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Oculina Evaluation Team Report (April 2014 Outreach Update)

Submitted to:

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2.0 Outreach Breakout Group Report

2.1 Status, Effectiveness, and Recommendations of Outreach Projects in Evaluation Plan and Recommendations

With the understanding that outreach activities would not have a direct influence on the Council’s decision regarding the size and configuration of the Oculina Experimental Closed Area, Team members involved in outreach efforts focused on the list of outreach projects outlined in the Evaluation Plan. This list of projects resulted from constituent meetings held in 2004, with review by advisory panels and the Council. The projects represent both efforts initiated by Council staff as well as those resulting from partnerships with a number of agencies. Additional information regarding outreach efforts is included in Appendix A.

(Council Initiated Projects)

Objective 1:

Assist in development of the *Oculina* Experimental Closed Area Evaluation Plan.

Project 1: Develop an outreach strategy for the *Oculina* Bank area.

Status 2007: Completed, 2005 <http://www.safmc.net/managed-areas/oculina-bank>

Recommendations 2007: none

Status Update 2014: none

Recommendations 2014: modify the document to update activities and clarify components based on input provided to the Council in 2014.

Objective 2.

Develop a focused campaign targeting recreational/commercial fishermen in the central eastern Florida area.

Project 1. Provide SAFMC regulation brochures to area fishermen (40,000 copies)

Status 2007: Regulation brochures were re-printed in May 2005. Re-print as needed (likely January 2007). Distributed to state and federal agencies and others as requested.

Recommendations 2007: The Team agreed that this is an effective tool for distributing regulation information on the OECA and is used widely by law enforcement officers during boardings in the area.

Status Update 2014: The four-color, 18-page *Fishing Regulations South Atlantic Federal Waters* brochures were reprinted in 2007 and again in 2010, with 40,000 hard copies delivered to state and federal agencies, fishing-related businesses, and individuals with each printing. In 2009, the Council, in partnership with SC Sea Grant Consortium, produced the four-color brochure *Regulations for Deepwater Marine Protected Areas in the South Atlantic* that also featured a page on the Oculina Bank with maps and regulations. Copies of the Deepwater MPA Regulations brochures were distributed in a similar manner.

Because of the frequency of changes to regulations, the Council is no longer printing the four-color regulations brochures. Updated summaries (PDF) of both commercial and recreational regulations for snapper-grouper species are available from the Council’s website at www.safmc.net and are designed for easy printing. In 2013, the Council developed a digital media application or “App”, *South Atlantic Fishing Regulations*. The free mobile App contains comprehensive, updated fishing regulations including regulations and maps on all protected areas, including the OECA. The App is available for both Android and Apple platforms and is actively promoted to the fishing community.

Recommendations 2014: The team recommends continued promotion of regulations via electronic media, including the *SA Fishing Regulations* mobile App, and the Council’s website. Performance can be evaluated by tracking the number of times the App is downloaded and the number of “hits” to the Council’s regulations webpage. The team also recommends working with FWC to promote Oculina-relevant regulations and information in their recreational and commercial regulation brochures. The recreational Saltwater Regulations booklet is produced biannually (January and July). The commercial regulations booklet is updated and distributed on a less frequent basis. FWC is willing to include a half-page article on OECA in both publications. In addition to printed copies, both the recreational and commercial regulation summaries are maintained on the MyFWC website.

Project 2. Work with fishing chart manufacturers and or vendors to improve available information for the *Oculina* Experimental Closed Area.

Status 2007: Incomplete. Contacts were made in 2005.

Recommendations 2007: Pursue this objective as a priority in 2006 - 2007. The OHAPC and OECA are poorly represented on paper charts, and information on fishing restrictions is incomplete. Contact manufacturers regarding re-print schedules and possible edits. Create transparent stickers to modify existing paper charts and make available through

retail outlets. Include a note in updated regulations brochure regarding sticker availability if timing allows. Check for legal issues regarding the use of stickers with NOAA General Counsel. Contact electronic chart manufacturers 2007 and investigate available information and possible updates.

Status Update 2014: Contacts were made with manufacturers of Home Port Charts, Inc., a regional manufacturer of popular locally printed and laminated fishing charts. Staff worked with manufacturers to improve designation of OECA coordinates and restrictions on printed copies. No contacts have been made with electronic chart manufacturers.

