

Ocean Era Modified NPDES Permit FLOA00001
Administrative Record Index

Number	Document Category	Document Sub-category	Document Description	Document Title
A. Draft Modified Permit				
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A.2	Application	-	Cage drawing	Cage Drawing 07-17-23.pdf
A.3	Application	-	Feed analysis	680560_Aquaxcel5014FK.pdf
A.4	Application	-	Supplemental Information	Engineering Design Information.docx
A.5	Application	-	Supplemental Information	FW_ Request for modified NPDES permit.pdf
A.6	Application	-	Supplemental Information	Ocean Era - Application for Modified Permit.pdf
A.7	Application	-	Supplemental Information	RE_ cargill feed analysis.msg
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A.9	Application	-	Feed Information	Redfish feed information 07-17-23.pdf
A.10	Permit Submittal	Plans	Draft Best Management Practices Plan	USEPA - BMP Plan_VE Project_110124.pdf
A.11	Permit Submittal	Plans	Draft Environmental Monitoring Plan	USEPA - EM Plan_VE Project_110124.pdf
A.12	Permit Submittal	Plans	Draft Facility Damage Prevention and Control Plan	USEPA - FDPC Plan_VE Project_110124.pdf
A.13	Permit Submittal	Plans	Draft Quality Assurance and Control Plan	USEPA - QA-QC Plan_VE Project_110124.pdf
A.14	Permit Submittal	Plans	Email Submittal	RE_ Public Notice - Ocean Era Draft Modified NPDES Permit (FLOA00001).msg
A.15	Public Notice	-	Press Release	EPA Press Release for Ocean Era off the Florida coast.pdf
A.16	Public Notice	-	Public Notice Proof - EPA website	EPA R4 website PN -Ocean Era Draft Modified NPDES Permit (FLOA00001) 10-24-24.pdf
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A.18	Public Notice	-	Public Notice	Ocean Era - Draft Modified Public Notice 10-24-24.pdf
A.19	Draft Permit	-	Draft Modified Permit	Ocean Era - Draft Modified Permit (FLOA00001) 10-23-24.pdf
A.20	Draft Permit	-	Draft Modified Fact Sheet	Ocean Era - Draft Modified Fact Sheet 10-23-24.pdf
A.21	Draft Permit	-	Draft Permit Modification Jusitification Memo	Ocean Era - Permit Modification Justification Memo 10-23-24.pdf
A.22	Draft Permit	-	Draft Modified Permit	Ocean Era - draft modified Permit (FLOA00001).docx
A.23	Draft Permit	-	Draft Modified Fact Sheet	Ocean Era - draft modified Fact Sheet.docx
A.24	Draft Permit	-	Draft Permit Modification Jusitification Memo	Ocean Era - Permit Modification Justification Memo V3.docx
A.25	Draft Permit	-	Summary Information	Ocean Era Summary Info 10-23-24.xlsx
A.26	Lead Agency Information	-	Email sent to NMFS and USACE	lead agency request letters and responses.msg
A.27	Lead Agency Information	-	Cooperating Agency Letter USACE	Coop Agency Ocean Era (USACE).pdf
A.28	Lead Agency Information	-	Cooperating Agency Letter NMFS	Coop Agency Ocean Era_11.02.2023.pdf
A.29	Lead Agency Information	-	NMFS response	20231102_OE_CoopAgencyResponse_SERO.pdf
A.30	Lead Agency Information	-	USACE response	20231103_SAJ-2017-03488_revised project_Corps_Cooperating_Agency_Acceptance_Ltr.pdf

Number	Document Category	Document Sub-category	Document Description	Document Title
A.31	Consultations	Endangered Species Act / Fish and Wildlife Coordination Act	Permit Modification Memo for USFWS	Ocean Era Permit Modification Justification V2 for USFWS 09-24-24.docx
A.32	Consultations	Endangered Species Act / Fish and Wildlife Coordination Act	Permit Modification Memo for USFWS	Ocean Era Permit Modification Justification V2 for USFWS 09-24-24.pdf
A.33	Consultations	Endangered Species Act / Fish and Wildlife Coordination Act	EPA email and USFWS Response	USFWS response for ESA and FWCA 10-02-24.pdf
A.34	Consultations	Endangered Species Act / Fish and Wildlife Coordination Act	NMFS Letter of Concurrence 08/26/2022	Verella Epsilon Marine Aquaculture Facility Amended LOC_final 1.pdf
A.35	Consultations	Endangered Species Act / Fish and Wildlife Coordination Act	NMFS Letter to Friends of Animals 08/31/2022	Letter to Friends of Animals RE Verella Epsilon NOI_final.pdf
