

GET Committee

From: Kanani Higbee <khigbee1037@gmail.com>
Sent: Wednesday, August 28, 2019 5:38 AM
To: GET Committee
Subject: Injection Wells

Aloha kākou,

I wholeheartedly reject this idea of injection wells in my hometown of Lahaina. The area this takes place is called "killameawhiffa." Which is Hawaiian Pidgin word for stink. When my daughter started Hawaiian Immersion, she would always say the air there was pilau, to mean the worst stink.

To know it stinks there so badly and to wonder how terrible the ocean water there is for humans swimming and even worst for fish living among the coral, makes me think the people making these decisions must have a serious case of tunnel vision. There are better ways to solve the issue of where to discard this sewage.

Please do not allow this nonsense to pass. This could affect the rest of the U.S. and forever make all our corals die and our beaches not fit for human frolicking.

With Aloha,
Kanani Higbee

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Kanani Higbee

GET Committee

From: County Clerk
Sent: Wednesday, August 28, 2019 7:47 AM
To: GET Committee
Subject: FW: Please settle the Lahaina Injections Wells case

-----Original Message-----

From: wdemme@everyactioncustom.com <wdemme@everyactioncustom.com>
Sent: Wednesday, August 28, 2019 6:26 AM
To: County Clerk <County.Clerk@mauicounty.us>
Subject: Please settle the Lahaina Injections Wells case

Dear Maui County Clerk Maui County Council,

I support the County seeking to settle the Lahaina Injection Well case (HAWAII WILDLIFE FUND, ET AL. V. COUNTY OF MAUI, RELATING TO THE CLEAN WATER ACT) as per CC 19-225,

The County of Maui should not be spending money attempting to gut the Clean Water Act. Instead, the money should be spent ensuring no pollutants reach the ocean from our wastewater facilities.

Sincerely,
Wendy Demme
2680 Aina Lani Dr Makawao, HI 96768-8402 wdemme@gmail.com

GET Committee

From: County Clerk
Sent: Wednesday, August 28, 2019 7:47 AM
To: GET Committee
Subject: FW: Please settle the Lahaina Injections Wells case

-----Original Message-----

From: kaholorain@everyactioncustom.com <kaholorain@everyactioncustom.com>
Sent: Tuesday, August 27, 2019 9:02 PM
To: County Clerk <County.Clerk@mauicounty.us>
Subject: Please settle the Lahaina Injections Wells case

Dear Maui County Clerk Maui County Council,

I support the County seeking to settle the Lahaina Injection Well case (HAWAII WILDLIFE FUND, ET AL. V. COUNTY OF MAUI, RELATING TO THE CLEAN WATER ACT) as per CC 19-225,

The County of Maui should not be spending money attempting to gut the Clean Water Act. Instead, the money should be spent ensuring no pollutants reach the ocean from our wastewater facilities.

Sincerely,
Raina Kaholoaa
767 Kea St Kahului, HI 96732-1437
kaholorain@hotmail.com

GET Committee

From: County Clerk
Sent: Wednesday, August 28, 2019 7:47 AM
To: GET Committee
Subject: FW: Please settle the Lahaina Injections Wells case

-----Original Message-----

From: jennadgottlieb@everyactioncustom.com <jennadgottlieb@everyactioncustom.com>
Sent: Tuesday, August 27, 2019 5:17 PM
To: County Clerk <County.Clerk@mauicounty.us>
Subject: Please settle the Lahaina Injections Wells case

Dear Maui County Clerk Maui County Council,

I humbly submit this testimony on my behalf and on behalf of my Maui O'hana in my support for the County seeking to settle the Lahaina Injection Well case (HAWAII WILDLIFE FUND, ET AL. V. COUNTY OF MAUI, RELATING TO THE CLEAN WATER ACT) as per CC 19-225,

The County of Maui should not be spending money attempting to gut the Clean Water Act. Instead, the money should be spent ensuring no pollutants reach the ocean from our wastewater facilities.

I'm sure it will come to no surprise to you that our precious Mother Earth is in desperate need for people in power to help aid in her preservation and thus the preservation of human life itself on this planet. We are at a point in our history where we all must stand up for what is right and what will protect our future and future of our children by ensuring that we slow down pollution that is leading to climate change.

Maui is one of the most pure, healing places I have ever had the honor of living. To actively take away that beauty in addition to aiding in the acceleration of the execution of our species by ignoring your contribution to global warming while blindsiding your constituents into paying for it with their tax dollars is grossly negligent and goes against the very meaning and soul of being human. Maui has always been a beacon of hope for me and so many others - stand up for what is right, settle this suit and spread aloha instead of corporate greed.

I appreciate your time.

Sincerely,
Jenna Gottlieb
1001 Union St Brooklyn, NY 11225-1104
jennadgottlieb@gmail.com

GET Committee

From: meganinmakawao <meganinmakawao@gmail.com>
Sent: Wednesday, August 28, 2019 10:00 PM
To: GET Committee
Subject: Lahaina Injection Wells

I have been a life long Maui resident. I am a teacher, mother of three and active community member. I was very disappointed to learn about the Lahaina injection well. I am proud of Maui and our track record on the environment (plastic bag ban, styrofoam ban). I do not understand how this issue with pollution that is creating algae blooms and destroying already vulnerable coral reefs is not being dealt with. Please resolve this issue and be pono for our 'aina.

Mahalo,

Margaret Ogle
MAKAWAO

Sent from my T-Mobile 4G LTE Device

GET Committee

From: Yvette Celiz <yceliz@outlook.com>
Sent: Wednesday, August 28, 2019 9:51 AM
To: GET Committee
Subject: 9/3/19 GET Meeting Re: Lahaina Injection Well Case
Attachments: 9.3.19 GET - Written Testimony.pdf

Aloha Chair Molina, Vice-Chair Rawlins-Fernandez, and members of the Governance, Ethics, and Transparency Committee,

My name is Yvette Celiz from Lahaina, Maui. I support the County seeking to settle the Lahaina Injection Well case (HAWAII WILDLIFE FUND, ET AL. V. COUNTY OF MAUI, RELATING TO THE CLEAN WATER ACT) as per CC 19-225. Please do not let this case reach the U.S. Supreme Court.

