



CAPE COD  
COMMISSION

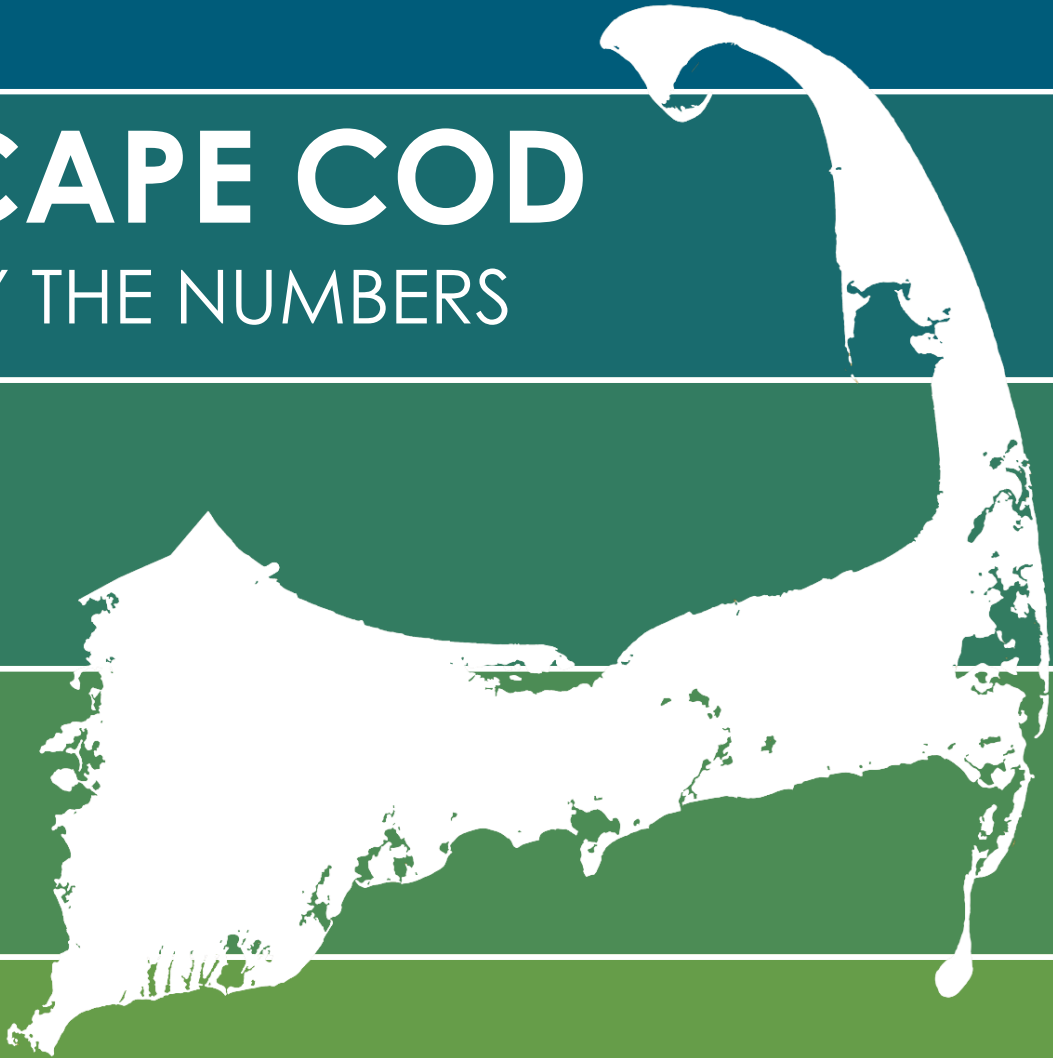
REDEFINING THE CLEAN WATER ACT  
**ON CAPE COD**

**FEBRUARY 11, 2015**

ESRI WATER CONFERENCE  
Portland, Oregon

# CAPE COD

BY THE NUMBERS



**3,147**

MILES FROM  
PORTLAND

**6 MILLION**

YEARLY VISITORS

**216,000**

YEAR ROUND  
POPULATION

**560**

MILES COASTLINE

**400**

SQUARE MILES





# CAPE COD COMMISSION **MISSION**

...TO PROTECT THE UNIQUE VALUES  
AND QUALITY OF LIFE ON CAPE COD  
BY COORDINATING A BALANCED  
RELATIONSHIP BETWEEN  
ENVIRONMENTAL PROTECTION AND  
ECONOMIC PROGRESS.



