



MARINE BIOLOGY RESEARCH PROGRAM IMPACT AND SUSTAINABILITY

FY 2016

MBRP – IMPACT AND SUSTAINABILITY - 2016

Content

To Our Community _____	3
Strategic, Post-Secondary, & WBL/Career Highlights _____	4
Strategic Highlights _____	4
Post-Secondary Highlights _____	4
Work-Based Learning (Career) Highlights _____	5
MBRP by the Numbers _____	6
Table 01. Work-Based Learning Experiences _____	6
Figure 01. MBRP Achievements and Opportunities Since 2011-2012 School Year _____	7
CTE & WBL Partners (2015) _____	8
Table 02. 2015 Career and Technical Education & Work-Based Learning Partners _____	8
What MBRP Students Have to Say... _____	9
Inside Work-Based Learning Programs _____	11
Aligning WBL to Learning Standards _____	12
Benefits of WBL Programs _____	13
Table 03. Benefits of Work-Based Learning Programs _____	13
21 st Century Curriculum _____	14
Professional Advisory Committee Members _____	15
Table 04. Professional Advisory Committee Members (2015) _____	15
Where are they now? _____	17
Contact Information _____	19
Company Information _____	19

MBRP – IMPACT AND SUSTAINABILITY - 2016

To Our Community

GOALS

FOR PAC

01. Strengthen our Professional Advisory Committee by encouraging its members to self-organize into subcommittees in: WBL, SRC/IRB, Curriculum evaluation, and Program sustainability, etc.

FOR MBRP

01. Increase college credit awards by 10% to underserved scholars.

02. Increase # of career plans completed by scholars with special needs.

03. Achieve students entering the Intel Science Competition.

04. Successfully implement a GIS certification exam with over a 75% passing rate.

Thank you for supporting our dynamic “Career Ready” Marine Biology Research Program. Your dedication, participation, and donations have made a huge impact on preparing our young research scholars for career readiness.

Parents, thank you for your support of these authentic learning opportunities for our children. Your donated time in event planning is greatly appreciated. Our research scholars are being given the career resources to succeed in their future endeavors.

Staff, thank you for your dedication in providing the best related curriculum to prepare our scholars for the new 21st century work world. Your goal to have all students master the content and skills has led to many of them receiving industry credentials.

Our counseling staff has done a wonderful job in giving our scholars the critical support they need in career counseling and college readiness. With this support our scholars have been able to make sound decisions about high school courses, clubs, internships, and post-secondary choices. These experiences translate into future career decisions after they leave our campus and beyond.

Professional Advisory Committee members and friends, your ongoing commitment, advice, and support throughout the years has truly strengthened the college and career experiences of the MBRP scholars. Our accomplishments are your accomplishments and they demonstrate the power that can be generated from the concern for a better tomorrow by responsible and dedicated individuals and institutions like you.



Mauricio Gonzalez
Director, Marine Biology
Science Research Program
Work-Based Learning Coordinator
December 4, 2016

MBRP – IMPACT AND SUSTAINABILITY - 2016

Strategic, Post-Secondary, & WBL/Career Highlights

STRATEGIC HIGHLIGHTS

This school year the Marine Biology Research Program (MBRP) will complete its fourth certified year as a New York State Education Department (NYSED) Career and Technical Education (CTE) Program of Study (POS). In this time, **thirty-two (32) scholars** have received the State's CTE Seal – a school best – while **ninety-eight (98) %** of all MBRP seniors have passed the industry assessment on Natural Resources Systems Management administered by NOCTI. Our MBRP scholars have also partnered up with the Environmental Protection Agency and CIVITAS Citizens as consultants to monitor the marine natural resources of the lower Hudson River Estuary. The EPA report is available on-line (harborseal.org) and phase one of the CIVITAS project will be published later this year. Lastly, the MBRP was approached by SUNY Stony Brook to offer a 100-level college class in Oceanography to our scholars for 3 college credits as part of their curriculum in the MBRP.

During the last annual report, we set out to accomplish the following:

FOR PAC

01. Create a thriving Work-Based Learning Program with twenty (20) % more scholar WBL experiences by next year.
02. Strengthen our Professional Advisory Committee by adding twenty (20) % new members and creating subcommittees by next year.

