Fall 2012

Learning to Protect and Restore: Interning at the National Oceanic and Atmospheric Administration

Sarah Idczak
Western Washington University

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HONORS THESIS

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Date 12/6/2012

Internship Overview:
Organization: The National Oceanic and Atmospheric Administration
Location: NOAA Western Regional Center, Seattle, Washington
Offices: General Counsel for Natural Resources and the Restoration Center
Position: Legal Assistant
Duration: June-July, 2012
Total Hours: 342

Introduction

When I started looking for internship opportunities for this past summer, I hoped to find something that was rooted in environmental policy, but that would result in real changes in communities and the environment. I also hoped that my internship would introduce me to a variety of different careers that I could pursue after graduating from Huxley College of the Environment at WWU. I applied for an internship at the National Oceanic and Atmospheric Administration knowing that working there would offer the rewarding and challenging experience I was looking for.

My learning objectives at the beginning of my internship were to explore the role that environmental lawyers play in protecting the environment, learn what skills I would need to develop and what training I would need to complete in order to be an effective environmental lawyer, and talk with other environmental professionals working at NOAA to explore a wider variety of careers. I also wanted to learn how the lawyers at NOAA further the agency's mission, how NOAA responds to environmental disasters such as the Deepwater Horizon oil spill, and how natural resource damage assessment impacts federal environmental cases. Beyond these objectives, I knew that my role as a legal assistant would be a flexible one, and I was ready to be useful in any way I could.

My internship supervisor was Craig O'Connor, NOAA's Deputy General Counsel and Section Chief of the Office of General Counsel for Natural Resources (GCNR). My other immediate supervisors were Laurel Jennings, a Habitat Restoration Specialist, and Amy Turner, the Restoration Center's Administrative Support Specialist. I shared my time between GCNR projects assigned by Mr. O'Connor, Restoration Center projects assigned by Ms. Jennings, and other miscellaneous projects assigned by Ms. Turner.

NOAA: The National Oceanic and Atmospheric Administration

In 1807, President Thomas Jefferson established the Survey of the Coast, a national service dedicated to creating navigational charts of American waters. Over two hundred years later, this small but essential government office has expanded and changed into the National Oceanic and Atmospheric Administration, or NOAA. As society's needs for scientific understanding of the environment have morphed, NOAA has adapted to meet them. In a letter introducing the agency to the public, Administrator Dr. Jane Lubchenco points out that NOAA

studies everything "from the surface of the sun to the depths of the ocean floor as we work to keep citizens informed of the changing environment around them."[1]

NOAA is organized into six Line Offices with different purviews and missions. The National Marine Fisheries Service is "responsible for the stewardship of the nation's living marine resources and their habitat."[2] The National Ocean Service is now the home of the Office of Coast Survey. The National Environmental Satellite, Data, and Information Service provides a wide range of environmental data. The Office of Oceanic and Atmospheric Research studies extreme weather events, climate patterns, ocean currents, and marine ecosystems. The National Weather Service forecasts the weather nationwide and provides warnings and advisories for extreme conditions. Finally, Program Planning and Integration helps coordinate efforts across the agency.

As an intern, I had the opportunity to help in both the Office of the General Counsel for Natural Resources and the Restoration Center. The Office of the General Counsel, rather than fitting into one of NOAA's line offices, is separate and has a number of sections which provide legal advice to different offices. The Natural Resources Section, known at NOAA by the acronym GCNR, "provides legal advice to the National Marine Fisheries Service and the National Ocean Service, and seeks monetary restitution from responsible parties for injuries caused to our Nation's natural resources."[3] For example, after a major oil spill or other toxic release, GCNR investigates and analyzes the event through the process of Natural Resource Damage Assessment to determine the extent of the damage and the value lost, as well as put together plans to restore the damaged resources to baseline status. NOAA's natural resource attorneys then pursue either settlements or lawsuits against those responsible for the event to make them pay the value of the resources that were lost and pay for the restoration of the resources.

