

Department of Land & Natural Resources  
DIVISION OF AQUATIC RESOURCES  
1151 Punchbowl Street, Room 330  
Honolulu, Hawaii 96813

Date Issued: March 3, 2023

Valid not longer than: March 2, 2024

SPECIAL ACTIVITY PERMIT

The Department of Land and Natural Resources hereby grants permission for certain activities involving aquatic organisms belonging to the people of Hawaii, under Section 187A-6, Hawaii Revised Statutes, and other applicable laws.

The Permittee is

Name:	Dr. Andrew Rossiter	Address:	Waikiki Aquarium
Title:	Director		2777 Kalakaua Avenue
Affiliation:	Waikiki Aquarium		Honolulu, HI 96815
Email:	<a href="mailto:andrewro@hawaii.edu">andrewro@hawaii.edu</a>		

This permit is issued, subject to the general and special conditions, for the collection, possession and transportation of regulated and non-regulated organisms, from regulated areas (Waikiki/Diamond Head Shoreline FMA\* - see section A. Locations) and non-regulated marine and freshwater areas on Oahu, using regulated gear (various small meshed nets and traps; < 2 inches stretched mesh and < 2 x 1 inches rigid mesh) and non-regulated gear, for the purposes of educational live display, and for the caring, exhibiting, providing educational live display and release of regulated marine turtles. Turtles are “pre-act” animals and thus exempt from the United States Endangered Species Act (ESA) and are not required to be authorized federally in Hawaii by a National Marine Fisheries Service (NMFS) permit. Waikiki Aquarium participates in Sea Life Park's long-term propagation program for sea turtles in Hawai'i, where turtles are cared for and released into the wild.

This permit, signed by an authorized representative of the Department of Land and Natural Resources (the Department), authorizes the permittee, and assistants designated on the final page(s) of, or attachments to, this permit, to engage in activities otherwise prohibited by law, subject to the conditions, which **TAKE, CATCH, POSSESS OR TRANSPORT** certain aquatic life from waters of the State, as follows:

Sp. Code	Sp. Description	Sp. Amt.	Morphology	Sp. Size	Island	Location	Comments
<i>Regulated organisms (<b>bolded</b>) / Non-regulated (non-highlighted)</i>							
<b>616</b>	<b>Chelonia mydas   Pacific Green sea turtle   honu   Chelonia mydas agassizi</b>	6	Individuals	Individuals (hatchlings/ juveniles; 8-10 inch shell diameter)	Oahu	Turtles are transported from Oahu (Sea Life Park) to Waikiki Aquarium for release into Oahu waters (except as prohibited by Special Conditions)	For care, rehabilitation and release after ≈ two years or ≈ 60 lbs. in weight  (No collection from wild; subject to any limits in the Special Conditions)

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25550	<b>Live rock (dead coral, rubble, loose rock, with attached aquatic life)</b>	1000	Fragments	lbs. (various sizes)	Oahu	400-Kewalo Basin Park-303 409-Kaalawai (Kaikoos) Beach-303 409-Blackpoint-303 409-Kahala beach-303 400-Waikiki/Diamond Head Shoreline FMA-303* 400-Ala Wai Boat Harbor-303 409-Wailupe Beach Park (Maunalua Bay)-303 409-Kawaikui Beach park-303 409-Koko marina-303 409-Paiko Lagoon (Beach) (Maunalua Bay)-303 409-Portlock (Maunalua Bay)-303 409-Allen Davis Beach-303 408-Makapu'u Beach Park-302 406-Kualoa Beach park-302 406-Kaaawa-301  (collections will occur at either a single or across multiple locations listed above)	1000 lbs. will be collected (approximately a total of twenty (20) 5-gallon buckets (~ 10 lbs. / gallon) from various locations around Oahu
25730	<b>Sand/ Marine sediment</b>	600	Unconsolidated material	Lbs.	Oahu	400-Kewalo Basin Park-303 409-Kaalawai (Kaikoos) Beach-303 409-Blackpoint-303 409-Kahala beach-303 400-Waikiki/Diamond Head Shoreline FMA-303* 400-Ala Wai Boat Harbor-303 409-Wailupe Beach Park (Maunalua Bay)-303 409-Kawaikui Beach park-303 409-Koko marina-303 409-Paiko Lagoon (Beach) (Maunalua Bay)-303 409-Portlock (Maunalua Bay)-303 409-Allen Davis Beach-303 408-Makapu'u Beach Park-302 406-Kualoa Beach park-302 406-Kaaawa-301  (collections will occur at either a single or across multiple locations listed above)	To be returned to location of collection  (sand/marine sediment is returned to collection location after use in exhibits and exchanged for new sand)  600 lbs. will be collected (approximately a total of twenty (12) 5-gallon buckets (~ 10 lbs. / gallon)

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<i>Baitfish (schooling fish)</i>							
610	<b>Atherinomorus insularum</b>   <b>Hawaiian silverside (FAO; Randall, 1996a), Togoro (DLNR)   `Iao   Atherinomorus insularum</b>	500	Fish (Adult/Juvenile)	Adult/Juvenile Fish (Any Size)	O'ahu	400-Kewalo Basin Park-303 409-Kaalawai (Kaikoos) Beach-303 409-Blackpoint-303 409-Kahala beach-303 400-Ala Wai Boat Harbor-303 409-Wailupe Beach Park (Maunaloa Bay)-303 409-Kawaikui Beach park-303 409-Koko marina-303 409-Paiko Lagoon (Beach) (Maunaloa Bay)-303 409-Portlock (Maunaloa Bay)-303 409-Allen Davis Beach-303 408-Makapu'u Beach Park-302 406-Kualoa Beach park-302 406-Kaaawa-301  (collections will occur at either a single or across multiple locations listed above)	Pending results of trial collection (100 individuals will be collected as a trial collection to test survivability) – see section B Activity.  No collections will occur in Waikiki SFMA
611	<b>Encrasicholina purpurea</b>   <b>Nehu (FAO; Randall, 1996a), Hawaiian anchovy (Randall, 1996a)   Encrasicholina purpurea</b>	500	Fish (Adult/Juvenile)	Adult/Juvenile Fish (Any Size)	O'ahu	Same locations as listed directly above  (collections will occur at either a single or across multiple locations listed above)	Pending results of trial collection (100 individuals will be collected as a trial collection to test survivability) – see section B Activity.  No collections will occur in Waikiki SFMA
6504	<b>Selar crumenophthalmus</b>   <b>Bigeye scad (AFS; FAO; Hoover, 1993, 2003; Randall, 1996a; DLNR), Purse-eyed scad (Randall et al., 1997a)   Akule   Selar crumenophthalmus</b>	500	Fish (Adult/Juvenile)	Adult/Juvenile Fish (Any Size)  (various sizes)  (Amounts and sizes will be specified in final report)	O'ahu	Same locations as listed directly above  (collections will occur at either a single or across multiple locations listed above)	Pending results of trial collection (100 individuals will be collected as a trial collection to test survivability) – see section B Activity.  No collections will occur in Waikiki SFMA

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<i>Sharks</i>							
5715	<b>Carcharhinus limbatus   Blacktip shark   Mano   Carcharhinus limbatus</b>	2	Fish (Adult/Juvenile)	Adult/Juvenile Fish (Any Size)	O'ahu	400-Kewalo Basin Park-303 409-Kaalawai (Kaikoos) Beach-303 409-Blackpoint-303 409-Kahala beach-303 400-Waikiki/Diamond Head Shoreline FMA-303* 400-Ala Wai Boat Harbor-303 409-Wailupe Beach Park (Maunalua Bay)-303 409-Kawaikui Beach park-303 409-Koko marina-303 409-Paiko Lagoon (Beach) (Maunalua Bay)-303 409-Portlock (Maunalua Bay)-303 409-Allen Davis Beach-303 408-Makapu'u Beach Park-302 406-Kualoa Beach park-302 406-Kaaawa-301  (collections will occur at either a single or across multiple locations listed above)	Pending additional DAR Cultural Advisory Group review and approval (in writing via email) and/or additional cultural practitioner consultation;  See section B. Activities. – Shark Collection and Sharks: Incidental mortality and Cultural Practitioner Consultation.
5718	<b>Carcharhinus plumbeus   Sandbar shark   Mano   Carcharhinus plumbeus</b>	3	Fish (Adult/Juvenile)	Adult/Juvenile Fish (Any Size)	O'ahu	Same locations as listed directly above  (collections will occur at either a single or across multiple locations listed above)	Pending review; See section B. Activities. – Shark Collection and Sharks: Incidental mortality and Cultural Practitioner Consultation.
6524	<b>Sphyrna lewini   Scalloped hammerhead   Mano-kihikihi   Sphyrna lewini</b>	4	Fish (Adult/Juvenile)	Adult/Juvenile Fish (Any Size)	O'ahu	Same locations as listed directly above  (collections will occur at either a single or across multiple locations listed above)	Pending review; See section B. Activities. – Shark Collection and Sharks: Incidental mortality and Cultural Practitioner Consultation.
Single species fish (damselfish, pipefish, seahorse, snake eel, gurnards, mullet, moi, wholehole, frogfish, barracuda etc.)							
6317	Paracirrhites arcatus   Whiteline hawkfish (AFS), Arc-eye hawkfish (Hoover, 1993, 2003; Randall, 1996a)   Pili-ko`a   Paracirrhites arcatus	1	Fish (Adult/Juvenile)	Adult/Juvenile Fish (Any Size)	O'ahu	Same locations as listed directly above  (collections will occur at either a single or across multiple locations listed above)	
5884	Doryrhamphus excisus   Bluestripe pipefish (FAO; Hoover, 1993, 2003; Randall, 1996a), Fantail pipefish	5	Fish (Adult/Juvenile)	Adult/Juvenile Fish (Any Size)	O'ahu	Same locations as listed directly above  (collections will occur at either a single or across multiple locations listed above)	

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5883	Doryrhamphus baldwini   Redstripe pipefish   Doryrhamphus (Dunckerocampus) baldwini	10	Fish (Adult/Juvenile)	Adult/Juvenile Fish (Any Size)	O'ahu	400-Kewalo Basin Park-303 409-Kaalawai (Kaikoos) Beach-303 409-Blackpoint-303 409-Kahala beach-303 400-Waikiki/Diamond Head Shoreline FMA-303* 400-Ala Wai Boat Harbor-303 409-Wailupe Beach Park (Maunalua Bay)-303 409-Kawaikui Beach park-303 409-Koko marina-303 409-Paiko Lagoon (Beach) (Maunalua Bay)-303 409-Portlock (Maunalua Bay)-303 409-Allen Davis Beach-303 408-Makapu'u Beach Park-302 406-Kualoa Beach park-302 406-Kaaawa-301  (collections will occur at either a single or across multiple locations listed above)
6060	Hippocampus kuda   Yellow seahorse (FAO; Randall, 1996a; Hoover, 2003), Spotted seahorse (Hoover, 1993, 2003; Randall et al., 1997a)   Hippocampus kuda	5	Fish (Adult/Juvenile)	Adult/Juvenile Fish (Any Size)	O'ahu	Same locations as listed directly above  (collections will occur at either a single or across multiple locations listed above)
973	<b>Kuhlia sandvicensis</b>   <b>aholehole</b>   <b>Kuhlia sandvicensis</b>	5	Fish (Adult/Juvenile)	Adult/Juvenile Fish (Any Size)	O'ahu	Same locations as listed directly above  (collections will occur at either a single or across multiple locations listed above)
7	<b>Mugil cephalus</b>   <b>Striped mullet (AFS; Hoover, 1993, 2003; Randall, 1996a), Flathead mullet (FAO), Sea mullet, Gray mullet (Yamamoto &amp; Tagawa, 2000; Hoover, 2003)   `Ama`ama   Mugil cephalus</b>	20	Fish (Adult/Juvenile)	Adult/Juvenile Fish (Any Size)	O'ahu	Same locations as listed directly above  (collections will occur at either a single or across multiple locations listed above)

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608	<b>Polydactylus sexfilis</b>   <b>Moi (Hoover, 1993, 2003; Randall, 1996), Moi-li`i (juveniles) (Gosline &amp; Brock, 1960), Threadfin (Hoover, 1993; DLNR), Six-feeler threadfin (Hoover, 1993), Six-fingered threadfin (Randall et al., 1997a; Randall, 1996a), Kingfish (Hoover, 2003)   moi   Polydactylus sexfilis</b>	10	Fish (Adult/Juvenile)	Adult/Juvenile Fish (Any Size)	O'ahu	400-Kewalo Basin Park-303 409-Kaalawai (Kaikoos) Beach-303 409-Blackpoint-303 409-Kahala beach-303 400-Waikiki/Diamond Head Shoreline FMA-303* 400-Ala Wai Boat Harbor-303 409-Wailupe Beach Park (Maunalua Bay)-303 409-Kawaikui Beach park-303 409-Koko marina-303 409-Paiko Lagoon (Beach) (Maunalua Bay)-303 409-Portlock (Maunalua Bay)-303 409-Allen Davis Beach-303 408-Makapu'u Beach Park-302 406-Kualoa Beach park-302 406-Kaaawa-301  (collections will occur at either a single or across multiple locations listed above)	
6227	Myrichthys magnificus   Magnificent snake eel (Hoover, 1993, 2003; Randall, 1996a), Hawaiian spotted snake eel   Pahi-la`au   Myrichthys magnificus	1	Fish (Adult/Juvenile)	Adult/Juvenile Fish (Any Size)	O'ahu	Same locations as listed directly above  (collections will occur at either a single or across multiple locations listed above)	
5837	Dactyloptena orientalis   Pinao (Hoover, 1993, 2003), Oriental helmet gurnard (FAO), Helmet gurnard (Hoover, 1993, 2003; Randall, 1996a), Flying gurnard (Hoover, 1993, 2003)   Loloa`u   Dactyloptena orientalis	2	Fish (Adult/Juvenile)	Adult/Juvenile Fish (Any Size)	O'ahu	Same locations as listed directly above  (collections will occur at either a single or across multiple locations listed above)	
609	Sphyræna barracuda   Great barracuda (AFS; FAO; Hoover, 1993; Randall, 1996a), Barracuda (DLNR)   Kaku   Sphyræna barracuda	2	Fish (Adult/Juvenile)	Adult/Juvenile Fish (Any Size)	O'ahu	Same locations as listed directly above  (collections will occur at either a single or across multiple locations listed above)	

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5551	Antennarius commerson   Commerson's frogfish (Hoover, 1993, 2003; Randall, 1996a), Giant frogfish (Hoover, 1993, 2003)	3	Fish (Adult/Juvenile)	Adult/Juvenile Fish (Any Size)	O'ahu	400-Kewalo Basin Park-303 409-Kaalawai (Kaikoos) Beach-303 409-Blackpoint-303 409-Kahala beach-303 400-Waikiki/Diamond Head Shoreline FMA-303* 400-Ala Wai Boat Harbor-303 409-Wailupe Beach Park (Maunalua Bay)-303 409-Kawaikui Beach park-303 409-Koko marina-303 409-Paiko Lagoon (Beach) (Maunalua Bay)-303 409-Portlock (Maunalua Bay)-303 409-Allen Davis Beach-303 408-Makapu'u Beach Park-302 406-Kualoa Beach park-302 406-Kaaawa-301  (collections will occur at either a single or across multiple locations listed above)	
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*Damselfish*

5512	Abudefduf sordidus   Blackspot sergeant; spot pom; Chaetodon sordidus   Kupipi   Abudefduf sordidus	15	Fish (Adult/Juvenile)	Adult/Juvenile Fish (Any Size)	O'ahu	Same locations as listed directly above  (collections will occur at either a single or across multiple locations listed above)	
6356	Plectroglyphidodon imparipennis   Brighteye damselfish   Plectroglyphidodon imparipennis	25	Fish (Adult/Juvenile)	Adult/Juvenile Fish (Any Size)	O'ahu	Same locations as listed directly above  (collections will occur at either a single or across multiple locations listed above)	Note: A total of 25 fish will be collected across a mix of various species of damsel listed (Plectroglyphidodon, Stegastes, Dascyllus and Chromis spp.)
6357	Plectroglyphidodon johnstonianus   Blue-eye damselfish (Hoover, 1993, 2003; Randall, 1996a), Johnston damselfish (Hoover, 1993; Randall et al., 1997a), Johnston Island damselfish (Hoover, 2003)   Plectroglyphidodon johnstonianus	25	Fish (Adult/Juvenile)	Adult/Juvenile Fish (Any Size)	O'ahu	Same locations as listed directly above  (collections will occur at either a single or across multiple locations listed above)	Note: A total of 25 fish will be collected across a mix of various species of damsel listed (Plectroglyphidodon, Stegastes, Dascyllus and Chromis spp.)

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11551	Stegastes marginatus   Hawaiian Gregory   Stegastes marginatus   Updated Name: Plectroglyphidodon marginatus	25	Fish (Adult/Juvenile)	Adult/Juvenile Fish (Any Size)	O'ahu	400-Kewalo Basin Park-303 409-Kaalawai (Kaikoos) Beach-303 409-Blackpoint-303 409-Kahala beach-303 400-Waikiki/Diamond Head Shoreline FMA-303* 400-Ala Wai Boat Harbor-303 409-Wailupe Beach Park (Maunalua Bay)-303 409-Kawaikui Beach park-303 409-Koko marina-303 409-Paiko Lagoon (Beach) (Maunalua Bay)-303 409-Portlock (Maunalua Bay)-303 409-Allen Davis Beach-303 408-Makapu'u Beach Park-302 406-Kualoa Beach park-302 406-Kaaawa-301  (collections will occur at either a single or across multiple locations listed above)	Note: A total of 25 fish will be collected across a mix of various species of damsel listed (Plectroglyphidodon, Stegastes, Dascyllus and Chromis spp.)
6528	Stegastes fasciolatus   Pacific gregory   Stegastes fasciolatus	25	Fish (Adult/Juvenile)	Adult/Juvenile Fish (Any Size)	O'ahu	Same locations as listed directly above  (collections will occur at either a single or across multiple locations listed above)	Note: A total of 25 fish will be collected across a mix of various species of damsel listed (Plectroglyphidodon, Stegastes, Dascyllus and Chromis spp.)
5840	Dascyllus albisella   Hawaiian dascyllus (AFS; Randall, 1996a; Hoover, 2003), Hawaiian domino (Hoover, 1993), Hawaiian domino damselfish (Hoover, 2003), Onespot damselfish (Hoover, 1993)   `Alo`ilo`i   Dascyllus albisella	25	Fish (Adult/Juvenile)	Adult/Juvenile Fish (Any Size)	O'ahu	Same locations as listed directly above  (collections will occur at either a single or across multiple locations listed above)	Note: A total of 25 fish will be collected across a mix of various species of damsel listed (Plectroglyphidodon, Stegastes, Dascyllus and Chromis spp.)
5787	Chromis hanui   Chocolate-dip chromis (Hoover, 1993, 2003; Randall, 1996a), Hawaiian bicolor chromis   Chromis hanui	25	Fish (Adult/Juvenile)	Adult/Juvenile Fish (Any Size)	O'ahu	Same locations as listed directly above  (collections will occur at either a single or across multiple locations listed above)	Note: A total of 25 fish will be collected across a mix of various species of damsel listed (Plectroglyphidodon, Stegastes, Dascyllus and Chromis spp.)

