

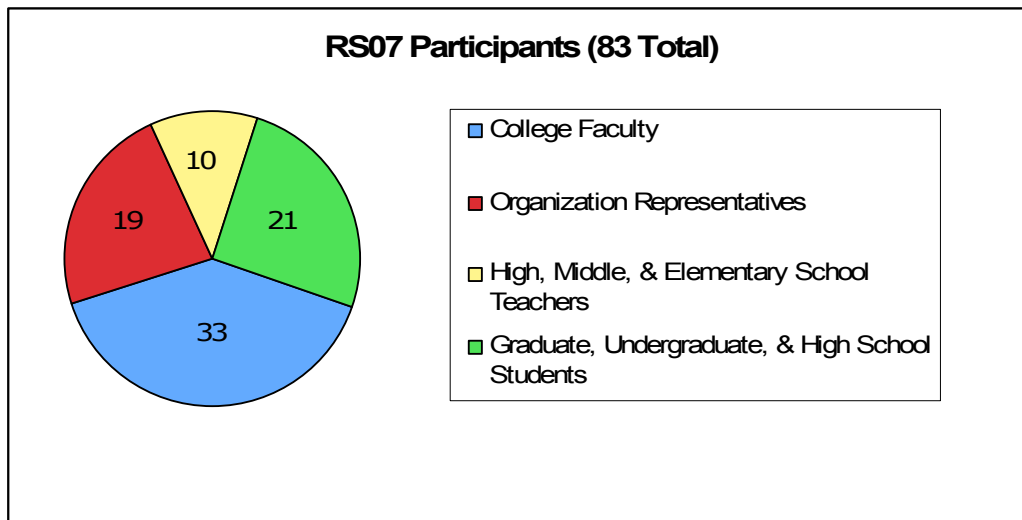
Environmental Consortium of Hudson Valley Colleges & Universities

River Summer Task Force Report

Steering Committee Meeting 21 September, 2007

Summary

The orientation for River Summer was held on June 13th and River Summer 2007 ran from July 10th through July 31st. When all was said and done, a total of 83 individuals from 52 different institutions and organizations had participated (see Appendix I: Participant List). We had a nice mix of college faculty, organization representatives, teachers, and students (see figure below for breakdown). In addition, RS07 was the first year that all modules were full (i.e., no empty bunks, plus a waiting list). From our measures of assessment, RS07 was very successful and the changes that we implemented had the desired impacts. Participant evaluations were quite positive; and the majority of participants provided concrete planning for how they would use some aspect of our program in their classroom.



Program

Similar to RS06, we scheduled short talks and discussions in the evenings and ran modules through noon of the final day of each module to allow for data/information processing, laboratory analyses, discussions, etc. We streamlined onboard sampling, which allowed more time for activities, and discussions on how River Summer activities could be exported to participant courses. As was observed in RS06, the community aspect of the group discussing an issue, completing an activity-related exercise, or working on samples and data bonded the group together and made efficient use of program time. Although there were a few repeat activities and participants from previous

years, the majority of participants and activities were new. Of the 83 participants, 54 were new to River Summer. Of the 29 repeating participants, 9 participated in new roles or taught a modified version of previous year's activity, usually integrating with another participant. Appendix II contains the final RS07 activity schedule.



Visiting Building 1 on Denning's point with Regan Chichester in Module 3; 7/18/07.



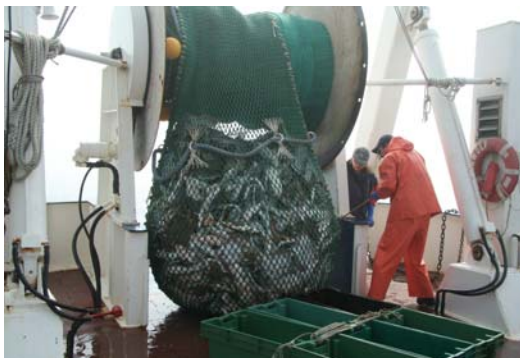
Lucy Johnson leading a discussion on Native American settlements in Module 3; 7/20/07.

Examples:

Lucy Johnson had participated as a student in RS05 and organized her summer archeology students' presentations to the RS groups in 05 and 06. This year, she participated as a Faculty Student in Module 2 and a Faculty only in Module 3 developing a new curricular activity about Identifying and predicting the locations of Native American settlements along the Hudson River.