The Restoration Center is a part of the Habitat Conservation division of the National Marine Fisheries Service. Its mission includes opening rivers, reconnecting coastal wetlands, restoring corals, and rebuilding fish and shellfish populations through a number of different programs to conserve the habitat of living marine resources. Through working with both of these offices, I was able to gain a sense of the diversity and complexity of NOAA's work.

Environmental Law and Natural Resource Issues

At the beginning of my internship, Mr. O'Connor gave me a stack of six books and a link to an online version of a seventh so that I could do some background reading about the history of NOAA and GCNR, and particularly about the Exxon Valdez oil spill, the Oil Pollution Act of 1990, and the Deepwater Horizon oil spill. After the unprecedented Exxon Valdez oil spill in 1989, Mr. O'Connor headed the team of NOAA attorneys that brought a civil case against Exxon for damage to natural and archaeological resources, tourism, and recreational use. Now in the

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[1] National Oceanic and Atmospheric Administration. http://www.noaa.gov/about-noaa.html
[2] National Marine Fisheries Service. http://www.nmfs.noaa.gov/aboutus/aboutus.html
[3] Natural Resources Section of NOAA's Office of the General Counsel. http://www.gc.noaa.gov/naturalres-office.html

wake of the Deepwater Horizon spill in the Gulf of Mexico, Mr. O'Connor is in charge of NOAA's civil case against BP for resource damages and lost use. My reading gave me a great deal of historical context for the issues that NOAA GCNR is now facing in the Deepwater Horizon case.

Since Mr. O'Connor is an attorney and knew that I was interested in law and was thinking about going to law school, he wanted me to attend the Natural Resource Trustee Council meetings for Portland Harbor and the Deepwater Horizon Oil Spill, so that I could meet lawyers working for NOAA and other government agencies and get a sense of what they do. After a major oil spill or other toxic release results in significant loss of natural resources and the services they provide, a Natural Resource Trustee Council is formed to assess the damage, seek monetary damages from responsible parties, and use this money to restore natural resources to their baseline abundance and function before the pollution event. This process can take many years, and the Trustee Council must meet regularly to keep all members informed and plan how to proceed.

In the case of Portland Harbor, toxic releases occurred over many years and resulted in a 12 mile section of the Willamette River, which runs through the heavily industrialized heart of Portland, Oregon, being listed on CERCLA's National Priorities List in 2000. The eight members of the Natural Resource Trustee Council for Portland Harbor are NOAA, the US Fish and Wildlife Service, the State of Oregon, and the Nez Perce, Warm Springs, Grande Ronde, Siletz, and Umatilla tribes. The natural resources of Portland Harbor that the Trustee Council seeks to restore include pacific salmon, pacific lamprey, white sturgeon, bald eagle, osprey, double-crested cormorant, great blue heron, belted kingfisher, mergansers, cliff swallows, spotted sandpipers, mink, river otter, northern red-legged frog, and pacific tree frog.

The Environmental Protection Agency is not part of the Trustee Council, but has been leading its own investigation into Portland Harbor since the site's listing twelve years ago. This seemed to be a recurring theme: NOAA and EPA, while both concerned with many contaminated sites and environmentally damaging events, conduct separate investigations. One reason for this is that, while EPA is concerned with decontaminating a damaged site by removing toxins and dealing with them responsibly, NOAA is concerned with restoring ecological function at the site. Thus, their parallel investigations have different focuses and their remediation efforts complement each other.

I went down to Portland the day before the Trustee Council meeting and met with the NOAA case team's lead on restoration planning. Learning more of the background of the case from her helped me understand what was going on in the meeting the next day, and meant that I got a lot more out of the experience. The meeting itself lasted most of the day, and it was very interesting to see how the trustees interacted and hear how they were moving the case forward. Because the case is ongoing and the proceedings of the Trustee Council are confidential, I took no notes during the meeting and cannot say much else about it, but it was a great opportunity just to get to observe the meeting.