FOR MBRP

01. Increase college credit awards by ten (10) %.
02. Increase # of career plans completed by twenty (20) students.
03. Begin implementing job shadowing and youth apprenticeships as WBL experiences.
04. Begin implementing ePortfolios with resumes and cover letters.
05. Increase the number of Work Skills Employability Profiles to sixty (60) % of total MBRP 11th and 12th grade scholars.

All the goals have since been accomplished except for 01) the creation of a self-organizing PAC with functional subcommittees and 02) the completion of career plans by twenty (20) students. These will be the SMART Goals for the next two years (See "Goals" side panel in page 3). Below you'll find details of our accomplishments of the goals of the previous annual report.

POST-SECONDARY HIGHLIGHTS

To date, **one hundred fifty-four (154) college credits** have been awarded to research scholars in the MBRP through our partnership with SUNY Albany and the successful completion of the NOCTI Natural Resources Systems culminating assessment. As mentioned above, this year the MBRP is offering a three-college credit course on Oceanography through SUNY Stony Brook. This, together with SUNY Albany's research college credits and the NOCTI Natural Resources Systems culminating assessment, an MBRP scholar can now potentially aspire to receive **eighteen (18) college credits** before they graduate from the New York Harbor School. In addition, the MBRP's articulation agreement with Manhattan College also allows a student to receive six college credits upon entry. Because of this college culture, our program consistently produces the most college bound scholars at the NYHS. Our students have gone on to attend Columbia University, SUNY

MBRP – IMPACT AND SUSTAINABILITY - 2016

Albany, SUNY Oswego, Rutgers, Penn State, Fordham University, SUNY Cobleskill, CUNY Hunter, Brown University, and City College among others. Last school year one of our scholars, Nicolle Martinez, was the recipient of the Gates Millennium Foundation scholarship. This same scholar was a runner up to represent NYC in the Intel Science competition.

WORK-BASED LEARNING (CAREER) HIGHLIGHTS

Work-Based Learning prepares our scholars for the real-world by giving them a chance to apply the technical and career ready skills they've learned in each CTE program (See chapter: Inside Work-Based Learning). School-wide, Mauricio Gonzalez and Brendan Malone led the NYHS's Work-Based Learning (WBL) SEAWORKS Program to a blockbuster 2015-2016 school year (Sept. – June). Over **sixty** NYHS scholars participated in paid internships that earned them over **fifty-four thousand (54,000) dollars**. Over **six thousand (6,000) hours** were logged in industry work ranging from marine science consultancy positions to resource recovery to maritime industry work. In addition, the following accomplishments were also achieved school-wide:

01. Successfully rolled out the Department of Education's (DOE) new Internship Management System (IMS),
02. Created a central filing station for paper work,
03. Implemented regular communication on WBL updates,
04. Implemented new teacher support which was non-existent in previous years,
05. Rolled out a WBL bulletin board to post the latest and most important information,
06. Created clear requirements for interns to qualify for paid internships,
07. Submitted time-sensitive proposals and reports to the DOE on-time for the first time,
08. All paper work related to WBL was handed out to all instructors,
09. Payroll assembly and workshops were implemented for interns,
10. EverFi for Financial Management was implemented for all CTE classes,
11. Communication was centralized with the DOE's WBL Resource Center, and
12. Developed more internship hosts and positions than ever before.

Specifically, in the MBRP, since 2012, over **eighty-eight (88) paid internships have been completed, seventy-five (75) service learning opportunities recorded, four hundred twenty-three (423) scholars participating in professional visits, forty (40) scholar presentations in conferences, twenty-eight (28) ePortfolios generated, forty-four (44) Work-Skills Employability Profiles kept up-to-date, and twenty-five (25) scholars went to work-site tours** (See Table 01). We've partnered up with the Environmental Protection Agency, Con Edison, CIVITAS Citizens, The Nature Conservancy, among others to offer unique experiences in the environmental science fields (See Table 02). Students have been exposed to other career development opportunities such as job site visits (*i.e.* CONEDISON, MDRC, Earth Matter, and the River Project) and classroom visits by professionals. In the past, we've had scholars present to City-wide audiences at the NYC Science and Engineering fair, Region-wide audiences at the Omega Institute, and Nation-wide audience at the AFT/AFL-CIO CTE Summit where Vice President Joe Biden gave a keynote address.