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5786	Chromis agilis   Agile chromis (Hoover, 1993, 2003; Randall et al., 1997a; Randall, 1996a), Reef chromis (Hoover, 1993, 2003), Bronze reef chromis (Myers, 1999), Rusty chromis   Chromis agilis	25	Fish (Adult/Juvenile)	Adult/Juvenile Fish (Any Size)	O'ahu	400-Kewalo Basin Park-303 409-Kaalawai (Kaikoos) Beach-303 409-Blackpoint-303 409-Kahala beach-303 400-Waikiki/Diamond Head Shoreline FMA-303* 400-Ala Wai Boat Harbor-303 409-Wailupe Beach Park (Maunalua Bay)-303 409-Kawaikui Beach park-303 409-Koko marina-303 409-Paiko Lagoon (Beach) (Maunalua Bay)-303 409-Portlock (Maunalua Bay)-303 409-Allen Davis Beach-303 408-Makapu'u Beach Park-302 406-Kualoa Beach park-302 406-Kaaawa-301  (collections will occur at either a single or across multiple locations listed above)	Note: A total of 25 fish will be collected across a mix of various species of damsel listed (Plectroglyphidodon, Stegastes, Dascyllus and Chromis spp.)
5789	Chromis ovalis   Oval chromis (Hoover, 1993, 2003; Randall, 1996a), Hawaiian chromis   Chromis ovalis	25	Fish (Adult/Juvenile)	Adult/Juvenile Fish (Any Size)	O'ahu	Same locations as listed directly above  (collections will occur at either a single or across multiple locations listed above)	Note: A total of 25 fish will be collected across a mix of various species of damsel listed (Plectroglyphidodon, Stegastes, Dascyllus and Chromis spp.)
5791	Chromis vanderbilti   Blackfin chromis (Hoover, 1993, 2003; Randall, 1996a), Vanderbilt's chromis (Randall et al., 1997a; Myers, 1999)   Chromis vanderbilti   Updated name: Pycnchromis vanderbilti	25	Fish (Adult/Juvenile)	Adult/Juvenile Fish (Any Size)	O'ahu	Same locations as listed directly above  (collections will occur at either a single or across multiple locations listed above)	Note: A total of 25 fish will be collected across a mix of various species of damsel listed (Plectroglyphidodon, Stegastes, Dascyllus and Chromis spp.)
<i>Goatfish</i>							
6216	<b>Mulloidichthys flavolineatus</b>   <b>Yellowstripe goatfish (AFS; Randall, 1996a), White goatfish (Hoover, 1993, 2003)   Weke`a   Mulloidichthys flavolineatus</b>	15	Fish (Adult/Juvenile)	Adult/Juvenile Fish (Any Size)	O'ahu	Same locations as listed directly above  (collections will occur at either a single or across multiple locations listed above)	Note: A total of 15 fish will be collected across a mix of various species of goatfish listed (Mulloidichthys and Upeneus spp.)
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6218	Mulloidichthys vanicolensis   Weke, Yellowfin goatfish (AFS; Hoover, 1993, 2003; Randall, 1996a), Red goat fish (DLNR)   Weke-`ula   Mulloidichthys vanicolensis	15	Fish (Adult/Juvenile)	Adult/Juvenile Fish (Any Size)	O'ahu	400-Kewalo Basin Park-303 409-Kaalawai (Kaikoos) Beach-303 409-Blackpoint-303 409-Kahala beach-303 400-Waikiki/Diamond Head Shoreline FMA-303* 400-Ala Wai Boat Harbor-303 409-Wailupe Beach Park (Maunalua Bay)-303 409-Kawaikui Beach park-303 409-Koko marina-303 409-Paiko Lagoon (Beach) (Maunalua Bay)-303 409-Portlock (Maunalua Bay)-303 409-Allen Davis Beach-303 408-Makapu'u Beach Park-302 406-Kualoa Beach park-302 406-Kaaawa-301  (collections will occur at either a single or across multiple locations listed above)	Note: A total of 15 fish will be collected across a mix of various species of goatfish listed (Mulloidichthys and Upeneus spp.)
11565	Upeneus taeniopterus   Nightmare weke   Upeneus taeniopterus	15	Fish (Adult/Juvenile)	Adult/Juvenile Fish (Any Size)	O'ahu	Same locations as listed directly above  (collections will occur at either a single or across multiple locations listed above)	Note: A total of 15 fish will be collected across a mix of various species of goatfish listed (Mulloidichthys and Upeneus spp.)
6329	<b>Parupeneus porphyreus</b>   <b>Whitesaddle goatfish</b> (AFS; Hoover, 1993, 2003; Randall, 1996a), <b>Red goat fish</b> (DLNR)   <b>Kumu</b>   <b>Parupeneus porphyreus</b>	1	Fish (Adult/Juvenile)	Adult/Juvenile Fish (Any Size)	O'ahu	Same locations as listed directly above  (collections will occur at either a single or across multiple locations listed above)	
6327	<b>Parupeneus multifasciatus</b>   <b>Manybar goatfish</b> (AFS; Hoover, 1993, 2003; Randall, 1996a), <b>Multibarred goatfish</b> (Myers, 1999)   <b>Moano</b>   <b>Parupeneus multifasciatus</b>	3	Fish (Adult/Juvenile)	Adult/Juvenile Fish (Any Size)	O'ahu	Same locations as listed directly above  (collections will occur at either a single or across multiple locations listed above)	

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<i>Jacks/trevally/ulua</i>							
603	<b>Caranx ignobilis   Giant trevally (AFS; FAO; Hoover, 1993, 2003; Randall, 1996a), White ulua (Hoover, 1993, 2003), Giant ulua (Hoover, 1993, 2003), Black ulua (used by fishermen for dark individuals, which sometimes creates confusion with C. lugubris, below)   Ulua aukea   Caranx ignobilis</b>	5	Fish (Adult/Juvenile)	Adult/Juvenile Fish (Any Size)	O'ahu	400-Kewalo Basin Park-303 409-Kaalawai (Kaikoos) Beach-303 409-Blackpoint-303 409-Kahala beach-303 400-Waikiki/Diamond Head Shoreline FMA-303* 400-Ala Wai Boat Harbor-303 409-Wailupe Beach Park (Maunalua Bay)-303 409-Kawaikui Beach park-303 409-Koko marina-303 409-Paiko Lagoon (Beach) (Maunalua Bay)-303 409-Portlock (Maunalua Bay)-303 409-Allen Davis Beach-303 408-Makapu'u Beach Park-302 406-Kualoa Beach park-302 406-Kaaawa-301  (collections will occur at either a single or across multiple locations listed above)	Note: A total of 5 fish will be collected across a mix of various species of goatfish listed (Caranx spp.)
604	<b>Caranx melampygus   Bluefin trevally (AFS; FAO; Hoover, 1993, 2003; Randall, 1996a), Blue crevally (Gosline &amp; Brock, 1960; DLNR), Blue ulua (Hoover, 1993, 2003), Ulua omilu (DLNR), Hoshi (DLNR)   `omilu   Caranx melampygus</b>	5	Fish (Adult/Juvenile)	Adult/Juvenile Fish (Any Size)	O'ahu	Same locations as listed directly above  (collections will occur at either a single or across multiple locations listed above)	Note: A total of 5 fish will be collected across a mix of various species of goatfish listed (Caranx spp.)
<i>Surgeonfish/tangs/unicornfish</i>							
6244	<b>Naso lituratus   Masked unicornfish (AFS), Orangespine unicornfish (Hoover, 1993, 2003; Randall, 1996a), Naso tang (Hoover, 1993, 2003), Clown tang (DLNR)   `Umaumalei   Naso lituratus</b>	3	Fish (Adult/Juvenile)	Adult/Juvenile Fish (Any Size)	O'ahu	Same locations as listed directly above  (collections will occur at either a single or across multiple locations listed above)	Note: A total of 3 fish will be collected across a mix of various species of surgeonfish listed (Naso spp.)
6243	<b>Naso hexacanthus   Sleek unicornfish (Hoover, 1993, 2003; Randall, 1996a), Blacktongue unicornfish (Myers, 1999)   Kala lolo   Naso hexacanthus</b>	3	Fish (Adult/Juvenile)	Adult/Juvenile Fish (Any Size)	O'ahu	Same locations as listed directly above  (collections will occur at either a single or across multiple locations listed above)	Note: A total of 3 fish will be collected across a mix of various species of surgeonfish listed (Naso spp.)

6246	<b>Naso unicornis</b>   <b>Bluespine unicornfish</b>   <b>Kala</b>   <b>Naso unicornis</b>	3	Fish (Adult/Juvenile)	Adult/Juvenile Fish (Any Size)	O'ahu	400-Kewalo Basin Park-303 409-Kaalawai (Kaikoos) Beach-303 409-Blackpoint-303 409-Kahala beach-303 400-Waikiki/Diamond Head Shoreline FMA-303* 400-Ala Wai Boat Harbor-303 409-Wailupe Beach Park (Maunaloa Bay)-303 409-Kawaikui Beach park-303 409-Koko marina-303 409-Paiko Lagoon (Beach) (Maunaloa Bay)-303 409-Portlock (Maunaloa Bay)-303 409-Allen Davis Beach-303 408-Makapu'u Beach Park-302 406-Kualoa Beach park-302 406-Kaaawa-301  (collections will occur at either a single or across multiple locations listed above)	Note: A total of 3 fish will be collected across a mix of various species of surgeonfish listed (Naso spp.)
5820	<b>Ctenochaetus strigosus</b>   <b>Goldring surgeonfish</b> (AFS; Hoover, 1993, 2003; Randall, 1996a), <b>Goldring bristletooth</b> (Randall et al., 1997a; Myers, 1999; Hoover, 2003)   <b>Kole</b>   <b>Ctenochaetus strigosus</b>	8	Fish (Adult/Juvenile)	Adult/Juvenile Fish (Any Size)	O'ahu	Same locations as listed directly above  (collections will occur at either a single or across multiple locations listed above)	Note: A total of 40 fish will be collected across a mix of various species of surgeonfish listed (Acanthurus spp.)
101	<b>Acanthurus triostegus</b>   <b>Convict tang</b> (AFS; Hoover, 1993, 2003), <b>Convict surgeonfish</b> (Randall, 1996a)   <b>Manini</b>   <b>Acanthurus triostegus sandvicensis</b>	40	Fish (Adult/Juvenile)	Adult/Juvenile Fish (Any Size)	O'ahu	Same locations as listed directly above  (collections will occur at either a single or across multiple locations listed above)	Note: A total of 40 fish will be collected across a mix of various species of surgeonfish listed (Acanthurus, Zebrasoma and Ctenochaetus spp.)
5526	<b>Acanthurus xanthopterus</b>   <b>Yellowfin surgeonfish</b>   <b>Pualu</b>   <b>Acanthurus xanthopterus</b>	40	Fish (Adult/Juvenile)	Adult/Juvenile Fish (Any Size)	O'ahu	Same locations as listed directly above  (collections will occur at either a single or across multiple locations listed above)	Note: A total of 40 fish will be collected across a mix of various species of surgeonfish listed (Acanthurus, Zebrasoma and Ctenochaetus spp.)

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110	Acanthurus dussumieri   Eyestripe surgeonfish   Palani   Acanthurus dussumieri	40	Fish (Adult/Juvenile)	Adult/Juvenile Fish (Any Size)	O'ahu	400-Kewalo Basin Park-303 409-Kaalawai (Kaikoos) Beach-303 409-Blackpoint-303 409-Kahala beach-303 400-Waikiki/Diamond Head Shoreline FMA-303* 400-Ala Wai Boat Harbor-303 409-Wailupe Beach Park (Maunalua Bay)-303 409-Kawaikui Beach park-303 409-Koko marina-303 409-Paiko Lagoon (Beach) (Maunalua Bay)-303 409-Portlock (Maunalua Bay)-303 409-Allen Davis Beach-303 408-Makapu'u Beach Park-302 406-Kualoa Beach park-302 406-Kaaawa-301  (collections will occur at either a single or across multiple locations listed above)	Note: A total of 40 fish will be collected across a mix of various species of surgeonfish listed (Acanthurus, Zebrasoma and Ctenochaetus spp.)
112	Acanthurus blochii   Ringtail surgeonfish   Pualu   Acanthurus blochii	40	Fish (Adult/Juvenile)	Adult/Juvenile Fish (Any Size)	O'ahu	Same locations as listed directly above  (collections will occur at either a single or across multiple locations listed above)	Note: A total of 40 fish will be collected across a mix of various species of surgeonfish listed (Acanthurus, Zebrasoma and Ctenochaetus spp.)
5515	<b>Acanthurus achilles</b>   <b>Redtail surgeonfish (AFS), Achilles tang (Hoover, 1993, 2003; Randall, 1996a)</b>   <b>Paku`iku`i</b>   <b>Acanthurus achilles</b>	40	Fish (Adult/Juvenile)	Adult/Juvenile Fish (Any Size)	O'ahu	Same locations as listed directly above  (collections will occur at either a single or across multiple locations listed above)	Note: A total of 40 fish will be collected across a mix of various species of surgeonfish listed (Acanthurus, Zebrasoma and Ctenochaetus spp.);  Collections of <i>Acanthurus achilles</i> will be distributed over greater area
5516	Acanthurus guttatus   Whitespotted surgeonfish (AFS; Hoover, 1993, 2003; Randall, 1996a), Mustard tang (Hoover, 1993, 2003)   `Api   Acanthurus guttatus	40	Fish (Adult/Juvenile)	Adult/Juvenile Fish (Any Size)	O'ahu	Same locations as listed directly above  (collections will occur at either a single or across multiple locations listed above)	Note: A total of 40 fish will be collected across a mix of various species of surgeonfish listed (Acanthurus, Zebrasoma and Ctenochaetus spp.)

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5517	Acanthurus leucopareius   Whitebar surgeonfish   Maikoiko   Acanthurus leucopareius	40	Fish (Adult/Juvenile)	Adult/Juvenile Fish (Any Size)	O'ahu	400-Kewalo Basin Park-303 409-Kaalawai (Kaikoos) Beach-303 409-Blackpoint-303 409-Kahala beach-303 400-Waikiki/Diamond Head Shoreline FMA-303* 400-Ala Wai Boat Harbor-303 409-Wailupe Beach Park (Maunalua Bay)-303 409-Kawaikui Beach park-303 409-Koko marina-303 409-Paiko Lagoon (Beach) (Maunalua Bay)-303 409-Portlock (Maunalua Bay)-303 409-Allen Davis Beach-303 408-Makapu'u Beach Park-302 406-Kualoa Beach park-302 406-Kaaawa-301  (collections will occur at either a single or across multiple locations listed above)	Note: A total of 40 fish will be collected across a mix of various species of surgeonfish listed (Acanthurus, Zebrasoma and Ctenochaetus spp.)
5524	Acanthurus olivaceus   Orangespot surgeonfish (AFS), Orangeband surgeonfish (Hoover 1993, 2003; Randall, 1996a), Orange spot tang (DLNR)   Na`ena`e   Acanthurus olivaceus	40	Fish (Adult/Juvenile)	Adult/Juvenile Fish (Any Size)	O'ahu	Same locations as listed directly above  (collections will occur at either a single or across multiple locations listed above)	Note: A total of 40 fish will be collected across a mix of various species of surgeonfish listed (Acanthurus, Zebrasoma and Ctenochaetus spp.)
5522	Acanthurus nigrofuscus   Brown surgeonfish (Hoover, 1993, 2003; Randall, 1996a), Lavender tang (Hoover, 1993, 2003)   Ma`i`i`i   Acanthurus nigrofuscus	40	Fish (Adult/Juvenile)	Adult/Juvenile Fish (Any Size)	O'ahu	Same locations as listed directly above  (collections will occur at either a single or across multiple locations listed above)	Note: A total of 40 fish will be collected across a mix of various species of surgeonfish listed (Acanthurus, Zebrasoma and Ctenochaetus spp.)
5521	Acanthurus nigricans   Whitecheek surgeonfish (AFS; Hoover, 1993, 2003; Randall et al., 1997a), Goldrim surgeonfish (Hoover, 1993, 2003; Randall, 1996a)   Acanthurus nigricans	40	Fish (Adult/Juvenile)	Adult/Juvenile Fish (Any Size)	O'ahu	Same locations as listed directly above  (collections will occur at either a single or across multiple locations listed above)	Note: A total of 40 fish will be collected across a mix of various species of surgeonfish listed (Acanthurus, Zebrasoma and Ctenochaetus spp.)

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6666	Zebrasoma veliferum   Sailfin tang   Zebrasoma veliferum	40	Fish (Adult/Juvenile)	Adult/Juvenile Fish (Any Size)	O'ahu	400-Kewalo Basin Park-303 409-Kaalawai (Kaikoos) Beach-303 409-Blackpoint-303 409-Kahala beach-303 400-Waikiki/Diamond Head Shoreline FMA-303* 400-Ala Wai Boat Harbor-303 409-Wailupe Beach Park (Maunalua Bay)-303 409-Kawaikui Beach park-303 409-Koko marina-303 409-Paiko Lagoon (Beach) (Maunalua Bay)-303 409-Portlock (Maunalua Bay)-303 409-Allen Davis Beach-303 408-Makapu'u Beach Park-302 406-Kualoa Beach park-302 406-Kaaawa-301  (collections will occur at either a single or across multiple locations listed above)	Note: A total of 40 fish will be collected across a mix of various species of surgeonfish listed (Acanthurus, Zebrasoma and Ctenochaetus spp.)
5819	Ctenochaetus hawaiiensis   Black surgeonfish (AFS; Hoover, 1993, 2003; Randall, 1996a), Hawaiian surgeonfish (Myers, 1999), Chevron tang (juveniles) (Hoover, 1993, 2003)   Ctenochaetus hawaiiensis	40	Fish (Adult/Juvenile)	Adult/Juvenile Fish (Any Size)	O'ahu	Same locations as listed directly above  (collections will occur at either a single or across multiple locations listed above)	Note: A total of 40 fish will be collected across a mix of various species of surgeonfish listed (Acanthurus, Zebrasoma and Ctenochaetus spp.)

*Groupers & Anthias*

5736	Cephalopholis argus   Roi (Hoover, 1993, 2003; Randall, 1996a), Bluespotted grouper (AFS), Peacock hind (FAO), Peacock grouper (Hoover, 1993, 2003; Randall, 1996a), Peacock rockcod (Randall et al., 1997a)   Cephalopholis argus	10	Fish (Adult/Juvenile)	Adult/Juvenile Fish (Any Size)	O'ahu	Same locations as listed directly above  (collections will occur at either a single or across multiple locations listed above)	Note: A total of 10 fish will be collected across a mix of various species of grouper or anthias listed (Cephalopholis, Epinephelus, Pseudanthias, Holanthias spp..)
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5921	Epinephelus quernus   Hawaiian grouper (FAO; Randall, 1996a), Hawaiian sea bass, Hawaiian black grouper (Hoover, 1993, 2003), Hapuupuu (DLNR), Sea bass (DLNR)   Hapu`u   Epinephelus quernus	10	Fish (Adult/Juvenile)	Adult/Juvenile Fish (Any Size)	O'ahu	400-Kewalo Basin Park-303 409-Kaalawai (Kaikoos) Beach-303 409-Blackpoint-303 409-Kahala beach-303 400-Waikiki/Diamond Head Shoreline FMA-303* 400-Ala Wai Boat Harbor-303 409-Wailupe Beach Park (Maunaloa Bay)-303 409-Kawaikui Beach park-303 409-Koko marina-303 409-Paiko Lagoon (Beach) (Maunaloa Bay)-303 409-Portlock (Maunaloa Bay)-303 409-Allen Davis Beach-303 408-Makapu'u Beach Park-302 406-Kualoa Beach park-302 406-Kaaawa-301  (collections will occur at either a single or across multiple locations listed above)	Note: A total of 10 fish will be collected across a mix of various species of grouper or anthias listed (Cephalopholis, Epinephelus, Pseudanthias, Holanthias spp..)
6400	Pseudanthias thompsoni   Hawaiian anthias (Hoover, 1993), Thompson's anthias (Randall, 1996a; Hoover, 2003)   Pseudanthias thompsoni	10	Fish (Adult/Juvenile)	Adult/Juvenile Fish (Any Size)	O'ahu	Same locations as listed directly above  (collections will occur at either a single or across multiple locations listed above)	Note: A total of 10 fish will be collected across a mix of various species of grouper or anthias listed (Cephalopholis, Epinephelus, Pseudanthias, Holanthias spp..)
6278	Odontanthias fuscipinnis   Hawaiian deep anthias (Hoover, 1994, 203), Yellow anthias (Randall, 1996a)   Odontanthias fuscipinnis used to be Holanthias	10	Fish (Adult/Juvenile)	Adult/Juvenile Fish (Any Size)	O'ahu	Same locations as listed directly above  (collections will occur at either a single or across multiple locations listed above)	Note: A total of 10 fish will be collected across a mix of various species of grouper or anthias listed (Cephalopholis, Epinephelus, Pseudanthias, Holanthias spp..)