The Deepwater Horizon Oil Spill started when the well being drilled by the Deepwater Horizon oil rig, being leased by BP, blew out on April 20, 2010, triggering an explosion that killed eleven people and leaking oil into the Gulf of Mexico. The well continued to gush until a sealing cap was installed on July 12th, and the well was finally killed on September 19. Altogether, around 206 million gallons of crude oil were spilled into the Gulf. For comparison, an Olympic swimming pool holds 660,000 gallons. NOAA was one of many government agencies that responded to the spill, and are still dealing with its aftermath. The Natural Resource Trustee Council for the spill includes NOAA, representing the Department of Commerce, the US Fish and Wildlife Service, National Parks Service, and the Bureau of Land Management, together representing the Department of the Interior, and thirteen state agencies from the five affected Gulf states: Texas, Louisiana, Mississippi, Alabama, and Florida. The natural resources that the Trustee Council seeks to restore are too many to list, but include fish and invertebrates, marine mammals, turtles, birds, and unique habitat.

My first assignment at my internship was to attend a status update meeting about the Natural Resource Damage Assessment process for the Deepwater Horizon oil spill. I was only an observer in this meeting, but the chance to witness the inner workings of a federal agency preparing for one of the largest natural resources damage cases in history was an incredible opportunity.

For the Deepwater Horizon Trustee Council meeting, I went to San Antonio with Mr. O'Connor for three days. In preparation for attending the meetings, I had done quite a bit of background reading about the spill, including skimming the 1400 page Draft Programmatic Environmental Impact Statement that will be a guide for restoration projects relating to the spill. The meeting itself was actually more of a conference, with one, two, or sometimes more meetings of different committees and groups meeting at a time for three days. As Mr. O'Connor's intern, I was allowed to attend many of these meetings, including some sessions of the Executive Council, the Programmatic Implementation Group, the Restoration Subcommittee, and a Devil's Advocate session. As with the Portland Harbor meeting, the proceedings of these meetings are confidential and I did not take any notes during them, but they were very interesting. My supervisor wanted me to attend just so I could observe the process, and get a chance to talk to many of the lawyers who were there, all of which was very valuable. Among others, Mr. O'Connor introduced me to his boss, NOAA's General Counsel, Lois Schiffer. I also really appreciated the chance to talk to young lawyers who are just a few years out of law school who are now working for NOAA and the State Department.

A key assignment that I completed for Mr. O'Connor after getting back from San Antonio was interviewing seven lawyers who work for him in the Office of General Counsel for Natural Resources, to get their feedback on how effective GCNR's and NOAA's response to the Deepwater Horizon oil spill has been. Mr. O'Connor wanted their input reported to him anonymously so that they could speak freely about what aspects of the response went well and what should be improved for the future. I asked what GCNR, NOAA, and the Deepwater Horizon case team had learned from the response experience, what could be done differently in

the response to a similar event in the future, what went well with the response effort, what Mr. O'Connor did well and how he could improve his management of the team for next time, and what training GCNR employees would benefit from for future response efforts. I conducted some interviews over the phone and some in person, and emailed out the interview questions in advance so that the respondents would have a chance to think about them before the interviews. I compiled the responses and reported them anonymously to Mr. O'Connor in simple bullet points, according to his directions.

Another assignment that I completed with Ms. Jennings' guidance was compiling a first draft of the index list for the 1400 page Draft Programmatic Environmental Impact Statement for the Deepwater Horizon Oil Spill. Even though all I was doing was coming up with a list of key words, I was glad to actually be working on a NOAA document. Ms. Jennings suggested that I look at the indexes of existing Programmatic Environmental Impact Statements online, to get a sense of their usual length and depth, and then see what I could come up with. When I had a decent list that I thought would be useful but not overwhelming, Ms. Jennings set up a conference call for me to talk to the core team writing the document, herself included, and get their feedback. I then took their suggestions and made revisions before turning it in to Ms. Jennings. My draft will most likely not be the final index list that ends up in the Programmatic Environmental Impact Statement, but at least I was able to give the team a start on it that they can change or adapt as they see appropriate.

