

**Ocean Observatories Initiative Facility Board (OOIFB) Meeting**  
**Via Web Conference (Zoom.gov)**  
**Wednesday & Thursday, May 13 & 14, 2020**  
**Start Time - 1:30 pm EDT each day**

***Meeting Minutes***

**Meeting Goals**

- 1) To be informed on the current status and future plans of the OOI 2.0 Program
- 2) To collect additional information needed to complete review of the Annual Work Plan by the end of May 2020.
- 3) Make significant progress on the OOI Science Document development

**Upcoming Deadlines** - Provide feedback on the OOI Program Year-3 Annual Work Plan by May 31, 2020

**Links to the Meeting Participant List and Presentations are Provided Below:**

1. [Meeting Participant List](#)
2. [OOI 2.0 PMO update and Community Engagement activities](#)
3. [Pioneer & Global Arrays Update](#)
4. [Endurance Array Update](#)
5. [Regional Cabled Array Update](#)
6. [OOI Data Delivery Manager Report](#)
7. [Pioneer and Global Arrays – Data Delivery and QA/QC Activities/Priorities](#)
8. [Endurance Array – Data Delivery and QA/QC Activities/Priorities](#)
9. [Regional Cabled Array – Data Delivery and QA/QC Activities/Priorities](#)
10. [OOI Annual Work Plan – Overview & Scoping Consideration](#)
11. [OOIFB Member Recognition – Jim O’Donnell](#)
12. [Presentation of the Larry P. Atkinson Travel Fellowship](#)
13. [Updates from NSF regarding education programs that apply to OOI data](#)
14. [OOI Education Programs led by Rutgers](#)
15. [OOIFB Action Items – Summary and Status](#)

**Meeting Action Items:**

There were no new OOIFB action items introduced during the meeting. Progress was made on addressing some of the open action items from previous years. The latest status of all action items is available at: <https://ooifb.org/action-items/>.

**Day 1, Wednesday, May 13<sup>th</sup>**

**Welcome, Introductions & Review agenda** – Kendra Daly opened Day 1 of the OOIFB meeting at 1:30 pm EDT on Wednesday, May 13, 2020. Kendra reviewed the agenda and there were no additions from the group. The meeting Participant List is included in [Appendix I](#).

**Update from NSF** – Lisa Clough provided the NSF update. She thanked everyone who has risen to the challenges created by the COVID-19 pandemic. NSF was well-poised for remote working because many

NSF employees had been regularly teleworking part-time for years. It has been encouraging and gratifying how science can keep moving forward despite challenges.

NSF has all of their funding now for Fiscal year 2020. It is a good year in terms of funding, but it is uncertain what FY2021 will bring. They were able to fund everything as planned in FY2020 and they are currently having discussions with facilities about changes that can be made as a result of the COVID-19 impacts. The stand down of the academic research fleet operations has been a major challenge. The flexibility of the community in dealing with ship schedule changes has been greatly appreciated. Lisa thanked UNOLS for having thoughtful discussions between scientists, ship operators, program officers in finding options for moving forward.

### **Updates from the OOI Program Office and MIOs**

**OOI 2.0 PMO update and Community Engagement activities-** John Trowbridge (WHOI) and Darlene Crew-Trist (WHOI) presented the report. Their slides are available in [Appendix II](#).

John began the report with the OOI 2.0 PMO Update. His report covered systems and activities, marine operations, and Cyberinfrastructure and data delivery (details are included in the slides). In Program Year 2 (PY2) there are eight major OOI cruises planned. The Fall 2019 Pioneer and Winter 2020 Southern Ocean cruises have been completed.

There have been a lot of activities in the areas of Cyberinfrastructure (CI) and data delivery. There continue operation of existing systems. Progress is being made on a new data discovery tool (Keryx) and there is continued QARTOD implementation. A new PI/subawrd will be selected for CI and an upgrade is planned for the CI hardware/network. A request for proposals (RFP) was released to the University of Washington (UW), Oregon State University (OSU), and Axiom. Proposals are due in June 2020. A review panel with external expertise and OOIFB representation is being formed. The target start date for a new CI sub-awardee is October 2020 with implementation in PY3. There will be parallel operation of the current and new CI system before shutdown of the existing system.

Darlene Crew-Trist continued the report with updates on community engagement activities (details are included in [Appendix II](#)).

Darlene started her position as the OOI community engagement manager on 1/14/20 and the Ocean Sciences Meeting (OSM) 2020 was happening a month later. It was a quick introduction to the OOI Program. Darlene enjoyed meeting the OOI team and the community at OSM. The OOI PIs and PMs were very supportive of the OOI activities that were planned at OSM which included hosting the OOI Booth, demos, and talks. New branding for OOI was put into place with support from Trapeze Communication from Canada. The OOI tagline at the Ocean Sciences Meeting was "Sustained Data to Power your Research." This message conveys that OOI is more than just infrastructure. At the OOI Booth, community members were encouraged to sign up for the OOI email list.

A focus of the community engagement efforts is to make OOI more visible. A new OOI brochure was updated with assistance by the PIs to bring everything current. Their goal is to have people within and outside the community know OOI and what they can do with the data. Regular posts on the web with timely and newsworthy, short and to the point messages are planned. They are also on social media platforms and are pleased to see the engagement with Tweets and friends on Facebook. Those metrics will be captured.

OOI launched the newsletter “Download” on May 1, 2020 and They have received requests to be added to the subscription list.

The new OOI website will launch on July 30, 2020 with a lot of effort going into updating content. It’s a clean and uncluttered design created by Trapeze, hopefully making it easier for the OOI user to get data. “Access Data” and “Help” links are visible on every web page. A mobile application will also be available.

A big effort has been made developing a new Data Discovery Tool. The new Data Discovery Tool has a landing page that will replace the data portal. There are three different ways to get to the data. There was a lot of input from the PIs on features for the discovery tool. The Data Discovery Tool will be tested this summer, and launched late Fall.

A community engagement activity is underway to name the Data Discovery Tool and many name entries have been submitted. The winner will receive an OOI baseball cap.

Darlene reported on OOI’s “Our Blue Planet by the Numbers.” The statistics were compiled by many PIs digging into their numbers. An informational graph will be in the WHOI magazine, *Oceanus*. “By the numbers” is designed to show the depth and breadth of OOI, for scientists, the public and policymakers.

Darlene concluded by saying that once all of the new features are in place, up-to-date and accessible, her focus will be on engaging the community.

John Trowbridge concluded the PMO report by discussing community engagement moving forward (see slide). He reported that the Community Engagement Plan, written early in Program Year 1 (PY1), has three broad goals.

- Optimize the OOI
- Build a robust user community
- Cultivate new users

Their challenge is to see the metrics on how OOI data is changing the way science and education is being done.