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<i>Wrasse</i>							
5544	Anampses chrysocephalus   Psychedelic wrasse (Hoover, 1993, 2003; Randall, 1996a), Redtail wrasse (Hoover, 1993, 2003), Psych head (Hoover, 1993, 2003)   Anampses chrysocephalus	25	Fish (Adult/Juvenile)	Adult/Juvenile Fish (Any Size)	O'ahu	400-Kewalo Basin Park-303 409-Kaalawai (Kaikoos) Beach-303 409-Blackpoint-303 409-Kahala beach-303 400-Waikiki/Diamond Head Shoreline FMA-303* 400-Ala Wai Boat Harbor-303 409-Wailupe Beach Park (Maunaloa Bay)-303 409-Kawaikui Beach park-303 409-Koko marina-303 409-Paiko Lagoon (Beach) (Maunaloa Bay)-303 409-Portlock (Maunaloa Bay)-303 409-Allen Davis Beach-303 408-Makapu'u Beach Park-302 406-Kualoa Beach park-302 406-Kaaawa-301  (collections will occur at either a single or across multiple locations listed above)	Note: A total of 25 fish will be collected across a mix of various species of wrasse listed (Anampses, Bodianus, Thalassoma, Coris, Cheilio, Gomphosus, Cirrhilabrus, Iniistius, Labroides, Halichoeres & Stethojulis spp..)
5658	Bodianus albotaeniatus   Hawaiian hogfish (Hoover, 1993, 2003; Randall, 1996a), Spot wrasse (DLNR), Table boss   A`awa   Bodianus bilunulatus albotaeniatus	25	Fish (Adult/Juvenile)	Adult/Juvenile Fish (Any Size)	O'ahu	Same locations as listed directly above  (collections will occur at either a single or across multiple locations listed above)	Note: A total of 25 fish will be collected across a mix of various species of wrasse listed (Anampses, Bodianus, Thalassoma, Coris, Cheilio, Gomphosus, Cirrhilabrus, Iniistius, Labroides, Halichoeres & Stethojulis spp..)
6597	Thalassoma trilobatum   Christmas wrasse (Hoover, 1993, 2003; Randall, 1996a), Ladder wrasse (Randall et al., 1997a)   `Awela   Thalassoma trilobatum	25	Fish (Adult/Juvenile)	Adult/Juvenile Fish (Any Size)	O'ahu	Same locations as listed directly above  (collections will occur at either a single or across multiple locations listed above)	Note: A total of 25 fish will be collected across a mix of various species of wrasse listed (Anampses, Bodianus, Thalassoma, Coris, Cheilio, Gomphosus, Cirrhilabrus, Iniistius, Labroides, Halichoeres & Stethojulis spp..)
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5811	Coris gaimard   Yellowtail coris (Hoover, 1993, 2003; Randall, 1996a), Clown wrasse (juveniles), Rainbow wrasse (Hoover, 1993, 2003)   Hinalea `aki-lolo   Coris gaimard	25	Fish (Adult/Juvenile)	Adult/Juvenile Fish (Any Size)	O'ahu	400-Kewalo Basin Park-303 409-Kaalawai (Kaikoos) Beach-303 409-Blackpoint-303 409-Kahala beach-303 400-Waikiki/Diamond Head Shoreline FMA-303* 400-Ala Wai Boat Harbor-303 409-Wailupe Beach Park (Maunalua Bay)-303 409-Kawaikui Beach park-303 409-Koko marina-303 409-Paiko Lagoon (Beach) (Maunalua Bay)-303 409-Portlock (Maunalua Bay)-303 409-Allen Davis Beach-303 408-Makapu'u Beach Park-302 406-Kualoa Beach park-302 406-Kaaawa-301  (collections will occur at either a single or across multiple locations listed above)	Note: A total of 25 fish will be collected across a mix of various species of wrasse listed (Anampses, Bodianus, Thalassoma, Coris, Cheilio, Gomphosus, Cirrhilabrus, Iniistius, Labroides, Halichoeres & Stethojulis spp..)
6007	Gomphosus varius   Bird wrasse   Hinalea `iwi   Gomphosus varius	25	Fish (Adult/Juvenile)	Adult/Juvenile Fish (Any Size)	O'ahu	Same locations as listed directly above  (collections will occur at either a single or across multiple locations listed above)	Note: A total of 25 fish will be collected across a mix of various species of wrasse listed (Anampses, Bodianus, Thalassoma, Coris, Cheilio, Gomphosus, Cirrhilabrus, Iniistius, Labroides, Halichoeres & Stethojulis spp..)
5769	Cheilio inermis   Cigar wrasse (Hoover, 1993, 2003; Randall, 1996a), Mongoose fish (DLNR)   Kupou   Cheilio inermis	25	Fish (Adult/Juvenile)	Adult/Juvenile Fish (Any Size)	O'ahu	Same locations as listed directly above  (collections will occur at either a single or across multiple locations listed above)	Note: A total of 25 fish will be collected across a mix of various species of wrasse listed (Anampses, Bodianus, Thalassoma, Coris, Cheilio, Gomphosus, Cirrhilabrus, Iniistius, Labroides, Halichoeres & Stethojulis spp..)

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6094	Iniistius pavo   Peacock razorfish, Peacock wrasse, Nabeta (DLNR), Indianfish, Blue razorfish (Myers, 1999), Pavo razorfish, Peacock razorfish (Hoover, 1993, 2003; Randall, 1996a), Black Nabeta, Black razorfish   Lae-nihi   Iniistius pavo, Xyrichtys pavo (XYPA)	25	Fish (Adult/Juvenile)	Adult/Juvenile Fish (Any Size)	O'ahu	400-Kewalo Basin Park-303 409-Kaalawai (Kaikoos) Beach-303 409-Blackpoint-303 409-Kahala beach-303 400-Waikiki/Diamond Head Shoreline FMA-303* 400-Ala Wai Boat Harbor-303 409-Wailupe Beach Park (Maunalua Bay)-303 409-Kawaikui Beach park-303 409-Koko marina-303 409-Paiko Lagoon (Beach) (Maunalua Bay)-303 409-Portlock (Maunalua Bay)-303 409-Allen Davis Beach-303 408-Makapu'u Beach Park-302 406-Kualoa Beach park-302 406-Kaaawa-301  (collections will occur at either a single or across multiple locations listed above)	Note: A total of 25 fish will be collected across a mix of various species of wrasse listed (Anampses, Bodianus, Thalassoma, Coris, Cheilio, Gomphosus, Cirrhilabrus, Iniistius, Labroides, Halichoeres & Stethojulis spp..)
6113	<b>Labroides phthirophagus   Hawaiian cleaner wrasse   Labroides phthirophagus</b>	25	Fish (Adult/Juvenile)	Adult/Juvenile Fish (Any Size)	O'ahu	Same locations as listed directly above  (collections will occur at either a single or across multiple locations listed above)	Note: A total of 25 fish will be collected across a mix of various species of wrasse listed (Anampses, Bodianus, Thalassoma, Coris, Cheilio, Gomphosus, Cirrhilabrus, Iniistius, Labroides, Halichoeres & Stethojulis spp..)
6043	Halichoeres ornatissimus   Ornate wrasse   Ia`o   Halichoeres ornatissimus	25	Fish (Adult/Juvenile)	Adult/Juvenile Fish (Any Size)	O'ahu	Same locations as listed directly above  (collections will occur at either a single or across multiple locations listed above)	Note: A total of 25 fish will be collected across a mix of various species of wrasse listed (Anampses, Bodianus, Thalassoma, Coris, Cheilio, Gomphosus, Cirrhilabrus, Iniistius, Labroides, Halichoeres & Stethojulis spp..)

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6537	Stethojulis balteata   Belted wrasse (Hoover, 1993, 2003; Randall, 1996a), Orange-bar wrasse (Hoover, 1993, 2003)   `Omaka   Stethojulis balteata	25	Fish (Adult/Juvenile)	Adult/Juvenile Fish (Any Size)	O'ahu	400-Kewalo Basin Park-303 409-Kaalawai (Kaikoos) Beach-303 409-Blackpoint-303 409-Kahala beach-303 400-Waikiki/Diamond Head Shoreline FMA-303* 400-Ala Wai Boat Harbor-303 409-Wailupe Beach Park (Maunalua Bay)-303 409-Kawaikui Beach park-303 409-Koko marina-303 409-Paiko Lagoon (Beach) (Maunalua Bay)-303 409-Portlock (Maunalua Bay)-303 409-Allen Davis Beach-303 408-Makapu'u Beach Park-302 406-Kualoa Beach park-302 406-Kaaawa-301  (collections will occur at either a single or across multiple locations listed above)	Note: A total of 25 fish will be collected across a mix of various species of wrasse listed (Anampses, Bodianus, Thalassoma, Coris, Cheilio, Gomphosus, Cirrhilabrus, Iniistius, Labroides, Halichoeres & Stethojulis spp..)
6593	Thalassoma duperrey   Saddle wrasse   Hinalea lau-wili (Hoover, 1993, 2003; Randall, 1996a), A`ala`ihi (Gosline & Brock, 1960),   Thalassoma duperrey	25	Fish (Adult/Juvenile)	Adult/Juvenile Fish (Any Size)	O'ahu	Same locations as listed directly above  (collections will occur at either a single or across multiple locations listed above)	Note: A total of 25 fish will be collected across a mix of various species of wrasse listed (Anampses, Bodianus, Thalassoma, Coris, Cheilio, Gomphosus, Cirrhilabrus, Iniistius, Labroides, Halichoeres & Stethojulis spp..)
<i>Butterflyfish</i>							
5985	Forcipiger longirostris   Longnose butterflyfish (AFS; Randall et al., 1997a; Randall, 1996a; Hoover, 2003; DLNR), Rare longnose butterflyfish (Hoover, 1993, 2003), Big longnose butterflyfish (Hoover, 1993, 2003), Lauwiliwili (DLNR)   Lau-wiliwili-nukunuku-oï`oi   Forcipiger longirostris	20	Fish (Adult/Juvenile)	Adult/Juvenile Fish (Any Size)	O'ahu	Same locations as listed directly above  (collections will occur at either a single or across multiple locations listed above)	Note: A total of 20 fish will be collected across a mix of various species of butterflyfish listed (Forcipiger & Chaetodon spp.)
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5746	Chaetodon auriga   Threadfin butterflyfish   Kikakapu   Chaetodon auriga	20	Fish (Adult/Juvenile)	Adult/Juvenile Fish (Any Size)	O'ahu	400-Kewalo Basin Park-303 409-Kaalawai (Kaikoos) Beach-303 409-Blackpoint-303 409-Kahala beach-303 400-Waikiki/Diamond Head Shoreline FMA-303* 400-Ala Wai Boat Harbor-303 409-Wailupe Beach Park (Maunalua Bay)-303 409-Kawaikui Beach park-303 409-Koko marina-303 409-Paiko Lagoon (Beach) (Maunalua Bay)-303 409-Portlock (Maunalua Bay)-303 409-Allen Davis Beach-303 408-Makapu'u Beach Park-302 406-Kualoa Beach park-302 406-Kaaawa-301  (collections will occur at either a single or across multiple locations listed above)	Note: A total of 20 fish will be collected across a mix of various species of butterflyfish listed (Forcipiger & Chaetodon spp.)
5752	Chaetodon lunula   Raccoon butterflyfish   Kikakapu   Chaetodon lunula	20	Fish (Adult/Juvenile)	Adult/Juvenile Fish (Any Size)	O'ahu	Same locations as listed directly above  (collections will occur at either a single or across multiple locations listed above)	Note: A total of 20 fish will be collected across a mix of various species of butterflyfish listed (Forcipiger & Chaetodon spp.)
5755	<b>Chaetodon ornatissimus   Ornate butterflyfish   Kikakapu   Chaetodon ornatissimus</b>	20	Fish (Adult/Juvenile)	Adult/Juvenile Fish (Any Size)	O'ahu	Same locations as listed directly above  (collections will occur at either a single or across multiple locations listed above)	Note: A total of 20 fish will be collected across a mix of various species of butterflyfish listed (Forcipiger & Chaetodon spp.)
5756	Chaetodon quadrimaculatus   Fourspot butterflyfish   Lau-hau   Chaetodon quadrimaculatus	20	Fish (Adult/Juvenile)	Adult/Juvenile Fish (Any Size)	O'ahu	Same locations as listed directly above  (collections will occur at either a single or across multiple locations listed above)	Note: A total of 20 fish will be collected across a mix of various species of butterflyfish listed (Forcipiger & Chaetodon spp.)

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<i>Flatfish/flounders</i>							
11308	Bothus sp.   Flatfish; Flounder; unknown member of a genus of flatfish (lefteye flounder)   Bothus sp.  Placeholder for Engyprosopon hawaiiensis (no code assigned yet in database)	4	Fish (Adult/Juvenile)	Adult/Juvenile Fish (Any Size)	O'ahu	400-Kewalo Basin Park-303 409-Kaalawai (Kaikoos) Beach-303 409-Blackpoint-303 409-Kahala beach-303 400-Waikiki/Diamond Head Shoreline FMA-303* 400-Ala Wai Boat Harbor-303 409-Wailupe Beach Park (Maunalua Bay)-303 409-Kawaikui Beach park-303 409-Koko marina-303 409-Paiko Lagoon (Beach) (Maunalua Bay)-303 409-Portlock (Maunalua Bay)-303 409-Allen Davis Beach-303 408-Makapu'u Beach Park-302 406-Kualoa Beach park-302 406-Kaaawa-301  (collections will occur at either a single or across multiple locations listed above)	Note: A total of 4 fish will be collected across a mix of various species of flatfish listed (Bothus and Engyprosopon spp.)
5664	Bothus mancus   Tropical flounder (AFS), Peacock flounder (Hoover, 1993, 2003), Manyray flatfish (Hoover, 1993, 2003), Flowery flounder (Randall et al., 1997a; Randall, 1996a; Myers, 1999)   Paki`i   Bothus mancus	4	Fish (Adult/Juvenile)	Adult/Juvenile Fish (Any Size)	O'ahu	Same locations as listed directly above  (collections will occur at either a single or across multiple locations listed above)	Note: A total of 4 fish will be collected across a mix of various species of flatfish listed (Bothus and Engyprosopon spp.)
5665	Bothus pantherinus   Leopard flounder (AFS), Panther flounder (Hoover, 1993; Randall et al., 1997a; Randall, 1996a)   Paki`i (Randall, 1996a), Paku (Gosline & Brock, 1960), `Ui`ui (Gosline & Brock, 1960),   Bothus pantherinus	4	Fish (Adult/Juvenile)	Adult/Juvenile Fish (Any Size)	O'ahu	Same locations as listed directly above  (collections will occur at either a single or across multiple locations listed above)	Note: A total of 4 fish will be collected across a mix of various species of flatfish listed (Bothus and Engyprosopon spp.)

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<i>Gobies</i>							
6004	Gnatholepis cauerensis   Shoulderspot goby   Gnatholepis cauerensis hawaiiensis	25	Fish (Adult/Juvenile)	Adult/Juvenile Fish (Any Size)	O'ahu	400-Kewalo Basin Park-303 409-Kaalawai (Kaikoos) Beach-303 409-Blackpoint-303 409-Kahala beach-303 400-Waikiki/Diamond Head Shoreline FMA-303* 400-Ala Wai Boat Harbor-303 409-Wailupe Beach Park (Maunalua Bay)-303 409-Kawaikui Beach park-303 409-Koko marina-303 409-Paiko Lagoon (Beach) (Maunalua Bay)-303 409-Portlock (Maunalua Bay)-303 409-Allen Davis Beach-303 408-Makapu'u Beach Park-302 406-Kualoa Beach park-302 406-Kaaawa-301  (collections will occur at either a single or across multiple locations listed above)	Note: A total of 25 fish will be collected across a mix of various species of gobies listed (Gnatholepis, Gnatholepis, Opuu and Psilogobius spp.)
6003	Gnatholepis anjerensis   Eye-bar goby   Gnatholepis anjerensis	25	Fish (Adult/Juvenile)	Adult/Juvenile Fish (Any Size)	O'ahu	Same locations as listed directly above  (collections will occur at either a single or across multiple locations listed above)	Note: A total of 25 fish will be collected across a mix of various species of gobies listed (Gnatholepis, Gnatholepis, Opuu and Psilogobius spp.)
6299	Opuu nephodes   Cloudy goby   Opuu nephodes	25	Fish (Adult/Juvenile)	Adult/Juvenile Fish (Any Size)	O'ahu	Same locations as listed directly above  (collections will occur at either a single or across multiple locations listed above)	Note: A total of 25 fish will be collected across a mix of various species of gobies listed (Gnatholepis, Gnatholepis, Opuu and Psilogobius spp.)
6416	Psilogobius mainlandi   Mainland's goby (Hoover, 1993, 2003), Hawaiian shrimp goby (Randall, 1996a)   Psilogobius mainlandi	25	Fish (Adult/Juvenile)	Adult/Juvenile Fish (Any Size)	O'ahu	Same locations as listed directly above  (collections will occur at either a single or across multiple locations listed above)	Note: A total of 25 fish will be collected across a mix of various species of gobies listed (Gnatholepis, Gnatholepis, Opuu and Psilogobius spp.)

