

3.0 Environmental Description

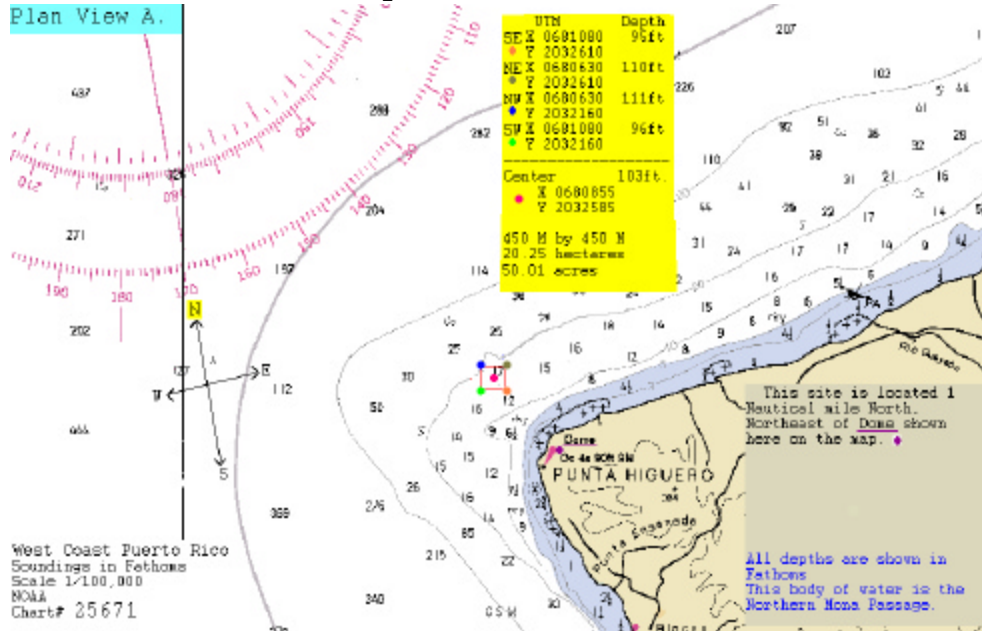


Illustration 1.1.1 "A" Location Map

Please View Illustration 1.1.1 "A"

General depth: 95ft. - 116ft.

Area Size: 50 Acers

Bottom description; Sand gravel mix through out the site. Current use; the bottom has no structure to date to report and is as of now considered dead to the fishing community.

Body of Water: The ocean this project is located is the Northern Mona Passage which is still considered the Atlantic Ocean. The project sits two miles off the coast of Rincon.

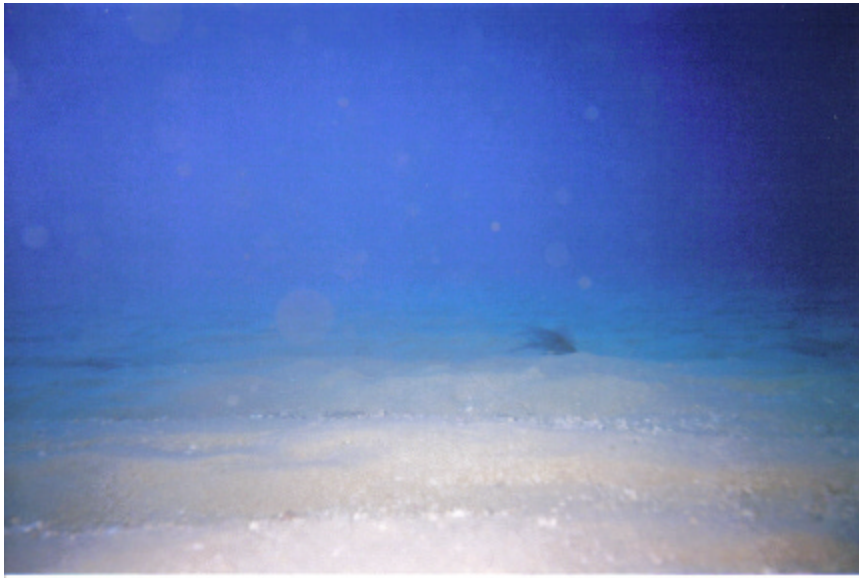
Benthic Communities: There is no sign of sea life in any form other then pelagic species that occasionally frequent the continental shelf more than 400 meters from the site.