Environmental Education

Another of my main assignments was helping with NOAA Science Camp. For ten summers now, NOAA Science Camp has been bringing seventh and eighth graders who are interested in science onto the NOAA campus in Seattle for a week of hands-on science exploration. During the week, campers visit a number of different offices around the campus, including the National Marine Fisheries Service, the NOAA Dive Center, the National Marine Mammal Laboratory, the National Weather Service, the Office of Coast Survey, and the Office of Oceanic and Atmospheric Research, where they learn about what the scientists work on, and do a hands-on activity in each office. Midway through the week, the campers are given a mystery to solve (a mysterious substance was found on a beach along with some dead fish), and have the chance to form hypotheses about what happened, consult the scientists that they met earlier in the week for clues, draw conclusions, and put together a poster displaying their research and analysis. At the end of the week they participate in a poster session attended by their parents and the NOAA scientists who they visited during the week. Interspersed throughout all this, of course, are field games, art projects, prizes and snacks.

Although there are two weeklong sessions of NOAA Science Camp each summer, I was only able to help out with the second session, since during most of the first session I was in San Antonio for the Deepwater Horizon Trustee Council Meeting. During the second session, I helped with everything from roving between different activities with a camera, taking pictures for the end of the week slide show, to helping prepare snacks and fill water balloons for field

games. I also helped lead the Restoration Center's activity, where campers learned the habitat requirements of salmon and then were given a large map of a stream and a simulation budget of $400,000 to restore fish habitat. They could choose any combination of projects, including removing a dam, installing a fish ladder or elevator (yes- there is such a thing as a fish elevator,) constructing an off-channel area, planting native riparian vegetation, installing large woody debris, and a variety of other options, as long as they stayed within their budget.

Besides being a lot of fun, helping with Science Camp was a great way of getting to know NOAA better. I was struck by the diversity and depth of NOAA's responsibilities. On many of the visits to different offices, I was learning right along with the campers about how divers perform a circle search, how a nautical chart is made, or how scientists predict where marine debris will end up. It was also very inspiring to see middle school students getting so excited about science.

Science Camp also gave me the opportunity to help with a speed-networking activity for the Junior Leaders, the high school-aged students who attend both weeks of Science Camp for in-depth science exploration and leadership training. I was one of ten or twelve interns, graduate students, and science professionals who were arranged at tables around the room. The Junior Leaders rotated around and had a few minutes at each table to ask us what we did and how we got to where we are professionally or academically. We in turn asked them questions about their studies and post-secondary goals in a mock interview. This seemed like a valuable chance for them to get ideas of possible science-related career paths and advice on how to pursue them, as well as an opportunity to practice interviewing skills. For my part, it was gratifying to hear that some of the Junior Leaders were interested in my career path of environmental policy and wanted to know how they could someday intern for NOAA.

Community Outreach and Restoration Grant Evaluation

The Restoration Center's Community Based Restoration Program provides funding and technical support for communities to restore local habitat ranging from oyster reefs to riparian zones. One grant opportunity within this program is provided jointly by the Restoration Center and the FishAmerica Foundation, a branch of the American Sportfishers' Association dedicated to conservation and research. One of my first significant assignments with the Restoration Center was to help review proposals from community groups for $10,000 to $75,000 FishAmerica grants to restore stream habitat for anadromous sportfish species, such as salmon. The grant opportunity is nationwide, so the nine proposals that I reviewed from Washington State were only a small sample of the pool of proposals.