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<i>Porcupinefish</i>							
606	Diodon hystrix   Porcupinefish (AFS; Hoover, 1993, 2003; Randall, 1996a), Giant porcupinefish (Hoover, 2003)   Kokala (Hoover, 1993, 2003; Randall, 1996a), `O`opu-kawa (Gosline & Brock, 1960),   Diodon hystrix	2	Fish (Adult/Juvenile)	Adult/Juvenile Fish (Any Size)	O`ahu	400-Kewalo Basin Park-303 409-Kaalawai (Kaikoos) Beach-303 409-Blackpoint-303 409-Kahala beach-303 400-Waikiki/Diamond Head Shoreline FMA-303* 400-Ala Wai Boat Harbor-303 409-Wailupe Beach Park (Maunaloa Bay)-303 409-Kawaikui Beach park-303 409-Koko marina-303 409-Paiko Lagoon (Beach) (Maunaloa Bay)-303 409-Portlock (Maunaloa Bay)-303 409-Allen Davis Beach-303 408-Makapu'u Beach Park-302 406-Kualoa Beach park-302 406-Kaaawa-301  (collections will occur at either a single or across multiple locations listed above)	Note: A total of 2 fish will be collected across a mix of various species of porcupinefish listed (Diodon spp.)
5870	Diodon holocanthus   Balloonfish (AFS), Spiny porcupinefish (Hoover, 1993), Spiny balloonfish (Randall, 1996a; Myers, 1999, Hoover, 2003), Freckled porcupinefish (Randall et al., 1997a), Longspine porcupinefish (Hoover, 2003)   Kokala   Diodon holocanthus	2	Fish (Adult/Juvenile)	Adult/Juvenile Fish (Any Size)	O`ahu	Same locations as listed directly above  (collections will occur at either a single or across multiple locations listed above)	Note: A total of 2 fish will be collected across a mix of various species of porcupinefish listed (Diodon spp.)
<i>Snappers</i>							
619	Lutjanus kasmira   Bluestriped snapper (AFS; Hoover, 1993, 2003; Randall, 1996a), Common bluestripe snapper (FAO), Blue-lined snapper (Myers, 1999), Bluestripe seaperch (Randall et al., 1997a)   Ta`ape   Lutjanus kasmira	30	Fish (Adult/Juvenile)	Adult/Juvenile Fish (Any Size)	O`ahu	Same locations as listed directly above  (collections will occur at either a single or across multiple locations listed above)	Note: A total of 5 fish will be collected across a mix of various species of snapper listed (Lutjanus spp..)
<i>Continued on next page</i>							



618	Lutjanus fulvus   Blacktail snapper (AFS; FAO; Hoover, 1993, 2003; Randall, 1996a), Flametail snapper (Hoover, 2003), Yellow-margined seaperch (Randall et al., 1997a)   To`au   Lutjanus fulvus	30	Fish (Adult/Juvenile)	Adult/Juvenile Fish (Any Size)	O`ahu	400-Kewalo Basin Park-303 409-Kaalawai (Kaikoos) Beach-303 409-Blackpoint-303 409-Kahala beach-303 400-Waikiki/Diamond Head Shoreline FMA-303* 400-Ala Wai Boat Harbor-303 409-Wailupe Beach Park (Maunalua Bay)-303 409-Kawaikui Beach park-303 409-Koko marina-303 409-Paiko Lagoon (Beach) (Maunalua Bay)-303 409-Portlock (Maunalua Bay)-303 409-Allen Davis Beach-303 408-Makapu'u Beach Park-302 406-Kualoa Beach park-302 406-Kaaawa-301  (collections will occur at either a single or across multiple locations listed above)	Note: A total of 5 fish will be collected across a mix of various species of snapper listed (Lutjanus spp..)
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*Scorpionfish*

5847	Dendrochirus barberi   Hawaiian lionfish (AFS; Randall, 1996a), Green lionfish (Hoover, 1993, 2003)   Nohu   Dendrochirus barberi	5	Fish (Adult/Juvenile)	Adult/Juvenile Fish (Any Size)	O`ahu	Same locations as listed directly above  (collections will occur at either a single or across multiple locations listed above)	Note: A total of 30 fish will be collected across a mix of various species of scorpionfish listed (Dendrochirus, Pterois and Scorpaenopsis spp..)
6419	Pterois sphex   Hawaiian turkeyfish (AFS; Randall, 1996a; Hoover, 2003), Hawaiian lionfish (Hoover, 1993, 2003)   Nohu pinao   Pterois sphex	5	Fish (Adult/Juvenile)	Adult/Juvenile Fish (Any Size)	O`ahu	Same locations as listed directly above  (collections will occur at either a single or across multiple locations listed above)	Note: A total of 30 fish will be collected across a mix of various species of scorpionfish listed (Dendrochirus, Pterois and Scorpaenopsis spp..)
6494	Scorpaenopsis cacopsis   Titan scorpionfish (Hoover, 1993, 2003; Randall, 1996a), Uglyface scorpionfish (Hoover, 1993), Hogo (DLNR)   Nohu   Scorpaenopsis cacopsis	5	Fish (Adult/Juvenile)	Adult/Juvenile Fish (Any Size)	O`ahu	Same locations as listed directly above  (collections will occur at either a single or across multiple locations listed above)	Note: A total of 30 fish will be collected across a mix of various species of scorpionfish listed (Dendrochirus, Pterois and Scorpaenopsis spp..)

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6493	Scorpaenopsis brevifrons   Bigmouth scorpionfish (FAO), Shortnose scorpionfish (Randall, 1996a)   Scorpaenopsis brevifrons	5	Fish (Adult/Juvenile)	Adult/Juvenile Fish (Any Size)	O'ahu	400-Kewalo Basin Park-303 409-Kaalawai (Kaikoos) Beach-303 409-Blackpoint-303 409-Kahala beach-303 400-Waikiki/Diamond Head Shoreline FMA-303* 400-Ala Wai Boat Harbor-303 409-Wailupe Beach Park (Maunalua Bay)-303 409-Kawaikui Beach park-303 409-Koko marina-303 409-Paiko Lagoon (Beach) (Maunalua Bay)-303 409-Portlock (Maunalua Bay)-303 409-Allen Davis Beach-303 408-Makapu'u Beach Park-302 406-Kualoa Beach park-302 406-Kaaawa-301  (collections will occur at either a single or across multiple locations listed above)	Note: A total of 30 fish will be collected across a mix of various species of scorpionfish listed (Dendrochirus, Pterois and Scorpaenopsis spp..)
6495	Scorpaenopsis diabolus   False stonefish (FAO; Randall et al., 1997a), Devil scorpionfish (Hoover, 1993, 2003; Randall, 1996a), Hogo (DLNR), Common scorpion (DLNR)   Nohu-`omakaha   Scorpaenopsis diabolus	5	Fish (Adult/Juvenile)	Adult/Juvenile Fish (Any Size)	O'ahu	Same locations as listed directly above  (collections will occur at either a single or across multiple locations listed above)	Note: A total of 30 fish will be collected across a mix of various species of scorpionfish listed (Dendrochirus, Pterois and Scorpaenopsis spp..)
<i>Squirrelfish and soldierfish</i>							
6456	Sargocentron xantherythrum   Hawaiian squirrelfish (Hoover, 1993, 2003; Randall, 1996a), Indianfish   `Ala`ihi   Sargocentron xantherythrum	10	Fish (Adult/Juvenile)	Adult/Juvenile Fish (Any Size)	O'ahu	Same locations as listed directly above  (collections will occur at either a single or across multiple locations listed above)	Note: A total of 10 fish will be collected across a mix of various species of squirrelfish and soldierfish listed (Sargocentron and Myripristis spp..)
6228	Myripristis amaena   Brick soldierfish (FAO; Hoover, 1993, 2003; Randall, 1996a), Menpachi (Gosline & Brock, 1960)   `a`a   Myripristis amaena	10	Fish (Adult/Juvenile)	Adult/Juvenile Fish (Any Size)	O'ahu	Same locations as listed directly above  (collections will occur at either a single or across multiple locations listed above)	Note: A total of 10 fish will be collected across a mix of various species of squirrelfish listed (Sargocentron and Myripristis spp..)
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6229	Myripristis berndti   Blotcheye soldierfish (FAO), Bigscale soldierfish (Hoover, 1993, 2003; Randall, 1996a), Menpachi (Gosline & Brock, 1960)   `a`a   Myripristis berndti	10	Fish (Adult/Juvenile)	Adult/Juvenile Fish (Any Size)	O'ahu	400-Kewalo Basin Park-303 409-Kaalawai (Kaikoos) Beach-303 409-Blackpoint-303 409-Kahala beach-303 400-Waikiki/Diamond Head Shoreline FMA-303* 400-Ala Wai Boat Harbor-303 409-Wailupe Beach Park (Maunalua Bay)-303 409-Kawaikui Beach park-303 409-Koko marina-303 409-Paiko Lagoon (Beach) (Maunalua Bay)-303 409-Portlock (Maunalua Bay)-303 409-Allen Davis Beach-303 408-Makapu'u Beach Park-302 406-Kualoa Beach park-302 406-Kaaawa-301  (collections will occur at either a single or across multiple locations listed above)	Note: A total of 10 fish will be collected across a mix of various species of squirrelfish and soldierfish listed (Sargocentron and Myripristis spp..)
6232	Myripristis murdjan   Pinecone soldierfish (FAO), Blotcheye soldierfish (Randall et al., 1997a; Myers, 1999)   Myripristis murdjan	10	Fish (Adult/Juvenile)	Adult/Juvenile Fish (Any Size)	O'ahu	Same locations as listed directly above  (collections will occur at either a single or across multiple locations listed above)	Note: A total of 10 fish will be collected across a mix of various species of squirrelfish and soldierfish listed (Sargocentron and Myripristis spp..)
6230	Myripristis chryseres   Yellowfin soldierfish   Pa`u`u   Myripristis chryseres	10	Fish (Adult/Juvenile)	Adult/Juvenile Fish (Any Size)	O'ahu	Same locations as listed directly above  (collections will occur at either a single or across multiple locations listed above)	Note: A total of 10 fish will be collected across a mix of various species of squirrelfish and soldierfish listed (Sargocentron and Myripristis spp..)
6231	Myripristis kuntee   Shoulderbar soldierfish (FAO; Randall, 1985), Pearly soldierfish (Hoover, 1993, 2003), Epulette soldierfish (Randall, 1996a; Hoover, 2003), Menpachi (DLNR)   `a`a   Myripristis kuntee	10	Fish (Adult/Juvenile)	Adult/Juvenile Fish (Any Size)	O'ahu	Same locations as listed directly above  (collections will occur at either a single or across multiple locations listed above)	Note: A total of 10 fish will be collected across a mix of various species of squirrelfish and soldierfish listed (Sargocentron and Myripristis spp..)

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6233	Myripristis vittata   White-tipped soldierfish (FAO; Randall, 1996a), Menpachi (DLNR)   ʻā`a   Myripristis vittata	10	Fish (Adult/Juvenile)	Adult/Juvenile Fish (Any Size)	O'ahu	400-Kewalo Basin Park-303 409-Kaalawai (Kaikoos) Beach-303 409-Blackpoint-303 409-Kahala beach-303 400-Waikiki/Diamond Head Shoreline FMA-303* 400-Ala Wai Boat Harbor-303 409-Wailupe Beach Park (Maunalua Bay)-303 409-Kawaikui Beach park-303 409-Koko marina-303 409-Paiko Lagoon (Beach) (Maunalua Bay)-303 409-Portlock (Maunalua Bay)-303 409-Allen Davis Beach-303 408-Makapu'u Beach Park-302 406-Kualoa Beach park-302 406-Kaaawa-301  (collections will occur at either a single or across multiple locations listed above)	Note: A total of 10 fish will be collected across a mix of various species of squirrelfish and soldierfish listed (Sargocentron and Myripristis spp..)
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*Triggerfish*

6432	Rhinecanthus aculeatus   Lagoon triggerfish (Hoover, 1993, 2003; Randall, 1996a), Picassofish (Myers, 1999), Whitebanded triggerfish (Randall et al., 1997a)   Humuhumu-nukunuku-a-pua`a   Rhinecanthus aculeatus	10	Fish (Adult/Juvenile)	Adult/Juvenile Fish (Any Size)	O'ahu	Same locations as listed directly above  (collections will occur at either a single or across multiple locations listed above)	
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6433	Rhinecanthus rectangulus   Picasso triggerfish (Hoover, 1993, 2003), Reef triggerfish (Hoover, 1993, 2003; Randall, 1996a), Wedge picassofish (Myers, 1999), Wedge-tail triggerfish (Randall et al., 1997a), Saddle-shoe fish   Humuhumu-nukunuku-a-pua`a   Rhinecanthus rectangulus	10	Fish (Adult/Juvenile)	Adult/Juvenile Fish (Any Size)	O'ahu	Same locations as listed directly above  (collections will occur at either a single or across multiple locations listed above)	
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<i>Tobys/Puffers</i>							
5700	Canthigaster jactator   Hawaiian whitespotted toby   Canthigaster jactator	6	Fish (Adult/Juvenile)	Adult/Juvenile Fish (Any Size)	O'ahu	400-Kewalo Basin Park-303 409-Kaalawai (Kaikoos) Beach-303 409-Blackpoint-303 409-Kahala beach-303 400-Waikiki/Diamond Head Shoreline FMA-303* 400-Ala Wai Boat Harbor-303 409-Wailupe Beach Park (Maunalua Bay)-303 409-Kawaikui Beach park-303 409-Koko marina-303 409-Paiko Lagoon (Beach) (Maunalua Bay)-303 409-Portlock (Maunalua Bay)-303 409-Allen Davis Beach-303 408-Makapu'u Beach Park-302 406-Kualoa Beach park-302 406-Kaaawa-301  (collections will occur at either a single or across multiple locations listed above)	Note: A total of 6 fish will be collected across a mix of various species of puffer and toby listed (Canthigaster, Torquigener and Arothron spp..)
5697	Canthigaster coronata   Crowned toby (Hoover, 1993, 2003; Randall, 1996a), Three-barred toby (Randall et al., 1997a)   Pu`u olai   Canthigaster coronata	6	Fish (Adult/Juvenile)	Adult/Juvenile Fish (Any Size)	O'ahu	Same locations as listed directly above  (collections will occur at either a single or across multiple locations listed above)	Note: A total of 6 fish will be collected across a mix of various species of puffer and toby listed (Canthigaster, Torquigener and Arothron spp..)
6607	Torquigener randalli   Randall's puffer   Torquigener randalli	6	Fish (Adult/Juvenile)	Adult/Juvenile Fish (Any Size)	O'ahu	Same locations as listed directly above  (collections will occur at either a single or across multiple locations listed above)	Note: A total of 6 fish will be collected across a mix of various species of puffer and toby listed (Canthigaster, Torquigener and Arothron spp..)
5597	Arothron hispidus   Stripebelly puffer (Hoover, 1993, 2003; Randall, 1996a), White-spotted puffer (Myers, 1999), Stars and stripes puffer (Randall et al., 1997a; Hoover, 2003), Balloon fish (DLNR)   o'opu hue   Arothron hispidus	6	Fish (Adult/Juvenile)	Adult/Juvenile Fish (Any Size)	O'ahu	Same locations as listed directly above  (collections will occur at either a single or across multiple locations listed above)	Note: A total of 6 fish will be collected across a mix of various species of puffer and toby listed (Canthigaster, Torquigener and Arothron spp..)
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5599	Arothron meleagris   Spotted puffer (Randall, 1996a), Guineafowl puffer (Myers, 1999), Velcro-fish (all from Hoover, 1993, 2003)   `O`opu-hue   Arothron meleagris	6	Fish (Adult/Juvenile)	Adult/Juvenile Fish (Any Size)	O`ahu	400-Kewalo Basin Park-303 409-Kaalawai (Kaikoos) Beach-303 409-Blackpoint-303 409-Kahala beach-303 400-Waikiki/Diamond Head Shoreline FMA-303* 400-Ala Wai Boat Harbor-303 409-Wailupe Beach Park (Maunalua Bay)-303 409-Kawaikui Beach park-303 409-Koko marina-303 409-Paiko Lagoon (Beach) (Maunalua Bay)-303 409-Portlock (Maunalua Bay)-303 409-Allen Davis Beach-303 408-Makapu`u Beach Park-302 406-Kualoa Beach park-302 406-Kaaawa-301  (collections will occur at either a single or across multiple locations listed above)	Note: A total of 6 fish will be collected across a mix of various species of puffer and toby listed (Canthigaster, Torquigener and Arothron spp..)
5696	Canthigaster amboinensis   Ambon toby (Hoover, 1993, 2003; Randall, 1996a)   Pu`u-ola`i   Canthigaster amboinensis	6	Fish (Adult/Juvenile)	Adult/Juvenile Fish (Any Size)	O`ahu	Same locations as listed directly above  (collections will occur at either a single or across multiple locations listed above)	Note: A total of 6 fish will be collected across a mix of various species of puffer and toby listed (Canthigaster, Torquigener and Arothron spp..)
5698	Canthigaster epilampra   Lantern toby   Pu`u olai   Canthigaster epilampra	6	Fish (Adult/Juvenile)	Adult/Juvenile Fish (Any Size)	O`ahu	Same locations as listed directly above  (collections will occur at either a single or across multiple locations listed above)	Note: A total of 6 fish will be collected across a mix of various species of puffer and toby listed (Canthigaster, Torquigener and Arothron spp..)

*Moorish Idol*

6663	<b>Zanclus cornutus</b>   <b>Moorish idol</b>   <b>Kihikihi</b>   <b>Zanclus cornutus</b>	6	Fish (Adult/Juvenile)	Adult/Juvenile Fish (Any Size)	O`ahu	Same locations as listed directly above  (collections will occur at either a single or across multiple locations listed above)	
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<i>Invertebrates</i>							
<i>Sea slugs</i>							
8170	Elysia lobata   Elysia lobata (Gould, 1852)	50	Invertebrate Individual	Male/Female (Any Size)	O'ahu	400-Kewalo Basin Park-303 409-Kaalawai (Kaikoos) Beach-303 409-Blackpoint-303 409-Kahala beach-303 400-Waikiki/Diamond Head Shoreline FMA-303* 400-Ala Wai Boat Harbor-303 409-Wailupe Beach Park (Maunalua Bay)-303 409-Kawaikui Beach park-303 409-Koko marina-303 409-Paiko Lagoon (Beach) (Maunalua Bay)-303 409-Portlock (Maunalua Bay)-303 409-Allen Davis Beach-303 408-Makapu'u Beach Park-302 406-Kualoa Beach park-302 406-Kaaawa-301  (collections will occur at either a single or across multiple locations listed above)	Note: A total of 50 individuals will be collected across a mix of various species of sea slugs listed (Elysia spp..)
8172	Elysia ornata   Ornate Sap-sucking Slug   Elysia ornata (Pease, 1860)	50	Invertebrate Individual	Male/Female (Any Size)	O'ahu	Same locations as listed directly above  (collections will occur at either a single or across multiple locations listed above)	Note: A total of 50 individuals will be collected across a mix of various species of sea slugs listed (Elysia spp..)
8173	Elysia rufescens   Elysia rufescens (Pease, 1871)	50	Invertebrate Individual	Male/Female (Any Size)	O'ahu	Same locations as listed directly above  (collections will occur at either a single or across multiple locations listed above)	Note: A total of 50 individuals will be collected across a mix of various species of sea slugs listed (Elysia spp..)
12901	Elysia sp.  (Placeholder for Elysia obtuse, Elysia tomentosa and Elysia marginata - no code assigned yet in database)	50	Invertebrate Individual	Male/Female (Any Size)	O'ahu	Same locations as listed directly above  (collections will occur at either a single or across multiple locations listed above)	Note: A total of 50 individuals will be collected across a mix of various species of sea slugs listed (Elysia spp..)
171	Elysia nealae   Elysia nealae Ostergaard, 1955	50	Invertebrate Individual	Male/Female (Any Size)	O'ahu	Same locations as listed directly above  (collections will occur at either a single or across multiple locations listed above)	Note: A total of 50 individuals will be collected across a mix of various species of sea slugs listed (Elysia spp..)