#### Discussion:

- Dax Soule - The metrics that are being tracked are impressive. What do you see as successful in terms of metrics? John Trowbridge – OOI has looked at the Ocean Networks Canada (ONC) metrics which has been operational for a longer period. OOI is also looking at funding awards using OOI data. The OOI program hasn’t set specific goals yet, but they will look into it as they move forward.

#### **Status for each OOI component and community engagement activities:**

Pioneer & Global Arrays - Al Plueddemann (WHOI) presented the status report for Coastal and Global Scale Nodes (CGSN). Slides are available in [Appendix III](#) and provide details on:

- CGSN Status -Pioneer
- CGSN Status -Irminger Sea
- CGSN Status -Station Papa
- CGSN Status - Southern Ocean
- Infrastructure & Instrumentation -Last 6 months
- Technical Developments & Reviews
- Summary COVID19 impacts

- Community Engagement

The impacts from COVID-19 on operations are shown in red text in the slides.

Pioneer:

- The surface moorings have been in good shape.
- All of the profiler moorings stopped collecting data in January due to a vendor firmware problem.
- 4 of the 5 gliders in the field are working as planned.
- AUV cruises are on hold due to COVID
- Glider data gaps are possible due to delays in refurbishment operations and delayed cruises.
- All moorings completed refurbishment and are ready for the Pioneer-14 deployment.
- A limited Pioneer-14 cruise is planned in June.

Irminger:

- The moorings are generally in good shape and are up to date on ingestions of data.
- There are 2 of 3 gliders in the field
- One glider was lost along with its data.
- Glider data gaps are possible due to delays in refurbishment operations and delayed cruises.
- Another glider failed but was recovered.
- Some refurbishment activities are delayed due to COVID-19
- They are optimistic for an Irminger-7 cruise in July 1-Aug 2, 2020.

Station Papa:

- There is a recommendation to cancel Papa-8 cruise on RV *Sikuliaq*. It is considered a high risk to personnel and with the lowest risk to infrastructure. Glider data gaps at Station Papa are expected to begin in the fall.

Southern Ocean:

- Final recovery of the Southern Ocean surface mooring was successfully completed.
- They are up to date on ingestion of data.
- There are no planned deployments going forward.

AI provided the status of the Infrastructure and Instrumentation for the last 6 months. A plot showed the 6-month status of the surface and profiler moorings.

Technical developments included:

- A new stretch hose termination that will decrease refurbishment costs.
- There is an alternate stretch hose manufacturer that should provide improved build quality.
- There have been telemetry service changes. They successfully swapped over from Fleet Broadband to commercial Iridium service for all deployed moorings on April 1<sup>st</sup>. This will result in significant savings.
- There are ongoing power systems review and upgrades.
- Instrument tech refresh activities are also being carried out.
- There was a glider review in February 2020 and they are waiting on the panel report and recommendations.

AI summarized the COVID-19 impacts. The Pioneer spring turn cruise will have reduced scope with only the profiler moorings turned. Planning is underway for a full Irminger annual turn. At Station Papa, the

recommendation is to cancel the annual turn. There will be cost savings from cruise cancellations, but there will also be cost increases. The remaining cruises will be more expensive.

The CGSN Community Engagement activities were summarized. There have been over 40 specific activities listed in the first two PY2 quarterly reports. There were engagement activities at Ocean Sciences including the OOI Booth and OOIFB Town Hall. There has been engagement with researchers, data distribution activities, talks, tours of OOI facilities, and social media. They took advice from the OOIFB and increased data distribution. Active Pioneer gliders are now available in the IOOS Glider DAC.

The next formal step in planning for the Pioneer relocation is an NSF sponsored workshop in Spring 2021. The CGSN is working towards TDP to support the workshop with a target of February 2021.

Al wrapped up his presentation with science highlights from CGSN. These are very exciting.

For full details about the CGSN report, refer to [Appendix III](#).

Endurance Array - Ed Dever presented the status report for the Endurance Array. His slides are available as [Appendix IV](#). The topics that he covered included:

- Endurance Array Turn Cruise 13 -1-19 July 2020
- Endurance Array Platform Status
- Endurance 12 Mooring Status
- Endurance Array Glider Coverage
- Endurance Array CSPP Deployment Summary
- Community Engagement

Al covered many of the same topics that Ed is dealing with at Endurance. Ed's group includes about 12 people.

The planned Spring 2020 Endurance cruise aboard R/V *Sikuliaq* (March 13 – April 15) was cancelled due to COVID-19. The moorings deployed during the Endurance 12 (October 2019) cruise continue to operate at reduced levels. The next Endurance Cruise is planned for 1-19 July aboard R/V *Thompson*. They are coordinating with the OOI RCA cruise, which will follow. There are some efficiencies being recognized, but there was some lost data in spring 2020. Normally they do 6-month system deployments, but because of the COVID-19 impacts there will be successive 9-month deployments.

Ed showed an illustration of the Endurance systems operations. Systems shown in green are working. There are no gliders in the water due to COVID. They had been planned for deployment in April. The profiler located on the shelf is not operating and is on the seafloor. Systems will start to be turned off as power runs low. The surface moorings are working.

The Endurance 12 Mooring status was shown as a matrix. The percent of operation for each platform is provided. Oregon offshore platform is fully operational at 100%, while the Oregon inshore platform has low operation.

Ed discussed the EA Glider coverage:

- Less than a full scope of gliders are deployed due to slow servicing, lack of a MoN, ship availability, winter storms, and COVID-19.
- 2 gliders leaked (one at 30 days and the other at 50 days due to aging components).
- 2 gliders beached in a January storm after the batteries ran out. One was lost and one was recovered.

- 2-3 glider deployments are planned for July 2020 pending scheduling of the Endurance 13 cruise.

The Endurance Array CSPP deployment summary was provided. Two CSPPs were profiling and fully depleted their batteries. They are currently parked at the Washington shelf and Oregon shelf.

Ed reviewed community engagement activities. There is a full list in the Q1 and Q2 reports. There was a strong presence at the 2020 Ocean Sciences Meeting with 5 talks/posters, 2 OOI town halls, and staffing at the OOI booth. Ed gave an early March seminar and workshop at OSU's Hatfield Marine Science Center.

Ed summarized the challenges that his group is currently dealing with:

- Glider servicing
- The pause in the Academic Research Fleet operations due to COVID-19
- COVID-19 work disruptions.

For full details about the Endurance report, refer to [Appendix IV](#).

