
Grass Buffer-Streamside with Exclusion Fencing
Non-Federal
Grass Buffer-Streamside with Exclusion Fencing
$284.30
Non-Federal
Grass Buffer-Streamside with Exclusion Fencing
$284.30
1 - 500 of 788 items
Add BMP
*Required field
CBWS Only
Geographic Scale *
County-Area in CBWS only
Geographic Area *
Nelson, VA (CBWS Portion Only)
BMP *
Forest Buffer-Upland Crops and Hay
Secondary BMP *
Forest Buffer
Load Source *
Cropland
Unit *
Acres in Buffers
Amount *
100
Add
Cancel
When you're ready, click Add

Your new BMP now appears at the top of the BMP list



When you're done adding BMPs, go back to Scenarios




Chesapeake Assessment Scenario Tool
helen@devereuxconsulting.com
Manage Profile
Log Off
HOME NEWS SCENARIOS RESULTS COST PROFILES LEARNING ABOUT NEIEN PORTAL ADMIN CONTACT US
Search Cast...
CAST-2019
SCENARIOS
My Scenarios
View Documentation
Add New Scenario
Clear Filters
Scenario Name
Scenario Status
Date Modified
Edit
Run
Delete
Climate-Smart Plan 2024-04-18 Editing Finished 2024-04-17 07:33:49 PM
2022 Baseline 2024-04-18 Editing Finished 2024-04-17 07:25:05 PM
USGS BMP Heat Map - 2022 Low Ag BMPs - NO NUTRIENT MANAGEMENT Run Finished 2024-04-12 12:29:57 PM
USGS BMP Heat Map - 2009 Low Ag BMPs - NO NUTRIENT MANAGEMENT Run Finished 2024-04-12 12:28:12 PM
2025 Planned Run Finished 2024-03-07 06:59:30 PM
2022 Baseline Run Finished 2024-03-07 06:32:39 PM