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Crabs							
4499	Calcinus seurati   Seuran's Hermit Crab   Unauna   Calcinus seurati Forest, 1951	40	Invertebrate Individual	Male/Female (Any Size)	O'ahu	400-Kewalo Basin Park-303 409-Kaalawai (Kaikoos) Beach-303 409-Blackpoint-303 409-Kahala beach-303 400-Waikiki/Diamond Head Shoreline FMA-303* 400-Ala Wai Boat Harbor-303 409-Wailupe Beach Park (Maunalua Bay)-303 409-Kawaikui Beach park-303 409-Koko marina-303 409-Paiko Lagoon (Beach) (Maunalua Bay)-303 409-Portlock (Maunalua Bay)-303 409-Allen Davis Beach-303 408-Makapu'u Beach Park-302 406-Kualoa Beach park-302 406-Kaaawa-301  (collections will occur at either a single or across multiple locations listed above)	
4496	Calcinus laevimanus   Left-handed hermit crab; Hawaiian hermit   Calcinus laevimanus (Randall, 1839)	40	Invertebrate Individual	Male/Female (Any Size)	O'ahu	Same locations as listed directly above  (collections will occur at either a single or across multiple locations listed above)	
16059	Calcinus elegans   elegant hermit	10	Invertebrate Individual	Male/Female (Any Size)	O'ahu	Same locations as listed directly above  (collections will occur at either a single or across multiple locations listed above)	
4497	Calcinus latens   Hidden hermit crab   Calcinus latens (Randall, 1839)	10	Invertebrate Individual	Male/Female (Any Size)	O'ahu	Same locations as listed directly above  (collections will occur at either a single or across multiple locations listed above)	
4640	Dardanus deformis   Pale Anemone crab   Unauna   Dardanus deformis (H. Milne Edwards, 1836)	10	Invertebrate Individual	Male/Female (Any Size)	O'ahu	Same locations as listed directly above  (collections will occur at either a single or across multiple locations listed above)	
4641	Dardanus gemmatus   Jeweled Anemone crab   Unauna   Dardanus gemmatus (H. Milne Edwards, 1848)	10	Invertebrate Individual	Male/Female (Any Size)	O'ahu	Same locations as listed directly above  (collections will occur at either a single or across multiple locations listed above)	

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4313	Acanthonyx simplex   spider crab   Acanthonyx simplex Dana, 1852	2	Invertebrate Individual	Male/Female (Any Size)	O'ahu	400-Kewalo Basin Park-303 409-Kaalawai (Kaikoos) Beach-303 409-Blackpoint-303 409-Kahala beach-303 400-Waikiki/Diamond Head Shoreline FMA-303* 400-Ala Wai Boat Harbor-303 409-Wailupe Beach Park (Maunalua Bay)-303 409-Kawaikui Beach park-303 409-Koko marina-303 409-Paiko Lagoon (Beach) (Maunalua Bay)-303 409-Portlock (Maunalua Bay)-303 409-Allen Davis Beach-303 408-Makapu'u Beach Park-302 406-Kualoa Beach park-302 406-Kaaawa-301  (collections will occur at either a single or across multiple locations listed above)	
4946	Lybia edmondsoni   Hawaiian Pom-Pom Crab   ku mimi pua   Lybia edmondsoni Takeda and Miyake, 1970	2	Invertebrate Individual	Male/Female (Any Size)	O'ahu	Same locations as listed directly above  (collections will occur at either a single or across multiple locations listed above)	
<i>Jellyfish</i>							
7208	Phyllorhiza punctata   White spotted jellyfish   Phyllorhiza punctata van Ledenfeld, 1884	15	Invertebrate Individual	Male/Female (Any Size)	O'ahu	Same locations as listed directly above  (collections will occur at either a single or across multiple locations listed above)	
6961	Aurelia sp.   Aurelia sp.   Moon jellyfish	200	Invertebrate Individual	Male/Female (Any Size)	O'ahu	Same locations as listed directly above  (collections will occur at either a single or across multiple locations listed above)	Usually about 10-20 individuals are collected at one time – 200 may be collected over one (1) year.
7007	Cassiopea andromeda   Upside down jellyfish   Cassiopea andromeda Light, 1914	15	Invertebrate Individual	Male/Female (Any Size)		Same locations as listed directly above  (collections will occur at either a single or across multiple locations listed above)	
7153	Mastigias sp.   Lagoon jellyfish   Mastigias sp.	15	Invertebrate Individual	Male/Female (Any Size)		Same locations as listed directly above  (collections will occur at either a single or across multiple locations listed above)	

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<i>Sea cucumbers</i>							
7462	<b>Holothuria edulis</b>   Edible Sea Cucumber   Ioli   <b>Holothuria (Halodeima) edulis Lesson, 1830</b>	15	Invertebrate Individual	Male/Female (Any Size)	O'ahu	400-Kewalo Basin Park-303 409-Kaalawai (Kaikoos) Beach-303 409-Blackpoint-303 409-Kahala beach-303 400-Waikiki/Diamond Head Shoreline FMA-303* 400-Ala Wai Boat Harbor-303 409-Wailupe Beach Park (Maunalua Bay)-303 409-Kawaikui Beach park-303 409-Koko marina-303 409-Paiko Lagoon (Beach) (Maunalua Bay)-303 409-Portlock (Maunalua Bay)-303 409-Allen Davis Beach-303 408-Makapu'u Beach Park-302 406-Kualoa Beach park-302 406-Kaaawa-301  (collections will occur at either a single or across multiple locations listed above)	Note: A total of 15 individuals will be collected across a mix of various species of sea slugs listed (Holothuria and Actinopyga spp..)
7461	<b>Holothuria difficilis</b>   Difficult Sea Cucumberb   Ioli   <b>Holothuria (Platyperona) difficilis Semper, 1868</b>	15	Invertebrate Individual	Male/Female (Any Size)	O'ahu	Same locations as listed directly above  (collections will occur at either a single or across multiple locations listed above)	Note: A total of 15 individuals will be collected across a mix of various species of sea slugs listed (Holothuria and Actinopyga spp..)
11245	<b>Holothuria sp.</b>   Sea Cucumber; unknown member of a genus of sea cucumber   <b>Holothuria sp.</b>	15	Invertebrate Individual	Male/Female (Any Size)	O'ahu	Same locations as listed directly above  (collections will occur at either a single or across multiple locations listed above)	Note: A total of 15 individuals will be collected across a mix of various species of sea slugs listed (Holothuria and Actinopyga spp..)
7473	<b>Holothuria pervicax</b>   Stubborn Sea Cucumber   Ioli ka'e   <b>Holothuria (Stauropora) pervicax Selenka, 1867</b>	15	Invertebrate Individual	Male/Female (Any Size)	O'ahu	Same locations as listed directly above  (collections will occur at either a single or across multiple locations listed above)	Note: A total of 15 individuals will be collected across a mix of various species of sea slugs listed (Holothuria and Actinopyga spp..)

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7472	<b>Holothuria pardalis</b>   Leopard Sea Cucumber   loli   <b>Holothuria (Lessonothuria) pardalis Selenka, 1867</b>	15	Invertebrate Individual	Male/Female (Any Size)	O'ahu	400-Kewalo Basin Park-303 409-Kaalawai (Kaikoos) Beach-303 409-Blackpoint-303 409-Kahala beach-303 400-Waikiki/Diamond Head Shoreline FMA-303* 400-Ala Wai Boat Harbor-303 409-Wailupe Beach Park (Maunalua Bay)-303 409-Kawaikui Beach park-303 409-Koko marina-303 409-Paiko Lagoon (Beach) (Maunalua Bay)-303 409-Portlock (Maunalua Bay)-303 409-Allen Davis Beach-303 408-Makapu'u Beach Park-302 406-Kualoa Beach park-302 406-Kaaawa-301  (collections will occur at either a single or across multiple locations listed above)	Note: A total of 15 individuals will be collected across a mix of various species of sea slugs listed (Holothuria and Actinopyga spp..)
7465	<b>Holothuria hilla</b>   Light-spotted Sea Cucumber   loli   <b>Holothuria (Thymiosycia) hilla Lesson, 1830</b>	15	Invertebrate Individual	Male/Female (Any Size)	O'ahu	Same locations as listed directly above  (collections will occur at either a single or across multiple locations listed above)	Note: A total of 15 individuals will be collected across a mix of various species of sea slugs listed (Holothuria and Actinopyga spp..)
7333	<b>Actinopyga mauritiana</b>   White-spotted Sea Cucumber   loli pua   <b>Actinopyga mauritiana (Quoy and Gaimard, 1833)</b>	15	Invertebrate Individual	Male/Female (Any Size)	O'ahu	Same locations as listed directly above  (collections will occur at either a single or across multiple locations listed above)	Note: A total of 15 individuals will be collected across a mix of various species of sea slugs listed (Holothuria and Actinopyga spp..)
7459	<b>Holothuria atra</b>   Black Sea Cucumber   loli koko, loli okuhi kuhu   <b>Holothuria (Halodeima) atra Jaeger, 1833</b>	15	Invertebrate Individual	Male/Female (Any Size)	O'ahu	Same locations as listed directly above  (collections will occur at either a single or across multiple locations listed above)	Note: A total of 15 individuals will be collected across a mix of various species of sea slugs listed (Holothuria and Actinopyga spp..)

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<i>Shrimp</i>							
5370	Stenopus earlei   Earle's Coral Shrimp   Stenopus earlei Goy and Randall, 1984	5	Invertebrate Individual	Male/Female (Any Size)	O'ahu	400-Kewalo Basin Park-303 409-Kaalawai (Kaikoos) Beach-303 409-Blackpoint-303 409-Kahala beach-303 400-Waikiki/Diamond Head Shoreline FMA-303* 400-Ala Wai Boat Harbor-303 409-Wailupe Beach Park (Maunalua Bay)-303 409-Kawaikui Beach park-303 409-Koko marina-303 409-Paiko Lagoon (Beach) (Maunalua Bay)-303 409-Portlock (Maunalua Bay)-303 409-Allen Davis Beach-303 408-Makapu'u Beach Park-302 406-Kualoa Beach park-302 406-Kaaawa-301  (collections will occur at either a single or across multiple locations listed above)	Note: A total of 5 individuals will be collected across a mix of various species of shrimp listed (Stenopus, Saron and Urocaridella spp..)
5371	Stenopus hispidus   Banded coral shrimp   Stenopus hispidus (Olivier, 1811)	5	Invertebrate Individual	Male/Female (Any Size)	O'ahu	Same locations as listed directly above  (collections will occur at either a single or across multiple locations listed above)	Note: A total of 5 individuals will be collected across a mix of various species of shrimp listed (Stenopus, Saron and Urocaridella spp..)
5328	Saron marmoratus   Marbled shrimp   Saron marmoratus (Olivier, 1811)	5	Invertebrate Individual	Male/Female (Any Size)	O'ahu	Same locations as listed directly above  (collections will occur at either a single or across multiple locations listed above)	Note: A total of 5 individuals will be collected across a mix of various species of shrimp listed (Stenopus, Saron and Urocaridella spp..)
5372	Stenopus pyrsonotus   Flameback coral shrimp   Stenopus pyrsonotus Goy & Devaney, 1980	5	Invertebrate Individual	Male/Female (Any Size)	O'ahu	Same locations as listed directly above  (collections will occur at either a single or across multiple locations listed above)	Note: A total of 5 individuals will be collected across a mix of various species of shrimp listed (Stenopus and Saron spp..)
5488	Urocaridella antonbruunii   Clear cleaner shrimp   Urocaridella antonbruunii Bruce, 1967	10	Invertebrate Individual	Male/Female (Any Size)	O'ahu	Same locations as listed directly above  (collections will occur at either a single or across multiple locations listed above)	

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4838	Hymenocera picta   Harlequin shrimp   Hymenocera picta Dana, 1852	2	Invertebrate Individual	Male/Female (Any Size)	O'ahu	400-Kewalo Basin Park-303 409-Kaalawai (Kaikoos) Beach-303 409-Blackpoint-303 409-Kahala beach-303 400-Waikiki/Diamond Head Shoreline FMA-303* 400-Ala Wai Boat Harbor-303 409-Wailupe Beach Park (Maunalua Bay)-303 409-Kawaikui Beach park-303 409-Koko marina-303 409-Paiko Lagoon (Beach) (Maunalua Bay)-303 409-Portlock (Maunalua Bay)-303 409-Allen Davis Beach-303 408-Makapu'u Beach Park-302 406-Kualoa Beach park-302 406-Kaaawa-301  (collections will occur at either a single or across multiple locations listed above)	
<i>Octopus and Squid</i>							
7701	<b>Octopus cyanea</b>   Day octopus   he'e maui   <b>Octopus cyanea Gray, 1849</b>	10	Invertebrate Individual	Male/Female (Any Size)	O'ahu	Same locations as listed directly above  (collections will occur at either a single or across multiple locations listed above)	Only one individual is collected at a time – the aquarium release individuals if they are not adjusting to captivity
7677	Euprymna scolopes   Hawaiian Bobtail Squid   mu he'e   Euprymna scolopes Berry, 1913	10	Invertebrate Individual	Male/Female (Any Size)	O'ahu	Same locations as listed directly above  (collections will occur at either a single or across multiple locations listed above)	
7725	Sepioteuthis lessoniana   Oval squid   mu he'e   Sepioteuthis lessoniana Lesson, 1830	15	Invertebrate Individual	Male/Female (Any Size)	O'ahu	Same locations as listed directly above  (collections will occur at either a single or across multiple locations listed above)	
<i>Lobsters</i>							
5117	<b>Panulirus penicillatus</b>   green spiny lobster (tufted spiny lobster)   ula   <b>Panulirus penicillatus (Oliver, 1791)</b>	5	Invertebrate Individual	Male/Female (Any Size)	O'ahu	Same locations as listed directly above  (collections will occur at either a single or across multiple locations listed above)	Note: A total of 5 individuals will be collected across a mix of various species of spiny lobster listed (Panulirus spp..)
<i>Continued on next page</i>							

5116	<b>Panulirus marginatus   black leg spiny lobster   ula poni and ula hiwa   Panulirus marginatus (Quoy &amp; Gaimard, 1825)</b>	5	Invertebrate Individual	Male/Female (Any Size)	O'ahu	400-Kewalo Basin Park-303 409-Kaalawai (Kaikoos) Beach-303 409-Blackpoint-303 409-Kahala beach-303 400-Waikiki/Diamond Head Shoreline FMA-303* 400-Ala Wai Boat Harbor-303 409-Wailupe Beach Park (Maunalua Bay)-303 409-Kawaikui Beach park-303 409-Koko marina-303 409-Paiko Lagoon (Beach) (Maunalua Bay)-303 409-Portlock (Maunalua Bay)-303 409-Allen Davis Beach-303 408-Makapu'u Beach Park-302 406-Kualoa Beach park-302 406-Kaaawa-301  (collections will occur at either a single or across multiple locations listed above)	Note: A total of 5 individuals will be collected across a mix of various species of spiny lobster listed (Panulirus spp..)
5338	<b>Scyllarides squammosus   Scaly Slipper lobster   ula papa   Scyllarides squammosus</b>	5	Invertebrate Individual	Male/Female (Any Size)	O'ahu	Same locations as listed directly above  (collections will occur at either a single or across multiple locations listed above)	Note: A total of 5 individuals will be collected across a mix of various species of slipper lobster listed (Scyllarides spp..)
11301	<b>Scyllarides sp.   Slipper Lobster; unidentified member of genus   Scyllarides sp.  Placeholder for Scyllarides haanii /Ridgeback slipper lobster – no code assigned yet in database</b>	5	Invertebrate Individual	Male/Female (Any Size)	O'ahu	Same locations as listed directly above  (collections will occur at either a single or across multiple locations listed above)	Note: A total of 5 individuals will be collected across a mix of various species of slipper lobster listed (Scyllarides spp..)
<i>Sea stars</i>							
7491	Linckia guildingi   Green Linckia   Linckia guildingi Gray, 1840	40	Invertebrate Individual	Male/Female (Any Size)	O'ahu	Same locations as listed directly above  (collections will occur at either a single or across multiple locations listed above)	Note: A total of 40 individuals will be collected across a mix of various species of sea stars listed (Linckia spp..)
<i>Continued on next page</i>							

7492	Linckia multifora   Spotted Linckia   hoku kai   Linckia multifora (Lamarck, 1816)	40	Invertebrate Individual	Male/Female (Any Size)	O'ahu	400-Kewalo Basin Park-303 409-Kaalawai (Kaikoos) Beach-303 409-Blackpoint-303 409-Kahala beach-303 400-Waikiki/Diamond Head Shoreline FMA-303* 400-Ala Wai Boat Harbor-303 409-Wailupe Beach Park (Maunalua Bay)-303 409-Kawaikui Beach park-303 409-Koko marina-303 409-Paiko Lagoon (Beach) (Maunalua Bay)-303 409-Portlock (Maunalua Bay)-303 409-Allen Davis Beach-303 408-Makapu'u Beach Park-302 406-Kualoa Beach park-302 406-Kaaawa-301  (collections will occur at either a single or across multiple locations listed above)	Note: A total of 40 individuals will be collected across a mix of various species of sea stars listed (Linckia spp..)
7490	Linckia diplax   Linckia diplax	40	Invertebrate Individual	Male/Female (Any Size)	O'ahu	Same locations as listed directly above  (collections will occur at either a single or across multiple locations listed above)	Note: A total of 40 individuals will be collected across a mix of various species of sea stars listed (Linckia spp..)
<i>Brittle stars</i>							
7540	Ophiocoma erinaceus   Spiny Brittle Star   Ophiocoma erinaceus Muller and Troschel, 1842	20	Invertebrate Individual	Male/Female (Any Size)	O'ahu	Same locations as listed directly above  (collections will occur at either a single or across multiple locations listed above)	Note: A total of 20 individuals will be collected across a mix of various species of brittle stars listed (Ophiocoma spp..)
7542	Ophiocoma pica   Pied Brittle Star   pe`a, peapea   Ophiocoma pica Muller and Troschel, 1842	20	Invertebrate Individual	Male/Female (Any Size)	O'ahu	Same locations as listed directly above  (collections will occur at either a single or across multiple locations listed above)	Note: A total of 20 individuals will be collected across a mix of various species of brittle stars listed (Ophiocoma spp..)
<i>Cushion stars</i>							
7414	Culcita novaeguineae   Cushion Star   Culcita novaeguineae Muller and Troschel, 1842	3	Invertebrate Individual	Male/Female (Any Size)	O'ahu	Same locations as listed directly above  (collections will occur at either a single or across multiple locations listed above)	
<i>Continued on next page</i>							

<i>Urchins</i>							
7438	Eucidaris metularia   Ten-lined Urchin   ha`ue`ue   Eucidaris metularia Lamarck, 1816	3	Invertebrate Individual	Male/Female (Any Size)	O`ahu	400-Kewalo Basin Park-303 409-Kaalawai (Kaikoos) Beach-303 409-Blackpoint-303 409-Kahala beach-303 400-Waikiki/Diamond Head Shoreline FMA-303* 400-Ala Wai Boat Harbor-303 409-Wailupe Beach Park (Maunalua Bay)-303 409-Kawaikui Beach park-303 409-Koko marina-303 409-Paiko Lagoon (Beach) (Maunalua Bay)-303 409-Portlock (Maunalua Bay)-303 409-Allen Davis Beach-303 408-Makapu`u Beach Park-302 406-Kualoa Beach park-302 406-Kaaawa-301  (collections will occur at either a single or across multiple locations listed above)	
7433	Echinothrix calamaris   black(banded) sea urchin   wana   Echinothrix calamaris (Pallas, 1774)	3	Invertebrate Individual	Male/Female (Any Size)	O`ahu	Same locations as listed directly above  (collections will occur at either a single or across multiple locations listed above)	
7417	Diadema paucispinum   Long-spined Urchin   wana   Diadema paucispinum Agassiz, 1863	3	Invertebrate Individual	Male/Female (Any Size)	O`ahu	Same locations as listed directly above  (collections will occur at either a single or across multiple locations listed above)	
7434	Echinothrix diadema   blue-black sea urchin   wana   Echinothrix diadema (Linnaeus, 1758)	5	Invertebrate Individual	Male/Female (Any Size)	O`ahu	Same locations as listed directly above  (collections will occur at either a single or across multiple locations listed above)	
7426	Echinometra mathaei   Rock-boring Urchin   `ina kea   Echinometra mathaei (Blainville, 1825)	20	Invertebrate Individual	Male/Female (Any Size)	O`ahu	Same locations as listed directly above  (collections will occur at either a single or across multiple locations listed above)	
7427	Echinometra oblonga   Oblong Urchin   `ina uli   Echinometra oblonga (Blainville, 1825)	20	Invertebrate Individual	Male/Female (Any Size)	O`ahu	Same locations as listed directly above  (collections will occur at either a single or across multiple locations listed above)	

