Chesapeake Bay Program
Science. Restoration. Partnership.

March 28, 2024

Introduction to CAST

2024 CAST Webinar Series

Hello!

My name is Helen Golimowski and I use she/her pronouns.
I am here to take us through today's topics. I work as a contractor to the Chesapeake Bay Program, where one of my roles is being the point of contact for CAST user support.

Agenda

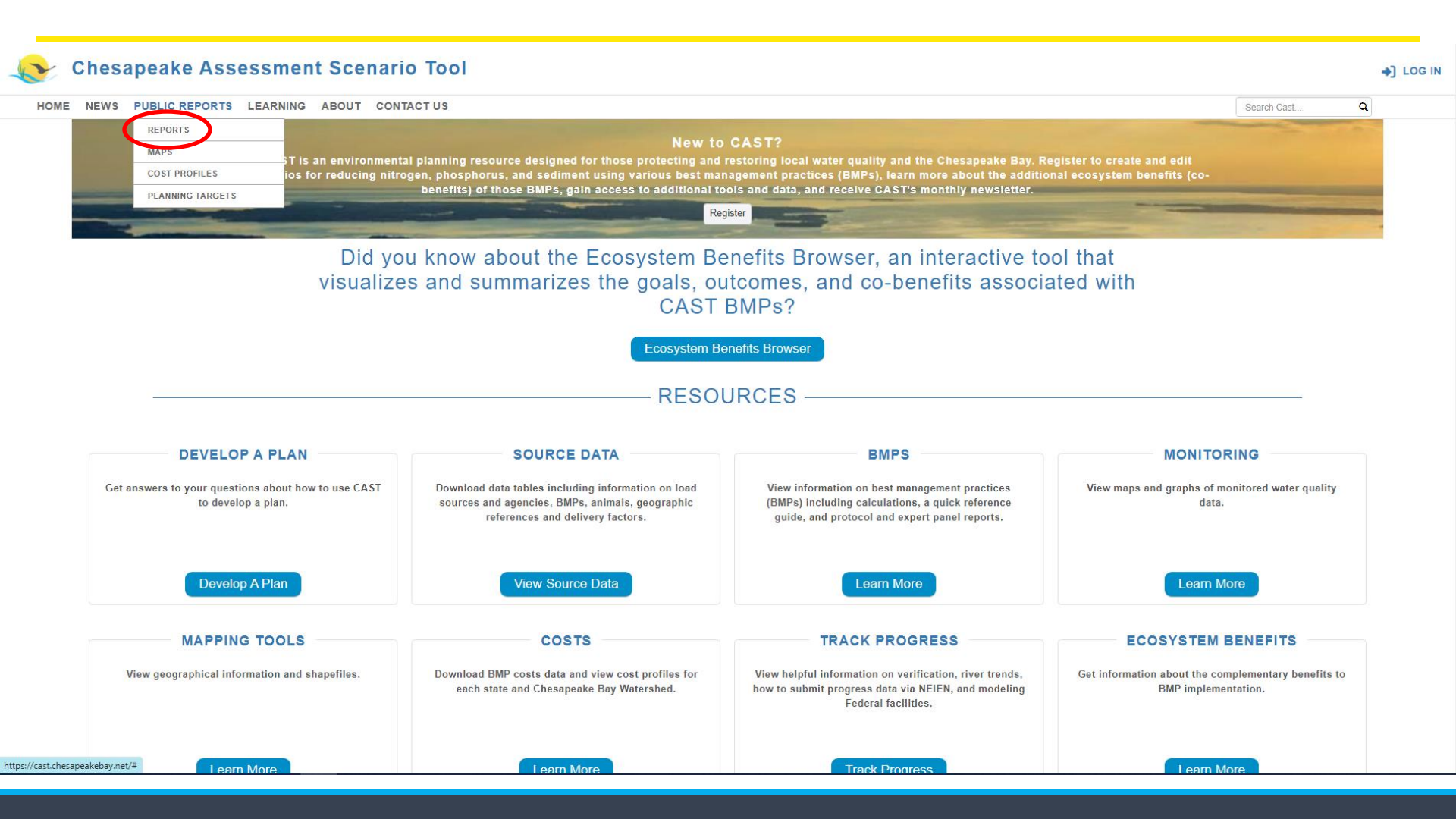
1. **Resources**
   What resources are on CAST and where to find them

2. **Scenarios**
   How to create and compare your own, unique scenarios

3. **Reports**
   What types of reports are available and how to run them

Resources

What resources are on CAST and where to find them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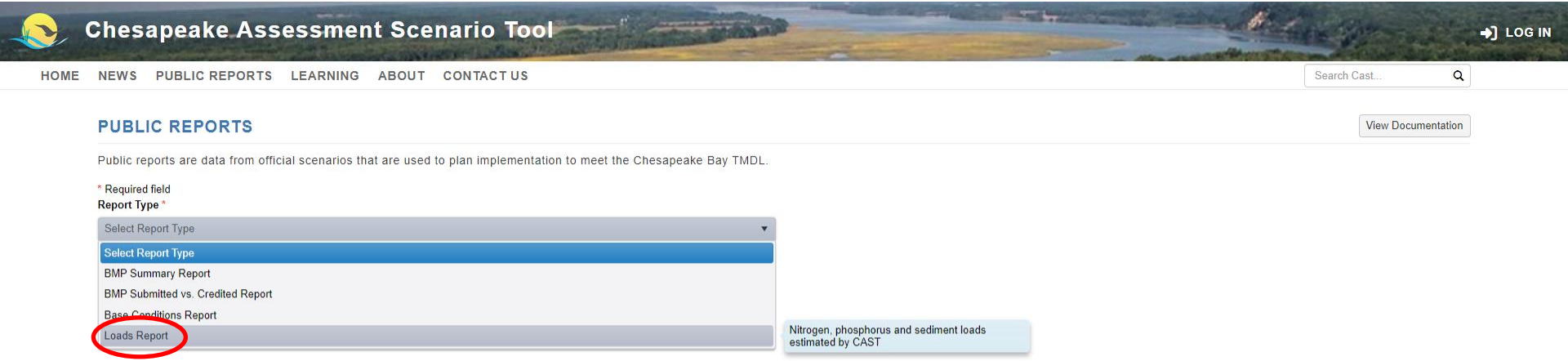
ios for reducing nitrogen, phosphorus, and sediment using various best management practices (BMPs), learn more about the additional ecosystem benefits (co-
benefits) of those BMPs, gain access to additional tools and data, and receive CAST's monthly newsletter.
Register
Did you know about the Ecosystem Benefits Browser, an interactive tool that visualizes and summarizes the goals, outcomes, and co-benefits associated with CAST BMPs?
Ecosystem Benefits Browser
RESOURCES
DEVELOP A PLAN
Get answers to your questions about how to use CAST to develop a plan.
Develop A Plan
SOURCE DATA
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.
COSTS
Download BMP costs data and view cost profiles for each state and Chesapeake Bay Watershed.
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
https://cast.chesapeakebay.net/#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Public reports are data from official scenarios that are used to plan implementation to meet the Chesapeake Bay TMDL.
* Required field
Report Type *
Select Report Type
Select Report Type
BMP Summary Report
BMP Submitted vs. Credited Report
Base Conditions Report
Loads Report
Nitrogen, phosphorus and sediment loads estimated by CAST

PUBLIC REPORTS

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Public reports are data from official scenarios that are used to plan implementation to meet the Chesapeake Bay TMDL.

* Required field

Report Type *

Loads Report

Report Name *

2022Progress_LoadsReport

Geographic Scale *

Select Geographic Scale

- County-Area in CBWS only
- State Basin-Area in CBWS only
- State-Area in CBWS only
- Chesapeake Bay Segment

Generate Report

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* Required field

Report Type *

Loads Report

Report Name *

2022Progress_LoadsReport

Geographic Scale *

County-Area in CBWS only

Scenarios *

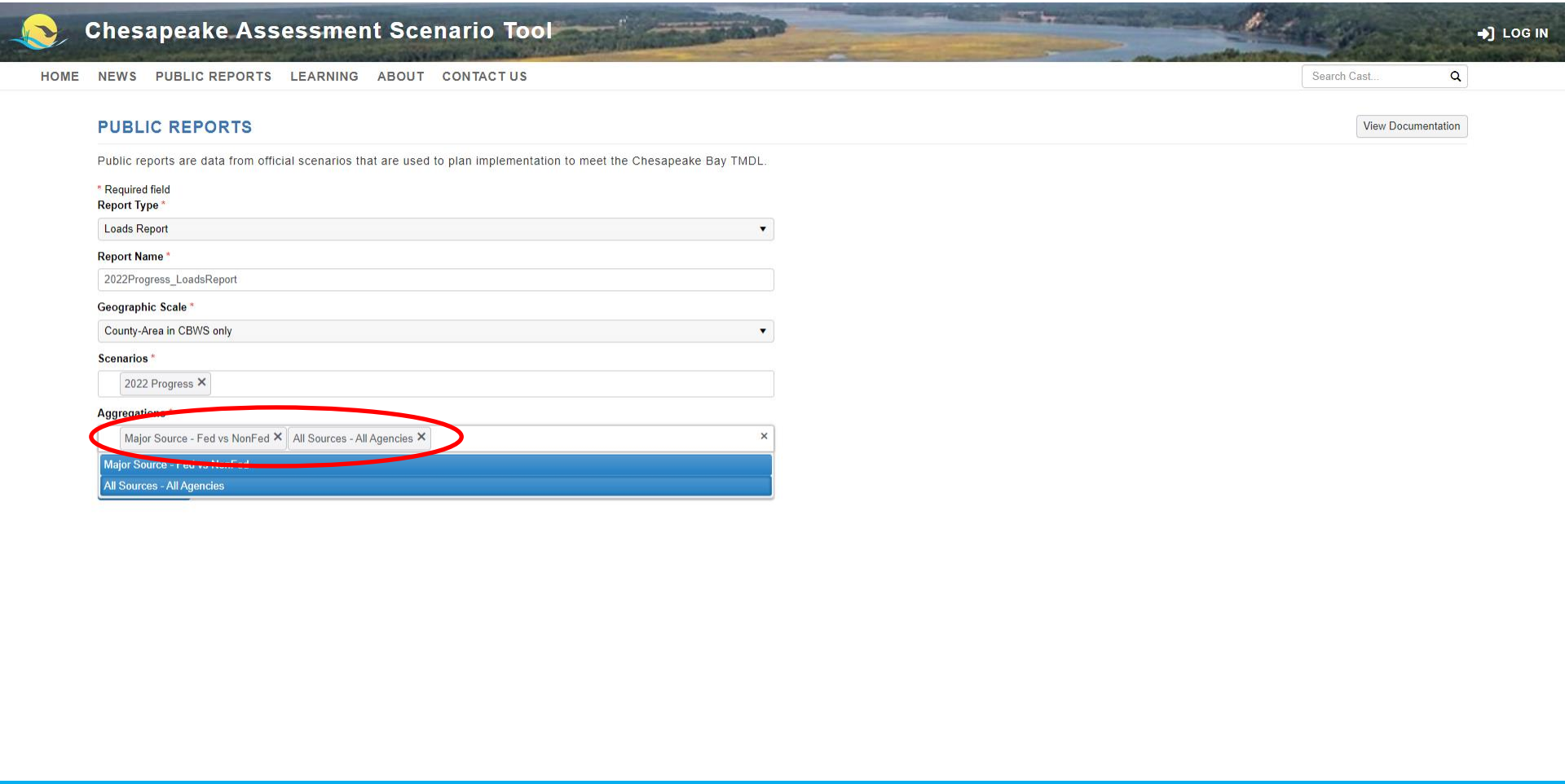
2022

2022 Progress

Aggregations *

Select Aggregations

Generate Report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Report Name *
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Geographic Scale *
County-Area in CBWS only
Scenarios *
2022 Progress
Aggregations *
Major Source - Fed vs NonFed
All Sources - All Agencies
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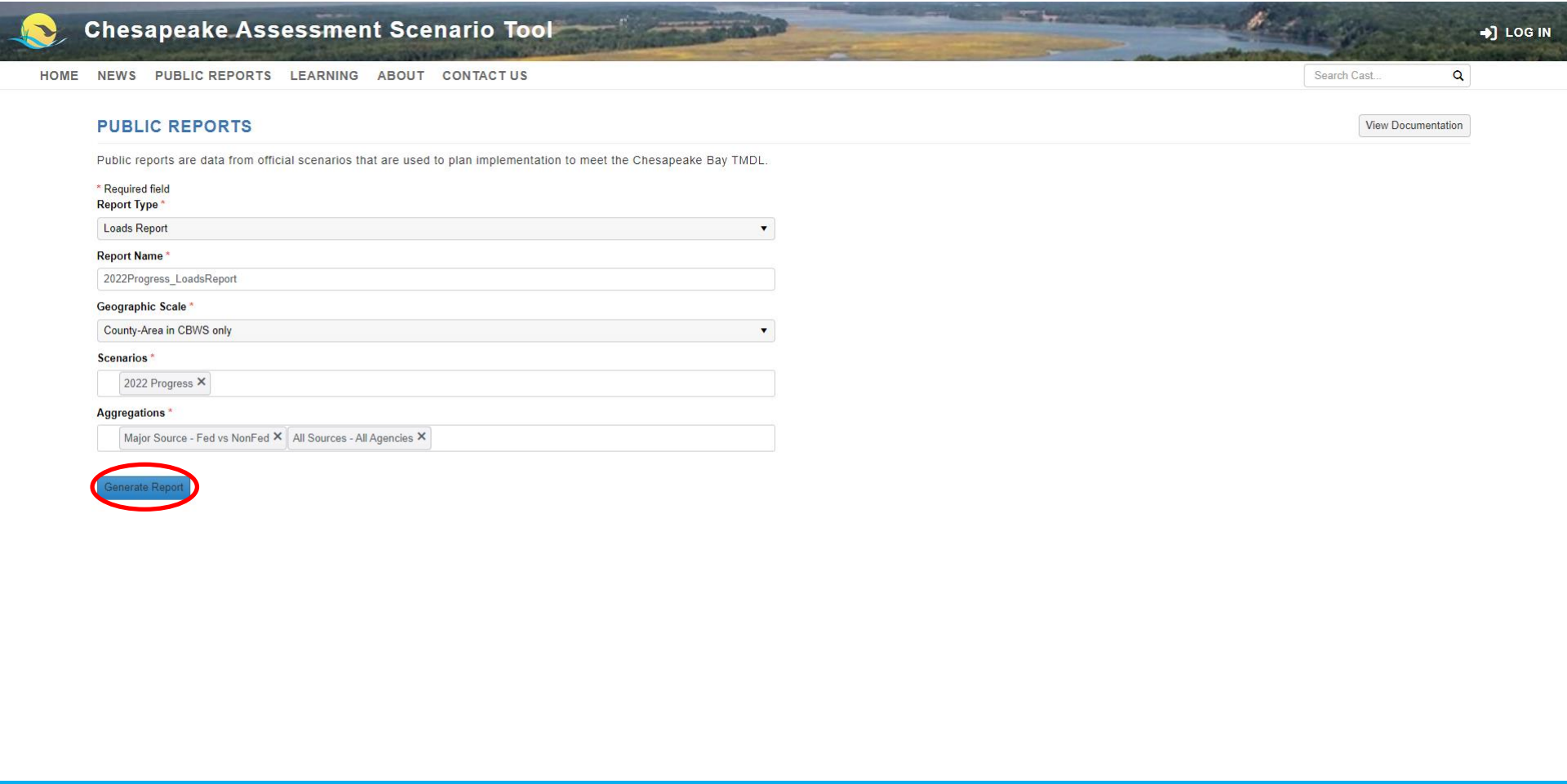
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2022Progress_LoadsReport
Geographic Scale *
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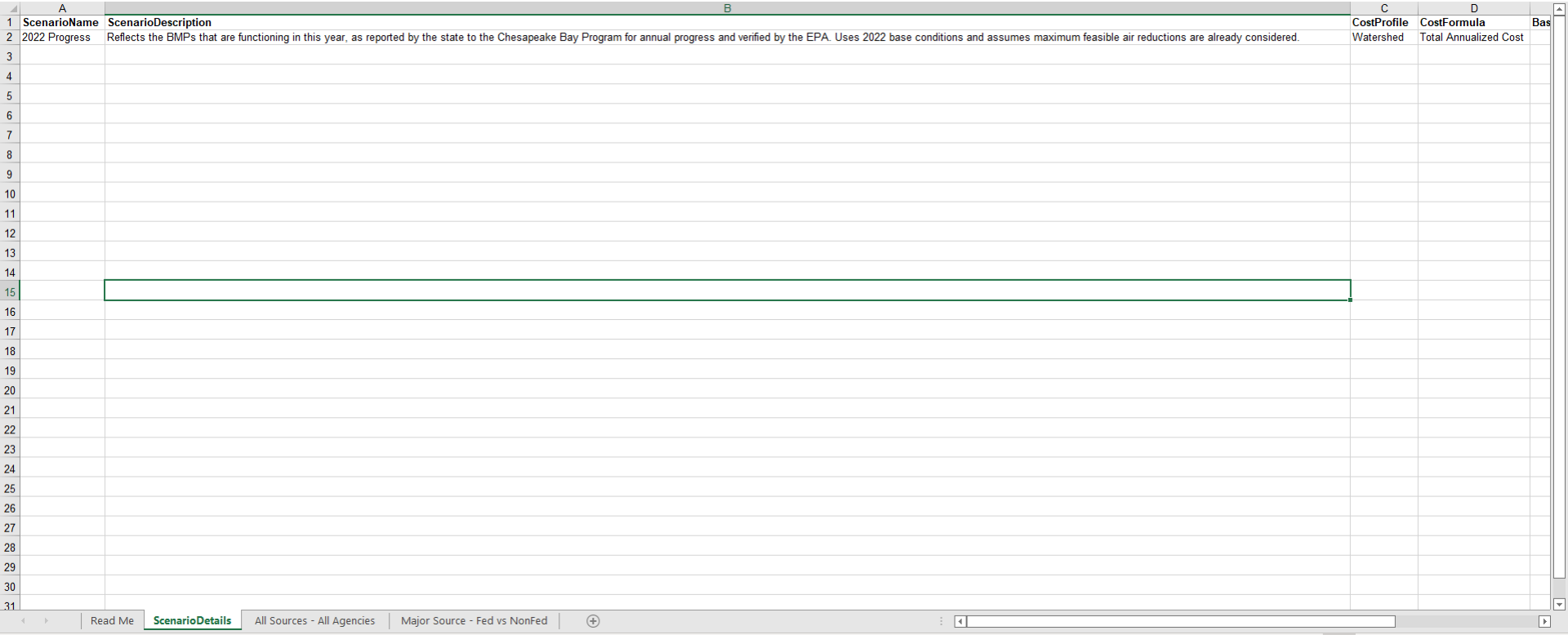
Scenarios *
2022 Progress
Aggregations *
Major Source - Fed vs NonFed
All Sources - All Agencies
Generate Report

	A	B
1	Version	Phase 6 - 7.10.0
2	File Creation Date	03/05/2024
3		
4	**Summary Loads Report**	This report provides scenario-specific data on loads. The loads are provided for the aggregations, geography, and scenarios that you selected. Definitions for aggregations and geographies are available at https://cast.chesapeakebay.net/Reports/RetrievePublicReport?reportType=1. The edge of stream (EOS) and edge of tide (EOT) loads are provided for total nitrogen (N), total phosphorus (P), and total suspended solids (S). The loads are pounds per year. The unit column is the measurement only for the amount column.

Read Me | ScenarioDetails | All Sources - All Agencies | Major Source - Fed vs NonFed



	A	B	C	D	
1	ScenarioName	ScenarioDescription	CostProfile	CostFormula	Bas
2	2022 Progress	Reflects the BMPs that are functioning in this year, as reported by the state to the Chesapeake Bay Program for annual progress and verified by the EPA. Uses 2022 base conditions and assumes maximum feasible air reductions are already considered.	Watershed	Total Annualized Cost	

	A	B	C	D	E	F	G	H	I	J	K	L
	Geography	Sector	LoadSource	AllocationType	Agency	Unit	2022 Progress_Amount	2022 Progress_NLoadEOS	2022 Progress_PLoadEOS	2022 Progress_SLoadEOS	2022 Progress_NLoadEOT	2022 Progress_PLoadEOT
2	Accomack, VA (CBWS Portion Only)	All	All Load Sources	All	All Agencies	acres	95323.08	1472354.485	79499.503	47168401.730	1316468.674	114919.8
3	Adams, PA (CBWS Portion Only)	All	All Load Sources	All	All Agencies	acres	333942.907	4450516.333	364575.191	319701814.029	2677291.042	160340.0
4	Albemarle, VA (CBWS Portion Only)	All	All Load Sources	All	All Agencies	acres	464712.141	2082988.661	219463.530	362624169.049	1237138.803	130480.0
5	Alexandria, VA (CBWS Portion Only)	All	All Load Sources	All	All Agencies	acres	9648.339	545396.808	23498.727	16721989.614	524352.732	24579.6
6	Allegany, MD (CBWS Portion Only)	All	All Load Sources	All	All Agencies	acres	275152.647	1185471.531	91463.991	242964932.601	837878.298	44169.4
7	Allegany, NY (CBWS Portion Only)	All	All Load Sources	All	All Agencies	acres	53914.620	231749.926	16944.257	42957270.373	121399.300	5876.1
8	Alleghany, VA (CBWS Portion Only)	All	All Load Sources	All	All Agencies	acres	287102.710	1380261.739	234080.454	257397222.445	600878.080	155135.9
9	Amelia, VA (CBWS Portion Only)	All	All Load Sources	All	All Agencies	acres	229453.723	1026017.431	147766.757	121265851.513	496269.924	41105.7
10	Amherst, VA (CBWS Portion Only)	All	All Load Sources	All	All Agencies	acres	306462.577	1298498.645	160309.574	277783087.818	668474.483	77899.3
11	Anne Arundel, MD (CBWS Portion Only)	All	All Load Sources	All	All Agencies	acres	258179.728	2959000.258	206165.600	234285962.488	2746024.342	239229.4
12	Appomattox, VA (CBWS Portion Only)	All	All Load Sources	All	All Agencies	acres	151303.906	650253.861	91677.042	127476373.784	342998.145	34977.2
13	Arlington, VA (CBWS Portion Only)	All	All Load Sources	All	All Agencies	acres	16646.219	146216.138	16620.759	35762830.783	134534.174	18903.4
14	Augusta, VA (CBWS Portion Only)	All	All Load Sources	All	All Agencies	acres	621349.012	4326893.933	483658.027	429637839.083	1848274.747	315227.7
15	Baltimore City, MD (CBWS Portion Only)	All	All Load Sources	All	All Agencies	acres	52061.249	2999154.802	335076.717	116770072.626	2861151.879	325173.9
16	Baltimore, MD (CBWS Portion Only)	All	All Load Sources	All	All Agencies	acres	385889.796	6283064.975	412622.098	525346897.167	4187801.908	353767.1
17	Bath, VA (CBWS Portion Only)	All	All Load Sources	All	All Agencies	acres	342162.382	1009461.063	101611.940	173288960.094	316882.280	36848.4
18	Bedford, PA (CBWS Portion Only)	All	All Load Sources	All	All Agencies	acres	649504.447	4788065.095	409324.976	703719030.545	2596577.572	102805.1
19	Bedford, VA (CBWS Portion Only)	All	All Load Sources	All	All Agencies	acres	68380.228	389818.246	50767.697	79935231.590	227171.855	30910.7
20	Berkeley, WV (CBWS Portion Only)	All	All Load Sources	All	All Agencies	acres	205793.841	1435767.370	103804.905	132566108.873	1214869.604	66523.6
21	Berks, PA (CBWS Portion Only)	All	All Load Sources	All	All Agencies	acres	56871.840	1488720.486	57449.859	53584447.567	991667.748	24980.7
22	Blair, PA (CBWS Portion Only)	All	All Load Sources	All	All Agencies	acres	337321.375	3845436.257	242971.474	316857783.496	2551794.623	113957.2
23	Botetourt, VA (CBWS Portion Only)	All	All Load Sources	All	All Agencies	acres	305326.036	1295969.660	165686.764	285668467.455	629475.883	79802.5
24	Bradford, PA (CBWS Portion Only)	All	All Load Sources	All	All Agencies	acres	743048.119	4758930.026	470332.855	473749153.868	2948305.149	167309.3
25	Broome, NY (CBWS Portion Only)	All	All Load Sources	All	All Agencies	acres	406528.547	3269568.988	217532.572	468342803.884	1873203.140	84070.1
26	Buckingham, VA (CBWS Portion Only)	All	All Load Sources	All	All Agencies	acres	373473.046	1352833.009	221434.380	295416909.287	651238.189	97093.3
27	Buena Vista, VA (CBWS Portion Only)	All	All Load Sources	All	All Agencies	acres	4345.590	82026.861	11617.720	7755041.668	58570.304	9792.4
28	Calvert, MD (CBWS Portion Only)	All	All Load Sources	All	All Agencies	acres	134578.331	969641.265	76729.474	137798467.457	1224555.479	347741.0
29	Cambria, PA (CBWS Portion Only)	All	All Load Sources	All	All Agencies	acres	187853.091	1576931.764	99087.977	209411634.319	765033.096	26194.2
30	Cameron, PA (CBWS Portion Only)	All	All Load Sources	All	All Agencies	acres	254156.361	790385.834	84825.661	163722588.389	413675.010	19237.2
31	Campbell, VA (CBWS Portion Only)	All	All Load Sources	All	All Agencies	acres	44418.376	364557.089	30742.509	53202405.129	259542.953	14291.9
32	Carbon, PA (CBWS Portion Only)	All	All Load Sources	All	All Agencies	acres	731.678	13856.663	2443.286	409144.225	10834.080	1132.2
33	Caroline, MD (CBWS Portion Only)	All	All Load Sources	All	All Agencies	acres	200228.924	3742157.992	166512.082	134213531.239	2837926.987	129322.2
34	Caroline, VA (CBWS Portion Only)	All	All Load Sources	All	All Agencies	acres	336877.996	1726083.878	134278.208	257103607.289	737835.319	54638.7
35	Carroll, MD (CBWS Portion Only)	All	All Load Sources	All	All Agencies	acres	289717.784	4458496.838	142909.066	317208743.094	2073832.145	55184.1
36	Cecil, MD (CBWS Portion Only)	All	All Load Sources	All	All Agencies	acres	217808.653	2186674.195	107528.618	156159197.863	2000461.299	139899.8

Read Me | ScenarioDetails | All Sources - All Agencies | Major Source - Fed vs NonFed

	A	B	C	D	E	F	G	H	I	J	K
1	Geography	Sector	LoadSource	AllocationType	Agency	Unit	2022 Progress_Amount	2022 Progress_NLoadEOS	2022 Progress_PLoadEOS	2022 Progress_SLoadEOS	2022 Progress_NLoadE
2	Accomack, VA (CBWS Portion Only)	Agriculture	Agriculture	Load Allocation	Federal Agencies	acres	0.000	0.000	0.000	0.000	
3	Accomack, VA (CBWS Portion Only)	Agriculture	Agriculture	Load Allocation	Non-Federal Agencies	acres	33490.846	914141.076	34695.867	3742425.166	761022
4	Accomack, VA (CBWS Portion Only)	Agriculture	Regulated Agriculture	Waste Load Allocation	Federal Agencies	acres	0.000	0.000	0.000	0.000	
5	Accomack, VA (CBWS Portion Only)	Agriculture	Regulated Agriculture	Waste Load Allocation	Non-Federal Agencies	acres	74.282	119572.730	3969.187	10784.272	10375
6	Accomack, VA (CBWS Portion Only)	Developed	Non-Regulated Developed	Load Allocation	Federal Agencies	acres	11.938	136.929	14.590	1453.393	12
7	Accomack, VA (CBWS Portion Only)	Developed	Non-Regulated Developed	Load Allocation	Non-Federal Agencies	acres	13554.364	167891.348	14489.358	1758474.795	14239
8	Accomack, VA (CBWS Portion Only)	Developed	Regulated Developed	Waste Load Allocation	Federal Agencies	acres	0.000	0.000	0.000	0.000	
9	Accomack, VA (CBWS Portion Only)	Developed	Regulated Developed	Waste Load Allocation	Non-Federal Agencies	acres	50.556	1306.543	182.961	21267.031	101
10	Accomack, VA (CBWS Portion Only)	Natural	Natural	Load Allocation	Federal Agencies	acres	15.315	44.109	10.206	12666.208	71
11	Accomack, VA (CBWS Portion Only)	Natural	Natural	Load Allocation	Non-Federal Agencies	acres	44802.596	162308.270	21067.307	41594178.906	21328
12	Accomack, VA (CBWS Portion Only)	Natural	Non-Tidal Water Deposition	Load Allocation	Federal Agencies	acres	43.539	346.064	26.026	0.000	34
13	Accomack, VA (CBWS Portion Only)	Natural	Non-Tidal Water Deposition	Load Allocation	Non-Federal Agencies	acres	3279.645	26068.031	1960.474	0.000	2606
14	Accomack, VA (CBWS Portion Only)	Septic	Septic	Load Allocation	Federal Agencies	systems	0.000	0.000	0.000	0.000	
15	Accomack, VA (CBWS Portion Only)	Septic	Septic	Load Allocation	Non-Federal Agencies	systems	6074.069	41268.158	0.000	0.000	3493
16	Accomack, VA (CBWS Portion Only)	Wastewater	Wastewater	Waste Load Allocation	Federal Agencies	acres	0.000	0.000	0.000	0.000	
17	Accomack, VA (CBWS Portion Only)	Wastewater	Wastewater	Waste Load Allocation	Non-Federal Agencies	acres	0.000	39271.227	3083.526	27151.958	3281
18	Accomack, VA (CBWS Portion Only)	Wastewater	Wastewater-CSO	Waste Load Allocation	Federal Agencies	acres	0.000	0.000	0.000	0.000	
19	Accomack, VA (CBWS Portion Only)	Wastewater	Wastewater-CSO	Waste Load Allocation	Non-Federal Agencies	acres	0.000	0.000	0.000	0.000	
20	Adams, PA (CBWS Portion Only)	riculture	Agriculture	Load Allocation	Federal Agencies	acres	0.000	0.000	0.000	0.000	
21	Adams, PA (CBWS Portion Only)	Agriculture	Agriculture	Load Allocation	Non-Federal Agencies	acres	132751.003	2850445.073	200954.054	104226782.803	170972
22	Adams, PA (CBWS Portion Only)	Agriculture	Regulated Agriculture	Waste Load Allocation	Federal Agencies	acres	0.000	0.000	0.000	0.000	
23	Adams, PA (CBWS Portion Only)	Agriculture	Regulated Agriculture	Waste Load Allocation	Non-Federal Agencies	acres	14.664	50790.711	1937.300	10871.433	3105
24	Adams, PA (CBWS Portion Only)	Developed	Non-Regulated Developed	Load Allocation	Federal Agencies	acres	875.361	9833.800	766.459	457233.351	604
25	Adams, PA (CBWS Portion Only)	Developed	Non-Regulated Developed	Load Allocation	Non-Federal Agencies	acres	46234.682	584412.272	40247.715	33911114.861	34531
26	Adams, PA (CBWS Portion Only)	Developed	Regulated Developed	Waste Load Allocation	Federal Agencies	acres	186.007	2096.123	150.066	110698.572	129
27	Adams, PA (CBWS Portion Only)	Developed	Regulated Developed	Waste Load Allocation	Non-Federal Agencies	acres	8639.038	129863.432	10869.780	7112297.324	7680
28	Adams, PA (CBWS Portion Only)	Natural	Natural	Load Allocation	Federal Agencies	acres	6173.340	16312.131	4691.867	5875594.604	1039
29	Adams, PA (CBWS Portion Only)	Natural	Natural	Load Allocation	Non-Federal Agencies	acres	134068.272	453848.028	79436.911	167892679.989	27400
30	Adams, PA (CBWS Portion Only)	Natural	Non-Tidal Water Deposition	Load Allocation	Federal Agencies	acres	53.984	502.967	33.405	0.000	40
31	Adams, PA (CBWS Portion Only)	Natural	Non-Tidal Water Deposition	Load Allocation	Non-Federal Agencies	acres	4946.556	46086.864	3060.879	0.000	3833
32	Adams, PA (CBWS Portion Only)	Septic	Septic	Load Allocation	Federal Agencies	systems	0.000	0.000	0.000	0.000	
33	Adams, PA (CBWS Portion Only)	Septic	Septic	Load Allocation	Non-Federal Agencies	systems	14526.005	126113.766	0.000	0.000	7458
34	Adams, PA (CBWS Portion Only)	Wastewater	Wastewater	Waste Load Allocation	Federal Agencies	acres	0.000	0.000	0.000	0.000	
35	Adams, PA (CBWS Portion Only)	Wastewater	Wastewater	Waste Load Allocation	Non-Federal Agencies	acres	0.000	180211.167	22426.754	104541.092	10932
36	Adams, PA (CBWS Portion Only)	Wastewater	Wastewater-CSO	Waste Load Allocation	Federal Agencies	acres	0.000	0.000	0.000	0.000	

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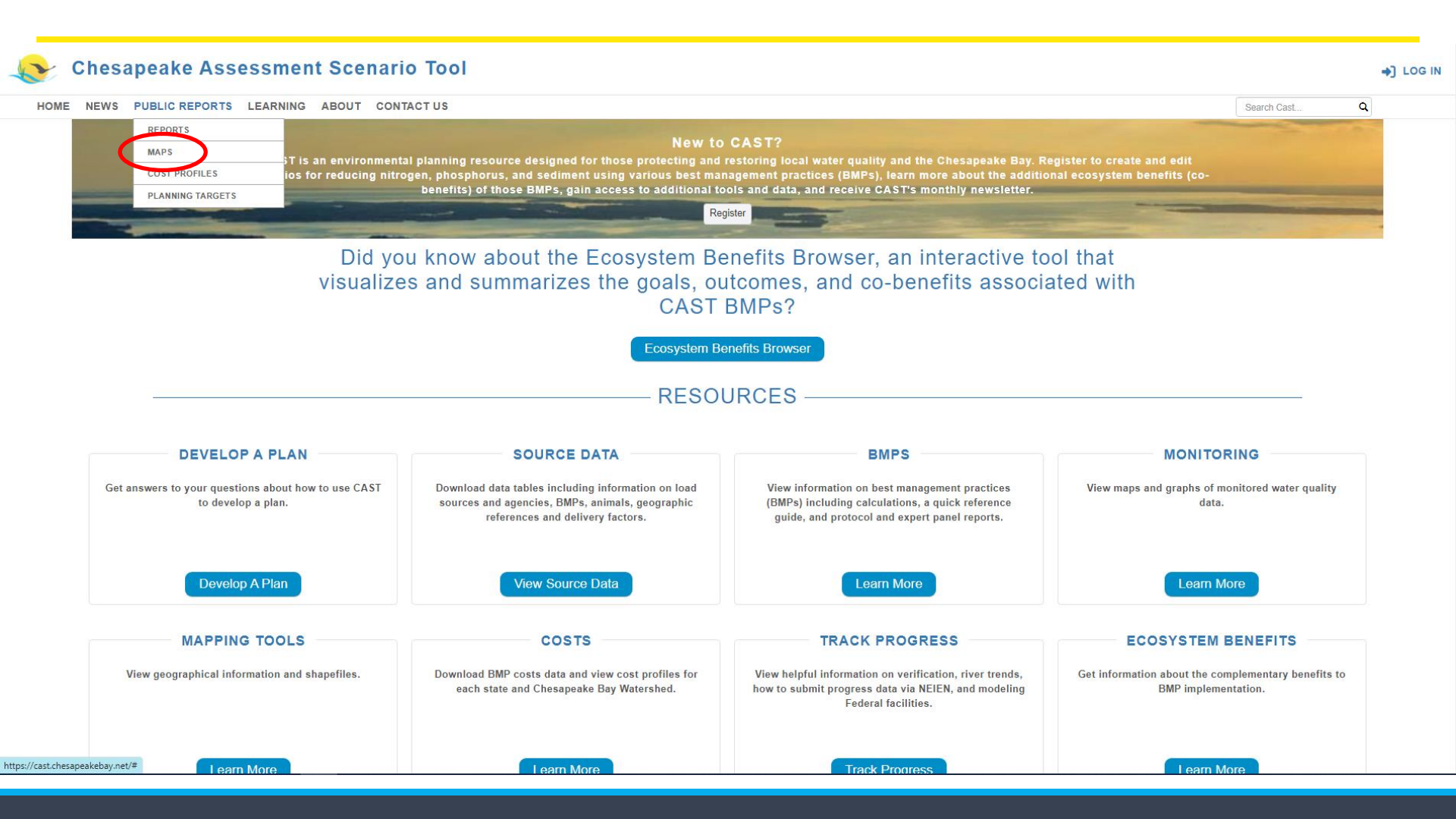
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T is an environmental planning resource designed for those protecting and restoring local water quality and the Chesapeake Bay. Register to create and edit
ios for reducing nitrogen, phosphorus, and sediment using various best management practices (BMPs), learn more about the additional ecosystem benefits (co-
benefits) of those BMPs, gain access to additional tools and data, and receive CAST's monthly newsletter.
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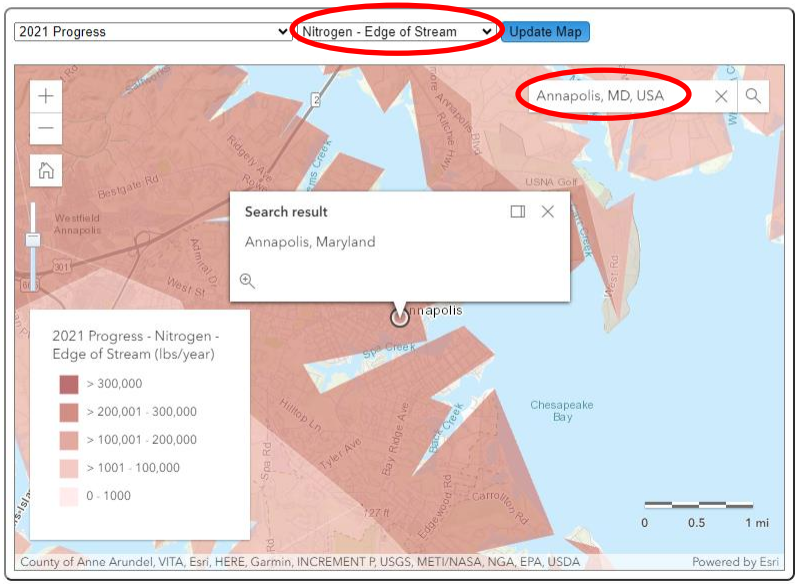
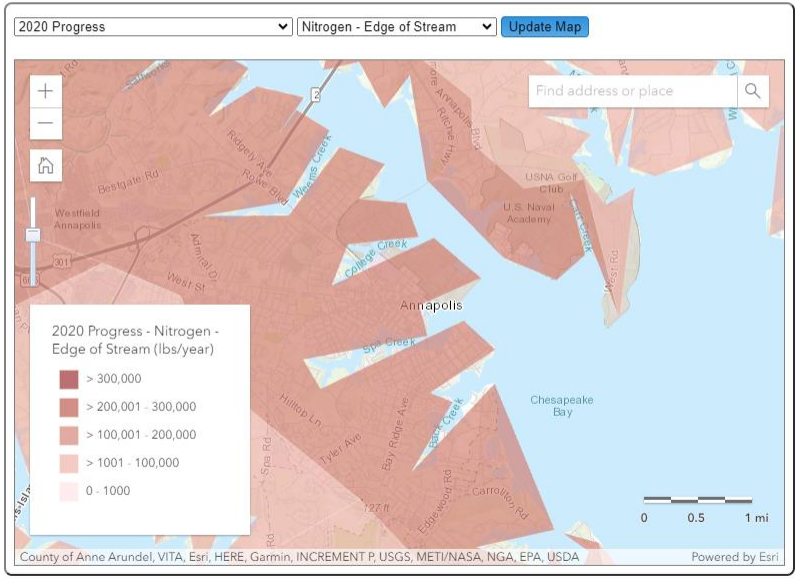
PUBLIC REPORTS - COMPARE MAP

The publicly-shared scenarios include annual progress, no action, Everything by Everyone, Everywhere (E3) and the Phase 2 Watershed Implementation Plans (WIP2). These maps facilitate comparison of nitrogen, phosphorus, and sediment loads at either the edge-of-stream or edge-of-tide scale. Select a scenario and pollutant in each map to compare scenarios, then click a land-river segment for more details. View a full sized version of the map here.