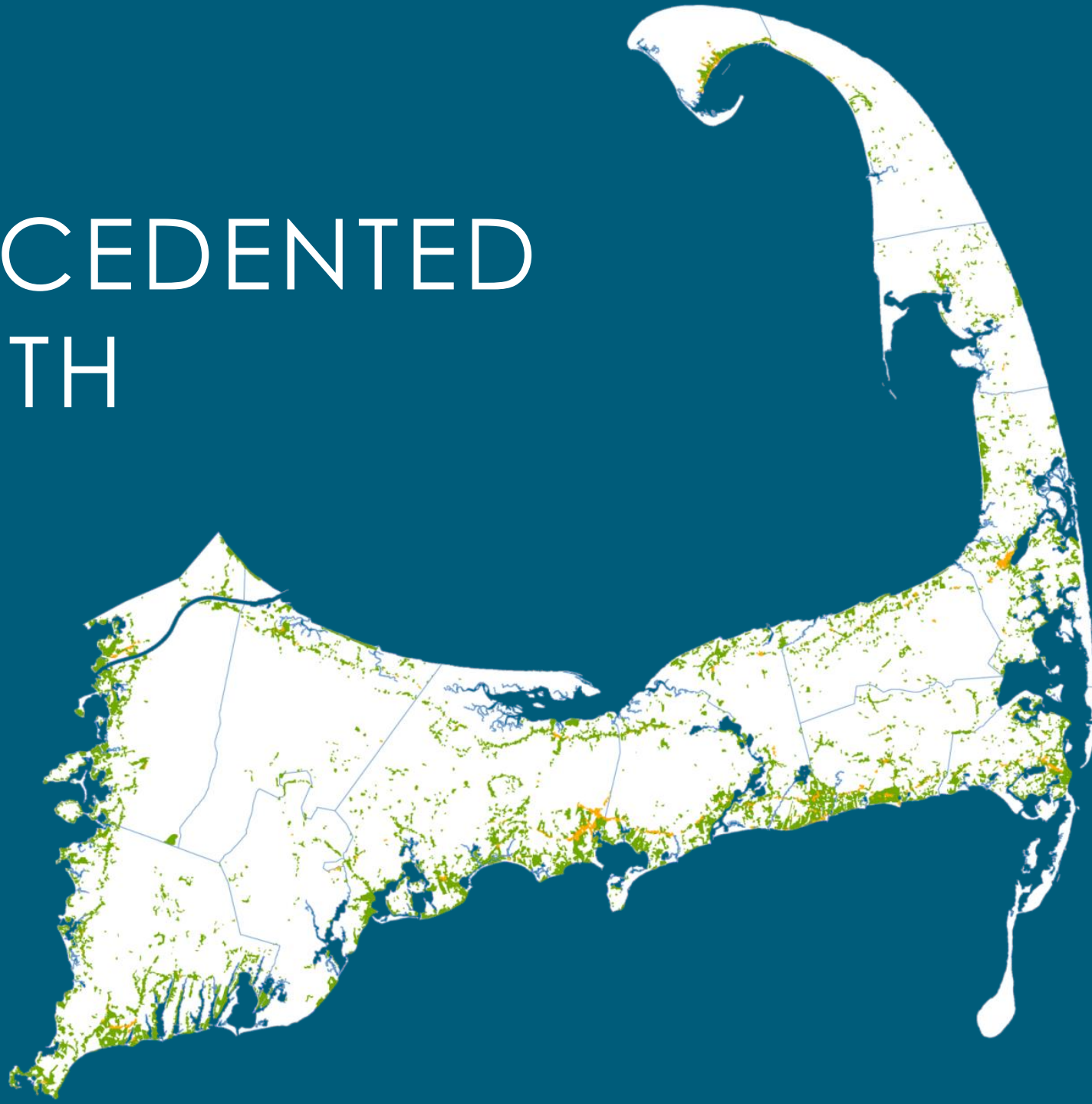


WHY § 208?

