**2020-2021 JPSS Proving Ground Risk Reduction Annual Plan**

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| **2020-2021 Project Information** |

**Project Title:** Optimization of phytoplankton functional type algorithms for VIIRS ocean color data in the Northeast U.S. Continental Shelf Ecosystem

**Principal Investigator:***Kimberly Hyde*

**Team Members:** Colleen Mouw (University of Rhode Island), Ryan Morse (NEFSC Affiliate)

**Organization:** Northeast Fisheries Science Center; University of Rhode Island

**Stakeholders/Users:** NESDIS-STAR, NOAA Fisheries

**User Engagement:** NOAA Ocean Color Coordinating Group updates, Northeast Fisheries Science Center State of the Ecosystem Report, University of Rhode Island Graduate School of Oceanography Student Seminar and Master’s Thesis, Peer-reviewed journal publications

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| **2020-2021 Project Summary** |

This project aims to optimize remote sensing phytoplankton functional type/size class (PFT/PSC) algorithms for the Northeast U.S. Continental Shelf for applications in fisheries management and ecosystem modeling. We are collecting *in situ* optical and pigment data on six Ecosystem Monitoring cruises operated by the Northeast Fisheries Science Center. All available *in situ* data will then be used to validate the ocean color data (e.g. RRS and IOP products) from VIIRS and other sensors and evaluate several abundance and absorption based PFT/PSC algorithms.

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| |  | | --- | | **2020-2021 Annual Milestones** | |

*2019 - 2020 plan, schedule and milestones should build upon project proposals and allocated budget. This plan serves as a project management tool allowing PI’s to track and meet goals. Tasks are activities that need to be accomplished within a defined period of time. Tasks are broken down into milestones with defined start and end dates. A milestone is an action or event marking a significant change or stage in development.  The level of granularity is defined by individual PI. This table should be used for future quarterly reports.*

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| **Milestone** | **Planned Completion Date**  *( part of annual plan and should not change from quarter to quarter)* | **Actual Completion** *(To be Filled out for Quarterly reports)* | **Status** *(To be Filled out for Quarterly reports)* |
| **Task 1: *Field Sampling*** | | | |
| Field Sampling 6 | May 27 – June 17, 2020 |  |  |
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| **Task 2: Laboratory Sample Analyses** | | | |
| URI Field Data Analyses 3 | January 2020 |  |  |
| URI Field Data Analyses 4 | March 2020 |  |  |
| URI Field Data Analyses 5 | June 2020 |  |  |
| URI Field Data Analyses 6 | October 2020 |  |  |
| **Task 3: Data Analysis** | | | |
| Satellite data processing | Continuous throughout the project |  |  |
| In situ data compilation | October 2020 |  |  |
| Preliminary algorithm validation | January 2020 |  |  |
| Algorithm optimization | October 2020 |  |  |
| Time series analysis | May 2021 |  |  |
| Modeling efforts | January 2021 |  |  |
| Publication writing | June 2021 |  |  |

*Add rows as needed for all annual tasks and milestones. New milestones which may arise should be added at the end of the table as needed.*

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| **Risks, Dependencies and Issues** |

*This section should include no more than the top five risks and dependencies.  Risks are the bad things that might happen. Dependencies on other projects and resources are considered risks.*

**Risk or Dependency 1:** *(State risk or issue and impact. This should be the same as in the annual plan)*

##### Risk - Due to COVID’19 all NEFSC project participants are not allowed in the laboratory and must telework. At this time the URI group has access to their laboratories, but sample analyses will be delayed if their access is restricted.

##### 

**Mitigation Plan:** *(This includes options and actions to reduce risks/threats. For issues, this includes plans to address impacts.)*

For everyone’s health and safety, we will abide by all recommendations and facility restrictions. Once the situation is over, we will evaluate our current progress and update the time line accordingly.

**Status:** *Use the following table for quarterly reports. Mark appropriate box with an X.*

|  |  |  |  |
| --- | --- | --- | --- |
| **No Change/Open** | **Increasing** | **Decreasing** | **Closed** |
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**Risk or Dependency 2:** *(State risk or issue and impact. This should be the same as in the annual plan)*

Risk - The current status of at-sea operations are unknown. There is a chance the May/June cruise will be postponed or canceled.

**Mitigation Plan:** *(This includes options and actions to reduce risks/threats. For issues, this includes plans to address impacts.)*

If the cruise is postponed a few weeks, we are able to participate as long as the ship departs before July. If the cruise is canceled, we may need to remove the sixth cruise from our task list because the next scheduled Ecosystem Monitoring cruise will not be until November 2020 and it would not be possible to complete the remaining tasks before the end of the project.

**Status:** *Use the following table for quarterly reports. Mark appropriate box with an X.*

|  |  |  |  |
| --- | --- | --- | --- |
| **No Change/Open** | **Increasing** | **Decreasing** | **Closed** |
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**Risk or Dependency 3:** *(State risk or issue and impact. This should be the same as in the annual plan)*

Dependency - The staff from NESDIS who collect the in-water radiometry and particulate absorption samples are unable to participate in the May/June cruise.

**Mitigation Plan:** *(This includes options and actions to reduce risks/threats. For issues, this includes plans to address impacts.)*

Dr. Mouw’s staff will borrow an instrument from our colleagues and will collect in-water radiometry and the particle absorption samples, which will be sent to NESDIS to be analyzed.

**Status:** *Use the following table for quarterly reports. Mark appropriate box with an X.*

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| --- | --- | --- | --- |
| **No Change/Open** | **Increasing** | **Decreasing** | **Closed** |
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**Risk or Dependency 4:** *(State risk or issue and impact. This should be the same as in the annual plan)*

Dependency/Risk – There have been delays getting complimentary data from project partners NESDIS and WHOI.

**Mitigation Plan:** *(This includes options and actions to reduce risks/threats. For issues, this includes plans to address impacts.)*

##### We regularly contact with both NESDIS and WHOI to inquire on the status of their data.

**Status:** *Use the following table for quarterly reports. Mark appropriate box with an X.*

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| --- | --- | --- | --- |
| **No Change/Open** | **Increasing** | **Decreasing** | **Closed** |
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| **Financial Information** |

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| **Funding Vehicle** | **Obligating Organization** | **Planned Obligation Month** | **Period of Performance** | **Funding Amount** |
| *List the name/number of the contract, grant, MOU, or other vehicle (e.g., CIMSS, Protech, etc) where the funding will be obligated. Federal equipment should be specified, if applicable.* |  |  |  |  |
| NEFSC (org code 30-21) | NEFSC | March (tentative) | June 2020-May 2021 | $101,419 |
| Sea Grant (org code 50-42) to URI | Sea Grant | March (tentative) | June 2020-May 2021 | $80,419 |
|  |  | Total FY20 Funding |  | $181,838 |

**Financial POC:** *List name, email address and phone number of POC that should receive the accounting information, must be a NOAA staff member*

NEFSC – Ann Weber, [ann.e.webber@noaa.gov](mailto:ann.e.webber@noaa.gov), 508 495-2291

Sea Grant – Chelsea Berg, [chelsea.berg@noaa.gov](mailto:chelsea.berg@noaa.gov), 231 360-7200