Recommendations 2014: Contact commercial electronic chart manufacturers to inventory information currently used to designate the Oculina OECA, HAPC, and the South Atlantic Deepwater MPAs. Work with commercial electronic chart manufacturers to improve designations if needed. Council staff will work with NOAA's Marine Charting Division to investigate if OECA, HAPC, and MPA boundaries and regulations can be included in a new proposed digital overlay of marine protection boundaries.

Project 3. Work with Florida Fish and Wildlife Conservation Commission (FWC) to provide written information regarding the *Oculina* Experimental Closed Area in (a) their publications targeting both recreational and commercial fishermen and in (b) mailings for fishing licenses and permits.

Status 2007: An article regarding the OECA and graphics were submitted to FWC for recreational regulations brochure in April 2005. The article ran in January 2007 (900,000 copies total). Copies were available in both English and Spanish.

Recommendations 2007: Follow up with the FWC's commercial permits office for mailing of rack cards with commercial permits in January 2007. Continue to supply FWC outreach staff with updated information as it becomes available.

Status Update 2014: Contact was made with FWC's permit office about a possible mailing of Oculina regulations rack cards. It was considered cost prohibitive to print copies for blanket mailing and likely an ineffective way to reach constituents. A decision was made to table the mailing. However, a feature article on the OECA/HAPC contributed by Council staff was featured in the printed copy of the 2007 FWC Recreational Fishing Regulations. Approximately 600,000 copies were printed and distributed.

Recommendations 2014: Council staff will work with FWC to populate a standing page highlighting regulations and information pertaining to OECA in their commercial and recreational FWC Regulations Brochures. The recreational brochure is printed biannually, and the commercial brochure is printed less frequently. The team will generate content for the recreational FWC Regulations brochure for their July 2014 edition, and recommends generating new content in conjunction with the implementation of Coral Amendment 8 and proposed changes to the Oculina Bank HAPCs.

The team will explore including OECA content in a June FWC mailing of recreational regulations to approximately 1800 saltwater license vendors. The license vendors in turn provide copies to anglers. Council staff will also draft an article to be included in the FWC publication “*Fishing Line Magazine*”. FWC will facilitate including OECA information in regional or national fishing magazines and publications (eg. Coastal Angler Magazine).

The team will also work with the FWC to incorporate OECA/HAPC information in to the FWC Law Enforcement Training Manual. Officers are provided a waterproof training manual. This will ensure new officers understand the laws and regulations surrounding OECA.

Project 4. Develop and distribute news releases to focus on law enforcement activities, research and monitoring projects, and the ecological importance of the area.

Status 2007: Ongoing

Recommendations 2007: Continue to work directly with state and federal law enforcement agencies to highlight activities. Post recent news releases from NOAA Office for Law Enforcement on the Council’s Oculina web site page and continue to highlight law enforcement activities in *South Atlantic Update* Newsletter.

Status Update 2014: News releases on research within the OECA were generated following a 2009 media excursion to the R/V *Seward Johnson*. News articles were featured in the Orlando Sentinel, Daytona Beach News Journal, Charlotte Observer and on the NBC Nightly News. Articles relative to the OECA were included in the Spring and Summer issues of the Council’s *South Atlantic Update Newsletter*, including a 2-page feature article on research activities by NOAA Research Scientist Stacey Harter. Staff continue to work with NOAA OLE to highlight enforcement activities as they occur.

Recommendations 2014: Council staff will continue to work with NOAA OLE to highlight enforcement activities. The upcoming SEFSC/FAU research missions in 2014-2016 will provide an opportunity to generate new news content.

Project 5. Develop a Powerpoint presentation about the *Oculina* Experimental Closed Area, distribute on CD, post at Web site, and present to fishing clubs, environmental groups, local governments etc.

Status 2007: Initial planning completed.

Recommendations 2007: This is not a high priority. Prepare draft for review and complete in 2007. Contact local educational institutions regarding use and distribution (Note: Grant Gilmore offered to help with identifying these sources).

Status Update 2014: A powerpoint presentation specific to the OECA has not been developed.