The County of Maui should not be wasting our hard-earned taxpayer dollars on appealing the already guilty verdict. The Hawaii Federal District Court & the 9th Circuit Court of Appeals ruled in favor of the environment and found Maui County guilty of violating the Clean Water Act and polluting our oceans. Why is the County planning on wasting \$4.3 million on outside legal counsel to appeal the case to the U.S. Supreme Court, when they should be using the money to update our wastewater facilities and ensure no pollutants reach the ocean.

In the August 16, 2019 edition of The Maui News, Mayor Victorino wrote that **“runoff from long-fallow agricultural fields and seepage from cesspools is a far greater stressor to nearshore ocean quality than the disposal of highly treated recycled water. This is where the county should focus its resources.”** I agree! Please focus our resources on these issues! Instead of spending \$4.3 million on legal counsel to take the case to the U.S. Supreme Court, use this money (and additional County resources) to address soil erosion runoff, cesspool seepage, AND to stop the disposal of high treated recycled wastewater. Although soil erosion runoff and cesspool seepage may be a greater stressor (according to the mayor), the pollution from recycled wastewater is **STILL a STRESSOR** to the ocean quality and our coral reefs. Thank you, Mr. Mayor for pointing out ALL of these stressors. So let's address ALL of these issues instead of throwing money down the drain (or injection well, pun intended) on legal fees. Let's not waste time and money fighting on semantics (polluting the ocean through groundwater vs. surface water). It's still a stressor to our ocean quality. Accept the settlement now and let's move forward to address solutions to these issues.

Speaking of which, disposing of highly treated recycled wastewater in the injection well is figuratively throwing money down the drain. According to the data that the Maui County Planning Department worked diligently to compile (<https://wearemaui.org/technical-resource-papers-drainage-and-stormwater>), the Lahaina Wastewater Reclamation Facility (WWRF), treats about 4.2 million gallons per day (mgd) of wastewater which is treated to R-1 quality. R-1 is the highest quality of recycled wastewater in the state, which is a **valuable resource** that can be utilized for other purposes. About 40% of this recycled wastewater is reused, mainly for golf courses and landscape irrigation, while 60% (2.4-3.2 mgd) is disposed of via injection well.

Approximately **3.2 MILLION GALLONS** of high quality water is being dumped each day (with negative impacts on our ocean quality). Meanwhile, across Maui County, 13 million gallons of water per day are diverted from potable surface water (stream diversions) for non-potable irrigation uses such as golf courses, parks, and landscaping. We should **CONSERVE** the valuable resource of **fresh drinking water** from our streams, and instead we should focus on **utilizing R-1 for non-potable irrigation uses**. So why are we throwing money down the drain (via legal fees), to fight to continue to throw money down the drain (disposing R-1 water through injection wells rather than using this valuable resource). Rather, let's **INVEST** in expanding the R-1 distribution system to increase the reuse of recycled wastewater.

When considering your vote, I humbly ask all of you to govern our Maui County with ethics and transparency. I hope the General Plan objective to "Strive for Good Governance" is at the forefront of your mind when you agree to make the right decision to settle the Lahaina Injection Well case and to stop the case from reaching the U.S. Supreme Court.

Mahalo committee members for your consideration,

Yvette Celiz

Lahaina, HI

GET Committee

From: Steve Dollar <sdollar@mrc-hawaii.com>
Sent: Wednesday, August 28, 2019 6:09 PM
To: GET Committee; Kelly King; Keani N. Rawlins; Tasha A. Kama; Riki Hokama; Alice L. Lee; Mike J. Molina; Tamara A. Paltin; Shane M. Sinenci; Yukilei Sugimura; Steve Dollar
Subject: Testimony Regarding Lahaina Wastewater Reclamation Facility (GET-26)
Attachments: _Dollar-Hochberg Testimony to Maui County Council (8_26_2019)_76190885_4-1_76239509_1.pdf

Please find attached a copy of testimony that I respectfully request to be considered by the GET committee.

Dr. Steven Dollar
Marine Research Consultants, Inc.
1039 Waakaua Pl.
Honolulu, HI 96822
808 779-4009

Date: August 28, 2019

Re: Hawaii Wildlife Fund et al. v. County of Maui, GET-26

To: Committee Chair Mike Molina
Members of the Governance, Ethics, and Transparency Committee

GET.committee@mauicounty.us
Kelly.King@mauicounty.us, Council Chair
Keani.Rawlins@mauicounty.us, Council Vice-Chair
Tasha.Kama@mauicounty.us, Presiding Officer Pro Tempore
Riki.Hokama@mauicounty.us, Councilmember
Alice.Lee@mauicounty.us, Councilmember
Mike.Molina@mauicounty.us, Councilmember
Tamara.Palfin@mauicounty.us, Councilmember
Shane.Sinenci@mauicounty.us, Councilmember
Yukilei.Sugimura@mauicounty.us, Councilmember

From: Dr. Steven Dollar and Dr. Eric Hochberg

Subject: Testimony Regarding Lahaina Wastewater Reclamation Facility and Kahekili Reef (GET-26)

Dr. Steven Dollar Qualifications

- Ph.D., University of Hawaii Department of Oceanography, School of Ocean & Earth Science and Technology
- President, Marine Research Consultants, Inc.
- Published multiple peer-reviewed scientific papers on stresses on coral reefs in Hawaii
- Conduct NPDES monitoring for ocean sewage outfalls for Counties of Kauai and Hawaii
- Conduct NPDES monitoring for ocean sewage outfalls for US Navy, Joint Base Pearl Harbor Hickam.
- Conduct NPDES monitoring for privately owned sewage treatment plants and power plants on Oahu and Kauai.
- Conducted assessments of algal blooms in West Maui funded by USEPA.
- Conducted assessments of effects of Lahaina WRF (LWRF) on Kahekili Reef.