# 1 SOLE SOURCE AQUIFER



# UNPRECEDENTED GROWTH



1951



# UNPRECEDENTED GROWTH



1971

# UNPRECEDENTED GROWTH



1985



# UNPRECEDENTED GROWTH



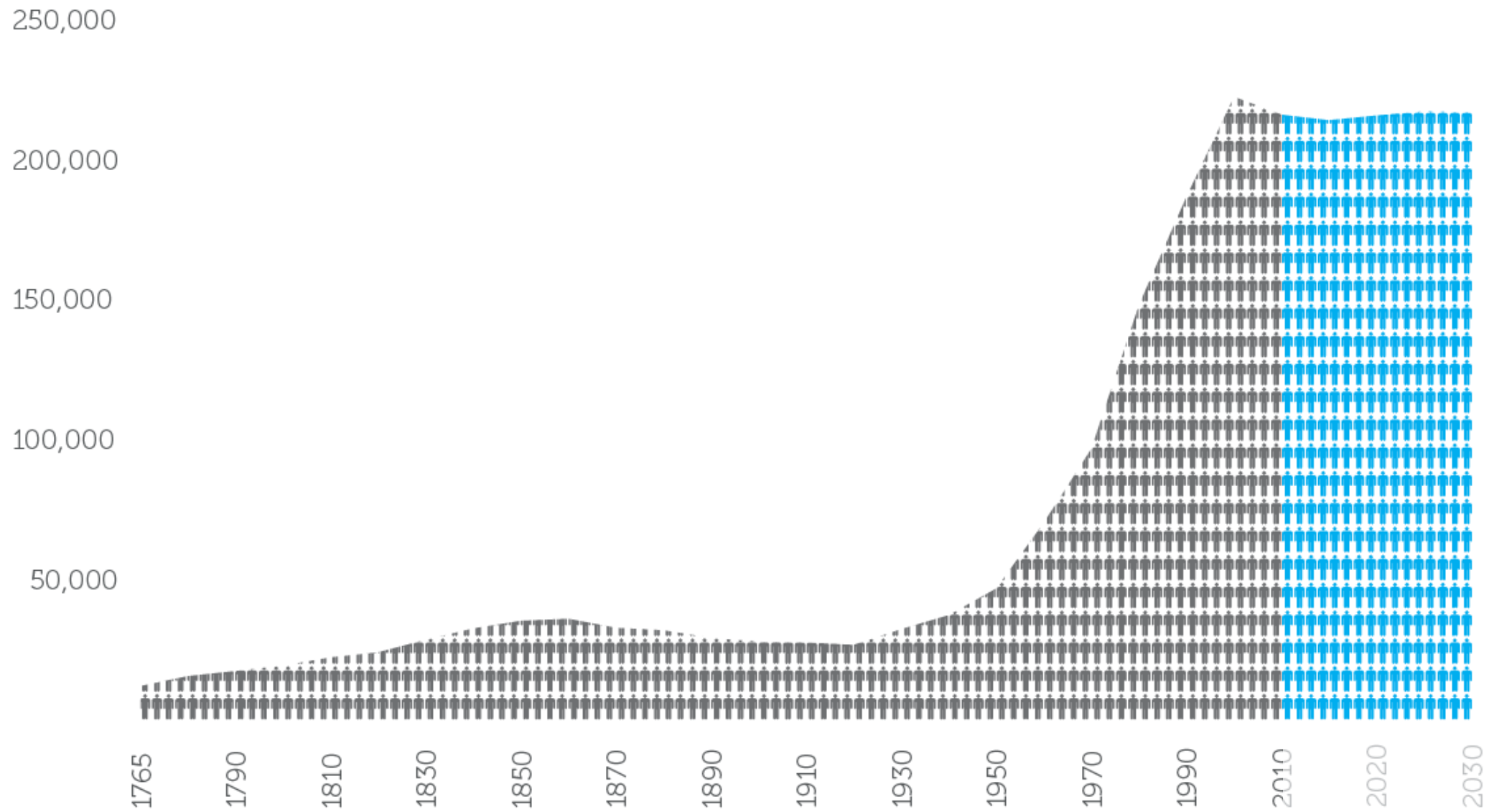
1999

# UNPRECEDENTED GROWTH



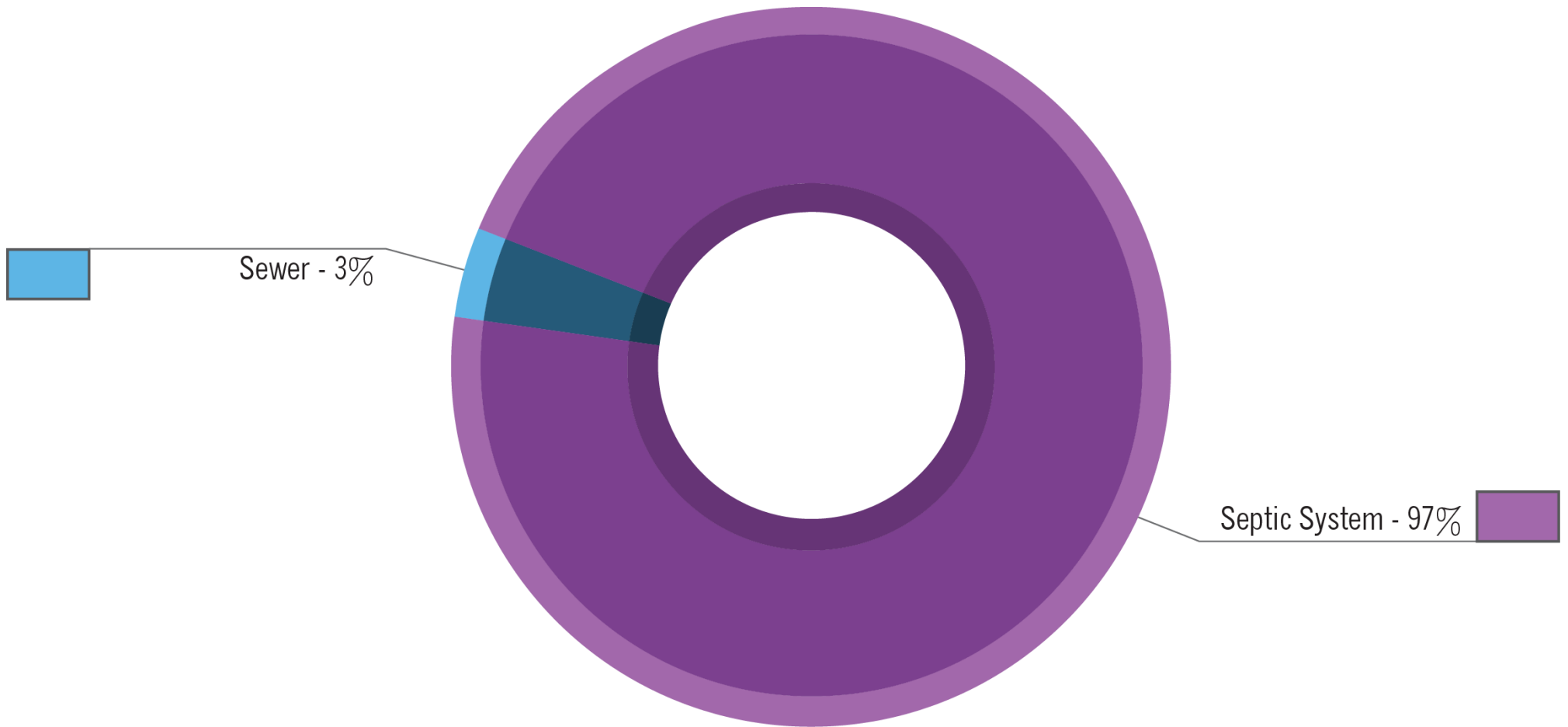
2012





# THE PROBLEM

POPULATION CHANGES



# THE PROBLEM

CURRENT SEWERING





OUR EMBAYMENTS ARE  
IMPACTED BY NITROGEN



# 53 EMBAYMENT WATERSHEDS





# REGIONAL ISSUE

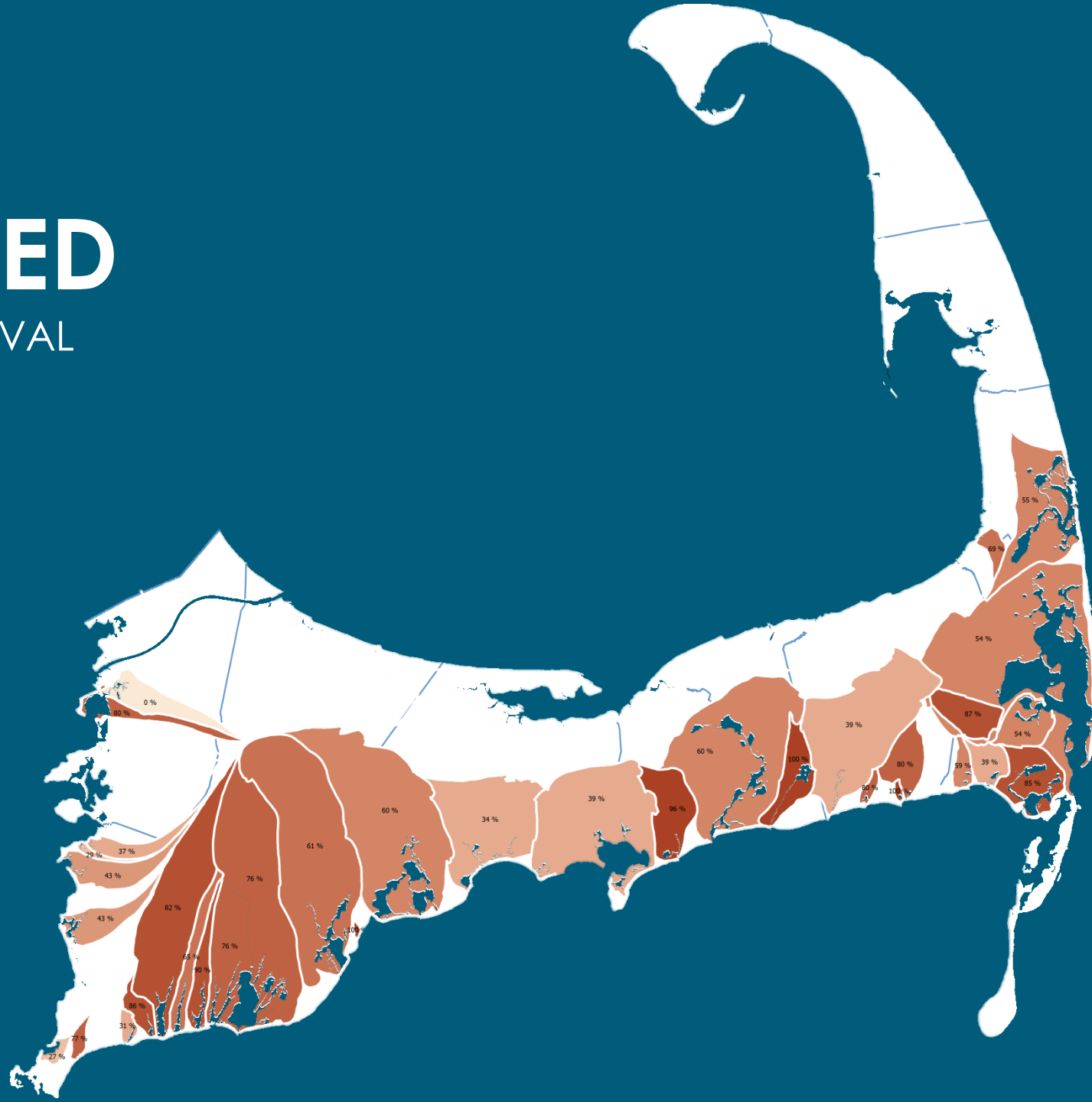
15 TOWNS

32 SHARED WATERSHEDS



# REQUIRED

NITROGEN REMOVAL



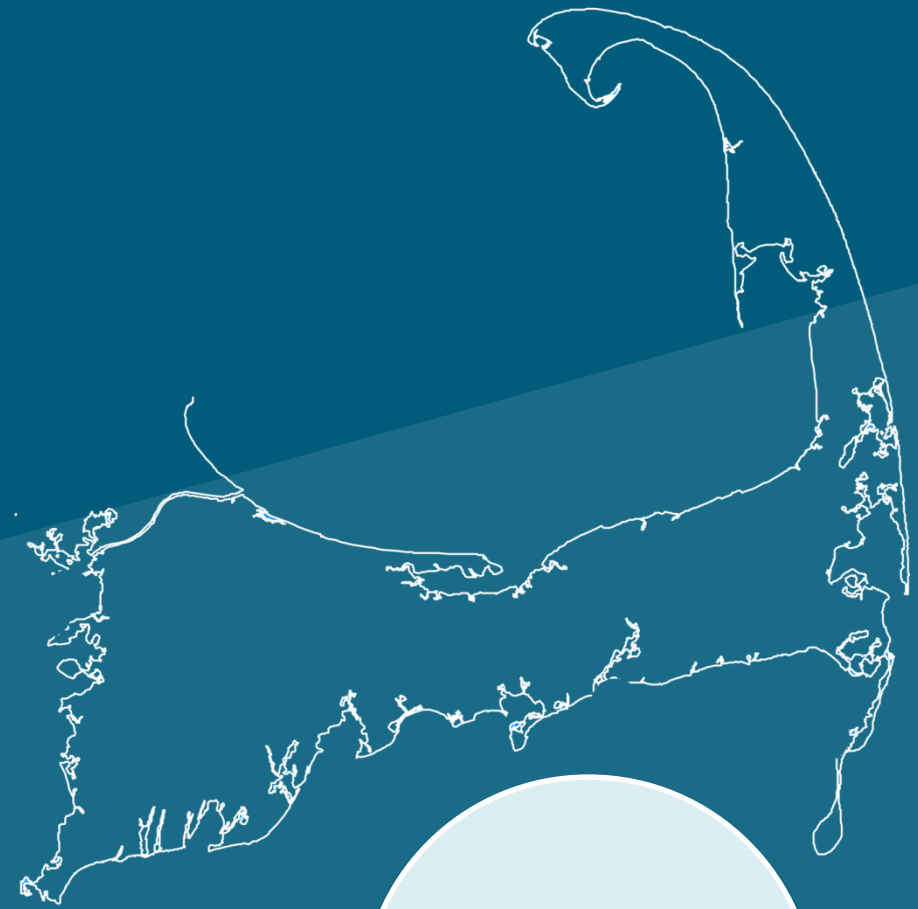
# WHAT IS THE 208 PLAN?

**Focus on 21st  
Century  
Problems**

Nitrogen:  
Saline waters