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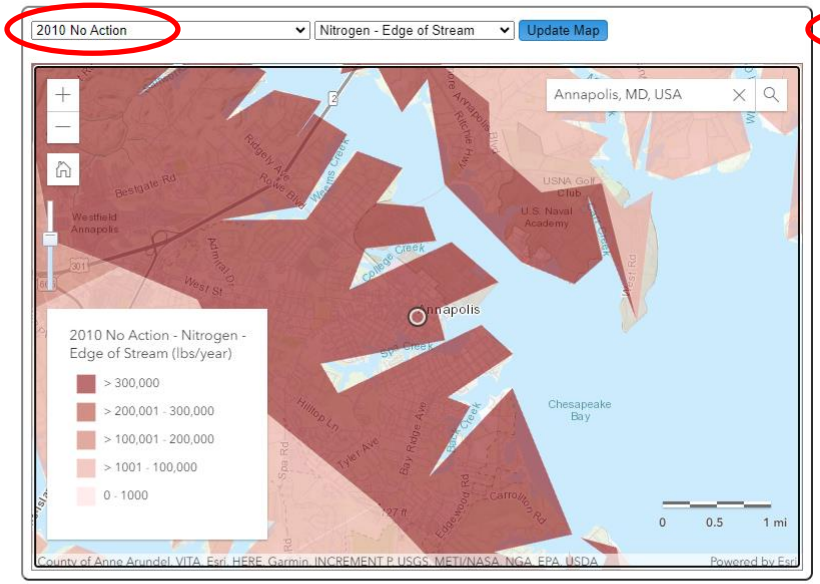

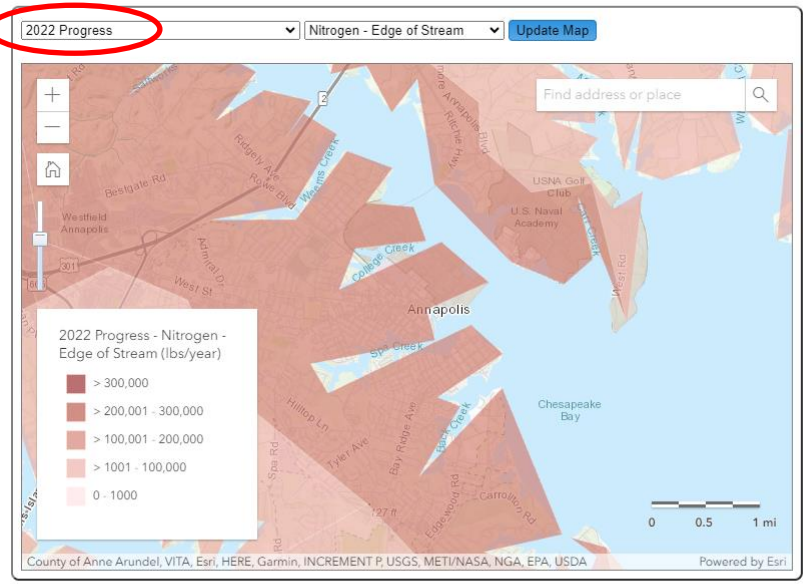

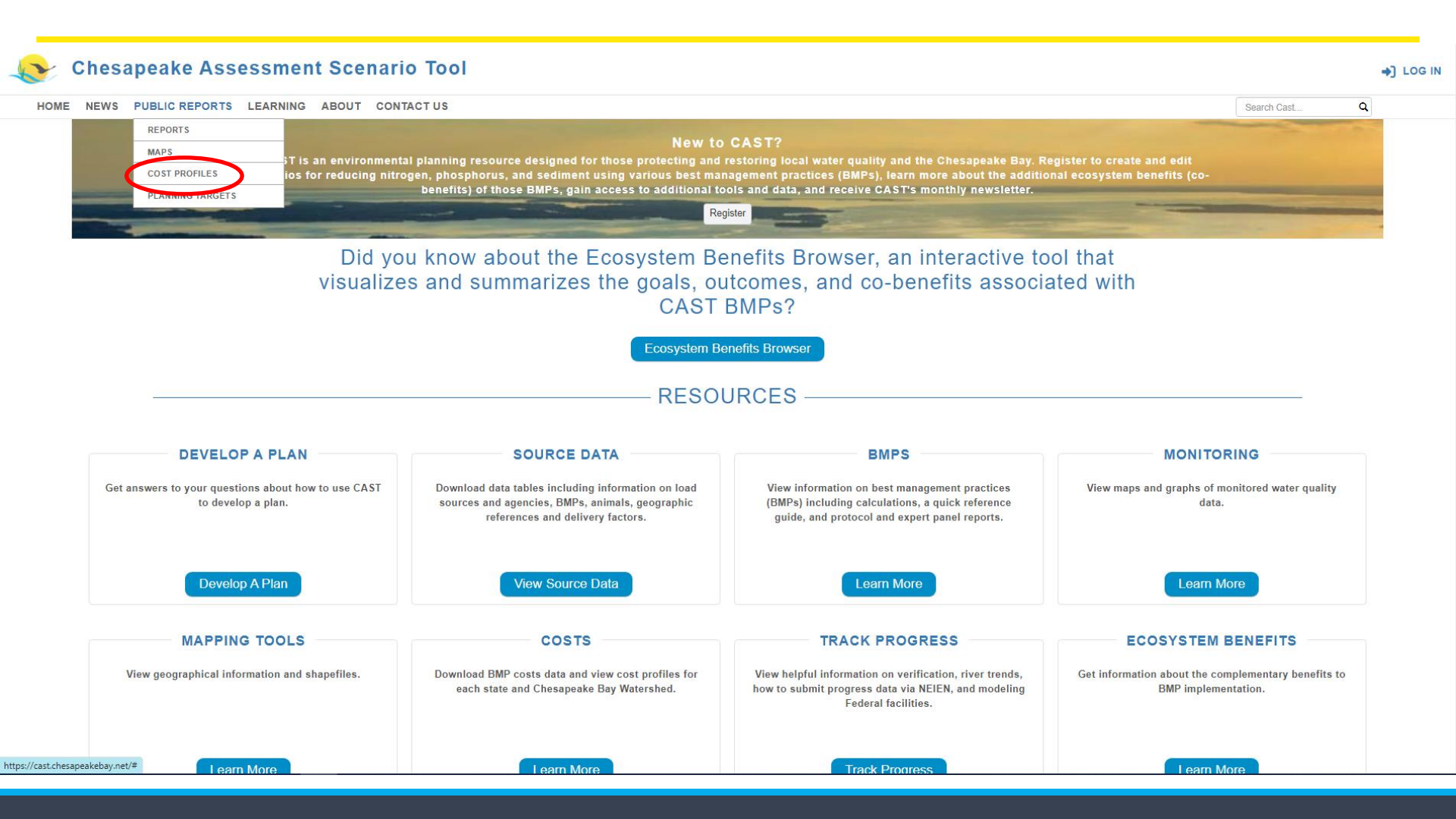
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Cost Profiles

Default unit cost estimates are provided for each state and the Chesapeake Bay Watershed. The Chesapeake Bay Watershed is an average of all states. Costs are provided as a starting point to use for creating your own cost estimates of various BMP scenarios. Costs are estimated in 2018 dollars. Costs are those incurred by both public and private entities. Technical assistance is not included in costs. Costs are for all BMPs in a scenario, both those currently implemented and those planned.

There are two cost formulas. For Total Annualized Cost, capital and opportunity costs are amortized over the BMP lifespan and added to annual operations and maintenance (O&M) cost. The interest rate for capital and opportunity costs is 5%. Costs represent a single year of cost rather than the cost over the entire lifespan of the practice. Total Annualized Costs are annualized average costs per unit of BMP (e.g.: $/acre treated/year). These costs are for a single year, and are not accumulated over time. The reason is two-fold. First, once the Bay TMDL deadline of 2025 is met, BMPs will need to remain in place to control loads and new BMPs will need to be implemented to offset new growth. Second, it is difficult to predict when a BMP is going to be implemented. Using this cost formula makes evaluations of costs among scenarios more comparable. The Total Annualized Cost formula is:

- annual costs = (capital * annualization factor) + O&M costs + (land * annualization rate)
- annualization factor = i/((1+i)^n - 1) + i
- i = annualization rate, which is always 5%.
- n = period of annualization (also called lifespan)

For Total Implementation Cost, the entire capital cost and one year of opportunity cost are summed. Total Implementation Cost does not consider life cycle costs. The formula is capital + land. You may specify this formula in Cost Profiles once logging in. The Total Annualized Cost is provided below.

Watershed Average | Delaware | New York | Virginia

District Of Columbia | Maryland | Pennsylvania | West Virginia

Edit Cost Profiles

You can log into CAST and edit the costs by creating your own Cost Profile. CAST provides costs associated with each scenario using the cost profile you select. The data available in the Cost Profiles is summarized to include the capital, operations and maintenance, and opportunity costs, depending on which cost formula you select.

BMP Costs

BMP costs included in CAST are developed by contractors to the EPA and are in 2018 dollars.The original costs were reviewed with the states who provided input. Additional BMPs were approved by the Chesapeake Bay Program Partnership since the original TMDL costs were determined. The data source of all BMPs are provided in the downloadable files below by sector.

- Agricultural BMP Costs
- Developed BMP Costs
- Septic System Costs
- Natural BMP Costs

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+ CAST 101 – Getting Started — 11 VIDEOS - 275 min

+ Scenario Analysis — 9 VIDEOS - 437 min

− Cost Data in CAST — 4 VIDEOS - 41 min

- Cost Data in CAST — 35 min
- Cost profiles — 3 min
- Editing cost profiles — 3 min

+ Develop a Plan — 11 VIDEO S - 426 min

Upcoming Webinars

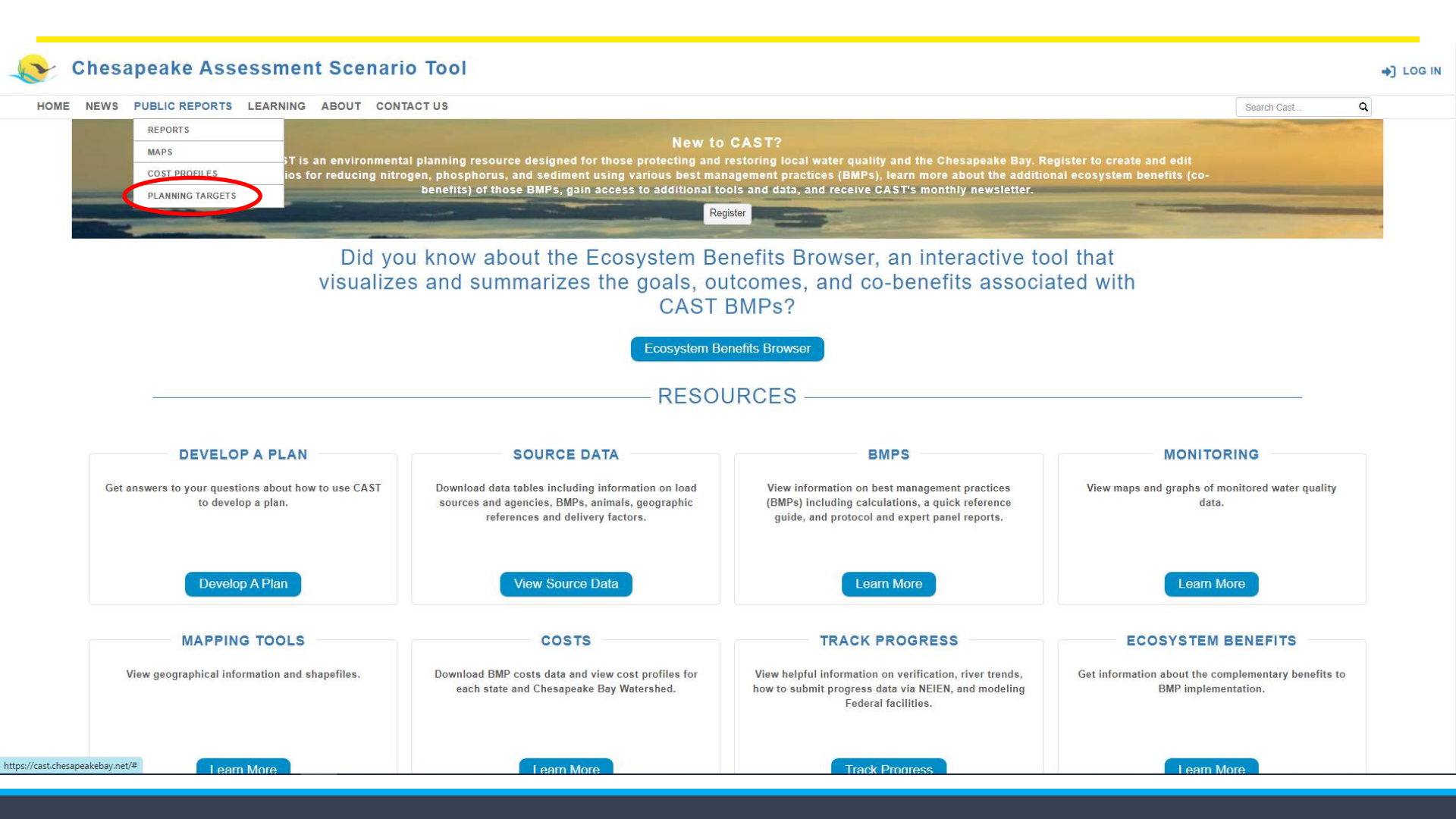
None currently scheduled.

In-Person Training

None currently scheduled.

Specialized Training

Interested in a training for a special group? Use the Contact Us button on the top menu bar to **request additional webinars** or **in-person trainings** in the Chesapeake Bay Watershed.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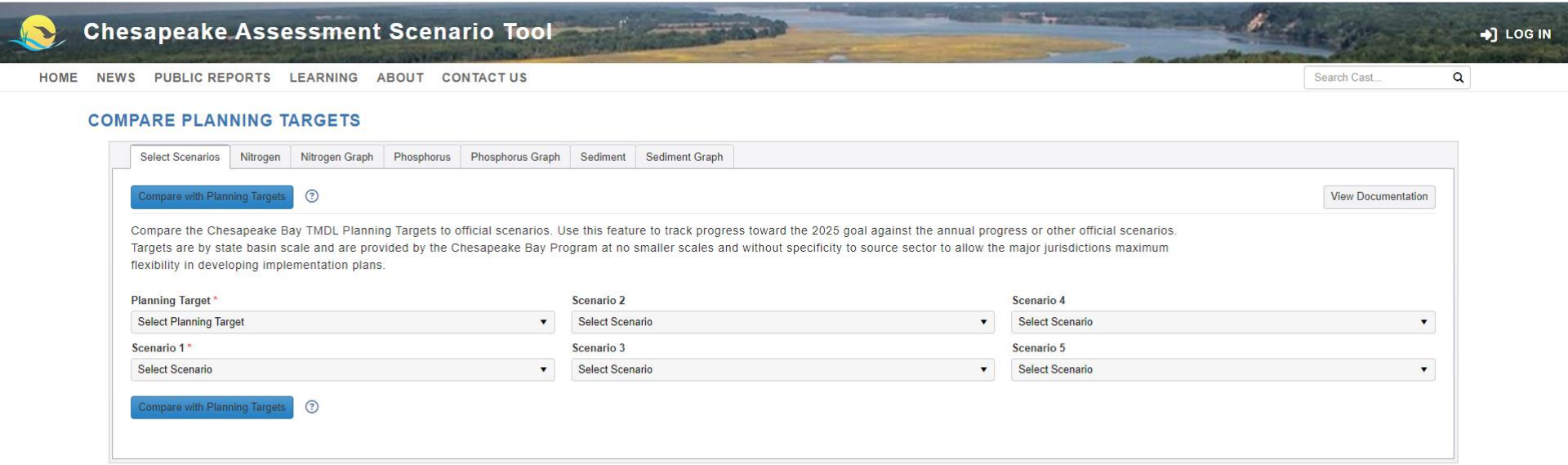
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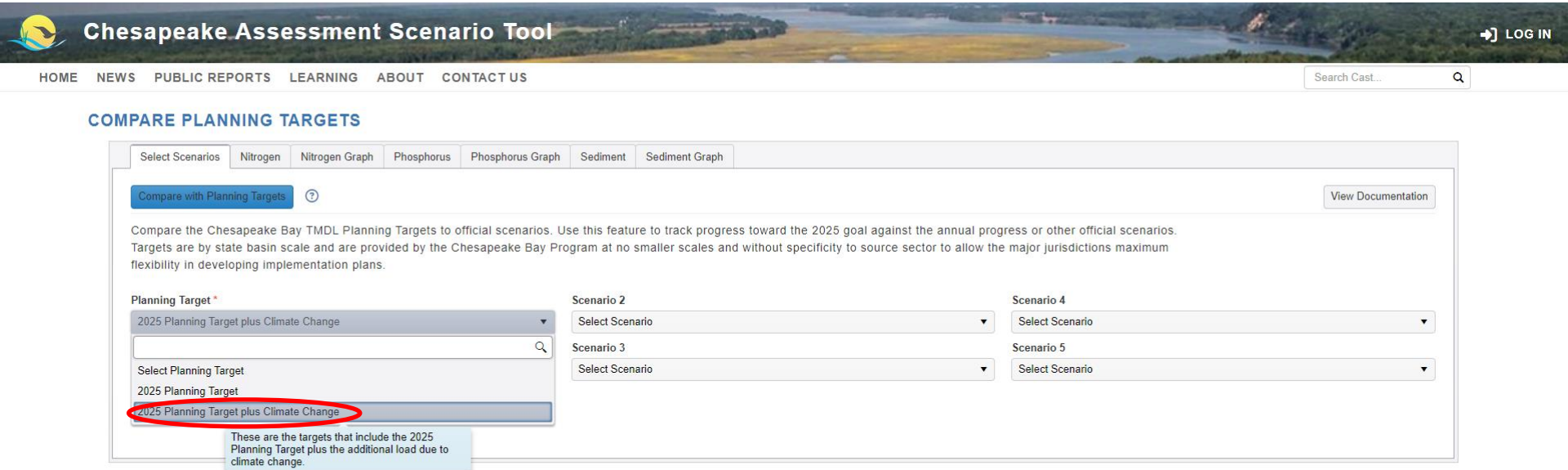
Nitrogen Graph
Phosphorus
Phosphorus Graph
Sediment
Sediment Graph
Compare with Planning Targets
View Documentation
Compare the Chesapeake Bay TMDL Planning Targets to official scenarios. Use this feature to track progress toward the 2025 goal against the annual progress or other official scenarios.
Targets are by state basin scale and are provided by the Chesapeake Bay Program at no smaller scales and without specificity to source sector to allow the major jurisdictions maximum
flexibility in developing implementation plans.
Planning Target *
Select Planning Target
Scenario 2
Select Scenario
Scenario 4
Select Scenario
Scenario 1 *
Select Scenario
Scenario 3
Select Scenario
Scenario 5
Select Scenario
Compare with Planning Targets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Phosphorus Graph
Sediment
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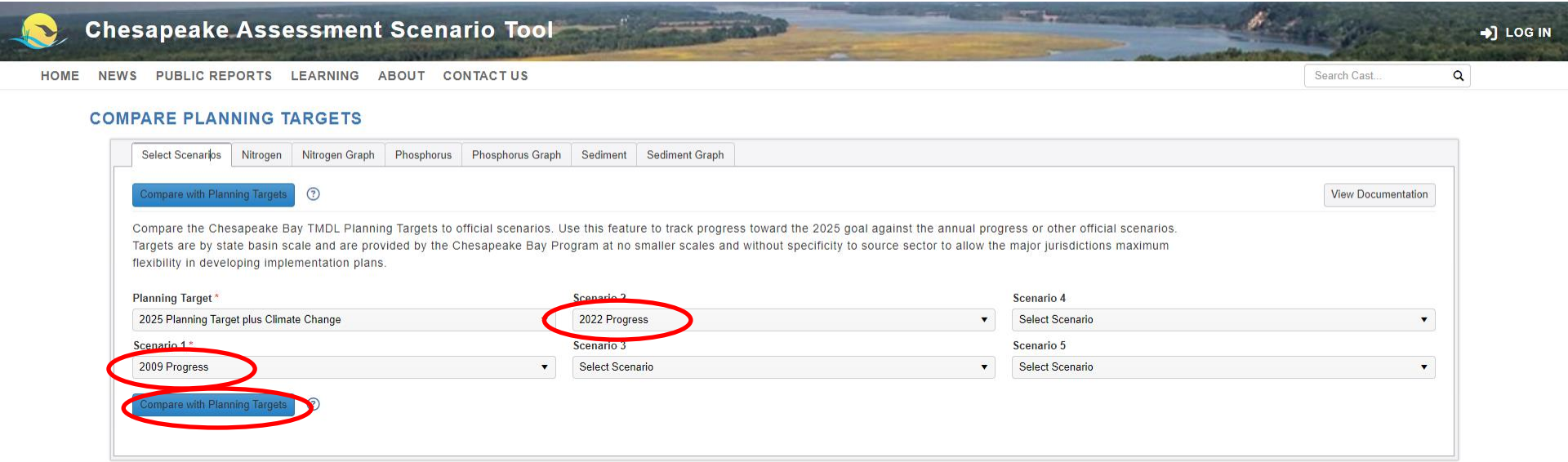
Planning Target *
2025 Planning Target plus Climate Change
Select Planning Target
2025 Planning Target
2025 Planning Target plus Climate Change
These are the targets that include the 2025 Planning Target plus the additional load due to climate change.
Scenario 2
Select Scenario
Scenario 3
Select Scenario
Scenario 4
Select Scenario
Scenario 5
Select Scenario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Phosphorus
Phosphorus Graph
Sediment
Sediment Graph
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Targets are by state basin scale and are provided by the Chesapeake Bay Program at no smaller scales and without specificity to source sector to allow the major jurisdictions maximum
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Planning Target *
2025 Planning Target plus Climate Change
Scenario 2
2022 Progress
Scenario 4
Select Scenario
Scenario 1 *
2009 Progress
Scenario 3
Select Scenario
Scenario 5
Select Scenario
Compare with Planning Targets

COMPARE PLANNING TARGETS

Select Scenarios | Nitrogen | Nitrogen Graph | Phosphorus | Phosphorus Graph | Sediment | Sediment Graph

Nitrogen (EOT) lbs/yr

View Documentation

Export to Excel

State	State Basin	Planning Target	2009 Progress	2022 Progress
Delaware				
Delaware	DE Eastern Shore of Chesapeake Bay (CBWS Portion Only)	4,511,669	6,850,559	6,180,924
	State Total:	4,511,669	6,850,559	6,180,924
District Of Columbia				
District Of Columbia	DC Potomac River Basin (CBWS Portion Only)	2,417,977	2,762,408	1,638,351
	State Total:	2,417,977	2,762,408	1,638,351
Maryland				
Maryland	MD Western Shore of Chesapeake Bay (CBWS Portion Only)	9,317,044	14,671,954	12,061,763
Maryland	MD Eastern Shore of Chesapeake Bay (CBWS Portion Only)	15,231,201	18,957,345	17,392,176
Maryland	MD Potomac River Basin (CBWS Portion Only)	15,587,537	18,669,275	16,483,964
Maryland	MD Susquehanna River Basin (CBWS Portion Only)	1,459,931	1,802,638	1,726,950
Maryland	MD Patuxent River Basin (CBWS Portion Only)	3,094,387	3,507,251	2,935,812
	State Total:	44,690,100	57,608,462	50,600,666
New York				
New York	NY Susquehanna River Basin (CBWS Portion Only)	11,397,892	14,421,032	12,834,417
	State Total:	11,397,892	14,421,032	12,834,417
Pennsylvania				
Pennsylvania	PA Eastern Shore of Chesapeake Bay (CBWS Portion Only)	407,205	731,376	712,601
Pennsylvania	PA Western Shore of Chesapeake Bay (CBWS Portion Only)	21,368	34,229	33,146

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COMPARE PLANNING TARGETS

Select Scenarios | Nitrogen | Nitrogen Graph | Phosphorus | Phosphorus Graph | Sediment | Sediment Graph

Nitrogen (EOT) lbs/yr

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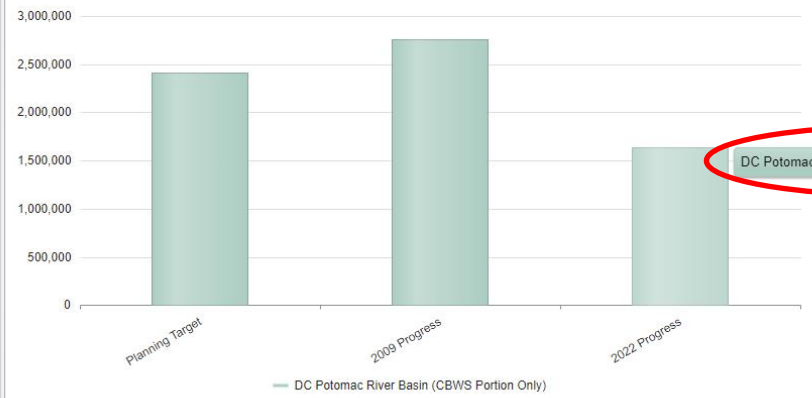
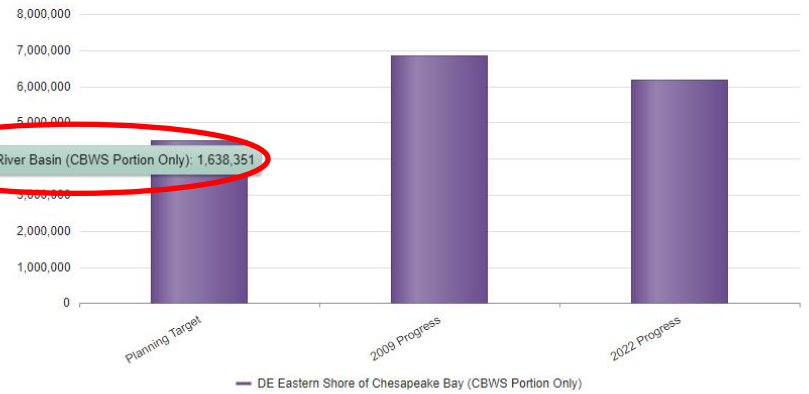
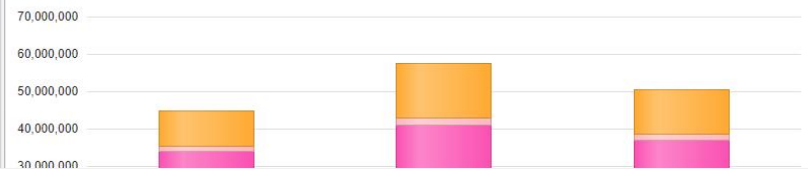
District Of Columbia



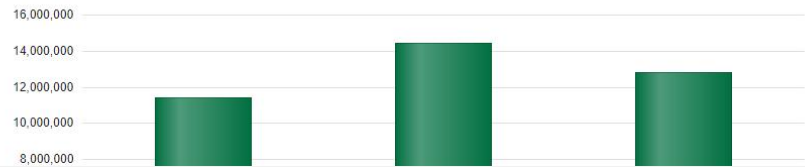
Delaware

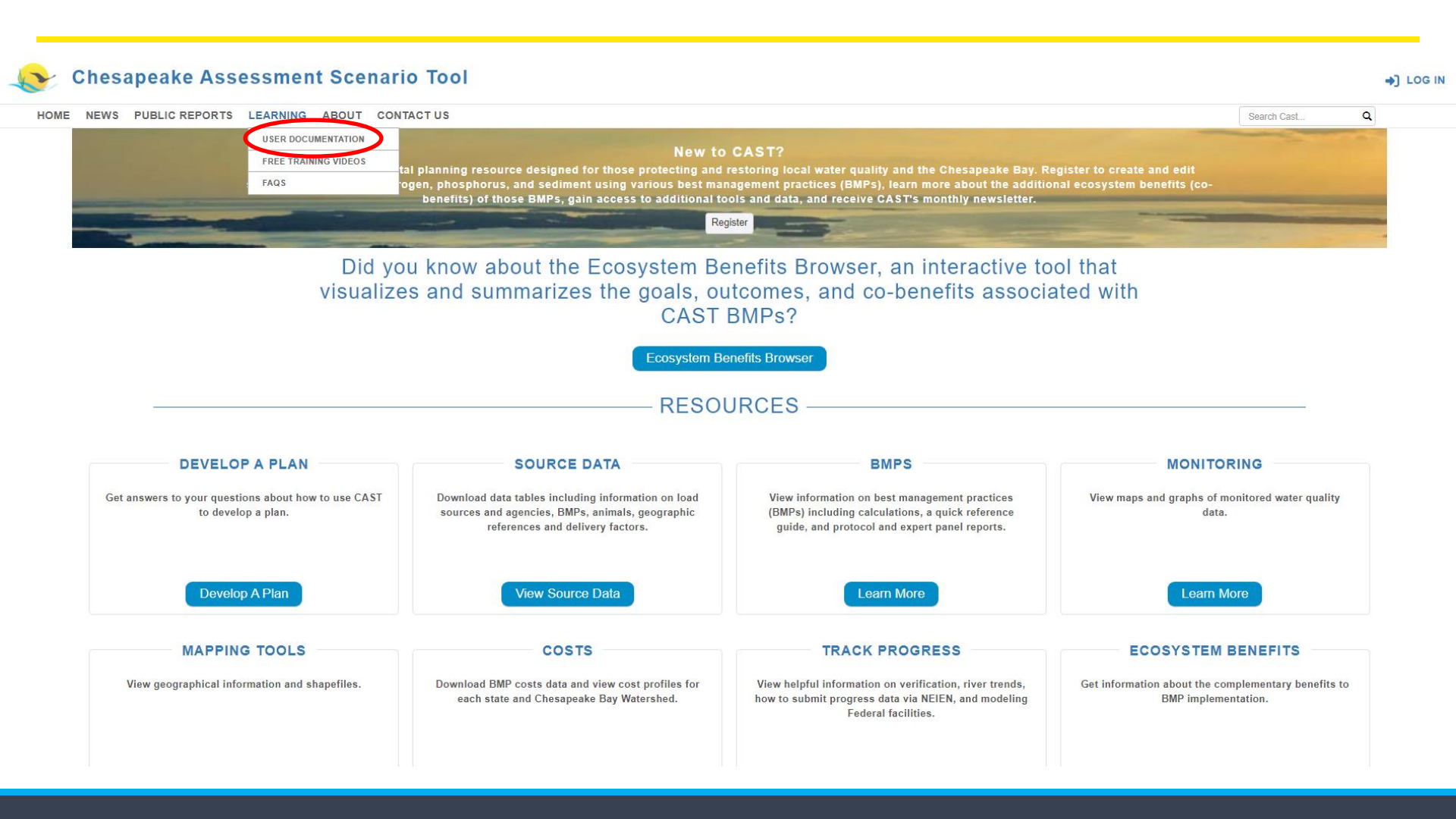


Maryland



New York

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CAST DOCUMENTATION

Using This Site

Print Section

Below are some basic tips on how to navigate and use the CAST site.

Ribbon

The user can access any of the CAST pages using the Ribbon at the top of each page. Many of the links represent groupings of features. Placing your mouse over the word opens a dropdown with additional items.

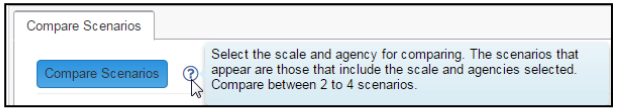
Before logging in, the Ribbon provides limited functionalities including access to a set of public reports available under the link with the same name.

User Profile

The Manage Profile link is the only page not accessible from the Menu Bar. It is located on the right side of the banner above the Menu Bar.

Help Icons

Help icons are distributed throughout the application and provide a short description of CAST features. Placing your mouse over the question mark icon will display the message.



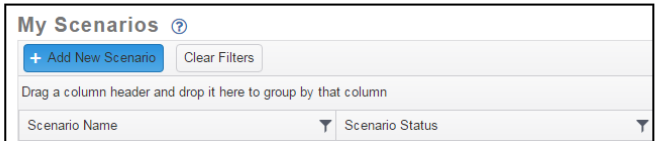
View Documentation

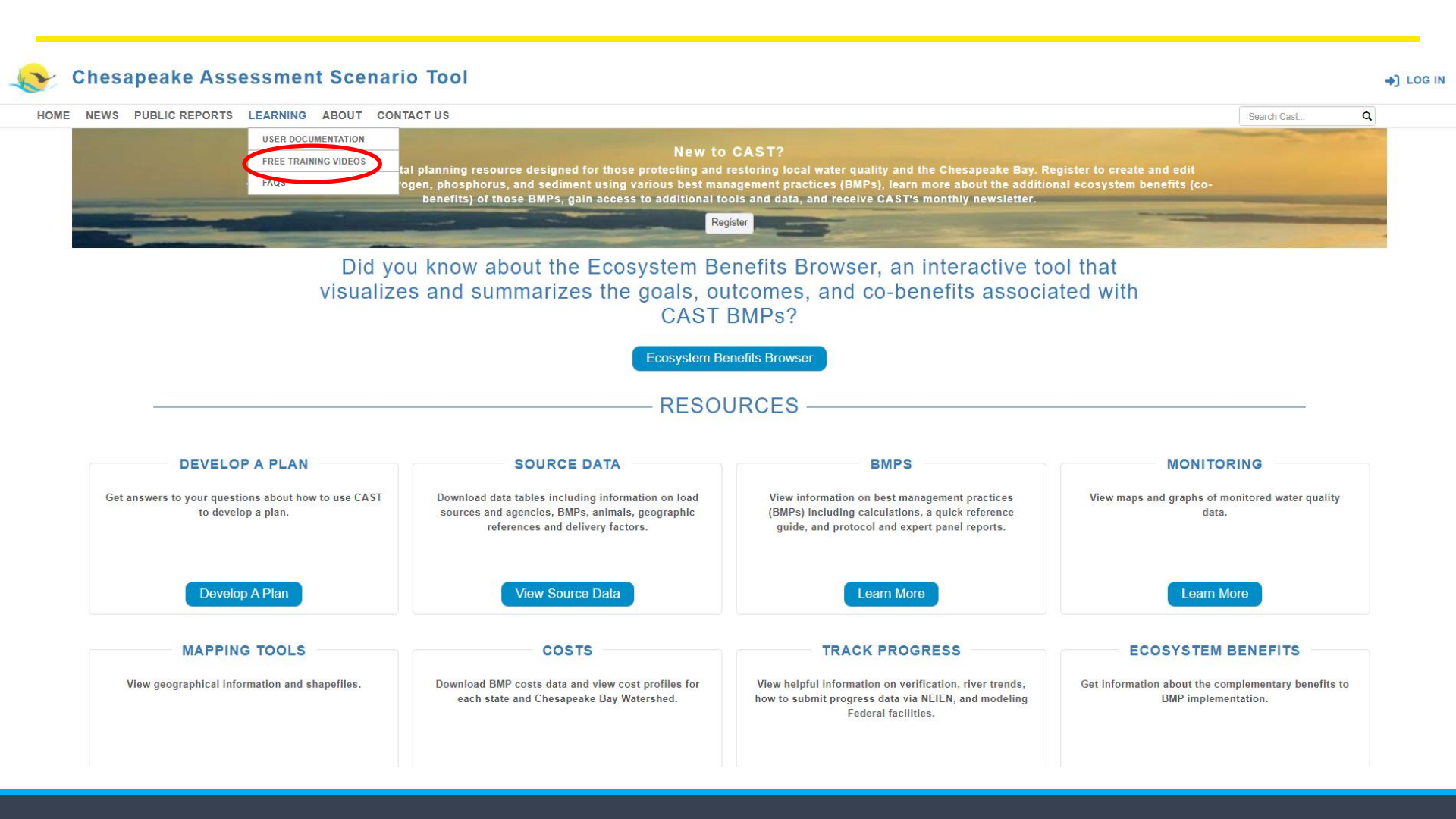
The View Documentation button links to the section of the User Documentation pertaining to page being displayed.

Tool Tips

Tool Tips are provided throughout the application to provide information about icon functionalities, items contained within the different grids or BMP entries.

The Scenario Name tool tip in the My Scenarios grid displays the scenario description the user created. It is an effective tool to display the selections used to create a scenario where the Add, Edit, Run and Delete functionalities are available instead of having to edit the scenario to view these details.