Recommendations 2014: Council staff and Outreach team partners will develop a “stock” powerpoint presentation on the Oculina Bank and OECA that can be tailored to a wide variety of audiences. FWC has agreed to include OECA information in their standard presentations on marine regulations and in FWC law enforcement training. Council staff and partners could prepare a YouTube video of a powerpoint presentation with a voiceover for wide distribution and usage (possibly hosted on a South Atlantic Fishery Management Council YouTube channel or on the Council’s website).

Project 6. Develop and distribute posters and rack cards/brochures at area bait and tackles shops, marinas, fish houses, boating stores, fishing tournaments, boat shows, etc.

Status 2007: Printing of rack cards and posters was completed in August 2006. 5,000 rack cards and 1,100 posters to be distributed throughout the Treasure Coast both in person and through the mail.

Recommendations 2007: Continue printing of materials for distribution as needed. Work closely with fishing tournament organizers in local areas to include Oculina rack cards in tournament packets. Contact FWC Law Enforcement Officers regarding possibility of talking briefly about regulations and rack cards at tournament captain’s meetings.

Status Update 2014: The Oculina Bank Fishing Regulations rack cards have been reprinted as needed and continue to be distributed as requested. NOAA OLE agents and FWC law enforcement officers have distributed the rack cards at captain’s meeting prior to tournaments and other area events and during vessel boardings in the area. Rack cards are also distributed at the Smithsonian Marine Station, and at the Oculina Bank financial institution in Ft. Pierce. There is a need to distribute the rack cards to area marinas, bait and tackle stores, etc. on a regular basis

Recommendations 2014: The Council should re-print the popular rack cards once Coral Amendment 8 is implemented and necessary updates to the rack cards have been made. This new version should be distributed to fishing clubs, marinas, fish houses, boating/marine stores, fishing tournaments, boat shows, bait and tackle stores, the Smithsonian Marine Station, FWC networks; and state parks (i.e. Ft. Pierce & Sebastian Inlet fishing museum). Bulk copies should be provided to NOAA OLE, The Smithsonian Marine Station, and FWC for distribution. The team should also interface with local state parks to see if there are opportunities to share information on the OECA (Sebastian Inlet State Park, Ft. Pierce State Park etc). State and Federal Port samplers may be able to help with distribution as well. Feedback on the poster indicated it was a less useful tool. The team recommends against reissuing the poster and recommends focusing on the rack cards.

Project 7 (NEW): Develop kiosk for target boat ramps/landings

Recommendations 2014: FWC has a successful prototype for an educational kiosk that could be installed at high profile boat ramps or landings sites in the Ft. Pierce area. Council staff should investigate the efficacy of employing this strategy to reach boaters and anglers.

(PARTNERSHIP PROJECTS)

These projects are the result of funding opportunities and partnerships involving NOAA’s Coral Reef Conservation Program, NOAA Fisheries, NOAA’s Undersea Research Program, and the Smithsonian Marine Station, in cooperation with Florida Fish and Wildlife Conservation Commission, NOAA Office for Law Enforcement, Florida Space Port Authority, U.S. Coast Guard, and Harbor Branch Oceanographic Institution.

Objective 3:

Coordinate a broader media campaign with partners to reach central Florida residents and visitors using newspaper, radio, TV, Internet, and existing environmental education network (e.g. environmental centers, schools, academia, area businesses).

Project 1: Develop an *Oculina* Web site or work within the existing site to establish a comprehensive web-based outlet to include access to useful education and outreach products. Publicize availability of information from new site by having links posted on other fishing/Non-Governmental Organizations/tourism related web sites

Status 2007: Oculina information was incorporated into the Council’s Ecosystem Web site in 2005-2006. Harbor Branch Oceanographic Institution’s www.@Sea.org Web site hosted the 2005 research cruise daily log reports and other information.

Recommendations 2007: Continue to incorporate information as it becomes available. Investigate possibility of incorporating daily cruise logs into the Council’s Ecosystem site. Add relevant press releases regarding law enforcement activities to the Web site.

Status Update 2014: The Council launched a new and improved Web site in 2013 that includes designated pages on the Oculina Bank as part of the “Managed Areas” section. Note that the HBOI Web site www.@Sea.org is no longer active.