Delaware Wildlands Pocomoke Baseline 2024 Run Finished 2024-02-28 08:06:38 PM
Pocomoke River no BMPs Run Finished 2024-02-28 05:03:40 PM
Shoreline Management Test Run Finished 2024-02-14 09:15:45 PM
Plan for Lancaster Run Finished 2024-01-09 03:47:52 PM
Shared Scenarios
Clear Filters
Refresh
Scenario Name
Scenario Status
Author
Date Modified
1985 Progress Run Finished CBP Admin 2020-02-19 08:54:55 PM
1986 Progress Run Finished CBP Admin 2020-02-19 08:54:58 PM
1987 Progress Run Finished CBP Admin 2020-02-19 08:55:01 PM
1988 Progress Run Finished CBP Admin 2020-02-19 08:55:05 PM
1989 Progress Run Finished CBP Admin 2020-02-19 08:55:11 PM
1990 Progress Run Finished CBP Admin 2020-02-19 08:55:15 PM
1991 Progress Run Finished CBP Admin 2020-02-19 08:55:20 PM
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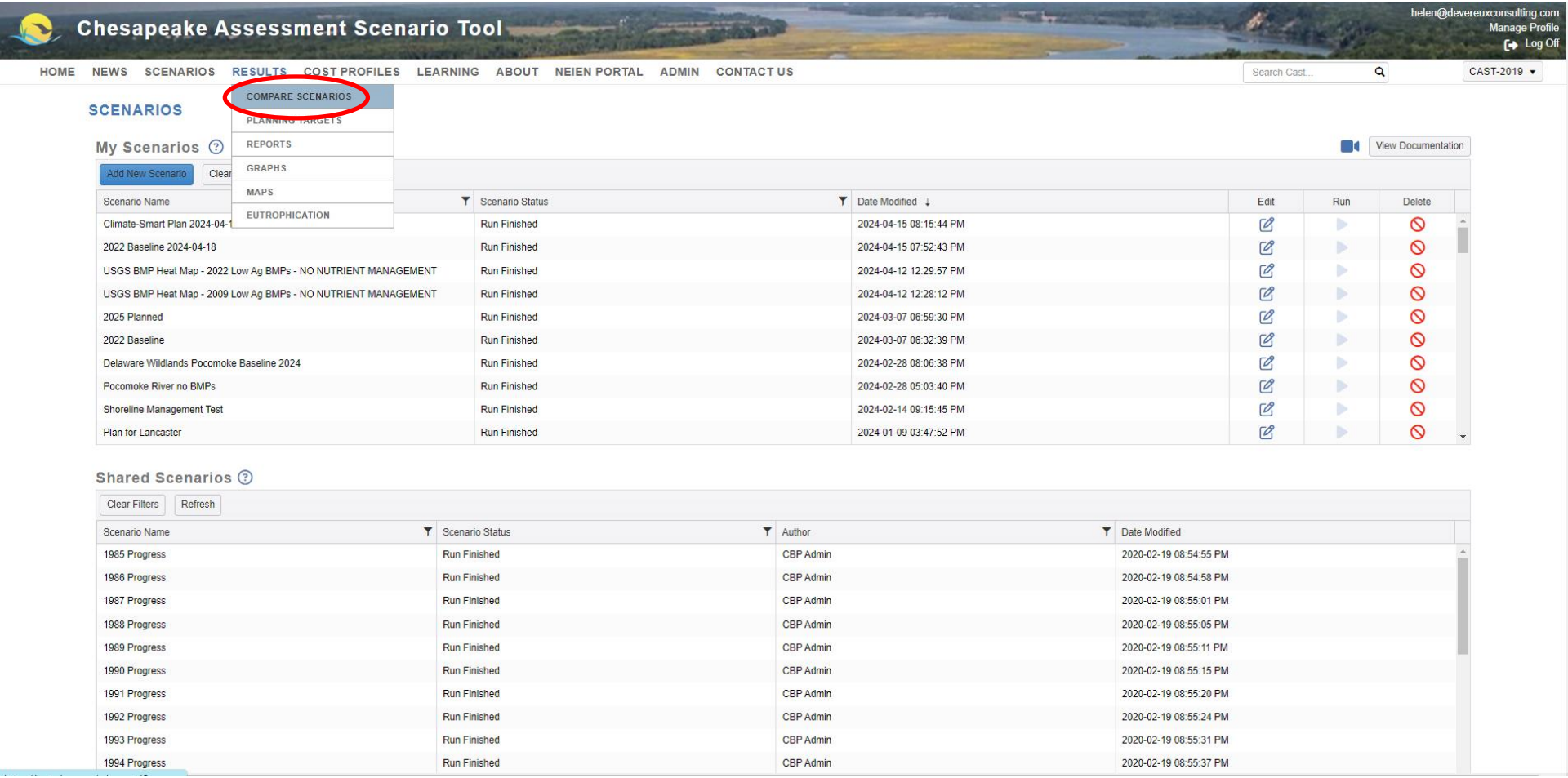
Chesapeake Assessment Scenario Tool
helen@devereuxconsulting.com
Manage Profile
Log Off
HOME
NEWS
SCENARIOS
RESULTS
COST PROFILES
LEARNING
ABOUT
NEIEN PORTAL
ADMIN
CONTACT US
Search Cast...
CAST-2019
COMPARE SCENARIOS
PLANNING TARGETS
REPORTS
GRAPHS
MAPS
EUTROPHICATION
SCENARIOS
My Scenarios
View Documentation
Add New Scenario
Clear
Scenario Name
Scenario Status
Date Modified
Edit
Run
Delete
Climate-Smart Plan 2024-04-1
Run Finished
2024-04-15 08:15:44 PM
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Run Finished
