

# Environmental Consortium of Hudson Valley Colleges & Universities

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## **River Summer Task Force Report**

Steering Committee Meeting 16 October, 2009

### **Summary**

This report documents the River Summer 2009 program. It is the second of 3 River Summer programs funded by the 2008 Mellon grant. We continued to work towards our goals: 1) Increase connections among faculty at different institutions and from different disciplines, and 2) Facilitate the development of curriculum and activities by faculty and teachers at their home institutions and schools based on River Summer's field & place based activities. The orientation for River Summer was held by teleconference on July 2<sup>nd</sup> and River Summer 2009 ran from July 9<sup>th</sup> through July 23<sup>rd</sup>. A total of 84 individuals from 46 different institutions and organizations participated in this year's program (see Appendix I: Participant List). We used the concept of history with its many definitions, scales, and time-frames to connect numerous field based activities from a variety of disciplines.

### **Task Force meetings and planning**

With the Hudson Quadricentennial celebration also occurring this year, the chosen connecting theme was a very good fit. Given the topic, we relied heavily on input from Roger Panetta during our task force meetings. We were also fortunate to add several new members to the task force including Geoff Brackett, Bob Speigleman, and Bruce Keith. With the success of the whole river transit model, we were keen to include this in some fashion. We were also interested in exploring the Hudson Valley's Native American history as well as connecting with West Point to examine the Hudson's critical role in our nation's early history. We agreed that tying into Juet's journal and traveling from offshore to Albany, would be an interesting voyage of discovery and one we could contrast to Hudson's. After several brainstorming sessions, we compiled a (partial) list of potential topics generally organized by area (Appendix II). We realized fairly quickly that this summer's program was not going to suffer from lack of interesting topics to explore. We were interested in the idea that the majority of places had layers and layers of events and significance beyond what we see today. We agreed that it would be interesting to assemble an interdisciplinary team and explore multiple layers and one or more areas.

### **Logistics and program modifications**

#### *Journaling*

One of the most significant programmatic changes we made this year was the addition of nightly journaling/blog activity that would be made available on line. In addition to the historical context of journals such as Juet's, our journal allowed others follow along with us on the journey and provided a written record of it as well. This was a great success, and we will definitely include it in next year's program. The journal is available on line at

<http://www.environmentalconsortium.org/taskforces/fieldstudies/riversummer/journey09.htm>

### *Module lengths*

One new logistical issue that affected the program was competition from researchers at Stony Brook for the early July time slot. One of the take-home lessons from last year's program was that even 4½ days were not enough time to transit the Hudson, allow for a reasonable number of off-boat activities, and not feel rushed. We initially had two 8-day transits scheduled for Modules 1 and 2. Since the whole river transit really fit in with Hudson's journey up the river, we decided that Module 1 would remain 8 days in length, allowing ample time to go offshore and transit to Albany with time to explore along the way. Module 2 was shortened to 6 days. We decided to include an intense 3-day integrated concentration in the West Point/Hudson Highlands area but still allow a reasonable amount of time to transit from Albany to Piermont with both on and off boat activities. Appendix III contains the final RS09 activity schedule.

In an effort to make efficient use of ship time, we made a few other schedule changes. Modules began in the late morning of the first day rather than in the evening, which allowed us to include an additional half day activity. While we definitely liked this change, we were a bit pressed for set up time at the beginning of modules. Next year, we will likely keep the early start time, but also include a full day to set up before the module begins.

Based on comments from previous participants and our own observations, we felt that we needed more time at the end of each module to process, interpret, and synthesize. We ended modules at 3:00 PM rather than 12:00PM to allow additional time for these activities. This worked well and we will likely repeat this next year.

### *No ADK Module*

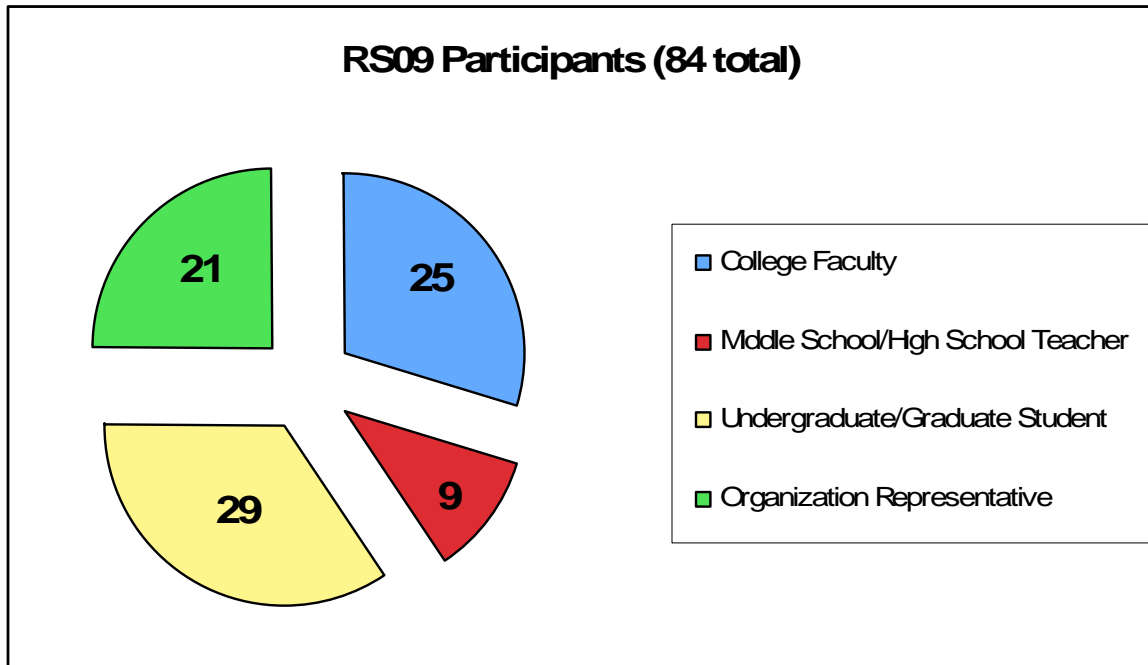
One very unfortunate logistical issue was an inordinate number of last minute participant withdrawals (from 8 to 3), which forced us to cancel the Adirondack Module. We expended quite a bit of effort trying to fill the empty spots, but our waiting list for this module was thin. In the end, we felt it would be a better use of funds and resources to conduct an additional activity in the future similar to last year's Black Rock Forest weekend. One topic we would like to explore is how we can better connect with Consortium members or other potential River Summer participants – although we generally have no problem enlisting day trippers, a longer waiting list for the full program participants (faculty/student or student only slots) for all of our modules would be most welcome.