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MBRP by the Numbers

TABLE 01. WORK-BASED LEARNING EXPERIENCES

	2016	TOTAL
Total Students	46	220
Female	21	107
Male	25	113
Special Education Services	5	17
NOCTI Culminating Assessment in Natural Resources Systems Management Passed	13	50
Digital Quest's Culminating Assessment in Geographic Information Systems "SPACE" Passed	0	0
Practical Assessment – Professionally Written Research Paper of Long Term Research Project	11	35
Practical Assessment – Professional Presentation in City-wide Venue	13	37
College Credits Earned	56	154
NYSED CTE Seal on HS Diploma	10	32
CTE Course Work Completed	14	41
Worksite Tours	18	25
On-Site Projects	9	79
Off-Site Projects	11	35
Paid Internships – Summer	9	54
Paid Internships – School Year	12	34
Service Learning	21	75
Visits by Industry Professionals	207	423
Scholar Professional Presentations – Off-site	18	40
Scholar Professional Presentations – On-site	39	206
Self-Assessment – Career DNA	8	25
Portfolios	16	93
ePortfolios	16	28
Career Plan	12	14
Work Skills Employability Profile	17	44
Financial Management (EverFi certificate)	8	8
Totals	635	1989

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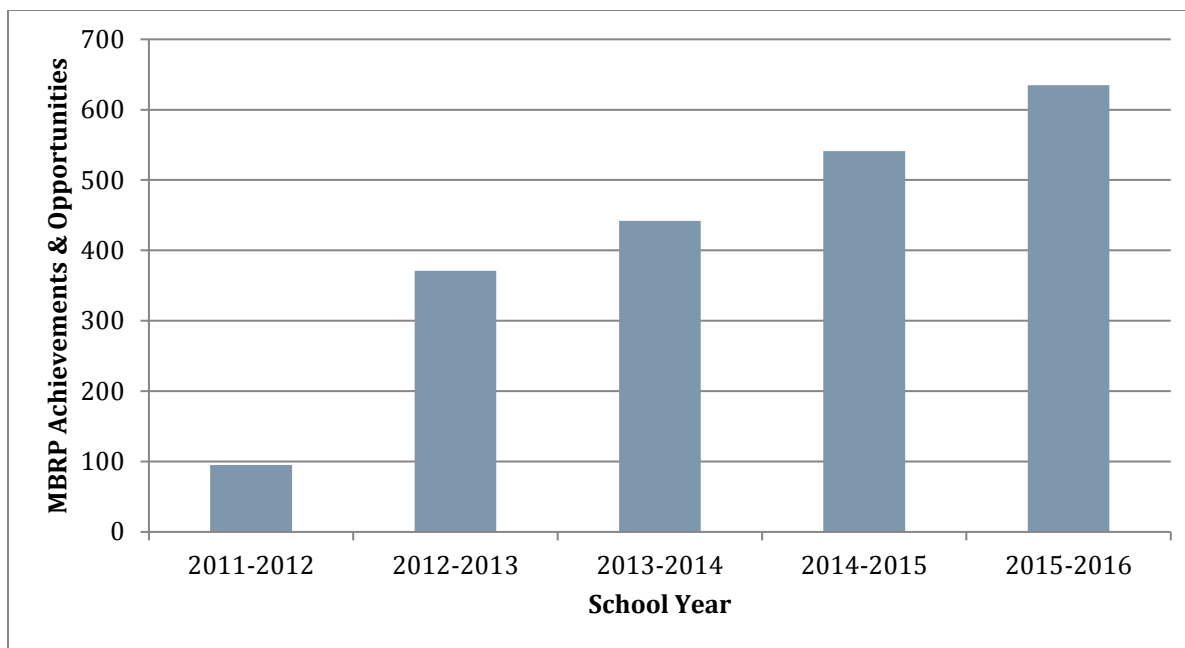