Regional Cabled Array (RCA) - Deb Kelley (UW) presented the Regional Cabled Array report. Her slides are available as [Appendix V](#). Deb's report covered the following topics:

- RCA Instrument/Infrastructure Status
- Profiler Mooring Status
- RCA Maintenance Cruise Status TV380
- RCA Externally Funded Programs
- Representation for RCA Awards
- IRIS -Seismic and Pressure Data
- Collaborative Research
- RCA Engagement
- RCA Proposals and Science Highlights
- AWS-Cloud Hosted Interactive Oceans Data Portal

The RCA Instrument/Infrastructure Status is displayed in a plot for the period from May 2019 to April 2020. The green bars show the percent of systems that are operational. Systems on average were operational for 65% of the time, offline 25%, 3% were not deployed, and 7% failed.

There has been a lot of success with the Axial Base Deep Profiler. The shallow profilers have completed over 40,000 profiles since 2015.

Deb reported that there are evolving considerations for the RCA maintenance cruise due to COVID-19. The cruise is now scheduled for July 20 to August 30<sup>th</sup>, after the Endurance cruise. UW Labs have tightly controlled access that started in early May. The supply chain has affected. Cruise participants will be required to have a two week quarantine in Newport or Seattle. They have decided to not have VISIONS students participate in the cruise this year. The cruise will have four legs and some activities will be postponed until 2021.

Deb provided statistics shown in pie charts on RCA externally funded programs. External funded activities have supported adding infrastructure to RCA (57%), research (21%), field programs (9%), education (8%), and foundation (5%). The total external funding is >\$27M, not including ship time.

RCA has a diverse profile. In addition to NSF, funding has been provided by NASA, ONR, foundations, and Germany.

There have been 50 funded RCA awards with a total of 59 PIs and Co-PIs. Awardees have included representation from 28 institutions and 2 industries. IRIS has been a big success in terms of RCA data use. There have been over 600 repeat users with more than \$1M in NSF awards using RCA seismic data on IRIS.

There is large NSF-OCE funded collaborative research project that will utilize RCA data, illuminating the Cascadia plate boundary zone and accretionary wedge with a regional-scale ultra-long offset multi-channel seismic study. PIs include S. Carbotte (LDEO), P. Canales (WHOI), S. Han and G. Christeson (U. Texas, Austin). The study will utilize the R/V *Langseth* to collect deep penetration 2-D marine seismic reflection data that will be coordinated with concurrent marine and land deployments of seismometers. This is the first regional scale seismic imaging investigation along the entire length of the Cascadia Subduction Zone.

RCA Community Engagement activities have included talks, field programs, the DESSC 2019 Early Career Workshop, Proposals, etc. There is now a mobile tool for identifying whale sounds.

There is interest in RCA by other agencies. There is a NASA experiment, In Situ Analyses Divebot for Exobiology Research InVADER. This experiment is delayed due to COVID-19. BOEM might have a project added on to this. There is an IODP full proposal for studies at Axial Seamount and Juan de Fuca. This is a big effort that was just submitted in April. There is also an IOPD pre proposal to use cabled borehole observatories to investigate plate boundary mechanics of the Cascadia Subduction Zone - Oregon transects.

RCA data is being used for tsunami studies. One major project is the, "Toward a Universal Frequency of Occurrence Distribution for Tsunamis: Statistical analysis of a 32-year bottom pressure record at Axial Seamount."

Deb concluded her report with an update on the "AWS-Cloud Hosted Interactive oceans UW Educational Site." They are currently harvesting data from 140 instruments on RCA and Endurance. It has highly interactive visual capabilities. There are a variety of education programs using this.

For full details about the RCA, refer to [Appendix V](#).

Kendra thanked all of the presenters. Their range of activities is impressive and we recognize that they have been dealing with a lot of challenges due to COVID-19 impacts.

#### Discussion:

- Tim Crone - Is there a place where we can find a list of the individual OOI awards , both NSF awards and externally funded awards.
  - John Trowbridge - We have a list of NSF awards that can be provided.
  - Deb Kelley - Some of the awards are not public and some are subcontracts. Some of the agencies do not want to make their funding numbers public. We can show the pie chart but we can't show exact numbers.
  - Tim Crone - Project titles would be of interest.
  - Deb Kelley – The project titles can probably be shared.
- Tim Crone - Regarding the July 1<sup>st</sup> cruise, the odds of it taking place seem risky. What instruments will keep operating if the cruise can't take place.

- Ed Dever -UNOLS solicited input from all of the PIs who have upcoming cruises to assess the impacts on research and also to assess the readiness of the program to go to sea with COVID19 restraints in effect. The OOI cruises fall into Category 1, the highest priority cruises to accomplish in 2020 with COVID19 restraints. There are associated issues that need to be addressed regarding travel required by science party and crew; the ability of the science party and crew to quarantine; the availability of testing for COVID-19; the numbers of people on the ship; and the risk of people with pre- existing conditions to go on the cruise. UNOLS is currently developing a questionnaire which will go to the Marine Superintendents and scientists to judge the risk level for each cruise. If it's low risk it can go forward subject to restraints. UNOLS and NSF have been clear that all of the stakeholders must understand and be comfortable with the risks associated with the at-sea operations. The Marine Superintendent for R/V *Thompson*, considers the summer Endurance cruise as low risk. It's local (in and out of Newport, OR), with a limited science party, and only ten people on a ship.
- Deb Kelley - UNOLS and NSF have taken COVID-19 seriously, and they have consulted with outside medical experts. Their cruise isn't going too far offshore.

**Cyberinfrastructure (CI) and Data Delivery Updates from the OOI Program Office** - Jeff Glatstein, the OOI Data Delivery Manager, provided the CI and data delivery update. His slides are available as [Appendix VI](#). Topics covered included:

- PY2 work in progress:
  - Redmine ticket statistics
  - Highlighted Achievements
  - Data Discovery Took (Keryx)
  - Asset Meta Data Management (Roundabout)
- PY3 planned work highlights

Achievements to date have included:

- They reduced their Redmine tickets by about 20%.
- The ADCP data has been improved.
- Meta data cleanup has been communicated to the end users.

OOI is working with Axiom on the new Data Discovery Tool (Keryx). User and MIO interviews were completed and the roadmap of functionality has been approved by the PIs. The first data that they have staged is the science data. Axiom is testing the largest data sets into the new tool. They are determining parameters by priority to be loaded into the new tool. The Milestones for Keryx were reviewed. Version 1 is planned for public release on 1 October.

The Asset Metadata Management (Roundabout) interface is a PY2 deliverable. The interface can be populated from the current GitHub repository. Coding of an advanced search feature is in progress.

Large efforts and focus areas during PY2 have included:

- Quality
- Data center provider evaluation and recommendation
- Cassandra Architecture Review

Planned work highlights for PY3 were reviewed (see slide for details).

