| | PDATE: October | | Implementation Date (if applicable |
|-----|----------------|---|------------------------------------|
| ec# | Year (FY) | Recommendation | Implementation Date (if applicable |
| 79 | 2024 | Marine Life: IOOS should fully implement the ATN (ARGOS and acoustic tracking systems) and ensure that key sentinel species are measured routinely. Implementation would include tracking data collected by all federal agencies. | Partially implemented, 2024 |
| 78 | | Marine Life: Identify core biological measurements and standards across the IOOS enterprise. Develop the capacity to ensure the development of a specific biological capability across the IOOS enterprise. IOOS should incorporate the GOOS framework for marine life observations to the extent possible. | Partially implemented, 2024 |
| 77 | 2024 | Marine Life: Develop a national inventory of biological measurements routinely made across IOOS regions. | Partially implemented, 2024 |
| 76 | 2024 | NOPP: NOAA and the IOOC should expand public-private partnerships, including working with philanthropic organizations, and assess ways to utilize innovative or alternate funding mechanisms other than BAAs to fund NOPP projects. | Not implemented, 2024 |
| 75 | | NOPP: IOOS should work with NOPP leadership and appropriate sponsor agencies to develop a process that clearly identifies observing/sensing requirements for NOPP projects far in advance. | Partially implemented, 2024 |
| 74 | 2024 | NOPP: NOAA should provide leadership, through NOPP, for interagency collaboration and coordination to enhance national observing programs, meeting national priorities that require an interagency approach. | Partially implemented, 2024 |
| 73 | 2024 | We strongly urge you to amend the President's Budget request as it relates to IOOS Regional Observations. Funding to the system should be at the bipartisan authorized appropriation level of \$56 million to keep pace with inflation and ensure there are no disruptions to the services that users rely on. At a minimum, the IOOS Regional Observations must be funded at the Fiscal Year 2024 enacted level of \$42.5 million. | Not Implemented, 2024 |
| 72 | 2023 | Climate: NOAA should develop a national integrated coastal climate capability with IOOS as the national leader to collect-collate-synthesize continental shelf data. | Partially implemented, 2024 |
| 71 | 2023 | Climate: NOAA should fund recapitalization and modernization of existing infrastructure and fill existing gaps in the current ocean observing network. | Partially implemented, 2024 |
| 70 | 2023 | Climate: NOAA should expand coastal observations and support regional- scale models that collectively can be used to monitor trends, detect changes, provide forecasts, and deliver tailored information products to users for improving coastal resilience. | Implemented, 2024 |
| 69 | | Climate: NOAA should invest in technological innovation for new types of observing tools, sensors, and delivery mechanisms to improve coastal observations and regional scale models, reduce costs and improve the understanding, delivery, and communication of information. | Implemented, 2023 |
| 68 | 2023 | Climate: NOAA should expand regional data integration services to better integrate IOOS with other coastal and global climate programs and to better provide products and services for communities. | Partially implemented, 2024 |
| 67 | 2023 | Climate: NOAA should increase engagement with historically underrepresented communities that are often disproportionately affected by climate impacts and take action to co-producing observation systems and tailored products to ensure all have access to the information and tools needed to fully prepare for and respond to coastal change. | Partially implemented, 2024 |
| 66 | | DEIA: The IOOS Program Office, working with the IOOS Association, the RAs, the IOOC and others (e.g. NOS) should develop common DEIA vision and mission statements for the IOOS enterprise. | Implemented, 2023 |
| 65 | 2023 | DEIA: NOAA should expand support for and/or develop new programs for DEIA activities within NOAA, leveraging the broader IOOS community. | Partially implemented, 2023 |
| 64 | 2023 | DEIA: NOAA and the IOOC should develop and execute strategies in DEIA activities that will strengthen the IOOS Program, IOOC observing community, and the new blue economy. | Not yet implemented, 2023 |