FIGURE 01. MBRP ACHIEVEMENTS AND OPPORTUNITIES SINCE 2011-2012 SCHOOL YEAR



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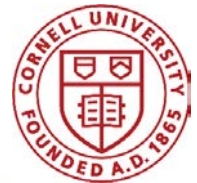
CTE & WBL Partners (2015)

TABLE 02. 2015 CAREER AND TECHNICAL EDUCATION & WORK-BASED LEARNING PARTNERS

- The Nature Conservancy
 - **Blaze Jones-Yellin**
- Environmental Protection Agency
 - **Patricia Sheridan**
- Manhattan College
 - **Mike Judge**
- St. Francis College
 - **Kathy Nolan**
- Department of Education – GIS dept.
 - **Jim Hall**
- Hudson River Foundation
 - **Jim Lodge**
- SeaSavers and Coast Guard Auxiliary
 - **Capt. Matthew Leahey**
- ConEdison
 - **Mike Kessler**
- NY Harbor Foundation
 - **Sam Janis**
- New York University
 - **Alberto Stolfi**
- Cornell University
 - **Matthew Hare**
- Earth Matter
 - **Marisa DeDominicis**
- CIVITAS
 - **Maura Smotrich**
- Department of Environmental Conservation
 - **Susan Maresca**
- SeArc
 - **Shimrit Perkol-Finkel**
 - **Ido Sella**
- Environmental Defense Fund
 - **Jim Tripp**
- Roger Williams University
 - **Tim Scott**
- Stevens Institute of Technology
 - **Philip Orton**
- ESRI
 - **Charlie Fitzpatrick**



WORKING FOR QUALITY
IN URBAN LIFE



The Nature
Conservancy
Protecting nature. Preserving life.™



EDF
ENVIRONMENTAL
DEFENSE FUND™
Finding the ways that work



What MBRP Students Have to Say...

"Throughout high school teachers always spoon fed [me] the information so [I] wouldn't have to think. The only exception was in your class where you always encouraged us [to] expand our minds and think outside the box for ourselves." – Randy Garcia, Class 2011

"The MBRP is the class that best prepared me for college." - Various

By far I do more work for the MBRP than all my other classes combined." – Grace Carter, Class 2017

"I mean, before I understood that you were exposing us to things that could initially, what many would call, "wake us up" I never fully grasped it until this morning. So this email is basically a thank you for being amazing and patient with all of us cause sooner or later the ones like myself who didn't completely grasp what you are trying to do will get it. Thank you so much. I can't say how thankful I am to have had someone like you a part of my life." - Tsiang Belgrove, Class of 2014

"Today was the first day of classes for Purchase and the courses are challenging, as I expected them to be. What I also expected was that other students would be just as prepared, knowing how to present in front of the room, how to ask questions, or even how to project their voices louder than a whisper. All day I've been frustrated with my peers because they don't get that they have to take their classes seriously, asking "why don't most people have basic problem solving/presentation/critical thinking skills?" And then I realized that I'm the odd one out. Just as you said, the American education system schools you, and although I'm sure people agree with that, they don't see the real influence it has on our development as people and even the relationships we create until you step back and look at it from a student from the New York Harbor School's perspective. That's why I thought of you, and why I'm thankful for you teaching me, and all the marine bio kids, to be as calm and as ready about college as I feel. Thank you." - Julia Montilla, Class of 2016

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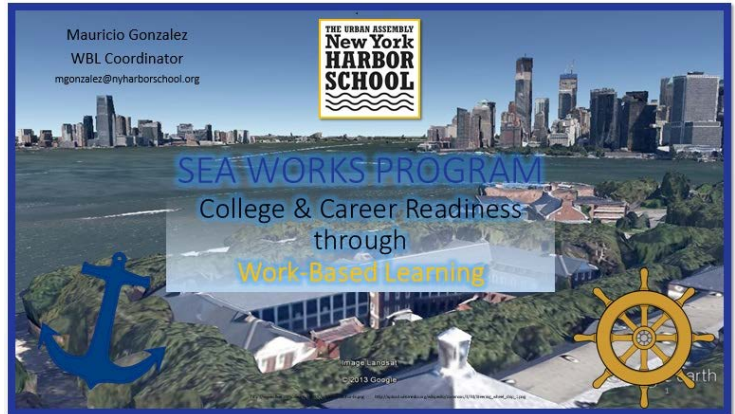
“Your class prepared me for Columbia University, an Ivy League. If it can do that it can prepare a student for any college.” – Nicolle Martinez, Class 2016