In Module 3, Steve Schimmrich worked together with Elizabeth Hutchinson to successfully integrate field geology with the Hudson River School of painting. Steve also expanded his program into the Adirondacks (Module 4) and worked with Rik Scarce to include Revolutionary War history into his field geology activity.

John Mylod and Brian Jensen had both participated in previous year's programs. This year in Module 3, they worked together in Poughkeepsie to integrate the perspectives of a fisheries biologist and a commercial fisherman.



The big trawlout in New York Bight Module 1; 7/110/07.



Juvenile Atlantic Sturgeon caught (and safely released!) during our fisheries activity on 7/19/07

Carol Reitsma participated in RS06 in the Student Only role. This year she returned as a Faculty in one module and a student in another. She worked with Dorothy Peteet to develop a hands on data collection activity in Piermont marsh that examined the distribution of the invasive species Phragmites relative to other native marsh plants.

In general, each module was well balanced, with multiple disciplines represented (see Appendix II). Things that contributed to better continuity between modules, included individuals participating in more than one module (in a variety of roles), the routine science sampling, and several activities that were repeated in more than one module or spanned multiple modules (e.g. Foundry Cove/Constitution Marsh activity, Native American settlements, the history of iron mining in the Hudson Valley and Panoramic images along the Hudson River)

As part of RS07 we were able to offer graduate credit to the K12 teachers who participated in the program through Rockland Teacher's Center Institute who arranged the credits through Mt. St. Vincent College. In all, 6 teachers took advantage of the credits.

Increased focus on curricular export

We changed the orientation focus – this year's orientation included a River Summer overview and Hudson River Basics presentation to give participants more background. Another important feature was the assessment presentation and activity by Ryan Kelsey, which was based on a successful workshop that was a result of RS06 Discussions. There was no formal evaluation by orientation participants, but comments in general were positive.

Following the orientation, we modified the Module feedback form to include assessment criteria, elicit specific examples from participants and how they might adapt a RS activity, as well as what assessment tools they might use. This topic was also included in the last day discussion. Ryan Kelsey is currently reviewing the completed forms. A blank form is included at the end of the report as Appendix III.

Changes to the Adirondack Module

Connecting the Hudson River Estuary to its headwaters in the Adirondacks

This was an important aspect of the program that we felt was missing. In previous years, the final river module ended south of Albany and the Adirondack Module began in the center of the Adirondack State park. Although we did cross the Hudson and collect samples near its headwaters, the Hudson between Albany and Newcomb was largely skipped over, and we agreed that a stronger connection was needed. Towards this objective, we



Where the river (lower right) meets the estuary (upper left). Out on the federal dam at Troy, NY; 7/24/07.

tried a 1-day transit aboard Riverkeeper in May between Waterford and Fort Edward to develop bedrock geology activity from the water. Although it was a great day on the water, we decided that it would be better to cover the geology from a van. As a result, we began the Adirondack module at the Federal dam and traced the Hudson into the Adirondacks while doing Bedrock Geology/Revolutionary War History stops; in Fort Edward, we had a PCB discussion while standing in front of the GE plant..

Multiple perspectives on the Park

Historical - Included a visit to the Adirondack Park Agency early in the module which gave an excellent overview of the Park, its history, development, and challenges.

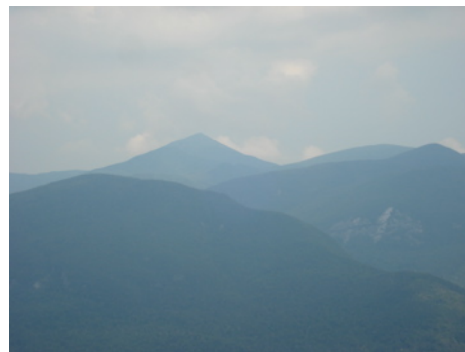
Geographical – We took a gondola ride up Whiteface Mountain, and hiked up Mt Adams and Bald Mountain, and took a float plane ride. Viewing the Adirondacks from multiple perspectives (and multiple altitudes) allowed us to appreciate how large the park is and how relatively undeveloped. These activities lead to several discussions related to land use and economic development.

Economics/development – Met with Lani Ulrich who has been involved with ongoing economic initiatives in the region, as well as a couple who runs an Adirondack lake summer cottage rental business.