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7453	Heterocentrotus mammillatus   Red Pencil Urchin   ha`uke, ha`ue`ue, ha`uke`uke, `ina`uli, la ula   Heterocentrotus mammillatus (Linnaeus, 1758)	5	Invertebrate Individual	Male/Female (Any Size)	O'ahu	400-Kewalo Basin Park-303 409-Kaalawai (Kaikoos) Beach- 303 409-Blackpoint-303 409-Kahala beach-303 400-Waikiki/Diamond Head Shoreline FMA-303* 400-Ala Wai Boat Harbor-303 409-Wailupe Beach Park (Maunaloa Bay)-303 409-Kawaikui Beach park-303 409-Koko marina-303 409-Paiko Lagoon (Beach) (Maunaloa Bay)-303 409-Portlock (Maunaloa Bay)- 303 409-Allen Davis Beach-303 408-Makapu'u Beach Park-302 406-Kualoa Beach park-302 406-Kaaawa-301  (collections will occur at either a single or across multiple locations listed above)	
<i>Algae</i>							
4095	Ulva reticulata   Ulva reticulata	Various amounts	Algae Individual	lbs.	O'ahu	Same locations as listed directly above  (collections will occur at either a single or across multiple locations listed above)	
4094	Ulva fasciata   limu palahalaha   Ulva fasciata	Various amounts	Algae Individual	lbs.	O'ahu	Same locations as listed directly above  (collections will occur at either a single or across multiple locations listed above)	
3348	Codium reediae   'a'ala'ula   Codium reediae	Various amounts	Algae Individual	lbs.	O'ahu	Same locations as listed directly above  (collections will occur at either a single or across multiple locations listed above)	
3601	Halimeda discoidea   Halimeda discoidea	Various amounts	Algae Individual	lbs.	O'ahu	Same locations as listed directly above  (collections will occur at either a single or across multiple locations listed above)	
3605	Halimeda opuntia   Halimeda opuntia	Various amounts	Algae Individual	lbs.	O'ahu	Same locations as listed directly above  (collections will occur at either a single or across multiple locations listed above)	
<i>Continued on next page</i>							

3241	Caulerpa racemosa   Caulerpa racemosa	Various amounts	Algae Individual	lbs.	O'ahu	400-Kewalo Basin Park-303 409-Kaalawai (Kaikoos) Beach-303 409-Blackpoint-303 409-Kahala beach-303 400-Waikiki/Diamond Head Shoreline FMA-303* 400-Ala Wai Boat Harbor-303 409-Wailupe Beach Park (Maunalua Bay)-303 409-Kawaikui Beach park-303 409-Koko marina-303 409-Paiko Lagoon (Beach) (Maunalua Bay)-303 409-Portlock (Maunalua Bay)-303 409-Allen Davis Beach-303 408-Makapu'u Beach Park-302 406-Kualoa Beach park-302 406-Kaaawa-301  (collections will occur at either a single or across multiple locations listed above)
3244	Caulerpa taxifolia   Caulerpa taxifolia	Various amounts	Algae Individual	lbs.	O'ahu	Same locations as listed directly above  (collections will occur at either a single or across multiple locations listed above)
3736	Microdictyon setchellianum   Microdictyon setchellianum	Various amounts	Algae Individual	lbs.	O'ahu	Same locations as listed directly above  (collections will occur at either a single or across multiple locations listed above)
3846	Padina australis   Padina australis	Various amounts	Algae Individual	lbs.	O'ahu	Same locations as listed directly above  (collections will occur at either a single or across multiple locations listed above)
11521	Padina japonica   elephant ears   Padina japonica	Various amounts	Algae Individual	lbs.	O'ahu	Same locations as listed directly above  (collections will occur at either a single or across multiple locations listed above)
11196	Algae   Algae; unidentified algae  Placeholder for Dichotomaria marginata – no code assigned yet in database	Various amounts	Algae Individual	lbs.	O'ahu	Same locations as listed directly above  (collections will occur at either a single or across multiple locations listed above)

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<i>Freshwater fish and invertebrates</i>							
260	<b>Cichla ocellaris   Peacock cichlid (AFS), Peacock bass, Tucunare (Yamamoto &amp; Tagawa, 2000; DLNR)   Cichla ocellaris</b>	4	Fish (Adult/Juvenile)	Adult/Juvenile Fish (Any Size)	O'ahu	Wahiawā Public Fishing Area	
256	<b>Micropterus dolomieu   Smallmouth bass (AFS), Smallmouth black bass (DLNR)   Micropterus dolomieu</b>	2	Fish (Adult/Juvenile)	Adult/Juvenile Fish (Any Size)	O'ahu	Alawai-Stream/River-33007002, Nuuanu-stream/river-33009001 Kaneohe-Stream/River-32010013 Kaneohe-Stream/River-32010014 Kaneohe-Stream/River-32010015 Kaneohe-Stream/River-32010017 Kaneohe-Stream/River-32010018 Kaneohe-Stream/River-32010019 Kaneohe-Stream/River-32010020 Kaneohe-Stream/River-32010021 Kaneohe-Stream/River-32010022 Kaneohe-Stream/River-32010025 Kaneohe-Stream/River-32010026 Kaneohe-Stream/River-32010027 Kaneohe-Stream/River-32010028 Kaneohe-Stream/River-32010029 Kaneohe-Stream/River-32010030 Kaneohe-Stream/River-32010032  (collections will occur at either a single or across multiple locations listed above)	
255	<b>Micropterus salmoides   Largemouth bass (AFS), Black bass (Yamamoto &amp; Tagawa, 2000), Largemouth black bass (DLNR)   Micropterus salmoides</b>	2	Fish (Adult/Juvenile)	Adult/Juvenile Fish (Any Size)	O'ahu	Same locations as listed directly above  (collections will occur at either a single or across multiple locations listed above)	

2	Sicyopterus stimpsoni   `O`opu nōpili   `O`opu nopili   Sicyopterus stimpsoni	4	Fish (Adult/Juvenile)	Adult/Juvenile Fish (Any Size)	O`ahu	Alawai-Stream/River-33007002, Nuuanu-stream/river-33009001 Kaneohe-Stream/River-32010013 Kaneohe-Stream/River-32010014 Kaneohe-Stream/River-32010015 Kaneohe-Stream/River-32010017 Kaneohe-Stream/River-32010018 Kaneohe-Stream/River-32010019 Kaneohe-Stream/River-32010020 Kaneohe-Stream/River-32010021 Kaneohe-Stream/River-32010022 Kaneohe-Stream/River-32010025 Kaneohe-Stream/River-32010026 Kaneohe-Stream/River-32010027 Kaneohe-Stream/River-32010028 Kaneohe-Stream/River-32010029 Kaneohe-Stream/River-32010030 Kaneohe-Stream/River-32010032  (collections will occur at either a single or across multiple locations listed above)	
3	Awaous stamineus   `O`opu nakea; Awaous guamensis TSN 553326   `O`opu nakea   Awaous guamensis	4	Fish (Adult/Juvenile)	Adult/Juvenile Fish (Any Size)	O`ahu	Same locations as listed directly above  (collections will occur at either a single or across multiple locations listed above)	
4	Stenogobius hawaiiensis   `O`opu naniha   `O`opu naniha   Stenogobius hawaiiensis	6	Fish (Adult/Juvenile)	Adult/Juvenile Fish (Any Size)	O`ahu	Same locations as listed directly above  (collections will occur at either a single or across multiple locations listed above)	
5	Eleotris sandwicensis   Hawaiian sleeper   `O`opu akupa   Eleotris sandwicensis	2	Fish (Adult/Juvenile)	Adult/Juvenile Fish (Any Size)	O`ahu	Same locations as listed directly above  (collections will occur at either a single or across multiple locations listed above)	
<i>Continued on next page</i>							

9	Neritina vespertina   Hapawai or Hapakai   Neritina vespertina old name is Theodoxus vespertinus (Sowerby, 1849)	5	Invertebrate Individual	Male/Female (Any Size)	O'ahu	Alawai-Stream/River-33007002, Nuuanu-stream/river-33009001 Kaneohe-Stream/River-32010013 Kaneohe-Stream/River-32010014 Kaneohe-Stream/River-32010015 Kaneohe-Stream/River-32010017 Kaneohe-Stream/River-32010018 Kaneohe-Stream/River-32010019 Kaneohe-Stream/River-32010020 Kaneohe-Stream/River-32010021 Kaneohe-Stream/River-32010022 Kaneohe-Stream/River-32010025 Kaneohe-Stream/River-32010026 Kaneohe-Stream/River-32010027 Kaneohe-Stream/River-32010028 Kaneohe-Stream/River-32010029 Kaneohe-Stream/River-32010030 Kaneohe-Stream/River-32010032  (collections will occur at either a single or across multiple locations listed above)
8	Neritina granosa   Hihiwai or wi   Neritina granosa Sowerby, 1825	5	Invertebrate Individual	Male/Female (Any Size)	O'ahu	Same locations as listed directly above  (collections will occur at either a single or across multiple locations listed above)
13	Clithon cariosus   Pipiwai   Clithon cariosus old is Theodoxus cariosus (Wood, 1828)	5	Invertebrate Individual	Male/Female (Any Size)	O'ahu	Same locations as listed directly above  (collections will occur at either a single or across multiple locations listed above)
800	Macrobrachium lar   Tahitian prawn   Macrobrachium lar (Fabricus, 1798)	5	Invertebrate Individual	Male/Female (Any Size)	O'ahu	Same locations as listed directly above  (collections will occur at either a single or across multiple locations listed above)

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11	Macrobrachium grandimanus   Hawaiian prawn   opae 'oeha'a   Macrobrachium grandimanus Randall, 1840	5	Invertebrate Individual	Male/Female (Any Size)	O'ahu	Alawai-Stream/River-33007002, Nuuanu-stream/river-33009001 Kaneohe-Stream/River-32010013 Kaneohe-Stream/River-32010014 Kaneohe-Stream/River-32010015 Kaneohe-Stream/River-32010017 Kaneohe-Stream/River-32010018 Kaneohe-Stream/River-32010019 Kaneohe-Stream/River-32010020 Kaneohe-Stream/River-32010021 Kaneohe-Stream/River-32010022 Kaneohe-Stream/River-32010025 Kaneohe-Stream/River-32010026 Kaneohe-Stream/River-32010027 Kaneohe-Stream/River-32010028 Kaneohe-Stream/River-32010029 Kaneohe-Stream/River-32010030 Kaneohe-Stream/River-32010032  (collections will occur at either a single or across multiple locations listed above)	
802	Procambarus clarkii   crayfish   Procambrus clarkii (Girard, 1852)	20	Invertebrate Individual	Male/Female (Any Size)	O'ahu	Same locations as listed directly above  (collections will occur at either a single or across multiple locations listed above)	

**I. SPECIAL CONDITIONS**

**A. Location**

All activity will occur in regulated areas (Waikiki/Diamond Head Shoreline FMA\* – where indicated in the table - if open year or on a case-by-case basis after review and approval by DAR) and non-regulated areas (Kewalo Basin Park, Kaalawai (Kaikoos) Beach, Blackpoint, Kahala beach, Ala Wai Boat Harbor, Wailupe Beach Park (Maunaloa Bay), Kawaikui Beach park, Koko marina, Paiko Lagoon (Beach) (Maunaloa Bay), Portlock (Maunaloa Bay), Allen Davis Beach, Makapu'u Beach Park, Kualoa Beach park and Kaaawa and various streams), in marine and freshwater waters of Oahu. Permittee will collect organisms or aquatic resources listed in Table 1 on Pages 1-42 and transport these organisms to Waikiki Aquarium for educational live display. Streams/Rivers: **Note: For all**

**stream/river collections, permittee must acquire landowner permission for stream access (see Tax Map Key for Oahu to determine landowner; GIS Map tab under “Property Records Search”: <https://www.gpublic.net/hi/honolulu/>) or access stream via a public access point – this permit does not grant landowner access.** Freshwater organisms (native and non-native) will be collected from the following streams on Oahu: Alawai-Stream/River-33007002, Nuuanu-stream/river-33009001 and Kaneohe-Stream/River (16 tributaries in Ho‘omaluhia Botanical Garden - after consultation/approval for land access from City and County of Honolulu or other land owner if applicable): including Kaneohe-Stream/River 32010013 to Kaneohe-Stream/River-32010032.

Additionally, live green sea turtles, will be transported between the Sea Life Park facilities in Waimanalo, Oahu and to the Waikiki Aquarium, Oahu, for release into the wild. Activities under this permit is limited to waters of the State of Hawaii and is expressly prohibited at the following locations unless listed in **bold** font:

<u>Island of MAUI</u> Kahului Harbor FMA <sup>1</sup> Honolua-Mokuleia MLCD <sup>2</sup> Ahihi-Kinau NAR <sup>3</sup> Molokini Shoal MLCD Kahekili Herbivore FMA	<u>Island of KAUA‘I</u> Ahukini Pier FMA Hanamaulu Bay FMA Kapaa Canal FMA Nāwiliwili Harbor FMA Port Allen FMA Waikaena Canal FMA Waimea Pier & Bay FMA Hā‘ena CBSFA <sup>8</sup>	<u>Island of HAWAI‘I</u> <u>Areas within the West Hawaii Regional Fishery Management Area (continued):</u> (1) Ka‘ūpūlehu Marine Reserve (2) North Kohala Fish Replenishment Area (FRA <sup>6</sup> ) (3) Puakō-‘Anaeho‘omalū FRA (4) Kaloko-Honokōhau FRA (5) Kailua-Keauhou FRA (6) Red Hill FRA (7) Nāpo‘opo‘o-Hōnaunau FRA (8) Ho‘okena FRA (9) Ka‘ohe Beach FRA (Pebble Beach) (10) Miloli‘i CBSFA (11) Kikaua Point-Mākolē‘ā Point Netting Restricted Area (NRA <sup>7</sup> ) (12) Nenuē Point-Kealakekua Bay NRA (13) Hanamalo Point-Kanewa‘a Point NRA (Part of Miloli‘i CBSFA) (14) Kanonone-Kalīpoa NRA
<u>Island of LANA‘I</u> Manele Harbor FMA Manele-Hulopoe MLCD	<u>Island of HAWAI‘I</u> <u>Areas within the West Hawaii Regional Fishery Management Area:</u> Hilo Bay FMA Kailua Bay FMA	<u>Island of HAWAI‘I</u> <u>West Hawaii Regional Fishery Management Area (WHRFMA)</u> Areas in the WHRFMA outside of all smaller FMA, MLCD, FRA and NRA
<u>Island of MOLOKA‘I</u> Kaunakakai Harbor FMA	Kawiahae Harbor FMA Kealakekua Bay MLCD Keauhou Bay FMA Kiholo Bay FMA Kona Coast FMA Old Kona Airport MLCD Lapakahi Bay MLCD Papawai Bay FMA Puako FMA Waiakea PFA <sup>5</sup> Wailea Bay MLCD Wailuku River FMA Wailoa River FMA Waiopae Tidepools MLCD Wawāloli FMA	
<u>Island of KAHO‘OLAWÉ</u> Restricted 2 nautical mile boundary Zone A and Zone B surrounding Kaho‘olawe		
<u>Island of O‘AHU</u> Ala Wai Canal FMA Coconut Island MLR Hanauma Bay MLCD Heiea Kea FMA Honolulu Harbor FMA Kapalama Canal FMA Paiko Lagoon Wildlife Refuge Pōka‘i Bay FMA Pūpūkea MLCD Waialua Bay (Hale‘iwa Harbor) <b>Waikīkī-Diamond Head SFMA</b> Waikiki MLCD <b>Wahiawa Public Fishing Area</b>		

**Table 2 – Regulated Areas – Definitions:** FMA<sup>1</sup> = Fisheries Management Area, MLCD<sup>2</sup> = Marine Life Conservation District, NAR<sup>3</sup> = Natural Area Reserve (DOFAW), MLR<sup>4</sup> = Marine Laboratory Refuge, PFA<sup>5</sup> = Public Fishing Area, FRA<sup>6</sup> = Fish Replenishment Area, NRA<sup>7</sup> = Netting Restricted Area, CBSFA<sup>8</sup> = Community-Based Subsistence Fishing Area

**B. Activities.** Permittee is authorized for the collection, transport, possession and display of regulated and non-regulated marine organisms and aquatic resources, from regulated areas (Waikiki/Diamond Head Shoreline FMA\* – where indicated in the table - if open year or on a case-by-case basis after review and approval by DAR) and non-regulated marine and freshwater areas (see section A. Locations), on Oahu, as listed in Table 1, Page 1-46, using

regulated (various small meshed nets and traps; < 2 inches stretched mesh and < 2 x 1 inches rigid mesh) and non-regulated gear. The objective of these collections is to stock live educational displays at Waikiki Aquarium with representative examples of marine and freshwater organisms found in Hawaii. Authorized is the use of small mesh dip-nets, hand nets, barrier nets and traps (dip-nets/hand nets with a mesh size of less than 2 inches and with dimensions greater than 3 ft., including handle, barrier nets with a mesh size of less than 2¾ inches, and traps with mesh size of less than 2 inches stretched mesh or < 2 x 1 inches rigid mesh). Methodology for collection of samples may have unintended by-catch. Permittee or authorized assistants will attend nets at all times and release/return all unintended by-catch as quickly as possible back into the marine environment. Permittee is additionally authorized to use hand tools to collect samples of live rock and sand as listed in Table 1.