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− CAST 101 – Getting Started

11 VIDEOS - 275 min

CAST 101	53 min
Scenario Loads	52 min
Adding BMPs to CAST scenarios	58 min
CAST Versions and Upgrades	57 min
Where do I start	2 min
Adding scenarios	9 min
Invalid BMPs	4 min
BMP Input Files and Invalid BMPs	32 min
Creating reports	4 min
Downloading reports	1 min
Creating graphs	3 min

+ Scenario Analysis

9 VIDEOS - 437 min

+ Cost Data in CAST

4 VIDEOS - 41 min

+ Develop a Plan

11 VIDEO S - 426 min

Upcoming Webinars

None currently scheduled.

In-Person Training

None currently scheduled.

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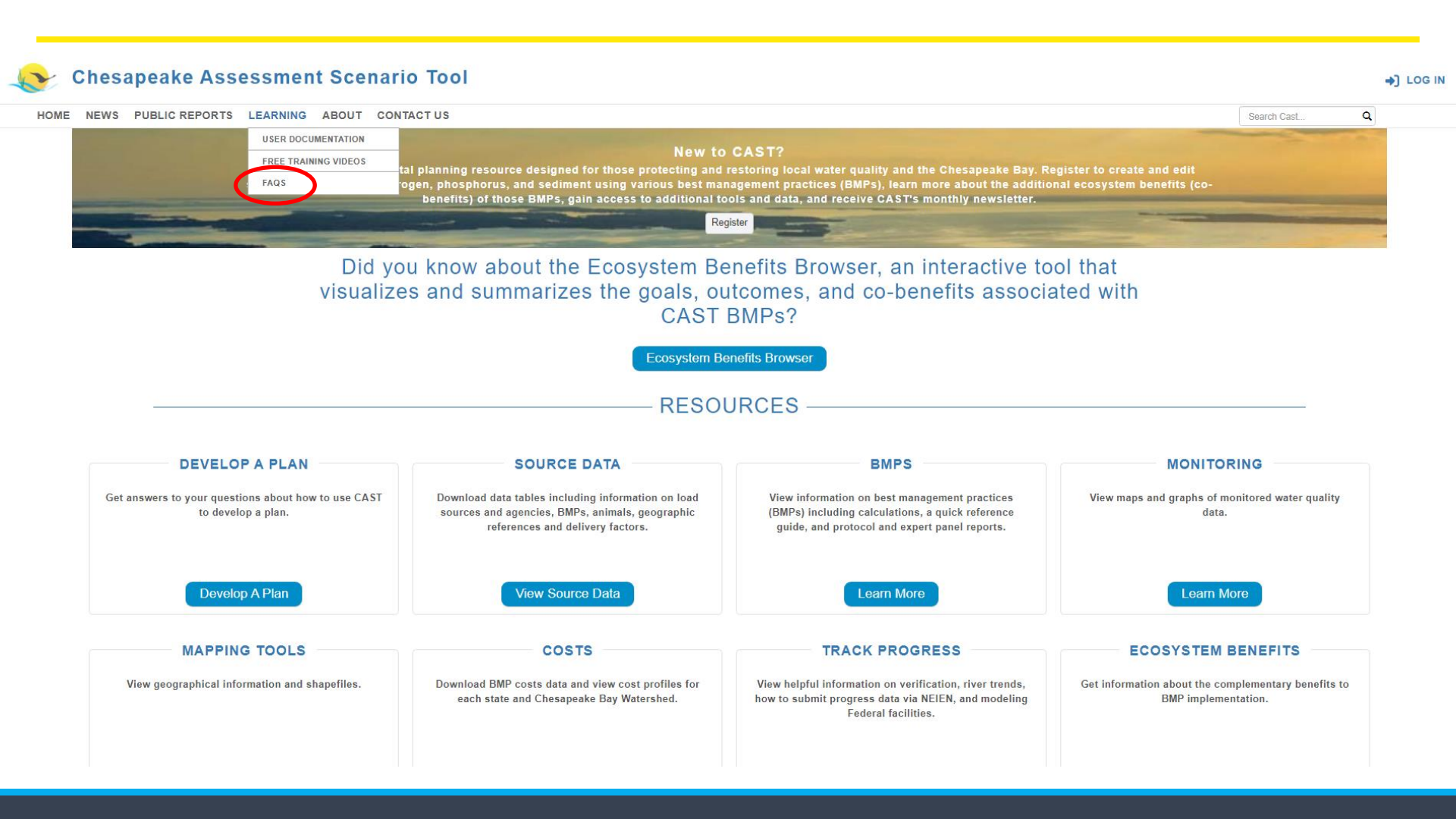
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  - Reports
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  - Cost Profiles
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- Septic BMPs
- Natural BMPs
- Agriculture BMPs
- Animal BMPs
- Manure Treatment BMPs

General

Print Section

CAST Users

Print Section

Who is eligible to receive a login and use CAST?

Anyone who wants to use CAST may register for a login and use the tool. There are no restrictions on public access, and no charge for access.

What might happen if I share my CAST login account with another person?

If you were to share your login, and more than one person was using the account at the same time, then the person could overwrite your inputs. Please consider not sharing your login. Other users of CAST can use the system to share scenarios with you, and vice versa.

I forgot my login username and/or password for CAST. What can I do to get it or reset it?

Your login is your email. If you no longer have access to that email address, you will need to create a new account. If you forget your password, click on Forgot Password to reset it.

How can I update the information in my CAST user profile?

You can edit your CAST user profile once you create a login and are logged in. Click on Manage Profile, located at top right of the page. This allows you to change your user password, first name, last name, organization, group, and email address.

How may I receive updates about changes to CAST?

By setting up a login account on CAST you will receive occasional email updates through the email address you used as your login. If your email address changes, please update it on the Manage Profile page. If you no longer wish to receive updates, you must close your account. We will never solicit you to purchase any goods or services, nor share your login profile with anyone else. You also may check the software updates page and look for changes in the help pages on this site that indicate new features.

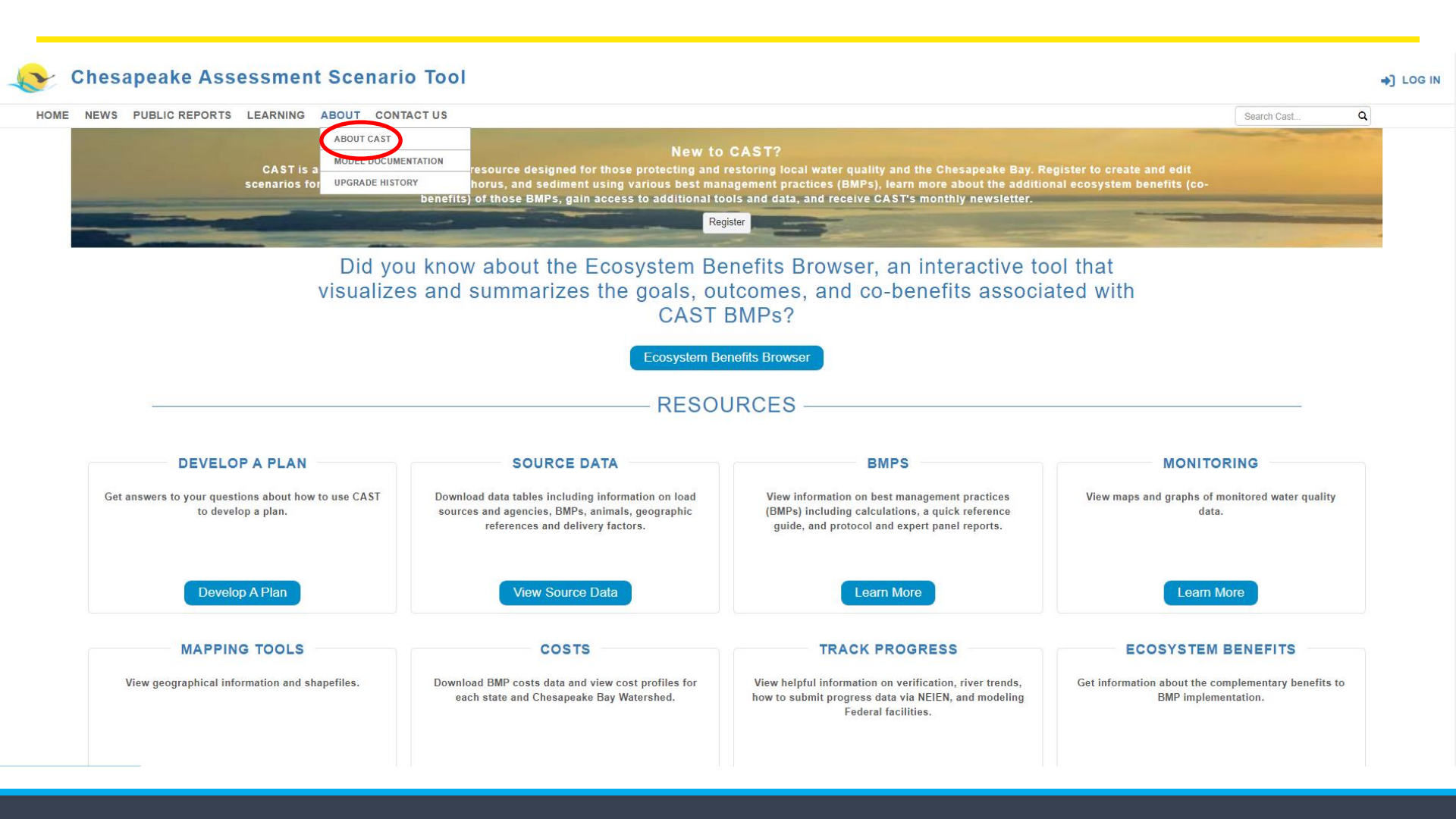
Scenario

Print Section

How are future scenarios projected?

The data used to project future scenarios include the items below. The projection methods for these data are determined by the Chesapeake Bay Program Partnerships source sector workgroups.

- Animal Populations
- Animal per Animal Unit and manure produced per animal daily
- Biosolids and agricultural spray irrigation
- Nitrogen and phosphorus amount to meet crop need
- Crop acres
- Crop yield, e.g. bushels per acre
- Inorganic fertilizer available in the watershed
- Land Use
- Nutrient concentration per animal manure type and county
- Septic systems
- Soil phosphorus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ECOSYSTEM BENEFITS
Get information about the complementary benefits to BMP implementation.

ABOUT CAST

Chesapeake Assessment Scenario Tool (CAST) is a web-based nitrogen, phosphorus and sediment load estimator tool that streamlines environmental planning. Users specify a geographical area, and then select best management practices (BMPs) to apply on that area. CAST builds the scenario and provides estimates of nitrogen, phosphorus, and sediment load reductions. The cost of a scenario is also provided so that users may select the most cost-effective practices to reduce pollutant loads.

Suggested Citation

Chesapeake Bay Program, 2020. Chesapeake Assessment and Scenario Tool (CAST) Version 2019. Chesapeake Bay Program Office, Last accessed [Month, Year].

What is included in the Chesapeake Bay Program's suite of modeling tools?

The Chesapeake Bay Program uses state-of-the-art science and monitoring data to replicate conditions of the Chesapeake Bay watershed. This information is then used by decision-makers at the federal, state and local levels to determine how best to restore and protect local waterways, and ultimately, the Chesapeake Bay. By combining sophisticated modeling data and real-world monitoring data, we gain a comprehensive view of the Chesapeake ecosystem—from the depths of the Bay to the upper reaches of the watershed. The suite of computer modeling tools developed by the Chesapeake Bay Program divides the 64,000-square mile watershed into thousands of smaller segments, and helps us understand the impact of pollution-reducing policies and practices at the regional and local level. The most significant value of the suite of modeling tools is the ability to predict how the Chesapeake Bay will respond to future conditions such as pollutant loads, land use changes and climate change. A fact sheet on the models is available. Information about the changes in moving to the Phase 6 Watershed Model are available here.

Why use CAST?

CAST enables planners in the watershed to develop a plan for meeting a nitrogen, phosphorus, or sediment load allocation using the most cost-effective strategy. CAST can be used to answer questions about the effect of different BMPs on loads, the impact of land use development over time, and to identify the geographical location where BMPs will reduce the most load. CAST provides estimates of load reductions. CAST allows users to understand which BMPs provide the greatest load reduction benefit, the extent to which these BMPs can be implemented, and the cost of these BMPs. Based on the scenario outputs, users can refine BMP choices in their planning.

CAST facilitates an iterative process to determine if Total Maximum Daily Load (TMDL) allocations are met. Scenarios may be compared to each other, TMDL allocations, or the amount of nitrogen, phosphorus, and sediment from the Watershed Implementation Plan (WIP) or a current annual progress scenario. CAST is used to facilitate Chesapeake Bay TMDL milestone and WIP development.

CAST is the Chesapeake Bay Program's (CBP) Watershed Model. Other available tools have assumptions that may be different from those used in the Watershed Model for developing the 2010 Chesapeake Bay TMDL. Since the Watershed Model is used to assess jurisdictions' progress toward meeting the TMDL allocations, consistency with the Watershed Model is critical.

What are CAST's outputs?

CAST estimates of load reductions for load sources include: agriculture, developed, natural, wastewater, and septic loading to the edge of a small stream (EOS) and loads delivered to the tidal portion of the Chesapeake Bay (EOT). CAST stores the geographic area, cost and implementation level associated with each BMP as well as the load for each sector and land use. With these data tables, CAST also serves as a data management system. Thus, users may quantify the impacts of various management actions while improving local management decisions.

Who benefits from using CAST?

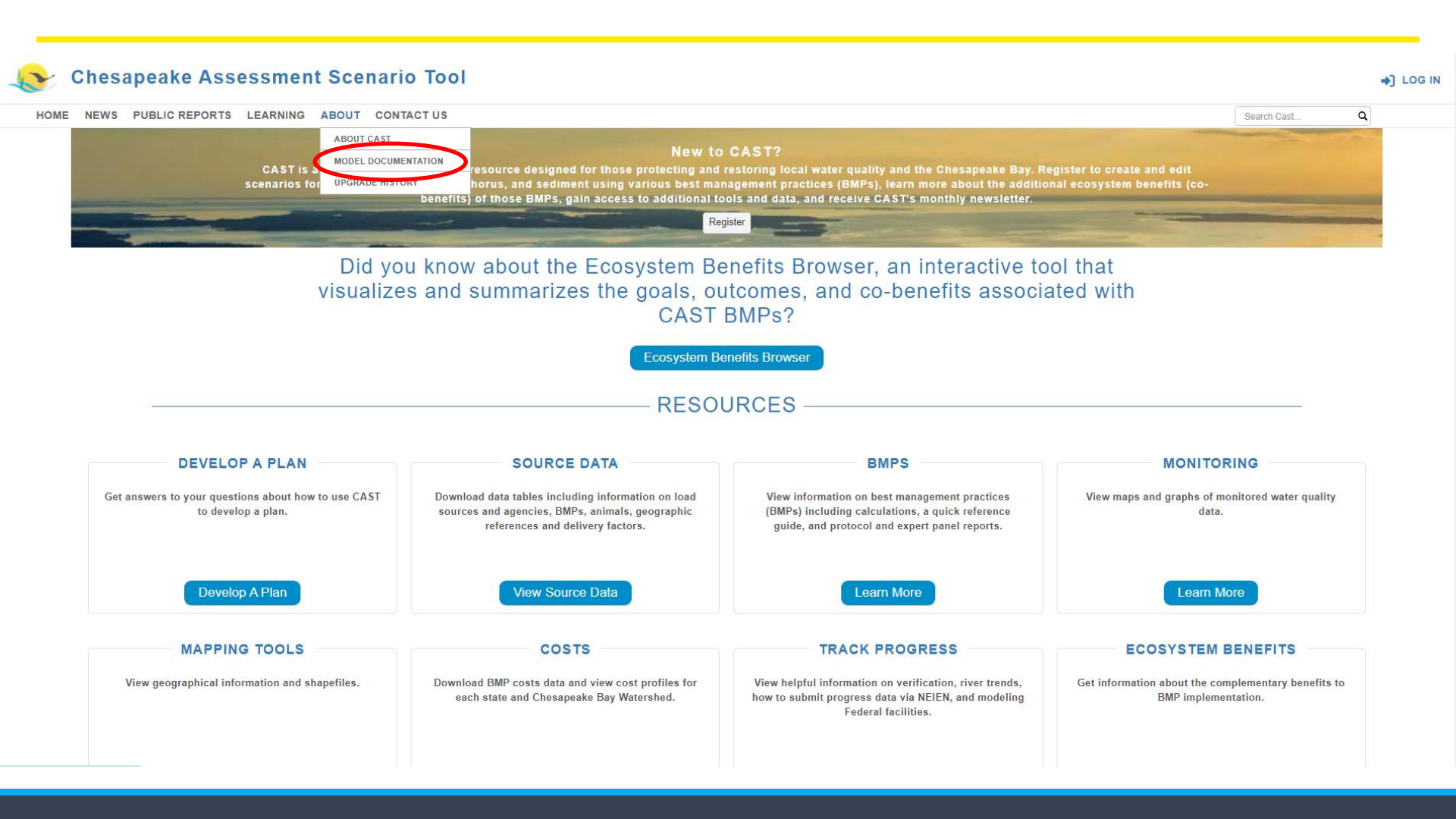
CAST is used by multiple local jurisdictions and states for the Phase II and III WIPs, two-year Milestones and even local TMDLs. Any user may see the source of the data that was used in developing the TMDL and the state's most recent annual progress scenario, Milestone and WIP. This allows involvement of the counties and other local planners in the Bay TMDL. CAST is easily accessible on-line with no need to install specific databases or software. All who request a login are granted one.

Why was CAST developed?

The first version of CAST was launched in 2011 to provide local jurisdictions, such as counties, with a tool to provide input into the TMDL WIP process. The U.S. Environmental Protection Agency (EPA) issued a TMDL in 2010 for the Chesapeake Bay based on allocations established by the states. The jurisdictions that drain to the Chesapeake Bay include New York, Pennsylvania, West Virginia, Maryland, Delaware, District of Columbia, and Virginia. The states agreed that it would be more efficient for states to allocate responsibility within their respective political boundaries, and for EPA to issue one overall TMDL that reflected each state's allocation. Since planning happens at a more local scale, such as county, some states downscaled the allocation to the county level.

How is information entered into CAST?

CAST is designed to be useful to people with a general knowledge of BMPs. Knowledge of models or BMP load reduction calculations is not necessary. CAST is available on-line to users with a login and password, which may be requested from the website.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Model Documentation

Suggested Citation

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CAST-23 version

CAST-23 is planned to be the last model update to the phase 6 suite of models. This follows the decision to update the CAST schedule, which was approved by the Water Quality Goal Implementation Team, Management Board, and Principals' Staff Committee. The decision can be found in the September 26, 2023 PSC meeting minutes. CAST-23 contains all the planned updates for CAST-21 plus:

- Updated BMP history (as of February 2024)
- 1985-2016 updated AAPFCO fertilizer for the agricultural and urban sector
- State-supplied fertilizer methodology and data change
- Urban fertilizer methodology and data change
- Oyster BMPs
- Animal mortality BMPs
- No expiration for wetland BMPs
- Resource Improvement Forest Buffer BMPs (9 and 10) added
- Changes to nutrient application eligibility
- Correction to regulated/unregulated Virginia developed acreage in CAST

Additional CAST-23 related resources are linked below.

- Response to comments
- Comparison of Loads and Inputs with prior version--Data Visualization Tool

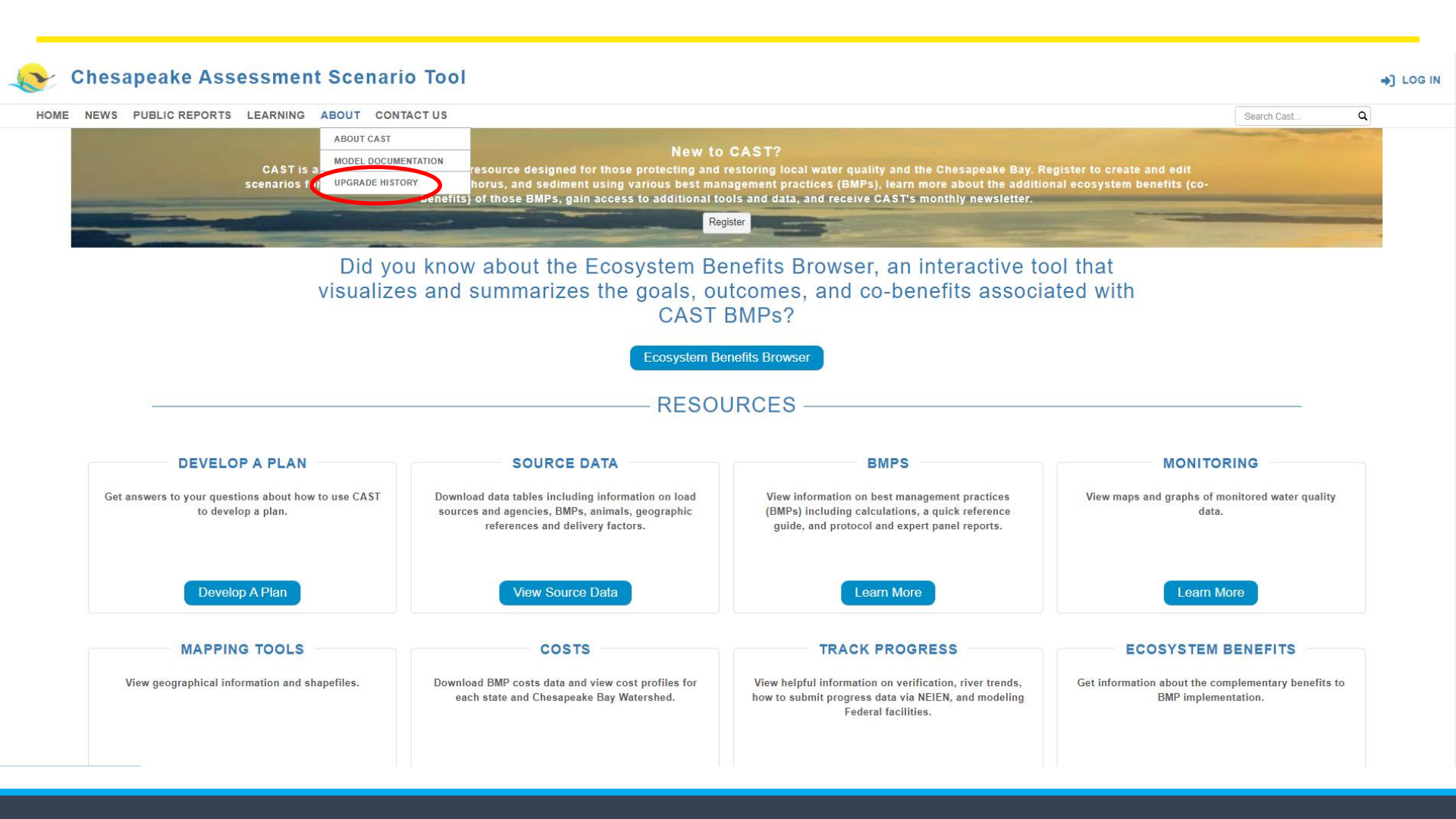
CAST-21 version (never released)

BMPs in progress scenarios are pulled from the National Environmental Information Exchange Network (NEIEN), and used to update that year's progress data. This means that new inspections, new cumulative BMPs in any year, and new annual BMPs are used for that year's progress. The prior years' progress scenarios are not updated. However, when changing to a new version of CAST, all years' progress scenarios are updated to include new BMP history.

- Fact Sheet
- Understanding Chesapeake Bay Modeling Tools
- Comparison of Loads and Inputs Between CAST-19 and CAST-21--Data Visualization Tool
- Technical Documentation of the Change Between CAST-19 and CAST-21
- Response to Comments

CAST-19 version

CAST-17d is updated to CAST-19 with changes to data and BMPs used in the Phase 6 model for the milestone period. This follows the Principals' Staff Committee decision of July 9, 2018 that changes are made only in advance of the two-year milestone period. The decision can be found in the July 9, 2018 PSC meeting minutes. These changes were agreed to by the WQGIT and its workgroups. The changes are limited in scope so that they do not: 1) impact modeled runoff during the 1993-1995 critical period; or 2)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UPGRADE HISTORY

Update released on February 2, 2024

- Version Phase 6 - 7.10.0
- The new coagulant enhanced treatment pond BMPs are in CAST-23 and available for use in planning scenarios.

Update released on January 19, 2024

- Version Phase 6 - 7.10.0
- Animal mortality and ditch BMPs' cost data updated to be consistent with all other BMP cost estimates, which are in 2018 dollar values.

Update released on October 26, 2023

- Version Phase 6 - 7.10.0
- Update to the manure application eligibility and timing files in CAST-23, changing all crop nutrient applications to be both manure and fertilizer eligible if the crop/land use allows it. This will change the results of reports run on the draft version of CAST-23 that was made available to members of the WQGIT, WTWG, and other interested parties for review.
- Correction to the unregulated/regulated land use classification in 5 Virginia counties: Fairfax County and all towns and cities contained therein (specifically including Fairfax City and Falls Church City), Loudoun County to specifically include eastern Loudoun County and the Town of Leesburg, and Harrisonburg City, by applying an adjustment factor as a CAST-23 post-processing measure. An adjustment factor is now applied as a ratio of CAST-19 unregulated/regulated lands. The ratio has been determined for each land-river model segment, load source, for each nonfederal and each federal agency type, and for each year after 2012.

Update released on October 4, 2023

- Version Phase 6 - 7.9.0
- The Eutrophication Units Calculator is now live on CAST. The Eutrophication Units Calculator is a tool which calculates the nitrogen and phosphorus exchanges needed to meet the planning goals based on a user-selected scenario and geography. Results are shown as eutrophication effects on dissolved oxygen in the Chesapeake Bay.

Update released on September 26, 2023

- Version Phase 6 - 7.8.0
- The official 2022 Progress scenario is now available on CAST. This scenario reflects the BMPs that are implemented and functioning in this year (July 1, 2021 - June 30, 2022) as reported by the state to the Chesapeake Bay Program for annual progress and verified by the Environmental Protection Agency (EPA).

Update released on August 24, 2023

- Version Phase 6 - 7.8.0
- Access to a draft version of CAST-23 made available to members of the WQGIT, WTWG, and other interested parties for review.
- Updates to CAST-23 will change the loads in all scenarios and years. This includes your own scenarios, scenarios shared with you, and public scenarios. Public scenarios and the shared scenarios owned by CBP Admin are recalculated for you.
- Updates that were made to the aborted version CAST-21 (11/1/2021) are included in the CAST-23 version as well as changes to the inorganic fertilizer data, which is updated through 2020, and the urban fertilizer application method.

Update released on August 3, 2023

- Version Phase 6 - 7.8.0
- Updates the text on the homepage to include mention of the ecosystem benefits (co-benefits) information CAST has to offer
- New BMP Unit-sort to the Add BMPs page
- Corrects icon display issue on Download Reports page
- Adds the Transportation BMP to the BMP Summary Report
- Updates the Estuary Trends URL from TrendsOverTime to EstuaryTrends

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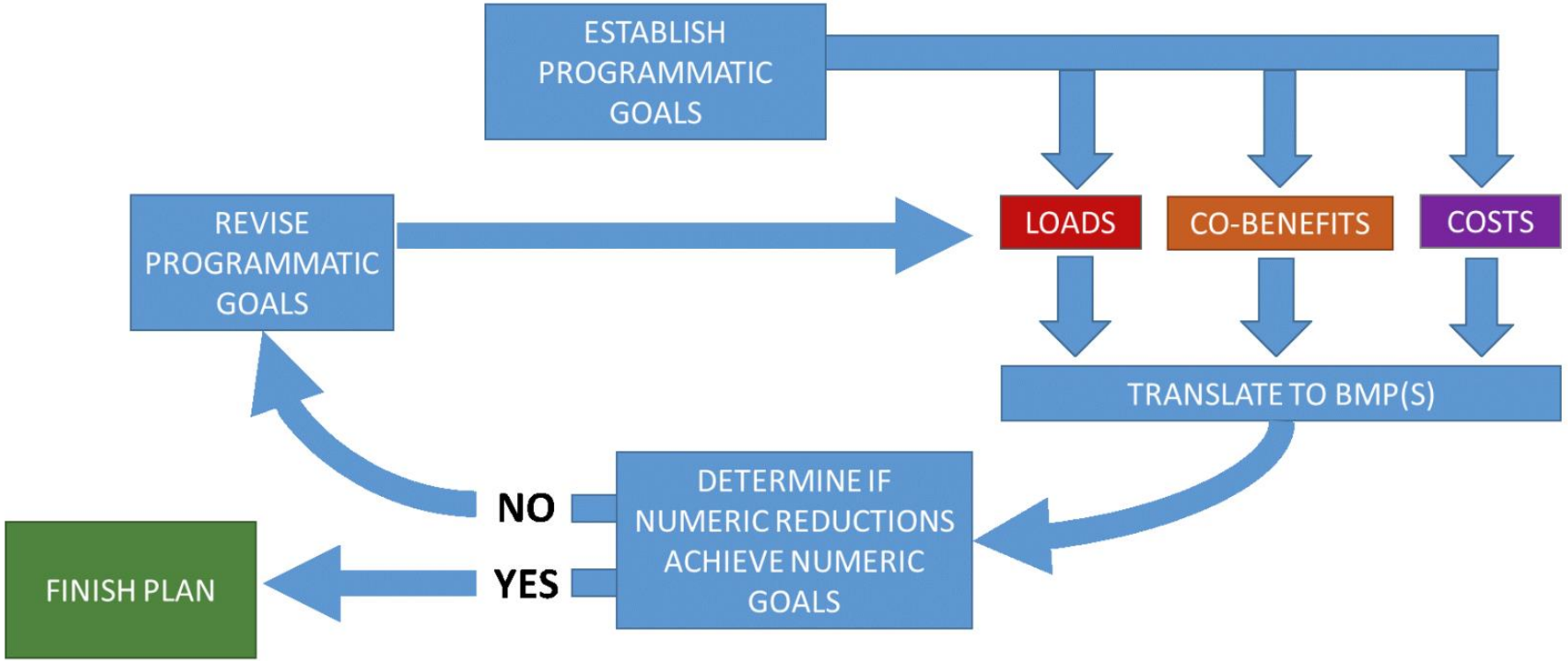

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- Load Source Definitions
- BMP Definitions
- Efficiency BMPs
- Load Source Conversion BMPs
- Load Reduction BMPs
- Animal BMPs
- BMP Units
- BMP Load Source Group
- Load Source Group Components
- BMP Animal Group
- Animal Group Components
- Geographic References
- Geographic Scale and Names
- Agencies
- Delivery Factors

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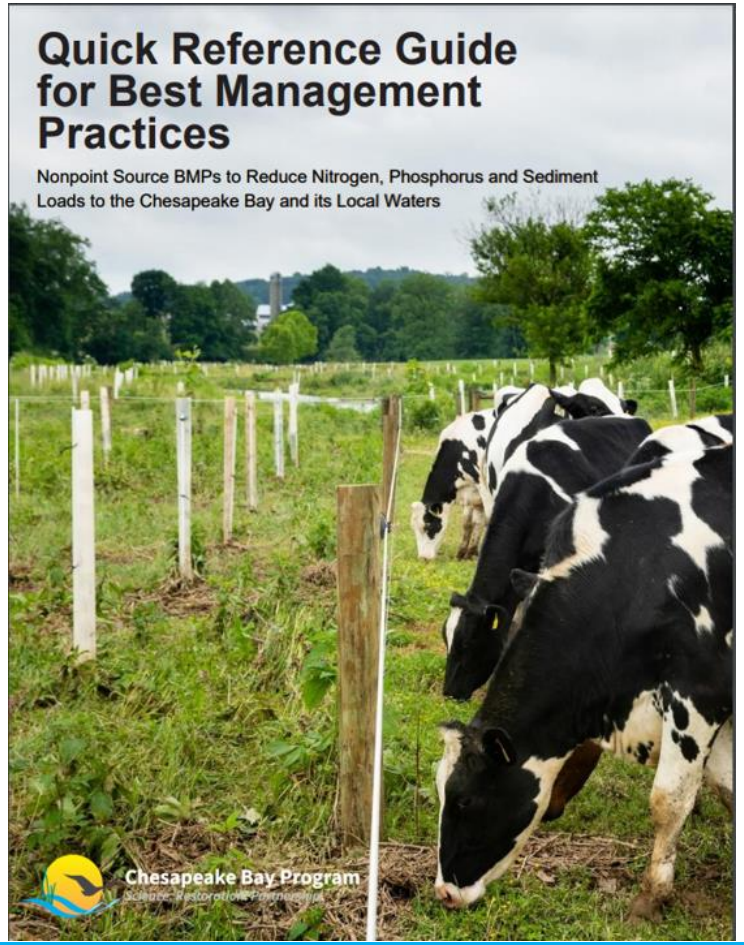

BMPs

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 on the BMPs page. 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.

The following resources are available on the CAST BMP page:

- 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
- Pasture Management/Grazing Report
- Simpson Weammert-Lane 2009 Report with detailed documentation of many BMPs
- **BMP Reference Guide**
- Manure BMP Fast Facts
- Manure Treatment Technologies Fast Facts
- Credit for Conservation Landscaping

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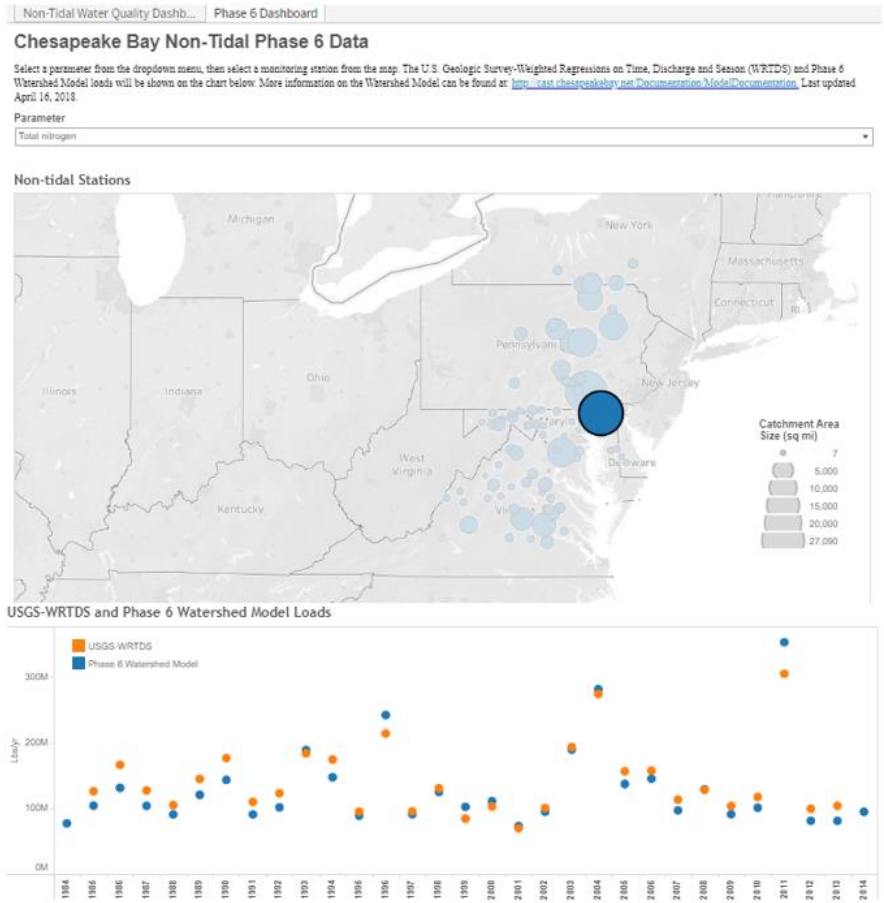
NON-TIDAL WATER QUALITY DASHBOARD



Monitoring

View maps and graphs of monitored water quality data.

Comparisons between the modeled and monitored data can be found on the **non-tidal water quality dashboard**. These visual representations show both the loads estimated from the U.S. Geologic Survey's Weighted Regressions on Time, Discharge and Season (WRTDS) and loads estimated from the time-variable Phase 6 Watershed Model.

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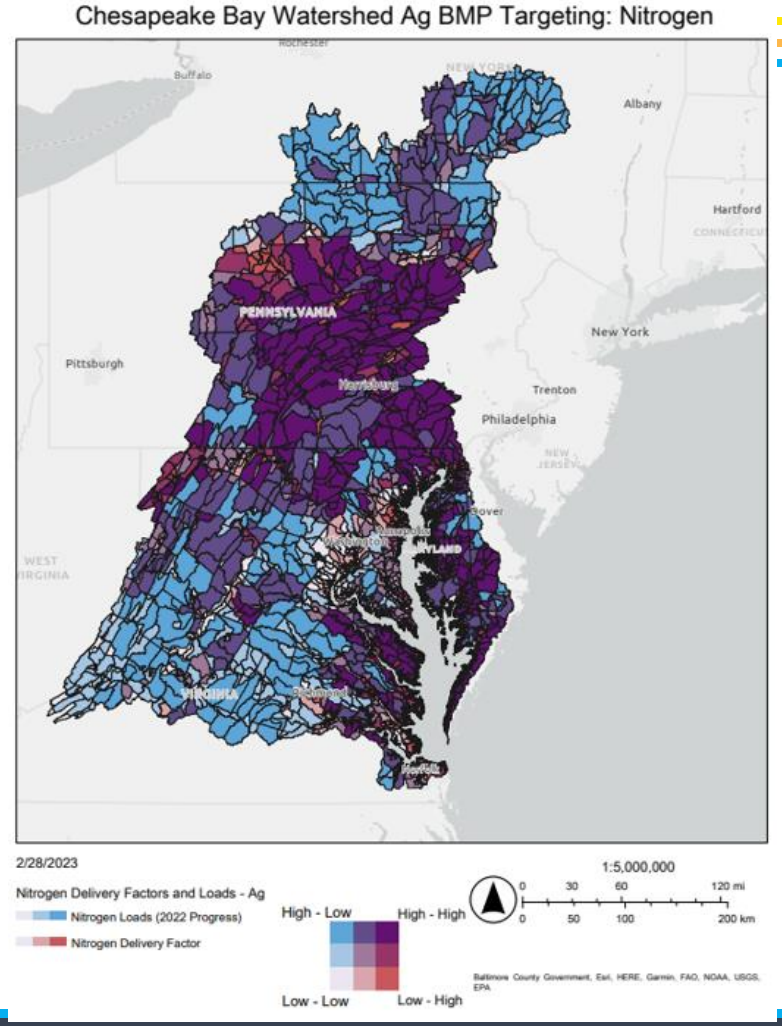

Mapping Tools

View geographical information and shapefiles. Shapefiles are available for download as GIS layers and KMZ files.