Recommendations 2014: The Council’s Web site www.safmc.net should be a central portal for information about the Oculina Bank in general. The site should cross-link with other entities that have Oculina or Deepwater Coral web presences such as Harbor Branch Oceanographic Institute, NOAA’s Deep Coral Program, NOAA’s Ocean Exploration Program, and The Smithsonian Marine Station. The Council will soon launch blogging capabilities from its website. The Council site will be a clearing house for event-based information during 2014-2016 research missions, including daily web-logs, photographs, etc.

Oculina and OECA content should also be included on FWC’s website. The Council will work with FWC to create content, including graphics, maps and photographs.

The team also recommends exploring the use of social media (blogging, Facebook and Twitter amongst others) to relay information or important messages about the OECA. This will be especially useful for event-based outreach during upcoming research missions and implementation of Coral Amendment 8.

Project 2: Develop education products for teachers (K-12) and informal educators, post on Web site, and develop packet for distribution to science teachers.

Status 2007: A 2005 Teacher Workshop was completed in conjunction with research and monitoring cruise.

Recommendations 2007: Continue workshops in conjunctions research and monitoring activities, building on 2005 workshop materials and recommendations. There is strong support for this outreach effort. The NOAA Fisheries Habitat Conservation Division expects funding from the NOAA Office of Education to continue teachers’ and excursion workshop activities in 2007.

Status Update 2014: Subsequent teacher workshops were held in 2007, 2008 and 2009 with NOAA funding and Council support. Education products were updated and expanded at each workshop and made available to participants. See Appendix A for additional details.

Recommendations 2014: Work with COSEE Florida, the Smithsonian Marine Station, and other partners to develop teacher materials in conjunction with 2014-2016 Oculina research activities. COSEE Florida and/or NOAA may be sources of potential funding. Assuming NOAA vessels are used for 2014-2016 research missions as planned, these missions should include a NOAA Teacher At Sea to further integrate NOAA science into classrooms. A “port day” activity could also be incorporated so students and teachers could tour the NOAA research vessel and interact with scientists. Collaboration with regional partners will be essential for creating these educational opportunities.

Project 3: Create media packet targeting ecological importance of area; packet should include popular news items about *Oculina* Experimental Closed Area.

Status 2007: Completed for 2005 research and monitoring cruise through contract with HBOI. Future media packets and materials are dependent upon funding.

Recommendations 2007: Utilize currently available materials (photos, B-roll) in future media releases.

Status Update 2014: Media packets were developed in conjunction with the 2009 Media Excursion organized in conjunction with a research cruise conducted onboard the R/V *Seward Johnson*.

Recommendations 2014: Building on past efforts, update media packet in support of a media event related to research activities in 2014-2016.

Project 4: Develop a traveling portable exhibit that can be displayed at fishing tournaments, tradeshow, seafood/maritime festivals, aquariums, science museums, libraries, government centers, etc.

Status 2007: Incomplete. Note: A portable deep water coral outreach exhibit is currently available through Smithsonian Marine Ecosystems Exhibit.

Recommendations 2007: Creating a new exhibit is a lower priority, contingent funding and staff availability. Network with local educational institutions for possible display of exhibit.

Status Update 2014: Complete. A portable exhibit was developed in 2009 and includes a kiosk featuring the deepwater coral film "Revealing the Deep". This exhibit is used at Council meetings and is available for use by outside organizations.

Recommendations 2014: The existing SAFMC display will need updating upon implementation of Coral Amendment 8. Staff may consider using existing files from the dismantled Smithsonian display to create fabric panels to replace or supplement the SAFMC portable display. The team should ensure the conservation community is aware the portable exhibit is available to resource agencies, marine education, law enforcement and researchers.

Project 5: Offer media excursions to the *Oculina* Experimental Closed Area and HAPC/ tours and interviews regarding enforcement activities onboard the *CT Randall* law enforcement vessel.

Status 2007: A media cruise was coordinated with FWC and NOAA OLE in conjunction with a 2005 research and monitoring cruise. Weather prohibited the media cruise. Council staff coordinated the use of the *CT Randall* and crew into 2005 Port Day activities.