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Run Finished
2024-04-12 12:29:57 PM
USGS BMP Heat Map - 2009 Low Ag BMPs - NO NUTRIENT MANAGEMENT
Run Finished
2024-04-12 12:28:12 PM
2025 Planned
Run Finished
2024-03-07 06:59:30 PM
2022 Baseline
Run Finished
2024-03-07 06:32:39 PM
Delaware Wildlands Pocomoke Baseline 2024
Run Finished
2024-02-28 08:06:38 PM
Pocomoke River no BMPs
Run Finished
2024-02-28 05:03:40 PM
Shoreline Management Test
Run Finished
2024-02-14 09:15:45 PM
Plan for Lancaster
Run Finished
2024-01-09 03:47:52 PM
Shared Scenarios
Clear Filters
Refresh
Scenario Name
Scenario Status
Author
Date Modified
1985 Progress
Run Finished
CBP Admin
2020-02-19 08:54:55 PM
1986 Progress
Run Finished
CBP Admin
2020-02-19 08:54:58 PM
1987 Progress
Run Finished
CBP Admin
2020-02-19 08:55:01 PM
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2020-02-19 08:55:05 PM
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Run Finished
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1991 Progress
Run Finished
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Run Finished
CBP Admin
2020-02-19 08:55:24 PM
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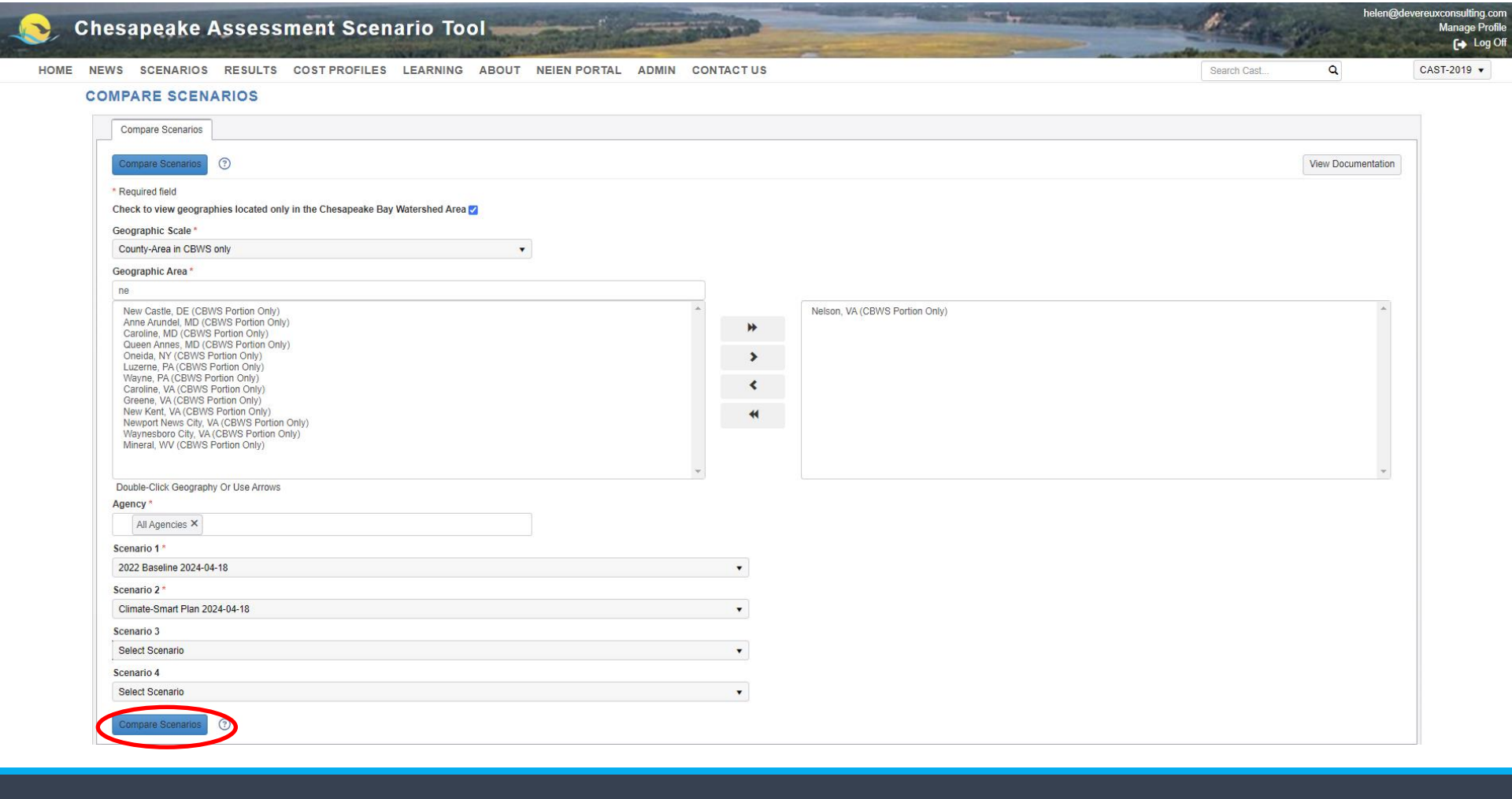
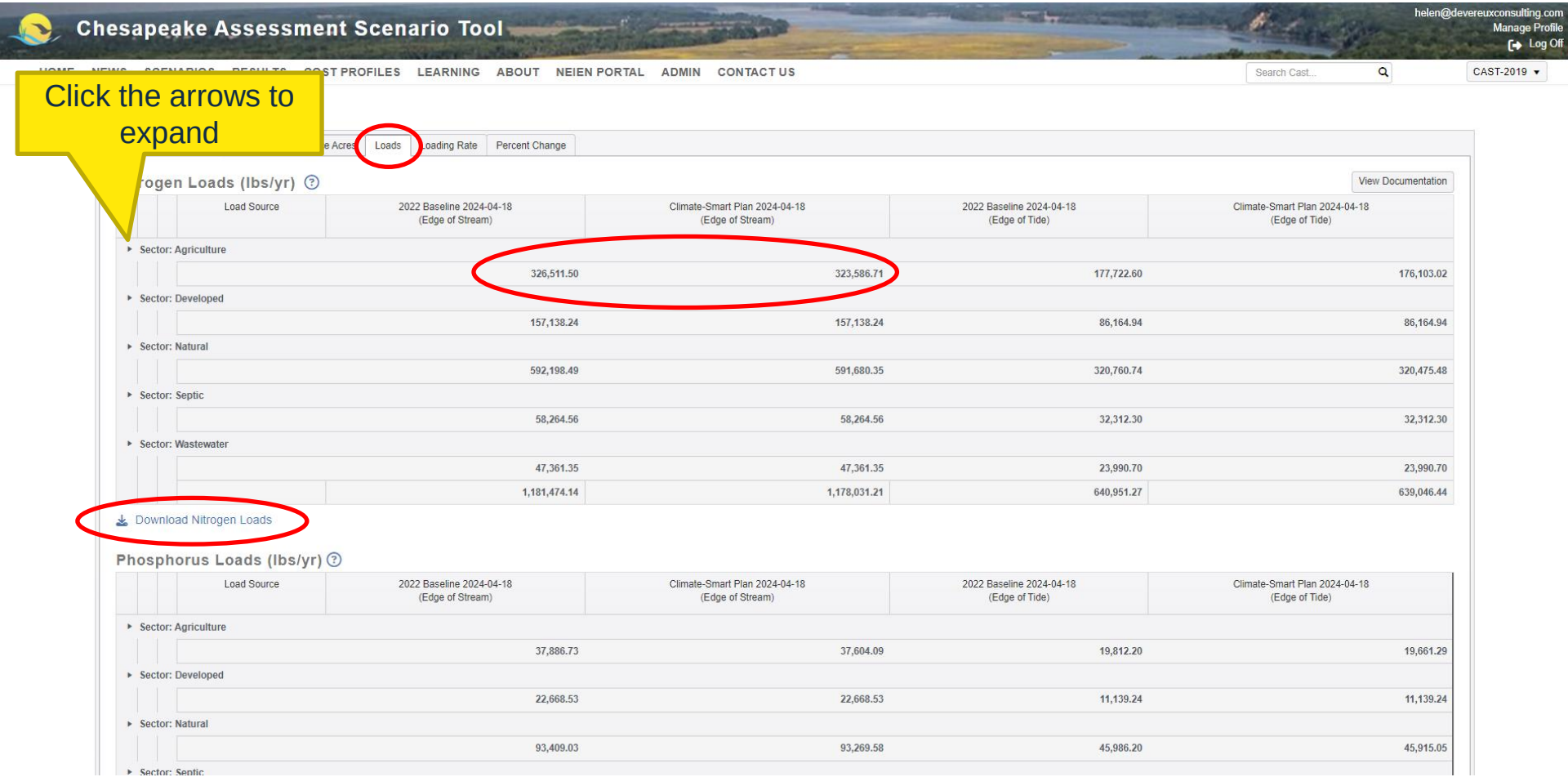
CBP Admin
2020-02-19 08:55:31 PM
1994 Progress
Run Finished
CBP Admin
2020-02-19 08:55:37 PM