A.36	Consultations	Endangered Species Act / Fish and Wildlife Coordination Act	NMFS email to EPA and USACE re: LOC	Amended Letter of Concurrence On Verella Epsilon Project.msg
A.37	Consultations	Endangered Species Act / Fish and Wildlife Coordination Act	NMFS email to EPA re: LOC	Fwd_ Response to Your NOI regarding Verella Epsilon Project.msg
A.38	Consultations	Endangered Species Act / Fish and Wildlife Coordination Act	SERO expedited consultation template	SERO-TEMPLATE-For-Expedited-Consultation_10_21
A.39	Consultations	Endangered Species Act / Fish and Wildlife Coordination Act	ESA email to USACE	draft ESA conclusions for Ocean Era Modified Permit.msg
A.40	Consultations	Endangered Species Act / Fish and Wildlife Coordination Act	ESA document for USACE	ESA section for USACE 09-13-24.docx
A.41	Consultations	Essential Fish Habitat	Permit Mod Memo used for EFH	Ocean Era Permit Modification Justification V2 for EFH 09-25-24.docx
A.42	Consultations	Essential Fish Habitat	Permit Mod Memo used for EFH	Ocean Era Permit Modification Justification V2 for EFH 09-25-24.pdf
A.43	Consultations	Essential Fish Habitat	EFH email to NMFS and NMFS response	Re_ EFH coordination for revisions to the Ocean Era project.pdf
A.44	Consultations	Essential Fish Habitat	EFH email to USACE	draft EFH conclusions for Ocean Era modified NPDES permit.msg
A.45	Consultations	Essential Fish Habitat	EFH document for USACE	EFH section for USACE 09-11-24.docx
A.46	Consultations	Coastal Zone Management Act / National Historic Preservation Act	Email to Florida State Clearinghouse	RE_ modified draft NPDES permit for Ocean Era marine aquaculture.pdf
A.47	Consultations	Coastal Zone Management Act	NOAA comments on draft CZMA info	EPA Ocean Era Permit Modification Justification V2 - CZMA section OCM edits (09-30-2024).docx
A.48	Consultations	Coastal Zone Management Act	Email from NOAA re: CZMA	Re_ CZMA process for aquaculture operation in federal waters.msg
A.49	Consultations	Coastal Zone Management Act	Draft CZMA info shared with NOAA	Ocean Era Permit Modification Justification V2 - CZMA.docx
A.50	Permit	References	References	See References Tab

Number	Document Category	Document Sub-category	Document Description	Document Title
B. Final Modified Permit				
B.1	2022 Final Permit Admin Record	Entire administrative record Incorporated by reference for 2022 permit issuance	-	-
B.2	General	References	References	See References Tab
B.3	General	Administrative Record	Administrative Record Spreadsheet	Admin Record Mod Permit.xlsx
B.4	Final NPDES permit	-	-	Final permit.pdf
B.5	Final Fact sheet	-	-	Final fact sheet.pdf
B.6	Appeal Procedures	-	-	Appeal procedures.pdf
B.7	Response to Comments	-	-	Response to comments.pdf
B.8	Final Modification Determination Memorandum	-	-	Ocean Era - Final modification determination memo.pdf
B.9	Public Comments	Comments received via mail	-	EPA-R04-OW-2024-0113 Comment.pdf
B.10	Public Comments	Comments received via email	-	multiple documents
B.11	Public Comments	Comments on Regulations.gov	-	multiple documents
B.12	Consultation	Endangered Species Act / Fish and Wildlife Coordination Act	Draft expedited informal consultation for ESA and FWCA	DRAFT expedited informal ESA and FWCA consultation request.msg
B.13	Consultation	Endangered Species Act / Fish and Wildlife Coordination Act	EPA request for expedited consultation	Ocean Era request for expedited informal ESA and FWCA consultation 11-20-24.pdf
B.14	Consultation	Endangered Species Act / Fish and Wildlife Coordination Act	EPA revised request for expedited consultation	Ocean Era request for expedited informal ESA and FWCA consultation 12-23-24.pdf
B.15	Consultation	Endangered Species Act / Fish and Wildlife Coordination Act	NMFS consultation response	SERO-2024-02953_EXP Ocean Era Marine Aquaculture Project_LOC.pdf
