

# Penobscot Bay

*Maine's  
Biggest  
Bay*

Penobscot Bay  
1,070 square miles,

Penobscot River  
Watershed  
8,570 square miles

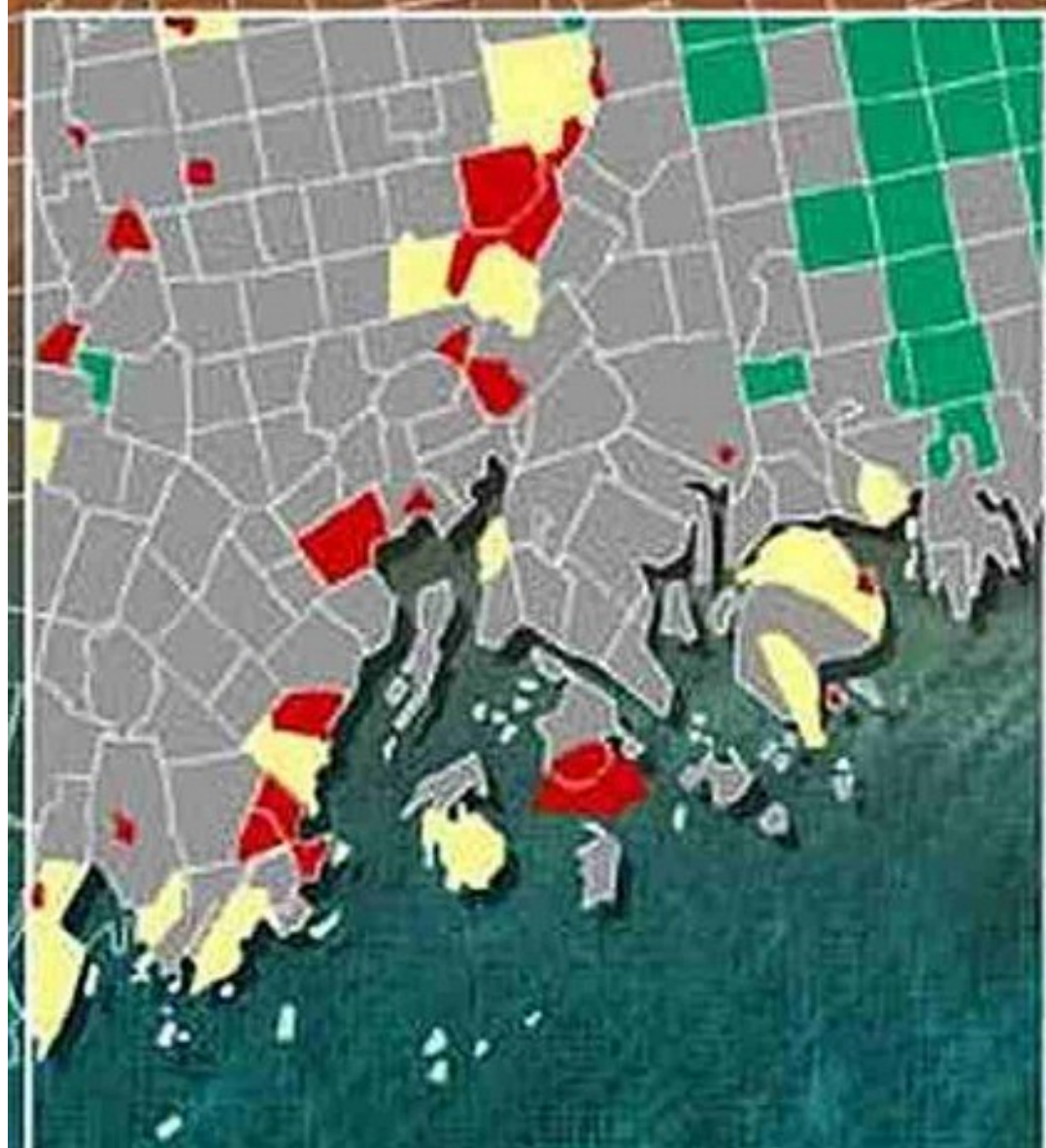
Intensifying Penobscot Bay Route One  
corridor development as climate warms.  
Shift from rural to suburbia around  
expanding Rockland Belfast, Buckport.