BMP targeting maps have been created using CAST delivery factors and 2022 Progress loads to communicate which land-river segments in the watershed would be most effective for BMP targeting. There are six bivariate targeting maps, one for each nutrient and sector.

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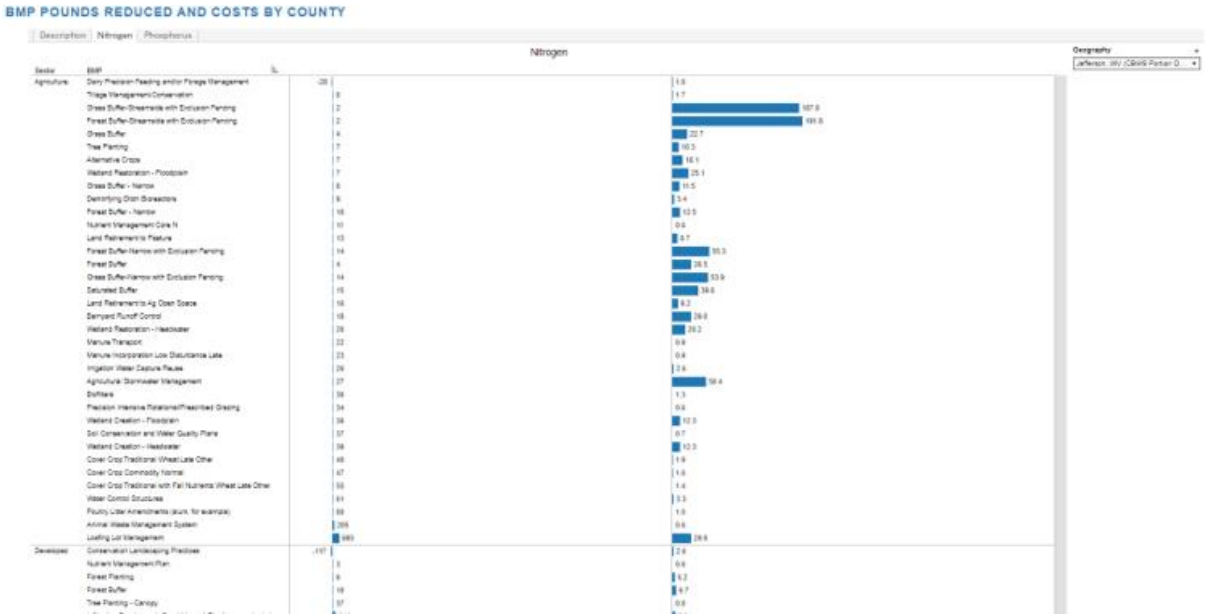

Costs

Download BMP costs data and cost profiles for each state and Chesapeake Bay Watershed.

The chart provided offers a quick look at the average cost per pound of nitrogen or phosphorus reduced and the average nitrogen or phosphorus pound reduced per BMP unit.

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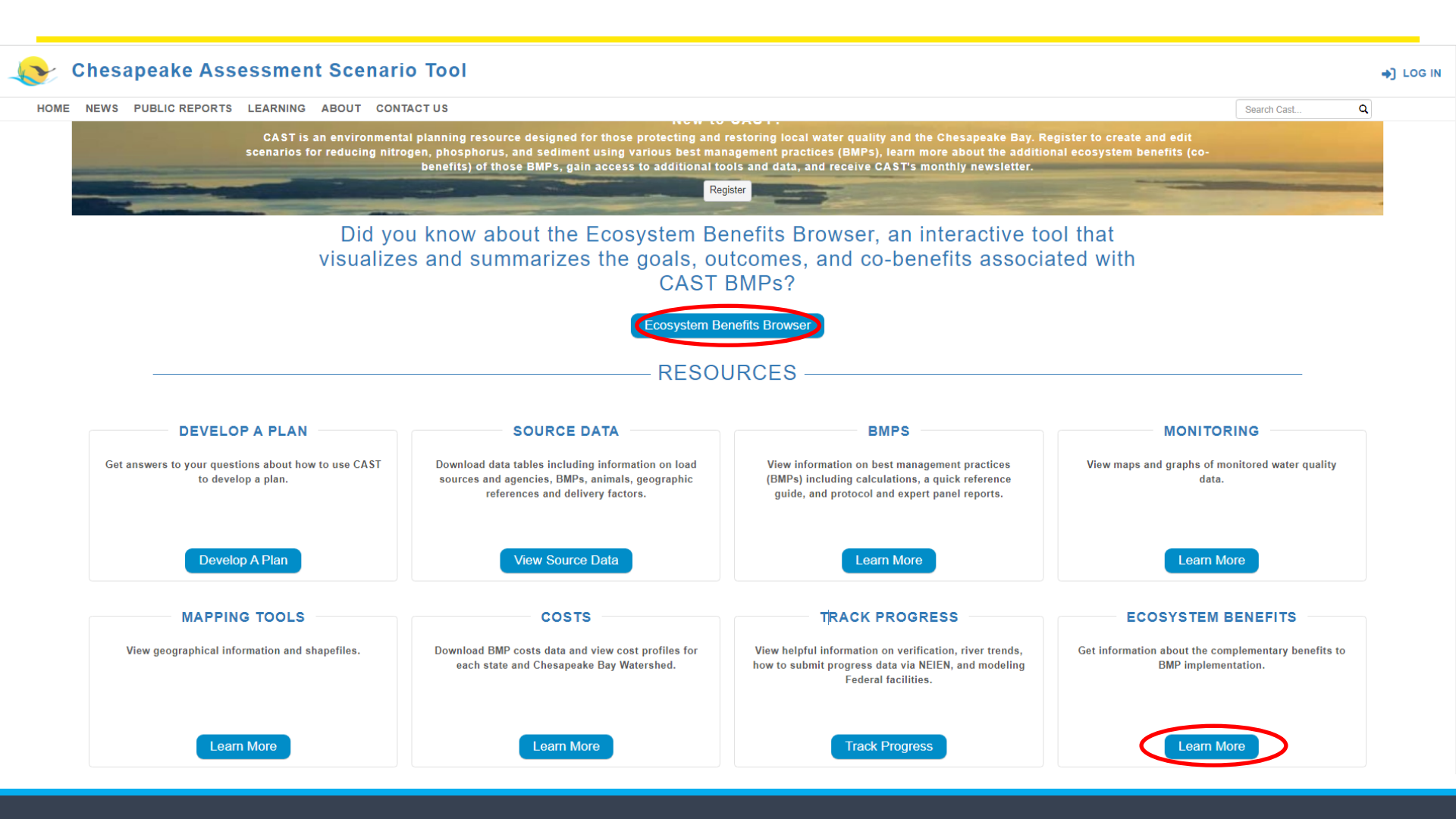
View trends for loads, nutrients, animal units and septic systems for the Bay jurisdictions from 1984 through 2025.

- BMPs implemented
- **Loads delivered to the streams and the Bay**
- Wastewater
- Nutrients applied to the land
- Animal numbers
- Septic systems
- Manure Transport
- Tidal Water Quality Trends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Tree Planting

includes any trees planted on agricultural land, except those used to establish riparian forest buffers, targeting lands that are highly erodible or identified as critical resource areas.

BMPs

- Tree Planting

Download

Goals

- Vital Habitats
- Toxic Contaminants
- Environmental Literacy
- Sustainable Fisheries
- Water Quality
- Climate Resiliancy
- Stewardship
- Healthy Watersheds

Outcomes

- Fish Passage
- Toxic Contaminants Research
- Environmental Literacy Planning
- Forest Buffer
- Wetlands
- Blue Crab Management
- Black Duck
- 2025 WIP

CoBenefit Bmps

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

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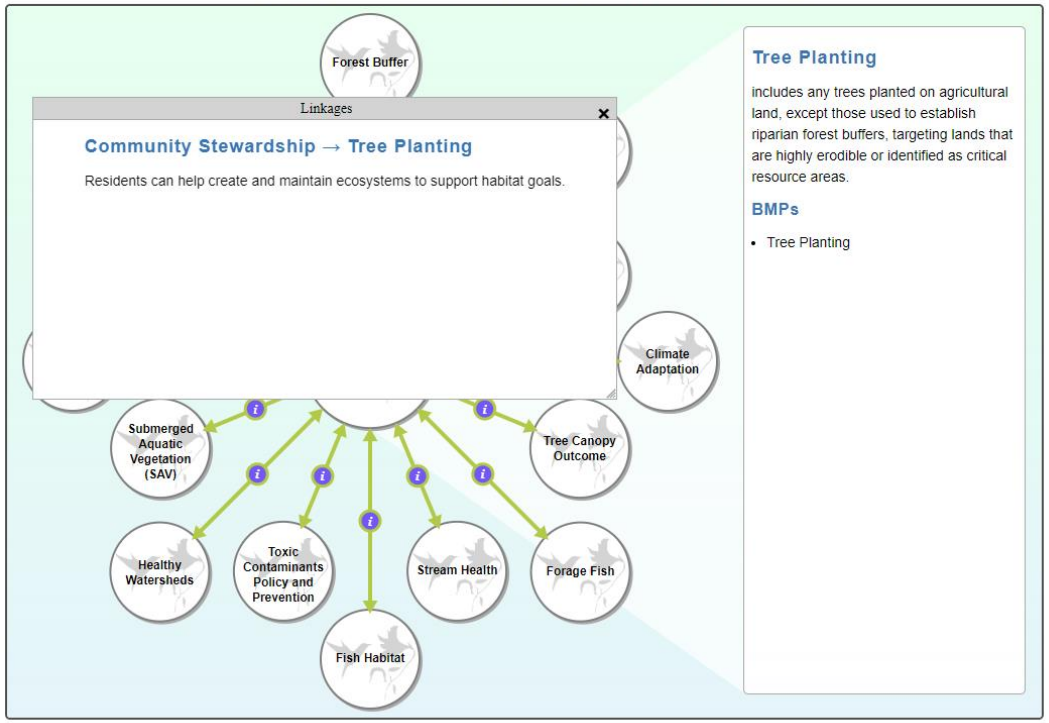

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Outcomes

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- Forest Buffer
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- Black Duck
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CoBenefit Bmps

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- Agricultural Grass Buffer
- Urban Forest Planting
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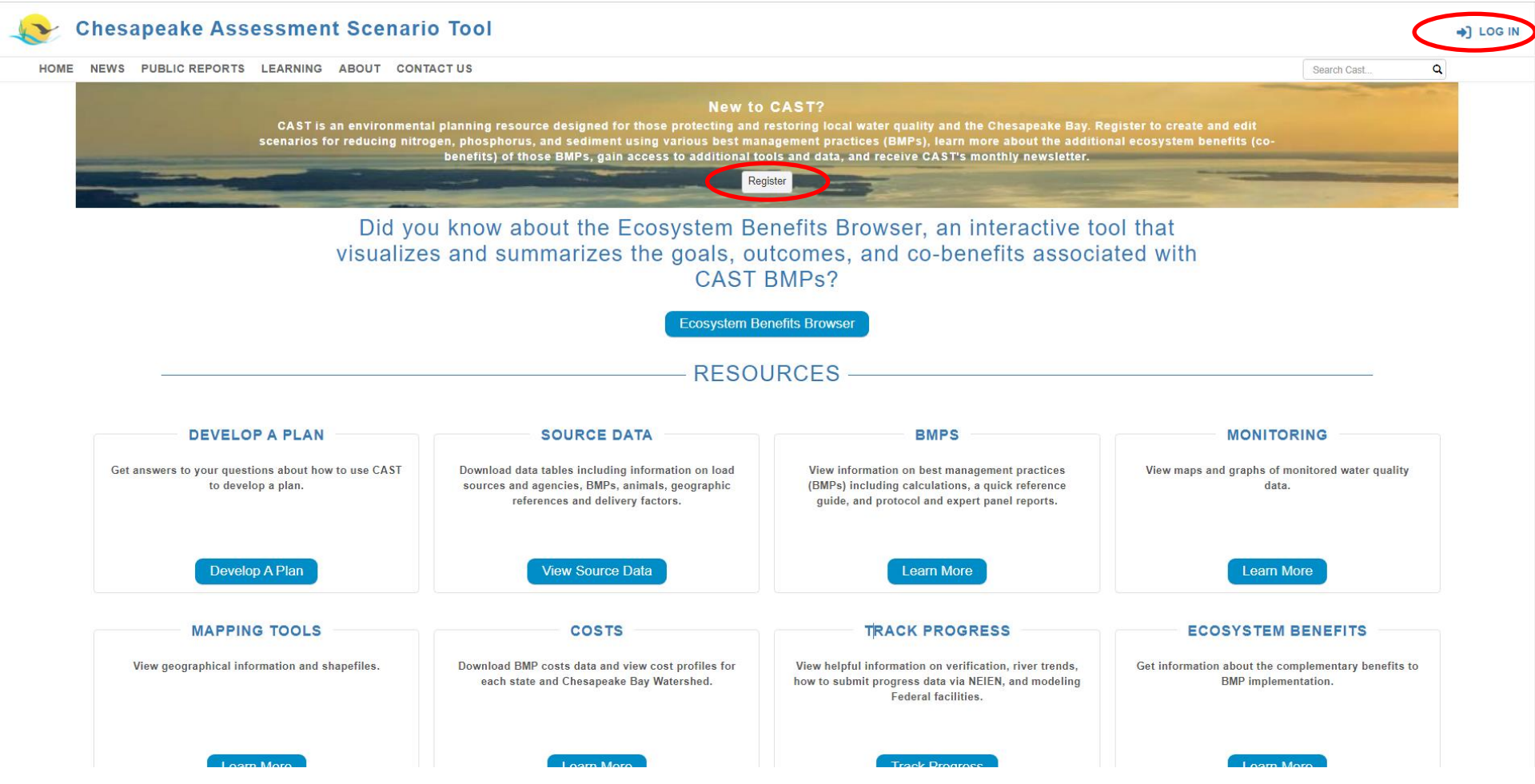
- Urban Tree Planting
- **Tree Planting**
- Impervious Surface Reduction

2

Scenarios

How to create and compare your own, unique scenarios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CAST is an environmental planning resource designed for those protecting and restoring local water quality and the Chesapeake Bay. Register to create and edit scenarios for reducing nitrogen, phosphorus, and sediment using various best management practices (BMPs), learn more about the additional ecosystem benefits (co-benefits) of those BMPs, gain access to additional tools and data, and receive CAST's monthly newsletter.
Register
Did you know about the Ecosystem Benefits Browser, an interactive tool that visualizes and summarizes the goals, outcomes, and co-benefits associated with CAST BMPs?
Ecosystem Benefits Browser
RESOURCES
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Get answers to your questions about how to use CAST to develop a plan.
Develop A Plan
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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.
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View maps and graphs of monitored water quality data.
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View geographical information and shapefiles.
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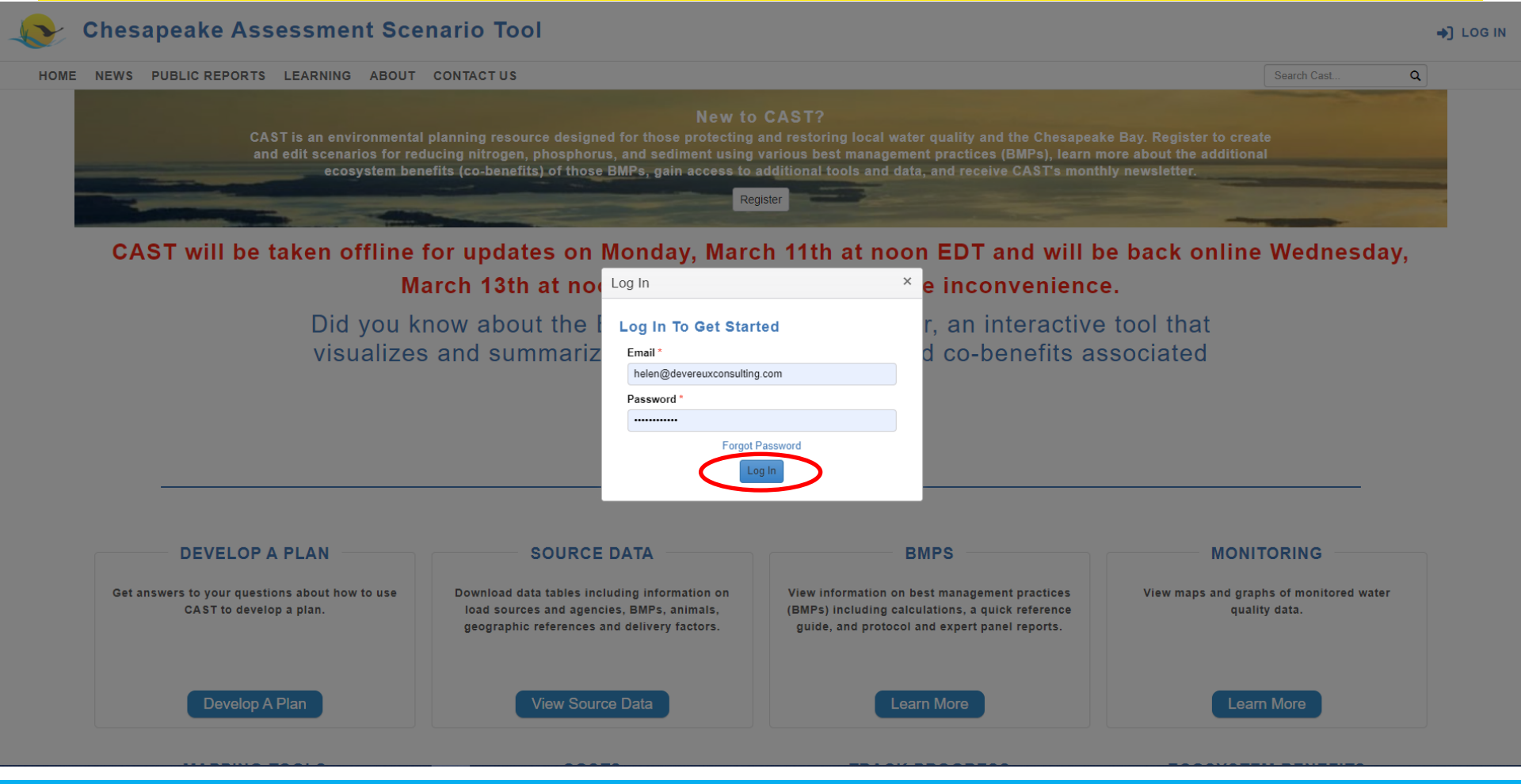
Download BMP costs data and view cost profiles for each state and Chesapeake Bay Watershed.
TRACK PROGRESS
View helpful information on verification, river trends, how to submit progress data via NEIEN, and modeling Federal facilities.
ECOSYSTEM BENEFITS
Get information about the complementary benefits to BMP implementation.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Register
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.
Did you know about the
r, an interactive tool that
visualizes and summariz
d co-benefits associated
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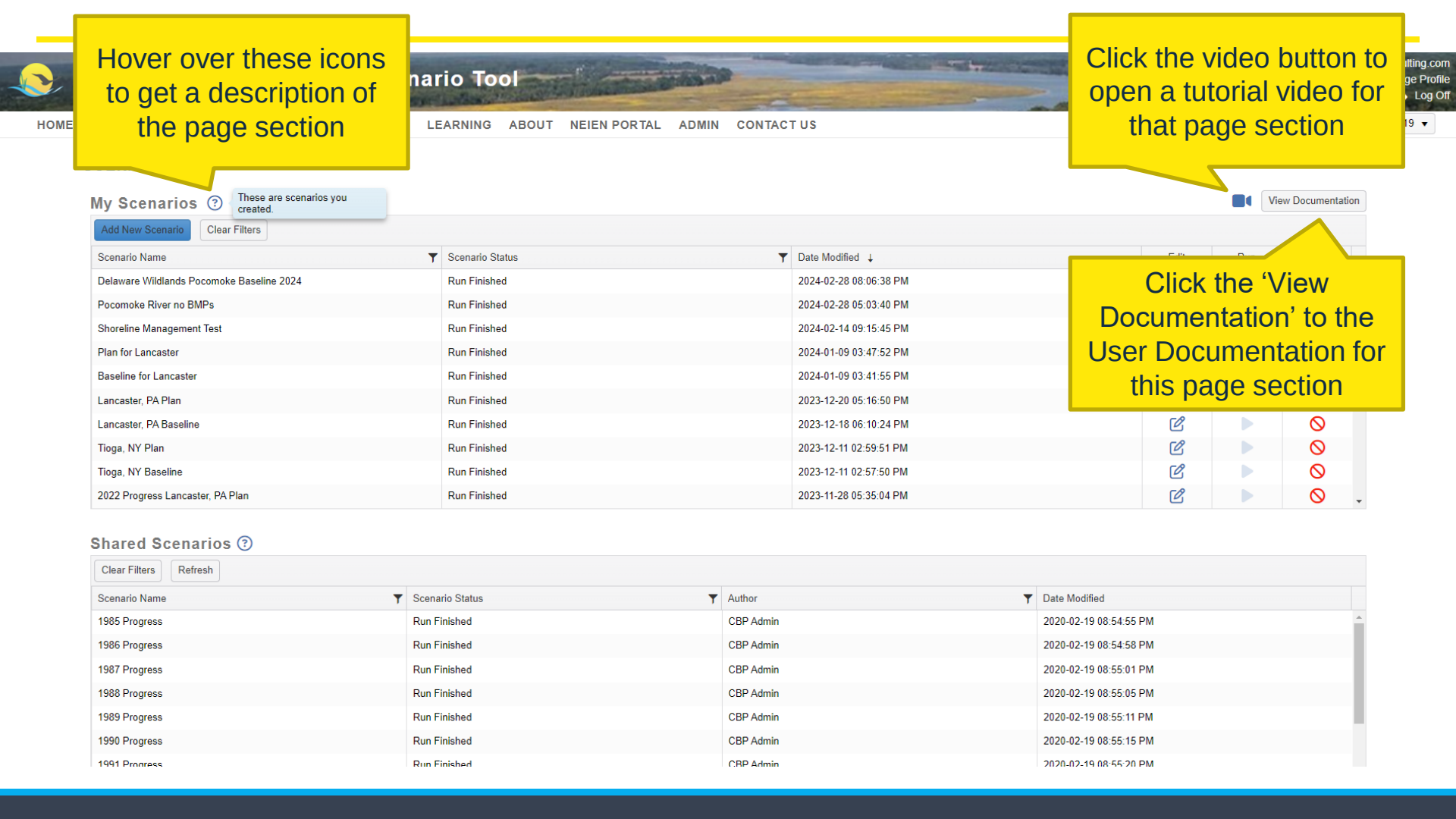
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Scenario Name
Scenario Status
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Delaware Wildlands Pocomoke Baseline 2024
Run Finished
2024-02-28 08:06:38 PM
Pocomoke River no BMPs
Run Finished
2024-02-28 05:03:40 PM
Shoreline Management Test
Run Finished
2024-02-14 09:15:45 PM
Plan for Lancaster
Run Finished
2024-01-09 03:47:52 PM
Baseline for Lancaster
Run Finished
2024-01-09 03:41:55 PM
Lancaster, PA Plan
Run Finished
2023-12-20 05:16:50 PM
Lancaster, PA Baseline
Run Finished
2023-12-18 06:10:24 PM
Tioga, NY Plan
Run Finished
2023-12-11 02:59:51 PM
Tioga, NY Baseline
Run Finished
2023-12-11 02:57:50 PM
2022 Progress Lancaster, PA Plan
Run Finished
2023-11-28 05:35:04 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
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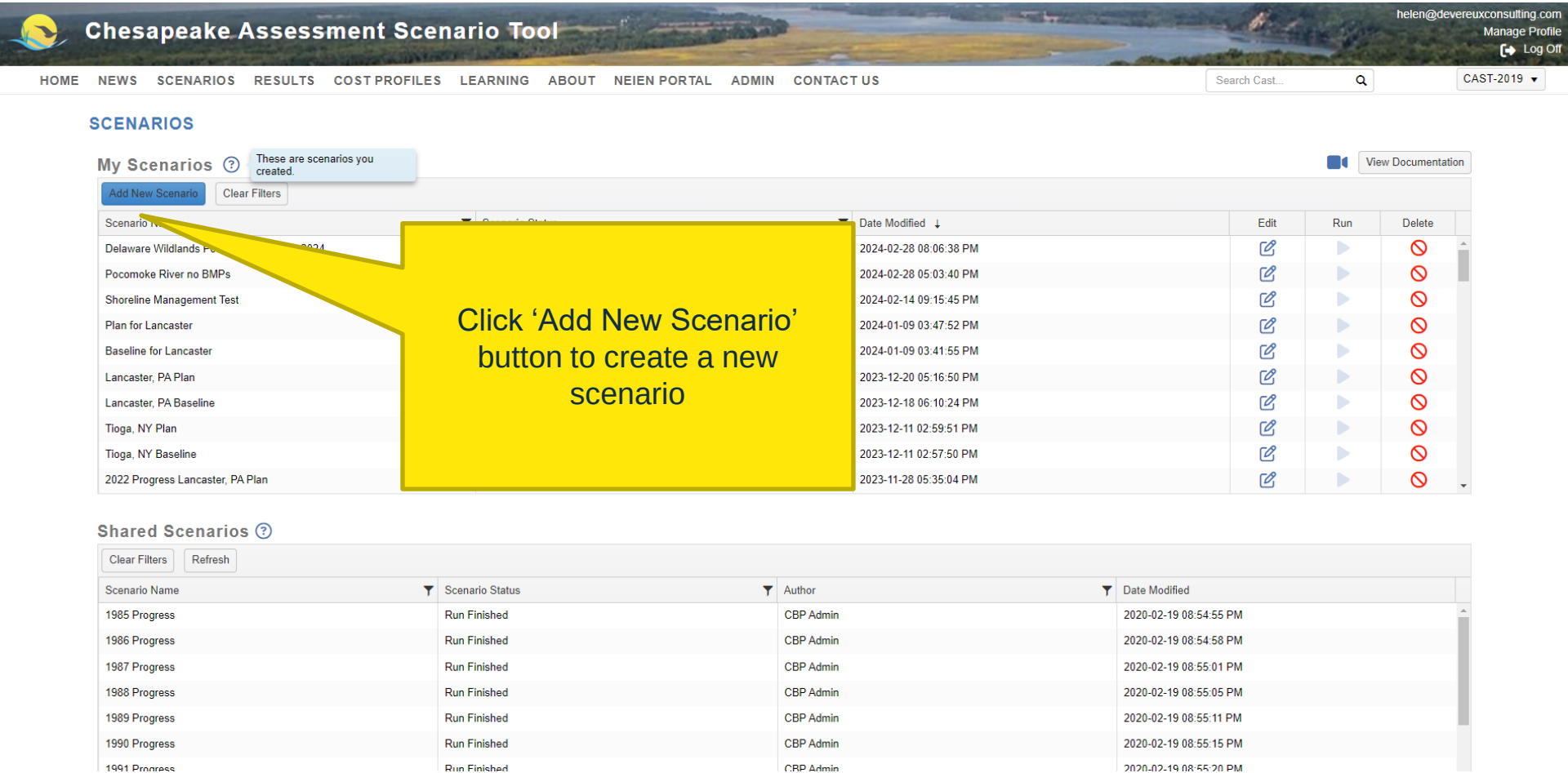
Run Finished
CBP Admin
2020-02-19 08:55:20 PM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Run
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Delaware Wildlands Pe 2024
2024-02-28 08:06:38 PM
Pocomoke River no BMPs
2024-02-28 05:03:40 PM
Shoreline Management Test
2024-02-14 09:15:45 PM
Plan 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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Refresh
Scenario Name
Scenario Status
Author
Date Modified
1985 Progress
Run Finished
CBP Admin
2020-02-19 08:54:55 PM
1986 Progress
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2020-02-19 08:54:58 PM
1987 Progress
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2020-02-19 08:55:01 PM
1988 Progress
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CBP Admin
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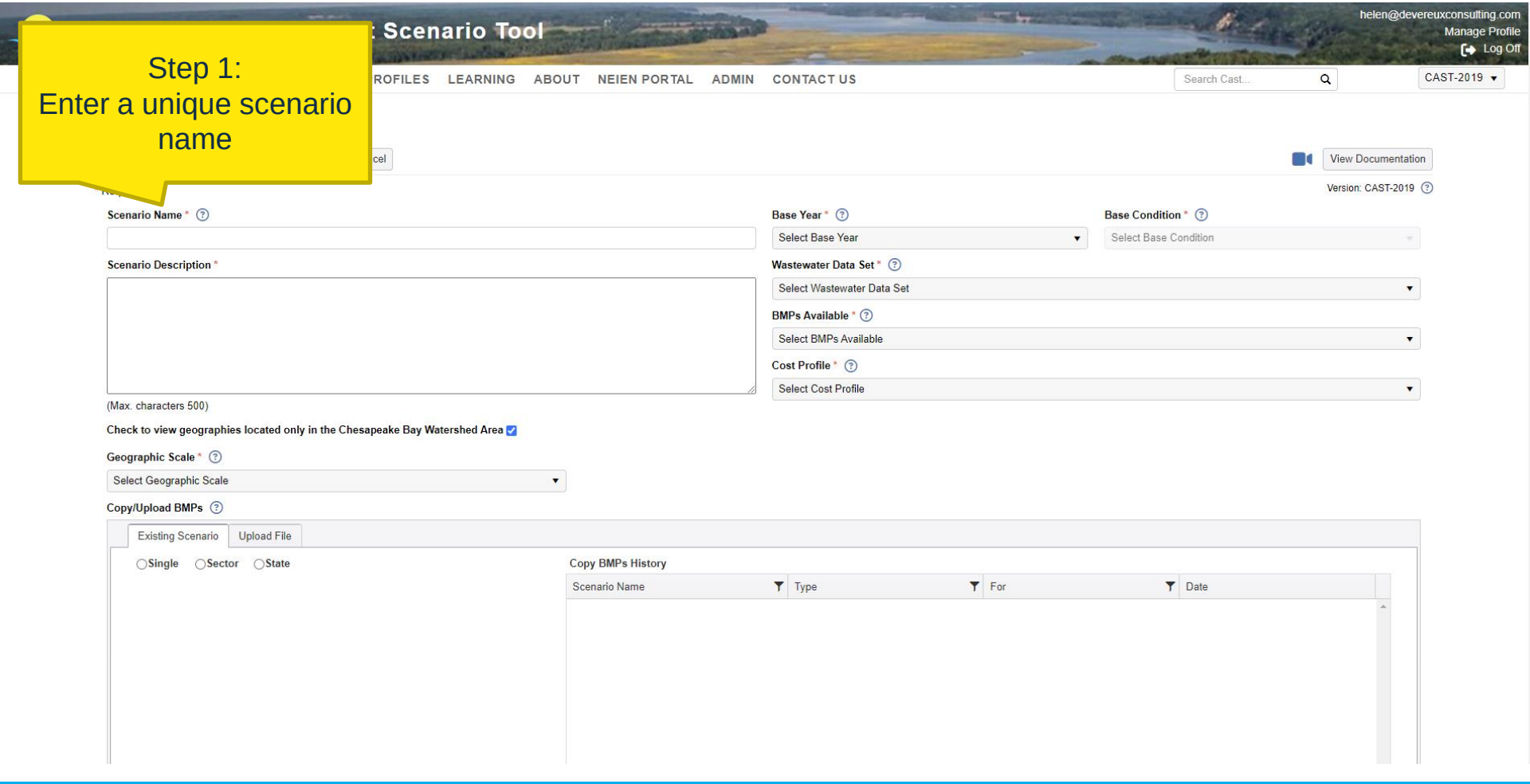
Run Finished
CBP Admin
2020-02-19 08:55:20 PM