**Marine and Freshwater Fish.** Permittee will collect a total of up to five hundred (500) individuals of each of the following species for a total of up to fifteen hundred (1500) individuals across all three species: ‘Iao/Hawaiian silverside, Nehu/Hawaiian anchovy and Akule/Big-eye scad, to display local schooling fish in an exhibit to provide education about their roll and importance in marine life and culture. **Note:** Permittee will conduct a trial collection of one hundred (100) individuals each per species first, to determine if mortality occurs from collection or transportation methods). Uniformed DOCARE officer or DAR biologist should be present during collection activities to monitor collections and provide information to public individuals with any questions about the activity or the gear utilized during collections. Permittee will submit results of collection (i.e. survivability rates of the ‘Iao, Nehu and Akule) to DAR for review and approval, before collecting the remaining additional four hundred (400) per species. **Note:** To collect schooling fish (‘Iao, Nehu and Akule), the permittee will utilize a cotton net (mesh size of 1cm and length of up to 40ft), to be placed as a barrier net attended by two to four (2-4) snorkelers, around a nearshore school of ‘Iao, nehu and akule in a non-regulated area (see C. Gear for more info). In addition permittee will collect the following amounts of the following of marine fish: nine (9) sharks\* (pending additional review; see section B. Activities. – Shark Collection and Sharks: Incidental mortality and Cultural Practitioner Consultation below), forty (40) damselfish, one (1) hawkfish, fifteen (15) pipefish, five (5) seahorses, five (5) aholehole, twenty (20) mullet, ten (10) threadfin/moi, one (1) snake eel, one (1) flying gurnard, two (2) barracuda, three (3) frogfish, nineteen (19) goatfish, five (5) jacks/trevally, three (3) unicornfish, forty-eight (48) surgeonfish, ten (10) groupers, twenty-five (25) wrasse, twenty (20) butterflyfish, four (4) flatfish/flounders, twenty-five (25) gobies, two (2) porcupinefish, thirty (30) snappers, five (5) scorpionfish, ten (10) squirrelfish, twenty (20) triggerfish, six (6) tobies/puffers, six (6) Moorish idols; and the following amounts of freshwater fish: eight (8) bass and sixteen (16) gobies. **Marine and Freshwater Invertebrates.** Permittee will collect the following marine invertebrates: fifty (50) sea slugs, one hundred and twenty-four (124) crabs, two hundred and forty-five (245) jellyfish, fifteen (15) sea cucumbers, five (5) shrimp, ten (10) octopus, twenty-five (25) squid, five (5) spiny lobsters, forty (40) sea stars, twenty (20) brittle stars, three (3) cushion stars, fifty-six (56) urchins and the following freshwater invertebrates: fifteen (15) opihi/chitons and thirty (30) shrimp/crayfish. **Algae.** Permittee will collect various amounts of the following species of algae: Ulva spp., Codium spp., Halimeda spp., Caulerpa spp., Microdictyon spp., Padina spp. and Dichotomaria spp. **Live rock/sand/marine sediment.** Permittee will collect approximately two-hundred (250) pounds of live rock per location (Kualoa, Black point, Waimanalo Bay, Rainbow's/Ka'a'awa) for a total of 1000 lbs. **Note:** Live rock is collected in 5-gallon buckets (each 5-gallon bucket holds approximately 50 lbs.); approximately five (5) buckets of live rock will be collected in each area. Permittee will collect sixty (60) gallons of sand/marine sediment in non-regulated areas (Kualoa, Black point, Waimanalo Bay, Rainbow's/Ka'a'awa) for a total of 600 lbs. Sand/marine sediment will be returned to collection location after use in exhibits and exchanged for new sand. **Note:** Before return of sand, observations will be made for invasive species, disease or parasites that may have colonized while in aquarium captivity and evaluation will be conducted to determine if tanks were treated with medication (i.e. antibiotics) or other treatments. If invasive species, disease or parasites are observed in sand or medication/treatments have been documented, specimens will not be released back into marine environment (unless determined otherwise during consultation with DAR). Efforts will be made by permittee and authorized assistants to distribute collection activities across shoreline/reef flat/benthic areas, so as not to consolidate the impacts of collection in one location. All genus/species, amounts, sizes and locations of collection will be specified in final report. **Note:** Permittee will make efforts to acquire aquacultured organisms when available to the extent practicable.

**Turtle Activities.** The turtles are on loan from Sea Life Park; Waikiki Aquarium participates in Sea Life Park Green Sea Turtle Breeding Program in an effort toward preservation and restoration of threatened species by caring



for the young turtles until they reach an appropriate size for release to the wild. Permittee is authorized for the possession, transportation, maintenance (feeding, measuring, caring, rescuing, treating, rehabilitating), exhibition (providing educational live displays) and release of up to six (6) green sea turtles (*Chelonia mydas*), depending on size (various sizes), provided such actions are in compliance with the Endangered Species Act (ESA) and other applicable federal laws. All activities will be conducted within Waikiki Aquarium, except the transportation of the turtles to and from the facility. The transportation of turtles will occur between the Sea Life Park facilities and Waikiki Aquarium on Oahu, for release into the wild, from the coastal area adjacent to the aquarium or other location approved by NMFS. This permit does not authorize the take of marine turtles from the wild but the permittee may receive turtles (as listed in Table 1, page 3) from other persons or agencies authorized to conduct work with marine turtles. The turtles will be on display with the condition that the interpretive focus is strongly directed toward education and conservation and subsequently released to the wild as part of Sea Life Park's long-term propagation program for sea turtles in Hawai'i.

Sea Life Park Hawaii turtles are "pre-act" animals; progeny of green sea turtles captured before *Chelonia mydas* was federally protected under the United States Endangered Species Act (ESA) and are thus exempt from the federal permitting requirements of ESA. Therefore, there is no associated federal National Marine Fisheries Service (NMFS) permit as seen with other Special Activity Permits (SAPs) issued to programs that work with ESA listed turtles. However, this program will continue to coordinate directly with turtle biologists from NMFS (Marine Turtle Biology and Assessment Program, NOAA) as described below and will operate under their guidelines and in compliance with the Endangered Species Act (ESA).

**Turtle Handling.** Turtles would be held in an appropriately sized holding tank in accordance with all USDA and other agency rules and regulations. One (1) to six (6) turtles, depending on size, would be on exhibit at a time, and each turtle would only rotate from exhibit to back holding tanks to minimize stress. The Waikiki Aquarium generally receives turtles which are hatchling to juveniles (approximately 8-10 inch shell diameter); turtles are released from holding/care after approximately two years or after the turtle reaches approximately 60 lbs. in weight. Turtles would be collected by hand for removal from exhibit or holding tank. Sturdy transport bins with a damp towel would be used for transporting the turtles between tanks (if necessary during care).

**Turtle Release and Data Collection.** As a part of the agreement with Sea Life Park Green Sea Turtle Breeding Program, the turtles' growth and health will be recorded. Sea Life Park Hawaii and NMFS will also monitor their progress. Release of the turtles will be conducted under the supervision of Sea Life Park Hawaii and NMFS at times and places deemed appropriate. The permittee will provide to DAR a final written report summarizing the results of the activities carried out under this permit (see Special Conditions, Section E. Annual Report). The annual report will include a written explanation as to how the activities with a regulated marine species is benefiting the State of Hawai'i and the improved management of the species. The annual report will include species name, total quantities and sizes of specimens, GPS coordinates or geographic description of location of release of turtles and photo-documentation of representative examples of turtles upon receipt from Sea Life Park, turtles upon release into ocean, housing provided for turtles and methodology used to release turtles into ocean. The Division of Aquatic Resources (DAR) and Division of Conservation and Recreation Enforcement (DOCARE) will be notified in advance of any turtle releases (see section O. Other Collection Guidelines below). Approval for new-acquisitions or release into State waters requires written approval from both DAR and NMFS.

**Shark Collection.** Proposed collection of sharks are pending additional DAR Cultural Advisory Group review and approval (in writing via email) and/or additional cultural practitioner consultation. Species, amounts, sizes, collection location or method may change after review.

**Sharks: Incidental mortality and Cultural Practitioner Consultation.** This program does not include any intentional lethal sampling, but incidental mortality of target and non-target fish (various spp. and sizes) may potentially occur. Permittee will notify DAR immediately in the event that an incidental mortality of a shark (or any other protected species) occurs and will report any incidental mortalities in final report. If any mortality occurs, the permittee and DAR will evaluate the cause of death; the methodology will be reviewed and permittee and DAR will identify changes that can be implemented to sampling operations to avoid such an occurrence in the future. If a repeated occurrence of mortality occurs, DAR will request to review the method and see if additional

modifications can be made to the method to avoid mortality. Note: DAR may request for collection or sampling of or activity with sharks to discontinue after mortality (evaluated on a case by case basis). DAR recommends changing sampling location if mortality occurs. Notification shall be made immediately via email to permit coordinator: [catherine.a.gewecke@hawaii.gov](mailto:catherine.a.gewecke@hawaii.gov) or [dar.sap@hawaii.gov](mailto:dar.sap@hawaii.gov), program manager: [edward.l.kekoa@hawaii.gov](mailto:edward.l.kekoa@hawaii.gov), DAR Main Office: and Oahu biologist: [bryan.r.ishida@hawaii.gov](mailto:bryan.r.ishida@hawaii.gov). Permittee will consult with local cultural practitioners (e.g. practitioner from Oahu - Kehau Kupihea at Mokauea: [Mokauea@gmail.com](mailto:Mokauea@gmail.com)) for a potential cultural training for the permittee to integrate culturally appropriate methods of interacting with, handling and/or taking of sharks into the project, to the extent practicable. Certain handling of organisms (e.g. tagging procedures or sample collection – if applicable) need to be conducted in accordance with the animal use protocol approved by the relevant Institutional Animal Care and Use Committee (IACUC), as the proposed methodology is designed to minimize handling time and subsequent physiological stress on the animals during capture, tagging or sample collection, and release. These methods are in place to minimize the risk of mortality to these animals and the permittee is not able to integrate any methods which may add handling time and/or physiological stress. In other instances where possible, the permittee will make efforts to integrate any other methods of handling or collection practices or other procedures, that are in line with those which may be suggested during the cultural training, and which do not conflict directly with any IACUC procedures. If a shark mortality occurs during handling, the permittee may take a set of samples for archiving and/or future studies (if part of the activity authorized). The rest of the organism or additional material may be able to be contributed to the Hawaii Institute of Marine biology (HIMB) (Kaneohe) or to the Bishop Museum (Honolulu), Oahu. In the event that there are portions of the shark which are not able to be processed by the permittees or contributed to museums, the permittees will reduce the waste of portions of the shark that are used in cultural practices and donate these portions (or entire animal) if requested, to cultural practitioners on Oahu (Kehau Kupihea at Mokauea: [Mokauea@gmail.com](mailto:Mokauea@gmail.com)). Permittee will provide notification to DOCARE and DAR 24 hrs. before each time sampling occurs (see section O. Other Collection Guidelines).

**Distribution of Samples/Invasive Species, Disease and Parasites.** The permittee will mitigate for the spread of invasive species, disease and parasites between sampling areas (if sampling in environmentally different areas) by utilizing best management practices, including but not limited to, ensuring that all organisms, hand tools or collection bags/containers are inspected and absent of any non-natives or invasive organisms before transportation to lab aquariums (not applicable where invasive species, disease and parasites are target species for collections) or before collection in a new area, and ensuring that all gear is disinfected or sterilized between collection areas (see **General Conditions O. Other Collection Guidelines: Aquatic Invasive Species**). Efforts will be made by permittee and authorized assistants to ensure that collection of samples is conducted in such a manner as the process does not result in any additional harm to surrounding organisms or environment. **Permittee will implement collection/sampling design that removes a sustainable proportion from the local population of target organisms and make efforts to distribute collection activities across shoreline/reef flat/benthic areas, so as not to consolidate the impacts of collection in one location (if applicable/if collecting samples).** Discretion should be used to avoid conflicts with fishers and others during authorized activities. Efforts will be made by permittee and authorized assistants to communicate with the public that have inquiries about the collection activities or methodology. Permittee and authorized assistants will clearly state the overall objective of the project, that these activities require permits, and that the methods the permittees are employing are not approved for recreational fishing but research, education, propagation or management activities ONLY.

**C. Gear and Methods.** This permit authorizes the use of regulated gear (nets with below minimum mesh size) and non-regulated gear to collect regulated and non-regulated marine and freshwater organisms and aquatic resources:

Regulated Gear:

- Small-mesh dip-nets/hand nets (< 2 inches stretched mesh): Any dip-net/hand net greater than 36 inches/3 ft. in any dimension (including handle).
- Traps: Larval light collectors (mesh size = < 2")

- Barrier Nets (Dimensions: > Mesh = < 2<sup>3</sup>/<sub>4</sub>" ): A standing barrier net (each 3 ft. x 4 ft. or 4 ft. x 15 ft.) will be used. The mesh size of the standing barrier is 1-2 cm. The nets will be placed in a semi-circle on the bottom for a short time, while the permittee or authorized assistants actively chases fish into the net (snorkelling). Individual fish will be chased into the net, while fish that are determined to be non-target species will be avoided. After the sampling, the net will be removed from the water and taken with the permittee(s) or assistant. Net will be attended at all times.
- Cotton net (mesh size = 1 cm and length of up to 40 ft.)
- This permit authorizes the use of **no more than five small mesh nets used at one time** to collect organisms.

Non-regulated gear:

- Small-mesh dip-nets/ hand nets (< 2 inches stretched mesh): Any net less than 36 inches/3 ft. in any dimension (including handle).
- Coral or live rock collection tools: Chisel, hand-snips, bone cutters, and dive knife.
- Other legal nets (legal lay, barrier, throw-nets); nets used and with dimensions in accordance with Chapters §13-75-10 through §13-75-15, HAR.

**Note:** To collect schooling fish ('Iao, Nehu and Akule), the permittee will utilize a cotton net (mesh size of 1 cm and length of up to 40 ft.), to be placed as a barrier net attended by two to four (2-4) snorkelers, around a nearshore school of 'Iao, nehu and akule in a non-regulated area. Two to four (2-4) additional snorkelers will corral the school into the section enclosed by barrier net, using clear plastic bags collect the fish, which will be put in a transport container with oxygen onto the aquarium's truck with a short transport to either their exhibit or 20' holding tank. The net will not be used to entangle the fish, it will be used as a barrier to corral them into the plastic bags; (Note: incidental entanglement of target and non-target fish may occur; all incidental mortalities will be noted in final report). Uniformed DOCARE officer or DAR biologist should be present during collection activities to monitor collections and provide information to public individuals with any questions about the activity or the gear utilized during collections.

Withholding exemptions to small-mesh dip-nets/hand nets, traps (larval light collectors) and barrier nets discussed above, permittee will use small-mesh dip-nets/hand nets, traps (larval light collectors) and barrier nets in accordance with all other conditions specified for these gear types in Chapters §13-75-10 through §13-75-15, HAR.

If using regulated nets, permittee or authorized assistants **will attend nets at all times** and **release/return all unintended by-catch or non-target organisms as quickly as possible to the marine or freshwater environment**. Incidental mortality may occur. Permittee will provide information on all incidental mortalities in final report. If using non-regulated nets or traps or other gear, permittee will follow regulations for each gear type: <https://dlnr.hawaii.gov/dar/fishing/fishing-regulations/gear-restrictions/>

**Entanglement Prevention.** Efforts will be made by permittee and authorized assistants to utilize best management practices to eliminate any potential for incidental entanglement of any unintended marine organisms (turtles, monk seals or other protected species) when utilizing nets. Entanglement prevention practices will include but are not limited to: minimizing the number of structures or components that may potentially cause entanglement during research operations (e.g. loops, holes, slack lines), checking the net regularly for unintended organisms and attending net at all times. **Permittee will immediately notify DAR and the appropriate federal agency to report the entanglement of any protected species if incidental entanglement occurs.**

**D. Transportation and/or Release, Collection, Monthly or Trip Plans/Reporting and Use of Organisms.**

**Transportation and/or Release.** The specimens will be collected and transported alive in aerated buckets to Waikiki Aquarium for educational live display. Some organisms may be returned alive to the site they were collected if not necessary any longer for the display or if the aquarist thinks release would be beneficial for health or survival of the organism. **Permittee will consult and request approval from DAR for all releases or return of organisms to collection locations.** Before release, observations will be made for invasive species, disease or parasites that may have colonized on organisms, live rock or in sand while in aquarium captivity and evaluation will be conducted to determine if tanks were treated with medication (i.e. antibiotics) or other treatments. If invasive species, disease or parasites are observed on organisms, live rock or in sand or medication/treatments have been documented, specimens will not be released back into marine environment (unless determined otherwise during consultation with DAR). Note: Permittee will release any organisms not acclimating to captivity (not including organisms with invasive species, disease or parasites) to original collection area and include this information in the final report. Permittee will contact DAR for approval if the release locations of the organisms differs from the collection locations. Some organisms may perish in captivity; all mortalities will be noted on final report and disposed of correctly.

**Collection, Monthly or Trip Plans/Reporting, Use of Organisms.**

1. **COLLECTING PRACTICES:** The permittee is responsible for persons engaging in activities under this permit behaving professionally and responsibly, in manner which does not generate conflict with public or private sectors, including but not limited to the following: local communities, fishing or dive-tour industries, etc.
  - a) Collecting activities under authority of this permit must be supervised directly, on site, by the permittee: Andrew Rossiter or authorized assistants (Adam Elwood, Tony McEwan, Roberto Alfieri, Maria Loberg, Briana Berdel, Martha Hill, Kelley Niide, Kalene Rogers, Mary Roney, Samantha Darin and Dean Spencer).
  - b) Collectors should be hired under a separate contract/agreement with the organization or permittee which obtains the SAP. The collector will be regarded as the organization's staff and will provide services as a collector to the project. Collectors need to be listed as an authorized assistant under the SAP.
  - c) Collectors shall not collect fish opportunistically and offer them to various organizations. No collections should occur outside of the species/amounts/size classes that have been requested and approved under an SAP.
  - d) Boats and vehicles used or hired for collecting under this permit will be clearly marked with inscription or sign bearing the permittee's affiliation, "Waikiki Aquarium" or a flag bearing a unique identifier number issued by DAR.
  - e) Every net or trap (if applicable), except for hand-nets, used for collecting under this permit, regardless of mesh-size, must bear a tag or inscription showing the name of the permittee's affiliation, "Waikiki Aquarium", and the number of this permit, "SAP 2024-13".
  - f) Except as specified expressly in the permit or amendment to the permit and approved collecting plan, no organism unlawful for taking or possession by reason of size, season or sex, under statute or administrative rule, may be collected or displayed under this permit.
  - g) The Division may require the permittee to accommodate presence of an observer specified by the Division.

- h) The permittee will accommodate periodic site visits by the Division either immediately before or throughout the permitting period (if requested);
  - i) Mass mortality - the permittee must notify DAR within one day of:
    - i) Any instance of major outbreak of disease or instance of mass mortality in a display or holding tank. “Mass Mortality” may be defined as unusual or large amounts of organisms (groups) perishing or repetitive cases of mortality due to activities such as collection or transportation practices or tank conditions (e.g. water quality/disease issues). “Unusual or large amounts” of organisms may be defined as more than the regular occurrence of incidental mortality of limited amounts of organisms that may occur due to natural causes (e.g. old age) or select incidences of stress, predation, lack of acclimation to captivity, of single organisms, etc.
    - ii) Waikiki Aquarium will provide information on measure(s) taken to control such disease or cause of mortality, and, as appropriate, measures taken to prevent or reduce release of pathogen or cause into ocean waters through the permittee's outfall, and;
    - iii) Waikiki Aquarium will provide information on plan(s) for any additional such control and prevention measure(s).
2. **COLLECTING PLANS:** Collecting activities authorized under this permit must be approved in advance, by the Division's written approval of a collecting plan for each month or each specific trip (if select collection trips will occur), in a form specified by the Division.
- a) Each collecting plan must:
    - i) Describe species and quantities intended for collection at specific locations, by specific methods, within specific date-ranges;
    - ii) Be submitted to the DAR office (Oahu) for approval (DAR Honolulu, Oahu office: email: Catherine Gewecke - Aquatic Biologist; email: [catherine.a.gewecke@hawaii.gov](mailto:catherine.a.gewecke@hawaii.gov) or [dar.sap@hawaii.gov](mailto:dar.sap@hawaii.gov)).
  - b) The Division may add conditions specific to particular species, locations, times, or methods proposed in a collecting plan.
  - c) Organisms approved for collection in one month but not actually collected, do not remain approved for collection in any subsequent month unless requested and approved again in a collecting plan for the subsequent month.
3. **USE OF ORGANISMS:** Organisms taken from Hawai‘i waters under authority of this permit may be used only for research, education/display or propagation at Waikiki Aquarium, except as authorized by prior written approval of the Division):

- a) Organisms collected under authority of this permit may not be used for personal consumption or sale;
  - b) Written approval must be obtained from the Division prior to:
    - i. Purchasing or any other acquisition of regulated organisms (regardless of origin) from any other party;
    - ii. Transporting any organisms (regulated or non-regulated) between islands;
  - c) The permittee may not convey in any fashion (including, but not limited to, exchanging, donating, selling, trading, giving or loaning) any organism collected under this permit to any person, party or organization in Hawai'i which does not already have a permit from the Department authorizing possession of same, unless authorized by this permit. If propagation is occurring, this condition may not apply to future progeny of organisms collected under this permit (see Section B Activities – Note – if applicable).
  - d) Signage approved by the Division must accompany any display(s) at Waikiki Aquarium (if open to the public), to communicate requirement for special activity permit to take and possess regulated organisms.
4. **MONTHLY COLLECTING REPORTS:** The permittee must provide to the Division's Honolulu office monthly, written reports of collecting activity carried out under this permit:
- a) Each report, in form specified by the Department (e.g. include genus/species or other taxonomic designation acceptable to the Division, quantities and sizes collected (or names and quantities of organisms purchased or otherwise acquired), collection locations, dates and methods of collection, disposition of any specimens not maintained at Waikiki Aquarium (e.g. discarded on the spot, returned to the ocean, died during collection or in captivity);
  - b) Reports should include names of collectors; collectors must be listed as authorized assistants on the permit;
  - c) Each monthly or trip-specific (if select collection trips will occur) collecting report is due to the DAR office (Oahu) for approval (DAR Honolulu, Oahu office: email: Catherine Gewecke - Aquatic Biologist; email: [catherine.a.gewecke@hawaii.gov](mailto:catherine.a.gewecke@hawaii.gov) or [dar.sap@hawaii.gov](mailto:dar.sap@hawaii.gov)) within five working days after the last day of the month for which it reports;
  - d) Upon request of the Department, the permittee will furnish with any monthly report an inventory of organisms collected under this permit and held at Waikiki Aquarium.
- E. Annual Report:** Upon 90 days post expiration of the permit or 30 days prior to expiration of the permit (depending on **renewal** or **non-renewal** status), the permittee must provide to DAR a final written report summarizing the results of the collection activity carried out under this permit and (if available/applicable) analysis of the data.