Natural history/education – visit to the Wild Center in Tupper Lake, the Adirondack ecological center in Newcomb, and The Adirondack Museum in Blue Mountain Lake. Between these three centers of learning and education, our group saw first hand the sophisticated educational resources available to both school groups and the public.

More focused Arbutus Watershed study

This activity was initially conducted during RS06 and refined for RS07. We not only collected our own water quality and nutrient data, but by integrating with ESF researchers, we were able to compare our data to their longer term, more complete, dataset. As a result, the group was able to observe relationships between hydrology, nitrogen cycling, and forest ecology integrated into an ArcGIS mapping exercise.



*Mt Marcy from Mt. Adams in Module 4;
7/30/07.*

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 from both RS06 and RS07. We would eventually like to produce a series of online audio/video for download as part of exportable curricular activities. We have

spoken to Rik Scarce (RS07 participant) about assisting us in integrating this material – he is experienced in video production and had many good ideas and is interested in helping out.

This fall and spring

Final report - We are planning a final report to document all three years of the program. This would include participant lists, project development, as well as a description of each activity.

Poster Session – We are planning to invite previous participant to return and present a poster documenting their adaptation of a River Summer activity or some other aspect of the program. Consortium members would also be invited to attend. As part of the meeting, we would also like to run a few of the activities we have developed over the course of the project in order for those who are interested but not generally available in July to participate. Although we are still in the planning stages, we are tentatively thinking of late March to hold the meeting.

As part of our NYSDEC grant, we will be developing several of the River Summer activities as stand alone Hudson-based curricular components. We are currently in the process of identifying the topic and contacting faculty.

River Summer 2008?

The Mellon grant will end in March of 2008 and while Stephanie, Margie, and I have met to debrief from this summer’s program, we have not yet had a Task Force meeting. We are planning to have one in October and will surely discuss the future of the program. At this point; however, we have not sought additional funding.



To Piermont Marsh and back again with Carol Reitsma and DorothyPeteet Module 1; 7/13/07

Please feel free to contact Tim Kenna tkenna@ldeo.columbia.edu, if you have any questions or comments.

Appendix I: River Summer 2007 Participant List

Faculty Name	Organization
Keith McKeever	Adirondack Park Agency
Lani Ulrich	Adirondack Park Agency
Pablo Garcia Del Real	American River College
William Petronis	Army Corps of Engineers
Eric Lind	Audobon Society
Richard Anderson	Audobon Society
Brian Mailloux	Barnard College
Cleo Chou	Barnard College
Elizabeth Hutchinson	Barnard College
Joni Baumgarten	Barnard College
Stephanie Pfirman	Barnard college
Patti Dunne	Beacon Institute
Regan Chichester	Beacon Institute
Anne Marie Nowak	Booker T. Washington Jr. High School
John Waldman	City University of New York
David Connover	Clearwater
Brian Jenson	College of Saint Rose
Mary Crosgrove	College of Saint Rose
Joanne Schultz	College of Staten Island – CUNY
Peter Wagner	Columbia University
Dianne Olsen	Cornell Cooperative of Putnam
Ted Whitesell	Evergreen College
Roger Panetta	Fordham University/Marymount College
Jay Williams	Hamilton College
Betsy Blair	Hudson River National Estuarine Research Reserve
John Mylod	Hudson River Fishermen
Kery Dawson	Hudson River Park Trust
Lauren Donnelly	Hudson River Park Trust
Jerome Levkov	Iona College
Meryl Nadel	Iona College
Bill & Judi Ryan	Lamont-Doherty Earth Observatory
Frank Nitsche	Lamont-Doherty Earth Observatory
Margie Turrin	Lamont-Doherty Earth Observatory
Sanpisa Sritrairat	Lamont-Doherty Earth Observatory
Tim Kenna	Lamont-Doherty Earth Observatory
Amanda Wilson	Manhattanville College
Jack Reilly	Mount Saint Mary's College
Teresa Thornton	Mount Saint Mary's College
Tom Sarro	Mount Saint Mary's College
Tim Scarlett	Michigan Technological University
Dorothy Peteet	NASA-GISS
Bianca Mislowack Silver	NYC Junior High School 240
Valerie Holmes	Ossining High School
Karl Coplan	PACE Law School
Geoff Brackett	Pace University
Zywia Wojnar	Pace University