Dr. Eric Hochberg Qualifications

- Ph.D., University of Hawaii Department of Oceanography, School of Ocean & Earth Science and Technology

- Professor of Oceanography, Bermuda Institute of Ocean Science.
- Principal Investigator; Coral Reef Airborne Laboratory (CORAL) 2015-2019 funded by NASA for \$17 million. Project developed system for mapping coral reefs of the world using spectral imaging obtained from remote sensing.

Background information

- With the exception of a small amount of treated sewage effluent that is re-used for irrigation, all treated sewage from all the Hawaiian islands flows to the ocean through either ocean outfalls or injection wells. Hence, all sewage disposal in Hawaii has a hydrologic connection with the ocean. The situation at Kahekili is typical, and not unique. But the impact is far smaller than in most other locations in the State of Hawaii, given the use of injection wells versus direct ocean outfall. At all ocean outfalls in Hawaii that discharge effluent in shallow water where corals occur, there is no indication of impacts to corals (Exhibit 1).
- Only a small fraction of the tertiary-treated recycled water from the LWRF reaches the ocean at the nearshore seeps located offshore of Kahekili ("Airport") Beach. The remainder reaches the ocean at unknown depths and distances from shore, and could be beyond the limits of coral reefs. The LWRF recycled water at the seeps represents a tiny fraction of what reaches the ocean compared to localized discharge from ocean outfalls that serve Oahu, Kauai and the Island of Hawaii.

Summary of Dollar-Hochberg Studies

WATER CHEMISTRY:

- For the alleged impacts to coral reefs to occur from the recycled water/groundwater exiting through the seeps, the chemistry of the ocean water must be changed enough in the areas where corals occur to cause damage to corals. This is the elementary fact on which all the other arguments are based.

- Earthjustice collected no data on water chemistry, nor did they show how water chemistry is changed by seep material over the reef to create impacts to corals.
- Our research included a program to sample water chemistry throughout the Kahekili Reef (Exhibit 2). We found that beyond several yards from the seeps, there were no changes to water chemistry that could affect corals. Therefore, there is no possibility of any impacts to corals across the reef because the water chemistry is not altered.

CORAL REEF COMMUNITY STRUCTURE:

- Our goal was to create a picture of the biological structure of the entirety of the Kahekili Beach coral reef, and not just the small area where the seeps occur. To do this, 71 survey sites were investigated, extending from the shoreline to the offshore limit of coral occurrence along the entire length of Kahekili Beach.
- The survey data clearly indicated that there are distinct zones of coral abundance across the reef. These data were used to create maps that show the amount of bottom covered by the three major components of the reef community (e.g., coral, algae, sand).
- The resulting maps showed that coral cover is low at the shoreline throughout the survey area (both where seeps occur and where they do not occur). The coral map also shows that the abundance of coral increases with distance from shore and is highest in the deeper areas (see Exhibits 3a, 3b, 3c).
- The nearshore zone where the seeps are located consists of a predominantly bare hard bottom (known as the shallow pavement zone) with less than 10% coral cover. Corals are limited in this shallow zone because of breaking waves and sand scour. That is, in the shallow pavement zone, physical conditions prevent significant coral occurrence along the entire shoreline. Hence, while there are few corals growing near the seeps, there are similarly few corals growing at similar depths and distances from the shoreline everywhere else along the West Maui coastline (Exhibits 4 and 5). Put simply, corals typically do not grow where near shore wave action and sand scour occurs.

- At about 30 feet offshore of the seeps, ocean conditions become less stressful, and healthy corals are abundant (Exhibit 6). This is the typical condition of the entirety of the "aggregate reef zone" at Kahekili.
- It is also apparent from the maps that there are no abnormalities in coral reef community composition at the sites of the seeps. Should the seeps be causing impacts to coral, it would be expected that there would be "halos" of reduced coral cover around the seeps. No such halos were observed (see Exhibit 3a).
- None of the data collected by Earthjustice provided a comprehensive picture of the entirety of Kahekili Beach reef. Hence, our data provides the only information to accurately evaluate the effect of the seeps on the coral reef community structure of this area.

HISTORICAL PERSPECTIVE:

- It can be assumed that some fraction of the recycled water has reached the seeps during the entire period of operation of the LWRF (~30 years). If the recycled water had been impacting coral reef structure and function continuously for the last three decades, there would be evidence of damaged or dead zones across the reef marked by increasing levels of dead coral with proximity to the seeps. However, data from all sources reveals that there are no such impacts.
- Data from the UH Coral Reef Assessment and Monitoring Program indicates that there has been increases in coral abundance at Kahekili from 1999 to 2012 (no data is available past this date).
[<http://cramp.wcc.hawaii.edu/>]
- The NOAA "Baseline assessments for coral reef community structure and demographics on West Maui: data report, 2017" concludes that "With mean coral cover ranging between 30% and 58%, the Wahikuli and Honokōwai Watersheds contain the greatest extent and concentration of coral-rich habitat in West Maui, with relatively well developed, spur-and-groove coral reef complexes off Canoe Beach, Kahekili Beach Park, and Honokōwai Point." There is no mention in the NOAA report of impacted corals at Kahekili Beach.
[<https://repository.library.noaa.gov/view/noaa/14801>]

- Another often mentioned, but never documented assertion, is that algal blooms are caused by the LWRF effluent. Under the auspices of a US EPA grant, extensive studies were conducted to determine causal effects of algal blooms that occurred in West Maui in the 1990's.
- One of the major conclusions of this study was that nutrient enrichment from sugarcane production provided the most likely driver for algal blooms. No algae that caused bloom conditions during the 1990's has occurred since that time. In addition, no algal blooms have occurred at the seeps since they have been under investigation. As the LWRF has been in operation for approximately three decades, if it was the cause of algal blooms, they would be observed during the course of studies at Kahekili.