1. The annual report should provide a written description of the activity and objective and a written explanation as to how the collection of or activity with protected/regulated aquatic organisms or non-regulated organisms (if collected with regulated method/gear or in regulated area), use of regulated method/gear and/or collection in regulated areas for scientific, education, management or propagation purposes is benefiting the State of Hawai'i in general and specifically, the improved management of the species or related species.
2. The annual report must describe the following, in form specified by the Department; access to reporting template on the DAR Permitting Portal can be found at: <https://inforps-dp.hawaii.gov/dlnraquaticpermitting/#/research-spreadsheet> or via email from permit coordinator (for info from #2. a. & c. and #3) – include all other info (#1, #2 b. & d. into a PDF report) – **consult permit coordinator for most up-to-date reporting template (if necessary):**
  - a. **Species name and total quantities and sizes** of all regulated and non-regulated specimens collected under this permit. Note: Permittee will identify any new species not previously requested for collection in previous permits (e.g. organism that is new for the aquarium to hold an exhibit).
  - b. **Results of chemical, genetic, physiological, histological, pathological, statistical or other analysis of data** (if possible/applicable).
  - c. **GPS coordinates (decimal degrees) of location of each sample taken or action conducted and associated geographic location** (e.g. windward side or east side of Patch Reef 8, or north side of Lilipuna Pier). Multiple samples collected in one single area can be geo-referenced by a single GPS point and associated geographic location.

**If GPS is not available:** Make accurate note of your sampling location in field and obtain GPS location from Google Earth after field sampling (**instructions are for the downloaded program - Google Earth Pro, not web version**):

:

- i. Click “Tools” in the top line menu and open Options.
- ii. In the “3D View” tab, **find** the “Show Lat/Long” section. Change the default from Degrees, Minutes, Seconds to **Decimal Degrees**.
- iii. Next, click the pushpin icon in the menu; click and drag the pushpin that appears to the point on the map from which you wish to obtain a GPS coordinate:  
  
(e.g.: Lat: 21.441646, Long: -157.799076)
- iv. Enter GPS coordinate into spreadsheet with associated sampling information (species, amount, size).

- d. **Photo-documentation** of a representative example of organisms collected, methodology, and gear:
  - i. Photo-documentation of **A)** one (1) representative **example per species of organism** or aquatic resource collected under this permit, Photo-documentation of **B)** one (1) representative **example per methodology used to collect organisms** in the field, Photo-documentation of **C)** representative **examples of by-catch** (if possible), Photo-documentation of **D)** representative **example of turtles upon receipt from Sea Life Park**, Photo-documentation of **E)** representative **example of turtles upon release into ocean**, Photo-documentation of **F)** representative **example housing/tank provided for turtles** and Photo-documentation of **G)** **process or methodology used to release turtles into ocean**.

- ii. Each representative example should include the following photos; **A) For organisms:** one (1) photo per species of organism (if fish are not possible, submit photos of only invertebrates or aquatic resources including coral, live rock and sand) with a scale for size; **B) For sampling methodology:** one (1) photo per method of various methods used by collectors to catch organisms in the field (including gear); **C) For by-catch:** photos of various by-catch (if applicable and possible without causing by-catch mortality); **D and E) For turtles upon receipt/release:** one (1) photo of turtle upon receipt and one (1) photo of same turtle upon release (with a scale for size); **F) For housing/tank provided for turtles:** one (1) photo of turtle housing or tank (with a scale for size) and; **G) For process or methodology used to release turtles into ocean:** one (1) photo of method used to release turtles.
3. An inventory (species list) of organisms (dead or alive) present at the facility or with the permittee the end of the report period, in form acceptable to the Division, must accompany the annual report. Permittee will indicate which organisms were collected under the current permit and which organisms were previously existing at the facility (if source of organism is available, DAR requests this info to be included – e.g. collected under previous permit, donated, purchased).
4. The annual report is due at the Division's Honolulu office one month (30 days) before expiration of the permit if renewal is needed or within three months (90 days) after expiration of the permit if renewal is not needed or as otherwise instructed by the Division.

**F. Use of Organisms, Parts of Organisms, Tissue Samples or other Aquatic Resources.** The permittee may not convey in any fashion (including, but not limited to, selling, trading, or giving) any organisms, parts of organisms, tissue samples or other aquatic resources to any person or party in Hawai'i that does not already have a permit from the Department authorizing possession of same and without written approval from DAR. Organisms taken under authority of this permit may be used for scientific study or educational purposes **ONLY**, except as authorized by prior written approval of DAR.

- a. This permit authorizes permittee and authorized assistants to transport organisms listed in Table 1 within Hawai'i to the following institutions and authorizes the following institutions to receive organisms listed in Table 1 from permittee and authorized assistants:
  - i. Sea Life Park Green Sea Turtle Breeding Program
  - ii. Maui Ocean Center, Maalaea, Maui
  - iii. Maui Streams (Palauhulu, Honomanu or Waihe'e Streams; freshwater fish collections)
  - iv. Coral Restoration Nursery (CRN), Department of Land and Natural (DLNR) Resources-Division of Aquatic Resources (DAR), Sand Island, Oahu

## **II. GENERAL CONDITIONS:**

- A. This permit does not make the Department of Land and Natural Resources or the State of Hawaii liable in any way for any claim of personal injury or property damage to the permittee or assistants which may occur during any activity conducted under this permit; moreover, the permittee and all assistants agree to hold the State harmless against any and all claims of personal injury, death or property damage resulting from activities of the permittee or any assistant.



- B. This permit conveys a privilege to engage in only those activities under the jurisdiction of the Department of Land and Natural Resources. The permittee is responsible for complying with all applicable County, State, and Federal requirements. The permit does not convey any privilege of access over or through private property.
- C. The permittee and each assistant are individually responsible and accountable for their actions while conducting activities authorized under this permit; additionally, the permittee is responsible and accountable for the actions of the permittee's assistants.
- D. This permit is not transferable or assignable. Any person whose name does not appear on this permit and is conducting any activity described herein is subject to prosecution for violation of State laws.
- E. The permittee may request changes to the permit. Any such request to make changes to the permit must be made in writing and received by the Department at least thirty days prior to the change. The addition of new assistants will require each individual to sign the Attachment on page 61, 62 or 63 stating that they have read, understood, and agree to abide by all general and special permit conditions. No change may be implemented without written approval from the Department.
- F. The permittee may request to:
1. Add assistants to the permit;
  2. Add another permittee or replace an existing permittee in the manner stated above; and
  3. Change the activities authorized under this permit.
- G. The permittee or their assistant(s) must have with them a copy of this permit while conducting activities authorized by this permit.
- H. This permit authorizes collection of organisms protected by Federal law only with prior appropriate Federal authority, which must be described on Page 1 of this permit (if applicable).
- I. This permit does not authorize the sale of any collected organism.
- J. This permit expires on the date indicated on Page 1. **If no renewal is needed**, the permittee must email a **PDF of this permit with all signature sheets** and additionally email a **PDF version of a final report** (to [catherine.a.gewecke@hawaii.gov](mailto:catherine.a.gewecke@hawaii.gov)) with complete information on all activities authorized under this permit (see **Special Conditions, Section E. Annual Report**) within **three months (90 days) after** the expiration date. **If renewal is needed**, permittee must submit a **PDF version of a final report** to the Division **one month (30 days) prior** to the expiration date for DAR biologists to review, in addition to turning in expired permit with signatures no later than the regular **three months (90 days) after expiry date**. If complete report cannot be submitted **one month (30 days) prior** to the expiration date, the permittee will submit a short synopsis of research conducted (PDF version- **one month (30 days) prior** to the expiration date) in past year including information on quantities, genus species and activities conducted, and submit full report no later than the regular **three months (90 days) after expiry date**.
- K. The permittee and assistants agree to provide access to data obtained under authority of this permit upon request of the Division of Aquatic Resources, and to provide to the Division a copy of each report, published for distribution, prepared with data obtained under this permit. The permittee agrees to provide the Division of Aquatic Resources access to organisms obtained and held under this permit for on-site inspection.
- L. The permittee agrees to notify the island office of the Division of Conservation and Resources Enforcement (DOCARE – Oahu Central Office: 808-643-3567) at least 24 hours prior to any authorized activity being conducted in the field. See section **O. Other Collection Guidelines** (below) for additional requirements.

- M. A violation of any terms or condition of this permit or any violation of State law not covered by this permit may result in revocation of the permit and other penalties as provided by law. In addition, the Department may consider any such violation as grounds for denying any future application for this or any other permit issued by the Department.
- N. Coral Activities: Activities under this permit shall abide by the following conditions.
1. Coral - the Permittee must notify DAR Oahu ([dar.sap@hawaii.gov](mailto:dar.sap@hawaii.gov)) within 24 hours of:
    - a. Any instance of major damage caused to coral or other marine natural resources, because of collection or other research activities conducted under this permit.
  2. Fragmentation - This permit **does not authorize** fragmentation of coral colonies (unless fragmentation occurs on corals already held at aquarium or if future coral collections are authorized under an amendment).
  3. Rare Species - The following *Porites* species require special permission from the Division prior to collection under this permit: *Porites pukoensis*, *Porites duerdeni*, *Porites studeri*. The following *Montipora* species require special permission from DAR prior to collection under this permit: *Montipora dilitata*. The following *Pocillopora* species require special permission from DAR prior to collection under this permit: *Pocillopora ligulata*, *Pocillopora molokensis*.
  4. **No impact-causing activities will be conducted on (or immediately adjacent to) any intact, attached coral colony measuring larger than 1 m x 1 m x 1 m. Specific efforts will be made to avoid damage to any large colonies of living coral.**
- O. Other Collection Guidelines:
1. Collecting generally - the Permittee must give notice, in form specified by the Department (email or phone call), to DAR ([catherine.a.gewecke@hawaii.gov](mailto:catherine.a.gewecke@hawaii.gov)) and to the Department's Division of Conservation and Resources Enforcement (DOCARE: 808-643-3567), at least 24 hours prior to initial commencement of any series of field collection/sampling activities taken place under this permit **or** on a schedule agreed to by DOCARE and the permittee (i.e. one call notifying of a period of time sampling that will occur across different locations throughout the year). **Permittee will provide the following info when DOCARE is notified:** SAP #, permittee name/institution, date, location, activity description (e.g. sampling or handling turtles, collection of regulated organisms, using regulated gear, etc.), description of boat being used (color, size, type of boat)(if applicable), description of vehicle on shore (if applicable), number of people involved in activity, etc.
  2. An **Aquatic Invasive Species (AIS) Mitigation Plan** will be filed with the Division prior to conducting any collection under this permit. The Plan will include methods and protocols to minimize AIS or disease movement through gear, supplies and activities of the permittee. Permittee must take actions to verify that collection tools have been disinfected before use if previously used in collection activities.
- Invasive Species/Disease/Parasites:** All collection gear deployed must be visually checked for invasive species/disease/parasites and disinfected with 10% bleach solution for 10 minutes before deployment in alternate location if collecting between multiple watersheds/distinct reef areas/islands. If collection gear cannot be bleached, gear must be thoroughly rinsed with fresh water and dried in sun for 24 hours before deployment in alternate location, sterilized with another viable method or alternate sampling gear should be utilized. If sampling disease or anomalous growth specimens, gear should be sterilized between each specimen or new collection gear should be used. **If collecting in Kaneohe Bay or Maunalua Bay:** Kaneohe Bay: All collection gear utilized in Kaneohe Bay must be visually checked for invasive species/disease/parasites (e.g. *Kappaphycus spp.*, *Eucheuma denticulatum*, *Gracilaria salicornia* and *Mycale grandis/armata*) and disinfected with 10% bleach solution for 10 minutes before deployment in alternate location other than Kaneohe Bay. Maunalua Bay: All collection gear deployed in Maunalua Bay must be visually checked for

invasive species/disease/parasites (e.g. *Avrainvillea amadelpha/lacerata* and *Gracilaria salicornia*) and disinfected with 10% bleach solution for 10 minutes before deployment in alternate location other than Maunaloa Bay. The following species remain a concern to the division: Alien invasive algae (*Kappaphycus* spp., *Eucahama denticulatum*, *Gracilaria salicornia*, *Acanthophora spicifera*, *Hypnea musciformis* and *Avrainvillea amadelpha/lacerata*), Coral disease (*Montipora White Syndrome*, *Porites trematodiasis*, *Montipora black band disease*, *Porites tissue loss syndrome*, and *Porites* spp. and *Montipora* spp. tumors, *Montipora* spp. growth anomaly), Orange keyhole sponge (*Mycale armata/grandis*).

(If applicable) Permittee will mitigate for the spread of invasive species/disease/parasites by ensuring that all organisms (e.g. coral colonies, fragments or live rock) collected from Kaneohe Bay are absent of any algae fragments or basal attachments of the invasive alga *Kappaphycus* spp., *Eucahama denticulatum*, *Gracilaria salicornia*, or other invasive species/disease/parasites (unless collecting these non-native species specifically) before transporting organisms to alternative location for research.

(If applicable) Permittee will mitigate for the spread of invasive species/disease/parasites by ensuring that all organisms (e.g. coral colonies, fragments or live rock) collected in Maunaloa Bay are absent of any algae fragments or basal attachments of the invasive alga *Avrainvillea amadelpha/lacerata*, *Gracilaria salicornia*, or other invasive species/disease/parasites (unless collecting these non-native species specifically) before transporting organisms to alternative location for research.

**Quarantine Protocol.** If transporting and holding live organisms (including live rock) in an aquarium/tank: After inspection, organisms transported to or from other locations on island must have a quarantine protocol involving either closed-system tanks for the entire research period or closed-system tanks for a select amount of quarantine time followed by flow-through tanks with UV lights on outfall. Organisms will be placed in placed into flow-through tanks only if observations indicate that no invasive species are present. Permittee will sacrifice any AIS/disease/parasites if found at this stage, and keep host organisms in closed system tanks for research. Length of quarantine time and type of holding tank (closed-system or open-system) will be determined based on location of collection/location of holding and type of organism collected, after consultation with DAR. Exceptions (after consultation with DAR): If quarantine process is not possible (due to capacity/lack of available closed-system tanks), quarantine process is not required permittees working with fish and invertebrates (other than coral) collected from areas outside of area where research tanks are located, if permittees conduct initial inspection of organisms for AIS/disease/parasites before transporting organisms back to open-system (flow-through tanks) at research location. DAR will work case on a case by case basis, that work with coral and live rock collected from areas outside of outside of the area where research tanks are located, but which may have limited quarantine capacity (lack of available closed-system tanks), to determine if the quarantine process is necessary.

3. No organism other than those listed on this permit will be collected or impacted by any activities conducted under this permit.
4. Collecting and transport activities under authority of this permit must be supervised directly, on site, by either the permittee or their authorized assistants (who must be a signatory of this permit).
5. Gear and Methods: Use of any chemical substances pursuant to Section 188-23, Hawai'i Revised Statutes, electrical shocking devices, or explosives remains expressly prohibited.
6. Use of Organisms: Organisms collected under authority of this permit may not be used for personal consumption or sale; organisms collected under this permit may not be traded, bartered or loaned to other individuals, institutions or entities;
  1. Written approval must be obtained from the Division prior to:

- a. Purchasing or any other acquisition of regulated organisms (regardless of origin) from any other party;
  - b. Exchanging or donating any organisms collected under this permit to any other person, party or organization (unless authorized by this permit);
7. **Sampling Moratoriums:** The Division may request a voluntary sampling moratorium, or in some cases, implement a mandatory sampling moratorium, for certain organisms authorized for collection under any current permit, during times of ecosystem pressure caused by natural or anthropogenic stressors. Example of ecosystem pressure may include coral bleaching events, which have occurred most recently in Hawaii during the months of July/August to November. Please take this into consideration when applying for a permit, plan your collections accordingly and be prepared to take a sampling hiatus (if necessary) until the stressor event is determined to have ended. Exemptions may be provided for studies or projects that have a research objective directly related to the naturally or anthropogenically caused stressors, which require collecting data or samples during this period, or select projects that are evaluated to not cause additional pressure during this period.

P. **OWNERSHIP OF BIOGENETIC RESOURCES.** The State holds legal title to the natural resources and biogenetic resources gathered from state lands, including submerged lands. See Haw. Op.Atty.Gen. Opinion No. 03-03 ([April 11, 2003](#)). Biogenetic resources refer to the genetic material or composition of the natural resources and other things connected to, or gathered from public lands. See Davis v. Green, 2 Haw. 327 (1861); United States v. Gerber, 999F.2d 1112 (7th Cir. 1993).




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DAWN N. S. CHANG, Chairperson  
Department of Land and Natural Resources

cc: (x) DOCARE  
(x) DAR – Oahu

SIGNATURES AND AGREEMENT

By my signature below, I acknowledge receipt and understanding of the general and special conditions of this Special Activity Permit. Further, I agree to abide by all of these conditions when conducting activities authorized by this permit.

PRINCIPAL PERMITTEES:   
Dr. Andrew Rossiter

DESIGNATED ASSISTANTS:

Signature: _____	Signature: _____
Print Name: Kelley Niide	Print Name: Tony McEwan
Signature: _____	Signature: _____
Print Name: Adam Elwood	Print Name: Roberto Alfieri
Signature: _____	
Print Name: Maria Loberg	

SIGNATURES AND AGREEMENT

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DESIGNATED ASSISTANTS:

Signature:	_____	Signature:	_____
Print Name:	Briana Berdel	Print Name:	Martha Hill
Signature:	_____	Signature:	_____
Print Name:	Kalene Rogers	Print Name:	Mary Roney
Signature:	_____	Signature:	_____
Print Name:	Samantha Darin	Print Name:	Dean Spencer
Signature:	_____	Signature:	_____
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