For full details about the CI and data delivery status and plans, refer to [Appendix VI](#).

**Current MIO Data and QA/QC Activities/Priorities:**



**Pioneer and Global Arrays** - Sheri White (WHOI) provided the presentation on Coastal and Global Scale Nodes (CGSN) and Data QA/QC. Her slides are available in [Appendix VII](#). Topics covered included:

- Data Team and Data Team Responsibilities
- Asset Management
- Metadata Review
- Data Ingestions/Availability
- Data QC
- Annotations
- Accomplishments and Path Forward

CGSN Data Team combined adds up to about 2 FTE; however, 12 different people are involved. Data Team responsibilities include asset metadata management, data ingestion/availability, data QC, and annotation.

During the asset management process all metadata is double checked through dedicated forks and branches in GitHub. They are using and developing automated processes for capturing calibration coefficients. During PY2, they have added or updated 947+ CSV files. They are documenting standard operating procedures and supporting development of Roundabout.

Metadata review was needed. For non-data impacting metadata, 40% of files had issues related to consistency of naming files. For data impacting metadata, 14% of calibration files showed errors. Currently all calibration files have been reviewed and implemented. All deployments have been reviewed with 60% implemented. Completion is planned in May 2020.

Data ingestion is all caught up and is at 100%. They are working on distributing data to the IOOS Glider DAC. They are also working with NDBC to distribute surface mooring data.

CGSN continues formal weekly operations review. They implemented the CGSN Incident Tracking document and are working on closing Redmine tickets. Sheri reviewed the Qartod tasks that are the responsibilities of the MIOs (see slide).

In PY2, CGSN has created or updated 146 operational annotations and 77 data annotations.

CGSN accomplishments and future plans are listed in the slides.

For full details about the CGSN data and activities, refer to [Appendix VII](#).

**Endurance Array** - Chris Wingard (OSU) presented the report on the Endurance Array (EA) Data QA/QC Activities. His slides are available as [Appendix VIII](#). Topics covered included:

- Data Team and Responsibilities
- Asset Management
- Data Ingestions/Availability
- Data QC
- Annotations/Communications
- Accomplishments and Path Forward

The Endurance Data Team includes Chris Wingard, Craig Risien, Russell Desiderio, Stuart Pearce, and many others. Data Team responsibilities include asset metadata management, data ingestion/availability, data QC, and annotation.

Under the asset management process, review of all critical metadata was completed at the end of 2019. They are continuing 2-person review of all updates and formalizing and tracking through GitHub pull request review process. 258 files were updated/added covering the last quarter of 2019 through present. They need to align documentation and Standard Operating Procedures (SOPs) with other MIOs. They are actively working with WHOI on requirements, goals, testing and development of Roundabout.

Data ingestion are current for all deployed and recently recovered systems. There are daily, operational reviews of OOI Net and OMS++ data availability with formal weekly assessments. All historical, full resolution EZ glider data is now available via the IOOS Glider DAC.

EA continues formal weekly operations reviews for data QC. In PY2, EA has created or updated 146 operational annotations. EA accomplishments and future plans are listed in the slides.

For full details about the EA data and activities, refer to [Appendix VIII](#).

**Regional Cabled Array** - Wendi Ruef (UW) presented the report on the Regional Cabled Array (RCA) Data QA/QC Activities. Her slides are available as [Appendix IX](#). The topics covered included:

- Data QA/QC Completed Activities
- Data QA/QC Ongoing Activities
- Data QA/QC HITL Workflow (DRAFT)
- Data Team Outreach
- Upcoming Priorities

RCA Data QA/QC completed activities include:

- Uploaded RCA Discrete Water Sample Data from 2015 - 2019 to Alfresco
- Assisted with cleanup and reorganization of OOI Raw Data Server
- User communication for audit of historical Critical Metadata
- Identification of pCO<sub>2</sub> blank interpolation and deployment mask issues
- Cross-MIO collaboration to implement 3-beam solution for partially disabled ADCPs
- Updated instrument drivers and parsers for PAR
- Developed workflow and initiated comprehensive data gap analysis for all RCA data

RCA Data QA/QC ongoing activities include:

- Initiated playback for RCA data gaps and purging of incorrect reference designators (see illustration in slides)
- Critical Metadata Audit, Phase 3
- Sensor Specific Deep Dives
- Development of Draft RCA-specific HITL data QA/QC Workflow. This includes instrument categorization for QC Checks based on user priority (see draft workflow chart)
- Assisting with design and implementation of QARTOD-based automated QC tests
- Cross-MIO collaboration to update OOI Documentation
- Compilation of Core Analytical Data and Metadata products
- Metadata entry and cruise documentation for VISIONS 2020 Cruise

- Monitoring data flow from instruments through network to OOINet and Raw Servers
- Active investigation/resolution of data-related Redmine Tickets, including help desk

RCA Data Team outreach activities have included:

- Participation in OOI meetings and Ocean Sciences 2020
- Compiled RCA feedback and requirements for PMO initiatives: Keryx, Trapeze, RDB
- Student engagement (Visions 2019 class, independent study student projects)

Upcoming priorities included:

- Finalization and implementation of RCA-specific HITL data QA/QC workflow
- Completion of critical metadata audit
- Sensor deep dives, as needed
- Completion of RCA historical data availability check, expansion of capabilities (parameter breadth, gap size tolerance)
- Asset management upload and verification for 2020 deployments
- Participation in RCA O&M Cruise (VISIONS 2020)

Discussion:

- Tim Crone - All of the MIOs mentioned GitHub. Are they coordinating their efforts?
  - Chris Wingard - All the repos have been moved to Ocean Observatories GitHub.
- Kendra Daly – What is the timeline for completing the Keryx work?
  - Jeff Glatstein - It's a multi-year project. There is enough work to keep us busy for three years and they will reprioritize as needed moving forward.
- Kendra Daly - Case Ocean Sciences is mentioned in the AWP. Can you explain what they do?
  - Jeff Glatstein - Case is operated by Jim Case and he has been involved with the program a long time. He will be working on integrating Trapeze with Keryx/Axiom.
- Kendra - What is the status of Trapeze and the new website?
  - Darlene Crew-Trist -The Trapeze contract will end when the website launches at the end of July.
- Sarah Gille - Deb mentioned that there would not be a VISIONS student cruise in 2020, but they will have an on-line course.
  - Reply: Yes, this is what Wendi was referring to in her slides.

### **Annual Work Plan (AWP):**

**NSF guidance on OOIFB review of the AWP** - Lisa Clough and Bob Houtman (NSF) reported that OOIFB's review of the AWP can follow the same process as last year. There are no suggested guidance changes. Immediate feedback is appreciated so that the OOI Program can consider it as they finalize the AWP for PY3. Long-term suggestions from the OOIFB regarding organization and format of future AWP are also welcome and can be provided later in the year. Feedback from both OOIFB and the DDCI Committee members is valuable. The OOI Program will submit their final PY3 AWP in August, so OOIFB feedback submitted to NSF by the end of May would be most useful.