Chesapeake Assessment Scenario Tool
helen@devereuxconsulting.com
Manage Profile
Log Off
HOME
NEWS
SCENARIOS
RESULTS
COST PROFILES
LEARNING
ABOUT
NEIEN PORTAL
ADMIN
CONTACT US
Search Cast...
CAST-2019
COMPARE SCENARIOS
Compare Scenarios
Compare Scenarios
View Documentation
* Required field
Check to view geographies located only in the Chesapeake Bay Watershed Area
Geographic Scale *
County-Area in CBWS only
Geographic Area *
ne
New Castle, DE (CBWS Portion Only)
Anne Arundel, MD (CBWS Portion Only)
Caroline, MD (CBWS Portion Only)
Queen Annes, MD (CBWS Portion Only)
Oneida, NY (CBWS Portion Only)
Luzerne, PA (CBWS Portion Only)
Wayne, PA (CBWS Portion Only)
Caroline, VA (CBWS Portion Only)
Greene, VA (CBWS Portion Only)
New Kent, VA (CBWS Portion Only)
Newport News City, VA (CBWS Portion Only)
Waynesboro City, VA (CBWS Portion Only)
Mineral, WV (CBWS Portion Only)
Nelson, VA (CBWS Portion Only)
Double-Click Geography Or Use Arrows
Agency *
All Agencies
Scenario 1 *
2022 Baseline 2024-04-18
Scenario 2 *
Climate-Smart Plan 2024-04-18
Scenario 3
Select Scenario
Scenario 4
Select Scenario
Compare Scenarios