Participating in this process of grant review was very interesting, especially since I had recently helped write a grant proposal for the Green Energy Fee at Western Washington University, and was eager to see the grant process from the other side and find ways of improving my own grant writing skills for the future. The proposals varied greatly, from small scale riparian planting and monitoring to large scale dam removal projects. Lacking the years of experience in the field and multiple science degrees of the other grant reviewers, I was hesitant at

first to score the proposals and offer my appraisal of their technical merits, but there were still many aspects of the proposals that I commented on. For example, some applicants included meticulously detailed budgets and dozens of pages of design drawings, while others had vague budgets and offered few design details. Talking with Ms. Jennings later, it was encouraging that the scores we had given many proposals were similar. When all the reviewers had read and scored all the proposals and the scores had been compiled, we all attended a conference call to discuss the proposals in detail and choose which projects from the Northwest region should receive funding. The grants recipients are being notified now, and will be announced publicly soon.

Toward the end of my internship, my supervisor Ms. Jennings asked me if I would be interested in writing a post for the Office of Response and Restoration's blog, about my experience as an undergraduate intern at NOAA. When I talked with the editor of the blog about what I had been working on and what might be interesting material for a blog post, she suggested that I write about NOAA's Community-Based Restoration Grants and my experience helping review the FishAmerica Foundation grant proposals. The blog post was published a few weeks after my internship ended, and is included at the end of this report.

One day Ms. Jennings asked me if I had any interest in shellfish. She was working on a presentation that she and another NOAA employee were going to give to the Northwest Indian Fisheries Commission introducing the Restoration Center and discussing opportunities for shellfish habitat restoration and aquaculture. She asked me to go through the PowerPoint slides and see if they made sense. In this case, having a fresh pair of eyes from outside NOAA and the field of conservation biology came in handy. Most of the changes I made were to standardize formatting and replace acronyms with the long form names of programs and offices to avoid confusion. (My vocabulary of NOAA acronyms was one way I measured my progress during my internship. On my first day I hardly knew NESDIS from DARRP. The entire first page of my internship notebook is devoted to acronyms, and I was eventually given access to a glossary that contained hundreds of them.)

After I helped review the presentation slides, Laurel invited me to go to the meeting with the Northwest Indian Fisheries Commission. This proved to be very interesting. The Commission is concerned with the vitality and sustainability of both shellfish and fin fisheries of twenty Western Washington tribes. There has historically been some tension between the interests of fin fisheries and shellfisheries, with habitat protection and restoration interests ending up in the middle of the fray. Eelgrass beds are vital habitat for many species of finfish, but according to regulations, shellfish aquaculture cannot take place in an area where there is eelgrass. At the same time, both eelgrass and shellfish improve water quality. The decline of the Western Washington salmon fishery and growing interest in geoduck aquaculture are complicating the situation further.

It takes about seven years, I learned, for a one to two pound geoduck to mature. However, farmed geoducks sell for around $32 per pound. Shellfish farmers have expressed frustration with the permit process for shellfish aquaculture, saying that it takes far too long, up to five

years, and the process is confusing. The Restoration Center's objectives were to make it clear that habitat protection and restoration are good for fisheries, rather than restricting them, and to explore ways to collaborate with the Northwest Indian Fisheries Commission to restore marine habitat and safeguard both fin and shellfisheries. I thought the meeting was very successful.

Another great opportunity that my internship provided was access to internal NOAA webinars on a variety of topics designed to help integrate the many offices of NOAA and showcase interesting projects and programs that the agency is involved in. For instance, I listened to a webinar presented by the National Marine Fisheries Service's Office of Aquaculture on current issues and research about farming fish and shellfish in the Northwest. Another interesting webinar was presented by the Alaska Center for Climate Policy and Health about the Local Environmental Observers program that encourages citizens to participate in scientific monitoring and reporting of climate-related changes in their communities, such as increased shoreline erosion and the appearance of invasive slug species. These webinars broadened my understanding of NOAA and the work that the agency does.