Faculty Name	Organization
Tom Mullane	Pearl River High School
Banny Ackermann	Radner Middle School
Howard Horowitz	Ramapo College
Trevor Ladd	Regis High School
Melissa Everett	Rensselaer Polytechnic Institute
Rik Scarce	Skidmore College
Virginia Jackson	Sleepy Hollow Middle School
Carol Rietsma	SUNY-New Paltz
Steve Schimrich	SUNY-Ulster County Community College
William Porter	SUNY-ESF
Zachary Danks	SUNY-ESF
Annie Woods	SUNY-ESF
Pat McHale	SUNY-ESF
Paul Hai	SUNY-ESF
Tamara Browning	Tenafly Middle School
Diana Fortune	The Wild Center
Karen Johnson	Trevor School
Lucy Johnson	Vassar College
Leah Weissburg	Vassar College
Andrew Duenas	Vassar College
Jonothan Lin	Vassar College
Anne Sando	Vassar College
Stuart Belli	Vassar College
Stuart Belli Student 1	Vassar College
Stuart Belli Student 2	Vassar College
Stuart Belli Student 3	Vassar College
Stuart Belli Student 4	Vassar College
Jared Fox	Frederick Douglass Academy III
Sasha Harbajan	George Washington Carver High School
Lisa Dimarzo	Mid-Hudson Children's Museum
Simon Gruber	Orange County Water Authority
Mary McTamaney	Newburgh Historic Society
Argie Miller	Secondary School for Law (K462)
Tamika Tannis	Stuyvesant High School
Stephanie Tubman	Colgate University
Rachel Suprenant	Colgate University
Isabel Pinedo	Hunter College - CUNY

Appendix II: River Summer 2007 Program

MODULE 1- NY/NJ Harbor, 7/10-7/14/07

Embark: 79th St. Boat Basin - Disembark: Piermont Pier

7/10 Evening talk: The Hudson River Harbor – John Waldman, City University of NY
Suggested reading “Heartbeats in the Muck” Waldman, 1999

7/11/07 Offshore - the New York Bight – Mapping and sampling techniques

Frank Nitsche- (LDEO)

Title of curriculum: - Mapping the river bottom with modern sonar techniques;

Brian Mailloux (Barnard), Tim Kenna (LDEO), Margie Turrin (LDEO) & Seawolf Crew

Activity: Enterococcus, Trawling, CTD, Sediment coring, Plankton, & Water sampling

Karl Coplan - (Pace Law)

Title of curriculum: The role of the environment in Hudson River law

7/12/07 The New York Harbor Area

Roger Panetta- (Fordham University)

Title of curriculum: Panoramas of the Hudson River (time allocated to include time for product)

Kerry Dawson & Lauren Donnelly– (Hudson River Park Trust)

Title of curriculum: The role of the Hudson Park Trust in the current New York City waterfront – and available educational opportunities & resources

Tim Kenna & Margie Turrin (Lamont-Doherty Earth Observatory)

Title of curriculum: Evening transit from 79th St. Boat Basin to Piermont Pier – water sampling and chemical analyses

Rik Scarce (Skidmore College)

Title of curriculum – The sociological underpinnings of the Environmental Movement

7/13/07 Lower Hudson Area

Steve Schimmrich (SUNY Ulster)

Title of curriculum: Geology of the Lower Hudson Valley

Dorothy Peteet – (NASA/GISS)

Title of curriculum: Piermont Marsh –Ecology and Paleoecology

Carol Reitsma – (SUNY New Paltz)

Title of curriculum: Marsh Ecology – historical conditions versus current assessment

Frank Nitsche- (LDEO)

Title of curriculum: How to access and use existing data (GIS and/or GoogleEarth). Data work up all

7/14/07 All – Data analysis & Discussion

Module1 participants curriculum planning and wrap up

1200 Students depart

MODULE 2- Mid-Hudson – 7/14-7/18/07

Embark: Piermont Pier - Disembark: West Point

7/14/07 Evening transit on the river through the Hudson Highlands

7/15 Newburgh Bay and the City of Newburgh

Seawolf Crew

Title of curriculum: **Trawling**

Melissa Everett (Sustainable Hudson Valley)

Title of curriculum: Human Ecology and sustainable community in a riverfront city (an exploration of the City of Newburgh & their Sustainable Master Plan)

Dinner at Mount Saint Mary's – Jack Reilly host

Geoff Brackett (Pace)

Title of curriculum: The Hudson River as a Literary Source

7/16 The Hudson Highlands

Howard Horowitz – (Ramapo College)