Chesapeake Assessment Scenario Tool
helen@devereuxconsulting.com
Manage Profile
Log Off
HOME NEWS SCENARIOS RESULTS COST PROFILES LEARNING ABOUT NEIEN PORTAL ADMIN CONTACT US
Search Cast...
CAST-2019
Click the arrows to expand
Loads
Loading Rate
Percent Change
rogen Loads (lbs/yr)
View Documentation
Load Source
2022 Baseline 2024-04-18 (Edge of Stream)
Climate-Smart Plan 2024-04-18 (Edge of Stream)
2022 Baseline 2024-04-18 (Edge of Tide)
Climate-Smart Plan 2024-04-18 (Edge of Tide)
Sector: Agriculture
326,511.50
323,586.71
177,722.60
176,103.02
Sector: Developed
157,138.24
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86,164.94
86,164.94
Sector: Natural
592,198.49
591,680.35
320,760.74
320,475.48
Sector: Septic
58,264.56
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32,312.30
32,312.30
Sector: Wastewater
47,361.35
47,361.35
23,990.70
23,990.70
1,181,474.14
1,178,031.21
640,951.27
639,046.44
Download Nitrogen Loads
Phosphorus Loads (lbs/yr)
Load Source
2022 Baseline 2024-04-18 (Edge of Stream)
Climate-Smart Plan 2024-04-18 (Edge of Stream)
2022 Baseline 2024-04-18 (Edge of Tide)
Climate-Smart Plan 2024-04-18 (Edge of Tide)
Sector: Agriculture
37,886.73
37,604.09
19,812.20
19,661.29
Sector: Developed
22,668.53
22,668.53
11,139.24
11,139.24
Sector: Natural
93,409.03
93,269.58
45,986.20
45,915.05
Sector: Septic