Less natural cover, more impervious  
surface = less natural runoff

# Expansion of Development

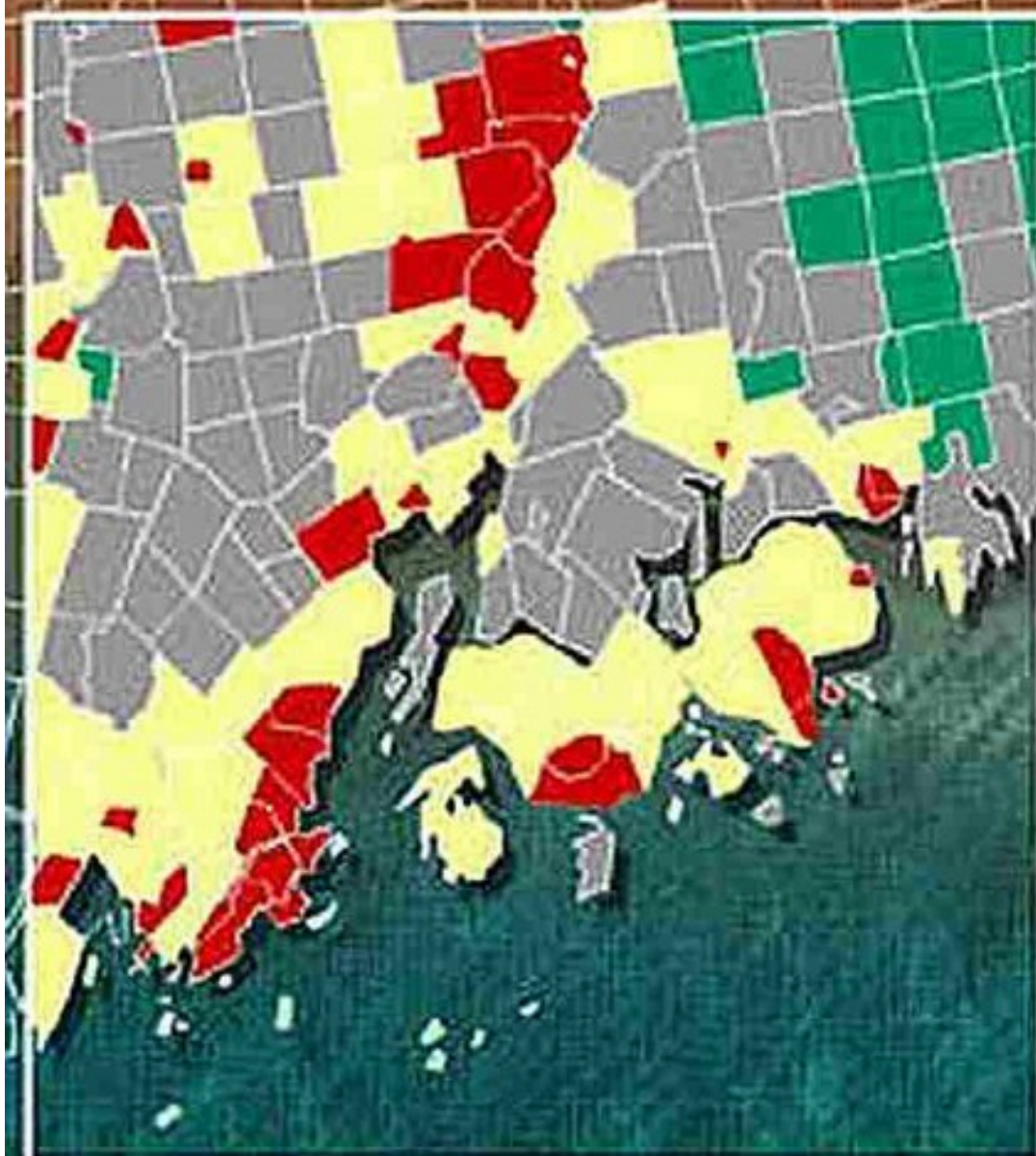
1960

- suburban/urban
- emerging suburb
- rural
- unorganized



# Expansion of Development (projected)

## 2010

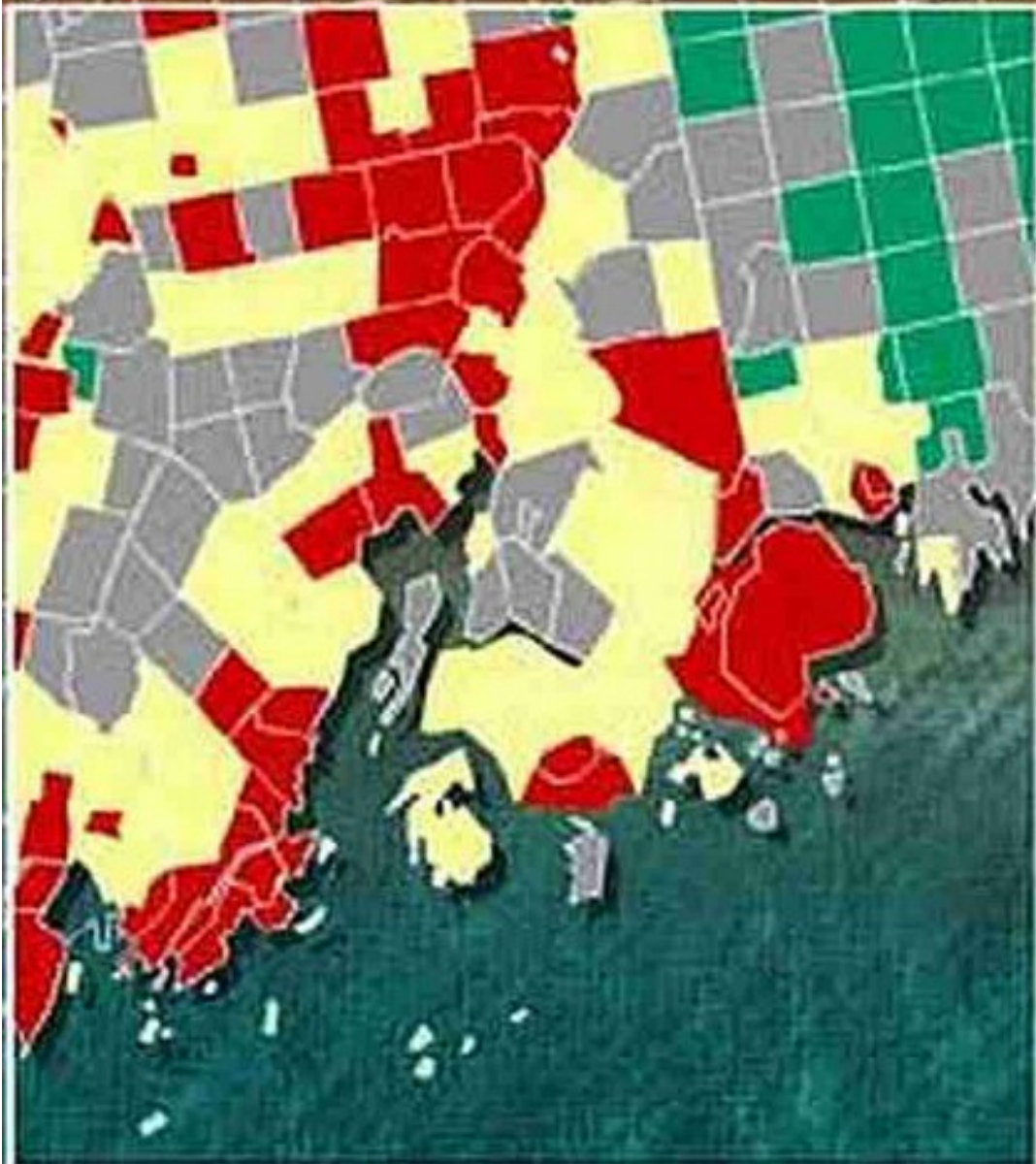


- suburban/urban
- emerging suburb
- rural
- unorganized



# Expansion of Development (projected)

## 2030



- suburban/urban
- emerging suburb
- rural
- unorganized



Stormwater  
goes from  
Helpful Natural Runoff  
to  
Harmful Unnatural Runoff.