SUMMARY:

- In summary, in order for the alleged damage from groundwater seeps to occur, there must changes to water chemistry on the reef to a point where corals could be impacted. Earthjustice presents no data on such changes to water quality over the reef. Our field data indicates that there are no changes to water chemistry on the reef beyond a small distance from the seeps, and there is no evidence of a "halo" effect of coral impacts centered at the seeps. Hence, there is no cause-and-effect between water quality and impacts to the coral community that can be linked to the seeps.
- Our comprehensive field investigations of the entire reef community at Kahekili indicate that there are no discernable effects to coral community structure that can be attributable to the recycled water exiting through the seeps or at diffuse locations along the coastline. The nearshore wave zone where the seeps occur is not occupied by substantial amounts of living coral anywhere along the West Maui coastline. Data from other governmental scientific agencies that have surveyed the reefs of West Maui indicate that there the reefs at Kahekili are among the best in the area with no evidence of damage from the seeps. As the LWRF has been in operation for several decades, any negative effects to reef structure would be clearly apparent at present. There is no data to support the occurrence of any such negative impacts to the reef at Kahekili.

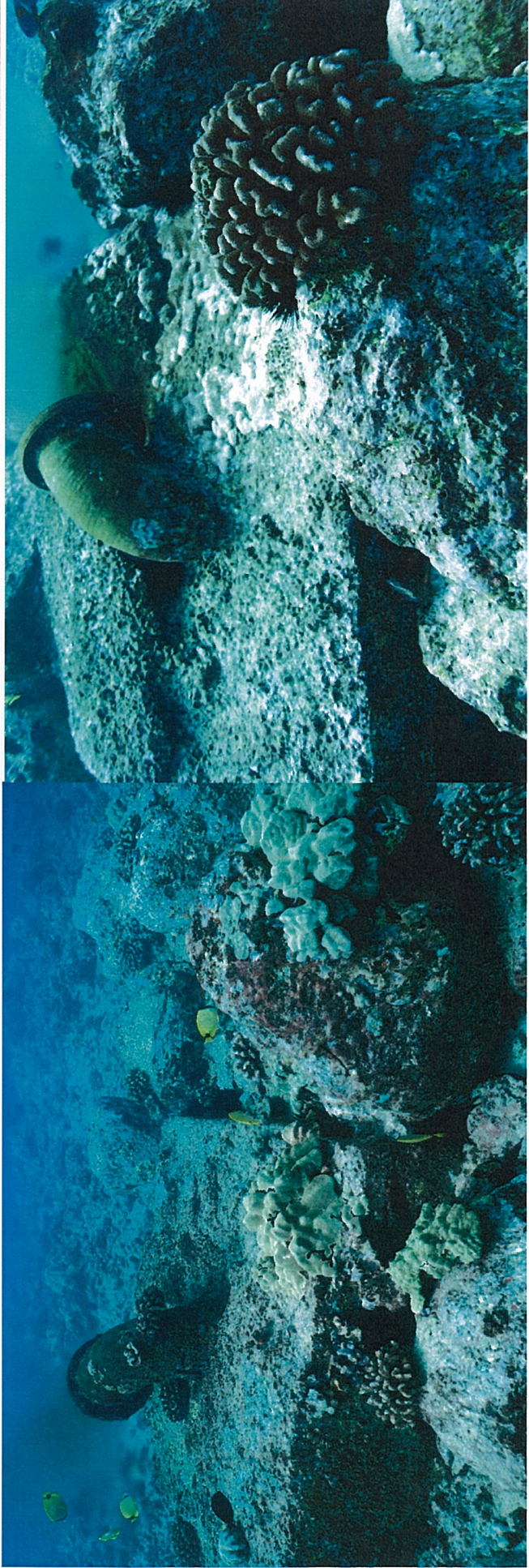
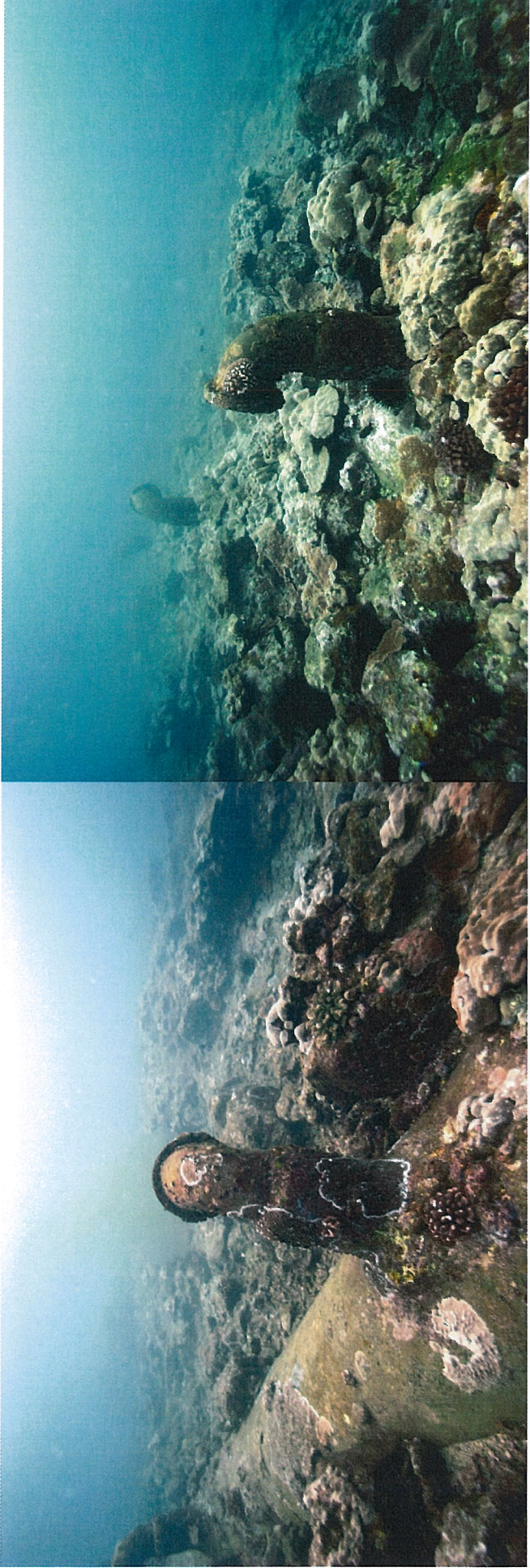


EXHIBIT 1. Photographs of ocean discharge diffusers in Hilo Bay off the Hilo Wastewater Treatment Plant (top) and off Sandy Beach off the East Honolulu Wastewater Treatment Plant (bottom). Both diffusers are at a water depth of approximately 35-40 feet. Concentrated streams of treated effluent of high nutrient concentration, low salinity, and elevated temperature relative to receiving water can be clearly seen in both photos. Note presence of live corals on both outfall structures, lack of presence of filamentous algae, and clarity of water. Both ocean outfalls have been in operation since the 1970's. All photographs taken by S. Dollar.