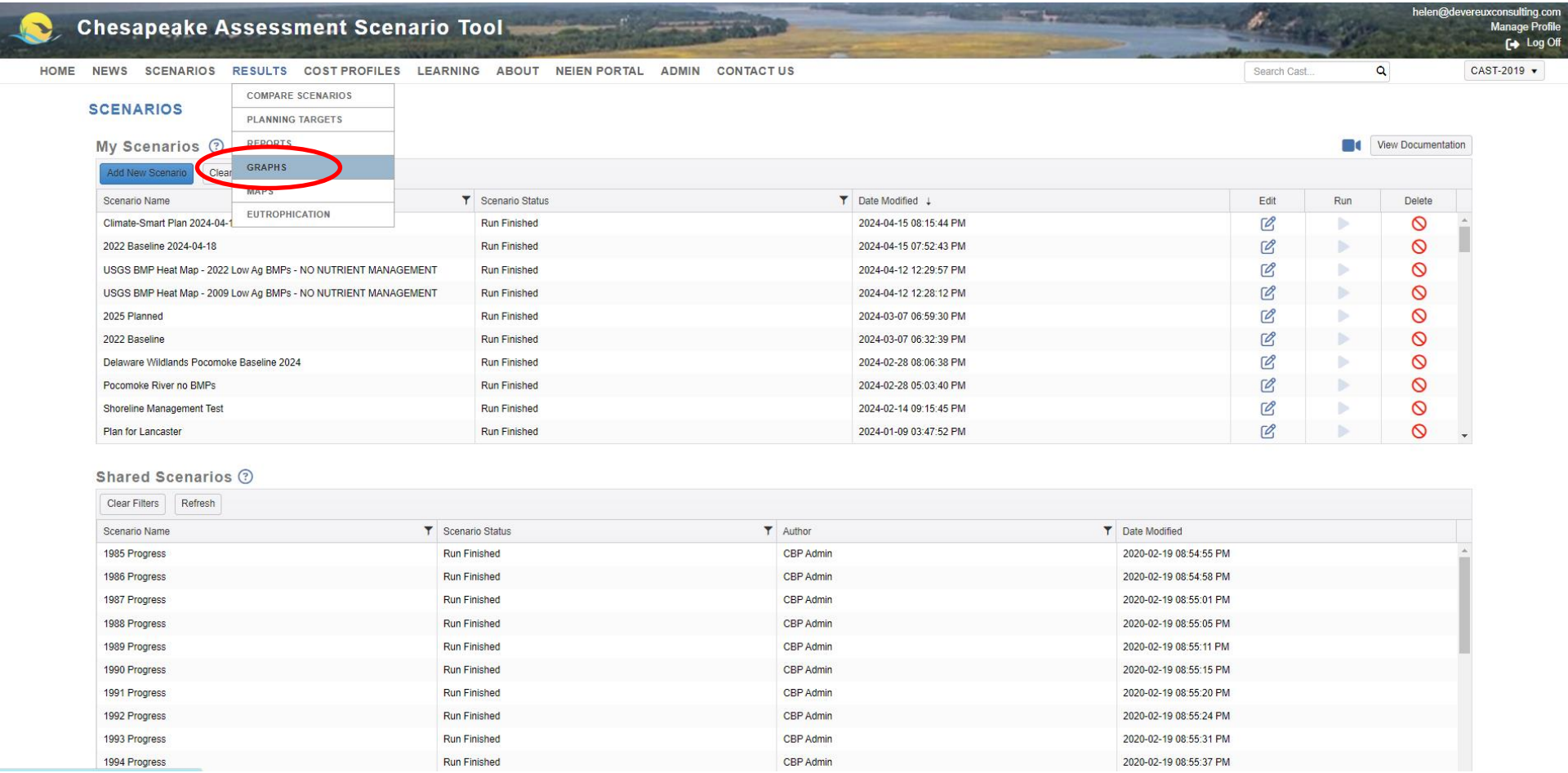
COMPARE SCENARIOS

Compare Scenarios | Costs and Load Source Acres | Loads | Loading Rate | Percent Change

Nitrogen Loads (lbs/yr)