## **Participants**

Once again, we had a nice mix of college faculty, organization representatives, teachers, and students with the dominant group being faculty (see figure below for breakdown).

***For the first time, the number of undergraduate and graduate student participants exceeded the number of college faculty.*** Of the 84 participants in this year's program,

there were 58 who were new to River Summer and 26 that had participated in previous River Summer Programs. Of the repeaters, 8 participated in a different role or taught a modified program. In addition, 6 of the full module participants were new to this role (i.e., none had participated in a full module on the Seawolf. From our measures of assessment, RS09 was very successful. Participant evaluations were quite positive. See appendix IV for a summary of the evaluation information.



### Program

RS09 followed in the direction of curricular activities connected by a common theme; this approach continues to work well. The lengthening of the modules allowed sufficient time for numerous activities as well as time to enjoy/reflect on the transit and synthesize the gathered information at the end of the module. The journal was a great addition, providing us with a unique record of our journey. The task force activities were an important contribution, and I think that this year more than others we were more explicit in our quest for interdisciplinary content. In several cases, we identified people or important topics and pursued them. Although we initially thought in terms of the layered history concept, which fairly straightforward and worked well in the Highlands, a surprising issue that was discussed was one of preservation. Who saves what? Who decides what gets saved, and how are these decisions made? What is the purpose of preservation? This year we interacted with many individuals who I have decided to collectively call Preservationists. This group includes Mark Jelly, Mary Burns, Fred Schaffer, the Fullers in Fort Edward, Tom Sullivan, and Lenny and his mother at the Haverstraw Brick Museum. I was struck by both their passion and dedication to preserving something from the past, the place based nature of the preservation efforts,

and the strong desire to tell the story to others balanced by a sense of ownership and need to protect it.

### **Recording River Summer**

Once again we recorded audio (iPod) and video (Hatcam) as well as obtained a large number of digital photographs. We are in the process of organizing and archiving this information. Rik Scarce and Tim Kenna continue to work with the video footage, and Michelle Land and Donna Kowal have been working with student interns to work with the iPod recordings, editing them with short introductory clips and photo displays. As pieces are completed, they will be added to the resources available to faculty on the project website.

### **Planning for River Summer 2010 (RS10)**

For RS10, we are exploring sustainability and the built environment as the program's unifying theme. In 2009, we looked back at how the region has developed, in 2010 we will look ahead to understand potential options for the future. Curricular activities could incorporate engineering, economics, political science, growth and development, and sociology as well as climate and environmental change impacts to the region. Other activities could include walking tours of cities and towns and discussions with town planners, historians and those in charge of development projects.

### **NYSDEC Curriculum Pieces**

As part of a grant from NYSDEC, several of the RS activities are being developed as stand alone Hudson-based curricular components. Thus far, 17 faculty members have agreed to develop curriculum pieces; to date, five have been fully completed with two more close to completion, as follows:

*Completed and currently available on the River Summer website*

*(<http://www.environmentalconsortium.org/taskforces/fieldstudies/riversummer/curriculum.htm>):*

- Brian Jensen - Fisheries Biology
- Carol Rietsma - Marsh Ecology
- Steve Schimmrich - Geology of the Lower Hudson Valley
- Dan Farkas - Introduction to Using GIS Mapping Using
- Marilyn Powers - New Urbanism, the Political Economy of the Hudson River Valley and a Walking Tour Case Study

*In final revisions:*

- Elizabeth Hutchinson - The Hudson River School of Art
- Michelle Land/Lee Paddock/Alex Dunn - An Environmental History of Law in The Hudson Valley

*In progress:*

- Tim Kenna - Visualizing estuarine circulation
- Ted Eismeier - Political Economy of the HV
- Margie Turrin/Karl Kehde - Community Planning/Brownfield Redevelopment in the HV
- Susan Fox Rogers - Free Writing
- Roger Panetta – Panoramas
- Howard Horowitz – Land Use in the Hudson Highlands
- Lucy Johnson – Early Man Decision Making Grid linked to a field guide of the historic uses of Denning’s Point
- Geoff Brackett – The Hudson River as a Literary Source
- Bruce Selleck – Using GPS and GIS for data collection and display