Step 1:
Enter a unique scenario name
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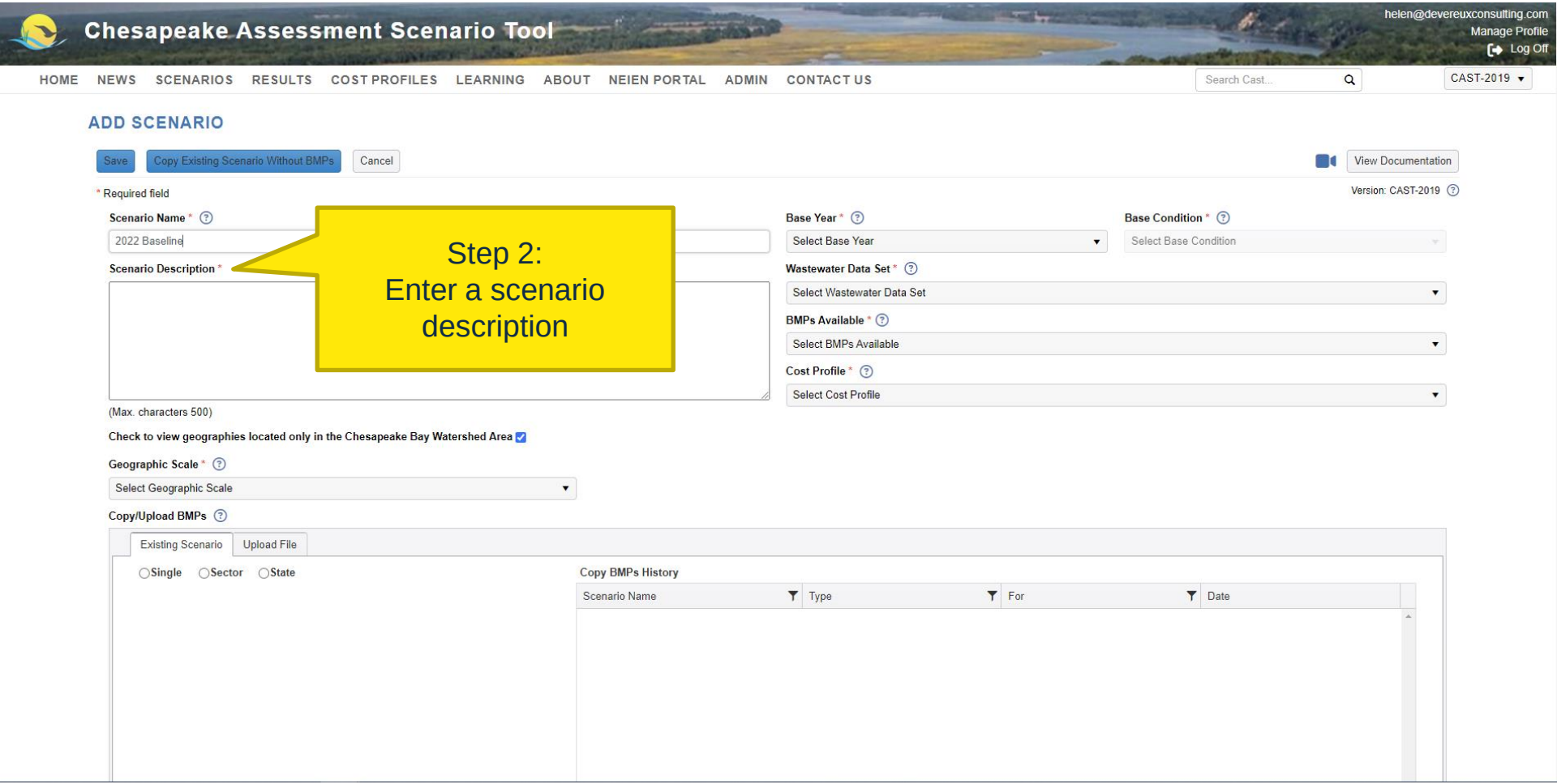
Version: CAST-2019
Scenario Name *
Base Year *
Select Base Year
Base Condition *
Select Base Condition
Scenario Description *
Wastewater Data Set *
Select Wastewater Data Set
BMPs Available *
Select BMPs Available
Cost Profile *
Select Cost Profile
(Max. characters 500)
Check to view geographies located 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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ADD SCENARIO
Save
Copy Existing Scenario Without BMPs
Cancel
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* Required field
Version: CAST-2019
Scenario Name *
2022 Baseline
Scenario Description *
Step 2:
Enter a 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
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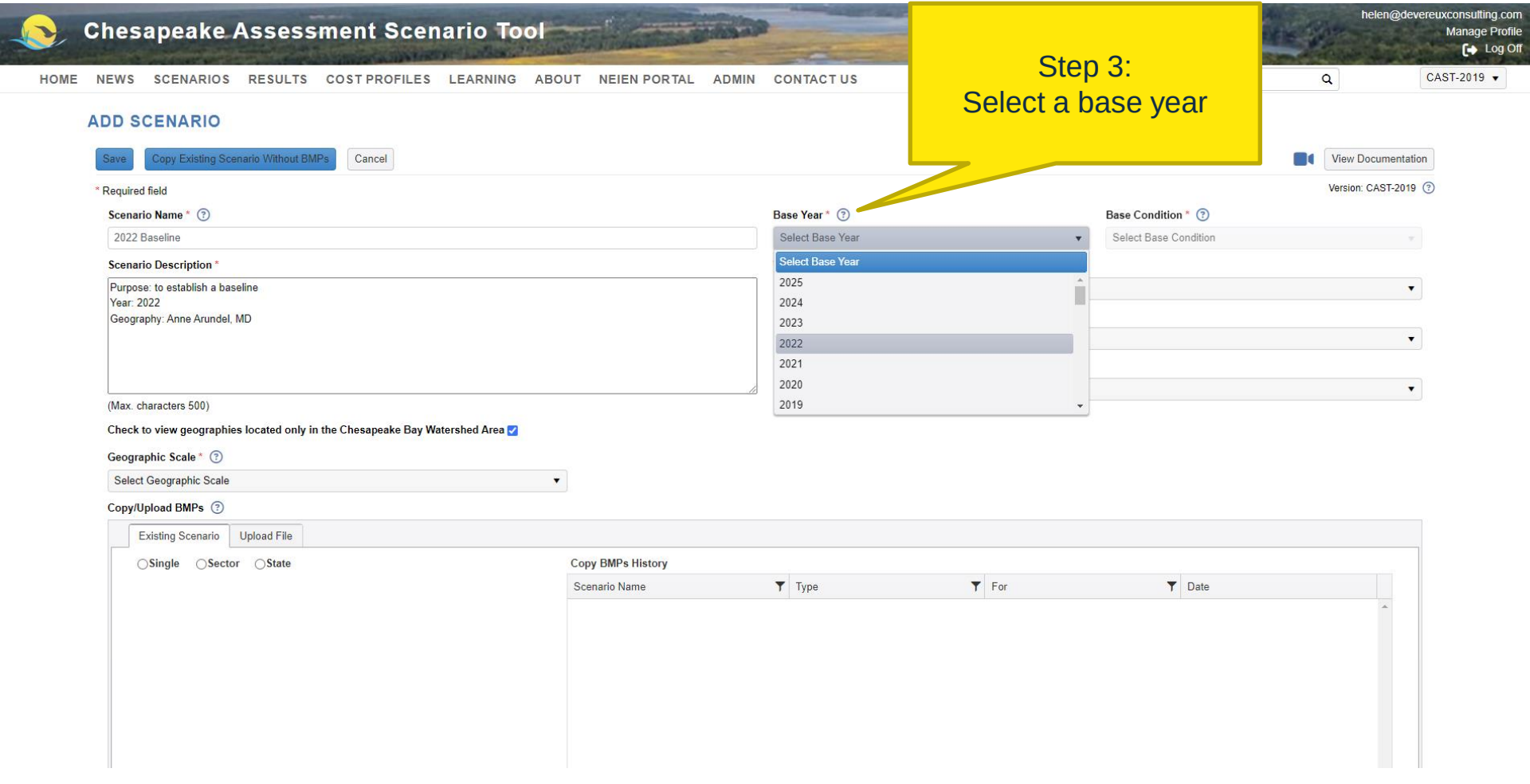
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Step 3:
Select a base year
ADD SCENARIO
Save
Copy Existing Scenario Without BMPs
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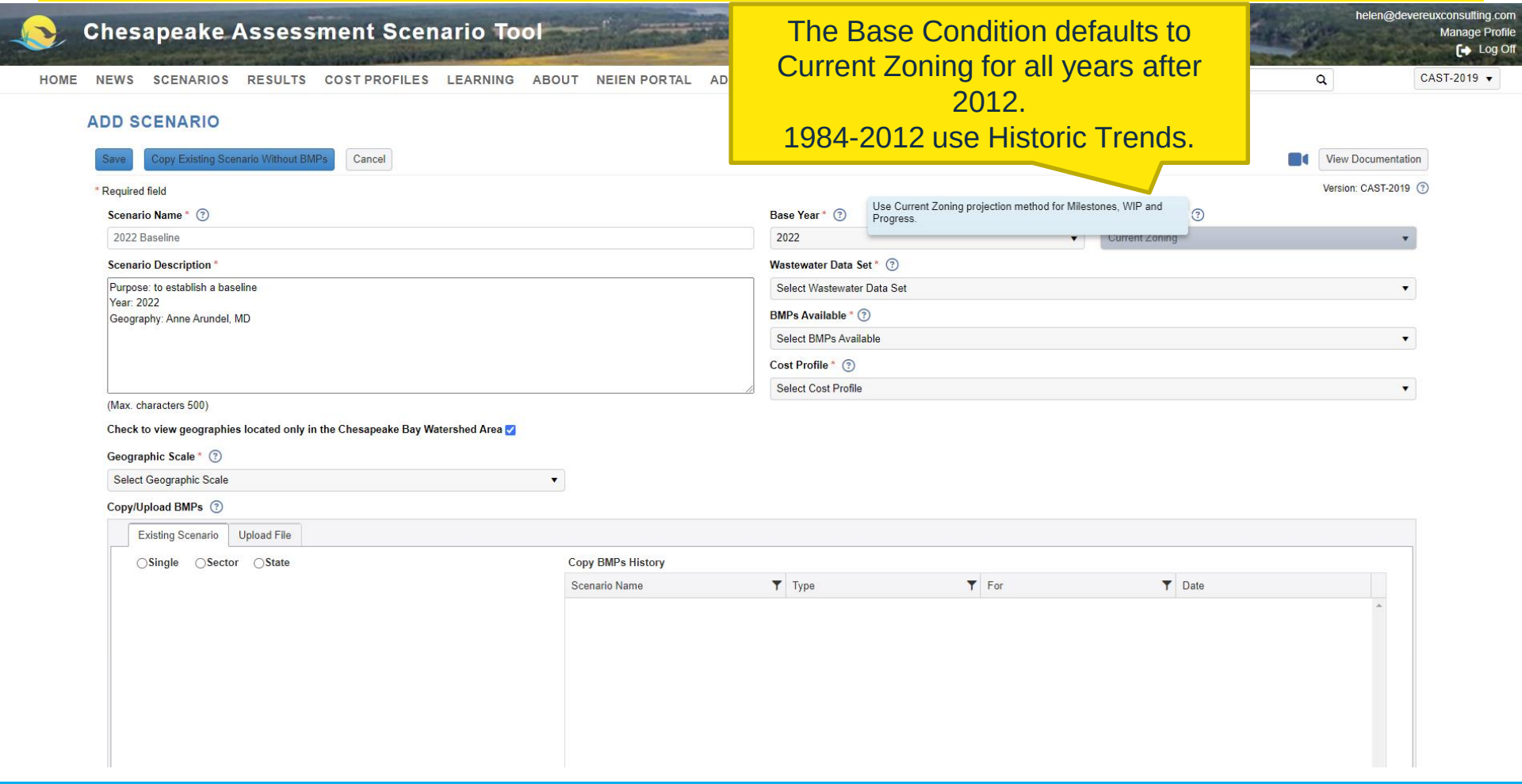
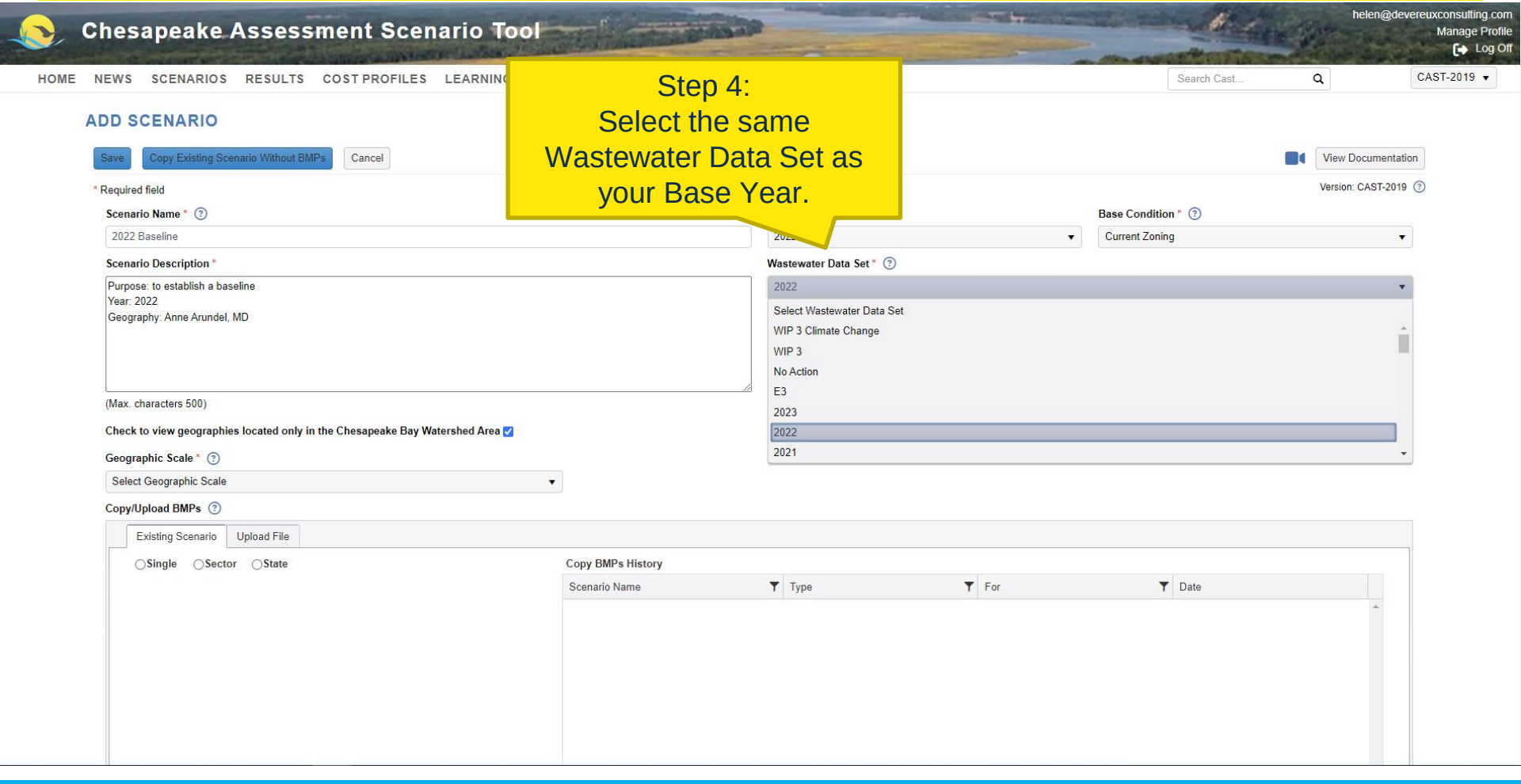
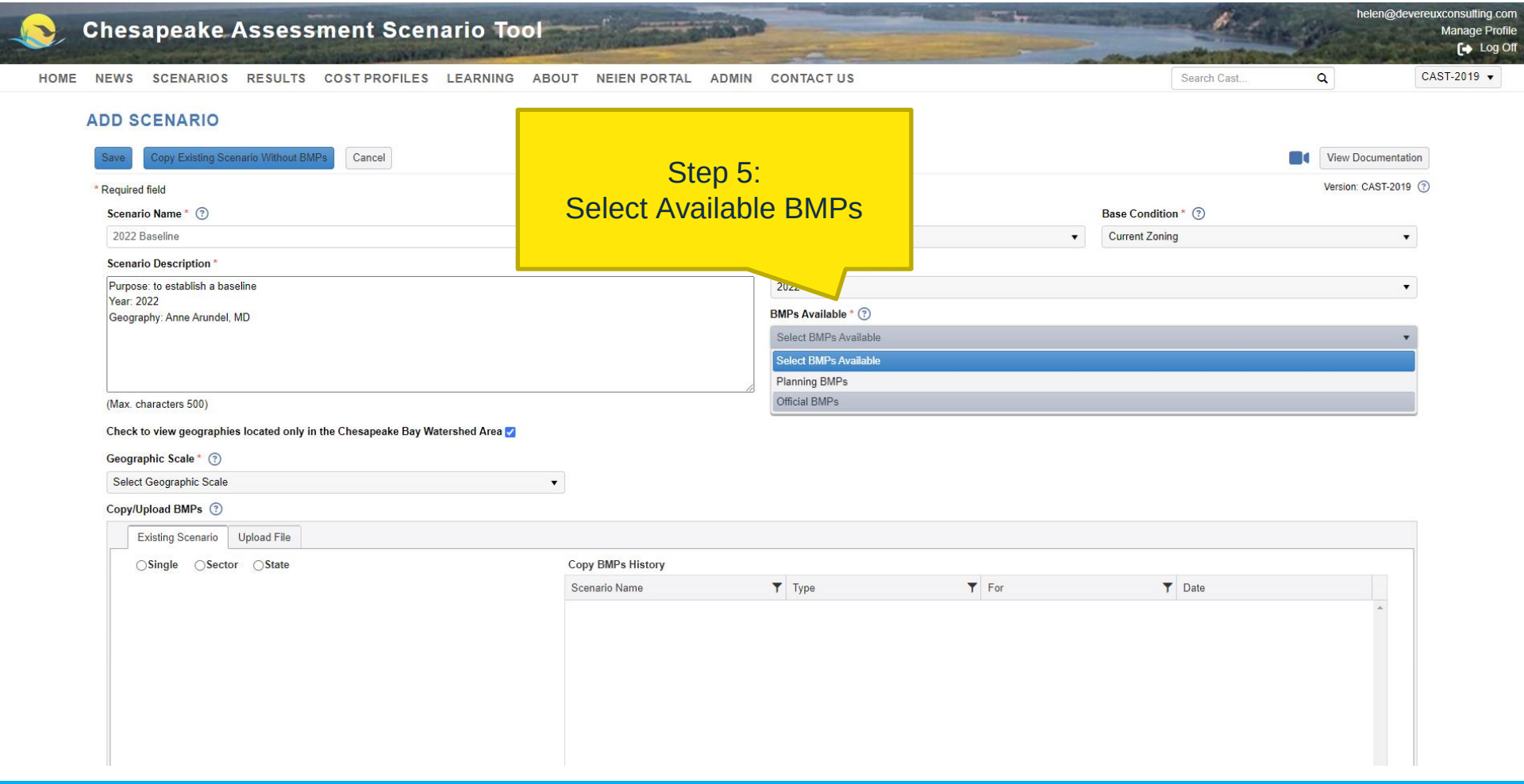
View Documentation
* Required field
Version: CAST-2019
Scenario Name *
2022 Baseline
Scenario Description *
Purpose: to establish a baseline
Year: 2022
Geography: Anne Arundel, MD
(Max. characters 500)
Base Year *
Select Base Year
Select Base Year
2025
2024
2023
2022
2021
2020
2019
Base Condition *
Select Base Condition
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



The Base Condition defaults to Current Zoning for all years after 2012.
1984-2012 use Historic Trends.



Step 4:
Select the same Wastewater Data Set as your Base Year.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CAST-2019
ADD SCENARIO
Save
Copy Existing Scenario Without BMPs
Cancel
View Documentation
* Required field
Version: CAST-2019
Scenario Name *
2022 Baseline
Base Condition *
Current Zoning
Scenario Description *
Purpose: to establish a baseline
Year: 2022
Geography: Anne Arundel, MD
(Max. characters 500)
BMPs Available *
Select BMPs Available
Select BMPs Available
Planning BMPs
Official BMPs
Check to view geographies located only in the Chesapeake Bay Watershed Area
Geographic Scale *
Select Geographic Scale
Copy/Upload BMPs
Existing Scenario
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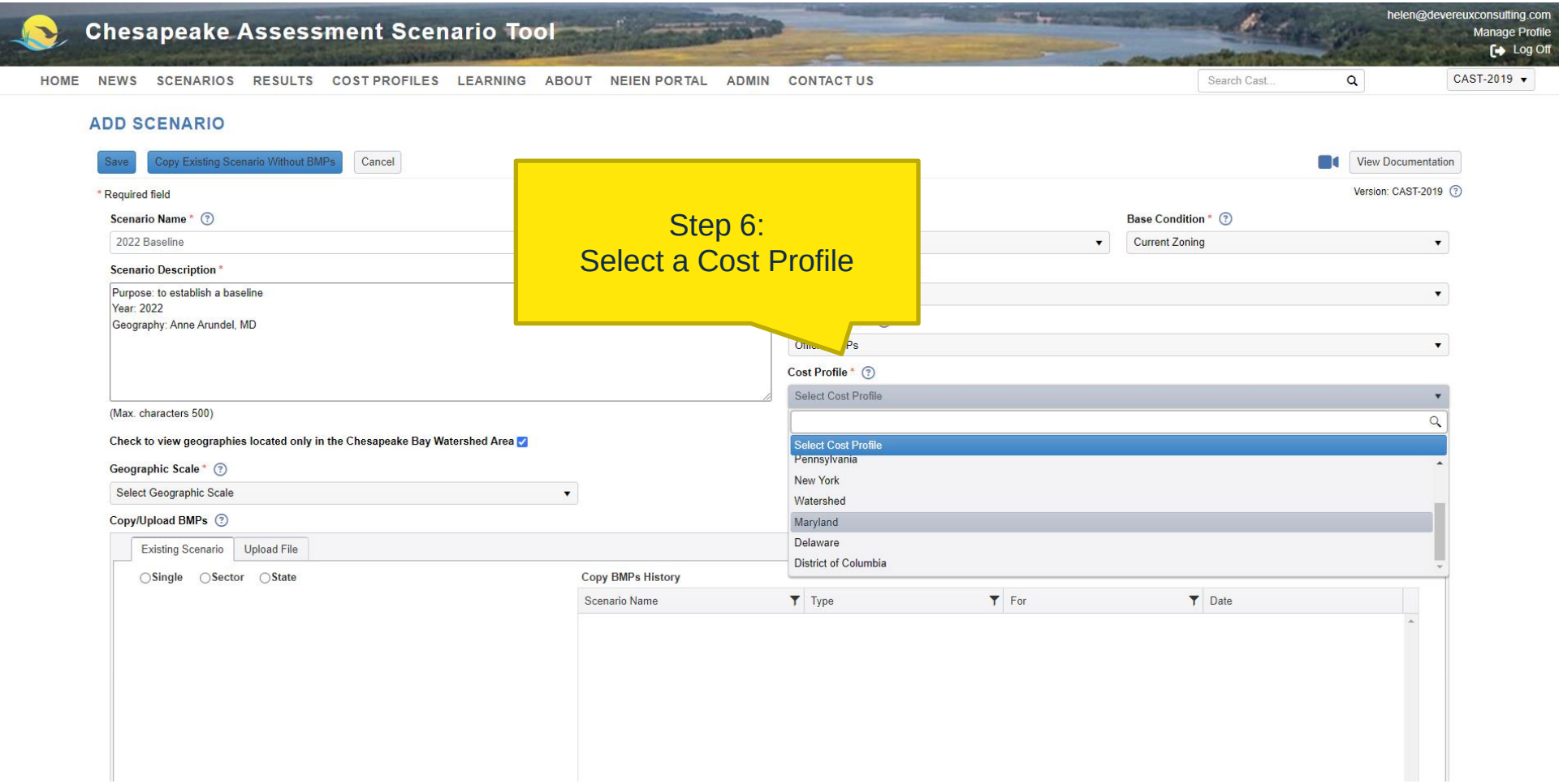
Single
Sector
State
Copy BMPs History
Scenario Name
Type
For
Date
Step 5:
Select Available BMPs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* Required field
Version: CAST-2019
Scenario Name *
2022 Baseline
Base Condition *
Current Zoning
Scenario Description *
Purpose: to establish a baseline
Year: 2022
Geography: Anne Arundel, MD
(Max. characters 500)
Cost Profile *
Select Cost Profile
Select Cost Profile
Pennsylvania
New York
Watershed
Maryland
Delaware
District of Columbia
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
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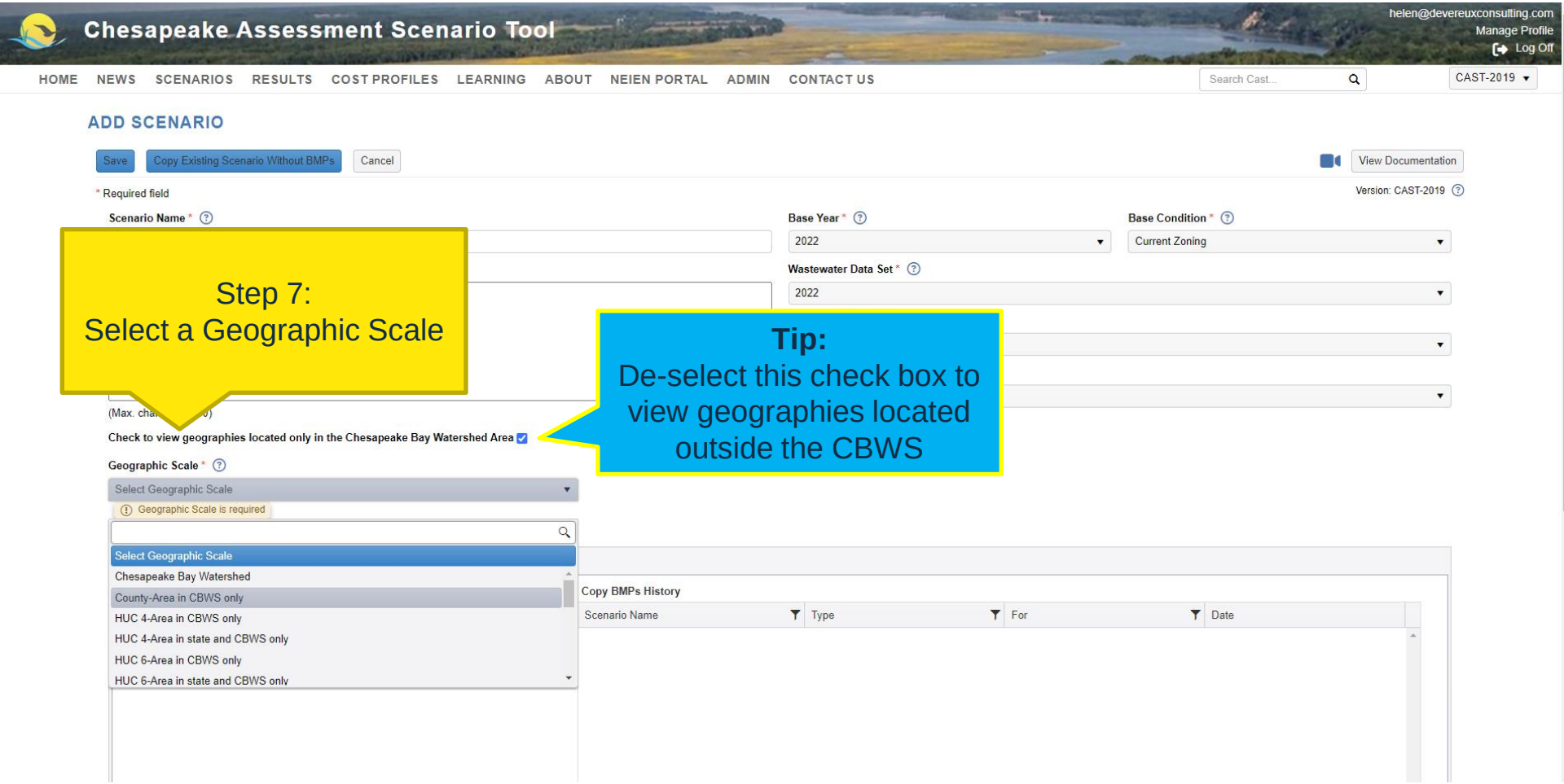
For
Date
Step 6:
Select a Cost Profile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ADD SCENARIO
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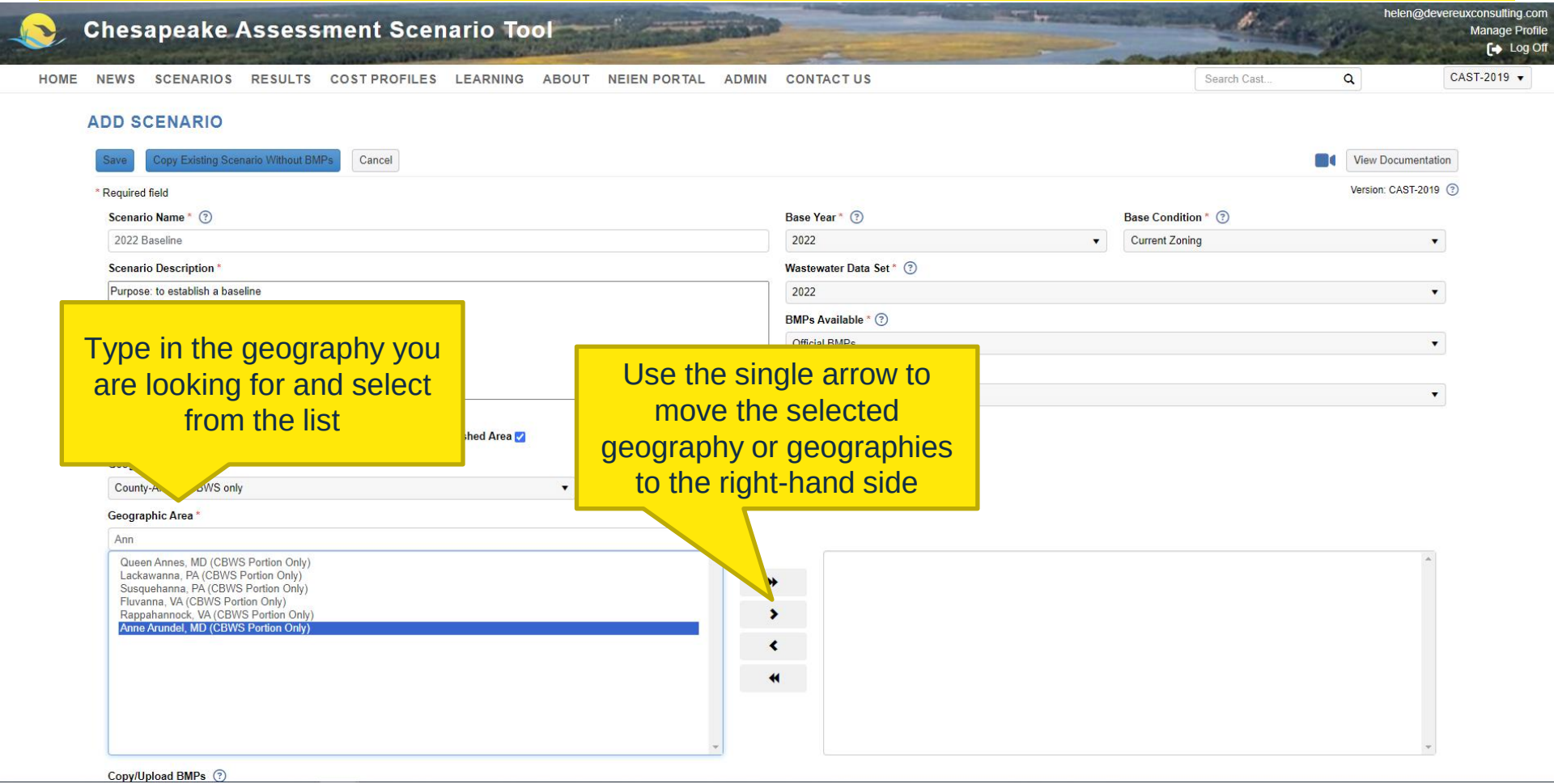
* Required field
Version: CAST-2019
Scenario Name *
Base Year *
2022
Base Condition *
Current Zoning
Wastewater Data Set *
2022
Step 7:
Select a Geographic Scale
Tip:
De-select this check box to view geographies located outside the CBWS
Check to view geographies located only in the Chesapeake Bay Watershed Area
Geographic Scale *
Select Geographic Scale
Geographic Scale is required
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
For
Date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* Required field
Version: CAST-2019
Scenario Name *
2022 Baseline
Base Year *
2022
Base Condition *
Current Zoning
Scenario Description *
Purpose: to establish a baseline
Wastewater Data Set *
2022
BMPs Available *
Official BMPs
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 *
Ann
Queen Annes, MD (CBWS Portion Only)
Lackawanna, PA (CBWS Portion Only)
Susquehanna, PA (CBWS Portion Only)
Fluvanna, VA (CBWS Portion Only)
Rappahannock, VA (CBWS Portion Only)
Anne Arundel, MD (CBWS Portion Only)
Copy/Upload BMPs

ADD SCENARIO

Save | Copy Existing Scenario Without BMPs | Cancel | View Documentation

* Required field

Version: CAST-2019

Scenario Name *

2022 Baseline

Scenario Description *

Purpose: to establish a baseline
Year: 2022
Geography: Anne Arundel, MD

(Max. characters 500)

Base Year *: 2022

Base Condition *: Current Zoning

Wastewater Data Set *: 2022

BMPs Available *: Official BMPs

Cost Profile *: Maryland

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

Geographic Scale *: County-Area in CBWS only

Geographic Area *

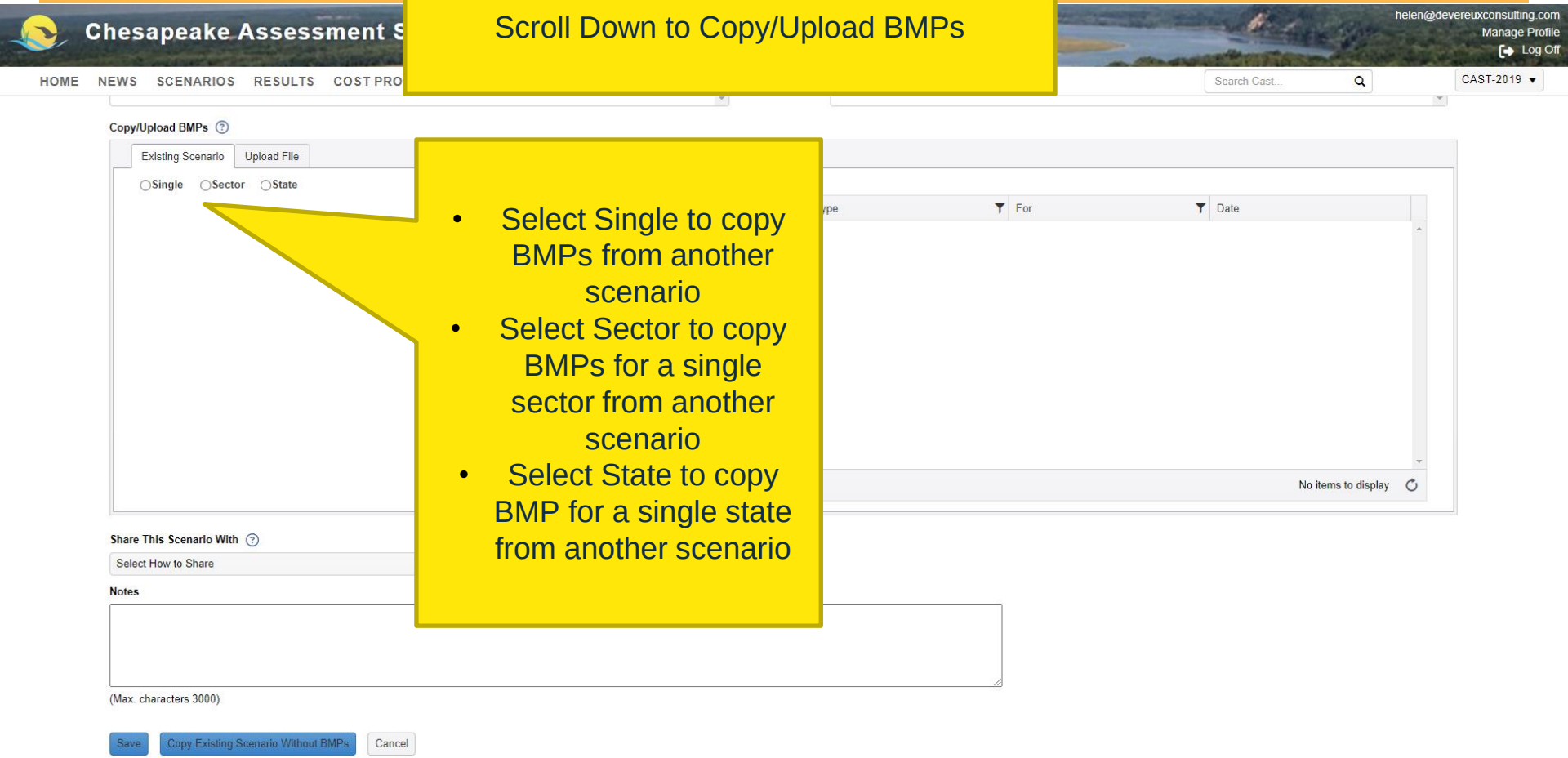
Ann

Queen Annes, MD (CBWS Portion Only)
Lackawanna, PA (CBWS Portion Only)
Susquehanna, PA (CBWS Portion Only)
Fluvanna, VA (CBWS Portion Only)
Rappahannock, VA (CBWS Portion Only)

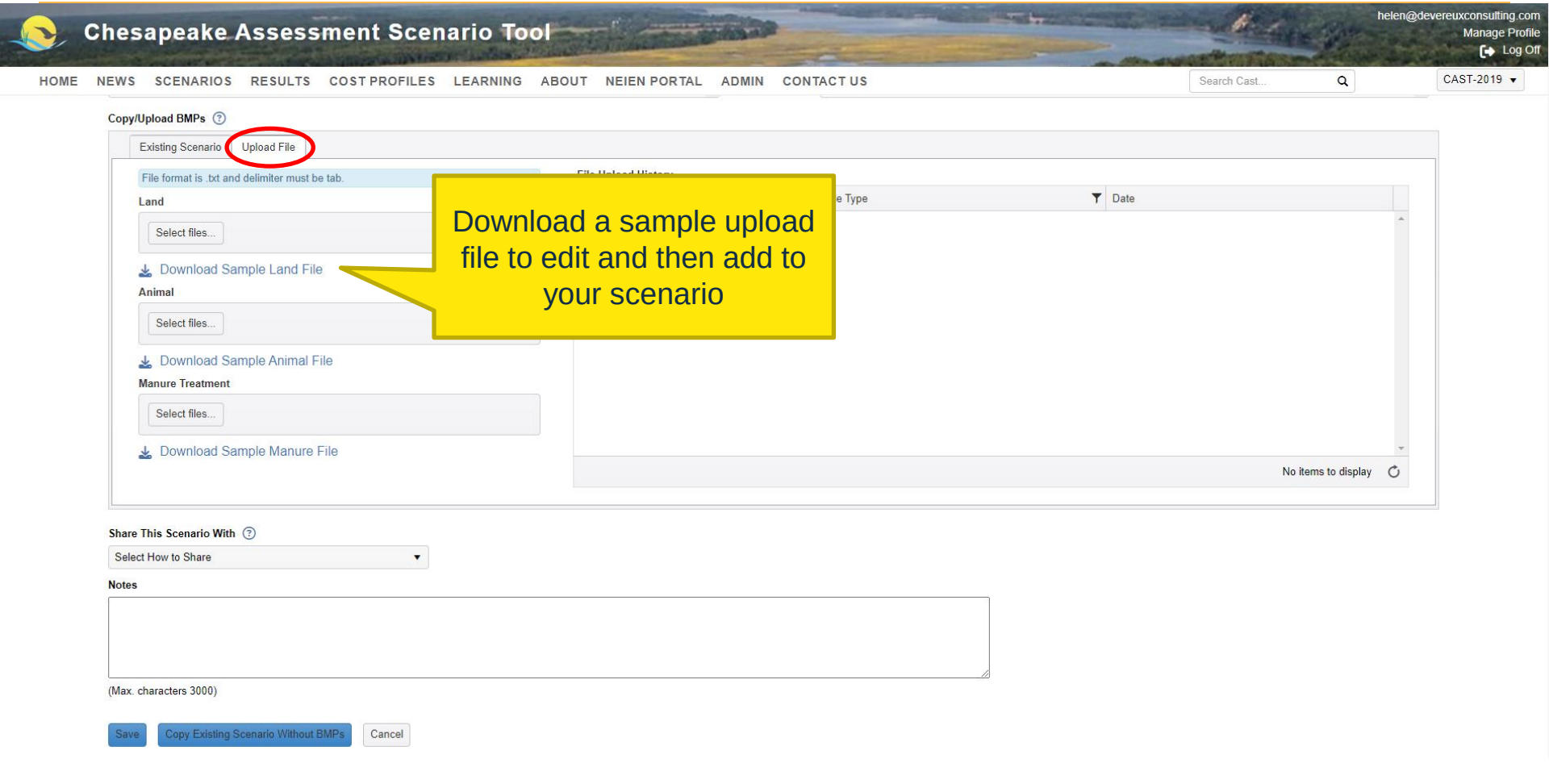
Anne Arundel, MD (CBWS Portion Only)