“I have to admit that everything you taught the Marine Bio class last year has made my life so much easier and you were completely right about life smacking me right in the face. I write lab reports and read so much it can be overwhelming. It is currently my third week in college and I have actively read about three textbooks and multiple articles (not only in my science courses but for English and history too) and have pulled two all-nighters. My papers are usually three to six pages long and in 12 point font, single spaced. I have completed about four of these. College is so different from high school... you're just one face somewhere surrounded by three hundred more... No one holds your hand like they did at Harbor.” – Ileana Leon, Class 2013



Inside Work-Based Learning Programs

“The term ‘work-based learning’ means coordinated, sequenced, and scaled applied learning opportunities for students that are integrated with academic and technical coursework, including but not limited to service-learning projects, mentorships, job shadowing, school enterprises, internships, and apprenticeships, including virtual apprenticeships.”



The New York Harbor School’s **Marine Biology Research Program (MBRP)** provides Work-Based learning (WBL) experiences to its students in the 10 through 12th grades through the **SEAWORKS** Program. WBL gives our marine scholars opportunities to study complex subject matter as well as vital workplace skills in a hands-on environment. WBL experiences also provide students with career awareness, career options exploration, appropriate workplace skills development, and the opportunity to relate academic skills to real-life applications.

Some WBL activities appropriate for every grade level are: self-assessments, work skills employability profile development, career and financial management, guest speaker visits to the classroom, career fairs, job site tours, job shadowing, work with professional mentors on research projects, and internships. Internships are considered the pinnacle of the WBL spectrum.

As students see the connections between their lab/field work and what is required at the work site, they gain an understanding of the importance of learning and can make better decisions about their futures.

Aligning WBL to Learning Standards

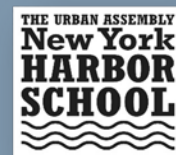
WBL addresses Career Development and Occupational Studies (CDOS) New York State standards by creating authentic, customized learning experiences for students. These experiences are based on students' exploration of their interests, aptitudes, skills and strengths. WBL programs develop and apply students' technical knowledge to master transferable skills that can be used in the workplace after high school and/or college.

Work-Based Learning programs address the following standards for Career Development and Occupational Studies:

- **Standard 1 - Career Development:** Students will be knowledgeable about the world of work, explore career options, and relate personal skills, aptitudes, and abilities to future career decisions.
- **Standard 2 - Integrated Learning:** Students will demonstrate how academic knowledge and skills are applied in the workplace and other settings.
- **Standard 3a - Universal Foundation Skills:** Students will develop mastery of the foundation skills and competencies essential for success in the workplace.
- **Standard 3b - Career Majors:** CTE students who continue in a major will acquire the career-specific technical knowledge and skills to progress toward gainful employment or post-secondary training.