Phosphorus:  
Fresh Waters

Growth & Title 5  
Limitations





# A NEW APPROACH



**WATERSHED-BASED**



**TARGETED WATERSHEDS**



**NON-POINT SOURCE**

# TECHNOLOGY MATRIX



Reduction

Remediation

Restoration

Site Scale

Neighborhood

Watershed

Cape-Wide

	Site Scale	Neighborhood	Watershed	Cape-Wide	
Reduction			Remediation of Existing Development TDR Transfer of Development Rights	N+P+K MGMT Fertilizer Management BMPs Stormwater BMPs Compact Development	
	Title 5	Standard Title 5 Systems		Conventional Treatment	
Remediation	IA	I/A Title 5 Systems	Cluster & Satellite Treatment Systems	Advanced Treatment	
	Enhanced IA	I/A Enhanced Systems	Wastewater Collection Systems	Effluent Disposal Systems	
	Toilet	Toilets: Urine Diverting	Constructed Wetlands: Surface Flow		
	Toilet	Toilets: Composting	Constructed Wetlands: Subsurface Flow		
	Toilet	Toilets: Packaging	Stormwater: Bioretention / Soil Media Filters		
	Toilet	Toilets: Incinerating	Stormwater: Wetlands	Phytoirrigation	
	EM	Eco-Machines & Living Machines			
	Phytobuffers	Phytobuffers		Fertigation Wells	
	Restoration	PRB	Permeable Reactive Barrier		Shellfish and Salt Marsh Habitat Restoration Aquaculture/Shellfish Farming
			Inlet / Culvert	Inlet / Culvert Widening	
		Pond and Estuary	Pond and Estuary Dredging		
		GW  SW  Wetlands	Constr. Wetlands - Groundwater, Salt Water, Floating		