*Please feel free to contact Tim Kenna [tkenna@ldeo.columbia.edu](mailto:tkenna@ldeo.columbia.edu), if you have any questions or comments.*

## Appendix I – River Summer 2009 Participant List

Name	Institution/Organization	Category
Brian Mailloux	Barnard College	College Faculty
Brian Jenson	College of St. Rose	College Faculty
Roger Panetta	Fordham University/Marymount College	College Faculty
Meryl Nadel	Iona College	College Faculty
Klaus Jacobs	Lamont-Doherty Earth Observatory	College Faculty
Margie Turrin	Lamont-Doherty Earth Observatory	College Faculty
Tim Kenna	Lamont-Doherty Earth Observatory	College Faculty
Jack Reilly	Mount Saint Mary College	College Faculty
James Cotter	Mount Saint Mary College	College Faculty
Suparna Bhalla	Mount Saint Mary College	College Faculty
Tom Sarro	Mount Saint Mary College	College Faculty
Pat Grove	Mount Saint Vincent College	College Faculty
Dorothy Peteet	NASA GISS	College Faculty
Geoff Brackett	Pace University	College Faculty
Robert Goldstein	Pace University	College Faculty
Bob Speigleman	Real-View Media, LLC & Independent Scholar	College Faculty
Susan Golz	Rockland Community College	College Faculty
Brent Turrin	Rutgers, State University of NJ	College Faculty
Carol Reitsma	SUNY New Paltz	College Faculty
Roger Flood	SUNY Stony Brook	College Faculty
Steve Schimrich (or MH)	SUNY Ulster County Community College	College Faculty
Bruce Keith	United States Military Academy	College Faculty
Marie Johnson	United States Military Academy	College Faculty
Rick Hoff	United States Military Academy	College Faculty
Lucy Johnson	Vassar College	College Faculty
Anne Marie Nowak	Booker T Washington	Middle School/High School Teacher
Gary Lyon	Elisabeth Morrow School	Middle School/High School Teacher
Roy Arezzo	Harbor School	Middle School/High School Teacher
Tom Mullane	Pearl River HS	Middle School/High School Teacher
Banny Ackermann	Radner Middle School	Middle School/High School Teacher
Argie Miller	Secondary School for Law, Brooklyn	Middle School/High School Teacher
Karen Johnson	Trevor School	Middle School/High School Teacher
Jaclyn Hoahing	University Neighborhood High School	Middle School/High School Teacher
David Kennedy	W. K. Doyle Middle School	Middle School/High School Teacher
Pat Zolnik	Cary Institute of Ecosystem Studies	Organization Representative
Clearwater Crew	Clearwater	Organization Representative
Charley Wilkinson	Constitution Marsh Audubon Center & Sanctuary	Organization Representative
Eric Lind	Constitution Marsh Audubon Center & Sanctuary	Organization Representative
Mary Charbonneau	Constitution Marsh Audubon Center & Sanctuary	Organization Representative
Myra Lawyer	Dutchess County Soil & Water	Organization Representative
Joanne Fuller	Fort Edwards historian	Organization Representative
Richard Fuller	Fort Edwards historian	Organization Representative
Mark Jelley	Friends of Doodletown	Organization Representative
John Mylod	Hudson River Fishermen	Organization Representative
Lynn Fagen	Hudson River Heritage Archeologist/Conservationist	Organization Representative
Mary Burns	Hudson River Heritage Archeologist/Conservationist	Organization Representative
Isabelle Jacobs	Lamont-Doherty Earth Observatory	Organization Representative
Dennis Hardy	Local Fisherman/Businessman	Organization Representative
Dan Miller	New York State Dept. of Environmental Conservation	Organization Representative
Tom Sullivan	Stony Point Historian	Organization Representative
Aaron Bennett	The Catskill Center for Conservation and Development	Organization Representative
Roddy MacLeod	United States Military Academy	Organization Representative
Steve Grove	United States Military Academy	Organization Representative
Tracy Johnson	Vassar College	Organization Representative
Fred Schaeffer	Walkway Over The Hudson	Organization Representative

## Appendix I – River Summer 2009 Participant List (continued):

<b>Name</b>	<b>Institution/Organization</b>	<b>Category</b>
Luke Henry	Bard College	Undergraduate/Graduate Student
Sarah Mount	Bard College	Undergraduate/Graduate Student
Cleo Chou	Barnard College	Undergraduate/Graduate Student
Holly Menten-Weil	Barnard College	Undergraduate/Graduate Student
Andy Ferguson	Barnard College	Undergraduate/Graduate Student
Courtney Turrin	Bucknell University	Undergraduate/Graduate Student
Karina Costa	Cary Institute of Ecosystem Studies	Undergraduate/Graduate Student
Daniel Cohen	Columbia University	Undergraduate/Graduate Student
Elise Luce	Columbia University	Undergraduate/Graduate Student
Gabriel Schubiner	Columbia University	Undergraduate/Graduate Student
Kamini Doobay	Columbia University	Undergraduate/Graduate Student
Katie Schummel	Columbia University	Undergraduate/Graduate Student
Kevin McLain	Columbia University	Undergraduate/Graduate Student
Kim Wu	Columbia University	Undergraduate/Graduate Student
Sanpisa Sritrairat	Columbia University	Undergraduate/Graduate Student
Tomas Diaz	Columbia University	Undergraduate/Graduate Student
Youngming Ha	Columbia University	Undergraduate/Graduate Student
Bethany Ellis- Caligiure	Constitution Marsh Audubon Center & Sanctuary	Undergraduate/Graduate Student
Eric Sabel	Constitution Marsh Audubon Center & Sanctuary	Undergraduate/Graduate Student
Matt Caligiure	Constitution Marsh Audubon Center & Sanctuary	Undergraduate/Graduate Student
Jennifer Courtwright	Northland College	Undergraduate/Graduate Student
Roisin Grzegorzewski	Pace University	Undergraduate/Graduate Student
Charles Solsa	Secondary School for Law, Brooklyn	Undergraduate/Graduate Student
Max Perez	Secondary School for Law, Brooklyn	Undergraduate/Graduate Student
John LaBold	SUNY Stony Brook	Undergraduate/Graduate Student
Nicole Rogers	University of Maine	Undergraduate/Graduate Student
Jerry Gilligan	Vassar College	Undergraduate/Graduate Student
Katie Intenichia	Vassar College	Undergraduate/Graduate Student
Rosa Speranza	Vassar College	Undergraduate/Graduate Student