**AWP Overview and Scoping Consideration** - John Trowbridge (WHOI) provided an overview of the OOI AWP for PY3 along with scoping considerations. His slides are available as [Appendix X](#). Topics covered included:

- Timeline
- Scope
- NSF Feedback on the April Draft AWP for PY3

- Challenges and Opportunities

OOI submitted their draft AWP for PY3 to NSF in mid-April. Some new scoping is anticipated in OOI's final AWP that will be submitted in August.

The April 2020 AWP draft scoping included:

- Continuing operation and management of Regional Cabled Array, Coastal Endurance and Pioneer Array, and Global Irminger and Papa Arrays.
- Continuing operation of existing CI and data delivery
- Community engagement

Anticipated new scope in the Aug 2020 AWP draft includes:

- Development of upgraded hardware and network under leadership of the new CI PI
- Testing of the new CI system and phase-out of old CI system
- Ongoing operation and management of new CI system

NSF provided some preliminary feedback to OOI regarding the April draft AWP. They indicated that the Community Engagement Section seems like a very long list of activities. NSF would like to see the activities grouped under goals with thought given to how the impact of these community engagements activities will be measured. NSF would like to see metrics on how OOI data used by the community is changing the way ocean science and education is being done.

John reported that the challenges that the OOI program is dealing with include a flat budget, COVID-19 impacts, and infrastructure.

**Summary of OOIFB and DDCI Committee Comments and Questions to the draft AWP** - Kendra Daly presented a preliminary summary of the OOIFB feedback to the draft PY3 AWP. The OOIFB compiled all of their feedback into one document. Kendra reviewed some of the major items of concern or interest. The OOIFB will have a web conference at the end of the month to finalize their feedback document. They will incorporate the DDCI Committee feedback into the FB document.

Tim Crone presented initial feedback from the DDCI Committee. The DDCI Committee had less than a week to review the AWP excerpts that pertained to data delivery, CI, and community engagement. They started a google doc to collect their feedback and will continue work on the document.

The feedback documents that Kendra and Tim presented were very preliminary and are not included as attachments to these minutes.

**Day-1 Wrap up and closing remarks** – Kendra thanked everyone for their participation.

***Day-1 of meeting was adjourned at 5:00 pm EDT.***

**Day 2, Thursday, May 14<sup>th</sup>, 1:30 pm EDT**

**Open Day-2 of the meeting & OOIFB Member Recognition** - Kendra Daly opened Day-2 of the meeting with recognition of two OOIFB Members.

**Recognition of Jim O'Donnell** – Kendra Daly reported that Jim O'Donnell has stepped down from the OOIFB. She presented a certificate to Jim and thanked him for his work with the OOIFB from May 2017 to April 2020. The Certificate can be seen in [Appendix XI](#). It will be mailed to Jim.

**Recognition of Larry Atkinson**- Lisa Clough (NSF) began by extending a big thank you to Larry Atkinson for all he has accomplished for the OOIFB as it's Inaugural Chair from May 2017 to November 2019. Lisa remarked that Larry's vision on how to move OOI forward with the community was critical, and looking forward was our guiding principle. The rule of Larry was to play the long game. Because of Larry Atkinson, our guiding principals were to encourage Oversight, Conduit, Collaboration, Equality and Evolution. He asked us to never lose sight of the people who make this happen.

Annette continued the presentation to Larry. Slides with images of Larry Atkinson are included in the slides that can be seen in [Appendix XII](#). Annette remarked that over the past five decades Larry has generously served the oceanographic community. He has continuously shared his time, knowledge, and leadership to support ocean initiatives.

Annette first met Larry when joining UNOLS in 1990. He was currently serving a term on the UNOLS Council. A few years after completing his Council term, a position opened on the UNOLS Fleet Improvement Committee, and recognizing Larry's extensive experience with ships, he was appointed to the Committee, where he served as a member from 1995-1997. His leadership qualities became very clear, and UNOLS was able to recruit Larry as the Fleet Improvement Committee Chair for two full terms from 1997 to 2003. He did an outstanding job and there were a lot of interesting adventures visiting new ships and construction projects (including a cruise on an icebreaker up the Chesapeake).

A few years later, the OOI program was ramping up and the arrays were being installed. NSF requested that a UNOLS committee be formed to represent the science community. The committee was named the Ocean Observatories Science Committee (OOSC) and again Larry was called on to be its Chair. He served in that position from 2010 until about 2016, overseeing the Committee through OOI's installation and commissioning. He worked hard during these years to try to engage the community and promote OOI. Two community workshops were held, each with about 90 participants. Larry had a particular focus on early career scientists and promoting their use of OOI data.

After OOI was fully installed, NSF formed the OOI Facility Board and yes, Larry was again asked to be the Chair. He served in this position from the Facility Board's inauguration in 2017 until last year. We have been very fortunate to have had Larry as our leader.

Larry is the person you can go to with difficult tasks. His leadership qualities are truly outstanding. He has always promoted inclusiveness, he advocates for all scientists – particularly early career scientists, he is a visionary, and always takes a no-nonsense approach to finding solutions. He introduced lightning talks to our OOIFB town halls, so that we could hear directly from the science users of OOI.

We always appreciated the way Larry would open the Facility Board meetings, by saying that “we aren't here to look back. Let's always look forward so that we can suggest improvements and new initiatives.” Larry wanted everyone to have a voice, so he closed each meeting with, “Round the Table.” This tradition has lived on and we continue to close our meetings with a “Round the Table.”

So in recognizing Larry as the inaugural Chair of the OOI Facility Board, we wanted to do something that would embrace his leadership initiatives and qualities. With this in mind:

**The Ocean Observatories Initiative Facility Board**

Establishes the:

**Larry P. Atkinson Travel Fellowship for Students and Early Career Scientists**

In recognition of

**Larry P. Atkinson's**

dedicated service as the **Inaugural Chair** of the **Ocean Observatories Initiative Facility Board**  
**May 2017 to November 2019**

*This Fellowship is established on: May 14, 2020*

An image of the Fellowship plaque is included in the slides. The plaque will be mailed to Larry.

The Larry P. Atkinson Travel Fellowship will help early career scientists and graduate students who are actively involved in research and/or education programs using Ocean Observatories Initiative (OOI) data. The Fellowship provides travel support for the recipient to attend and present a paper or poster on research or education using OOI data at a national or international conference or workshop. The Fellowship will be awarded annually.