| 63 | 2023 | DEIA: NOAA should gather knowledge and enhance access to information to increase diversity, equity, inclusivity, and accessibility in coastal ocean communities and programs. | Partially implemented, 2023 |
| 62 | 2023 | DEIA: NOAA should ensure coordination of DEIA activities across NOAA and the broader IOOC community. | Partially implemented, 2023 |
| 61 | 2023 | New Blue Economy: NOAA should invest in technology advancement by leveraging the IOOS network of government agencies, academia, and industry. | Implemented, 2023 |

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| 60 | , | New Blue Economy: NOAA should review and evaluate the current Data Management & Cyberinfrastructure (DMAC) structure to meet the exponential growth in data being created from sensors, models, analysis, and Al. | Partially implemented, 2023 |
| 59 | | New Blue Economy: NOAA should review and evaluate the data buy agreements currently in place for the ocean domain. | Partially implemented, 2023 |
| 58 | 2023 | New Blue Economy: IOOS should evaluate its role in coordination of data collection and data management for the Offshore Wind sector. | Partially implemented, 2023 |
| 57 | 2023 | New Blue Economy: NOAA should promote IOOS to support STEM education in ocean sciences. | Partially implemented, 2023 |
| 56 | 2022 | The IOOS Advisory Committee recommends that the IOOC support the coastal climate signal workshop proposal submitted to US CLIVAR. | Implemented, 2022 |
| 55 | 2022 | The Federal Advisory Committee (FAC) for the Integrated Ocean Observing System (IOOS) strongly recommends infrastructure funding for IOOS be included in NOAA's spend plan for ocean observing system sections within the Infrastructure Investment and Jobs Act (PL 117-XX). | Implemented, 2023 |
| 54 | 2021 | Maintain and increase IOOS observing infrastructure and measurements and ensure they capture the coastal climate signal and its impact through sustained observations and models. | Implemented, 2022 |
| 53 | 2021 | Advance linkages between regional near-shore and global ocean models and enhance integration with NOAA's Unified Forecast System. | Partially implemented, 2023 |
| 52 | 2021 | Continue to undertake economic valuation processes of observing systems to better quantify benefits and enhance messaging for sustained observations. | Implemented, 2022 |
| 51 | 2021 | Ensure use of 11 federally certified regional data centers to implement advanced data tools and further data aggregation. | Implemented, 2021 |
| 50 | 2021 | Identify ways that NOAA can use technological innovations to address the needs of coastal and oceanographic communities and stakeholders, including for outreach and education purposes. | Implemented, 2021 |
| 49 | | Leverage diverse STEM expertise to enhance future workforce. | Implemented, 2021 |
| 48 | | Maintain/Build on existing partnership models | Implemented, 2022 |
| 47 | | Use partnerships to accelerate innovation and inclusivity | Implemented, 2022 |
| 46 | | Analyze NOAA initiatives with established partnership models to ensure alignment with IOOS effort. | Implemented, 2022 |
| 45 | 2021 | Expand engagement with private industries and other entities to rapidly establish partnerships to augment aging ocean observing infrastructure. | Implemented, 2022 |
| 44 | 2021 | Pursue leveraged support from other agencies and private sources through the National Ocean Partnership Program. | Implemented, 2021 |
| 43 | 2021 | Collaborate with NOAA Big Data Project, and other relevant entities, regarding IOOS contributions to ecological forecasting and regional ocean forecasting efforts. | Implemented, 2021 |
| 42 | 2021 | Expand the participation at all levels of BIPOC and underserved and underrepresented communities, including co-production of knowledge and incorporation of local and traditional Indigenous knowledge. | Partially Implemented, 2024 |
| 41 | 2021 | The U.S. IOOS Office should adopt a requirements management system that begins with higher-level objectives (e.g. "IOOS observations will lead to a XX% improvement in hurricane intensity forecasts over the next X years") | Implemented, 2022 |
| 40 | 2021 | NOAA Leadership should develop a coherent description of the many ocean observing programs within its Line Offices, including associated budgets in a cross-Line Office roll-up | Partially Implemented, 2024 |