Enter:  
the  
commercial  
fishing industry



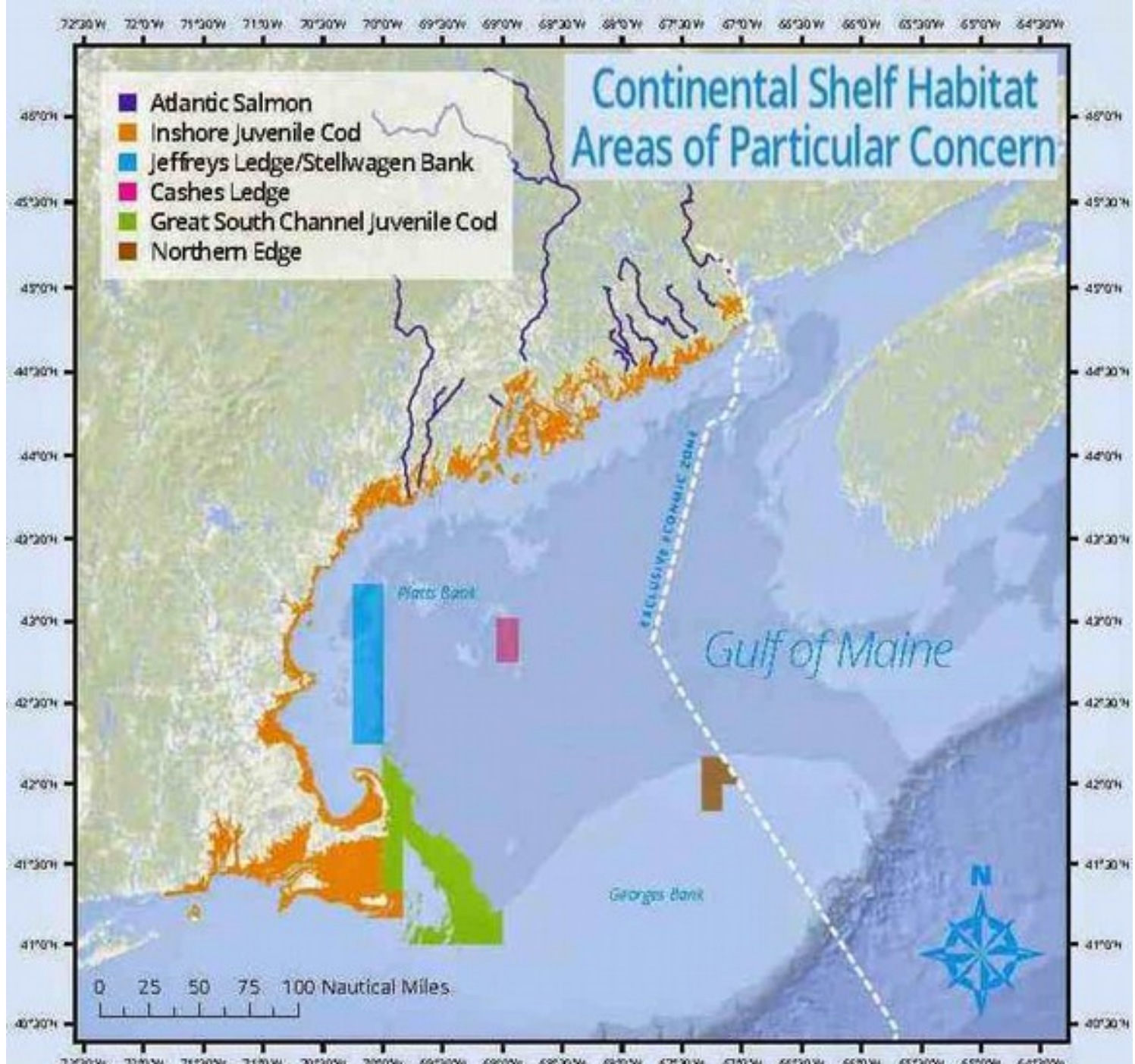
New England Fishery  
Management Council  
& NOAA