- Wastewater
- Existing Water Bodies
- Stormwater
- Regulatory





# WATERSHED PLANNING TOOLS



WATERSHED MVP

MULTI-VARIANT PLANNER

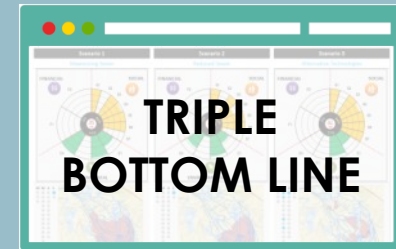
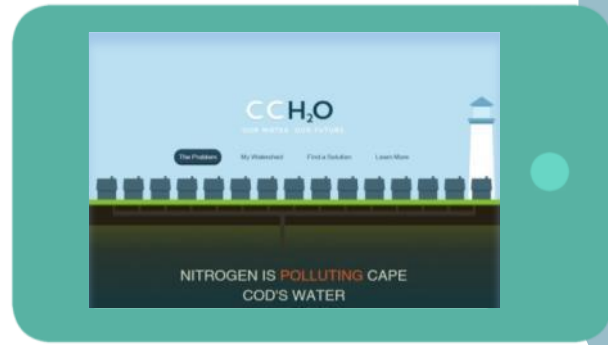


DRAFT 208

CAPE COD AREA WIDE WATER QUALITY MANAGEMENT PLAN

MAP VIEWER <sup>BETA</sup>

# CONNECTING THE TOOLS





CAPE COD  
COMMISSION

CCH<sub>2</sub>O  
OUR WATER. OUR FUTURE.



- The Problem
- My Watershed
- Find a Solution
- Learn More



## NITROGEN IS POLLUTING CAPE COD'S WATER

Our most important natural and economic resource needs your help

Cape Cod's health is intricately interwoven in its Environment and its Economy. But decades of population growth are significantly degrading our marine water quality. We need to act now. The cost of doing the wrong thing is only outweighed by the cost of doing nothing.

Ready to help? Start by learning about [your watershed](#) and solutions for [your home and in your community](#).

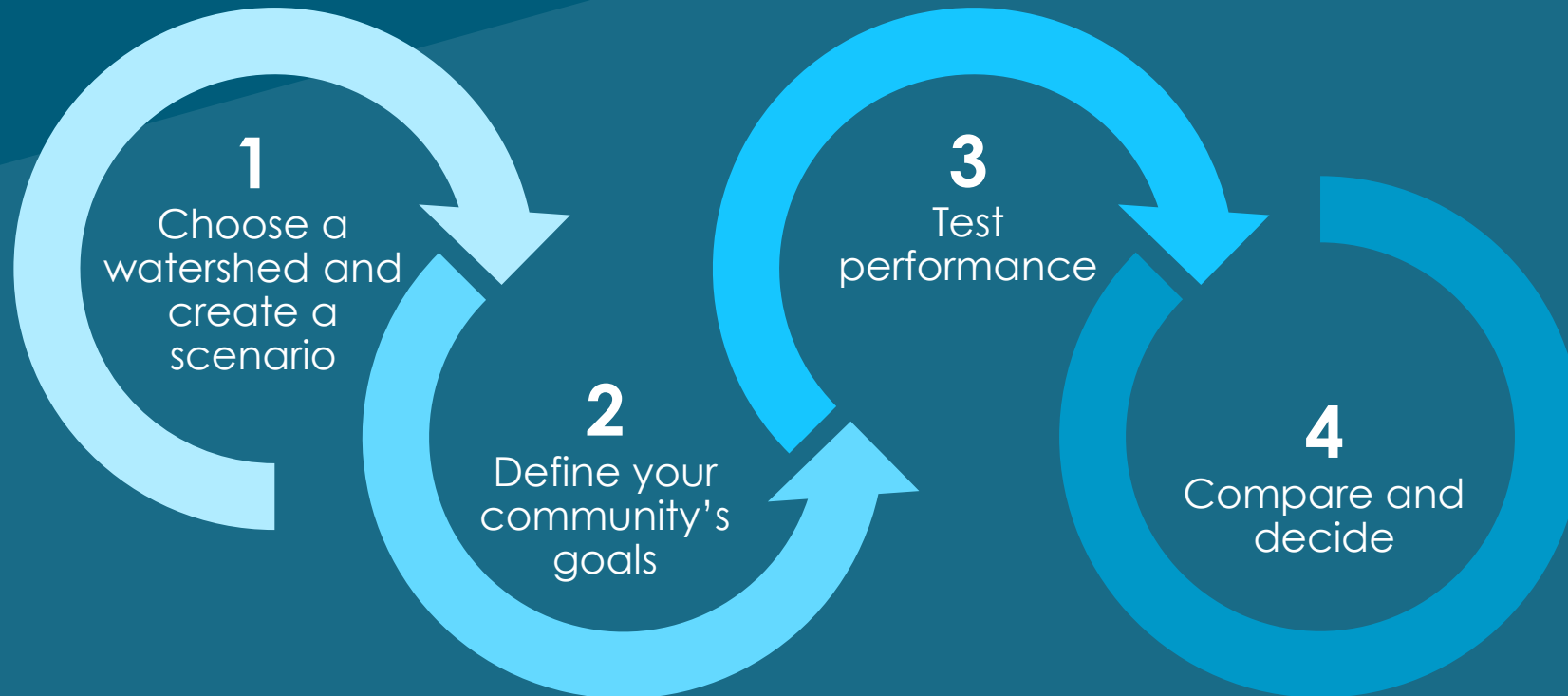
[www.CCH20.org](http://www.CCH20.org)





# IMPLEMENTATION

Evaluate solutions based on **social**,  
**environmental** and **financial** factors