Conclusion

My course work at Western Washington University and Huxley College of the Environment prepared me well for my internship with NOAA. For my Environmental Policy major, I took many classes in environmental policy, law, and economics, all of which were very helpful during my internship. The environmental science classes that I have taken held me in good stead, as well. If anything, I think having had more science prior to my internship would have made it easier to understand NOAA's projects, objectives, and methods. Generally, critical reading, writing, and research skills were invaluable to me in my internship.

This internship has also helped prepare me for my future educational and career path in a number of ways. From meeting and talking to so many lawyers, I now have a much better idea of the duties and projects assigned to environmental lawyers working for government agencies, and this will inform my thinking as I continue to consider law school. In general, I was impressed by the years of meticulous preparation that go into building a federal environmental case. I was also interested to learn that a vast majority of federal environmental cases settle out of court. As I mentioned above, it was very helpful to talk to young lawyers and hear about their experiences in law school and since.

Working with NOAA also gave me ideas of other graduate programs that might be interesting and other organizations and agencies that would be rewarding places to work. NOAA would be a great place to work someday. The University of Washington's School of Marine and Environmental Affairs seems like it would be very worthwhile. NOAA's Commissioned Officer Corps, a uniformed service that runs NOAA's fleet of research vessels, would also be a very rewarding career. Above all, my internship at NOAA gave me valuable experience working in a professional setting, which will hold me in good stead everywhere I work in the future.

August 7, 2012
by Office of Response and Restoration Leave a comment

Giving Communities the Dollars to Restore America's Rivers

This is a post by NOAA intern Sarah Idczak.

While recently leading an activity for middle school students, I showed two pictures of streams. In one, a narrow culvert protruded from under a road, the lower edge a foot or so above the stream that it fed. The other picture showed a wide, shady creek strewn with logs running under a bridge.

"If you were a salmon," I asked them, "which of these streams would you rather swim up?"

Nearly all hands went up for the stream with the bridge.

As an intern with NOAA's Restoration Center and Office of General Counsel for Natural Resources, I've had the amazing opportunity to help review community grant proposals for fish habitat restoration projects. Having helped write a grant proposal to conduct a wind resource study at my university, I was interested in seeing the other side of a grant program, which meant participating in the review and discussion that determines which projects receive funding.

In 2000, volunteers planted saltmarsh vegetation at Ft. McHenry in Maryland. (NOAA Restoration Center)

Because I have been working at NOAA's Seattle office, I focused on the grant proposals for Washington state. There were nine proposals from Washington alone this year, and the grant is open nationally, which means only a few excellent projects can be granted funding in each region in a given year. The Restoration Center's experienced grant reviewers and I first read through the proposals, paying close attention to budget and design details, as well as the likely impact of the projects. After individually scoring each proposal, the reviewers compared notes and discussed each proposal's strengths and weaknesses, determining which projects would go on to the next round of deliberations for possible funding.

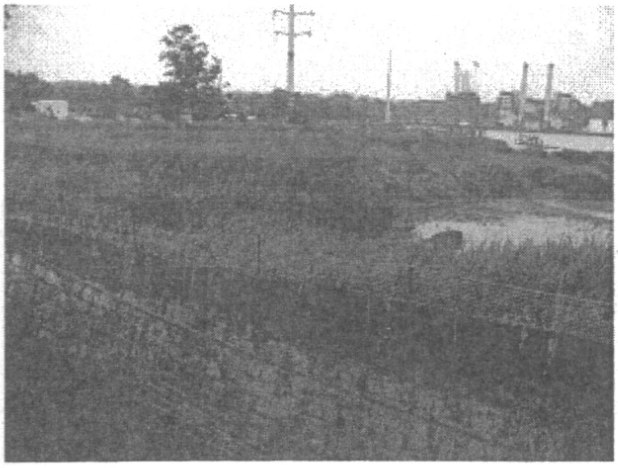
The Restoration Center, partnering with the American Sportfishing Association's Fish America Foundation, awards grants to projects that will restore habitat for sport fish species such as salmon and trout. These projects can include removing barriers that prevent fish from migrating upstream to spawn, such as dams and culverts; placing large woody debris in streams to provide fish with places to rest and hide; or planting native vegetation near streams to provide shade.