| 39 | 2021 | U.S. IOOS Office should develop an annual investment strategy based on a traceable requirements management process | Partially Implemented, 2024 |
| 38 | 2021 | NOAA Leadership should position IOOS as the oceanographic operational integrator at NOAA | Not Yet Implemented, 2024 |
| 37 | 2021 | IOOS Office should create an unfunded requirements list based on a gap analysis | Implemented, 2022 |
| 36 | 2021 | IOOS Enterprise should develop an Observing System Recapitalization Plan to include maintenance, operations, sustainability, and modernization of the observing system | Partially Implemented, 2024 |

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| 35 | 2021 | NOAA should set up PAC budget lines for IOOS, for infrastructure refreshes and equipment servicing as part of a larger plan to fully fund | Partially Implemented, 2024 |
| 34 | 2021 | IOOS should, where possible without a federal budget cross-cut, assess requirements in the context of the total federal investments | Implemented, 2024 |
| 33 | 2021 | The IOOC should conduct the federal budget cross-cut mandated in both the ICOOS Act of 2009 and the Coordinated Ocean Observation and Research Act (COORA) of 2020, and ensure their membership has the expertise, resources, and influence in their agencies to accomplish this task. | Not Yet Implemented, 2024 |
| 32 | 2021 | Consider new task teams to address critical U.S. government-wide priorities such as communications and messaging, ocean climate modeling, and environmental justice (underserved users). | Implemented, 2024 |
| 31 | | Generate a list of the IOOC's top ten accomplishments of the past decade, in order to provide context to the impacts of that committee on the federal ocean observing enterprise. | Implemented, 2022 |
| 30 | | Align outcomes of OceanObs'19 and Ocean Studies Board workshops focused on sustaining ocean observations with emerging priorities, programs, and concepts linked to the UN Decade for Ocean Science and Sustainable Development goals. | Implemented, 2022 |
| 29 | 2021 | Manage a crosswalk of the status of all essential ocean, biology, climate, and other relevant variables; and suggest best practices or standards to best integrate the data from a local-to-global scale. | Implemented, 2023 |
| 28 | 2018 | We recommend that the U.S. IOOS Office be positioned at a level within NOAA that will enable more senior recognition during marketing and communication with partner agencies. | Implemented, 2020 |
| 27 | 2018 | We note there are challenges to the integration of ocean observing systems. Increased support from the IOOC would be advantageous to resolving this concern. | n/a |
| 26 | 2018 | An easy "win" will be to highlight and celebrate the upcoming 20 year anniversary of IOOS in 2019. | Implemented, 2019 |
| 25 | 2018 | Identify relevant data sets suitable for management and analysis by these techniques. | Implemented, 2019 |
| 24 | 2018 | Support the existing cross-NOAA "big data" initiatives and encourage continued direct engagement of IOOS in these efforts. | Implemented, 2019 |
| 23 | 2018 | Strive to develop and maintain connectivity to the private sector in this field to ensure currency of technology best practices and identify innovation opportunities. | Implemented, 2019 |
| 22 | 2018 | Enhance IOOS Data Management and Communications (DMAC) using the "big data" topic to evaluate and advance new DMAC methods and practitioners. | Implemented, 2019 |
| 21 | 2018 | In order to guide focused, effective, market-driven growth of IOOS, the AC suggests that methods for marketing of IOOS be embraced formally through structured methodology with marketing industry experts. | Partially implemented, 2024 |
| 20 | | We recommend IOOS foster frequent and regular consultation among these three segments [government, academic, and commercial] to make complementary use of both public and private funding. | Implemented, 2019 |
| 19 | | Increase funding from \$36.2M to \$44M annually. | Implemented, 2020 |
| 18 | | Support appropriation of funds for high priority ocean observation infrastructure needs. | Implemented, 2021 |
| 17 | 2016 | Increase the OTT budget from \$5M to \$10M annually, and identify other opportunities for NOAA and the IOOC to invest in tech development and transfer in collaboration with provate sector partners. | Partially Implemented, 2024 |