CAPEWIDE  
MEETINGS

SUBREGIONAL  
WORKING GROUPS

WATERSHED  
WORKING GROUPS

CCH<sub>2</sub>O

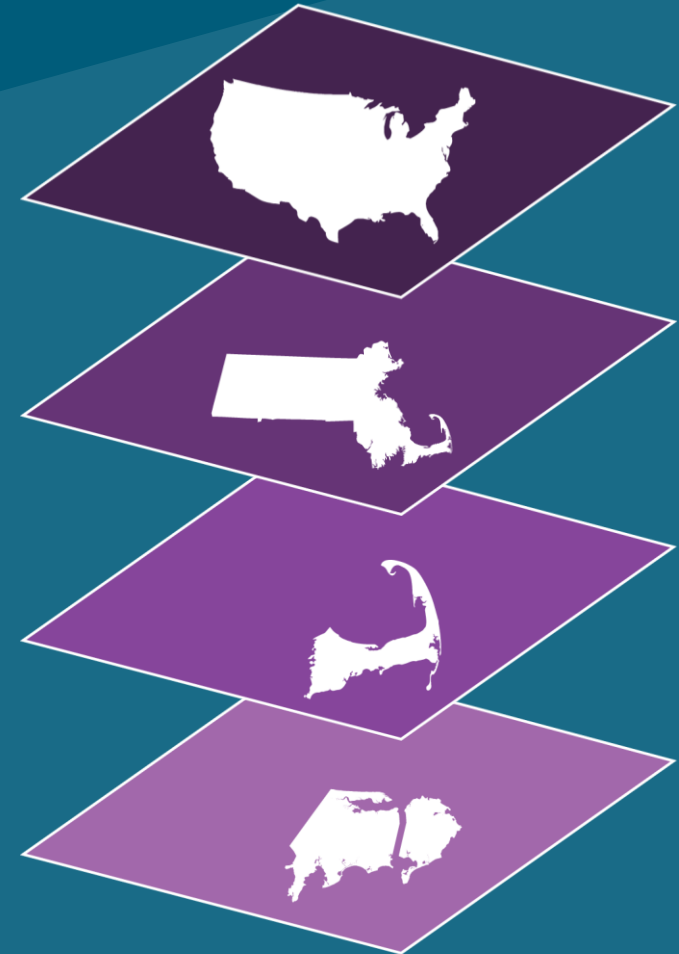
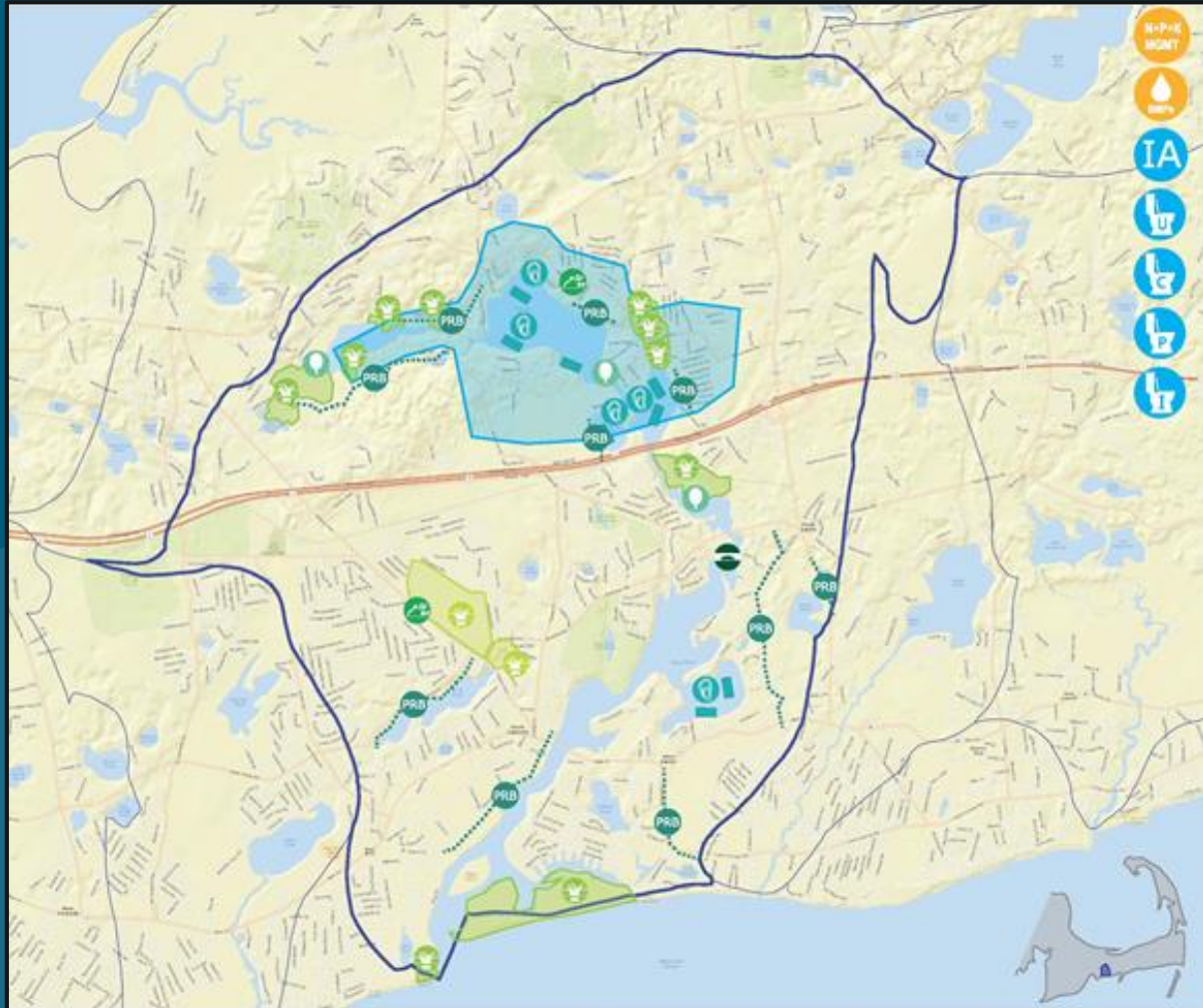
CAPE<sub>2</sub>O