MBRP & WBL

**WBL
SUPPORTS THE
NEW
COMMON CORE
STANDARDS
&
MEETS THE
NYS
CAREER
DEVELOPMENT
STANDARDS**



**1 - Career
Development**

**2 - Integrated
Learning**

**3a - Universal
Foundation Skills**

3b - Career Majors

Benefits of WBL Programs

TABLE 03. BENEFITS OF WORK-BASED LEARNING PROGRAMS

Benefit to Students	Benefit for Employers	Benefit for Schools	Benefit for Community
<ul style="list-style-type: none"> - Provides a real-world learning environment to develop interests and abilities - Develops an understanding of employment opportunities and responsibilities through direct worksite experiences - Promotes the development of positive work habits and attitudes - Provides a real-world setting for developing marketable skills - Provides opportunities to apply classroom learning (both academic and CTE) - Provides real life interaction with other employees, which leads to better understanding of the human factors in employment - Provides an opportunity to participate in, and profit from, two types of learning environments—school-based and work-based - Increases motivation to remain in school, graduate, and pursue postsecondary education/training (lifelong learners) - Provides financial rewards in paid CO-OP while career focused skills are being developed 	<ul style="list-style-type: none"> - Fosters involvement in the CTE curriculum development process - Provides an opportunity to experiment with new programs, projects, and/or activities with student assistance and input - Improves employee retention - Provides a pool of potential future employees - Can reduce training/recruiting costs - Provides a community service 	<ul style="list-style-type: none"> - Brings employers and schools together in a training effort to develop strong CTE programs - Enhances the ability to meet the needs of a diverse student population - Makes education more relevant and valuable for students - Promotes school/faculty interaction with the business community - Increases relevant school-based learning by helping students clarify career goals and provide a practical means of reaching them - Bridges the gap between school and the world of work 	<ul style="list-style-type: none"> - Provides an effective way of helping young people become productive citizens in the community - Increases the economic health of the region and state as students help employers meet the need for skilled workers - Promotes respect and tolerance between various groups in the community - Provides a method of introducing high school students to local employment opportunities - Promotes closer cooperation and understanding between community and schools - Encourages students to remain in the local community after graduation, thus promoting a more stable workforce

PREPARING PROFESSIONALS FOR THE 21ST CENTURY

This Report articulates our desire to expand work-based learning opportunities for students, strengthen partnerships with business and community leaders, and effectively integrate 21st century skills and technology into instruction.

21st Century Curriculum

Provided is a list of modules and topics for general classroom instruction and training site content to augment instruction already within the CTE program.

Career Planning – Junior Year Over First 20 Weeks

Self-Assessment
Foundation – Academic Theory
Career Exploration
Career Plan and Portfolio

Pre-Placement

Essential Documents
Training Plan
Child Labor Laws
Safety

Pre-Employment Skills – Junior Year Over Second 20 Weeks

Preparing for the Interview
Applying for the Job
Follow-up after the Job

Internship - First to Second Weeks

Workplace Orientation
Hours of Employment
Workplace journal

Job Success Skills – Senior Year Over First 10 Weeks

Problem Solving, Success Skills
Ethics, Rights and Your Job
Becoming a Professional
General Related Safety
The Employer
Performance Evaluations
Unions
Financial Literacy
Entrepreneurship

Internship - Third to Fourth Weeks

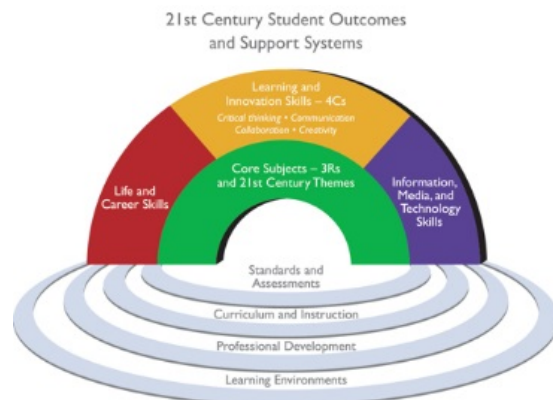
Workplace Journal
Begin Industry Profile – WBL
Interview/Research Project
Performance Appraisal

Internship - Fifth to Sixth Weeks

Industry Profile – WBL
Interview/Research Project
Performance Appraisal

Career Planning – Senior Year Over Second 10 weeks

Employability Skills
Career Strategy
Post-Secondary Training
Career Plan and Portfolio



MBRP – IMPACT AND SUSTAINABILITY - 2016

Professional Advisory Committee Members

TABLE 04. PROFESSIONAL ADVISORY COMMITTEE MEMBERS (2015)