have designated the entire  
New England coastal waters

High tideline to 20 meter depth contour

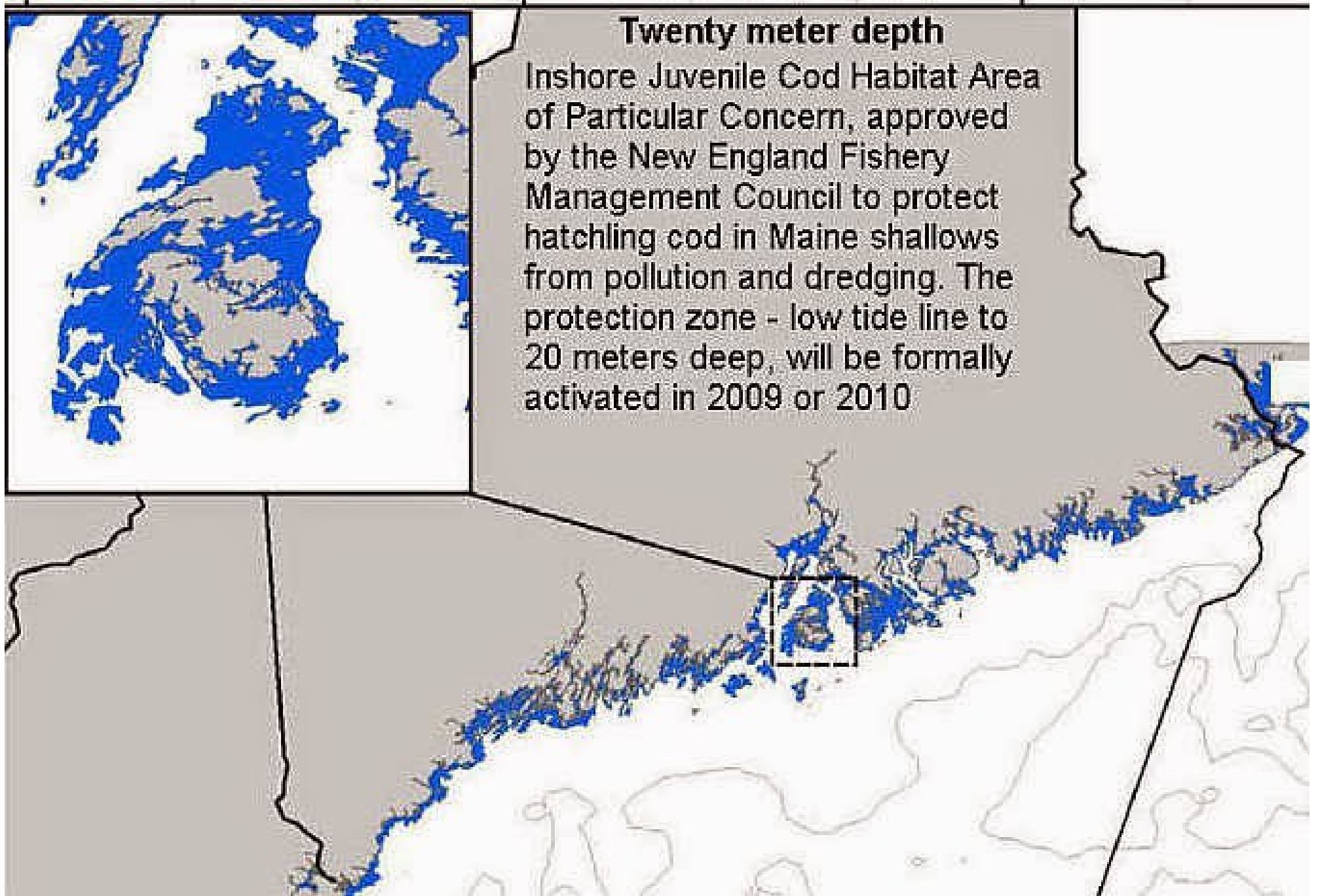
As a...

Habitat Area of  
Particular Concern  
for  
Inshore Juvenile  
Atlantic Cod



### **Twenty meter depth**

Inshore Juvenile Cod Habitat Area of Particular Concern, approved by the New England Fishery Management Council to protect hatchling cod in Maine shallows from pollution and dredging. The protection zone - low tide line to 20 meters deep, will be formally activated in 2009 or 2010



AGE ZERO Atlantic cod gain  
safety in the shallows.

*because*

AGE ONE Atlantic Cod are  
CANNIBALS

The shallows are subject to  
strongest concentrations of  
tainted stormwater runoff  
and  
its land-sourced pollutant  
loads.

The New England Fishery  
Management Council has no  
expertise on land based  
pollution prevention and  
clean up.

NOAA Habitat Chief calls on  
NGOs to help document  
existing habitat quality  
of zNorth Atlantic coastal /tidal  
shallows:



***From:*** Lou Chiarella  
Assistant Regional  
Administrator  
for Habitat Conservation  
NOAA  
Gloucester

"...I agree with your assessment of the **inshore juvenile cod HAPC**. Although HAPC's are not directly afforded greater protection under the EFH guidelines, they do highlight these special places

"...I do want to reach out to the NGOs and government agencies to discuss the importance of the juvenile cod HAPC..."

...Including  
non-fishing  
activities that  
are of  
concern...

**"...which allows NOAA Fisheries  
and other federal and state  
agencies to prioritize our  
conservation efforts in those  
locations."**

Omnibus EFH Amendment 2 – Volume 2

Potential Threats	Type	Eggs	Larvae	Juveniles	Ad.	
PAH	Chemical	M	M	M	M	
PCB		M	M	M	M	
Heavy Metals		M	M	M	M	
Nutrients		M	M	M	M	
Pesticides/Herbicides		U	U	U	U	
Acid		M	M	M	L	
Chlorine		M	M	M	M	
Greenhouse Gases		U	U	U	U	
Channel Dredging		Physical	M	M	M	M
Dredge and Fill			M	M	M	M
Dredge Material Disposal	H		M	M	M	
Marina/Docks	M		M	M	L	
Vessel Operation	M		L	L	L	
Utility Lines/Pipelines	U		U	U	U	
Oil/Gas Operations	M		M	M	M	
Erosion/Flood Control Structures	U		U	U	U	
Road Building/Maintenance	U		U	U	U	

Dam Construction/Operation	Physical	U	U	U	U
Agriculture/Silviculture		U	U	U	U
Water Intake		M	M	L	L
Water Discharge		L	M	M	M
Sewage/Septic Discharge		M	M	M	M
Marine Mining		M	L	L	L
Salinity		L	L	L	L
Suspended Particles		M	M	M	L
Thermal		M	M	M	L
Dissolved Oxygen		M	M	M	M
Exotic Species		Biological	U	U	U
Pathogens	U		U	U	U
Aquaculture Operations	U		U	U	U
Plankton Blooms	U		U	U	U

Most of the feds'  
list of pollution  
concerns are  
already concerns of  
you and I.