The OOI Facility Board (OOIFB) along with representatives of the National Science Foundation founded the Larry P. Atkinson Travel Fellowship in recognition of his outstanding leadership as the Inaugural Chair of the OOIFB.

We had hoped to be able to present this award at a nice dinner venue with perhaps a fine glass of wine in hand. Unfortunately, that isn't possible due to COVID-19 social distancing.

Everyone on the call raised his/her glass (via Zoom) and thanked Larry for his superb leadership as the inaugural chair of the OOIFB!

**AWP Discussion Session** - Kendra Daly continued the discussion of the AWP and what is needed to complete the OOIFB response.

Discussion:

- John Trowbridge – John greatly appreciates all of the input that the OOIFB is providing regarding the AWP.
- Lisa Clough - In general, there are fewer comments from OOIFB than in the past. There were a couple specific comments from the DDCI Committee that would be good to discuss.
  - Tim Crone - It would be good to have some sort of mapping between the DDCI report recommendations and the AWP PY3 activities.
- Tim Crone – Recognizing that budget numbers have been discussed in the past, he wants to reiterate that it is very difficult to gage the level of effort in the AWP without seeing the budget. Are there ways the cost information could be explained without the cost being actually shared? There is a lot activity happening on data delivery and CI, but it's hard to tell how they rank in terms of the prioritization and the amount of focus that will be placed on things. There's discussion about upgrades to the old OOInet, but without knowing the costs of those activities vs. the cost of the new Data Discovery tool, we don't know where they'll be spending their time. We don't know where the program is devoting their time. Are there any creative ideas to convey OOI's level of focus?

- Bob Houtman – He can't think of a way to show this. NSF will discuss this further with John and the team to determine if there are any mechanisms that can create more visibility into the prioritization but without getting into the budget details.
- Dax Soule - He asked about the availability of the OOI quarterly reports. Being new to the committee, he would find these helpful.
  - Lisa Clough – It has been their intention to send the science highlights from the reports. There are budget numbers in the reports that will need to be redacted.

Next steps for finalizing the OOIFB feedback document were discussed:

- Kendra Daly - She and Annette will clean up the redundancies and send it back to the OOIFB for review. Then we'll have another conversation before sending the final version to NSF.
- Lisa Clough - It's useful to have the level of detail that is currently provided with the Section number and page references. It would also be helpful for OOIFB to prioritize their recommendations by placing their top five recommendations in the beginning of their response to NSF.

### **Introduction and Updates from Other Agencies:**

**NASA** - Laura Lorenzoni was unable to join the meeting. She sent an email indicating that she doesn't have an update at this time, but might have a report for the fall meeting. She noted that NASA's EXPORTS program has been pushed back a year.

**BOEM** - Guillermo Auad reported that he doesn't have any updates to the report that he provided to the OOIFB last November (it is posted with the November OOIFB Minutes). BOEM would like to remain engaged with OOI and there could be opportunities for their organization in the future. They are interested in the discussions regarding the possible relocation of the Pioneer Array. BOEM recently signed an inter-agency agreement with NSF to work on a few projects. This provides confirmation of their commitment to work with NSF.

**OOI Science Document – OOI: Exciting Science Opportunities using OOI data** - Kendra Daly opened the discussion on the OOI Science Document. The last science plan document (*Closer Look*) was written 2007. OOIFB will work to update the 2007 document. The update will have a five-year outlook.

An outline for the updated Science Plan has been drafted and is in the OOIFB Google drive. It is loosely based on past OOI Science Plan outlines. Kendra reviewed the draft outline and comments were incorporated directly into the Google Doc outline during the discussion. Rather than starting from scratch, text from the previous science plan will be used as appropriate. We need to determine what is still relevant and then update what needs to be made current.

Everyone agreed that the high-level science themes are still relevant for today. These same themes have shown up on workshop documents and are likely to be current for a very long time. The science questions can be updated, as there may be new questions since the 2007 document was published. Sidebars will accompany the science questions and will each provide a one-page summary of examples of science that uses the OOI facility.

The network design will need to be updated and assistance from the PMO and IOs will be needed. OOI's contribution to new technologies and platforms has been significant and should be highlighted in the document. Cloud technology has been recommended and perhaps this can be added as a future initiative. Sections on OOI educational opportunities and community engagement can be added. A section on partnerships could also be included to reflect activities involving international collaborations and interagency coordination.

### Discussion:

- Lisa Clough – Should there be a section on outside funding in terms of numbers and PIs across the program? This would be for projects funded for OOI, but outside of core OOI funding.
  - Kendra Daly - That would be a good idea and could go under interagency opportunities.
- Al Plueddemann – This is a good outline. For the network design update, there is a paper from *Frontiers* 2019 journal that updates the infrastructure for 2.0.
  - Kendra Daly – She went through a lot of material including the *Oceanography* Special Edition, many OOI publications, and the OOI website. She realized that the OOI Program would be best able to update the network design. OOIFB has made a request through NSF that OOI program management and the IOs revise the network design text.
- Ed Dever - What is the intended lifetime for this document and is there a way to refresh it? Do we want to design it so that future updates will be easy? Sidebars will help make the document modular.
  - Kendra Daly - Our charge was for a five year Plan. Sidebars could be switched out and edited to make it more current. We could update interagency and international collaborations and the network design. We will keep this in mind as the report is designed.
  - Ed Dever - There will be significant updates in the next year. WHOI has the RFP for a new cyberinfrastructure subaward, the Trapeze website will be released in July, and the Keryx data portal is coming soon. Some of these changes will be in place before this Plan is drafted, but more things will need updating in the next few years.
- Kendra Daly - We have been asked to complete the Science Plan by Fall 2020, so we would like to get most of the draft completed this summer.
- Deb Kelley - A network of Early Career folks who use OOI data have engaged with each other. This came out of a workshop a couple years ago.
  - Kendra Daly – It isn't clear if this should be in the science plan. These might fit better on the OOI website, not in a science plan.
  - Sarah Gille - To follow on this point, a sidebar authored by an Early Career scientist would be a good addition.
  - Dax Soule - This document could reflect the concept that OOI is a program that is intended to last for a long time and engaging the Early Career scientists is a fundamental way we ensure success in the long term. OOI is transformative in its ability to get science data to educational institutions. This is important to highlight.
- Darlene Crew-Trist – This document could be a living digital document. There could be links that bring you to additional information on topics. She volunteers her services to help.
- Deb Kelley - Who is the audience for this document? Is it the National Science Board (NSB)? Does that help guide the messaging in the document?
  - Lisa Clough - It does. Large NSF facilities are supported with five-year awards, with the possibility of renewal for an additional five years. There is generally a re-compete after ten years. Although we are only in year two of OOI's 2.0 operations, we need to start thinking about the renewal process. NSF will need to go before the NSB as part of the process. This science plan audience will be people who are interested in NSF funded facilities on a larger scale. They want to better understand the program.
  - Deb Kelley - Do we emphasize the OOI successes versus looking ahead to the future?
  - Kendra Daly - We should emphasize our success with looking to the future.
  - Bob Houtman – Some things to consider while drafting the document: What difference has the OOI program made? What does the future look like? Should we be continuing to be investing? Is OOI performing as it was advertised, “a transformational approach for the oceans community?” Has the community embraced OOI?
- Kendra Daly - Is the outline going in the right direction?