Recommendations 2007: Continue to coordinate efforts in conjunction with research and monitoring cruises dependent upon funding.

Status Update 2014: A subsequent media excursion was arranged in Aug 2009 in conjunction with a research mission aboard the R/V *Seward Johnson*. The media excursion was highly successful. Media representatives toured the vessel, witnessed the deployment of the *Johnson SeaLink* submersible, and visited the research labs. The

mission received significant local and national coverage, including NBC Nightly News (Kerry Sanders). See Appendix A for additional details.

Recommendations 2014: Continue to coordinate efforts in conjunction with research and monitoring cruises dependent on funding. Explore the use of FWC, CT Randall or other Law Enforcement assets if available.

Project 6: Develop TV documentaries working with environmental TV outlets (e.g., Discovery Channel, Public TV).

Status 2007: A documentary film producer accompanied the 2005 research and monitoring cruise. Film is currently under development.

Recommendations 2007: Continue activities as funding allows.

Status Update 2014: The film developed in conjunction with the 2005 research and monitoring cruise, “Fragile Forests of the Deep”, was produced by George Sibley and had limited distribution. Art Howard produced videos in conjunction with subsequent research cruises – Beneath the Blue Video (<http://vimeo.com/5929294>) and “Below the Surface” (<http://vimeo.com/6221700>). A “Coral Forests of the Deep” video was created in support of the Smithsonian’s Oceans Today Kiosk at the Sant Oceans Hall of the Natural History Museum. Kiosk content is available to Kiosks around the country and on the web (<http://oceantoday.noaa.gov/coralforestsofdeep/>)

Recommendations 2014: Reach out to film makers who had expressed interest in Oculina and Deep Water Corals in the past to see if they want to follow up with future research activities. The team should explore the feasibility of including an Oculina story in the “Chevrolet Conservation Minute” – a sponsored public service opportunity for disseminating FWC/conservation information.

Project 7: Work within existing program to deploy a real time data buoy in the Oculina Bank area to provide weather and sea-state information for boaters and fishermen and integrate information into web site.

Status 2007: No activity

Recommendations 2007: The team recommends removal of this project (real time data buoy) from Evaluation Plan as it is cost prohibitive. It was suggested that staff work with existing NOAA data buoy web site and investigate possibility of linking web sites with the Council’s current site.

Status Update 2014: Installing a buoy is cost prohibitive. However, in 2009, the Council partnered with the NOAA National Data Buoy Center to include direct links from the NDBC stations at Ft. Pierce (41114) and Cape Canaveral (20009) to the Council’s Web site. The direct link accesses regulations information for the OECA.

Recommendations 2014: Continue the partnership with the NOAA Data Buoy Center and update information as necessary.

Project 8: Assist with the continued development of an interpretive *Oculina* coral display at the Smithsonian Marine Station in Ft. Pierce, Florida.

Status 2007: Complete. The world's only *Oculina* interpretive exhibit was completed in July, 2006. CRCP funds paid for signage. The professionally created exhibit has been well received. Outreach materials, including rack cards, are being distributed through the Marine Station.

Recommendations 2007: Promote and utilize this exhibit more fully. Add a link from the Council's Web site to the Smithsonian Marine Station. Highlight article in newsletter about grand opening/5th year anniversary of Smithsonian Exhibit this year. Assure continued contact and representation of Smithsonian in future Evaluation Team efforts. Provide additional video footage for display and make teacher materials available on SMSFP Web site.

Status Update 2014: A link to the Smithsonian Marine Station has been added to the Council's new website. *Oculina* Bank Regulations rack cards continue to be distributed.

Recommendations 2014: The Smithsonian Ft. Pierce Marine Station receives between 35,000-38,000 visitors per year, and about 25% of those visitors are students. The Council and OET partners will work with the Smithsonian Marine Station to refresh the signage on the *Oculina* Exhibit and provide supporting photography, outreach materials, and information over the next 2 years. The Council will also incorporate information on the *Oculina* Bank in their MPA education modules.

**Objective 4:
Evaluation**

Project 1: Develop a survey tool to assess the effectiveness of the campaign and widely distribute before, during and after majority of activities underway.

Status 2007: 2004 survey developed in cooperation with FL Sea Grant had limited distribution.