B.16	Consultation	Endangered Species Act / Fish and Wildlife Coordination Act	NMFS revised consultation response	SERO-2024-02953_EXP Ocean Era Project_LOC_amended_final.pdf
B.17	Consultation	Endangered Species Act / Fish and Wildlife Coordination Act	NMFS vessel strike avoidance measures	Vessel_Strike_Avoidance_Measures.pdf
B.18	Consultation	Endangered Species Act / Fish and Wildlife Coordination Act	NMFS protected species construction conditions	Protected_Species_Construction_Conditions_1.pdf
B.19	Consultation	Endangered Species Act / Fish and Wildlife Coordination Act	Protected species monitoring plan	VE Project_MonitoringPlan_122024F.pdf
B.20	Consultation	Endangered Species Act / Fish and Wildlife Coordination Act	Email from NMFS to EPA re: ESA and FWCA consultation	SERO-2024-02953 Ocean Era Velella Epsilon Project-Amended LOC.msg
B.21	Consultation	Coastal Zone Management Act	FDEP Clearinghouse letter of clearance	State Clearance Letter for FL202410250278 NPDES Ocean Era.pdf
B.22	Permittee Documents	Plans Required by Permit	email from Ocean Era	RE_ Public Notice - Ocean Era Draft Modified NPDES Permit (FL0A00001).msg
B.23	Permittee Documents	Plans Required by Permit	Draft BMP plan	USEPA - BMP Plan_VE Project_070825.pdf
B.24	Permittee Documents	Plans Required by Permit	Draft EM plan	USEPA - EM Plan_VE Project_070725.pdf
B.25	Permittee Documents	Plans Required by Permit	Draft FDPC plan	USEPA - FDPC Plan_VE Project_070725.pdf
B.26	Permittee Documents	Plans Required by Permit	Draft QAQC plan	USEPA - QA-QC Plan_VE Project_070725.pdf

Number	Document Category	Document Sub-category	Document Description	Document Title
B.27	Miscellaneous Information	-	Buoy data	multiple files
B.28	Miscellaneous Information	-	Peer review request for NMFS	RE_ Peer review for Ocean Era's engineering analysis.msg
B.29	Miscellaneous Information	-	Technical Assistance Memo from NMFS	TechAssistance_Memo_20250429.pdf
B.30	Miscellaneous Information	-	email from NMFS RE: technical assistance	CUI - NMFS Technical Assistance memo.pdf
B.31	Miscellaneous Information	-	Memorandum re: removed permit conditions	memo RE removed permit conditions 05-14-25.pdf

Number	Document Category	Document Sub-category	Document Description	Document Title
C. References				
C.1	General	-	Reference	40 CFR Part 1500 (up to date as of 09-13-24)
C.2	General	-	Reference	Final EA and FONSI for Kona Blue Water Farm mariculture operation
C.3	General	-	Reference	Final Report - Effect of netting materials on fouling and parasite egg loading on offshore net pens in Hawaii
C.4	General	-	Reference	A global review of protected species interactions with marine aquaculture
C.5	General	-	Reference	Haodi Wu, Jing Hou, Xiangke Wang. 2023. A review of microplastic pollution in aquaculture: Sources, effects, removal strategies and prospects. Ecotoxicology and Environmental Safety, Volume 252, 2023, 114567, ISSN 0147-6513, https://doi.org/10.1016/j.ecoenv.2023.114567 .
C.6	General	-	Reference	Huntington, T (2019). Marine Litter and Aquaculture Gear – White Paper. Report produced by Poseidon Aquatic Resources Management Ltd for the Aquaculture Stewardship Council. 1539-ASC/R/01/C
C.7	General	-	Reference	CEQ memo RE: implementation of NEPA 02-19-25
C.8	General	-	Reference	MOU between USFWS and USACE for conducting FWCA activities
C.9	General	-	Reference	NOAA - CZMA federal consistency overview 02-24-20
C.10	General	-	Reference	Determination of digestibility coefficients of various feedstuffs for red drum (Sciaenops ocellatus) 09-11-95
C.11	General	-	Reference	Efficacy testing of novel antifouling coatings for pen nets in aquaculture: How good are alternatives to traditional copper coatings? 2020
C.12	General	-	Reference	USEPA. 2016. State of Science White Paper – A summary of literature on the chemical toxicity of plastics pollution to aquatic life and aquatic-dependent wildlife. Office of Water, Office of Science and Technology. EPA-822-R-16-009.