EXHIBIT 2. Satellite image of Kahekili Beach and offshore reef showing locations of nine water sampling transects. Water samples were collected at the ocean surface, mid-way through the water column, and just above the sea floor at eight locations along each transect (white circles). Locations of the North and South seep groups (NSG, SSG) are also shown as yellow circles. CRAMP monitoring stations are shown as red circles.

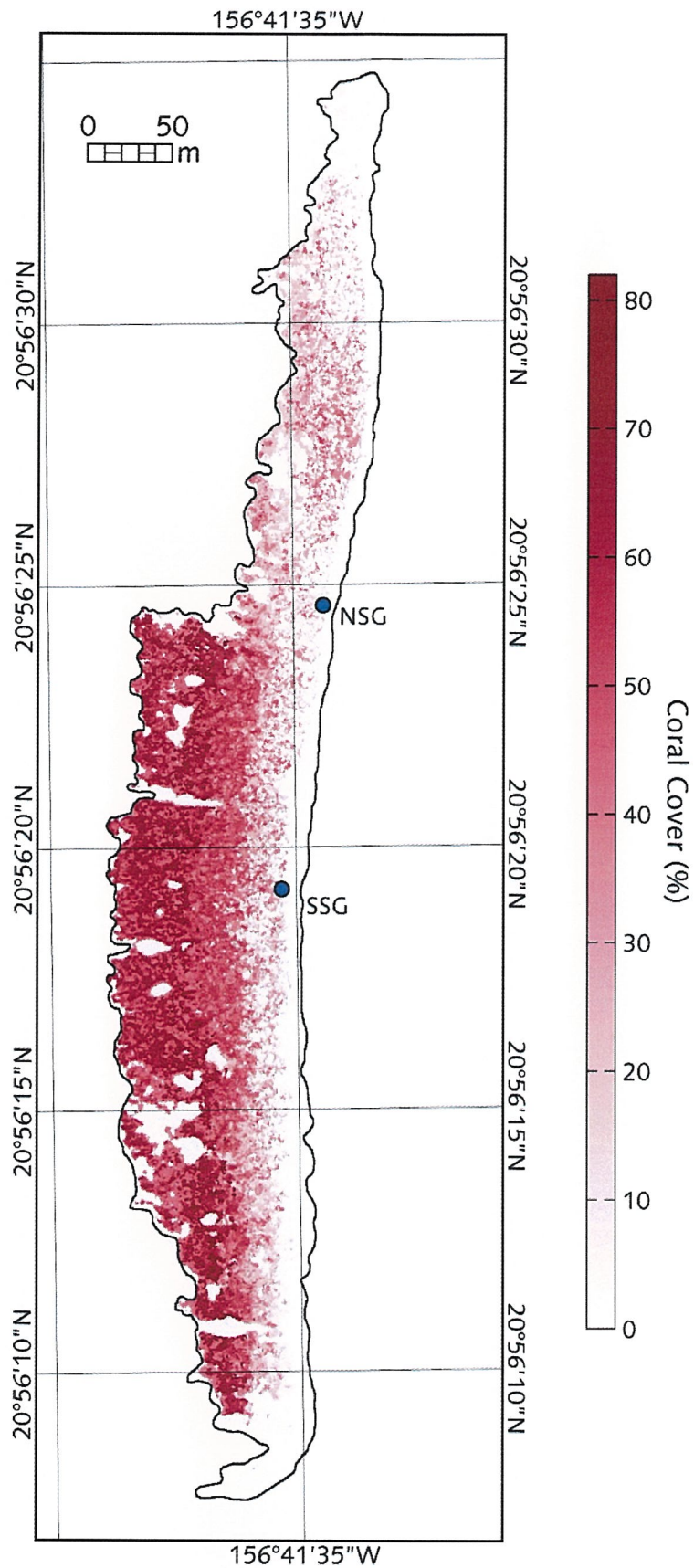


EXHIBIT 3a. Remote sensing map created from photomosaic data showing percentage cover of living corals on Kahekili reef. Locations of North Seep Group (NSG) and South Seep Group (SSG) are also shown. Note that coral cover is uniformly low in the nearshore pavement zone where the seeps occur along the entire length of the reef.