Recommendations 2007: The current survey should be re-evaluated. Explore new sources for survey distribution through the Florida Fish and Wildlife Conservation Commission's Fisheries-Dependent Monitoring Program (check with Michelle Owen) or as a graduate student project (check with local colleges: FIT, FAU, BCC).

Status Update 2014: No activity

Recommendations 2014: Working with the Council's Information and Education Advisory Panel, assess the effectiveness of the survey approach and ask for

recommendations regarding tools to use for Evaluation. The Smithsonian Marine Station will explore options for utilizing the survey approach as part of a graduate studies project through Florida Atlantic University (FAU/HBOI).

Project 2: Continue to receive input from local constituents (through the database established from the June 2004 outreach meetings) regarding the development of materials and level of community awareness.

Status 2007: Ongoing

Recommendations 2007: The group recommends continued outreach efforts with local stakeholder groups on an annual basis. Also, staff should attend local fishing group meetings, including Cape Canaveral Charter Boat Captain’s Association, Florida Sportfishing Association, and others. Network with local educational institutions.

Status Update 2014: Ongoing

Recommendations 2014: Maintain and expand communications with constituent groups such as the Smithsonian Marine Station, area fishing clubs and organizations, the Oculina Bank financial institution, and other regional businesses and chambers of commerce. Participate in the annual Indian River Lagoon Science Festival co-sponsored by the Smithsonian Marine Station, HBOI, COSEE Florida and others to promote awareness of the Oculina Bank OECA and fishing regulations. The Council’s Information and Education Advisory Panel may be able to make recommendations here.

Appendix A. Overview of Oculina Outreach Activities

Activities 2004 - 2007

Partnering has played a major role in recent outreach efforts associated with the Oculina Bank Experimental Closed Area and the Oculina Habitat Area of Particular Concern. As part of a larger outreach initiative focusing on Deepwater Corals through NOAA's Coral Reef Conservation Program (CRCP), partners from Harbor Branch Oceanographic Institution, The South Atlantic Fishery Management Council, The Smithsonian, NASA, and NOAA-National Undersea Research Center, joined NOAA Fisheries-Southeast Fishery Science Center in implementing a broad outreach and education initiative, using the Oculina HAPC and Experimental Closed Area as a focus. Beginning in 2004, CRCP provided funding for a series of local constituent meetings that proved valuable to the development of the Outreach component of the Evaluation Plan for the Oculina Experimental Closed Area. Details are included in the Evaluation Plan.

In October 2005, the cooperative efforts capitalized on event-based outreach and education activities associated with the NOAA CRCP sponsored research expedition to the Oculina Bank. Details regarding these activities are listed below. Additional outreach and education activities were conducted in conjunction with a 2009 research cruise.

Partnerships through the CRCP project have increased awareness of and involvement with deep water coral resources of the Southeast region by producing teacher workshops, daily web-logs during the Oculina research and monitoring cruises, a port day for students and teachers, multi-media resources for news media and educators, posters and rack cards, and web-based resources. The Council's website was updated in 2013 and continues to feature an entire section on deepwater corals, including information specifically developed cooperatively with NOAA/NURC regarding *Oculina varicosa* and the Oculina Bank HAPC and Experimental Closed Area.

<http://www.safmc.net/managed-areas/oculina-bank>

Beginning in 2005, the Council produced printed copies of the *2005 Fishing Regulations for the U.S. South Atlantic* that included an entire page on regulatory information for the Oculina Bank HAPC and Experimental Closed Area. The popular regulations brochures were distributed to state and federal law enforcement agencies as well as to the general public, with 40,000 copies distributed in 2005, and updated versions distributed in 2007 and again in 2010. Due to frequent changes in regulations, the printed brochures are no longer produced. In 2009, the Council, in conjunction with the S.C. Sea Grant Consortium, developed and distributed 40,000 copies of a new regulations brochure, *Regulations for Deepwater MPAs in the South Atlantic* that also included information on the OECA. In 2013, the Council released a mobile application "App" as noted in the report. The App includes regulation information on managed areas, including the OECA. In addition, the *South Atlantic Update*, a quarterly publication of the Council, has featured numerous articles regarding the Oculina Bank. Copies of both the *Regulations for Deepwater MPAs for the South Atlantic* and the *South Atlantic Update* are available online at www.safmc.net.