C.13	General	-	Reference	USACE ESA consultation request for mariculture farm 03-19-21
C.14	General	-	Reference	Fish and Wildlife Coordination Act United States Code
C.15	General	-	Reference	Iván A. Hinojosa, Martin Thiel. 2009. Floating marine debris in fjords, gulfs and channels of southern Chile, Marine Pollution Bulletin, Volume 58, Issue 3, Pages 341-350, ISSN 0025-326X, https://doi.org/10.1016/j.marpolbul.2008.10.020 .
C.16	General	-	Reference	Federal Register Notice ESA status for Black-Capped Petrel 12-28-23
C.17	General	-	Reference	FWC website titled Raising Red Drum at SERF (accessed 05-02-25 12:52PM)
C.18	General	-	Reference	GESAMP (2016). “Sources, fate and effects of microplastics in the marine environment: part two of a global assessment” (Kershaw, P.J., and Rochman, C.M., eds). (IMO/FAO/UNESCO-IOC/UNIDO/WMO/IAEA/UN/UNEP/UNDP Joint Group of Experts on the Scientific Aspects of Marine Environmental Protection). Rep. Stud. GESAMP No. 93, 220 p.

Number	Document Category	Document Sub-category	Document Description	Document Title
C.19	General	-	Reference	Tucker, J. W., Jr., Lellis, W. A., Vermeer, G. K., Roberts, D. E., Jr., & Woodward, P. N. (1997). Growth of red drum, <i>Sciaenops ocellatus</i> , to maturity on experimental diets. <i>Journal of Applied Aquaculture</i> , 7(4), 93-108. doi: 10.1300/J028v07n04_07
C.20	General	-	Reference	NOAA - Guide for permitting marine aquaculture in the United States (2022)
C.21	General	-	Reference	Rappucci G, Garrison LP, Soldevilla M, Ortega-Ortiz J, Reid J, Aichinger-Dias L, Mullin K, Litz J. 2023. Gulf of Mexico Marine Assessment Program for Protected Species (GoMMAPPS): marine mammals. Volume 1: report. New Orleans (LA): US Department of the Interior, Bureau of Ocean Energy Management. 104 p. Obligation No.: M17PG00013. Report No.: OCS Study BOEM 2023-042.
C.22	General	-	Reference	Health and disease management of Almaco Jack (2019)
C.23	General	-	Reference	Innovasea launches new aquaculture monitoring tool (accessed 02-28-25 5:16PM)
C.24	General	-	Reference	Krüger L, Casado-Coy N, Valle C, Ramos M, Sánchez-Jerez P, Gago J, Carretero O, Beltran-Sanahuja A, Sanz-Lazaro C. 2020. Plastic debris accumulation in the seabed derived from coastal fish farming. <i>Environ Pollut</i> . 2020 Feb;257:113336. doi: 10.1016/j.envpol.2019.113336.
C.25	General	-	Reference	Lusher, A.L.; Hollman, P.C.H.; Mendoza-Hill, J.J. 2017. Microplastics in fisheries and aquaculture: status of knowledge on their occurrence and implications for aquatic organisms and food safety. <i>FAO Fisheries and Aquaculture Technical Paper</i> . No. 615. Rome, Italy.
C.26	General	-	Reference	A review: Marine aquaculture impacts marine microbial communities 03-19-24
C.27	General	-	Reference	Chunheng Miao, Jiahao Zhang, Ruixin Jin, Tianhao Li, Yifei Zhao, Maocai Shen. 2023. Microplastics in aquaculture systems: Occurrence, ecological threats and control strategies. <i>Chemosphere</i> , Volume 340, 2023, 139924, ISSN 0045-6535, https://doi.org/10.1016/j.chemosphere.2023.139924 .