View Documentation

Load Source	2022 Baseline 2024-04-18 (Edge of Stream)	Climate-Smart Plan 2024-04-18 (Edge of Stream)	2022 Baseline 2024-04-18 (Edge of Tide)	Climate-Smart Plan 2024-04-18 (Edge of Tide)
Sector: Agriculture				
AgencyType: Non Federal				
Agency: Non-Federal				
Ag Open Space	7,667.49	7,629.80	4,180.68	4,160.18
Double Cropped Land	0.00	0.00	0.00	0.00
Full Season Soybeans	6,551.43	6,284.81	3,505.95	3,357.62
Grain with Manure	1,997.26	1,925.41	1,067.61	1,026.92
Grain without Manure	2,283.34	2,201.74	1,220.57	1,174.36
Leguminous Hay	1,276.45	1,270.44	695.96	692.67
Non-Permitted Feeding Space	139.33	139.33	75.97	75.97
Other Agronomic Crops	14,129.04	13,553.84	7,561.07	7,241.09
Other Hay	111,827.98	111,300.91	60,973.31	60,684.92
Pasture	140,914.44	140,232.19	76,690.41	76,316.69
Permitted Feeding Space	270.93	270.93	150.55	150.55
Riparian Pasture Deposition	22,154.70	22,154.70	12,260.34	12,260.34
Silage with Manure	7.51	7.51	4.07	4.07
Silage without Manure	0.79	0.79	0.43	0.43
Small Grains and Grains	0.17	0.17	0.09	0.09
Specialty Crop High	6,164.39	5,917.41	3,327.64	3,190.05
Specialty Crop Low	11,126.25	10,696.74	6,007.94	5,767.08
	326,511.50	323,586.71	177,722.60	176,103.02
	326,511.50	323,586.71	177,722.60	176,103.02
AgencyType: Federal				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Run Finished
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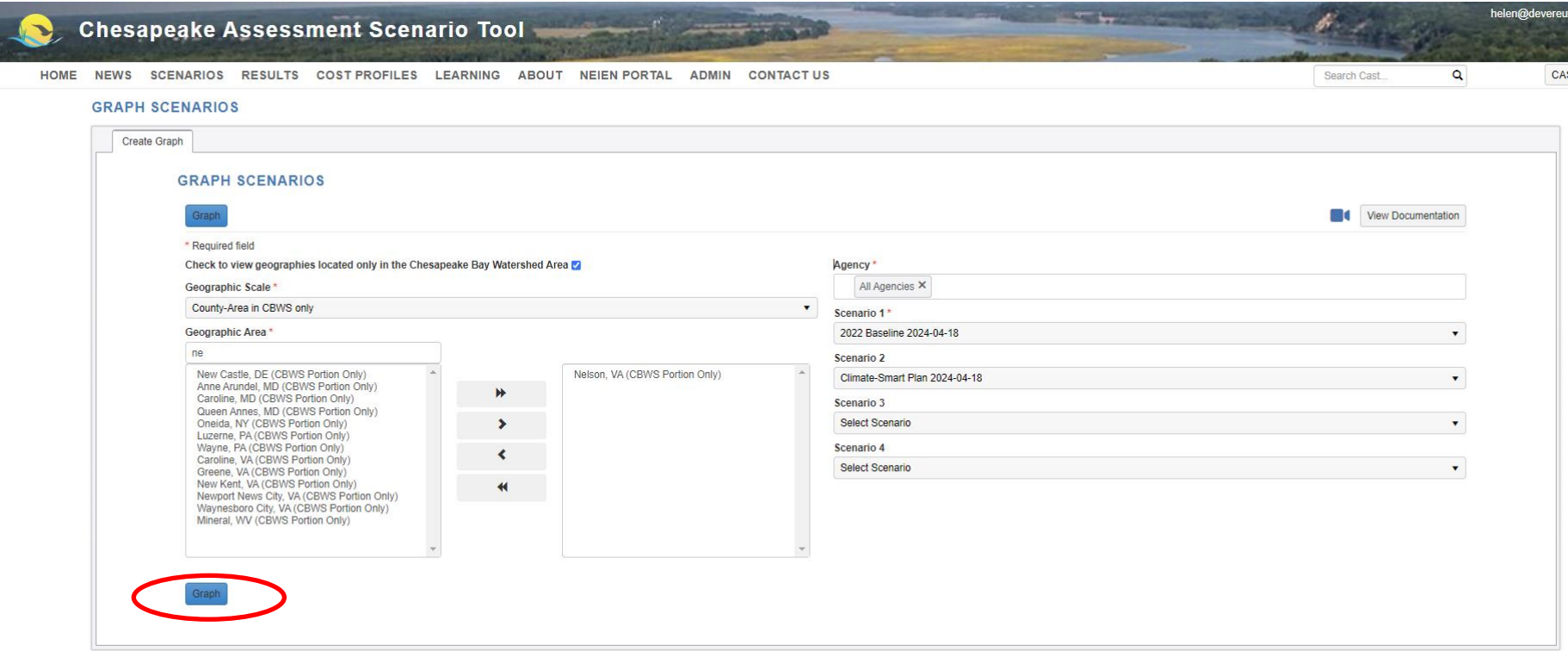
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County-Area in CBWS only
Geographic Area *
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Queen Annes, MD (CBWS Portion Only)
Oneida, NY (CBWS Portion Only)
Luzerne, PA (CBWS Portion Only)
Wayne, PA (CBWS Portion Only)
Caroline, VA (CBWS Portion Only)
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Newport News City, VA (CBWS Portion Only)
Waynesboro City, VA (CBWS Portion Only)
Mineral, WV (CBWS Portion Only)
Nelson, VA (CBWS Portion Only)
Agency *
All Agencies
Scenario 1 *
2022 Baseline 2024-04-18
Scenario 2
Climate-Smart Plan 2024-04-18
Scenario 3
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Scenario 4
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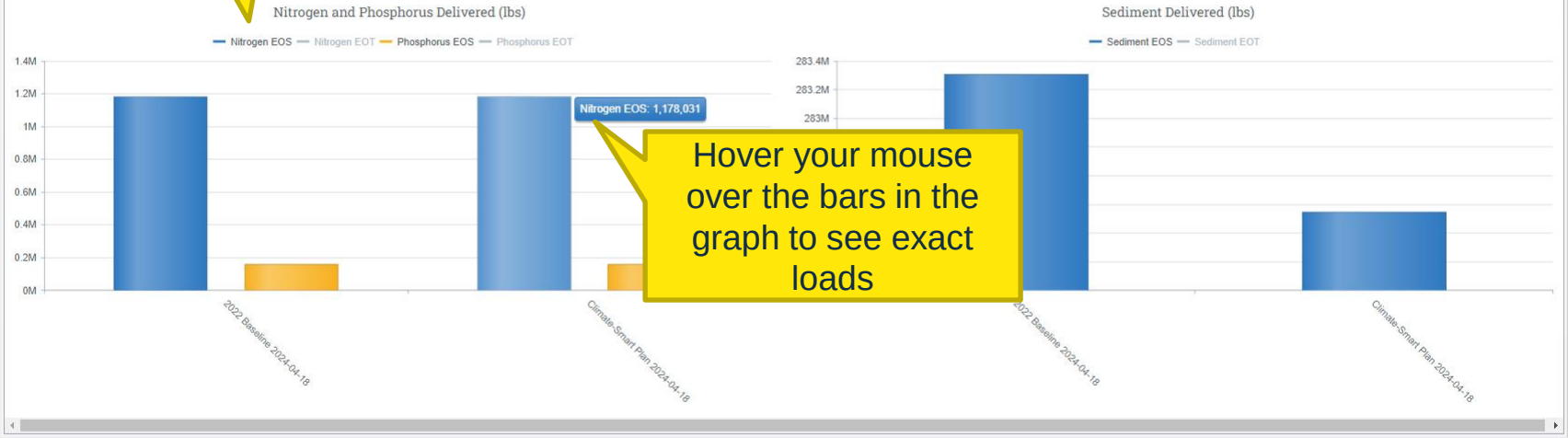