Cooperative project accomplishments are highlighted below:

Teacher Workshops

August 2005: NOAA, the Council, and HBOI sponsored a one-day teacher workshop entitled “*Treasures of the Deep – Deep Water Corals of the South Atlantic and Oculina Bank: A Local Resource Workshop for Teachers.*” Twenty one secondary school educators from three counties along the central eastern coast of Florida attended the workshop held August 17, 2005. Participants learned about DSC ecosystems, the OECA and HAPC, research and monitoring efforts, resource management, and received educational materials for classroom use. Participants received new curriculum and multi-media educational resources, conducted activities related to oceanographic exploration, and gained further understanding of the importance of this unique deep water habitat.

September 2007: A Deepwater Coral Teacher Workshop was held September 15, 2007 in Ft. Pierce, FL. The NOAA-led workshop was held at HBOI and included an afternoon tour of the Smithsonian Marine Station, also located in Ft. Pierce. Nineteen teachers participated in the one-day workshop. The workshop included lectures, lesson plans and the field trip to the marine station. Supplemental educational materials were also distributed to workshop participants.

April 2008: A Deepwater Coral Teacher Workshop was held on April 19, 2008 at HBOI with a field trip to the Smithsonian Marine Station. The workshop, coordinated by the Council, included presentations by NOAA Fisheries, NOAA Office of Law Enforcement, NOAA Undersea Research Center at UNC-W, HBOI staff, and coral scientists. A total of 21 area teachers and educators attended the workshop. Participants received a workshop notebook that included lesson plans and additional resources, including DVDs from John Reed, Coral Reef Scientist, with HBOI that included background information on Oculina corals and research conducted within the OECA/HAPCs.

November 2009: A one-day teacher workshop was held November 7, 2009 at the North Carolina Museum of Natural Sciences. This workshop included lecture, lesson plan development, and laboratory components. Participants included NOAA, USGS, HBOI, UNCW, SAFMC, Temple University, MCBI, the North Carolina Museum of Natural Sciences, and the NOAA Teacher at Sea program. Twenty nine teachers from the region attended.

Port Day

On 10/12/05, prior to the departure of the NASA M/V *Liberty Star*, ~90 students from 3 Brevard County schools joined expedition scientists and crew at the Port for an educational event. Students rotated among 6 stations learning about *O. varicosa* and deep water reefs, the OHAPC, science and research, enforcement, and management.

Daily Web Logs

Through HBOI’s @Sea website (www.at-sea.org), researchers posted daily research journal entries, photographs, and data logs (e.g., ROV temperature, depth, and geographic

position) during the 2005 Expedition. Regional students posed questions for the scientists and crew, which were answered in the daily journal entries. Although the @Sea website is no longer active, copies of daily log postings from cruises were archived on the Council website and may be available at a later date.

Daily web logs were also generated during the 2009 cruise aboard the *RV Seward Johnson* and posted to the USGS DISCOVRE web site. The educator on board (Liz Baird, NCMNS) mediated a question/answer session with schools and the public.

Press Kits & News Releases

Media were invited to participate the 2005 Port Day and excursion activities and received press kits containing background information, high-resolution images, b-roll film footage, and other materials for developing news stories. The resulting media coverage included several print and on-line articles in local, regional, and national news outlets, including the Daytona Beach News Journal, Florida Today Newspaper, and ScienceDaily.com.

Media kits were also available for the 2009 media excursion held in conjunction with a research cruise on the *R/V Seaward Johnson*, resulting in several news stories (see additional details below).

Media Excursions

In October 2005, the FWC Law Enforcement vessel, the *C.T. Randall*, was scheduled to shuttle media and teachers to the *M/V Liberty Star* for a day-at-sea experience. A tropical depression caused unsafe sea conditions on both excursion days. Despite the weather issues, several news services picked up the story.

