*Okeanos Explorer* ROV Dive Planning Form

Last Updated: March 1, 2017

**Expedition: EX-17-05: Cook Islands, Jarvis Island, and Kingman/Palmyra**

Please use this as a template for documenting your recommendations for high-priority dive targets. Be sure to include a rationale for the dive as well as specific protocols (if applicable), and any known previous work or potential hazards at the site. Please include only generalized location information for any marine archaeology sites.

The form also includes fields for mapping targets and CTD cast locations as well.

Please send the completed form to Kasey.Cantwell@noaa.gov

**Site Name:** Aunu'u Unit

**Approximate Location (in decimal degrees):**  14°17'3.95"S, 170°29'55.21"W

**Dive Date (local):** YYYY/MM/DD

**Depth Range (starting and ending depth in meters or list of targeted depths for mid-water dives):** 500-250 m

**Insert Image of Dive Site (if available)**

# Exploration Rational

*Please explain the rational for the specific dive track, and how the dive fits in with* [*CAPSTONE*](http://oceanexplorer.noaa.gov/okeanos/explorations/capstone/welcome.html) *priorities or themes.*

**NMSAS Rationale: A total of 5.8 square miles of reef and offshore waters around Aunuˊu have been included in the sanctuary, with 3.9 square miles designated a research zone and allows surface fishing for pelagics only, and 1.9 square miles multiple use zone that allows traditional and non-destructive fishing practices. The research and multiple use zones will allow for comparisons over time of an area that prohibits the take of reef fish and bottom dwelling species and benefits to an adjacent area of higher human uses that meets the needs of day-to-day living in sustainable ways. Information on bottomfish off Aunu'u will be used to inform the next sanctuary Condition Report that will be produced in 2017/18 and the process update of the sanctuary management plan that will begin in 2017/18.**

**Additionally, this area has been rallied heavily by the local government and fishermen as an economic loss and a forgone benefit for the community. As some of this area is a mesophotic habitat the Sanctuary would appreciate including this to be researched when the Okeanos explorer is in next year.**

**Clark Rational: I am interested in doing some mesophotic work, especially off of park waters in Tutuila. I have mostly been thinking of connectivity issues. We have been dealing with a crown of thorn starfish issue since 2011, and it has highlighted the fact that the deep and shallow reefs have a fair amount of migration between them.**

# **Dive Objectives**

*Please provide a brief explanation of the objectives of the dive, what you can anticipate encountering/what available tools you anticipate using (e.g. high temperature probe at hydrothermal vent), and any other relevant information (e.g. mid-water transects at 800, 1000, 1200 m) that will impact operations.*

**Has previous work been conducted here? Are there potential hazards in the area?**

Yes- much shallower. Potential fishing entanglements.

**If you have submitted multiple dive plans, what is the relative priority of this dive?**(Please provide a numeric ranking)

# Sampling Objectives

**Please describe any particular biologic or geological sampling priorities for this site. How will these samples contribute to establishing a baseline characterization of the site or general region? What potential discoveries are there to be made by collecting these samples?**

# ROV Track Waypoints Table

*For mid-water work please provide a starting location and depths for transects, and weigh points along the dive (if applicable).*

|  |  |
| --- | --- |
| Desired Waypoints to Explore(completed by shore-side scientist) | Actual Waypoints to Explore(completed by shipboard expedition leader) |
| **Waypoint Name orSequence** | **Latitude** | **Longitude** | **Approx. Depth** | **Waypoint Name orSequence** | **Latitude** | **Longitude** | **Approx. Depth** |
| Launch |  |  |  | **Launch** |  |  |  |
| WP1 |  |  |  | **WP1** |  |  |  |
| WP2 |  |  |  | **WP2** |  |  |  |
| WP3 |  |  |  | **WP3** |  |  |  |
| WP4 |  |  |  | **WP4** |  |  |  |
| WP5 |  |  |  | **WP5** |  |  |  |
| Recovery |  |  |  | **Recovery** |  |  |  |

**Ancillary Information:**

***This could include specifics about your proposed dive, such as how you would***

# Additional Requested Operations in the Target Area Prior to or After the ROV Dive

Please include requests for in situ sensors (LSS, DO, ORP) to be added to the CTD cast here, and specifics on the type of mapping operation requested (multibeam, subbottom, single beam, ADCP) in the table below.

|  |  |  |  |
| --- | --- | --- | --- |
|  | Latitude | Longitude | Approx. Depth |
| CTD Casts |
| 1 |  |  |  |
| 2 |  |  |  |
| 3 |  |  |  |
| 4 |  |  |  |
| Mapping Area Bounding Coordinates |
| North |  |  |  |
| East |  |  |  |
| South |  |  |  |
| West |  |  |  |