Copy/Upload BMPs

Scroll Down to Copy/Upload BMPs



- Select Single to copy BMPs from another scenario
- Select Sector to copy BMPs for a single sector from another scenario
- Select State to copy BMP for a single state from another scenario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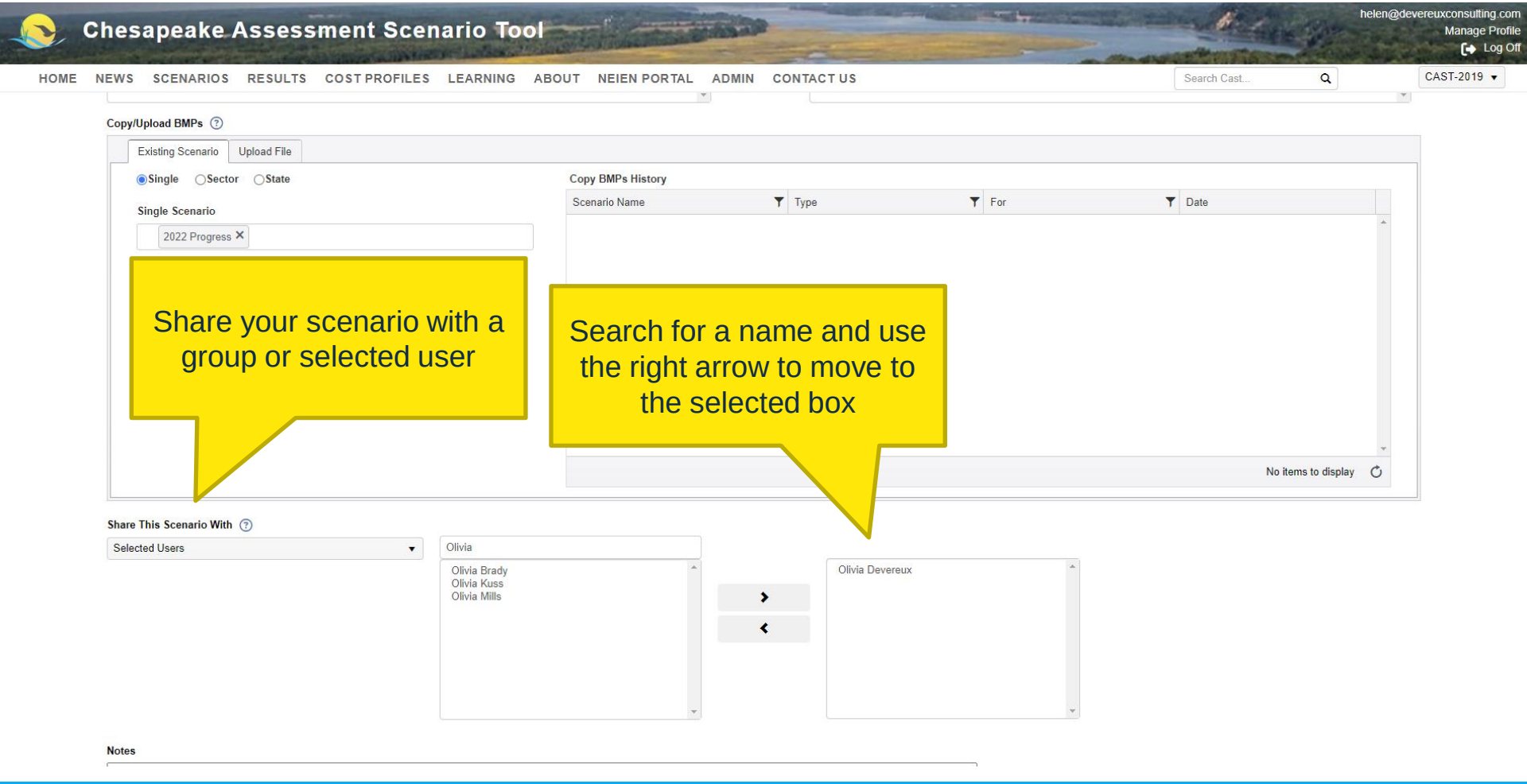
Existing Scenario
Upload File
File format is .txt and delimiter must be tab.
Land
Select files...
Download Sample Land File
Animal
Select files...
Download Sample Animal File
Manure Treatment
Select files...
Download Sample Manure File
Download a sample upload file to edit and then add to your scenario
e Type
Date
No items to display
Share This Scenario With
Select How to Share
Notes
(Max. characters 3000)
Save
Copy Existing Scenario Without BMPs
Cancel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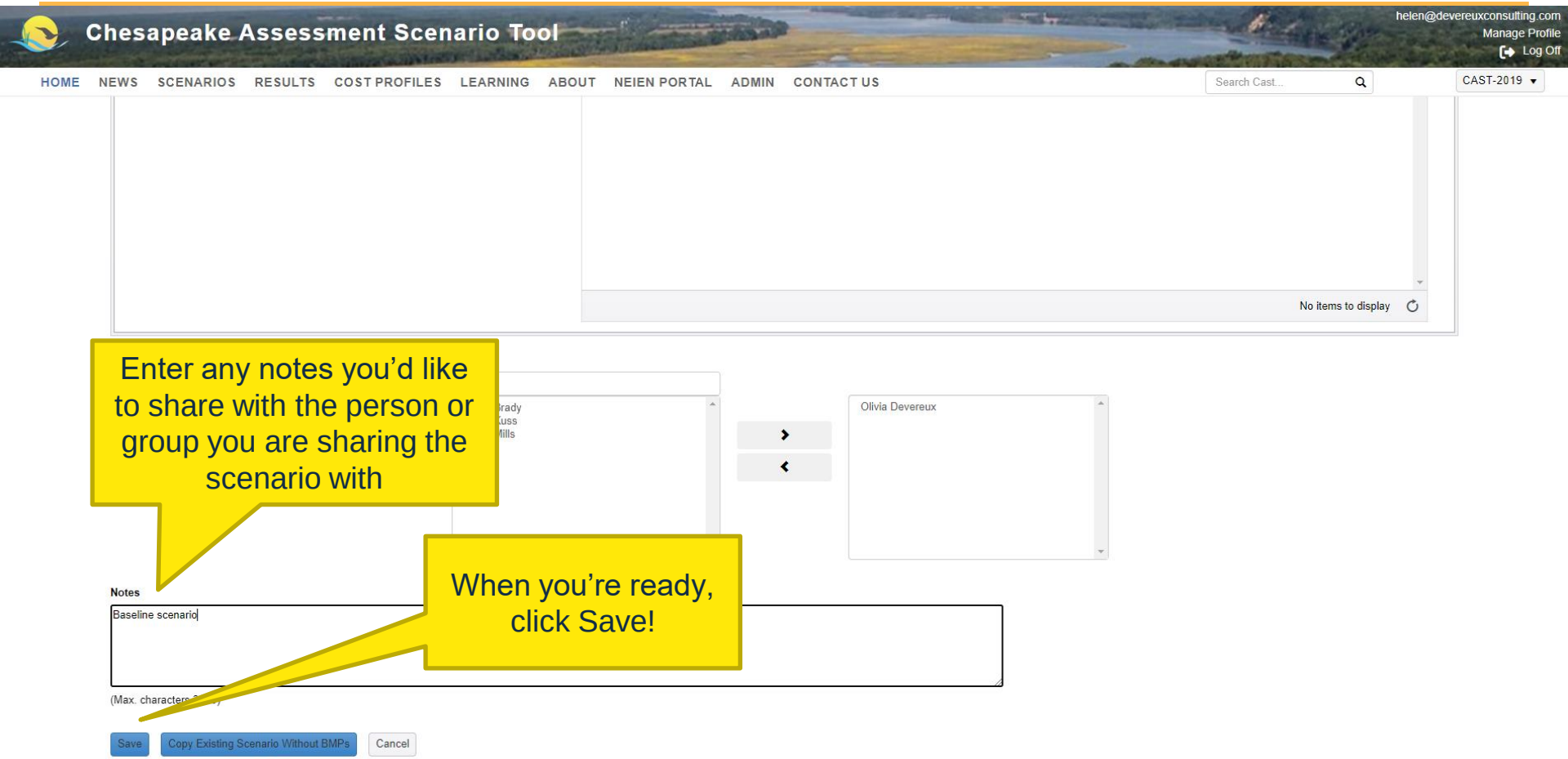
Existing Scenario
Upload File
Single
Sector
State
Single Scenario
2022 Progress
Copy BMPs History
Scenario Name
Type
For
Date
No items to display
Share your scenario with a group or selected user
Search for a name and use the right arrow to move to the selected box
Share This Scenario With
Selected Users
Olivia
Olivia Brady
Olivia Kuss
Olivia Mills
Olivia Devereux
Notes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Olivia Devereux
Enter any notes you'd like to share with the person or group you are sharing the scenario with
When you're ready, click Save!
Notes
Baseline scenario
Save
Copy Existing Scenario Without BMPs
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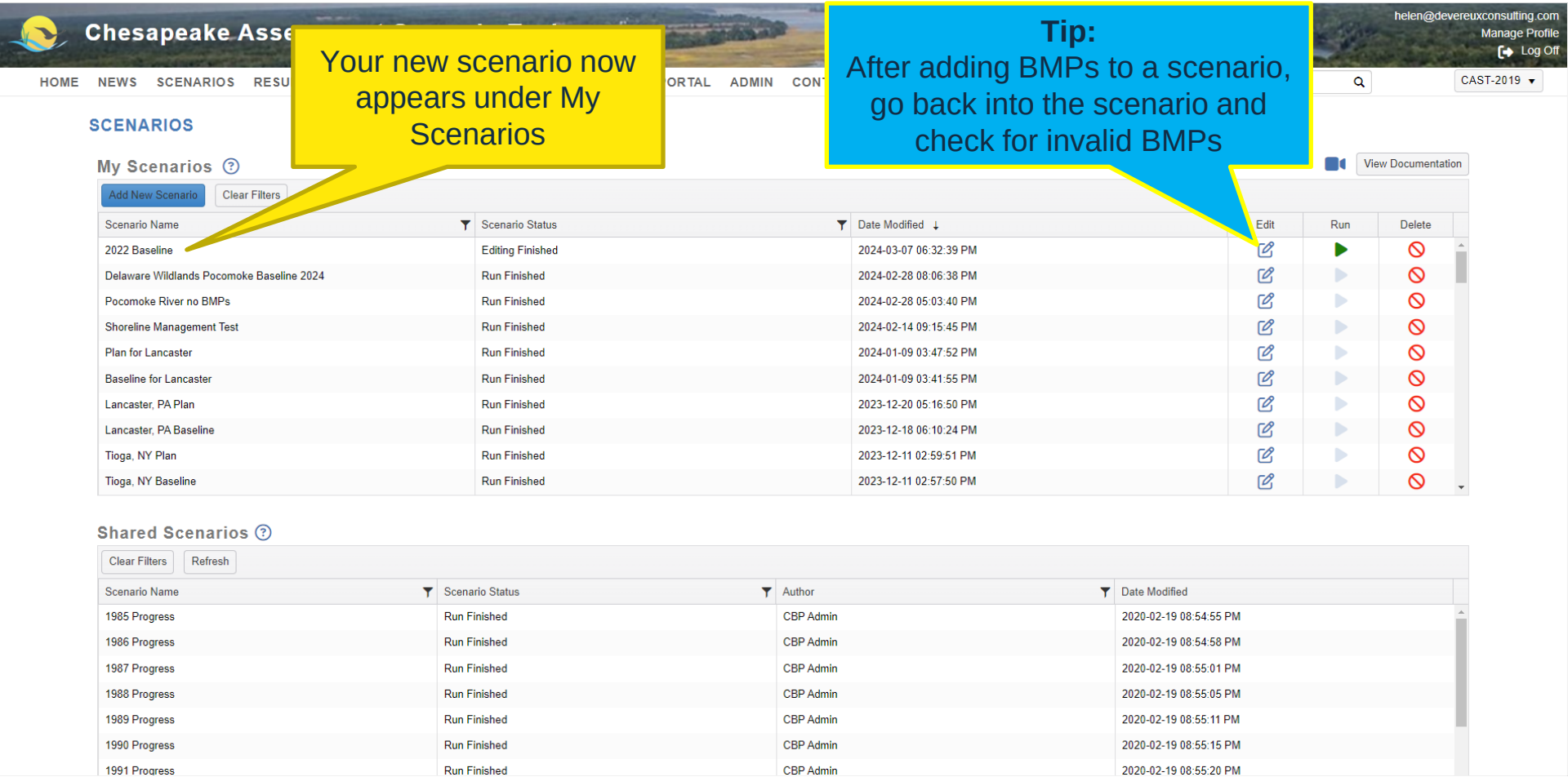
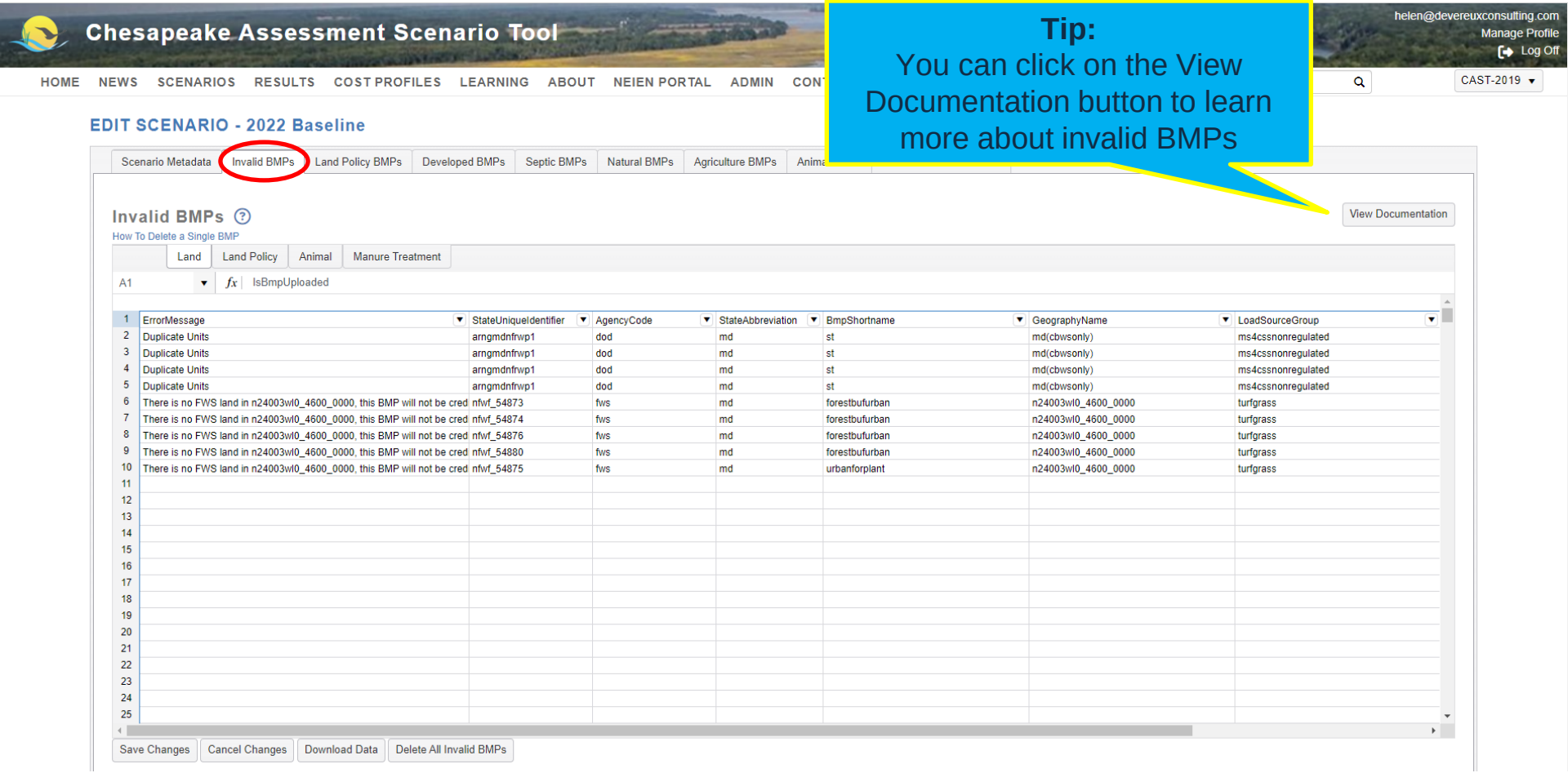


Your new scenario now appears under My Scenarios

Tip:
After adding BMPs to a scenario, go back into the scenario and check for invalid BMPs



	ErrorMessage	StateUniqueIdentifier	AgencyCode	StateAbbreviation	BmpShortname	GeographyName	LoadSourceGroup
2	Duplicate Units	arngmdnfrwp1	dod	md	st	md(cbwsonly)	ms4cssnonregulated
3	Duplicate Units	arngmdnfrwp1	dod	md	st	md(cbwsonly)	ms4cssnonregulated
4	Duplicate Units	arngmdnfrwp1	dod	md	st	md(cbwsonly)	ms4cssnonregulated
5	Duplicate Units	arngmdnfrwp1	dod	md	st	md(cbwsonly)	ms4cssnonregulated
6	There is no FWS land in n24003wl0_4600_0000, this BMP will not be cred	nfwf_54873	fws	md	forestbufurban	n24003wl0_4600_0000	turfgrass
7	There is no FWS land in n24003wl0_4600_0000, this BMP will not be cred	nfwf_54874	fws	md	forestbufurban	n24003wl0_4600_0000	turfgrass
8	There is no FWS land in n24003wl0_4600_0000, this BMP will not be cred	nfwf_54876	fws	md	forestbufurban	n24003wl0_4600_0000	turfgrass
9	There is no FWS land in n24003wl0_4600_0000, this BMP will not be cred	nfwf_54880	fws	md	forestbufurban	n24003wl0_4600_0000	turfgrass
10	There is no FWS land in n24003wl0_4600_0000, this BMP will not be cred	nfwf_54875	fws	md	urbanforplant	n24003wl0_4600_0000	turfgrass

Click Add New Scenario button to create a planning scenario

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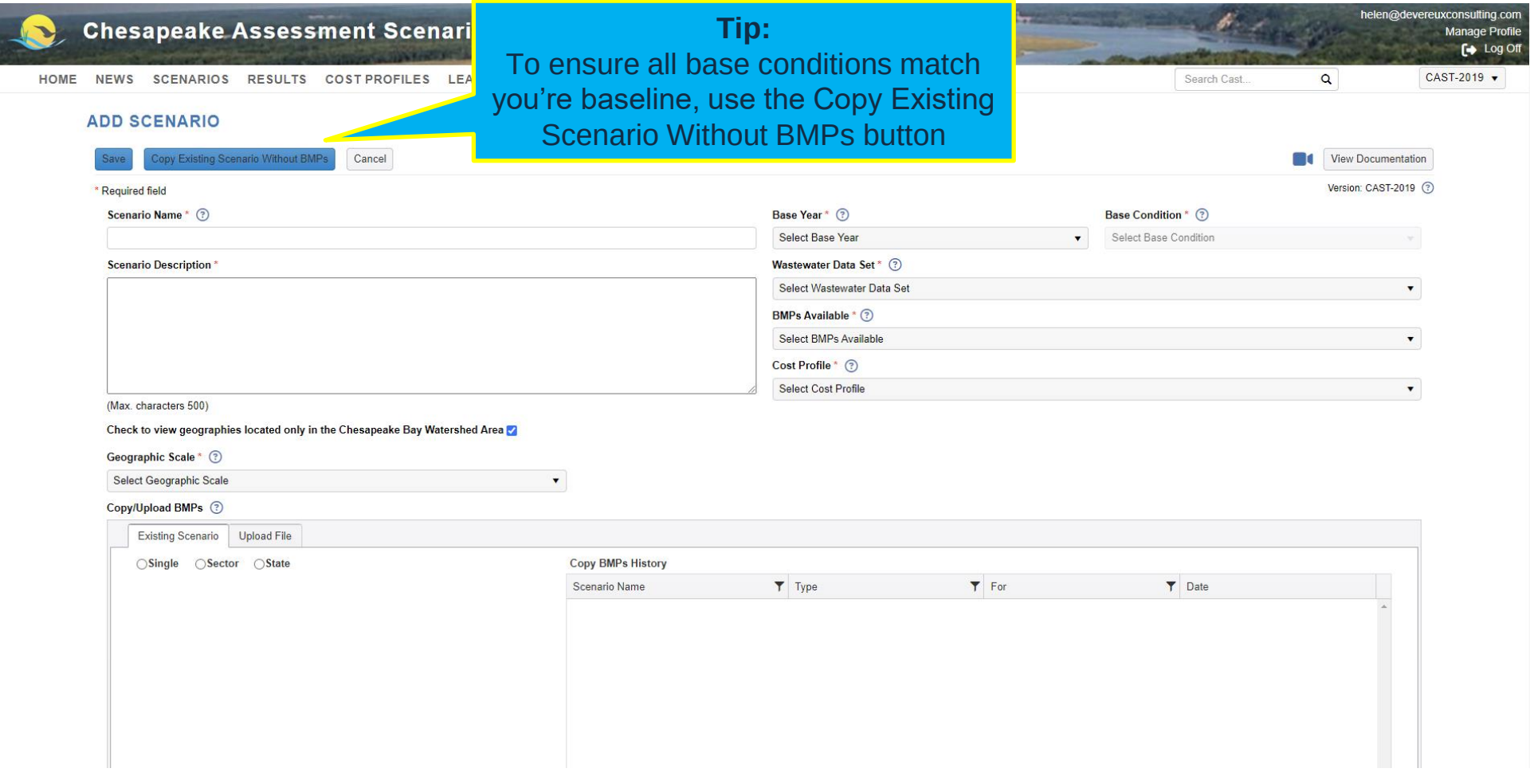
Scenario Name	Scenario Status	Date Modified ↓	Edit	Run	Delete
2022 Baseline	Editing Finished	2024-03-07 06:32:39 PM			
Delaware Wildlands Pocomoke Baseline 2024	Run Finished	2024-02-28 08:06:38 PM			
Pocomoke River no BMPs	Run Finished	2024-02-28 05:03:40 PM			
Shoreline Management Test	Run Finished	2024-02-14 09:15:45 PM			
Plan for Lancaster	Run Finished	2024-01-09 03:47:52 PM			
Baseline for Lancaster	Run Finished	2024-01-09 03:41:55 PM			
Lancaster, PA Plan	Run Finished	2023-12-20 05:16:50 PM			
Lancaster, PA Baseline	Run Finished	2023-12-18 06:10:24 PM			
Tioga, NY Plan	Run Finished	2023-12-11 02:59:51 PM			
Tioga, NY Baseline	Run Finished	2023-12-11 02:57:50 PM			

Shared Scenarios

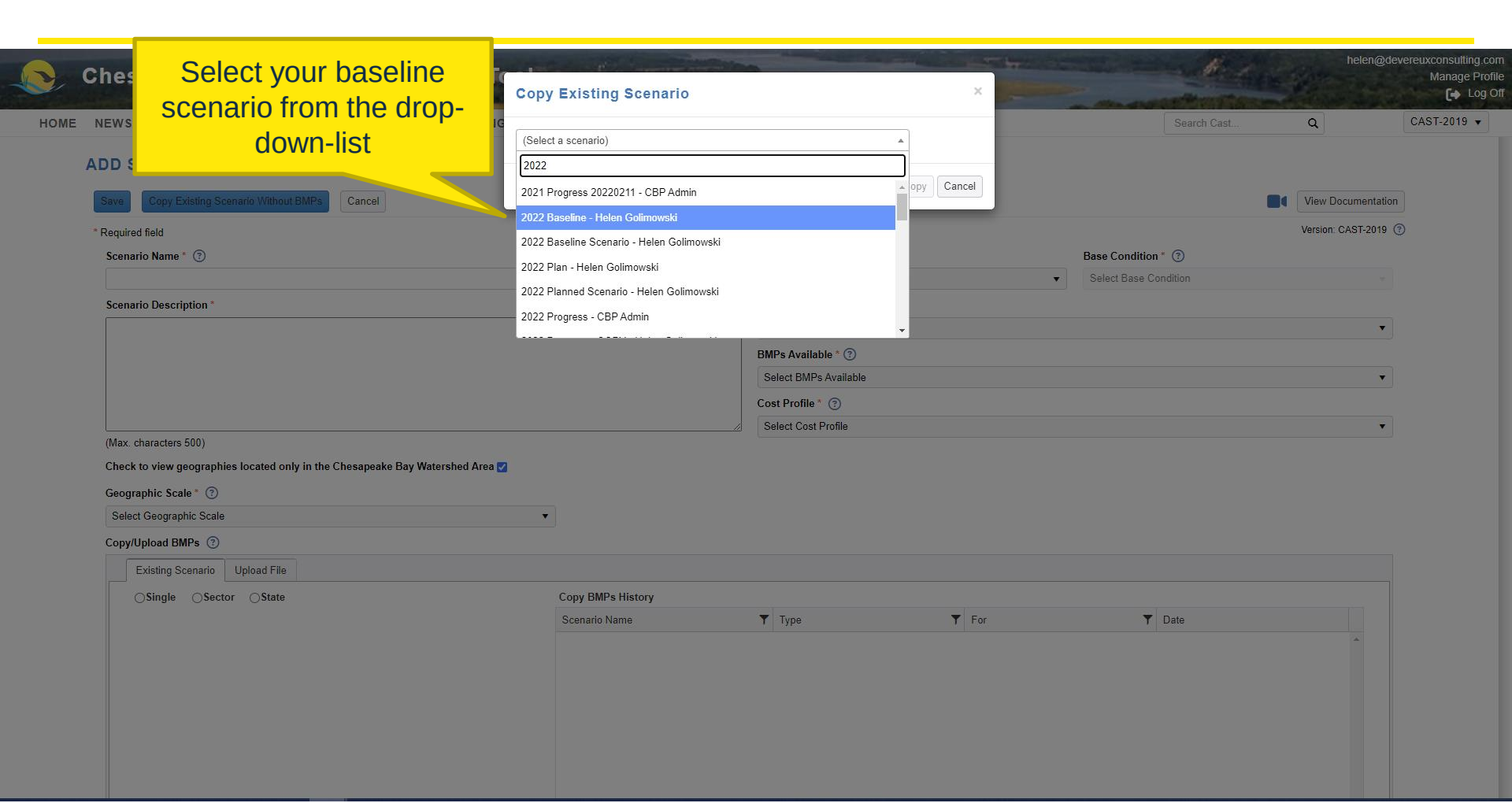
Clear Filters | Refresh

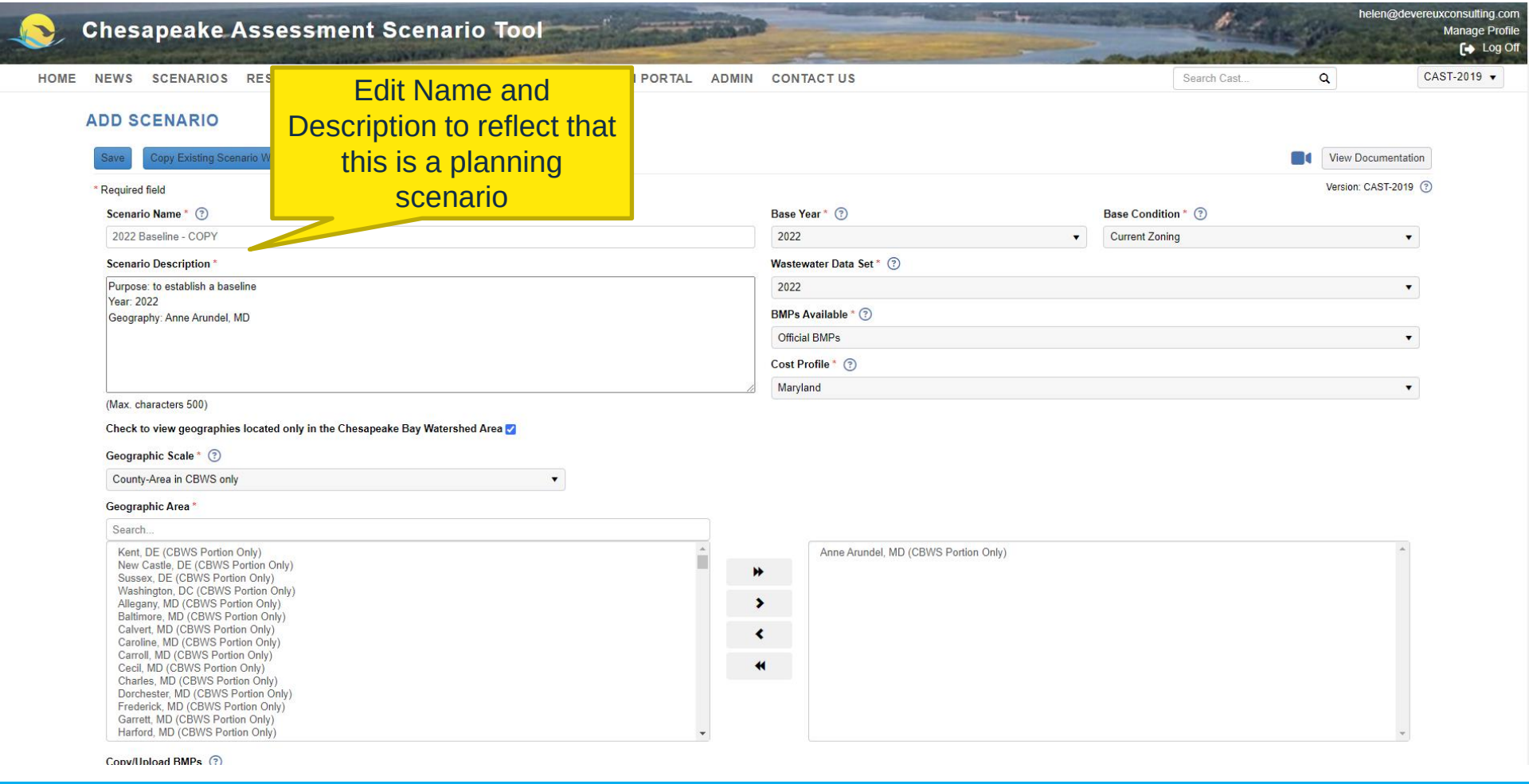
Scenario Name	Scenario Status	Author	Date Modified
1985 Progress	Run Finished	CBP Admin	2020-02-19 08:54:55 PM
1986 Progress	Run Finished	CBP Admin	2020-02-19 08:54:58 PM
1987 Progress	Run Finished	CBP Admin	2020-02-19 08:55:01 PM
1988 Progress	Run Finished	CBP Admin	2020-02-19 08:55:05 PM
1989 Progress	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



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
2021 Progress 20220211 - CBP Admin
2022 Baseline - Helen Golimowski
2022 Baseline Scenario - Helen Golimowski
2022 Plan - Helen Golimowski
2022 Planned Scenario - Helen Golimowski
2022 Progress - CBP Admin
Cancel
helen@devereuxconsulting.com
Manage Profile
Log Off
HOME
NEWS
Search Cast...
CAST-2019
Save
Copy Existing Scenario Without BMPs
Cancel
View Documentation
* Required field
Version: CAST-2019
Scenario Name *
Base Condition *
Select Base Condition
Scenario Description *
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


Chesapeake Assessment Scenario Tool
helen@devereuxconsulting.com
Manage Profile
Log Off
HOME
NEWS
SCENARIOS
RES
PORTAL
ADMIN
CONTACT US
Search Cast...
CAST-2019
Edit Name and Description to reflect that this is a planning scenario
ADD SCENARIO
Save
Copy Existing Scenario W
View Documentation
* Required field
Version: CAST-2019
Scenario Name *
2022 Baseline - COPY
Scenario Description *
Purpose: to establish a baseline
Year: 2022
Geography: Anne Arundel, MD
(Max. characters 500)
Base Year *
2022
Base Condition *
Current Zoning
Wastewater Data Set *
2022
BMPs Available *
Official BMPs
Cost Profile *
Maryland
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)
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)
Harford, MD (CBWS Portion Only)
Anne Arundel, MD (CBWS Portion Only)
Copy/Upload BMPs

ADD SCENARIO

Save | Copy Existing Scenario Without BMPs | Cancel | View Documentation

* Required field

Version: CAST-2019

Scenario Name *

2025 Planned

Scenario Description *

Purpose: to plan for 2025
Year: 2022
Geography: Anne Arundel, MD

(Max. characters 500)

Base Year *: 2022

Base Condition *: Current Zoning

Wastewater Data Set *: 2022

BMPs Available *: Official BMPs

Cost Profile *: Maryland

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

Geographic Scale *: County-Area in CBWS only

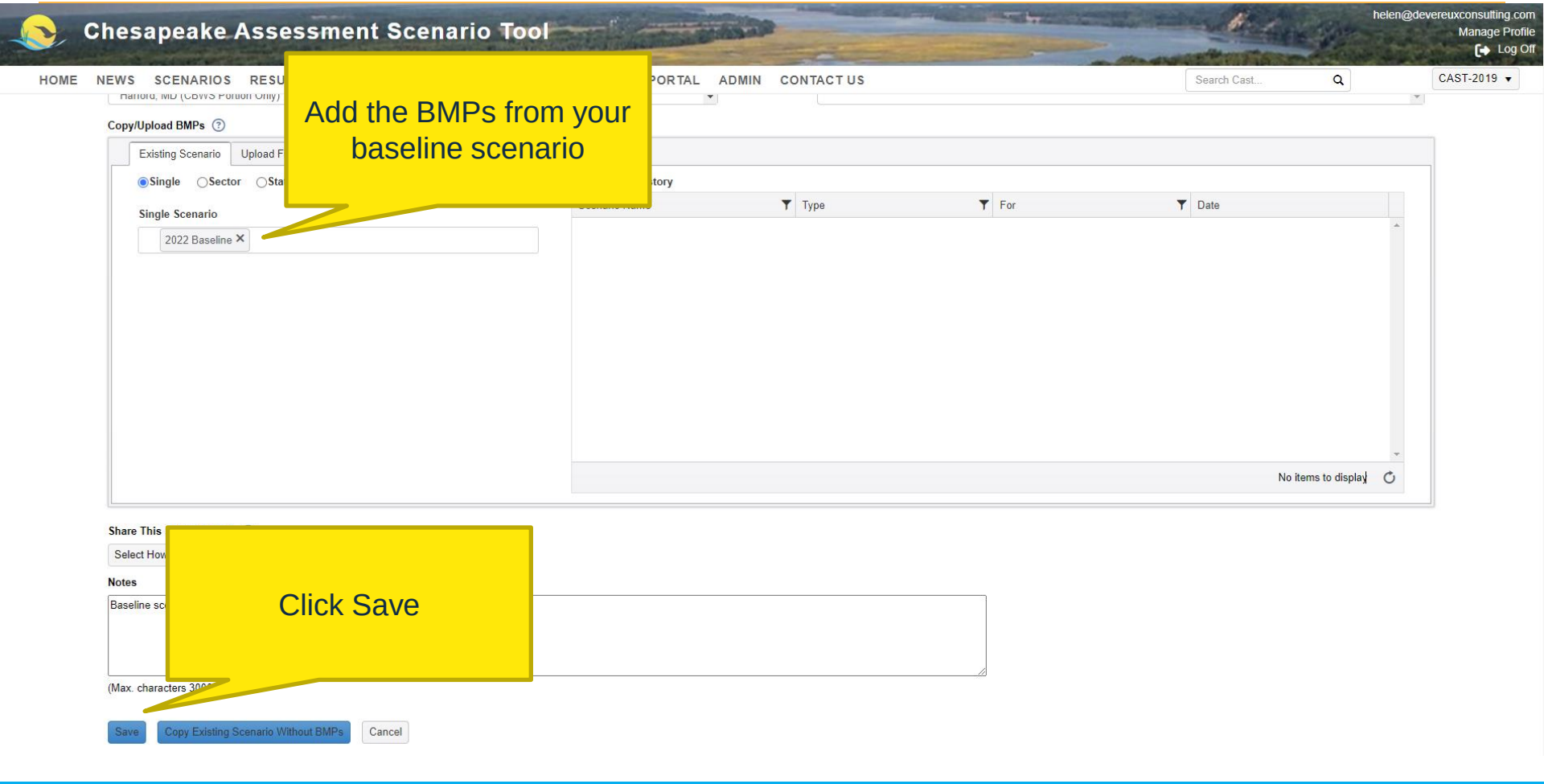
Geographic Area *

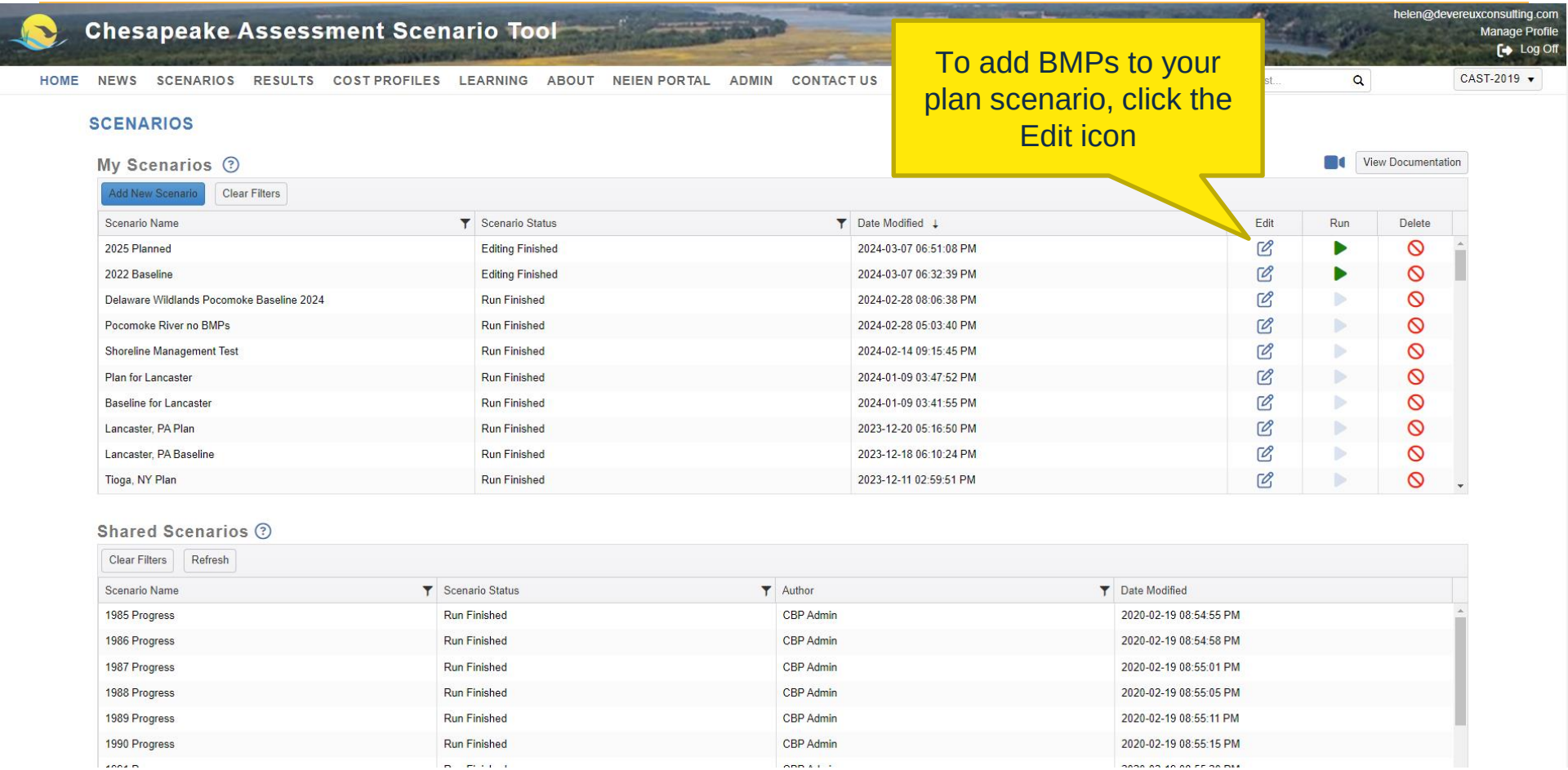
Search...