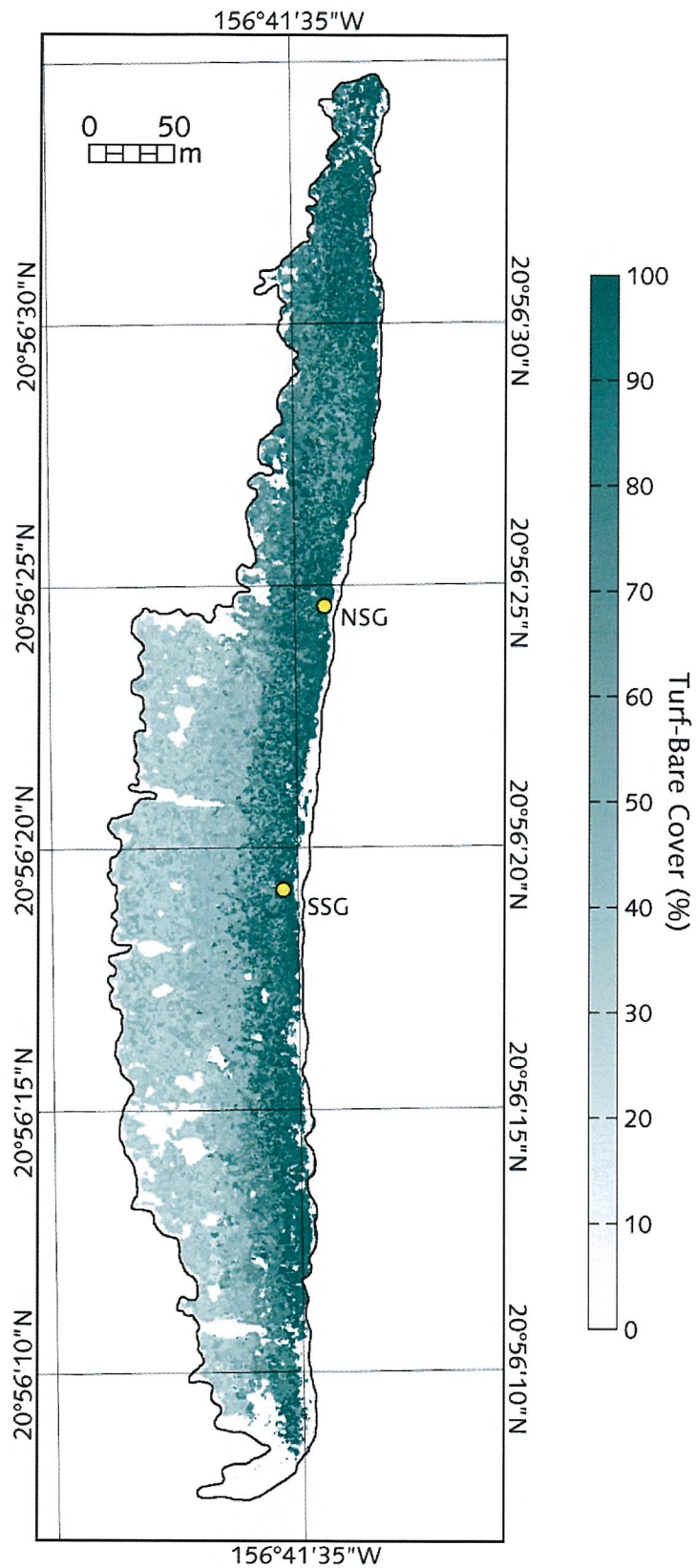


EXHIBIT 3b. Remote sensing map created from photomosaic data showing percentage cover of turf algae and bare bottom on Kahekili reef. Locations of North Seep Group (NSG) and South Seep Group (SSG) are also shown. Note that turf-bare cover is uniformly high in the nearshore pavement zone where the seeps occur along the entire length of the reef.

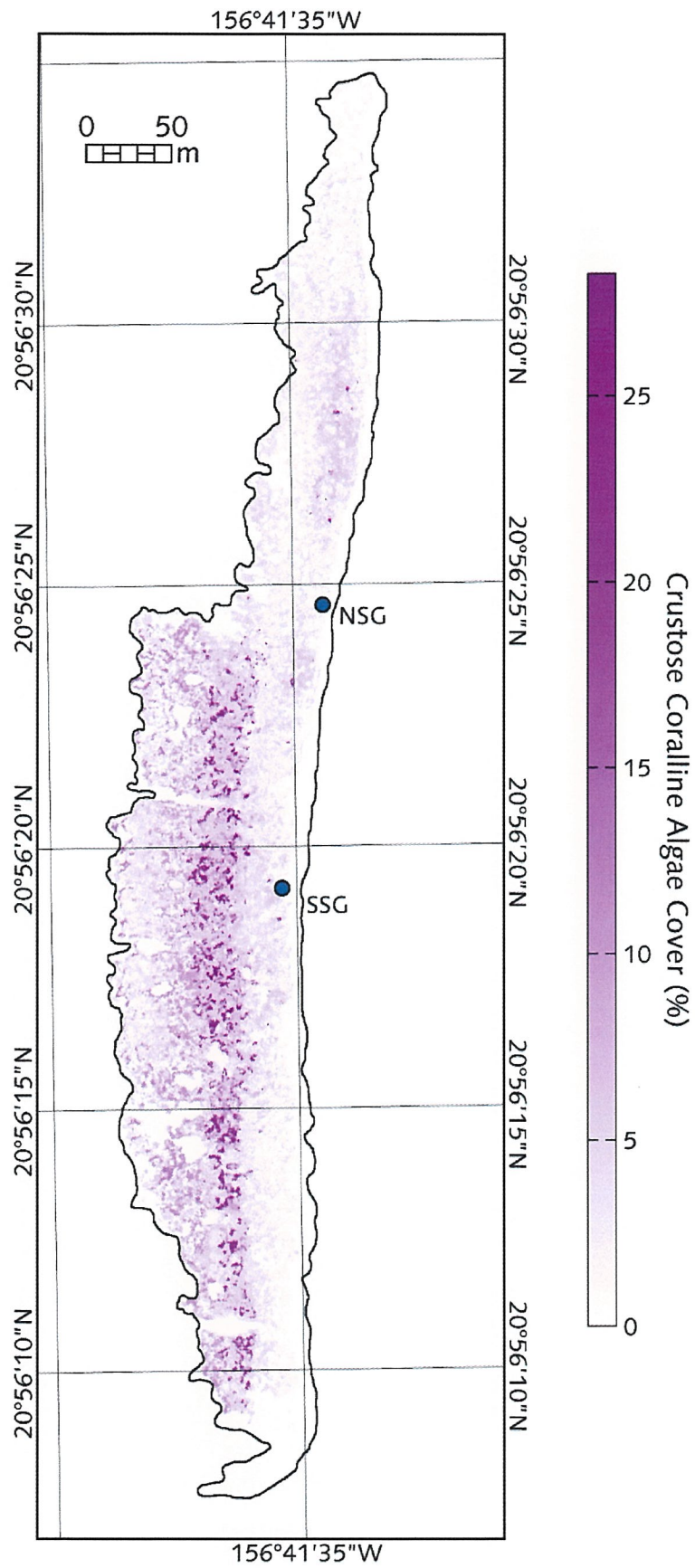


EXHIBIT 3c. Remote sensing map created from photomosaic data showing percentage cover of crustose coralline algae (CCA) on Kahekili reef. Locations of North Seep Group (NSG) and South Seep Group (SSG) are also shown. Note that the pattern of CCA cover shows no gradients of abundance with respect to location of seeps along the entire length of the reef.