C.28	General	-	Reference	A.G.M. Sofi Uddin Mahamud, Mithila Saha Anu, Artho Baroi, Anindita Datta, Md Shihab Uddine Khan, Mariya Rahman, Tamanna Tabassum, Jarin Tasnim Tanwi, Tanvir Rahman. 2022. Microplastics in fishmeal: A threatening issue for sustainable aquaculture and human health, <i>Aquaculture Reports</i> , Volume 25, 2022, 101205, ISSN 2352-5134, https://doi.org/10.1016/j.aqrep.2022.101205 .
C.29	General	-	Reference	MOU between NMFS and USACE for conducting FWCA activities (agreement #: NMFS-2020-OHC-074)
C.30	General	-	Reference	Mote website titled Mote raises and releases largest number of hatchery-reared red drum in its history (accessed 05-02-25 1:14PM)
C.31	General	-	Reference	Survival and Growth in Multiple Size-Classes of Hatchery Red Drum over Three Simulated Seasons
C.32	General	-	Reference	Federal Register Notice CEQ regulations 40 CFR 1500-1508 05-01-24
C.33	General	-	Reference	NMFS ESA Biological Opinion for authorization to install new net pens and ongoing, revised mariculture operations by Blue Ocean Mariculture 08-11-22

Number	Document Category	Document Sub-category	Document Description	Document Title
C.34	General	-	Reference	Emmett Environmental Law & Policy Clinic at Harvard Law School, Environmental Law Institute, and The Ocean Foundation, Offshore Aquaculture Regulation Under the Clean Water Act, (December 2012).
C.35	General	-	Reference	USACE website Planning Community Toolbox for Fish and Wildlife Coordination (accessed 10-28-24 1:48PM)
C.36	General	-	Reference	Reproduction, growth, and mortality of red drum (<i>Sciaenops ocellatus</i>) in Florida waters 03-09-90
C.37	General	-	Reference	Lin L, Chen CC, Zhu X, Pan K and Xu X (2022) Risk of aquaculture-derived microplastics in aquaculture areas: An overlooked issue or a non-issue? Front. Mar. Sci. 9:923471. doi: 10.3389/fmars.2022.923471
C.38	General	-	Reference	Killian Chary, Myriam D Callier, Denis Covès, Joël Aubin, Julien Simon, Annie Fiandrino, Scenarios of fish waste deposition at the sub-lagoon scale: a modelling approach for aquaculture zoning and site selection, ICES Journal of Marine Science, Volume 78, Issue 3, July 2021, Pages 922–939, https://doi.org/10.1093/icesjms/fsaa238
C.39	General	-	Reference	NMFS SERO template for expedited ESA consultation 10-01-21
C.40	General	-	Reference	Observer news article - Whitney Laboratory releases 100,000 juvenile redfish into local waters (accessed 05-02-25 1:14PM)
C.41	General	-	Reference	Davidson, T.M. 2012. Boring crustaceans damage polystyrene floats under docks polluting marine waters with microplastic, Marine Pollution Bulletin, Volume 64, Issue 9, Pages 1821-1828, ISSN 0025-326X, https://doi.org/10.1016/j.marpolbul.2012.06.005 .
C.42	General	-	Reference	Guanglong Chen, Yizheng Li, Jun Wang. 2021. Occurrence and ecological impact of microplastics in aquaculture ecosystems, Chemosphere, Volume 274, 2021, 129989, ISSN 0045-6535, https://doi.org/10.1016/j.chemosphere.2021.129989 .
C.43	General	-	Reference	Zeliang Su, Liangfu Wei, Linyong Zhi, Xiaomei Huang, Xu Wang, Jun Wang. 2024. Microplastics in aquafeeds: Occurrence, sources, effects and considerations for aquatic food production, TrAC Trends in Analytical Chemistry, Volume 176, 117760, ISSN 0165-9936, https://doi.org/10.1016/j.trac.2024.117760 .
C.44	General	-	Reference	Priscilla, V., Patria, M.P., 2019. Comparison of microplastic abundance in aquaculture ponds of milkfish <i>Chanos chanos</i> (Forsskal, 1775) at Muara Kamal and Marunda, Jakarta Bay. In: Proceedings of the 4th EMBRIO International Symposium and the 7th International Symposium of East Asia Fisheries and Technologists Association. Vol. 404.
C.45	General	-	Reference	Zhou, A., Zhang, Y., Xie, S., Chen, Y., Li, X., Wang, J., Zou, J., 2021. Microplastics and their potential effects on the aquaculture systems: a critical review. Rev. Aquac. 13, 719–733.