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)
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)
Harford, MD (CBWS Portion Only)

Anne Arundel, MD (CBWS Portion Only)

Copy/Upload BMPs


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
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Manage Profile
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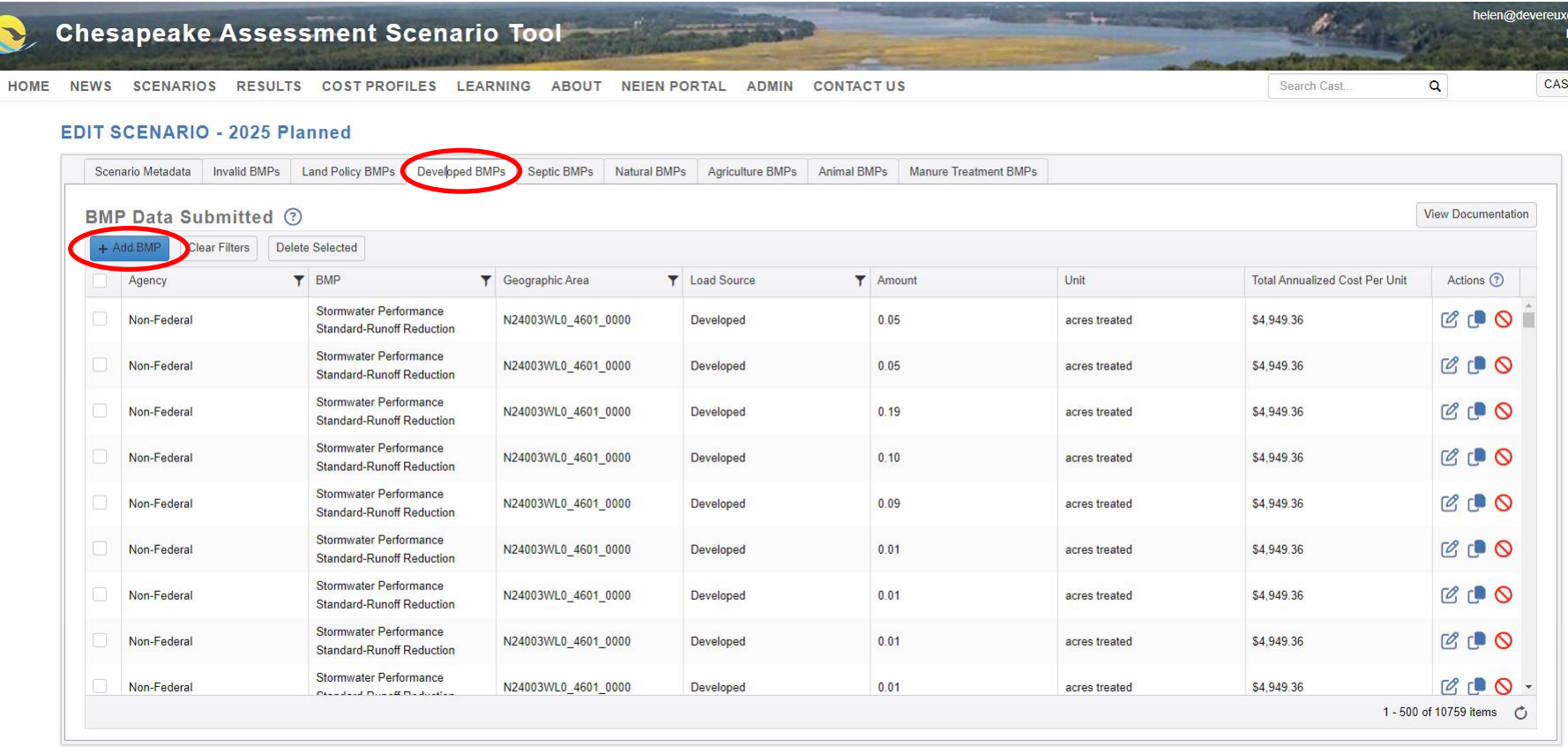
HOME
NEWS
SCENARIOS
RESULTS
COST PROFILES
LEARNING
ABOUT
NEIEN PORTAL
ADMIN
CONTACT US
CAST-2019
To add BMPs to your plan scenario, click the Edit icon
SCENARIOS
My Scenarios
View Documentation
Add New Scenario
Clear Filters
Scenario Name
Scenario Status
Date Modified
Edit
Run
Delete
2025 Planned
Editing Finished
2024-03-07 06:51:08 PM
2022 Baseline
Editing 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
Baseline for Lancaster
Run Finished
2024-01-09 03:41:55 PM
Lancaster, PA Plan
Run Finished
2023-12-20 05:16:50 PM
Lancaster, PA Baseline
Run Finished
2023-12-18 06:10:24 PM
Tioga, NY Plan
Run Finished
2023-12-11 02:59:51 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


Chesapeake Assessment Scenario Tool
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COST PROFILES
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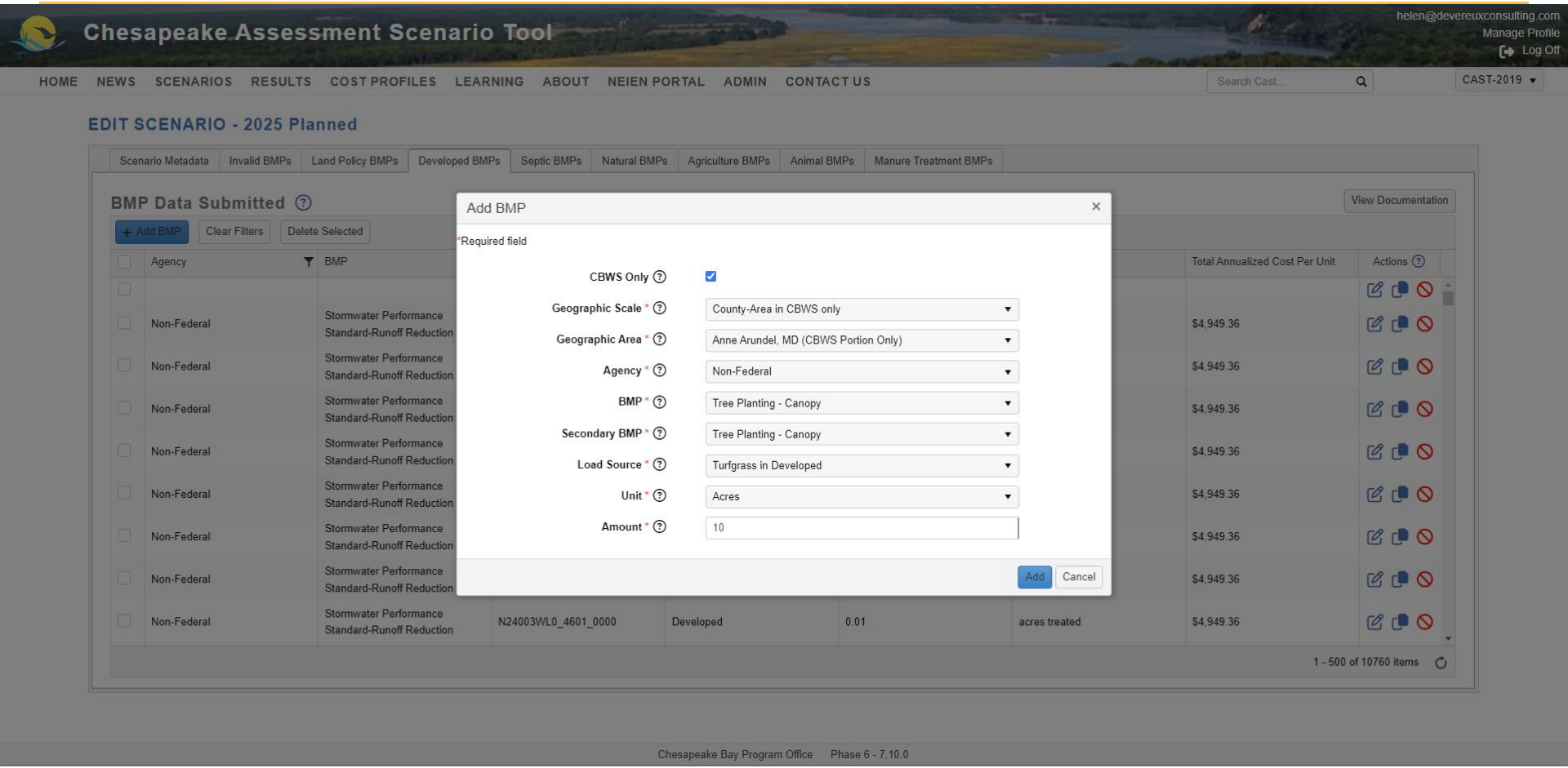
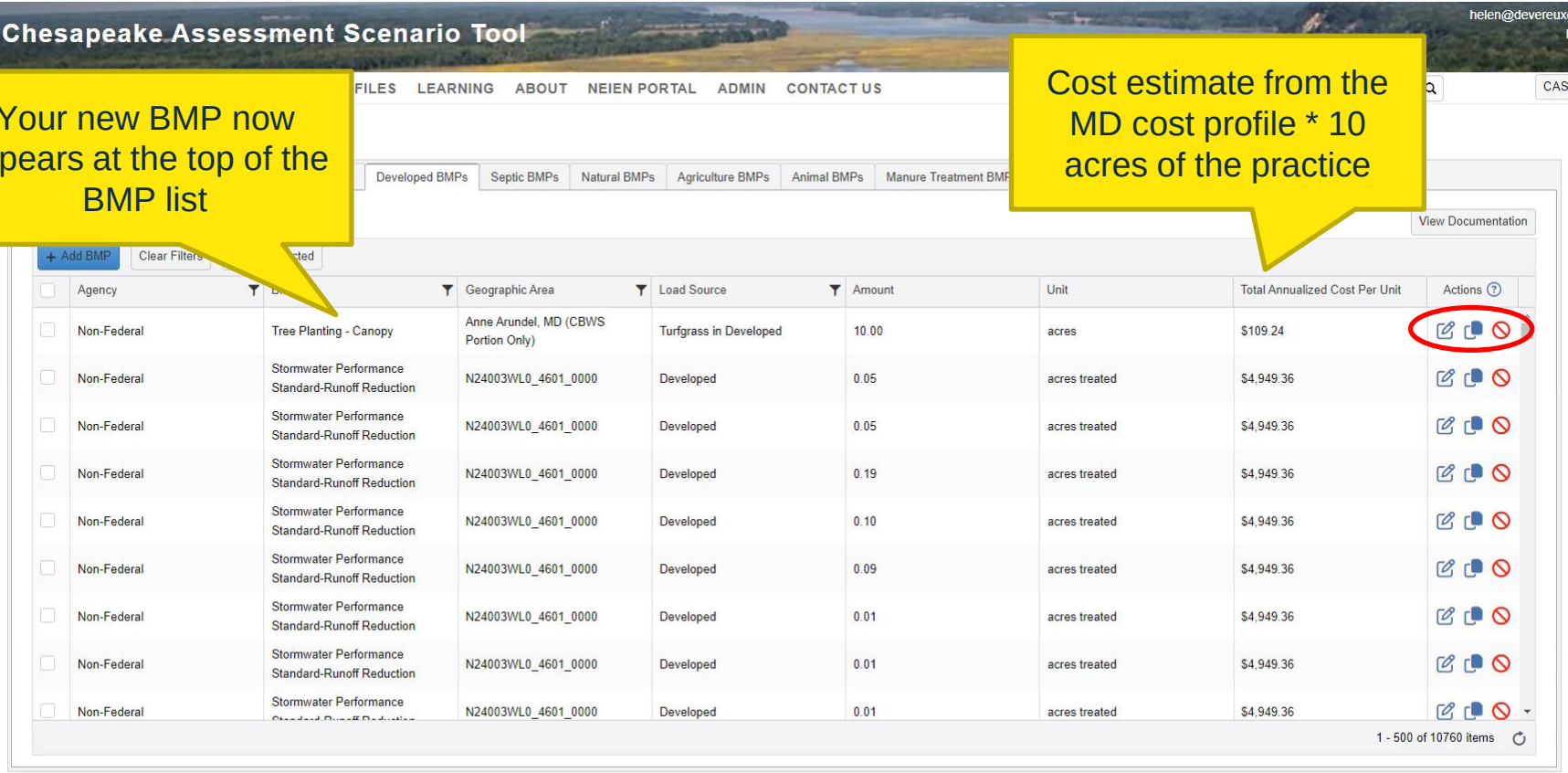
NEIEN PORTAL
ADMIN
CONTACT US
Search Cast...
CAST-2019
EDIT SCENARIO - 2025 Planned
Scenario Metadata
Invalid BMPs
Land Policy BMPs
Developed BMPs
Septic BMPs
Natural BMPs
Agriculture BMPs
Animal BMPs
Manure Treatment BMPs
BMP Data Submitted
View Documentation
+ Add BMP
Clear Filters
Delete Selected
Agency
BMP
Geographic Area
Load Source
Amount
Unit
Total Annualized Cost Per Unit
Actions
Non-Federal
Stormwater Performance Standard-Runoff Reduction
N24003WL0_4601_0000
Developed
0.05
acres treated
$4,949.36
0.19
0.10
0.09
0.01
1 - 500 of 10759 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 - 2025 Planned
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 Stormwater Performance Standard-Runoff Reduction $4,949.36
Non-Federal Stormwater Performance Standard-Runoff Reduction N24003WL0_4601_0000 Developed 0.01 acres treated $4,949.36
1 - 500 of 10760 items
Add BMP
*Required field
CBWS Only
Geographic Scale * County-Area in CBWS only
Geographic Area * Anne Arundel, MD (CBWS Portion Only)
Agency * Non-Federal
BMP * Tree Planting - Canopy
Secondary BMP * Tree Planting - Canopy
Load Source * Turfgrass in Developed
Unit * Acres
Amount * 10
Add Cancel
Chesapeake Bay Program Office Phase 6 - 7.10.0

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

Cost estimate from the MD cost profile * 10 acres of the practice



SCENARIOS

My Scenarios

View Documentation

Add New Scenario | Clear Filters

Scenario Name	Scenario Status	Date Modified	Edit	Run	Delete
2025 Planned	Editing Finished	2024-03-07 06:59:30 PM			
2022 Baseline	Editing 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			
Baseline for Lancaster	Run Finished	2024-01-09 03:41:55 PM			
Lancaster, PA Plan	Run Finished	2023-12-20 05:16:50 PM			
Lancaster, PA Baseline	Run Finished	2023-12-18 06:10:24 PM			
Tioga, NY Plan	Run Finished	2023-12-11 02:59:51 PM			

Shared Scenarios

Clear Filters | Refresh

Scenario Name	Scenario Status	Author	Date Modified
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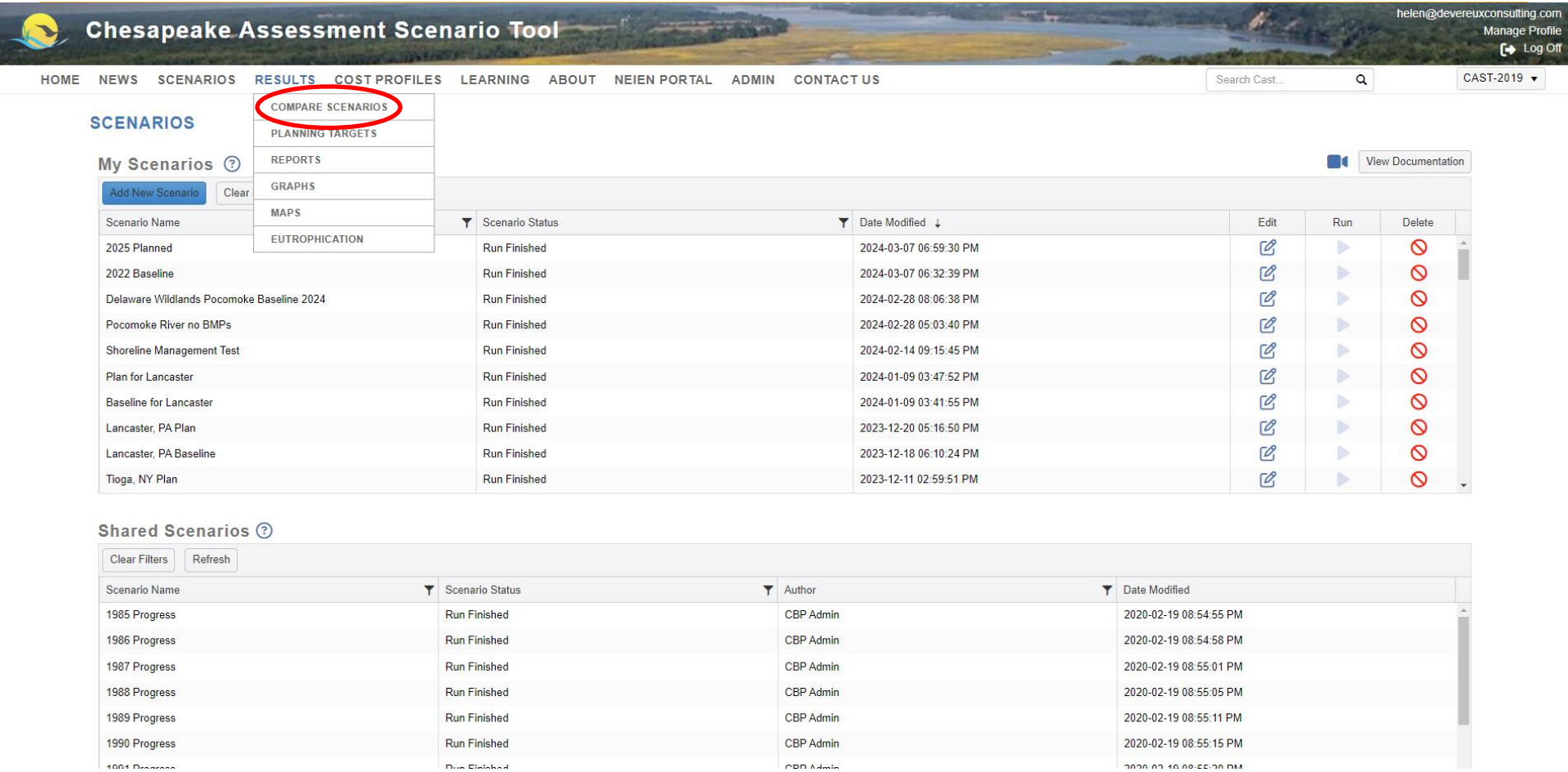
1986 Progress	Run Finished	CBP Admin	2020-02-19 08:54:58 PM
1987 Progress	Run Finished	CBP Admin	2020-02-19 08:55:01 PM
1988 Progress	Run Finished	CBP Admin	2020-02-19 08:55:05 PM
1989 Progress	Run Finished	CBP Admin	2020-02-19 08:55:11 PM
1990 Progress	Run Finished	CBP Admin	2020-02-19 08:55:15 PM
1991 Progress	Run Finished	CBP Admin	2020-02-19 08:55:20 PM

3

Reports

What types of reports are available and how to run them


Chesapeake Assessment Scenario Tool
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CAST-2019
COMPARE SCENARIOS
PLANNING TARGETS
REPORTS
GRAPHS
MAPS
EUTROPHICATION
SCENARIOS
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Add New Scenario
Clear
Scenario Name
Scenario Status
Date Modified
Edit
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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
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Run Finished
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Baseline for Lancaster
Run Finished
2024-01-09 03:41:55 PM
Lancaster, PA Plan
Run Finished
2023-12-20 05:16:50 PM
Lancaster, PA Baseline
Run Finished
2023-12-18 06:10:24 PM
Tioga, NY Plan
Run Finished
2023-12-11 02:59:51 PM
Shared Scenarios
Clear Filters
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Scenario Name
Scenario Status
Author
Date Modified
1985 Progress
Run Finished
CBP Admin
2020-02-19 08:54:55 PM
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1990 Progress
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CBP Admin
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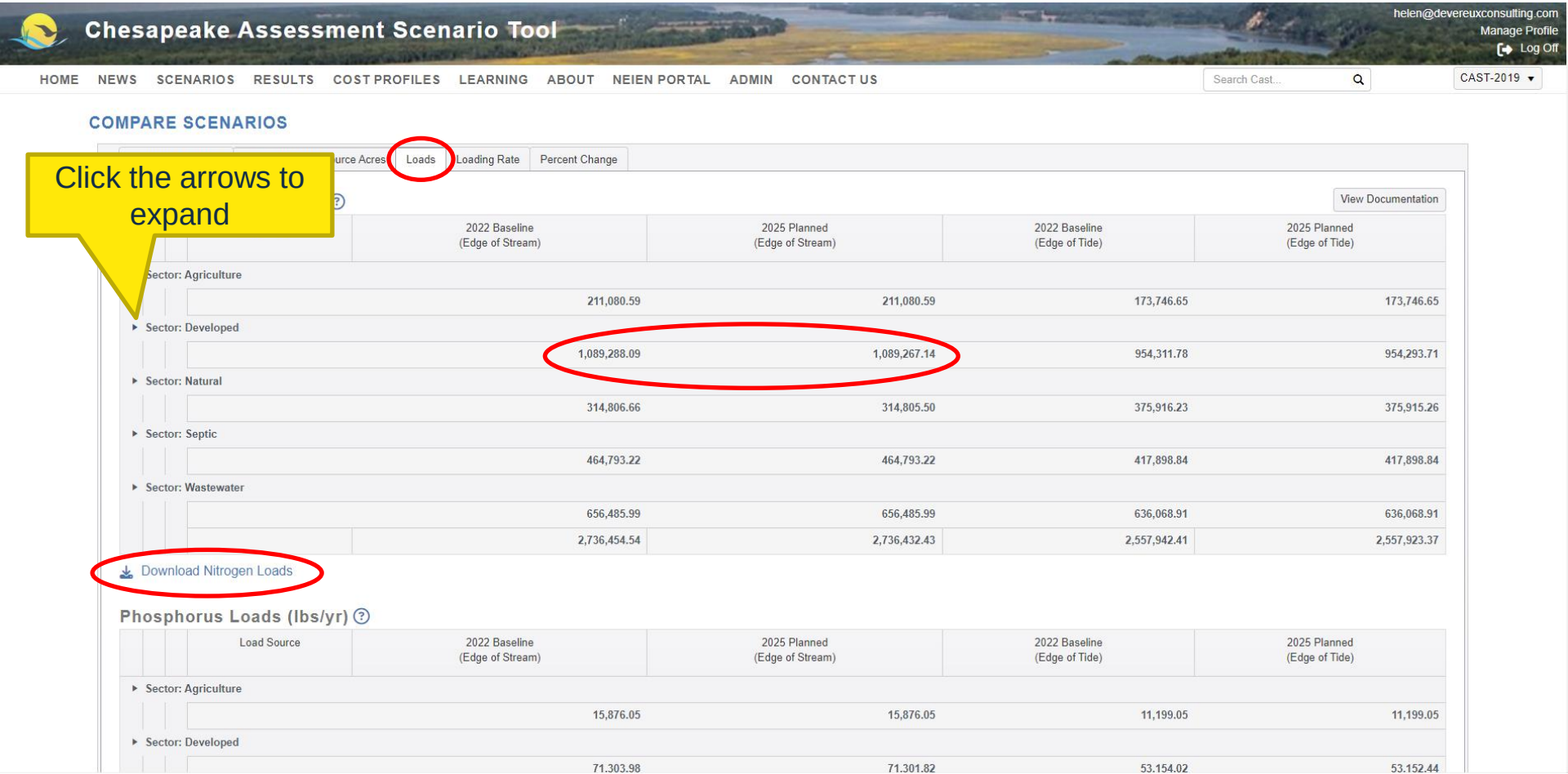
Chesapeake Assessment Scenario Tool
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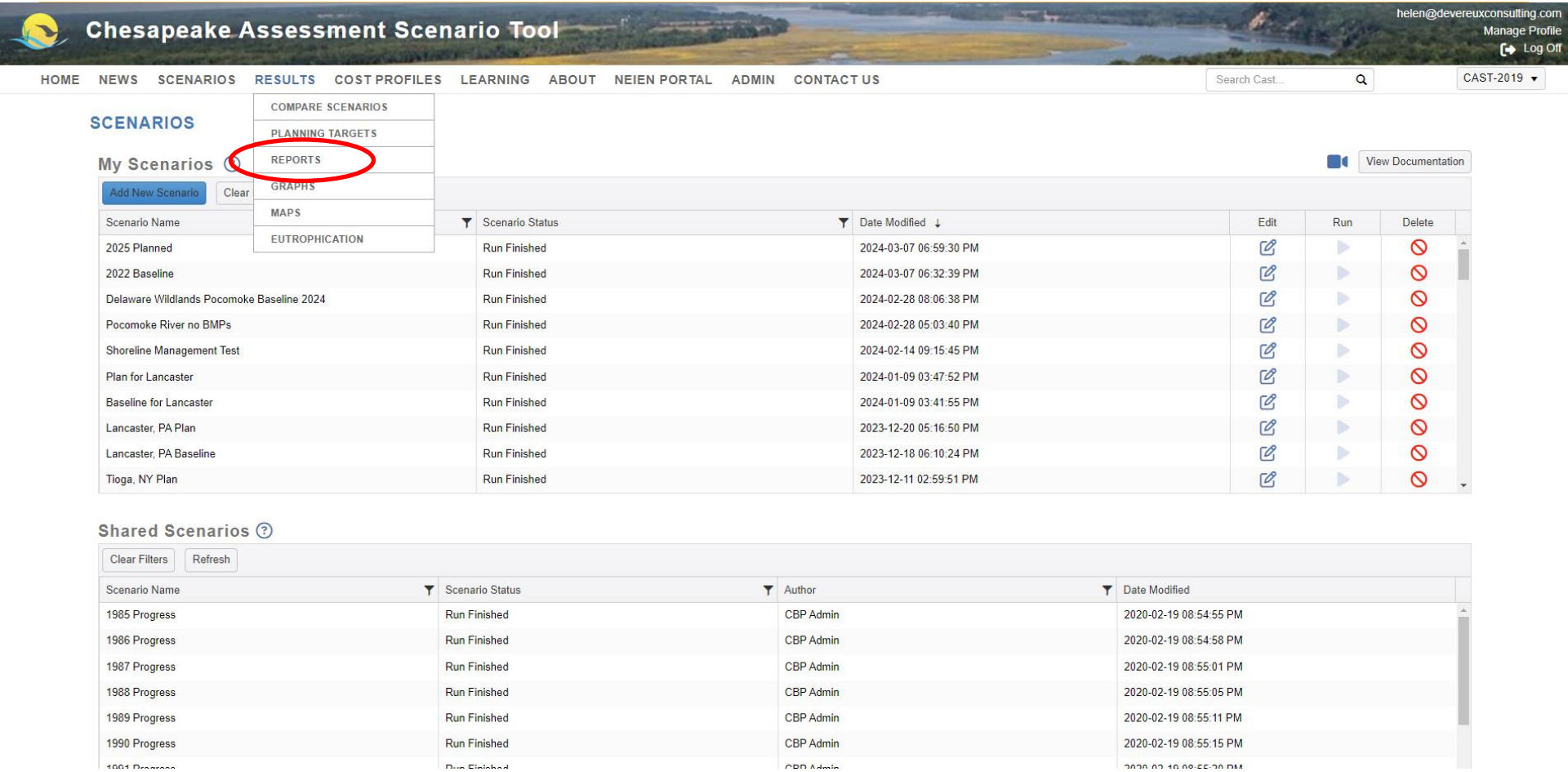
HOME NEWS SCENARIOS RESULTS COST PROFILES LEARNING ABOUT NEIEN PORTAL ADMIN CONTACT US
Search Cast...
CAST-2019
COMPARE SCENARIOS
Click the arrows to expand
urce Acres
Loads
Loading Rate
Percent Change
View Documentation
2022 Baseline (Edge of Stream)
2025 Planned (Edge of Stream)
2022 Baseline (Edge of Tide)
2025 Planned (Edge of Tide)
Sector: Agriculture
211,080.59
211,080.59
173,746.65
173,746.65
Sector: Developed
1,089,288.09
1,089,267.14
954,311.78
954,293.71
Sector: Natural
314,806.66
314,805.50
375,916.23
375,915.26
Sector: Septic
464,793.22
464,793.22
417,898.84
417,898.84
Sector: Wastewater
656,485.99
656,485.99
636,068.91
636,068.91
2,736,454.54
2,736,432.43
2,557,942.41
2,557,923.37
Download Nitrogen Loads
Phosphorus Loads (lbs/yr)
Load Source
2022 Baseline (Edge of Stream)
2025 Planned (Edge of Stream)
2022 Baseline (Edge of Tide)
2025 Planned (Edge of Tide)
Sector: Agriculture
15,876.05
15,876.05
11,199.05
11,199.05
Sector: Developed
71,303.98
71,301.82
53,154.02
53,152.44

Sector: Developed

AgencyType: Non Federal

Agency: Non-Federal

CSS Buildings and Other	0.00	0.00	0.00	0.00
CSS Construction	0.00	0.00	0.00	0.00
CSS Roads	0.00	0.00	0.00	0.00
CSS Tree Canopy over Impervious	0.00	0.00	0.00	0.00
CSS Tree Canopy over Turf Grass	0.00	0.00	0.00	0.00
CSS Turf Grass	0.00	0.00	0.00	0.00
MS4 Buildings and Other	321,921.28	321,921.28	279,871.23	279,871.23
MS4 Roads	115,571.99	115,571.99	101,071.03	101,071.03
MS4 Tree Canopy over Impervious	205,390.63	205,390.63	183,746.83	183,746.83
MS4 Tree Canopy over Turf Grass	122,648.50	122,713.77	110,080.95	110,137.35
MS4 Turf Grass	290,864.14	290,778.47	251,748.45	251,674.41
Non-Regulated Buildings and Other	4,029.53	4,029.53	3,353.68	3,353.68
Non-Regulated Roads	1,110.17	1,110.17	923.99	923.99
Non-Regulated Tree Canopy over Impervious	2,006.51	2,006.51	1,665.57	1,665.57
Non-Regulated Tree Canopy over Turf Grass	6,841.39	6,843.10	5,971.81	5,973.20
Non-Regulated Turf Grass	7,643.39	7,641.13	6,198.23	6,196.41
Regulated Construction	11,260.57	11,260.57	9,680.00	9,680.00
	1,089,288.09	1,089,267.14	954,311.78	954,293.71


Chesapeake Assessment Scenario Tool
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View Documentation
Add New Scenario
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Scenario Name
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Date Modified
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2025 Planned
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Shared Scenarios
Clear Filters
Refresh
Scenario Name
Scenario Status
Author
Date Modified
1985 Progress
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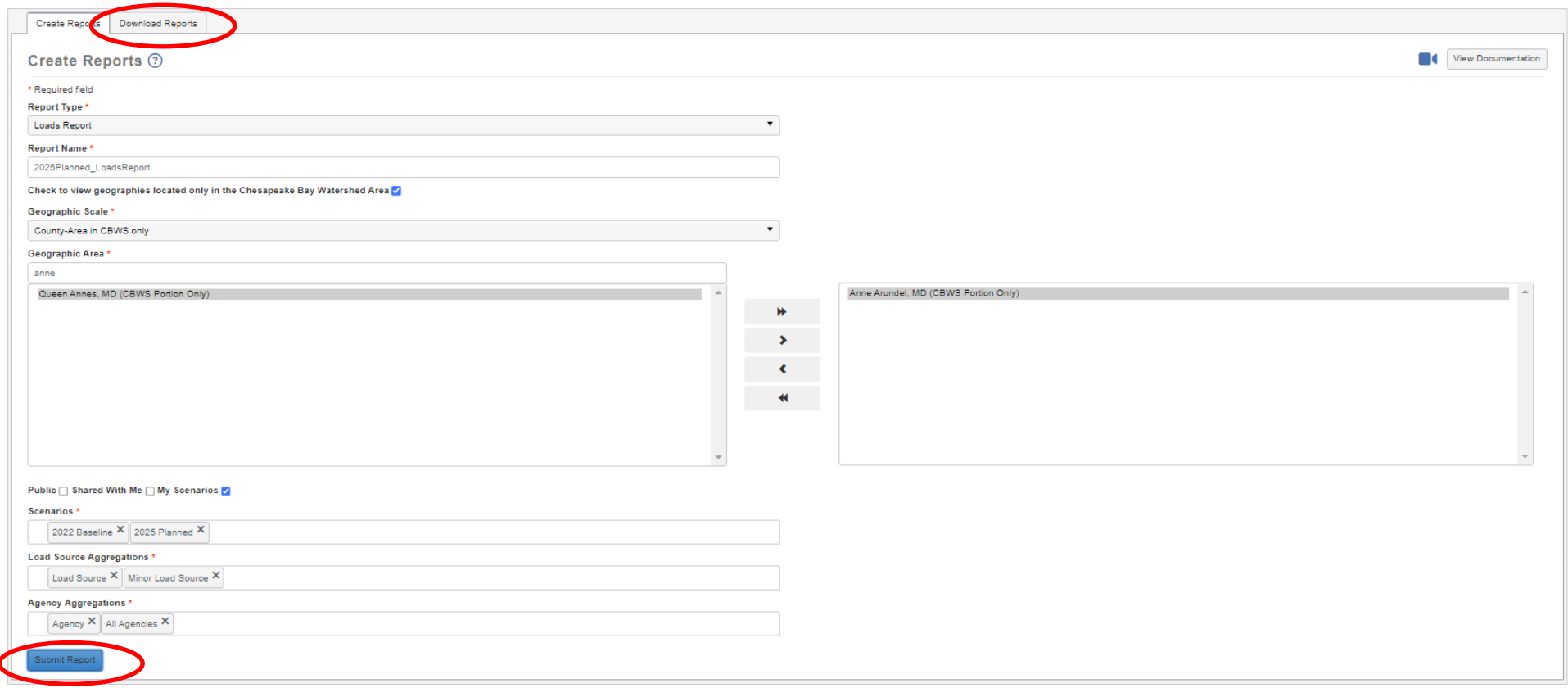
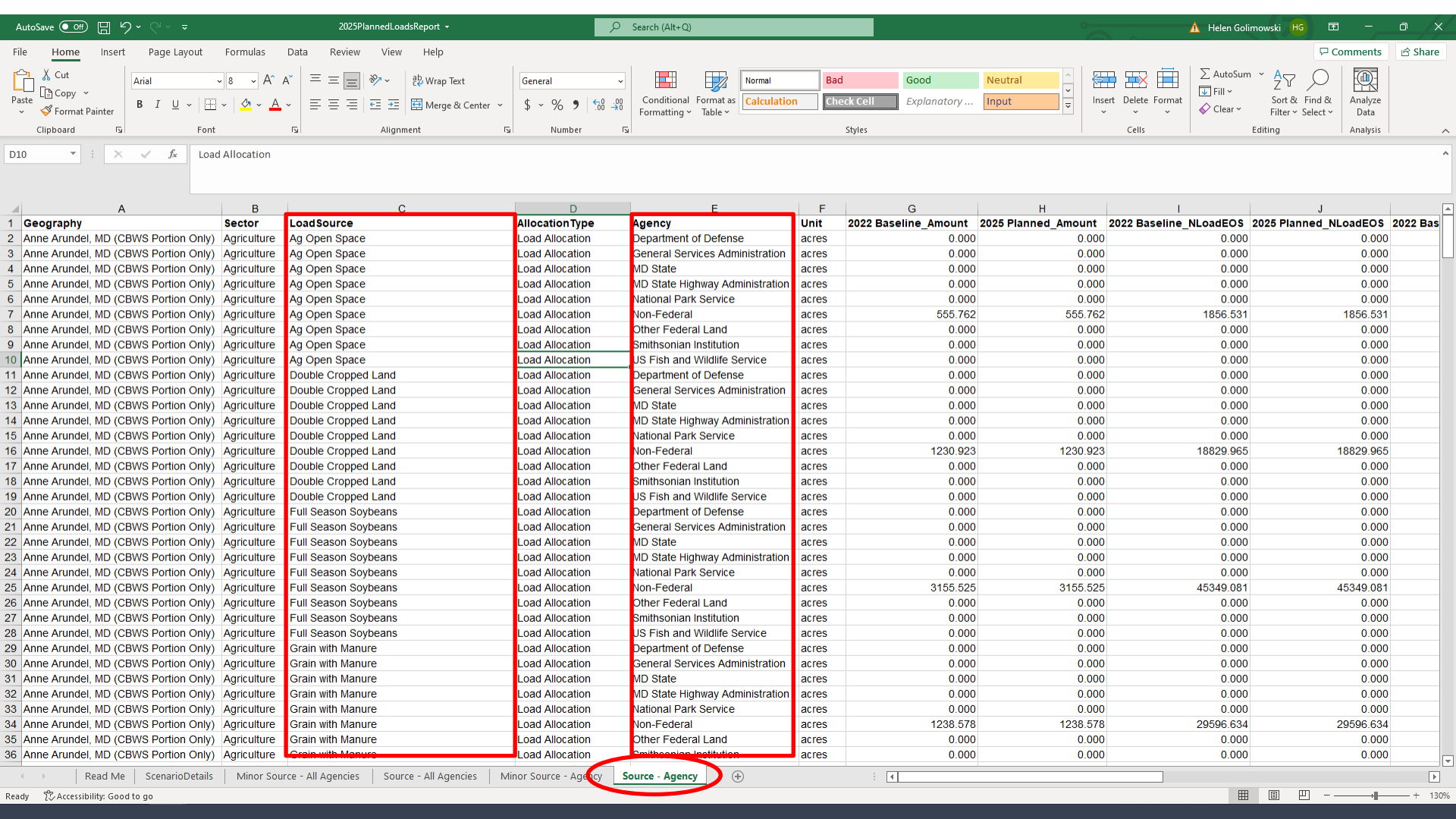
CBP Admin
2020-02-19 08:54:55 PM
1986 Progress
Run Finished
CBP Admin
2020-02-19 08:54:58 PM
1987 Progress
Run Finished
CBP Admin
2020-02-19 08:55:01 PM
1988 Progress
Run Finished
CBP Admin
2020-02-19 08:55:05 PM
1989 Progress
Run Finished
CBP Admin
2020-02-19 08:55:11 PM
1990 Progress
Run Finished
CBP Admin
2020-02-19 08:55:15 PM

Reports

- Atmospheric Deposition Report
- Base Conditions Report
- BMP Input Files
- BMP Submitted vs. Credited Report
- BMP Summary Report
- Loads Per Unit
- Loads Report
- Quick Results Report
- Wastewater Report

REPORTS


Create Reports
Download Reports
Create Reports
View Documentation
* Required field
Report Type *
Loads Report
Report Name *
2025Planned_LoadsReport
Check to view geographies located only in the Chesapeake Bay Watershed Area
Geographic Scale *
County-Area in CBWS only
Geographic Area *
anne
Queen Annes, MD (CBWS Portion Only)
Anne Arundel, MD (CBWS Portion Only)
Public
Shared With Me
My Scenarios
Scenarios *
2022 Baseline
2025 Planned
Load Source Aggregations *
Load Source
Minor Load Source
Agency Aggregations *
Agency
All Agencies
Submit Report