## **APPENDIX II –Stepping Off Points for River Summer Topics/ Places along the Hudson with “layers” of history**

### Verrazzano Narrows

Geology of Staten Island – slivers of Ordovician oceanic crust  
Postglacial moraine location - Where the Wisconsin terminal moraine crosses from Brooklyn to Staten Island and the breach that drained glacial lakes to the north.  
Named after Giovanni da Verrazzano who sailed through in 1524  
Engineering marvel of bridge  
Beginning of the Hudson estuary  
Entrance to New York Harbor – importance in modern shipping industry

### Manhattan

Geology of Manhattan Island – metamorphic rocks & structure influencing modern city  
Manhatta Project (Sanderson, WCS) – what Manhattan looked like before Europeans  
Panoramas using good maps of natural/built shorelines  
Native settlement of Manhattan – interactions with Hudson & Dutch settlers  
Why is there a major world city located here?  
Walking tour of lower Manhattan, that’s where the shoreline has changed most, and some of that is preserved in the streets, e.g. Water Street near South Street Seaport was the old waterfront.  
Role of Dutch & English in development  
The Battery – the history, & offshore sediments show methane gas turbation?  
Central Park – layers of geology, talk about development, Frederick Law Olmstead, Robert Moses, etc.  
Bowling Green Park  
Environmental challenges of major city on the River  
Great seaport  
Lousy location for defending the river  
Inwood Park – original topography of the island, ecology and habitat (last natural forest and salt marsh in Manhattan)  
Washington gets run out of town;  
racial diversity;  
radically altered landscape making for constructions of nature  
World Trade Center - Signature of 9/11 in the sediment.  
Underneath NYC – tunnels for water supply, power, sewage etc.  
Grants Tomb

### New York Harbor

Ellis Island  
Liberty Island. The legal issue of who owns what, NY or NJ - Statue of Liberty  
Hoffman/Swinburne Islands - Old quarantine stations



Transportation connections around New York Harbor, from waterways, to ferry connections, to bridges & tunnels.

The Triborough bridge being renamed this year is a connection to that idea (and Robert Moses).

The Tunnels

North River STP

GW Bridge – Turbidity maximum here has strong influence on sedimentation.

The Port Authority Channel Deepening Project – impact on sedimentation

#### Governor's Island

Half of the island is fill (from subway construction?), and with its connection to lower Manhattan and its future plans being debated, it is a good place to talk about past & future development of the city

#### Palisades

Palisades Sill – Igneous intrusion related to Mesozoic rifting of Pangaea

Triassic from the opening of the Atlantic and control of the Hudson's course here.

Palisades – Landmark along the Hudson River since first glimpsed by Verrazzano in 1524

Henry Hudson anchored here around September 10-12. Obtained oysters from natives

Fort Lee – Importance in Revolutionary War

Mining of "traprock" along the cliffs

Preservation and creation of Palisades Interstate Park – the role of women in the conservationist movement

JC Morgan, Rockefeller etc. & their role

Creation of the 'parkways' – Robert Moses & his vision

#### Tappan Zee/Piermont

Preglacial Sparkill Gap - history of the Hudson River & its trajectory

Why is the Hudson so wide at Tappan Zee?

Piermont Marsh

Silk Industry, canning factory

Rerouting the Pocantico - history of the site of the GM Plant in Sleepy Hollow - from bricks to cars – impact of the RR

Washington Irving (literature)

Tappan Zee. Bridge boring help to decipher post glacial history and sea level rise.

Impact on the West Hudson from the creation of the TZ Bridge

Tappan Zee bridge controversy today

Hook Mountain – Hudson River Painters

#### Haverstraw/Stony Point/Croton Point

Southern boundary of Hudson Highlands / Ramapo Fault

Brick making from post-glacial lake clays

Haverstraw Bay

High Tor Mountain – Revolutionary beacon & later role in Env. Protection

Tilcon traprock mining from Palisades Sill  
Scenic Hudson & Emerline Park  
Croton Point postglacial lake delta  
Bald eagles and Croton Point  
Croton Park – superfund site  
Ossining Prison  
Stony Point importance in Revolutionary War  
Indian Point nuclear power plant – Lamont study of seismicity in the region  
Relic oyster reefs

