



**Department of
Environmental
Conservation**

Building Environmental Literacy Through Inclusive, Hands-on, Estuary Education

**Presented by: Fran Dunwell and Chris Bowser
NYSDEC Hudson River Estuary Program
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NOTE: All photo credits NYSDEC unless otherwise noted

Today:

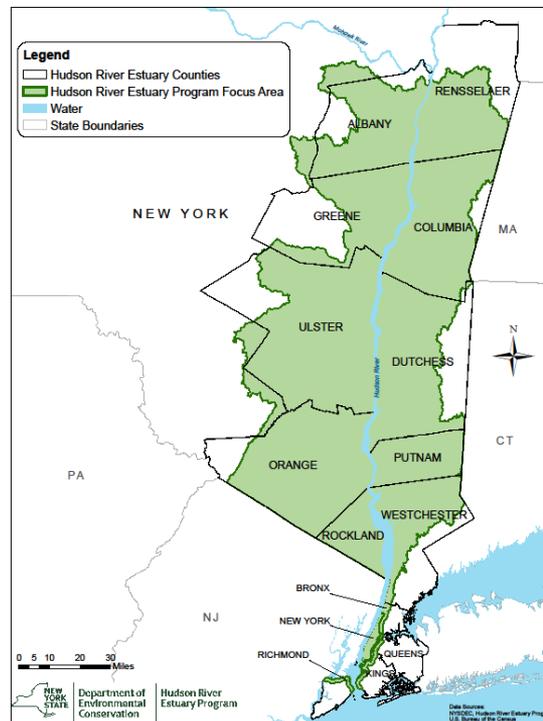
- * Building consciousness about our living environment
- * The importance of hands-on programs that raise eco-literacy
- * Enhancing inclusion

But first, who are we?

What is the NYSDEC Hudson River Estuary Program?



We are a science-based program focused on conserving the river and its watershed for the benefit of people



We focus on:

- The River
- The Watershed
- Recreation & Education



**This year we
launched two
over-arching
priorities
affecting all of
our work**

*** More fully addressing
social and economic
inequities.**

*** Building a more climate-
resilient environment.**

Our work is guided by a 5- year plan and \$5.5m budget



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Hudson River Estuary Action Agenda 2021–2025 OPPORTUNITIES FOR ACTION

Kathy Hochul, Governor | Basil Seggos, Commissioner



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Our staff is organized into Teams

- Fisheries
- River Habitats
- Water (River & Streams)
- Climate
- Natural Areas
- Education
- River Access



We do a lot of outreach and education with people in the community to promote best management practices



And we have a robust education program that Chris will talk about, focused on:

- Introducing “the river” to everyone
- Deeper engagement in content and time
- Supporting teachers and centers



Why environmental education? First:

- Big shift to walking and indoor entertainment
- People are losing their consciousness of nature



That's why we are enhancing river access

To encourage more:

- boating
- fishing
- swimming
- river watching &
- learning



Why environmental education? Second:

- People don't understand natural processes, which affects DEC's ability to manage resources



That's where environmental centers like Five Rivers come in—hands-on learning

Five Rivers



Norrie Point



Yonkers CURB



Why environmental education? Third:

- Outdoor experiences are the inspiration for most environmental careers.



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That's why we provide inclusive education, especially for STEM careers, with stepping-stones, including SCA



Why environmental education? Fourth:

- Young people feel powerless to make change.
- Community science (eels, trees, oysters) shows that they can make a difference in their community



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Our education focus: Meet people where they are

- **Introductions to the River** like Day in the Life, classroom programs, and public events
- **Deeper experiences** like the Eel Project and TIDES
- **Empowering teachers & partners** with professional development and curriculum



Introducing students to the River--classroom and field activities

- Classroom programs & Field experiences at Norrie Point



Introducing everyone to the River

- Day in the Life of the Hudson & Harbor
- Great Hudson River Fish Count



Eel sampling in river towns:

- Conservation goal: monitoring eel migration and habitat use
- Community goal: Empowering new scientists to keep exploring



More eels: Newburgh Free Academy at Quassaick Creek, and great local support at Hannacroix Creek





TIDES (The Institute Discovering Environmental Scientists)

HRNERR intensive research program
High School and College students

- Two-weeks in summer
- Transportation provided
- Student researchers paid hourly wage
- Similar to NSF “INCLUDES”
- Being replicated 4x in 2022



Eels and TIDES skill building

- Research Project Design
- Field and Lab Methodology
- Data Analysis
- Aquatic Ecology Understanding
- Public Speaking and Presenting
- Confidence
- Teamwork



Teacher Training & Professional Development

- TOTE: Teachers on the Estuary...with Five Rivers!



In summary, environmental education is crucial for many reasons, and we are proud to be partners with Five Rivers.

Questions?

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