Title of curriculum: Highlands Environmental History: Sterling Forest and Mt. Peter - Exploring the Appalachian Highlands Iron Mining History, Land Preservation, Forest Resources & Water Resources

EVE - All - Discussion & Lab Work

7/17 Native American Settlements and the History of Foundry Cove

Lucy Johnson - (Vassar)

Title of curriculum: Native American Settlements along the Hudson River: Why are they where they are? Developing a predictive model

Stuart Belli (Vassar)/ Zywia Wojnar (Pace University)

Title of curriculum: Foundry Cove: A Brownfield Case Study (Policy, Sociology, Chemistry)

Eric Lind (Audubon Society) –

Title of curriculum: Marathon Battery and Constitution Marsh recovery

Tim Kenna – (LDEO)

Title of curriculum: Foundry Cove: Sediment cores for remediation assessment – A record of Cadmium contamination in Constitution Marsh sediments

Tim Scarlett – (Michigan Tech)

Title of curriculum: Industrial Archeology of Foundry Cove

All - Discussion & Lab Work

7/18/07

Tim Kenna (LDEO)

Title of curriculum: Visualizing data using ARCGIS

Title of curriculum: Estuarine Circulation

All – Data analysis & Discussion

Module2 participants curriculum planning and wrap up

MODULE 3- Mid-Upper Hudson – 7/18-7/22/07

Embark: Waryas Park - Disembark: Kingston – Hudson River Maritime Museum

7/18 The Beacon Institute for Rivers and Estuaries

Regan Chichester (Project Manager)

Trip to Denning's Point to see Building 1

Patti Dunne (Program Coordinator)

Trip to Beacon to view the Map Exhibit

7/19

Brian Jensen- (The College of St. Rose) & John Mylod (Hudson - Hudson River Fisherman & author), David Conover (Clearwater Director of Education)& Seawolf crew

Title of curriculum: Hudson River Fisheries Biology, History & Practice; Trawling Demonstration

Tim Kenna – (LDEO)

Title of curriculum: The History of Cadmium in Foundry Cove (credit to Eric Lind) & XRF lab on Foundry Cove sediment cores

7/20

Dianne Olsen (Cornell Cooperative)

Title of curriculum: Well water contamination & its effect on trust in public institutions

Lucy Johnson - (Vassar) (Transit to Kingston)

Title of curriculum: Native American Settlements along the Hudson River: Why are they where they are? Testing a predictive model

Betsy Blair (HRNERR Program)

Title of curriculum: The role of the National Estuarine Research Reserve in the Hudson River

7/21 Art and Geology of the Upper Hudson Valley

Elizabeth Hutchinson – (Barnard College)

Title of curriculum: Seeing the Catskills through the Hudson River School

Steven Schmmrich- (SUNY Ulster)

Title of curriculum: Geology of the Upper Hudson Valley

Tim Kenna & Margie Turrin (Lamont-Doherty Earth Observatory)

Title of curriculum: Panoramas of the Hudson River (credit to Roger Panetta)

Eve Labwork – All

7/22

Tour of the Rondout Creek - Steve Cluett (Seawolf Captain)

All – Data analysis & Discussion

Module 3 participants curriculum planning and wrap up

MODULE – Adirondacks – 7/24-7/31/07

Begin: Federal Dam at Troy End: Huntington Wildlife Preserve

7/24: From the Estuary to the River

William Petronis (Army Corps of Engineers)

Title of curriculum: History of the Canal system and tour of the Federal Dam

Steven Schmmrich- (SUNY Ulster)

Title of curriculum: Geology of the Upper River - transition to Bedrock Geology of the Adirondack Mountains; Economy of the Upper River; PCB

Discussion/legal piece; Historical

Rik Scarce (Skidmore College)

Title of curriculum: The Battles of Saratoga: Pivotal point in The American Revolution

7/25: Exploring the Adirondacks

Diana Fortune (The Wild Center)

Title of curriculum: Building a Natural History Museum in the Adirondacks: A behind the scenes tour and development of museum

Keith McKeever (Adirondack Park Agency)

Title of curriculum:The History, Economic Base & Development model of the Adirondack Park: Challenges of Economic growth, sustainability and Environment

RS Group

Gondola ride to visualize the development issues

Stephanie Tubman & Rachel Suprenant (Colgate University)