On August 12, 2009, two charter vessels (supported by the Council) brought invited guests to the *R/V Seward Johnson* during a research cruise within the OECA/HAPC. Representatives from NBC News, the Associated Press, Orlando Sentinel, Daytona Beach News Journal, Florida Times Union, the South Atlantic Fishery Management Council, FWC Law Enforcement, and NOAA Coral and Habitat Programs participated in the media excursion. Visitors were provided lunch, given a tour of the ship and *Johnson SeaLink* submersible, and were allowed access to scientists for interviews. They were provided video and still imagery for use in print articles, on-line media stories, and television. This event generated a substantial amount of generally positive media exposure (see below for a list of media generated by this activity).

Media Stories Generated from 2009 Media Day Activities

NBC Nightly News featured a story on 13 Aug. Later in the week, articles followed in newspapers all over the country. Although there was some misinterpretation by NBC News which created a minor controversy concerning fishery damage to habitats (this was later mitigated), the press was generally positive and well received. School participation was low because of the timing of the cruise (during summer). A Facebook presence was created for the cruise on Art Howard's Facebook page, and video and photos were posted there as well.

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Cruise video posted at <http://vimeo.com/6221700>.

NBC Nightly News:

<http://dailynightly.msnbc.msn.com/archive/2009/08/13/2030740.aspx>

Associated Press:

http://news.yahoo.com/s/ap/20090818/ap_on_sc/us_deep_sea_reefs;_ylt=Au.q8msq_y93dGedBssAGjOs0NUE;_ylu=X3oDMTFldXBucG0xBHBvcwMxMTgEc2VjA2FjY29yZGlvlb9zY2l1bmNIBHNSawNwcm90ZWNoaW9ucGw

ABC News: <http://abcnews.go.com/Technology/wireStory?id=8351163>

Washington Post: <http://www.washingtonpost.com/wp-dyn/content/article/2009/08/18/AR2009081800578.html>.

Cape Fear's Going Green: see <http://www.goinggreenpublications.com/currentissue.html>

G-Online - Sydney, New South Wales, Australia:

<<http://www.gmagazine.com.au/news/1516/scientists-explore-deep-sea-coral-reefs>>

Orlando Sentinel: <http://www.orlandosentinel.com/news/local/orl-coral-reefs-081309,0,1457862.story>

Daytona Beach News Journal: <http://www.news-journalonline.com/NewsJournalOnline/News/Headlines/frtHEAD01081909.htm>

Coastal Heritage (vol. 23, no. 3, publication of SC Sea Grant), UNCW Research magazine, and.

Atlantic Fishery Management Council Newsletter

Posters & Rack Cards

An educational poster and Fishing Regulations for the Oculina Bank rack cards were produced in July 2006 and provide information about the regulations and importance of the OHAPC/OECA. The posters and rack cards were distributed to a variety of recipients including partner organizations, bait and tackle shops, marinas, charter boat captains, fishers, restaurants, and educators including the Smithsonian Marine Station. The Council has reprinted the rack cards as needed and copies of both the rack card and poster are available from the Council's website at: <http://www.safmc.net/managed-areas/oculina-bank>.

Other Outreach Activities

A poster specific to outreach efforts for the OECA was presented at the 2005 International Deep Water Coral Symposium held in November 2005 in Miami, FL.

Council staff participated in the 2008 FWC Law Enforcement “Big Boat” enforcement vessel annual meeting in Ocala, FL and provided updated information on regulations and management measures within the OECA and Oculina Bank HAPCs.

A joint paper highlighting deepwater corals, including the OECA and HAPCs was presented at the 2008 Annual National Marine Educator’s Association meeting in Savannah, GA. The paper, “Shedding Light on Deepwater Coral Reefs” was presented jointly by staff from the Smithsonian Marine Station and the Council.

In 2011, a multi-agency Surveillance and Enforcement of Remote Maritime Areas Workshop was held in Orlando, FL. The workshop was part of a project looking at the application of surveillance technologies to protected areas in the South Atlantic region. A grant was awarded to the Marine Conservation Institute through the Coral Reef Conservation Program to review the surveillance and enforcement capacity for the SA Region. The workshop included Council staff, staff from both Gray’s Reef and the Florida Keys National Marine Sanctuary, state LE agencies, NOAA Office for Law Enforcement and USCG. The workshop included discussions on the OECA as well as the Deepwater MPAs in the region, and resulted in a list of outreach recommendations.