- Bob Houtman – Yes, from his perspective.
- Lisa Clough - She agreed and is encouraged we are moving in the right direction.
- Brian Glazer – He offered to assist with the Innovative Technologies section.
- Al Plueddemann - In Section 7, he would love to get the OOI technicians and engineers involved so that they can show off some of their technologies. If OOIFB came up with a broad category (i.e. the profilers), the IOs could curate and solicit information from their teams.
  - Kendra Daly - Showing this type of work with improving the quality control of sensors should be highlighted. All of this is really important and any examples would be great to add in here.
- Bob Houtman - Highlight the best practices from OOI and the international community.
  - Kendra Daly - Another section on best practices could be added.
- Lisa Clough – Perhaps there could be *EOS* articles written in conjunction with this. This will be a document owned by the OOIFB that can be posted on your website. A publication that has powerful messages to convey to the community would also be valuable. Other avenues to get the word out could be considered.
- Bob Houtman - It's also an opportunity to take a look at how the IODP program and facility board of IODP is moving ahead with their new science plan. It might be worth a look.
- Jaime Allen – IODP is in a big transition. COVID-19 has made it challenging for them to schedule a meeting. Some in-person meetings had been planned, but now they will need to be virtual. IODP is using Zoom to do peer reviews in association with Slack for sharing documents. It has been successful. Most of what they do in these meetings, we can do on Zoom, The *Joides Resolution* Facility Board (JRFB) choose what gets scheduled, they make policy decisions, and they recommend to NSF a program plan. NSF does the fiduciary approval and sets the budget. The IODP science plan was written by close to 600 people from the international community who made contributions and then was finalized by a writing group of about 30 people. Their Plan includes a new road map that's a workplan with a timeframe of 2024-2050. A draft document was delivered to NSF this summer and it has taken 14 months from start to finish. They take a long-range view and try to review it every five years by an international group.
- Kendra Daly - OOI had two (300 people) workshops and those went into the original science plan.
- Jamie Allen – He is really impressed how the OOI facility is being used and the amount of progress in terms of the utilization of it.

#### Sidebars Discussion:

- Kendra Daly - Sidebars are intended to provide a short summary. They are typically one page, 500-1000 words, including references and a figure. Kendra went through a lot of publications looking at who might be potential authors for these sidebar topics. There was focus on mid-career and early career scientists who have already written on these topics. Suggestions are in the Google drive. The author suggestions were reviewed and discussed. Comments were incorporated into the Google Doc outline.
- Al Plueddemann suggested adding shelf/slope interaction to the sidebar topic list. We can reach out to try to get some sidebar authors who are not from WHOI.
- Kendra Daly - We need to start contacting potential authors as soon as possible and request the sidebar by the end of July. OOIFB members were asked to make suggestions as soon as possible.

#### **OOI Education Programs:**

**Updates from NSF regarding education programs that apply OOI data** - Lisa Rom presented the report for NSF's OOI Education Activities. Her slides are available in [Appendix XIII](#).

NSF has funded a variety of OOI workshops since 2016:

- OOI Teaching with Data Workshops 2016-2017
- Early Career Data Workshops 2018
- OOI Ocean Data Development Workshops 2019

The OOI 1.5 Education Team members and organizations are shown in Lisa's slides along with their education activities.

NSF issued a "Dear Colleague Letter" on February 18, 2020. They are seeking proposals for conferences and other training events for OOI. The proposed activities should encourage the wider use of the OOI data by supporting conferences to introduce researchers and educators to available data and community tools.

The move to on-line teaching due to COVID-19 is offering an unexpected opportunity to use OOI data in the classroom. During the summer 2020, virtual OCE Research Experiences for Undergraduates (REU) were created that focused on OOI data. NSF is interested in supporting more virtual REU opportunities in the future and improving undergraduate STEM education.

**OOI Education Programs led by Rutgers** - Janice McDonnell and Sage Lichtenwalner (Rutgers) presented the OOI Education Programs led by Rutgers. Their slides are available as [Appendix XIV](#).

Janice began the report on the OOI Data Explorations/Data Labs. Team members are shown in the slides. The OOI Data Labs Project key goals are to build a Community of Practice (CoP) of undergraduate educators interested in using OOI data with their students and to make OOI data more accessible to educators and students.

They are building a CoP using OOI Data in Teaching. OOI data is integrated into introductory oceanography courses. Data Labs (DLs) are structured in learning science theory. The project timeline was displayed. Success of the DLs is being evaluated through surveys and interviews.

Sage continued the presentation. The Ocean Data Labs community is growing (see map in slides). They have held Development Workshops on Interactive Widgets:

- 18 Pilot Data Explorations (from 2016-2017)
- 13 New Data Explorations from 2019 Workshops

Details about the workshop focus areas, educators, and plots generated are included in the slides.

There was a Development Workshop focused on Python/Matlab/R Notebooks. The notebooks can be used for tutorials, exercises/practice (in-class or out), guided discovery, and self-directed inquiry (aka research projects). There are 31 example OOI Data Processing Notebooks to date (see <https://github.com/ooi-data-lab/data-lab-workshops>). Four "Data Labs Fellows" are working on educational notebooks.

Janice continued the presentation and provided details about their Fellowship Program. Seven fellows are IRB approved to test Data Labs in their classrooms. Four fellows are working on Python Notebooks.

The Rutgers group has worked to evaluate their Community of Practice by conducting four case studies (see slides for details). Of the 116 active participants in the Data Lab (DL) workshops:

- 11 delivered OOI DL webinars
- 11 became DL Fellows
- 11 are designing and building the DL Notebook
- 8 became peer presenters at mini workshops

- 10 presented on OOI at Ocean Sciences Meeting in San Diego, CA
- 13 volunteered to be an OOI Virtual REU mentor

Janice closed with some notable Professor quotes (see slides).