#### Bear Mountain/West Point

Hudson Highlands geology and magnetite deposits  
Iron mining in the Highlands – old mines, towns, and forges  
Doodletown  
West Point--critical force in the Revolutionary War, probably kept the colonists in the war via access to the river;  
Forts and chains across the Hudson – strategic importance during the Revolutionary War  
The Gorge – World’s End  
George Washington, Benedict Arnold, and others  
Iona Island – historic uses & current role in the HRNERR system  
Constitution Marsh  
Constitution Island  
Foundry Cove superfund site  
Kowawese – Plum Point – Native Settlement, trading post, battlement area for revolution, brick making, sand for thoroughway, public park

#### Newburgh/Beacon

Denning’s Point – Beacon - Jim Heron walking tour – early man through Native population through brickmaking history & Dennings family  
New Rivers & Estuaries Center education building on Denning's Point – green building – history of paper clip factory etc,  
Harriman State Park – preserving the Highlands  
Storm King Mountain –power & preservation  
Historic Newburgh (Mary McTammeny)  
Newburgh Redevelopment  
Fishkill Manufacturing & relation to the Fishkill Creek and the river  
Beacon – the tale of two cities

#### Poughkeepsie

Whaling Capital  
Industry hub  
Second NY Capital –  
Ratification of the US Constitution – John Jay, Alexander Hamilton  
Astor, Vanderbilt homesteads  
Crumbs Elbow & trawling

## Kingston

- Former site of large Esopus Indian village
- Rondout flows into Hudson River here
- critical city in the life and history of the river from 1669 to mid-19th Century
- First capital of New York (1777)
- Burned by British after Battles of Saratoga (1777)
- Terminus of Delaware & Hudson Canal (PA coal)
- Important port for Catskill bluestone and brick making
- Northern end of Rosendale natural cement district
- Naturalist and writer John Burroughs lived nearby (West Park)
- Sturgeon trawling off Kingston Point last summer
- Hudson Landing waterfront development controversy (1,500+ units)

## Catskill

- Catskill Mountain geology
- Catskill bluestone
- Catskill Mountain House & Kaaterskill Falls
- Hotels – history of the Catskill retreat
- Hudson River School – Thomas Cole House
- Olana and Frederic Church
- Rip Van Winkle (literature)
- Hemlocks and tanneries
- Tanneries & Hemlock devastation
- NYC water supply – reservoirs
- Opus 40 Environmental Sculpture in Saugerties NY – bluestone quarry
- Recreation
- (constructions of nature--both conceptual and physical)

## Hudson

- Olana – Fredrick Church
- Whaling
- Proposed concrete plant
- Fallen economy – gradual re-emergence post 9-11
- Artists venue –
- Issues of race

## Greene County

- amazing stuff being done there by Rene VanSchaack and the county development folks to promote business and preservation both

## Albany

- Geology of Helderberg Escarpment
- Colonial trading post
- Merger of Mohawk and Hudson Valleys
- James Fennimore Cooper (literature)

Modern capital of New York State  
The Half Moon – connect with them  
Fort Orange,  
Erie Canal,  
Seat of government;  
Schuyler House  
(race and ongoing racial tensions, as well as environmental justice)  
Active Port

## **UPPER HUDSON**

Tracing the parallel histories of industrial exploitation of natural resources, and tourism along the Upper Hudson

Key Idea: Resource exploitation and tourism development have gone on simultaneously along the Upper Hudson; their impacts on the natural environment are different, and often competing; the upper Hudson and Adirondacks include many sites where these histories can be traced and impacts assessed. The nature and extent of resource exploitation and tourism are controlled by both intrinsic (minerals and ores in the landscape, forest type and accessibility, suitable sites for water power; transportation routes, scenic landscapes, climate and air quality) and extrinsic (economic demand for products, availability of capital, new technologies, governmental regulation; changing cultural patterns, perceptions of nature, etc) factors. At each site, examination of these issues, in the context of a particular form of resource exploitation or tourism opportunity, would be carried out within an historical framework

Faculty: Would be great to have an historian and an economist involved. Local experts would work well for this – town historians, etc. Involve - ESF-AEC; Skidmore?, RPI?

Troy Dam –  
PCBs behind the dam  
Impact on fish movement

Saratoga Battlefield/Bennington Battlefield—  
if Saratoga was the turning point of the Revolution, Bennington (in the Watershed!) was the turning point of the turning point;  
geology,  
resorts

Fort Edward/Glens Falls/Warrensburg  
Southern gateway to Adirondacks;  
Fort Edwards - once the wealthiest town in U.S. thanks to massive timbering-a symbol of the riches of the upper watershed and the ecological tragedy behind those riches.  
Paper Mills  
GE Plant  
Hudson/Champlain Canal  
Hydro power  
PCBs and GE

## Dredging

### Adirondacks

North Creek/Gore Mountain – Garnet mining, ski area, rafting, changing wildlife, potential for wind power

Tahawas/Newcomb – Mining, forestry, great camps, Railroad, hunting clubs

High Peaks and source of Hudson – Fur trapping, logging, Adirondack Park, and “Forever Wild”, Blue line, impacts of modern tourism

Champlain and Lake Champlain--probably worth a mention - a stop at the lake?