Education	Administration Principal	UANYHS	Jeffrey	Chetirko	Principal
Education	Staff Dept Chairs	UANYHS	Brendan	Malone	CTE
Education	Star Teachers	UANYHS	David	Albin	English
Education	Star Teachers	UANYHS	Matthew	De Andrade	Math
Education	Special Needs	UANYHS	Paula	Bencivenga	SpEd
Education	Guidance	UANYHS	Nellie	Garrow-Coleman	Social Worker
Education	Guidance	UANYHS	Jessica	Cuevas	Guidance
Education	Students	UANYHS	Grace	Carter	Student
Education	Students	UANYHS	Melanie	Smith	Student
Education	Students	UANYHS	Erik	Wiemer	Student
Education	Parents	UANYHS	Celia	Baruchin	PTA President
Education	Parents	UANYHS	Alice	Chiu	SLT
Education	Parents	UANYHS	Alice	Chiu	Parent
Education	Alumni	UANYHS	Jah-Vin	Vaughn	Alumni
Education	Alumni	UANYHS	Rachel	Anderson	Alumni
Education	Alumni	UANYHS	Nicolle	Martinez	Alumni
Employer for one specific career cluster	Marine Resources	Sea Savers Inc	Matt	Leahey	President
Employer for one specific career cluster	Marine Resources	DOE	Jim	Hall	GIS Analyst
Employer for one specific career cluster	Marine Resources	ESRI	Charlie	Fitzpatrick	Schools Program Manager
Employer for one specific career cluster	Marine Resources	TNC	Blaze	Jones-Yellin	Regional Coordinator
Employer for one specific career cluster	Marine Resources	Earth Matter	Marisa	DeDominicis	President
Employer for one specific career cluster	Marine Resources	ConEdison	Michael	Kessler	Senior Manager

MBRP – IMPACT AND SUSTAINABILITY - 2016

Employer for one specific career cluster	Marine Resources	SeArc	Shimrit	Perkol-Finkel	Chief Scientist
Employer for one specific career cluster	Marine Resources	SeArc	Ido	Sella	CEO
Employer for one specific career cluster	Marine Resources	Hudson River Foundation	Jim	Lodge	Research Scientist
Employer for one specific career cluster	Marine Resources	Forge Organics	Kevin	Ferry	Director
Employer for one specific career cluster	Marine Resources	Rozalia Project	Rachael	Miller	Director
Employer for one specific career cluster	Marine Resources	DEP	Beau	Ranheim	Research Scientist
Employer for one specific career cluster	Marine Resources	DEC	Susan	Maresca	Research Scientist
Not-for-profit Groups	Restoration	CIVITAS	Maura	Smotrich	Project Manager
Not-for-profit Groups	Restoration	Env. Defense Fund	Jim	Tripp	Senior Council
Community Based Org.	Human Services	Citizen Science	Bart	Chezar	Citizen Scientist
Community Based Org.	City Planning	CB10/HRPTF	Tom	Lunke	City Planner
Post Secondary	College 2 year	BCC	Neil	Phillip	Chemistry Chair
Post Secondary	College 2 year	BMCC	John	Gallagher	Director Media Center
Post Secondary	College 4 year	Manhattan College	Mike	Judge	Biology Chair
Post Secondary	College 4 year	Roger Williams University	Tim	Scott	Professor
Post Secondary	College 4 year	Stevens Institute of Technology	Philip	Orton	Research Scientist
Post Secondary	College 4 year	St. Francis College	Kathleen	Nolan	Biology Chair
Post Secondary	College 4 year	NYU	Alberto	Stolfi	Post Grad

MBRP – IMPACT AND SUSTAINABILITY - 2016

Where are they now?



Kimberly is studying
Biology at SUNY Albany



Cezanne is studying Env.
Genetics at Rutgers



Andrew is studying Biology at SUNY Oswego

MBRP – IMPACT AND SUSTAINABILITY - 2016



Luca is studying
Astrophysics at Penn State



Nicolle is studying Env.
Science at Columbia
University



Ameena is studying
Environmental studies at
SUNY Cobbleskill



Pablo is studying Graphic
Design at FIT

Contact Information

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WBL COORDINATOR
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THE URBAN ASSEMBLY
New York
HARBOR
SCHOOL
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## Company Information

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School Website: [www.newyorkharborschool.org](http://www.newyorkharborschool.org)

Program Website: [www.harborseals.org](http://www.harborseals.org)