## INTERTIDAL HAPC HABITATS

1. Pebble-gravel pavement (left) and cobble/boulder pavement with macroalgae (right)
2. Cobble/boulder pavement (not including groin).
3. Cobble/boulder pavement (borderline “scattered”).
4. Scattered cobble boulders
5. Pebble-gravel pavement (bottom), scattered cobble left, sand and pebble-gravel (top).













## **Subtidal HAPCs.**

6. Pebble-gravel pavement

7. Scattered boulders/cobble, but underlying pebble-gravel pavement.

8. Scattered” boulders, with underlying pebble-gravel pavement.

9. “Scattered” boulders/cobble and pebble-gravel patches.

10. Pebble-gravel pavement mixed gravel-bottom.  
unless less than 10% pebble-gravel content.

11. Pebble-gravel and cobble pavement area.

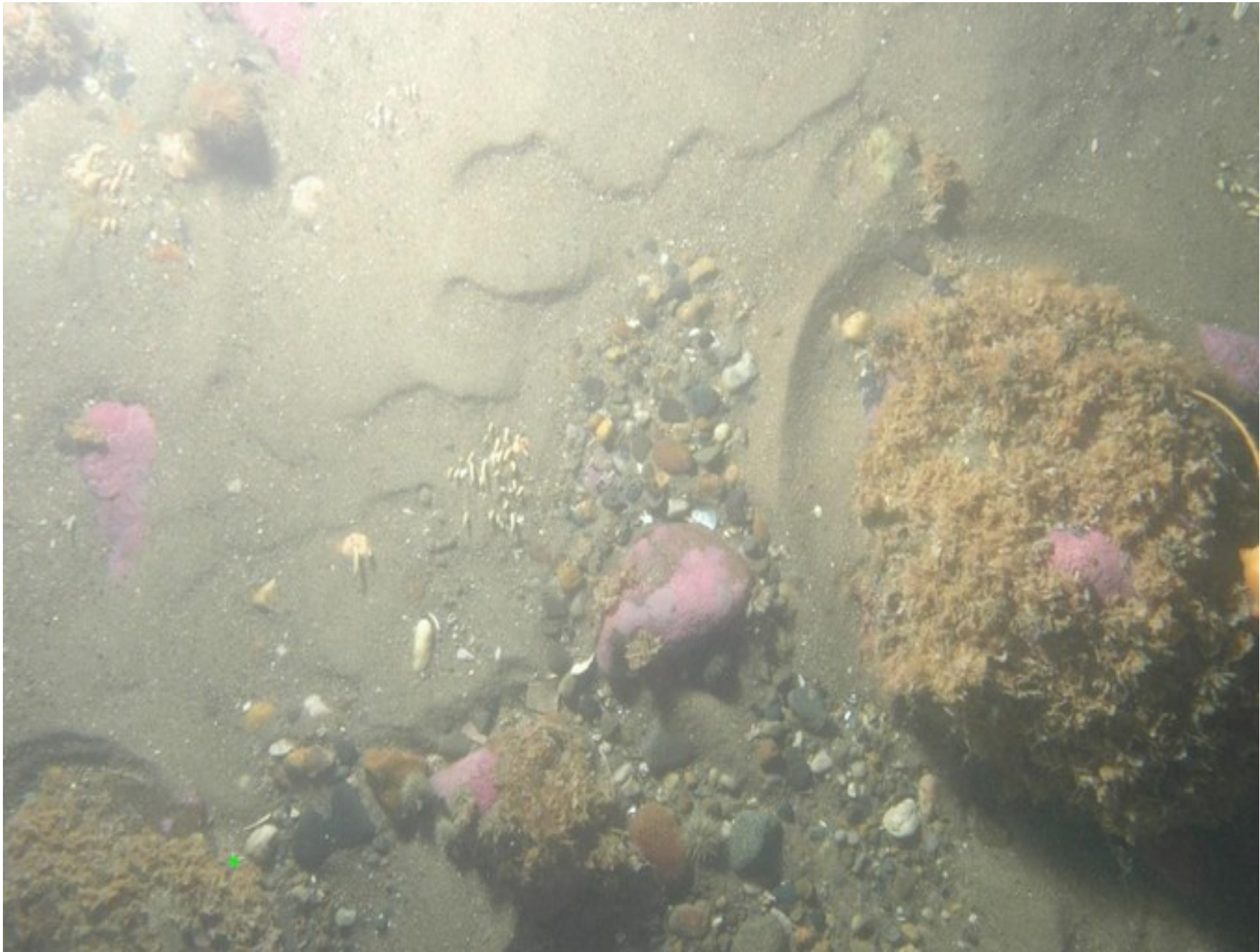
12. Sand with low percentage pebble-gravel content.