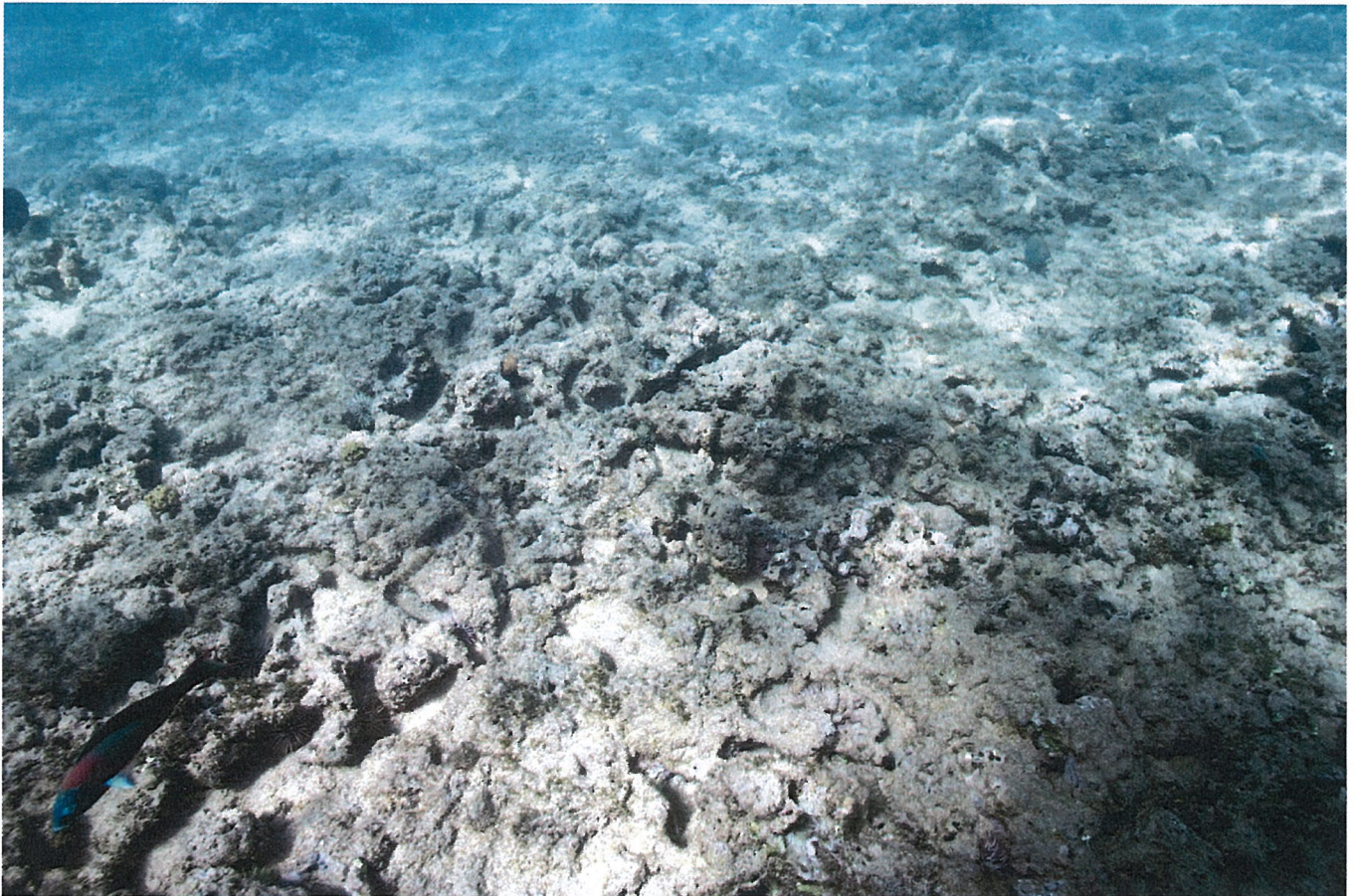


EXHIBIT 4. Typical views of pitted limestone surface comprising the Shallow Pavement zone adjacent to the shoreline off Kahekili Beach adjacent to South Seep Group. Water depth is approximately 1 meter.