#### Discussion:

- Sarah Gille - What will be the best practices for virtual REU programs? What is likely to work and what are essential components?
  - Janice McDonnell - We've started building a two-week professional development program. They will work with a curated set of data. In the following six weeks, the students will get a project of their own to be self-directed using OOI under a controlled environment. Janice offered to share their session's schedule.
- Tim Crone - Janice and Sage have been actively involved in teaching Early Career scientists and others how to use the data portal. A new OOI Data Discovery tool is in development. Will they be involved in the evaluation of that tool?
  - Janice McDonnell - Their grant ends this summer, so the timing probably doesn't match with the launch of the Tool.
  - Sage Lichtenwalner - There is nothing formally proposed. They saw tidbits of the portal a few weeks ago, but haven't been involved in discussions. They are moving more toward the Python and developing more examples. One of the biggest challenges is getting the data and putting that data into context. We're not committed to anything else beyond what we are doing now.
  - Tim Crone - The OOI program perhaps could consider you in the beta test phase since you work so closely with the data and users.
- Kendra Daly praised Janice and Sage for their presentation and the great work they are doing.

#### **OOIFB Other Business:**

**OOIFB action items** – The OOIFB action item list and status were provided to the Facility Board in advance of the meeting. Annette DeSilva provided a summary of the action items. Her slides are available in [Appendix XV](#).

#### Action Item status summary:

- 2017 – 8 Actions: 7 Complete, 1 Tabled, 1 in progress
- 2018 – 12 Actions: 9 Complete, 2 Tabled, 1 in progress
- 2019 – 8 Actions: 6 Complete, 1 in-progress/paused, 1 postponed
- 2020 – 4 Actions: All in progress

Open action items from 2017, 2018, 2019, and 2020 include:

#### 2017:

- OOIFB- 2017-8 – Identify strategies for collecting OOI User Metrics.
  - In 2017 it was suggested that we identify strategies for collecting OOI metrics.
  - In all of our meetings we've had a discussion on metrics.

#### 2018:

- OOIFB-2018-9 – Draft a Science Plan/White Paper.
  - We are on a good path to make progress on this and complete it by fall.

#### 2019:

- OOIFB-2019-5: Provide recommendations regarding OOI community engagement needs. [Note: The original action item was to form an OOIFB task force on science outreach/engagement. However, it was decided to put this on hold until the OOI community engagement manager was in place for a few months. The Action Item was revised to instead provide recommendations for OOI community engagement needs.]
  - Three recommendations were suggested for OOI Community Engagement:
    - Hold a community workshop (this became action OOIFB-2019-7)
    - Provide feedback to OOI regarding plans for the booth at the 2020 Ocean Science Meeting
    - Revisit the need to form a task group in about 6 months.
- OOIFB-2019-7 (Postponed): Host a Community Workshop focused on the North East Pacific OOI Arrays:
  - The OOI Community Workshop was planned for June 2020. The program was developed and presenters identified. The workshop was postponed due to COVID-19 impacts.
  - Once there is a clearer path forward regarding social distancing we can revisit this and reschedule it.

#### 2020:

- OOIFB-2020-1 – Provide future activities/tasks for the DDCI Committee
- OOIFB-2020-2 – Re-evaluate the name of the DDCI Committee.
- OOIFB-2020-3 – Review and provide input to the 2020 OOI Annual Work Plan (AWP) for Program Year 3. NSF requests OOIFB's feedback by May 31, 2020.
- OOIFB-2020-4 – Make a vacancy appointment for the remainder of an unexpired term of an OOIFB position.

#### Discussion:

- Kendra Daly - Regarding the user metrics action item from 2017, what is NSF's feeling about the user metrics? Should the Facility Board continue these discussions or should the OOI Program take this up?
  - Lisa Clough – The FB might want to hear from the OOI Program regarding the status of user metrics. Some of this information is contained in the Quarterly Reports. At a future meeting, the FB could ask the OOI Program for a presentation on user metrics. We can look at the ONC metrics and suggest additional metrics that the OOI facility can incorporate into what they are doing.
  - Kendra Daly -That is something we could work on next fall after the science plan is done.

#### **OOIFB Fall Meeting and Web Conferences:**

May Web Conference - Annette DeSilva reported that the OOIFB monthly web conference will be Wednesday, May 27 at 2:30 pm EDT.

Fall OOIFB Meeting - Lisa Clough reported that the NSF building will be closed to in-person meetings through at least the end of September. We will revisit scheduling the Fall meeting in the coming months.

**OOIFB Membership** – The OOIFB had a discussion on Membership and terms that are expiring.

Expiring Terms: The first terms for Sarah Gille and Brian Glazer are ending at the end of this month. Both are eligible for a second term.

Discussion:

- Sarah Gille reported that she is available to continue one more year on the FB, but not a three-year term. She is willing to do whatever the committee feels is best.
- Kendra Daly - We'd appreciate it if Sarah stays for one more year and see us through the revised science plan, that would be helpful. Anyone can resign at any time.
- Sarah Gille agreed to be re-appointment to begin a second term.
- Brian Glazer agreed to be reappointed for a second term.
- Kendra Daly - Thank you to both.

Open OOIFB Position – A replacement is needed to fill the remainder of Jim O'Donnell position. A motion was made to approve John Wilkins (Rutgers U) as a new member of the OOIFB. All voting members were accounted for, and the vote was unanimous. Kendra will contact John and invite him to be a part of the OOIFB Committee. She will also contact him about writing a sidebar.

**Round the Table:**

- Larry Atkinson - Thank you all for your support and he is happy seeing the OOI progress especially on the education side. Thank you for setting up the fellowship, he never imagined something like that. Helping young people get to meetings is important.
- Brian Glazer - Great meeting, he has done a few of these, remotely, and was glad to see it ran smoothly for everyone. He has some thoughts regarding the AWP and will share those. He heard about Trapeze during this meeting, but doesn't know how it fits in with the AWP.
  - Kendra Daly – The AWP compiled comments will be posted on the Google drive, so additional comments can be added.
  - Lisa Clough - The plan is for Trapeze to complete the OOI website redesign by the end of July. They will be complete before the start of the AWP PY3.
- Ruoying He - He has no other comments, thank you Kendra and Annette for organizing this meeting.
- Sarah Gille - Thank you to Larry for starting OOIFB and Kendra and Annette for the last two days. One thought we should think about long term is how OOI fits into the broader picture (OceansObs19, Global Ocean Observing System, etc.).
- Tim Crone - Thanks to Kendra and Annette for organizing and it was so nice to have Larry on the call.
- Deb Kelley – There are some new technologies of interest that could be applicable to OOI. She'll put a note in the Google doc on this. Great to see Larry.

Kendra Daly –Thanked everyone for making the meeting a success. The Committee will be hearing from Kendra and Annette about the AWP and the next teleconference on May 27, Wednesday at 2:30 pm.

**Adjourn** - Kendra Daly adjourned the meeting at 1635.