Title of curriculum: Orientation to Leave No Trace Camping

7/26: Into the Woods

Stephanie Tubman & Rachel Suprenant (Colgate University)

Activity: Packing and gear dispersal for "Leave no Trace" hiking/camping at Mt. Adams site

Depart for Mt. Adams site, hike, setup camp

Tim Kenna & Margie Turrin (Lamont-Doherty Earth Observatory)

Activity: Mapping, Site Location & GPS

Activity: Tree identification exercise

7/27:

Tim Kenna & Margie Turrin (Lamont-Doherty Earth Observatory)

Activity: Hike up Mt. Adams –

Activity – Tree Identification/stem counts with GPS

Activity – Water Sample collection

Activity – Writing Activity

7/28: Out of the Woods

Stephanie Tubman & Rachel Suprenant (Colgate University)

Activity: Break Camp & Hike out

Margie Turrin (LDEO)

Title of curriculum: Exploring Tahawus: A Tour of the McIntyre Furnace site & overview of mining history

Tim Kenna & Margie Turrin (Lamont-Doherty Earth Observatory)

Activity: Tree count/water sample data - GIS mapping project using data collected while camping

William Porter (AEC Director) – History of the AEC

Zak Danks (SUNY-ESF) – Moose & Moose Vehicle Collisions

Annie Woods (SUNY-ESF) – Shifting range of birds – A climate change indicator?

7/29

Patrick McHale (AEC) & RS Staff

Activity: Arbutus Watershed stream sampling

Tim Kenna & Margie Turrin (Lamont-Doherty Earth Observatory)

Activity : Blue Lake Museum

Activity: Watershed study data analysis & GIS work

Paul Hai (AEC)

Activity: History of the Great Camps and Huntington Wildlife Preserve

7/30

Lani Ulrich (Adirondack Park Agency)

Title of curriculum: Challenges and successes in the Adirondacks

Tim Kenna & Margie Turrin (Lamont-Doherty Earth Observatory)

Activity: Hike up to Bald Mountain fire tower;

Activity: Float Plane ride – A bird's eye view of the Adirondacks

Evening – BBQ and wrap up

7/31

All – Data analysis & Discussion

Module 4 participants curriculum planning and wrap up

GENERAL MODULE FEEDBACK FORM

Name _____

River Summer 2007

Institution _____

1) Please indicate the dates of your participation in River Summer _____

2) One of our major goals is for you to transfer what you learn to your home institution. Please list AND comment on up to 3 activities you participated in that you found most promising for use/adaptation at your institution.

ACTIVITY	HOW I MIGHT ADAPT IT
<i>Ex. GIS/GPS module</i>	<i>assign my 10th graders to map our local stream</i>
a)	
b)	
c)	

3) Please list the specific course(s) where you plan to use the above and describe the students.

Ex. Hydrology 101 Geology majors, typically sophomore and juniors

4) What obstacles or challenges (if any) do you face in implementing any of the above activities? (e.g. time, supplies, access to expertise, resources, other)

5) Please describe why you have selected these particular activities in terms of the goals you have in mind for your students.

Ex. Goal statement: Upon completion of my GIS module, my students will be able to take a given set of spatial coordinates and data and map that data according to basic standards of mapmaking. This is an important precursor to more advanced spatial data analysis methods that students typically struggle with.

6) Based on the activities and goals you have identified, what kinds of assessment might you employ with your students? (Check all that apply)

- content/fact-based → traditional exam
- skill-based → scenarios
- concept/system-based → concept mapping
- attitudinal-based → reflection activities (e.g. journaling)

Additional Comments on assessment possibilities?

Ex. Since my goals are mostly skill-based, I plan to give them a scenario project based on a nearby river. They will be working in teams, but I will ask each student to submit her own materials.

7) Please list AND comment on any activities that you participated in that could use significant instructional and/or design improvements.

a)

b)

c)

8) How satisfied/unsatisfied are you with the time and effort you spent this week?

Very Satisfied Satisfied Somewhat Satisfied Somewhat Dissatisfied Dissatisfied

Please comment on what was most and least satisfying about the experience.

9) Please rate the overall quality of instruction you received.

Excellent Very Good Good Fair Poor

10) Please rate the level of individual attention you received.

Excellent Very Good Good Fair Poor

11) Please rate the River Summer program as a whole.

Excellent Very Good Good Fair Poor

12) Any additional comments or suggestions for the program? (Use back if necessary)