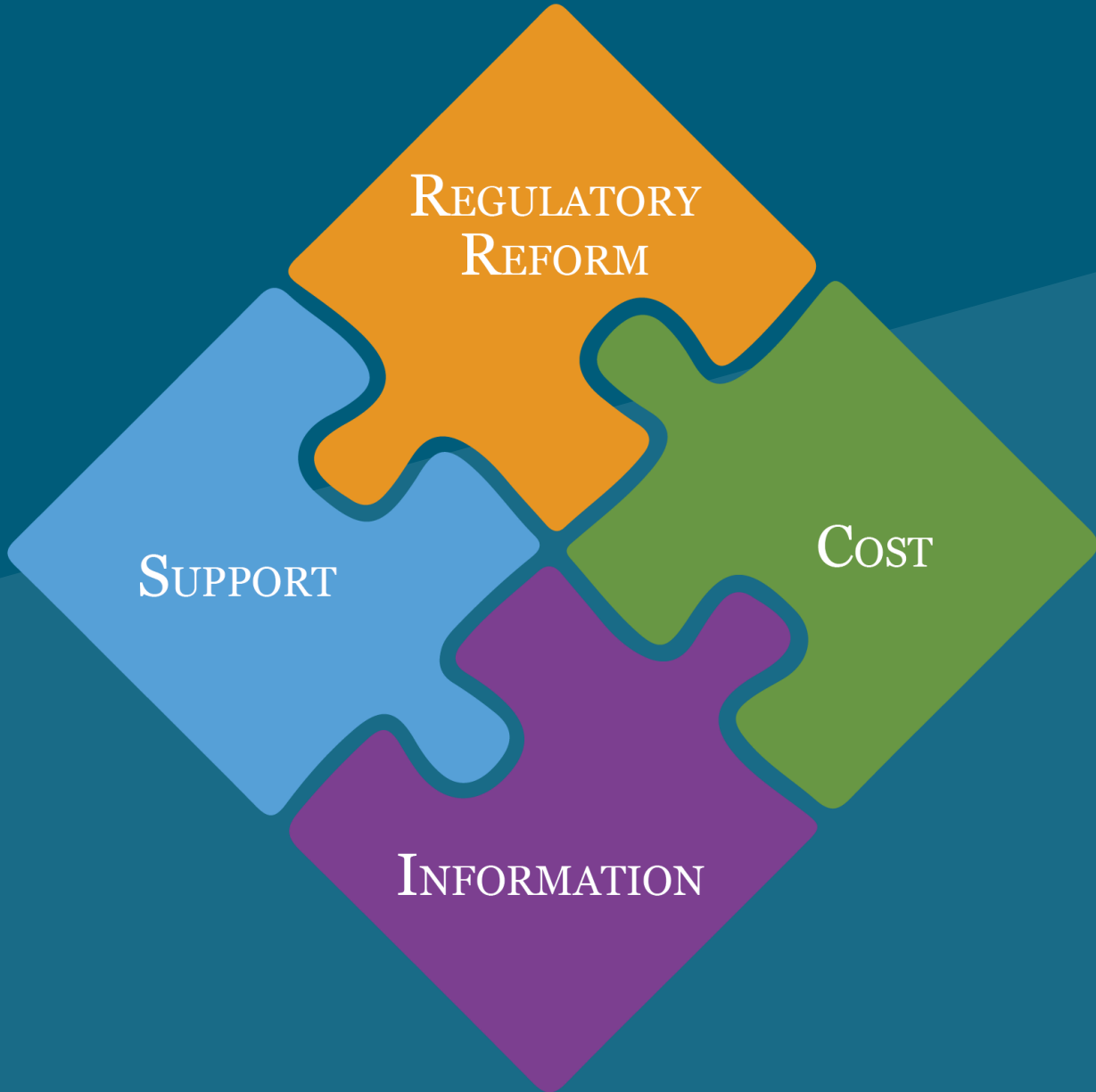
# STAKEHOLDERS



# REGULATORY ENVIRONMENT







REGULATORY  
REFORM

SUPPORT

COST

INFORMATION



CAPE COD  
COMMISSION