Current Patterns: Information below will show the prevailing current pattern across the site flowing from East to West and South to North out onto the continental shelf away from the shorelines of Punta Higuero.

Endangered Species: Humpback whales and Sea turtles are the only species that migrate through the area seasonally, if at all.

Project References : came from Culebra (**Appendix 6**) and Kona Hawaii (**Appendix 1**)





3.4.a Currents

The observed current patterns over the site were fundamental in choosing this location in the first place. Readings taken from 2/9/04 thru 2/27/04 are typical of the patterns observed throughout the year. Note that the prevailing currents run from the reserve at Rincon Northward converging with the currents, which run westward from Aguadilla. The most westward current at bearing 194 degrees occurs only briefly with the full moon and sweeps off the continental shelf into the Mona Passage. These current patterns are ideal for this proposed project due to the direction and speed allowing for near perfect carrying capacity essential for a successful open ocean aquaculture model.

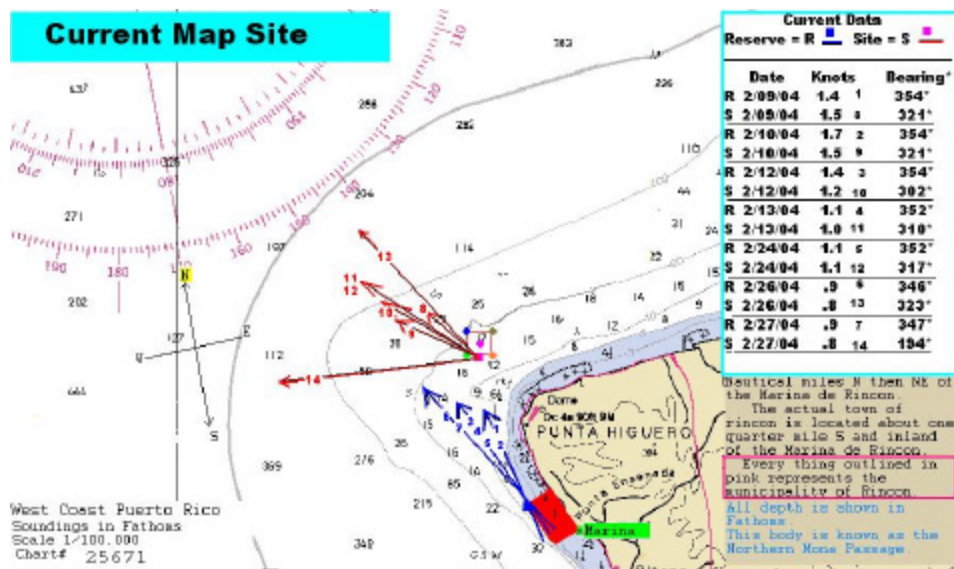
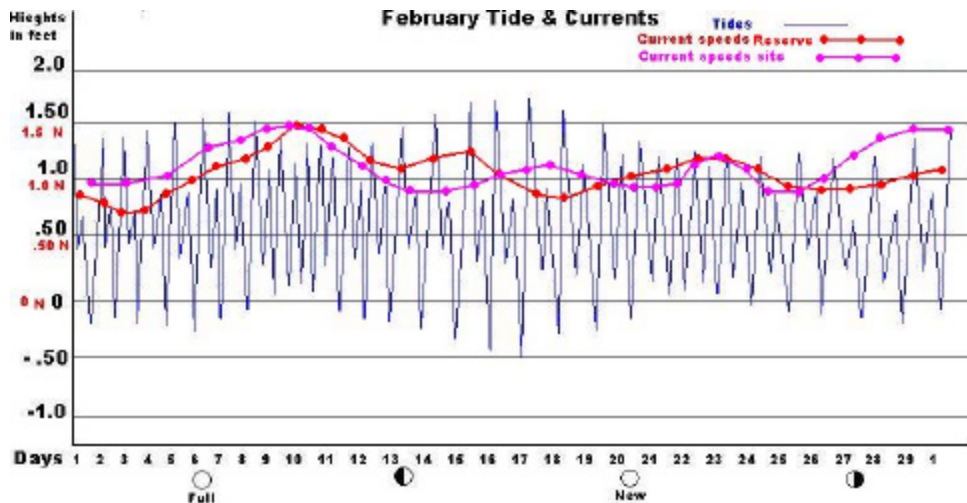


Illustration 1.1.3 "A"

This Map illustrates the typical current flow along the West Coast at Punta Higuero from the Marine Reserve at Rincon moving in a North by Northwest direction across the proposed site. Note the currents converging from an East to West direction with those coming from the South sweeping out away from the coastlines of Punta Higuero and onto the deeper waters of the continental shelf.