| 16 | 2016 | Support reauthorization of the ICOOS Act of 2009. | Implemented, 2020 |
| 15 | 2016 | Support Interagency ocean observations efforts and the IOOC. | Implemented, 2016 |
| 14 | 2016 | Make a stronger IOOS available to communities, local governments, industry and institutions to support the resilience decision-making | Implemented, 2016 |
| 13 | 2016 | Focus the attention of the nation of the role that IOOS plays in enhancing resilience, and on the fact that IOOS has been a trusted and essential source of ocean, Great Lakes and coastal information. | Implemented, 2016 |

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| 12 | | Improve the visibility of IOOS within NOAA, and with federal agency Interagency Ocean Observation Committee (IOOC) partners, as an essential, valuable tool in the race to acquire the information and data for shaping a resilient and sustainable future for our country. | Implemented, 2016 |
| 11 | 2016 | Provide IOOS the funding and administrative support needed to maintain and expand its resilience efforts. | Implemented, 2018 |
| 10 | 2015 | The NOAA Administrator, in collaboration with the IOOC, should clearly define how IOOS can effectively lead across agencies and how those agencies can be counted upon to support the IOOS vision. | Implemented, 2015 |
| 9 | 2015 | The IOOS Office should be elevated within NOAA to a Program Office, as per the ICOOS Act of 2009. | Implemented, 2021 |
| 8 | 2015 | IOOS "touch-points" should be identified to connect the complex organizations that make up IOOS to the IOOS Program Office and IOOC member agencies. | Implemented, 2015 |
| 7 | 2015 | The IOOS Program Office, the IOOC, and the NOAA Administrator should communicate all actions to the regional associations and thus to all IOOS enterprise stakeholders. | Implemented, 2015 |
| 6 | 2015 | The NOAA Administrator and IOOC should seek to celebrate IOOS success internally and externally. The IOOS enterprise touches a vast network of individuals and organizations in much the same way a championship team positively impacts a high school or college community. | Implemented, 2015 |
| 5 | 2015 | In support of the marketing and communications Guiding Principles, which are focused on engagement, embracing new approaches, and evaluation for success, outreach should include a continuum stretching from applied research to product use, with an active customer-driven focus. | Implemented, 2015 |
| 4 | 2015 | In support of the planning and operations Guiding Principles, which emphasize efficiency in execution and enhancement of the IOOS office, the following suggestions are offered: Consistent focus on strategic planning, designed resilience, and flexibility at all levels with continued review. Requirements for coordination with national and international integrating systems, for example, the National Response Framework, NOAA Data Integration Framework, Spatial Data and GIS interoperability standards, Metadata Standards and other key existing (and future) standards. Flexible planning from maintenance to introduction of promising new technologies to take into account the changing constraints on the funding entities. Flexible cost savings mechanisms, such as a pool of deployable observational assets, e.g. portable weather stations, general spare parts and instruments for use in emergency situations such as hurricane or tsunami response. Flexible management to tie diverse, operational parts together to enable federal and non-federal partners to retain or increase their funding based on collaboration with the national IOOS endeavor. Flexible management to integrate federal, regional, private, and public data, products, and services. Review of IOOS assets for ranking by quality of data incoming and new methodologies for how to handle these types of information. | Implemented, 2015 |
| 3 | 2013 | Empower IOOS to promote the growth and development of the enterprise, products and services, not simply to manage a system. | Implemented, 2014 |
| 2 | | Encourage increased interagency governmental and non-governmental activity and trusted involvement in the enterprise. | Implemented, 2014 |
| 1 | 2013 | Expect excellence and participation from collaborators and stakeholders to ensure maximum value and return on investment. | Implemented, 2014 |