AutoSave Off | 2025PlannedLoadsReport | Search (Alt+Q) | Helen Golimowski HG

File Home Insert Page Layout Formulas Data Review View Help | Comments | Share

Paste | Cut | Copy | Format Painter | Clipboard

Arial | 8 | Font

Wrap Text | Merge & Center | Alignment

General | Number

Conditional Formatting | Format as Table | Normal | Bad | Good | Neutral | Calculation | Check Cell | Explanatory ... | Input | Styles

Insert | Delete | Format | Cells

AutoSum | Fill | Clear | Sort & Filter | Find & Select | Editing

Analyze Data | Analysis

D10 | Load Allocation

	A	B	C	D	E	F	G	H	I	J	
1	Geography	Sector	LoadSource	AllocationType	Agency	Unit	2022 Baseline_Amount	2025 Planned_Amount	2022 Baseline_NLoadEOS	2025 Planned_NLoadEOS	2022 Bas
2	Anne Arundel, MD (CBWS Portion Only)	Agriculture	Ag Open Space	Load Allocation	Department of Defense	acres	0.000	0.000	0.000	0.000	
3	Anne Arundel, MD (CBWS Portion Only)	Agriculture	Ag Open Space	Load Allocation	General Services Administration	acres	0.000	0.000	0.000	0.000	
4	Anne Arundel, MD (CBWS Portion Only)	Agriculture	Ag Open Space	Load Allocation	MD State	acres	0.000	0.000	0.000	0.000	
5	Anne Arundel, MD (CBWS Portion Only)	Agriculture	Ag Open Space	Load Allocation	MD State Highway Administration	acres	0.000	0.000	0.000	0.000	
6	Anne Arundel, MD (CBWS Portion Only)	Agriculture	Ag Open Space	Load Allocation	National Park Service	acres	0.000	0.000	0.000	0.000	
7	Anne Arundel, MD (CBWS Portion Only)	Agriculture	Ag Open Space	Load Allocation	Non-Federal	acres	555.762	555.762	1856.531	1856.531	
8	Anne Arundel, MD (CBWS Portion Only)	Agriculture	Ag Open Space	Load Allocation	Other Federal Land	acres	0.000	0.000	0.000	0.000	
9	Anne Arundel, MD (CBWS Portion Only)	Agriculture	Ag Open Space	Load Allocation	Smithsonian Institution	acres	0.000	0.000	0.000	0.000	
10	Anne Arundel, MD (CBWS Portion Only)	Agriculture	Ag Open Space	Load Allocation	US Fish and Wildlife Service	acres	0.000	0.000	0.000	0.000	
11	Anne Arundel, MD (CBWS Portion Only)	Agriculture	Double Cropped Land	Load Allocation	Department of Defense	acres	0.000	0.000	0.000	0.000	
12	Anne Arundel, MD (CBWS Portion Only)	Agriculture	Double Cropped Land	Load Allocation	General Services Administration	acres	0.000	0.000	0.000	0.000	
13	Anne Arundel, MD (CBWS Portion Only)	Agriculture	Double Cropped Land	Load Allocation	MD State	acres	0.000	0.000	0.000	0.000	
14	Anne Arundel, MD (CBWS Portion Only)	Agriculture	Double Cropped Land	Load Allocation	MD State Highway Administration	acres	0.000	0.000	0.000	0.000	
15	Anne Arundel, MD (CBWS Portion Only)	Agriculture	Double Cropped Land	Load Allocation	National Park Service	acres	0.000	0.000	0.000	0.000	
16	Anne Arundel, MD (CBWS Portion Only)	Agriculture	Double Cropped Land	Load Allocation	Non-Federal	acres	1230.923	1230.923	18829.965	18829.965	
17	Anne Arundel, MD (CBWS Portion Only)	Agriculture	Double Cropped Land	Load Allocation	Other Federal Land	acres	0.000	0.000	0.000	0.000	
18	Anne Arundel, MD (CBWS Portion Only)	Agriculture	Double Cropped Land	Load Allocation	Smithsonian Institution	acres	0.000	0.000	0.000	0.000	
19	Anne Arundel, MD (CBWS Portion Only)	Agriculture	Double Cropped Land	Load Allocation	US Fish and Wildlife Service	acres	0.000	0.000	0.000	0.000	
20	Anne Arundel, MD (CBWS Portion Only)	Agriculture	Full Season Soybeans	Load Allocation	Department of Defense	acres	0.000	0.000	0.000	0.000	
21	Anne Arundel, MD (CBWS Portion Only)	Agriculture	Full Season Soybeans	Load Allocation	General Services Administration	acres	0.000	0.000	0.000	0.000	
22	Anne Arundel, MD (CBWS Portion Only)	Agriculture	Full Season Soybeans	Load Allocation	MD State	acres	0.000	0.000	0.000	0.000	
23	Anne Arundel, MD (CBWS Portion Only)	Agriculture	Full Season Soybeans	Load Allocation	MD State Highway Administration	acres	0.000	0.000	0.000	0.000	
24	Anne Arundel, MD (CBWS Portion Only)	Agriculture	Full Season Soybeans	Load Allocation	National Park Service	acres	0.000	0.000	0.000	0.000	
25	Anne Arundel, MD (CBWS Portion Only)	Agriculture	Full Season Soybeans	Load Allocation	Non-Federal	acres	3155.525	3155.525	45349.081	45349.081	
26	Anne Arundel, MD (CBWS Portion Only)	Agriculture	Full Season Soybeans	Load Allocation	Other Federal Land	acres	0.000	0.000	0.000	0.000	
27	Anne Arundel, MD (CBWS Portion Only)	Agriculture	Full Season Soybeans	Load Allocation	Smithsonian Institution	acres	0.000	0.000	0.000	0.000	
28	Anne Arundel, MD (CBWS Portion Only)	Agriculture	Full Season Soybeans	Load Allocation	US Fish and Wildlife Service	acres	0.000	0.000	0.000	0.000	
29	Anne Arundel, MD (CBWS Portion Only)	Agriculture	Grain with Manure	Load Allocation	Department of Defense	acres	0.000	0.000	0.000	0.000	
30	Anne Arundel, MD (CBWS Portion Only)	Agriculture	Grain with Manure	Load Allocation	General Services Administration	acres	0.000	0.000	0.000	0.000	
31	Anne Arundel, MD (CBWS Portion Only)	Agriculture	Grain with Manure	Load Allocation	MD State	acres	0.000	0.000	0.000	0.000	
32	Anne Arundel, MD (CBWS Portion Only)	Agriculture	Grain with Manure	Load Allocation	MD State Highway Administration	acres	0.000	0.000	0.000	0.000	
33	Anne Arundel, MD (CBWS Portion Only)	Agriculture	Grain with Manure	Load Allocation	National Park Service	acres	0.000	0.000	0.000	0.000	
34	Anne Arundel, MD (CBWS Portion Only)	Agriculture	Grain with Manure	Load Allocation	Non-Federal	acres	1238.578	1238.578	29596.634	29596.634	
35	Anne Arundel, MD (CBWS Portion Only)	Agriculture	Grain with Manure	Load Allocation	Other Federal Land	acres	0.000	0.000	0.000	0.000	
36	Anne Arundel, MD (CBWS Portion Only)	Agriculture	Grain with Manure	Load Allocation	Smithsonian Institution	acres	0.000	0.000	0.000	0.000	

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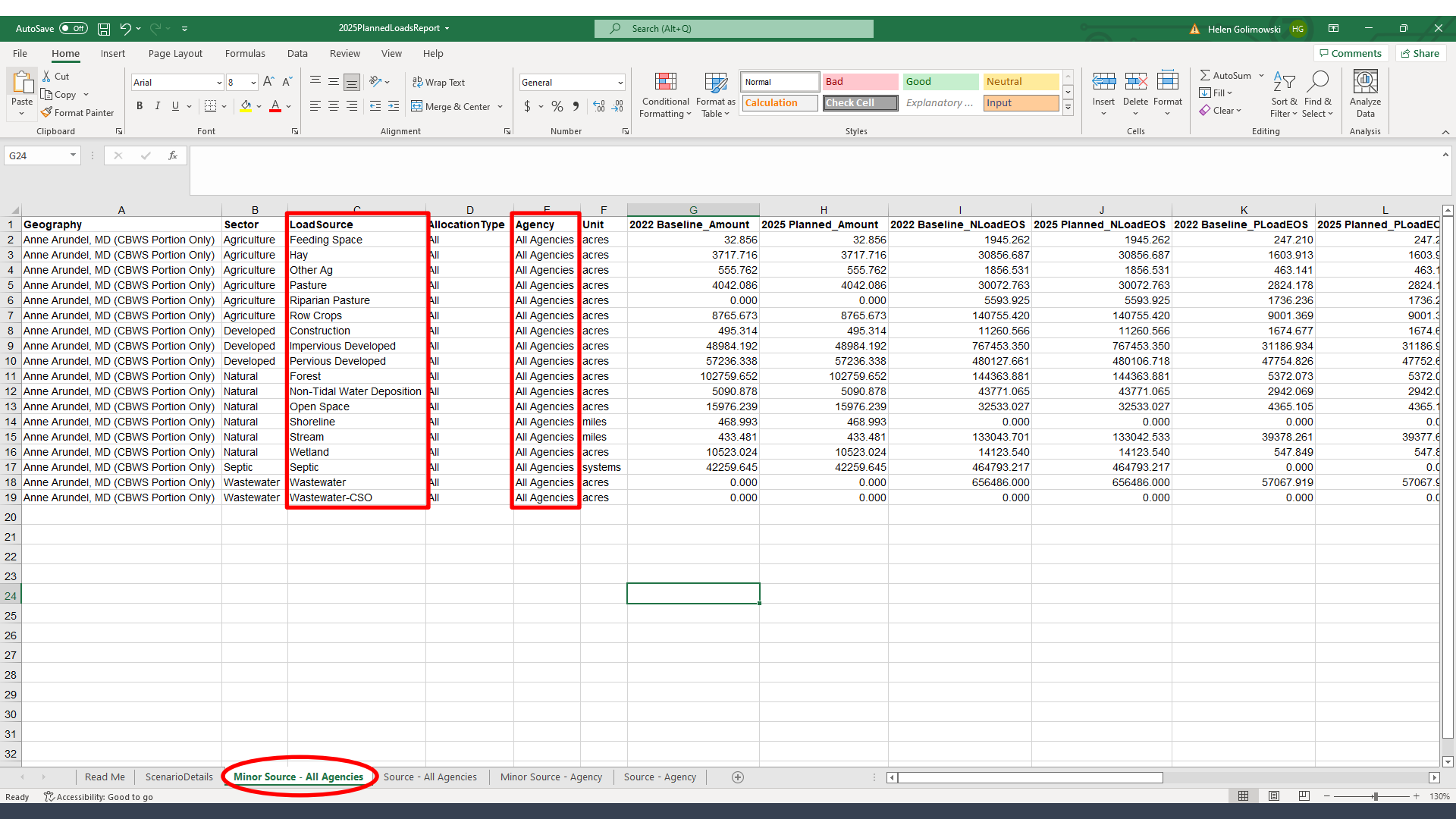
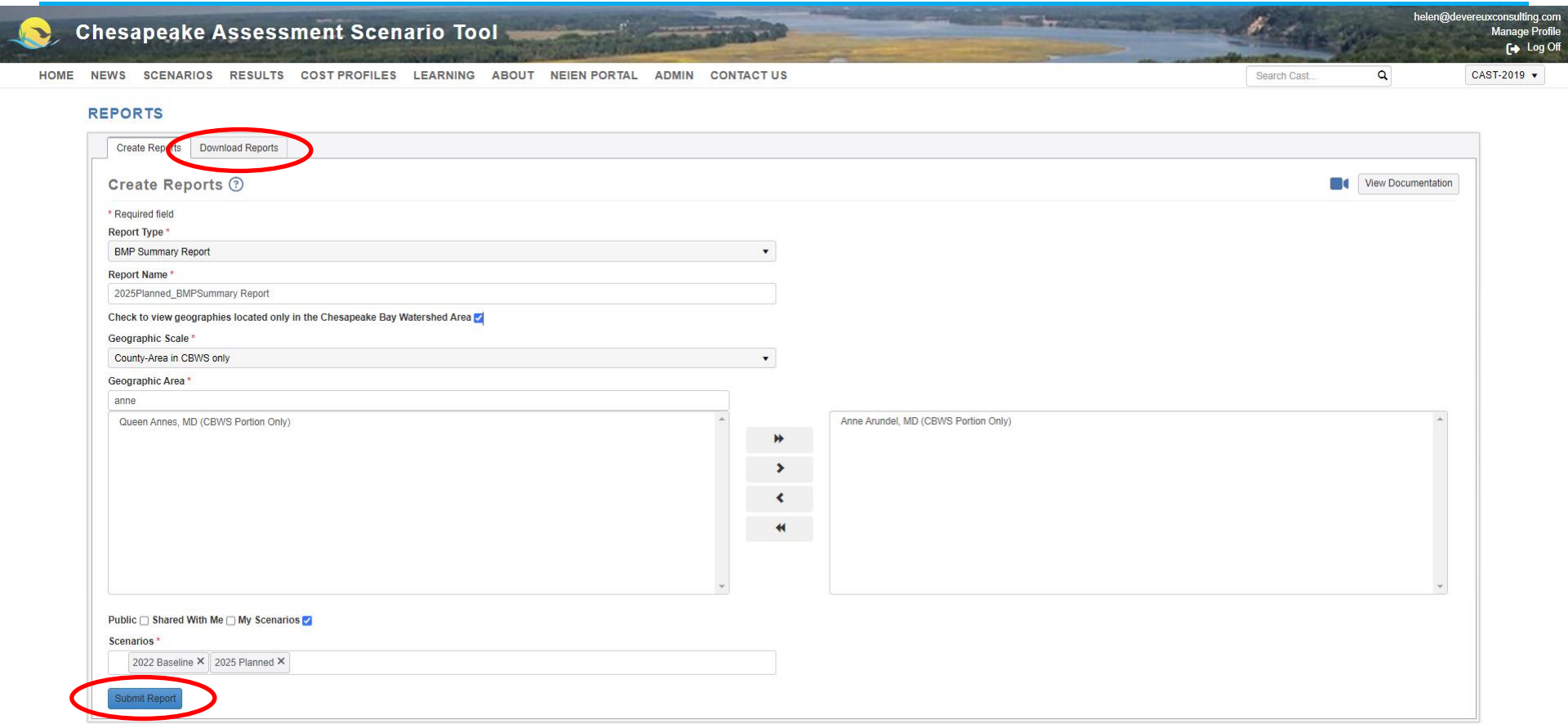
Ready | Accessibility: Good to go | 130%



Geography	Sector	LoadSource	AllocationType	Agency	Unit	2022 Baseline_Amount	2025 Planned_Amount	2022 Baseline_NLoadEOS	2025 Planned_NLoadEOS	2022 Baseline_PLoadEOS	2025 Planned_PLoadEO
Anne Arundel, MD (CBWS Portion Only)	Agriculture	Feeding Space	All	All Agencies	acres	32.856	32.856	1945.262	1945.262	247.210	247.2
Anne Arundel, MD (CBWS Portion Only)	Agriculture	Hay	All	All Agencies	acres	3717.716	3717.716	30856.687	30856.687	1603.913	1603.9
Anne Arundel, MD (CBWS Portion Only)	Agriculture	Other Ag	All	All Agencies	acres	555.762	555.762	1856.531	1856.531	463.141	463.1
Anne Arundel, MD (CBWS Portion Only)	Agriculture	Pasture	All	All Agencies	acres	4042.086	4042.086	30072.763	30072.763	2824.178	2824.1
Anne Arundel, MD (CBWS Portion Only)	Agriculture	Riparian Pasture	All	All Agencies	acres	0.000	0.000	5593.925	5593.925	1736.236	1736.2
Anne Arundel, MD (CBWS Portion Only)	Agriculture	Row Crops	All	All Agencies	acres	8765.673	8765.673	140755.420	140755.420	9001.369	9001.3
Anne Arundel, MD (CBWS Portion Only)	Developed	Construction	All	All Agencies	acres	495.314	495.314	11260.566	11260.566	1674.677	1674.6
Anne Arundel, MD (CBWS Portion Only)	Developed	Impervious Developed	All	All Agencies	acres	48984.192	48984.192	767453.350	767453.350	31186.934	31186.9
Anne Arundel, MD (CBWS Portion Only)	Developed	Pervious Developed	All	All Agencies	acres	57236.338	57236.338	480127.661	480106.718	47754.826	47752.6
Anne Arundel, MD (CBWS Portion Only)	Natural	Forest	All	All Agencies	acres	102759.652	102759.652	144363.881	144363.881	5372.073	5372.0
Anne Arundel, MD (CBWS Portion Only)	Natural	Non-Tidal Water Deposition	All	All Agencies	acres	5090.878	5090.878	43771.065	43771.065	2942.069	2942.0
Anne Arundel, MD (CBWS Portion Only)	Natural	Open Space	All	All Agencies	acres	15976.239	15976.239	32533.027	32533.027	4365.105	4365.1
Anne Arundel, MD (CBWS Portion Only)	Natural	Shoreline	All	All Agencies	miles	468.993	468.993	0.000	0.000	0.000	0.0
Anne Arundel, MD (CBWS Portion Only)	Natural	Stream	All	All Agencies	miles	433.481	433.481	133043.701	133042.533	39378.261	39377.6
Anne Arundel, MD (CBWS Portion Only)	Natural	Wetland	All	All Agencies	acres	10523.024	10523.024	14123.540	14123.540	547.849	547.8
Anne Arundel, MD (CBWS Portion Only)	Septic	Septic	All	All Agencies	systems	42259.645	42259.645	464793.217	464793.217	0.000	0.0
Anne Arundel, MD (CBWS Portion Only)	Wastewater	Wastewater	All	All Agencies	acres	0.000	0.000	656486.000	656486.000	57067.919	57067.9
Anne Arundel, MD (CBWS Portion Only)	Wastewater	Wastewater-CSO	All	All Agencies	acres	0.000	0.000	0.000	0.000	0.000	0.0

Reports

- Atmospheric Deposition Report
- Base Conditions Report
- BMP Input Files
- BMP Submitted vs. Credited Report
- BMP Summary Report
- Loads Per Unit
- Loads Report
- Quick Results Report
- Wastewater Report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Report Name *
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Geographic Scale *
County-Area in CBWS only
Geographic Area *
anne
Queen Annes, MD (CBWS Portion Only)
Anne Arundel, MD (CBWS Portion Only)
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2025 Planned
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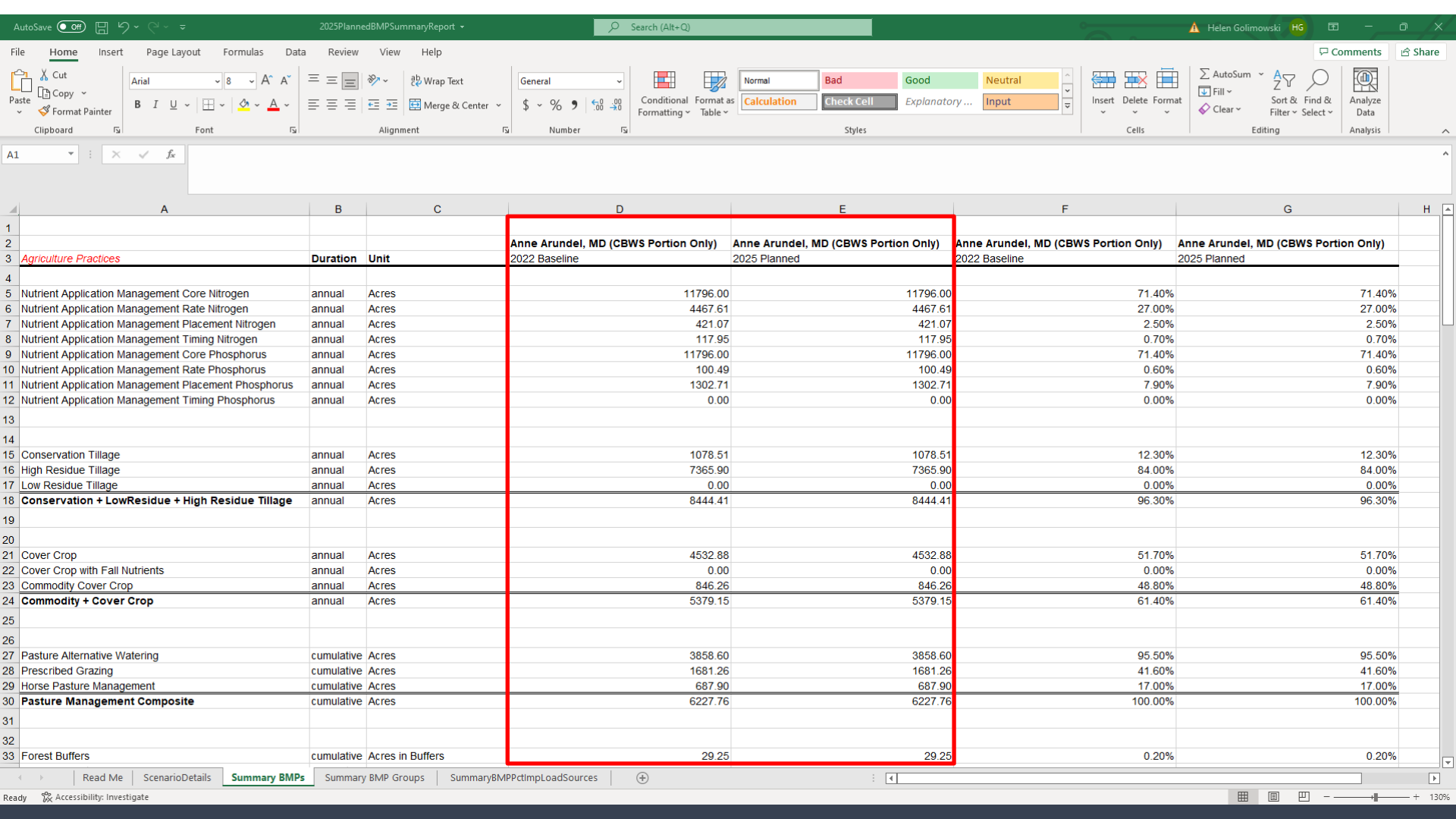
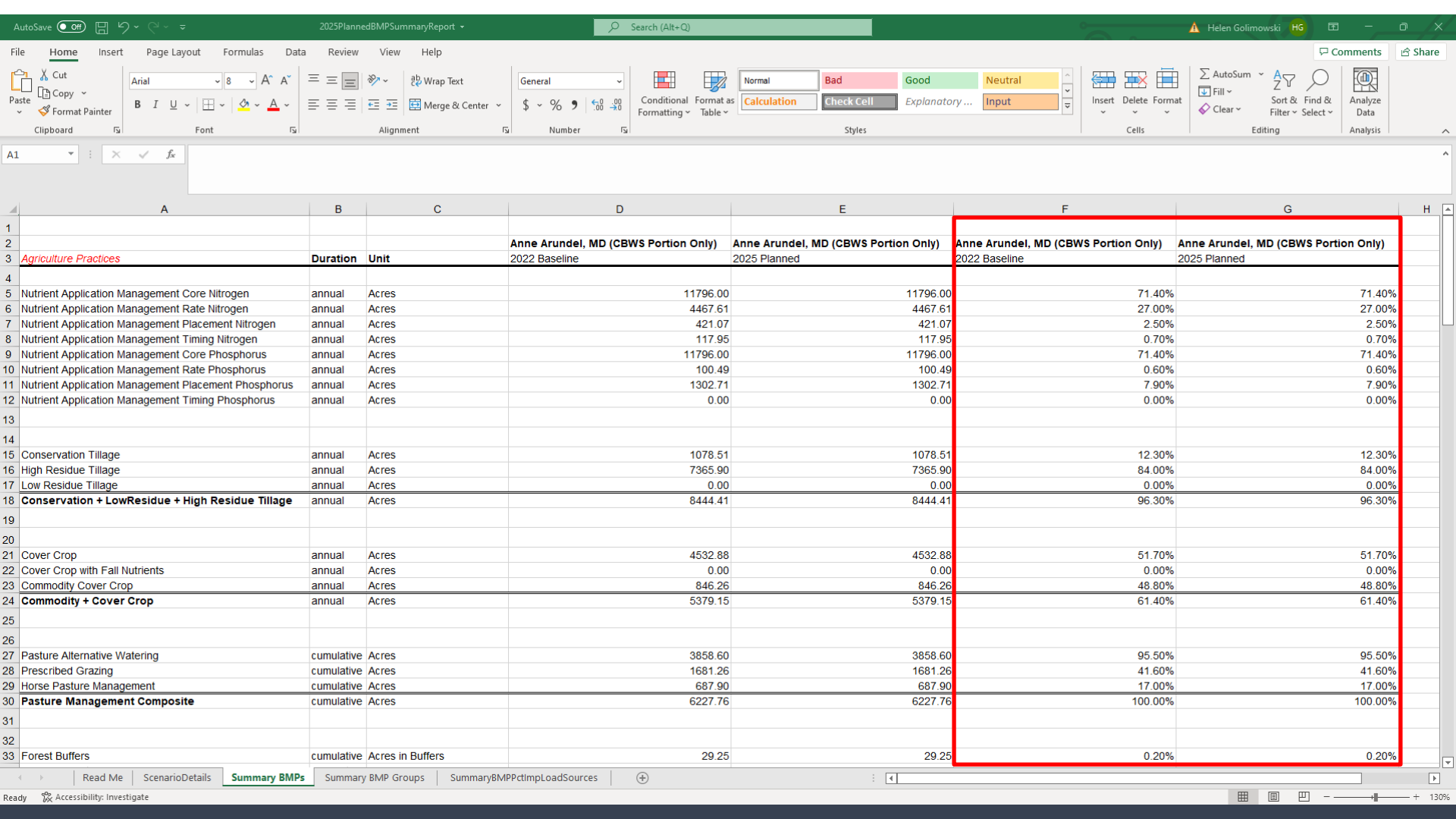
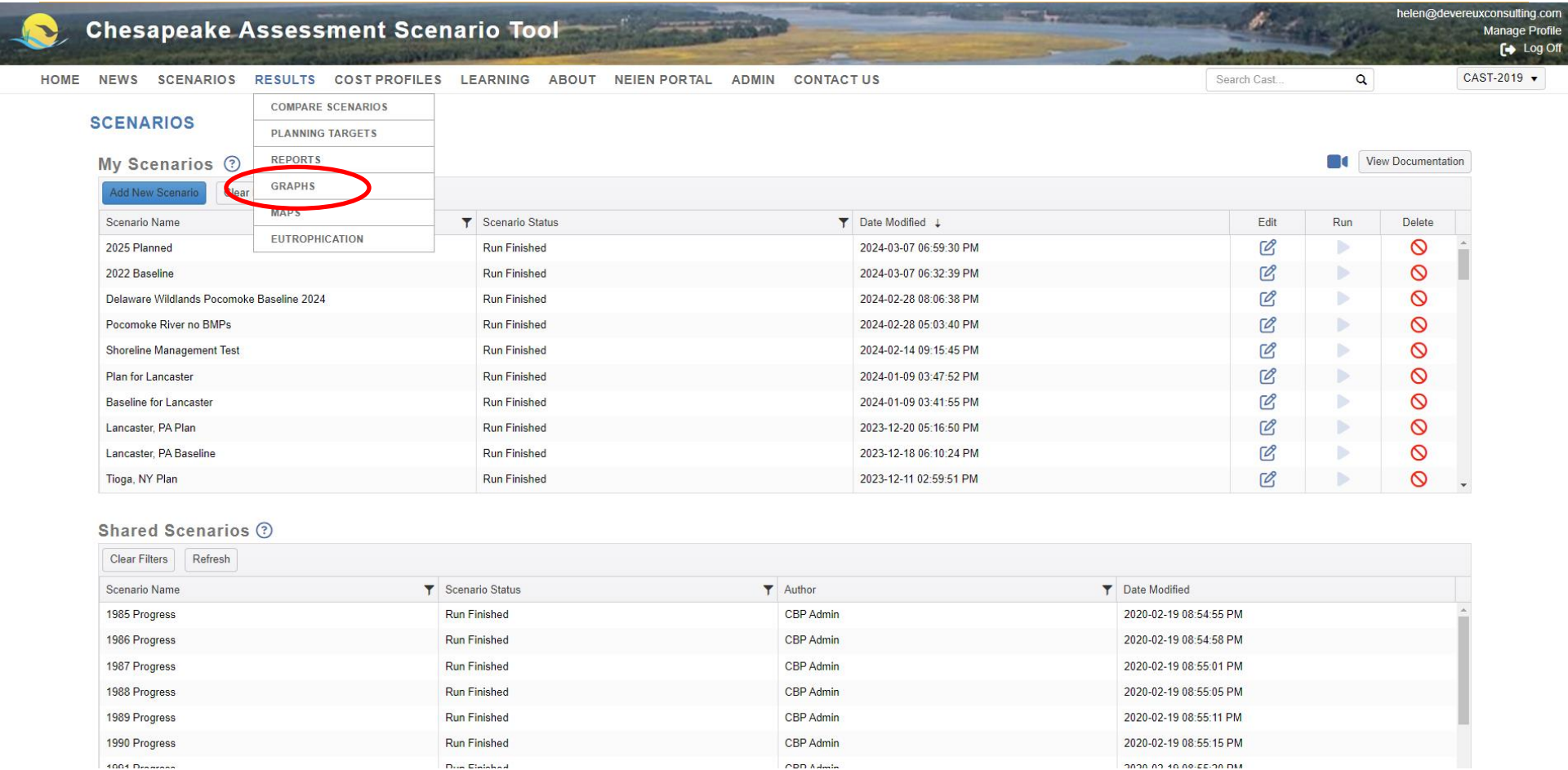


Agriculture Practices	Duration	Unit	Anne Arundel, MD (CBWS Portion Only) 2022 Baseline	Anne Arundel, MD (CBWS Portion Only) 2025 Planned	Anne Arundel, MD (CBWS Portion Only) 2022 Baseline	Anne Arundel, MD (CBWS Portion Only) 2025 Planned
Nutrient Application Management Core Nitrogen	annual	Acres	11796.00	11796.00	71.40%	71.40%
Nutrient Application Management Rate Nitrogen	annual	Acres	4467.61	4467.61	27.00%	27.00%
Nutrient Application Management Placement Nitrogen	annual	Acres	421.07	421.07	2.50%	2.50%
Nutrient Application Management Timing Nitrogen	annual	Acres	117.95	117.95	0.70%	0.70%
Nutrient Application Management Core Phosphorus	annual	Acres	11796.00	11796.00	71.40%	71.40%
Nutrient Application Management Rate Phosphorus	annual	Acres	100.49	100.49	0.60%	0.60%
Nutrient Application Management Placement Phosphorus	annual	Acres	1302.71	1302.71	7.90%	7.90%
Nutrient Application Management Timing Phosphorus	annual	Acres	0.00	0.00	0.00%	0.00%
Conservation Tillage	annual	Acres	1078.51	1078.51	12.30%	12.30%
High Residue Tillage	annual	Acres	7365.90	7365.90	84.00%	84.00%
Low Residue Tillage	annual	Acres	0.00	0.00	0.00%	0.00%
Conservation + LowResidue + High Residue Tillage	annual	Acres	8444.41	8444.41	96.30%	96.30%
Cover Crop	annual	Acres	4532.88	4532.88	51.70%	51.70%
Cover Crop with Fall Nutrients	annual	Acres	0.00	0.00	0.00%	0.00%
Commodity Cover Crop	annual	Acres	846.26	846.26	48.80%	48.80%
Commodity + Cover Crop	annual	Acres	5379.15	5379.15	61.40%	61.40%
Pasture Alternative Watering	cumulative	Acres	3858.60	3858.60	95.50%	95.50%
Prescribed Grazing	cumulative	Acres	1681.26	1681.26	41.60%	41.60%
Horse Pasture Management	cumulative	Acres	687.90	687.90	17.00%	17.00%
Pasture Management Composite	cumulative	Acres	6227.76	6227.76	100.00%	100.00%
Forest Buffers	cumulative	Acres in Buffers	29.25	29.25	0.20%	0.20%



	A	B	C	D	E	F	G
1							
2				Anne Arundel, MD (CBWS Portion Only)	Anne Arundel, MD (CBWS Portion Only)	Anne Arundel, MD (CBWS Portion Only)	Anne Arundel, MD (CBWS Portion Only)
3	*Agriculture Practices*	**Duration**	**Unit**	2022 Baseline	2025 Planned	2022 Baseline	2025 Planned
4							
5	Nutrient Application Management Core Nitrogen	annual	Acres	11796.00	11796.00	71.40%	71.40%
6	Nutrient Application Management Rate Nitrogen	annual	Acres	4467.61	4467.61	27.00%	27.00%
7	Nutrient Application Management Placement Nitrogen	annual	Acres	421.07	421.07	2.50%	2.50%
8	Nutrient Application Management Timing Nitrogen	annual	Acres	117.95	117.95	0.70%	0.70%
9	Nutrient Application Management Core Phosphorus	annual	Acres	11796.00	11796.00	71.40%	71.40%
10	Nutrient Application Management Rate Phosphorus	annual	Acres	100.49	100.49	0.60%	0.60%
11	Nutrient Application Management Placement Phosphorus	annual	Acres	1302.71	1302.71	7.90%	7.90%
12	Nutrient Application Management Timing Phosphorus	annual	Acres	0.00	0.00	0.00%	0.00%
13							
14							
15	Conservation Tillage	annual	Acres	1078.51	1078.51	12.30%	12.30%
16	High Residue Tillage	annual	Acres	7365.90	7365.90	84.00%	84.00%
17	Low Residue Tillage	annual	Acres	0.00	0.00	0.00%	0.00%
18	**Conservation + LowResidue + High Residue Tillage**	annual	Acres	8444.41	8444.41	96.30%	96.30%
19							
20							
21	Cover Crop	annual	Acres	4532.88	4532.88	51.70%	51.70%
22	Cover Crop with Fall Nutrients	annual	Acres	0.00	0.00	0.00%	0.00%
23	Commodity Cover Crop	annual	Acres	846.26	846.26	48.80%	48.80%
24	**Commodity + Cover Crop**	annual	Acres	5379.15	5379.15	61.40%	61.40%
25							
26							
27	Pasture Alternative Watering	cumulative	Acres	3858.60	3858.60	95.50%	95.50%
28	Prescribed Grazing	cumulative	Acres	1681.26	1681.26	41.60%	41.60%
29	Horse Pasture Management	cumulative	Acres	687.90	687.90	17.00%	17.00%
30	**Pasture Management Composite**	cumulative	Acres	6227.76	6227.76	100.00%	100.00%
31							
32							
33	Forest Buffers	cumulative	Acres in Buffers	29.25	29.25	0.20%	0.20%

	A	B	C	D	E	F	G	H
91	*Urban/Suburban Practices*	**Duration**	**Unit**	2022 Baseline	2025 Planned	2022 Baseline	2025 Planned	
92								
93	Runoff Reduction Performance Standard	cumulative	Acres Treated	6440.91	6440.91	6.10%	6.10%	
94	Storm Water Treatment Performance Standard	cumulative	Acres Treated	6719.59	6719.59	6.30%	6.30%	
95	Wet Ponds & Wetlands	cumulative	Acres Treated	1771.49	1771.49	1.70%	1.70%	
96	Floating Treatment Wetlands	cumulative	Acres Treated by Wet Pond	0.00	0.00	0.00%	0.00%	
97	Dry Ponds	cumulative	Acres Treated	1734.19	1734.19	1.60%	1.60%	
98	Extended Dry Ponds	cumulative	Acres Treated	578.03	578.03	0.50%	0.50%	
99	Infiltration Practices	cumulative	Acres Treated	15.19	15.19	0.00%	0.00%	
100	Filtering Practices	cumulative	Acres Treated	2.23	2.23	0.00%	0.00%	
101	BioRetention	cumulative	Acres Treated	23.29	23.29	0.00%	0.00%	
102	BioSwale	cumulative	Acres Treated	9.78	9.78	0.00%	0.00%	
103	Permeable Pavement	cumulative	Acres Treated	2.83	2.83	0.00%	0.00%	
104	Vegetated Open Channel	cumulative	Acres Treated	0.00	0.00	0.00%	0.00%	
105	Urban Filter Strips	cumulative	Acres Treated	0.00	0.00	0.00%	0.00%	
106	Impervious Disconnection	cumulative	Acres Treated	0.00	0.00	0.00%	0.00%	
107	Conservation Landscaping Practices	cumulative	Acres Treated	0.00	0.00	0.00%	0.00%	
108	**Stormwater Management Composite**	cumulative	Acres Treated	17297.53	17297.53	16.30%	16.30%	
109								
110								
111	Erosion and Sediment Control	annual	Acres	448.21	448.21	90.50%	90.50%	
112	Impervious Surface Reduction	cumulative	Acres	4.42	4.42	0.00%	0.00%	
113	Urban Forest Buffers	cumulative	Acres in Buffers	27.48	27.48	0.10%	0.10%	
114	Urban Grass Buffers	cumulative	Acres in Buffers	0.00	0.00	0.00%	0.00%	
115	Urban Tree Planting	cumulative	Acres	182.93	192.93	0.20%	0.30%	
116	Urban Forest Planting	cumulative	Acres	0.02	0.02	0.00%	0.00%	
117	Urban Nutrient Management	annual	Acres	49241.65	49241.65	85.30%	85.30%	
118	Urban Stream Restoration	cumulative	Feet	42319.80	42319.80	1.80%	1.80%	
119	Storm Drain Cleanout	annual	Lbs of Sediment	0.00	0.00			
120	Grey Infrastructure Nutrient Discovery Program	annual	Acres Treated	0.00	0.00	0.00%	0.00%	
121	Grey Infrastructure Nutrient Discharge Elimination	cumulative	Lbs of Nitrogen	0.00	0.00			
122	Street Sweeping	annual	Acres	0.00	0.00	0.00%	0.00%	
123	Urban Shoreline Management	cumulative	Feet	11285.44	11285.44	0.50%	0.50%	
124								
125								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Nitrogen and Phosphorus Delivered (lbs)

Nitrogen EOS — Nitrogen EOT — Phosphorus EOS — Phosphorus EOT

3M
2.5M
2M
1.5M
1M
0.5M
0M

Nitrogen EOS: 2,736,432

2022 Baseline
2025 Planned

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

Sediment Delivered (lbs)

Sediment EOS — Sediment EOT

198.737M
198.7365M
198.736M
198.733M
198.7325M

2022 Baseline
2025 Planned

Thank you!

Any questions?
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