The chart above illustrates as a graph the typical Tide and Currents as observed during the month of February 2004. the month of February was chosen due to it tends to be the roughest month of the year in the Rincon area.

The most westerly current bearing 194 deg. Occurs on 2/27/04 with the moon going full. Note also that the current speed across the site increases as currents across the Reserve decrease at this time.

Current Data 2/9/04 – 2/27/04

Reserve 10:04 am 2/09/04 Starting point N 18- 20.552 W 67 -16.248.
 Drift rate 38 sec to cover 30 M. Direction moving: Bearing 354 degrees Depth 55 ft.
 After calculations = 1.5 N = 77.1666667 cent/ sec
Site 9:15 am 2/09/04 Starting point N 18- 22.674 W 67- 17.174
 Drift rate 29 sec to cover 30 M Direction Moving: Bearing 321 degrees Depth 116 ft.
 After calculations = 1.8 N = 92.6 cent/ sec

Reserve 9:13 am 2/ 10 / 04 Starting point N 18-20.552 W 67-16.248
 Drift rate 34 sec to cover 30 M. Direction moving: Bearing 354 degrees Depth 46 ft.
 After calculations = 1.7 N = 87.4555556 cent/ sec
Site 9:45 am 2 / 10 / 04 starting point N 18-22.674 W 67-17.174
 Drift rate 33 sec to cover 30 M Direction moving: Bearing 321 degrees Depth 110 ft.
 After calculations = 1.7 N = 87.4555556 cent/ sec

Reserve 8:03 am 2/ 12 / 04 Starting point N 18-20.552 W 67-16.248
 Drift rate 39 sec to cover 30 M. Direction moving: Bearing 354 degrees Depth 54 ft.
 After calculations = 1.4 N = 72.0222222 cent/ sec
Site 9:25 am 2 / 12 / 04 starting point N 18-22.674 W 67-17.174
 Drift rate 46 sec to cover 30 M Direction moving: Bearing 302 degrees Depth 100 ft.

After calculations = 1.2 N = 61.7333333 cent/ sec

Reserve 7:15 am 2/ 13 / 04 Starting point N 18-20.552 W 67-16.248
Drift rate 49 sec to cover 30 M. Direction moving: Bearing 352 degrees Depth 54 ft.
After calculations = 1.1 N = 56.5888889 cent/ sec
Site 9:15 am 2 / 13 / 04 starting point N 18-22.674 W 67-17.174
Drift rate 53 sec to cover 30 M Direction moving: Bearing 310 degrees Depth 100 ft.
After calculations = 1 N = 51.4444444 cent/ sec

Reserve 7:15 am 2/ 24 / 04 Starting point N 18-20.552 W 67-16.248
Drift rate 51 sec to cover 30 M. Direction moving: Bearing 352 degrees Depth 52 ft.
After calculations = 1.1 N = 56.5888889 cent/ sec
Site 9:15 am 2 / 24 / 04 starting point N 18-22.674 W 67-17.174
Drift rate 46 sec to cover 30 M Direction moving: Bearing 317 degrees Depth 114 ft.
After calculations = 1.1 N = 56.5888889 cent/ sec

Reserve 7:35 am 2/ 26 / 04 Starting point N 18-20.552 W 67-16.248
Drift rate 59 sec to cover 30 M. Direction moving: Bearing 346 degrees Depth 52 ft.
After calculations = .9 N = 46.3 cent/ sec
Site 9:00 am 2 / 26 / 04 starting point N 18-22.674 W 67-17.174
Drift rate 69 sec to cover 30 M Direction moving: Bearing 323 degrees Depth 114 ft
After calculations = .8 N = 41.15 cent/ sec

Reserve 7:45 am 2/ 27 / 04 Starting point N 18-20.552 W 67-16.248
Drift rate 62 sec to cover 30 M. Direction moving: Bearing 347 degrees Depth 52 tarter
calculations = .9 N = 46.3 cent/ sec
Site 9:00 am 2 / 27 / 04 starting point N 18-22.674 W 67-17.174
Drift rate 71 sec to cover 30 M Direction moving: Bearing 194 degrees Depth 114 ft
After calculations = .8 N = 41.15 cent/ sec