For example, the Mattole Restoration Council, a community organization in Petrolia, Calif., was awarded a $57,800 Fish America Foundation grant a few years ago to remove a culvert along a tributary of the Mattole River and replace it with a bridge. This project restored one mile of prime steelhead and salmon habitat.

Since the partnership began 14 years ago, the Fish America Foundation and NOAA have awarded $6.9 million in grants, resulting in an estimated $23 million worth of restored fish habitat along U.S. coasts, including the Great Lakes. Volunteers play an integral role in these projects, contributing 11,000 hours of labor to the projects funded in 2010 alone.

The Applied Environmental Sciences Site prior to restoration. Fill material and common reed (Phragmites australis) were removed in 2003 during the shoreline and saltmarsh restoration of Bar Beach Lagoon in New York. (EEA/Laura Schwanof)

These funding opportunities are part of the Restoration Center's Community-Based Restoration Program, which focuses on facilitating and funding hands-on community involvement in habitat restoration. This project is also part of a broader effort throughout many of NOAA's offices to involve the public in restoring and protecting the natural resources in their communities.



The background shows 2003 saltmarsh restoration at the Applied Environmental Sciences site in New York. In the foreground you can see further restoration which North Hempstead, N.Y., continued in 2007. (NOAA/Lisa Rosman)

NOAA's Office of Response and Restoration, which works closely with the Restoration Center to evaluate and restore environmental damages after oil and chemical releases, also reaches out to conservation groups and community members to help rehabilitate degraded habitat. In these cases, the people responsible for the spill are required to fund the restoration projects.

A legal settlement over the Applied Environmental Sciences Superfund site on Long Island, N.Y., for instance, included funding for a community restoration project that restored an acre of saltmarsh and shoreline near the site. A more recent project reclaimed a stretch of Philadelphia's waterfront after a 2004 oil spill on the Delaware River.

Through participation in these community restoration projects, people learn the importance of high-quality habitat, gain the knowledge and experience to pick out other potential projects in their communities, and help make restoration more effective and longer lasting. To learn more about restoration projects in your community, take a look at NOAA's Restoration Atlas.

 *Sarah Idczak recently completed a summer internship working jointly with NOAA's Office of General Counsel Natural Resources Section and NOAA's Restoration Center. She is a senior at Huxley College of the Environment at Western Washington University, studying environmental policy.*