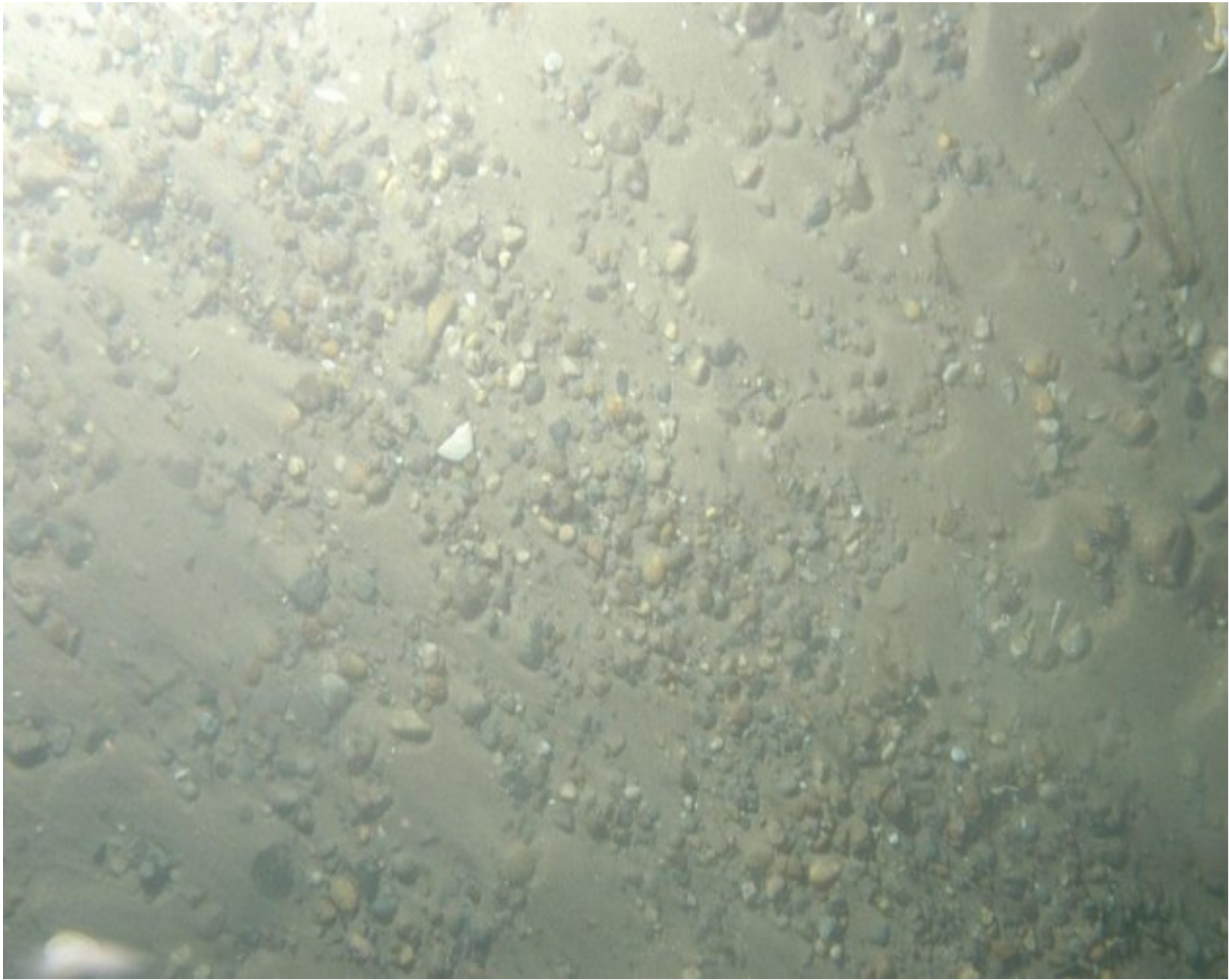




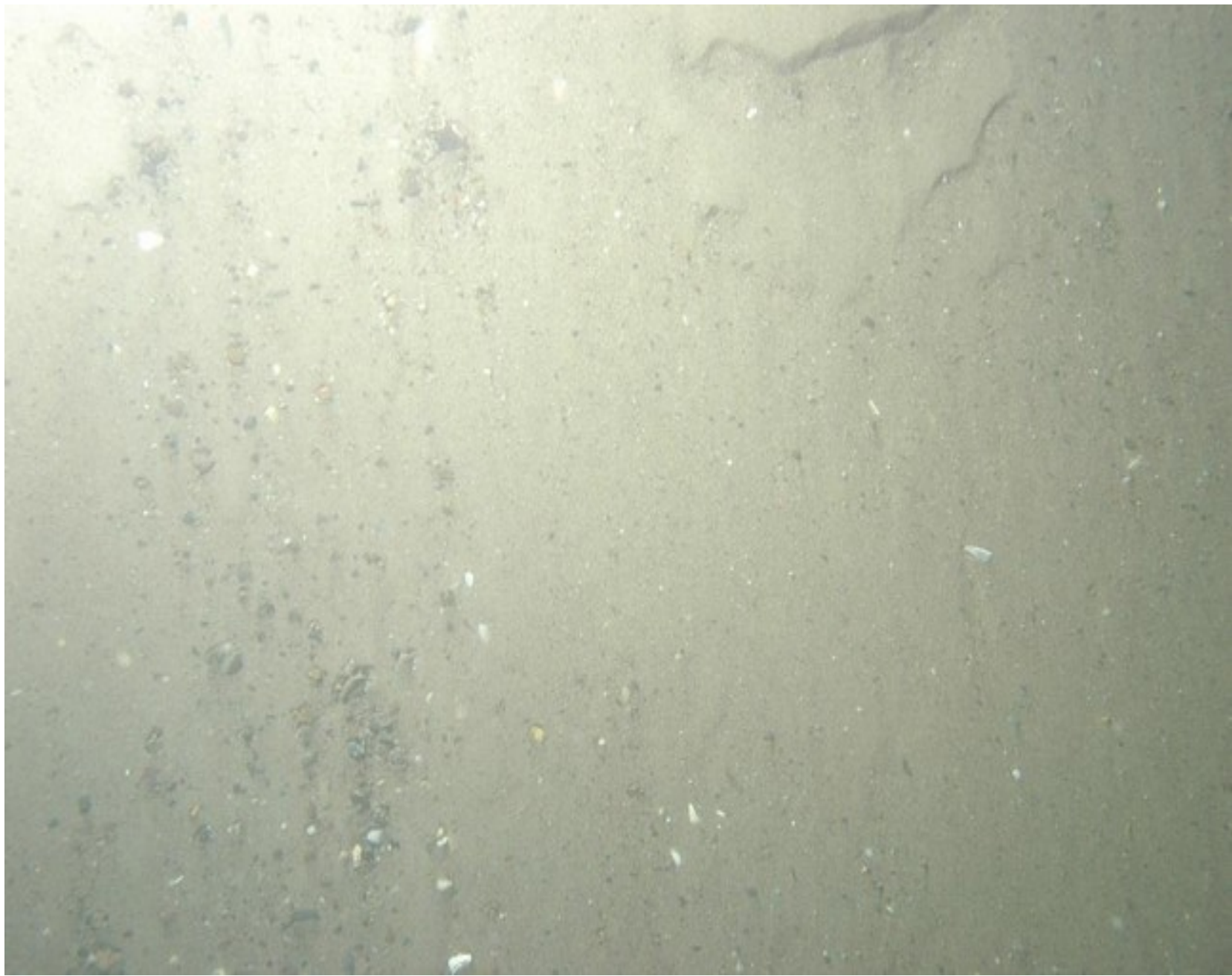












For without this data, state and local decision makers have no idea what the submerged habitat resources at risk even are.



For this to work, we need to build the documentary video & photo record of the inshore juvenile Atlantic cod HAPC within the 30 foot depth contour from Narragansett Bay to Passamaquoddy Bay.

We will then be able to inform the decision makers of New England coastal towns of the actual state of their towns' inshore habitats, lest they permit something that could harm it.

Communities will be able to ask NOAA to require the Army Corps and state agencies to include an evaluation of potential impacts on specific HAPC habitats at risk from the would be developer's stormwater discharge.

Friends of Penobscot Bay has  
the network to midwife this  
new HAPC into being.

We do NOT have the  
resources to carry it out.

# AGENCY LEADS FOR THIS HAPC

## **New England Fishery Management Council**

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## **UNDERWATER VIDEOGRAPHERS**

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Friends of Penobscot Bay has  
the network to midwife this  
new HAPC into being.

We do NOT have the  
resources to carry it out.

When it comes to  
Inshore fish habitat loss  
& tainted stormwater  
**Prevention**  
is the best medicine!