## Appendix III – River Summer 2009 Program

 <p>River Summer</p>	<p><i>River Summer 2009 Schedule</i></p>	 <p>Environmental Consortium</p>
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### **MODULE 1- Transect from NY Harbor to Albany 7/9-7/16/09**

Embark: 79<sup>th</sup> St. Boat Basin

Disembark: Albany

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#### **Thursday 7/9/09 - 1100 Module 1 participants arrive at 79<sup>th</sup> Street**

**Participants unload their gear on boat**

**Background on Journaling – Geoff Brackett – Pace University,**

**1300-1600 – Meryl Nadel, Iona College, Title of the Curriculum - Walking**

Tour of Lower Manhattan

**1700-1800 Roger Panetta – Fordham University**

Title of the Curriculum - Walking Tour of Southstreet Seaport

**1700 1900– Participants settle in, Seawolf orientation, Dinner**

Blog & Journaling – group

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#### **Friday 7/10/08 Offshore - the New York Bight**

**0600-1200 Roger Flood- SUNY Stony Brook**

Title of curriculum: Multibeam Mapping and interpretation in the Lower Hudson River & the NY Bight

**Brian Mailloux (Barnard) & River Summer Staff & Boat Crew -**

Activity: Enterococcus, CTD, Plankton, Water samples

Activity: Trawling in Marine Waters

**1230-1630 – Roger Panetta - Fordham University –**

Title of curriculum: Waterfront Tour of Manhattan –

(East River & Manhattan waterfront tour)- – transit to Piermont

Activity: Enterococcus, CTD, Plankton, Water samples

**16:30 Transit to Piermont Pier**

**1830- BBQ on the pier**

**1930 Eve – Dennis Hardy – History of Piermont fishing and the pier**

Activity: Walk on the pier

Blog & Journaling - group

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#### **Saturday 7/11/09 Piermont to Dobbs Ferry to Piermont to West Point**

**0800-1200 Bob Spiegleman, Quadridental Lecturer & Lucy Johnson, Vassar College**

Title of curriculum: Dobbs Ferry Wicker's Creek – the Native Story

**1200-1300 – Transit Back to Piermont –**

Title of curriculum: “What does a Geologist See”

**1300 -1700 – Brent Turrin, Rutgers University & Margie Turrin, LDEO**

Title of curriculum: The Palisades Sill – A Lynchpin in Geologic understanding, Conservation Efforts and Local Economics

**1700-2000 EVE – Transit to West Point – dinner underway**

**River Summer Staff & Boat Crew -**

Activity: Enterococcus & water samples

Blog & Journaling - group

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**Sunday 7/12/09 West Point to Poughkeepsie**

**0800-1200 Steve Schimmrich – SUNY Ulster**

Title of curriculum: Highlands Geology & Iron Mining in Doodletown

**Palisades Interstate Park/Friends of Doodletown –Mark Jelley**

Title of curriculum: History of Doodletown & Tour

**1300-1500 –Stony Point Historian – Tom Sullivan**

Title of curriculum: The Brick Industry of Haverstaw – Walking tour

**1500-1700 Transit to Poughkeepsie**

**River Summer Staff & Boat Crew -**

Activity: Enterococcus & water samples

**1700-- Eve –Fred Schaeffer – Walkway Over the Hudson**

Title of curriculum: History of the Poughkeepsie Railroad, dinner & walk on the railroad bridge trail

Blog & Journaling - group

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**Monday 7/13/09 Poughkeepsie to Kingston**

**0900-1100 Whaling - John Mylod, Hudson River Fisherman**

**1100 – 1400 Brian Jensen - College of St. Rose , John Mylod, Hudson River Fisheries**

Title of curriculum: Seining & Trawling in freshwater – the Hudson River then and now

**1400 – 1600 Transit to Kingston**

**1600 – 1700 Explore the Maritime Museum**

**1900- EVE – Geoff Brackett – PACE**

Activity: The Hudson River: The birth of the American Poetic Place

Blog & Journaling - group

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**Tuesday 7/14/09 Kingston to Catskill**

**0800-1400 Steve Schimmrich – SUNY Ulster**

Title of curriculum: Geology in the Upper Hudson Valley – the role of the cement industry in the river development

D& H Canal

History of Kingston

**1530 – Mary Burns – Magdalen Island –**

Title of curriculum: Protecting our archeological heritage. The importance of active involvement.

**1700 – 1900 Transit to Catskill**

**Robert Goldstein – legal issues on the Hudson –**

Blog & Journaling - group

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**Wednesday 7/15/09 Catskill to Albany –**

**0930-1230 Catskill Center – Aaron Bennett**

Title of curriculum: Platte Clove Preserve – The role of the Catskills in the NYC drinking water

**1300-1500 – Tim Kenna – LDEO**

Title of curriculum: Esopus Bend Preserve – coring & invasives

**1600- 1900 - DAN MILLER, New York State DEC, restoration projects**

Title of curriculum "Changing Channels: Construction of the Hudson River Navigation Channel, Effects on Habitat and Opportunities for Restoration".

**1700 – 2000 Transit to Albany**

Blog & Journaling - group

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**Thursday 7/16/09**

**0900 - 1500 Module 1 participants final wrap up of project**

- Data
- Concluding Journal
- Curriculum
- Evaluation

**1500 Students depart**

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**Friday 7/17/09 – No Program**

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**MODULE 2- Albany to Piermont Pier – 7/18-7/23/09**

Embark: Albany Seawall

Disembark: Piermont Pier, Piermont

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**Saturday 7/18/09 –Albany to Catskill –**

**1000 Module 2 participants Arrive**

**Orientation by Boat Captain**

**Introduction to Journaling**

**1100– Transit to Green Island/On to Peebles/Up to Fort Edwards**

Activity:

- Discuss the Troy Dam
- Head to Peebles Island and talk about confluence of the Mohawk and Hudson - different geology, geomorphology, Mohawk major contributor to the Hudson sedimentation and flow.. Talk about the historic piece behind the Island - Native people as well as Early settlers...
- Talk about the history of the Canal (Margie)
- Early History of Fort Edwards (Margie & Joanne & Richard Fuller, town historians)



- Fort Edward today – the story of GE and Hudson River PCBs

**Transit to Catskill – water sampling**

**1900 Evening Activity:**

Blog & Journaling - group

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**Sunday 7/19/09 Catskill to West Point –**

**0600 Transit to Catskill**

**0800-1430 – Steve Schimmrich – SUNY Ulster, & Mark Watson, Columbia U**

Title of curriculum: The Hudson River School of Art & The Geology of the Catskills

**1430 – Transit to West Point – Chris Bowser, Hudson River Estuary Program, Brian Jenson College of St. Rose**

Title of curriculum: - Trawling in freshwater – the Hudson River then and now

**River Summer Staff & Boat Crew –**

Activity: Trawl, Enterococcus, CTD, Plankton, Water samples

**Evening – James Cotter – Mount Saint Mary’s College**

Activity: Poetry of the Hudson, Riverine Anthology

Blog & Journaling - group

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**Monday 7/20/09 West Point**

**0800-1200 – Constitution Marsh – Eric Lind**

**1300-1500 – Foundry Cove – Soil Samples**

**1500-1700 - Dorothy Peteet – Lamont-Doherty Earth Observatory, NASA**

**GISS & Sanpisa Sritrairat - Lamont-Doherty Earth Observatory**

Title of curriculum: Marsh cores – what can we learn?

**Evening – Core analysis**

Blog & Journaling - group

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**Tuesday 7/21/09 – West Point**

**0900-1300 West Point Day - Marie Johnson West Point Geology, & Steve Grove West Point Historian,**

Title of curriculum: West Point – The history, geology and science of West Point

**1400-1630 - Trip to Constitution Island – Roddy McLeod – West Point -**

**1900-2100 – EVE –**

**Rick Hoff (Chemistry) West Point pharmaceuticals**

Blog & Journaling - group

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**Wednesday 7/22/09 West Point to Piermont**

**0800-1200 – Roger Flood – SUNY Stony Brook –**

Title of curriculum: multibeam and imaging the river bottom – Cheveaux-de-Frise, the Chain and other artifacts

**1400 Transit to Piermont Pier**

**CORING**

**River Summer Staff & Boat Crew -**

Activity: Enterococcus, CTD, Plankton, Water samples

**Evening – BBQ**

**Thursday 7/23/09**

**0900 - 1500 Module 2 participants final wrap up of project**

- Data - CTD, nutrients, entero, soil XRF, CORE XRF,
- Concluding Journal – Highlights of the module,
- Discussion of what we learned and how to export
- Evaluation -form

**1500 Students depart**

## **APPENDIX IV – River Summer 2009 Evaluation Comments**

### **Theme**

**The blending of history with science was very positively received. Some of the comments that were turned in included:**

- The major take-home message for me revolves around the complexity of development and preservation issues.
- What should we preserve? Who decides this? How old is something when it is believed important enough to preserve? What intrinsic value does it need to possess?
- Rather than just focusing on the human impact on the watershed River Summer has me thinking that better essential questions might be in order ....How has nature influenced the Watershed over time and then How has man dealt with it? It is a subtle more relevant inquiry that may get us closer to talking about sustainability issues throughout the year.

### **Benefit of Field Work/Studies**

**While several noted the difficulties in getting students out into the field with class time constraints, many seemed to find a way to include it and there was unanimous recognition in the value of it.**

- Students remain engaged if they feel connected to the area around them and can see the relevance of material that they are studying. I plan to take the learning out of the classroom and help them see how choices made by both individuals and nature change the world around them. This learning experience in turn should help them be more aware of their surroundings and help them make more environmentally friendly choices
- Plan to be more organized with field study data. When we mapped out sites, graphs and looked at the data to discover a higher phosphate count in a specific area, it hit me that in watershed we could be doing a much better job mapping – with our GPS more, maintain a blog, maps, chart and graph results, look for patterns, time of day, season, point v non point pollution if any. Seeing the Hudson map spread out and the discussions about the data and the graphs reconfirmed my need to redefine our monitoring schedule. Students learn to test, assess habitat, trouble shoot explanations for why a count might be high or low but their hasn't been a whole picture review in a few yrs. – time to refine our objectives and look for patterns, have better discussions etc. Really inspired to make this happen!

### **Program Impacts: people, places, connections, conversations**

**While there was not unanimous feedback on this it seemed that for most people it is the people and their passion, and seeing the places 'from the river' that have the strongest impacts.**

- Conversations! It has always been about framing the questions!
- I enjoyed the science-based activities very much, but what really struck me about this year was the synergies between the various sites and people we encountered and heard from in terms of

what, to me, was the central focus this year: historical preservation: what to save, how to save it and why.

- As strenuous as the outings were for me physically, ultimately they had the most impact on me. There is no substitute for being out in the field and seeing things on the river first hand. In addition, traveling ON the river itself and seeing parts I had never seen was exhilarating.

- I have also been amazed during the sessions I attended at the level of expertise of so many people in so many different fields who are all working towards a common goal and who can really communicate both with each other from their separate disciplines and with River Summer students about what they do and why it matters.