NOAA INTERNSHIP HOURS LOG

Date	Hours	Location	Assignments/ Activities
1/10/2012	2	Bellingham	Read Draft NRDA for DWH spill in preparation for update meeting
1/12/2012	10	Sand Point	Sat in on status update meeting for DWH Natural Resource Damage Assessment
4/2/2012	4	Bellingham	Read Oil Pollution Act of 1990 and reviewed Deepwater NRDA powerpoint
6/8/2012	7	Sand Point	Badge and Open House
6/11/2012	8	Sand Point	NOAA/ DARC/ DWH Background Reading, Reviewing FAF Grant Proposals
6/12/2012	8.5	Sand Point	NSC/Outreach Workshop, Reviewing FAF Grant Proposals
6/13/2012	8	Sand Point	Climate Change Education and Aquaculture Webinars, FAF Grant Proposals
6/14/2012	8	Sand Point	Tent and FAF Grant Proposal Review
6/15/2012	8	Sand Point	FAF Grant Proposal Review
6/18/2012	8.5	Sand Point	FAF Grant Proposal Review, EV Background Reading, Shellfish meeting w/ Laurel and Laura
6/19/2012	8	Sand Point	EV Background Reading, Alaska Climate Change Citizen Science Webinar, PH/DARRP Background
6/20/2012	8	Sand Point	Shellfish Pres, PH Background Reading, FAF Grant Proposal Review
6/21/2012	8.5	Sand Point	PH Background Reading, DWH Background, Seattle Science Festival/ Open House Debrief Meeting
6/22/2012	8	Sand Point	DWH Background Reading, RC Shellfish pres
25-Jun	8	Sand Point	NWIFC meeting with Laurel and Jen, DWH Background reading
6/26/2012	8	Sand Point	FAF OR/AK grant review call, PH Case Team Call, RC All Hands Call, PH background reading, DWH background reading
6/27/2012	7	SEA/PDX	Travel to Portland and pre-meeting with Megan Callahan Grant about Portland Harbor
6/28/2012	9	PDX/SEA	Portland Harbor Trustee Council Meeting in Portland, travel to Seattle
6/29/2012	8	Sand Point	DWH PEIS Index list, EV/NRDA Background Reading (Mission w/o a Map)
7/2/2012	8.75	Sand Point	DWH PEIS Index list, EV/NRDA Background Reading (Mission w/o a Map), Field et al reading
7/3/2012	6.75	Sand Point	Field et al Reading- power outage
7/5/2012	8.5	Sand Point	NOAA Science Camp Staff Training
7/6/2012	8.5	Sand Point	NOAA Science Camp Staff Training
7/7/2012	6.5	40th Ave (APT)	Reading "A Hole at the Bottom of the Sea"
7/8/2012	3	40th Ave (APT)	Reading "A Hole at the Bottom of the Sea"
7/9/2012	14	SEA/SAT	Travel to San Antonio with Craig
7/10/2012	6	San Antonio	DWH Trustee Council Meeting- EC, PIG, Restoration
7/11/2012	4.5	San Antonio	DWH Trustee Council Meeting- EC, Restoration
7/12/2012	11.5	San Antonio/ SEA	DWH Devil's Advocate, Travel back to Seattle
7/13/2012	8.5	Sand Point	NOAA Science Camp Session 1
7/14/2012	2.5	40th Ave (APT)	Networking Bio, Reading "Extreme Conditions"
16-Jul	9	Sand Point	NOAA Science Camp including helping teach restoration activity, reading "Extreme Conditions"
7/17/2012	10.25	Sand Point	NOAA Science Camp, DWH PEIS Index review call, Index list revisions, met w/ Ashley about blog post, Interviews Prep
7/18/2012	10.5	Sand Point, Apt	Science Camp, Index list revisions, Interviews, Blog Post research/prewriting
7/19/2012	10.5	Sand Point, Apt	Science Camp SpeedNetworking, Interviews, PEIS Index List, reading "Extreme Conditions"
7/20/2012	9.5	Sand Point	Science Camp, Interviews, Index List Review Discussion and final edits, Blog Post
7/23/2012	8.75	Sand Point, Apt	Interviews, Blog Post, Met w/ Craig, Reading "Extreme Conditions,"
7/24/2012	8	Sand Point, Apt	Interviewed Katherine, Bob, and Marguerite, Blog Post revisions, scanning documents, ACCAP webinar (AK Climate Change), reading
7/25/2012	8	Sand Point	Interview Report, Scanning Docs, Blog Post, reading Envi Law Text Book
7/26/2012	8.5	Sand Point, Apt	Interview Report, Scanning Docs, reading Envi Law Text Book, reading "Extreme Conditions"

7/27/2012	8	Sand Point	Blog Post revisions, Interview Report, Scanning docs, reading Envi Law Textbook
7/30/2012	9.5	Sand Point	Blog Post revisions, Interview Report, finished reading "Extreme Conditions"
7/31/2012	8	Sand Point	Interview Report, Blog Post revisions
TOTAL:	342		(300 Hours = 10 Credits)