Hover your mouse over the bars in the graph to see exact loads

3

Carbon Reductions in CAST

Discuss the path forward for adding carbon reduction estimates to CAST

BMP Carbon Reduction Estimates in CAST
EPA Office of Research and Development

BMP	Soil Carbon Sequestered Per Unit (lbs/acre/year)
Cover Crop (all types)	261.20
Forest Buffers	1,071.60
Grass Buffers	803.70
Impervious Surface Reduction	2,119.98
Tree Planting	1,071.60
Urban Forest Buffers	126.14
Urban Forest Planting	126.14
Urban Tree Planting	126.14
Wetland Creation	1,512.21
Wetland Restoration	1,512.21

Carbon Sequestration in a CAST BMP Report

	A	F	G	H	I	P	Q	R
1	StateAbbreviation	BMP	BMPType	Unit	Sector	TotalAmountCredited	Cost	Lbs Carbon Sequestration
49	MD	Cover Crop Commodity Normal	Efficiency	Acres	Agriculture	78192.575	6088855.798	20424096.01
63	MD	Cover Crop Traditional Wheat Normal Drilled	Efficiency	Acres	Agriculture	463582.088	36099137.189	121088800.3
113	MD	Forest Buffer	Landuse Change	Acres in Buffers	Agriculture	19098.047	5716618.261	20465466.64
142	MD	Forest Buffer-Narrow with Exclusion Fencing	Landuse Change	Acres in Buffers	Agriculture	694.627	875640.361	744362.7273
147	MD	Forest Buffer	Landuse Change	Acres in Buffers	Developed	722.133	128871.892	91087.17438
169	MD	Grass Buffer	Landuse Change	Acres in Buffers	Agriculture	42513.530	7706427.628	34168124.26
201	MD	Grass Buffer-Narrow with Exclusion Fencing	Landuse Change	Acres in Buffers	Agriculture	1172.929	1372550.062	942683.2264
226	MD	Impervious Surface Reduction	Landuse Change	Acres	Developed	199.190	11445347.127	422278.3062
396	MD	Tree Planting	Landuse Change	Acres	Agriculture	4673.339	714880.647	5007949.933
402	MD	Forest Planting	Landuse Change	Acres	Developed	6614.271	281371.095	834299.3591
417	MD	Tree Planting - Canopy	Landuse Change	Acres	Developed	3291.374	265449.305	415161.5609
463	MD	Wetland Restoration - Headwater	Landuse Change	Acres	Agriculture	13050.443	5402883.422	19734958.28

Reduction estimates were reviewed by the co-chairs of the Chesapeake Bay Program's goal teams

Soil Carbon Sequestration Estimate Comparison: COMET-Planner vs EPA ORD

BMP	COMET Total CO_2 Equivalent per Acre	EPA ORD Soil Carbon Sequestered per Acre
Forest Buffer	8	1,072

Discussion Question

- What context for the BMP carbon reductions would be most helpful?
- Which measure would be most helpful in CAST?
  - Soil Carbon Sequestration (EPA ORD)
  - Total CO_2 Equivalent (Carbon sequestration and green house gas emissions) (USDA's COMET-Planner)

Thank you!

Any questions or feedback?
You can contact me by clicking ‘Contact Us’ from any page on the CAST site!