- Conversations - I learned so much from the way that Tim and Margie presented topics and led discussions on the issues that emerged from the work. They are both really good at promoting discussions between participants, clarifying issues, and demonstrating common elements across very diverse fields. While they clearly have their own points of view, they kept the discussions open and instructive.

### **How has River Summer affected you outside of teaching?**

**The personal connection to the river built and enhanced in each participant an individual passion for the Hudson.**

- I feel a personal passion for the river that has been my home for 43 years

- It is more personal as I learned about the area I live in and now cannot wait to share it with my class.

- It is the whole program that inspires and impacts my learning and my teaching. Conversations, instruction helps me to be more knowledgeable, a better planner, collaborator/team player. River Summer does bolster my confidence – hard to say why when I happily realize how little I really know about the river and how much I want to learn. It's the inspiration to make things happen ...make connections, bring people together to share expertise in that really comes through with River Summer.

- It was River Summer that opened my eyes to the rich history and vitality of the Hudson River and made it come to life for me. After living in NYC for 36 years and being only vaguely aware of the Hudson for most of that time, River Summer engaged not only my head, but also my heart – the Hudson has become an important part of my life. It's no longer just what I teach about, it's what I really care about.

- My experiences with River Summer reminded me of what I have always hoped for my students, but frankly forgot about in the sheer busyness of teaching over the years: that learning can transform you and allow you to connect in a deep and meaningful way to the world out there.

- When I attended in '07, I thought most about the sheer joy of being on the river itself; I was also really struck by the interdisciplinary aspect. The first time around ('07), ideas for curriculum had to percolate for a while and came more slowly to me – I had so much new experience to digest first.

The second time around in '09, I was more actively thinking about curriculum ideas as we went along and therefore I was able to ask questions of the activity leaders while I was still on the boat

with them. That was really helpful and perhaps suggests why it can be valuable to continue to include previous participants in River Summer in some fashion.

### **The daily journaling/blogging activity**

**The blogging/journaling was a unifying piece that facilitated daily wrap up and discussion as well as providing an activity record. The one complaint was that it did take some time at the end of the day when people were tired and ready to relax.**

- Love it, not in my comfort zone to share, nor do I have a remarkable skill set in this area but I ask my students to write in a daily logbook, maintain a sketchbook and journal... great for me to keep at it!
- Blogging was a great idea. It made us think about the day that had gone by. We discussed issues as we went along instead of waiting to the end of the course. This culminating activity at the end of the day, complain as we may have, was really useful.

### **How would you suggest River Summer continue if/when the grant funds expire?**

**Perhaps this is the largest question. There is overwhelming support for the program on behalf of the participants but the longevity of it is a challenge.**

- If this happened then we could think about designing a credit bearing inter collegiate environmental program/ class. The cost could then be shared by the colleges and the students who I am sure would love to have this experience. It could also be designed to be a capstone experience for several courses.
- Good question. The big expense is, of course, the Seawolf. Much of the program could run from shore, but there again, housing of some sort would be necessary. Room and board could be asked of participants, but even with tuition as well, I don't think it would pay for boat time. So I guess the answer is a) continue to solicit grants, b) find a foundation to endow the program.
- While I am not sure how to support the whole program, there are many aspects of River Summer that I would hope could continue
  - Maintaining the interdisciplinary structure - continuing the dialogue/conversations between participants in all fields (students/teachers and those in diverse fields)
  - Getting out there on the river itself, even for a mini-River Summer experience in one spot with several people bringing their own view/expertise to the place, wherever it is; being on the river is key
  - Using a single theme (this year: history) was a revelation to me; it allowed me to see connections that I had not recognized before and it is a wonderful way to support multiple perspectives
- Encourage industries along the river to fund the program as a tax incentive and for recognition e.g. banners or posters, put up at activity sites.

### **Suggestions we were able to incorporate right away**

**Several people in Module 1 made suggestions we were able to incorporate into Module 2. Each of the items listed below was adjusted for Module 2.**

- Would it be possible to do the CTD analyses as we go along so that we could follow the changes and wouldn't get all backed up on the last day?

- It would be good to discuss the problems we ran into with people interpreting the seichi disk measurements wrong and your YSI deciding to miscalculate results so that those on the trip who are not used to doing science and did not happen to be around when the problems were discovered and discussed and corrected/ compensated for can understand the ‘unpredictables’ in scientific research.
- More time left for discussion.
- Discuss the blog before we write it so it is more inclusive and is used as a summative daily experience.
- Give individuals ownership of specific science activities so that they oversee collection and synthesis of the data, then present the data last day.
- Perhaps break the group up sometimes for some activities and data collection – sometimes hard to deal with the bigger group as a whole

**Suggestions we could not immediately incorporate**

**We recognize the need to address these items and have talked of ways to improve them for 2010.**

- The experts leading activities were amazing. Since we were outdoors all of the time and that alone made it hard to hear everything, let alone remember it, I would say ensuring that as much as possible is recorded is key (and much of it was). I would love to have access at some point to the audio tapes that were made during some of the presentations.
- I sometimes hoped for some balance between the intensely physical activities and those that were quieter and more reflective, so that there was time to absorb things and reflect on them before moving on to the next activity. At the same time, I surely understand that field work is by nature “out there” and sometimes key sites are in proximity, so it makes sense to visit them one after the other and not miss the opportunity to do so.
- Some days I needed more down time for reflection and conversation.
- Roger Panetta is a remarkable treasure but we need amplification so that we can hear him, as well as with Meryl Nadel.