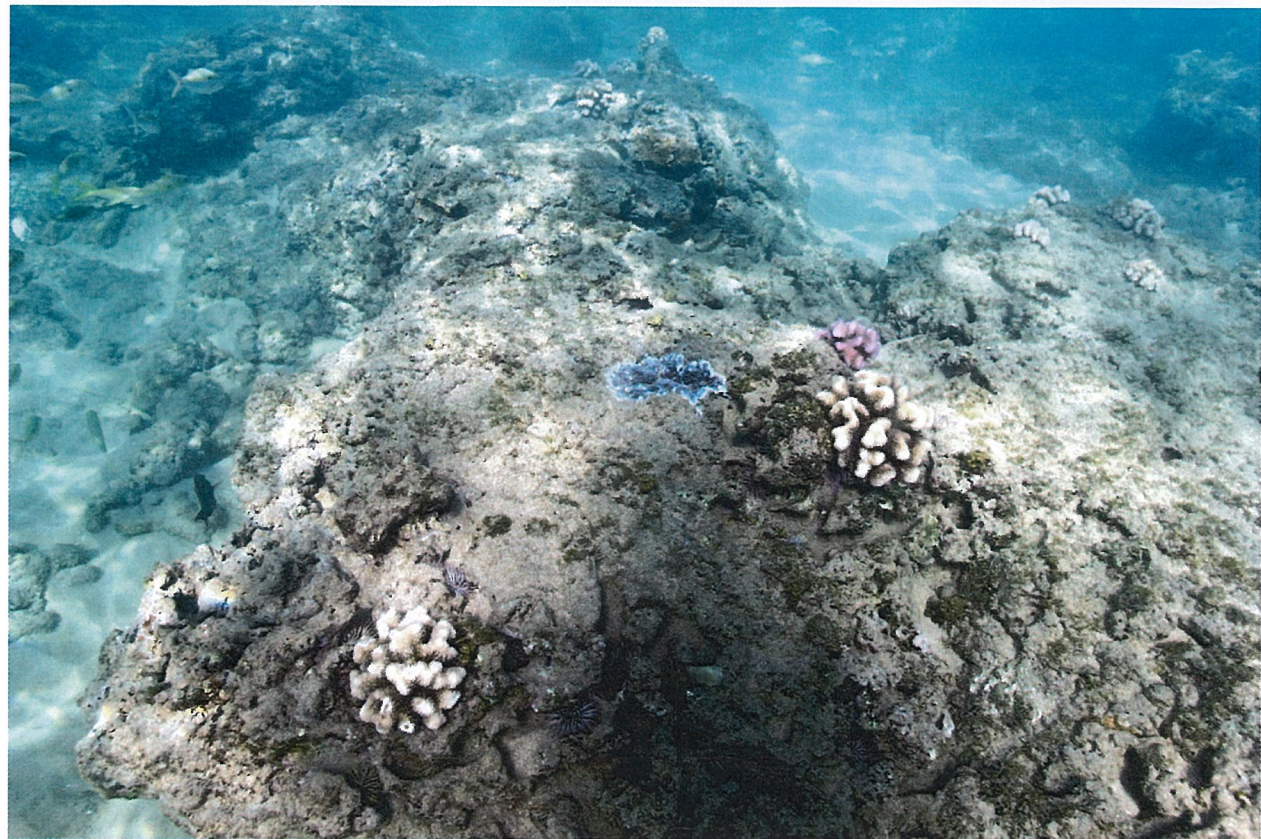


EXHIBIT 5. Photos of area of North Seep Group. Upper photo shows bubble streams emanating from sand bed covering seeps. Note large ripples in sand indicating significant wave action. Bottom photo shows section of raised pavement above sand bed adjacent to South Seep Group. Round branching corals growing on pavement are *Pocillopora meandrina*, which is a species that commonly occurs in the nearshore reefs of Hawaii in areas too harsh for other species. The size of the colonies indicates that they are no greater than five years old, indicating that they would have recruited and settled in the area during the period when the LWRF was in operation. Water depth is approximately 1 meter.

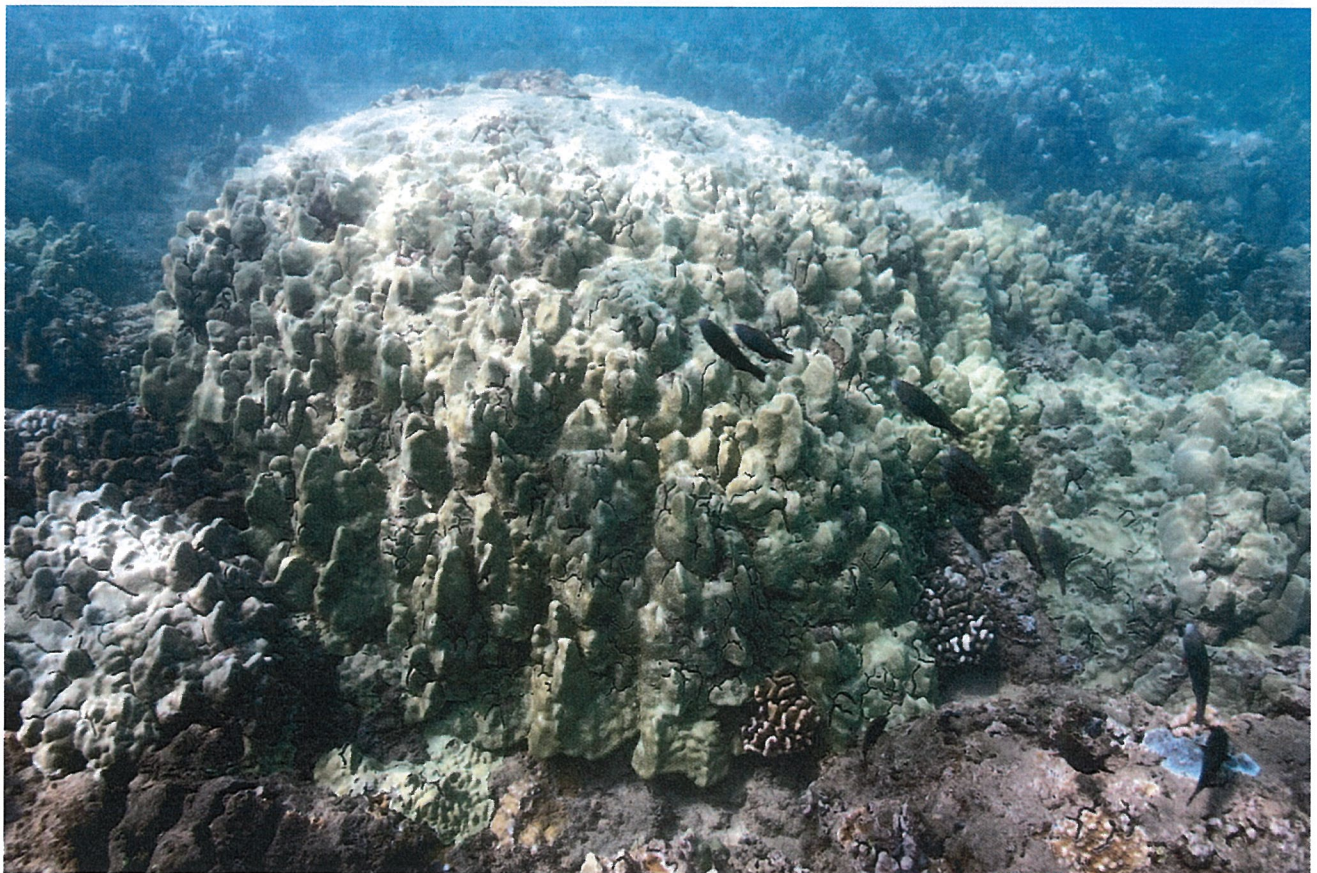
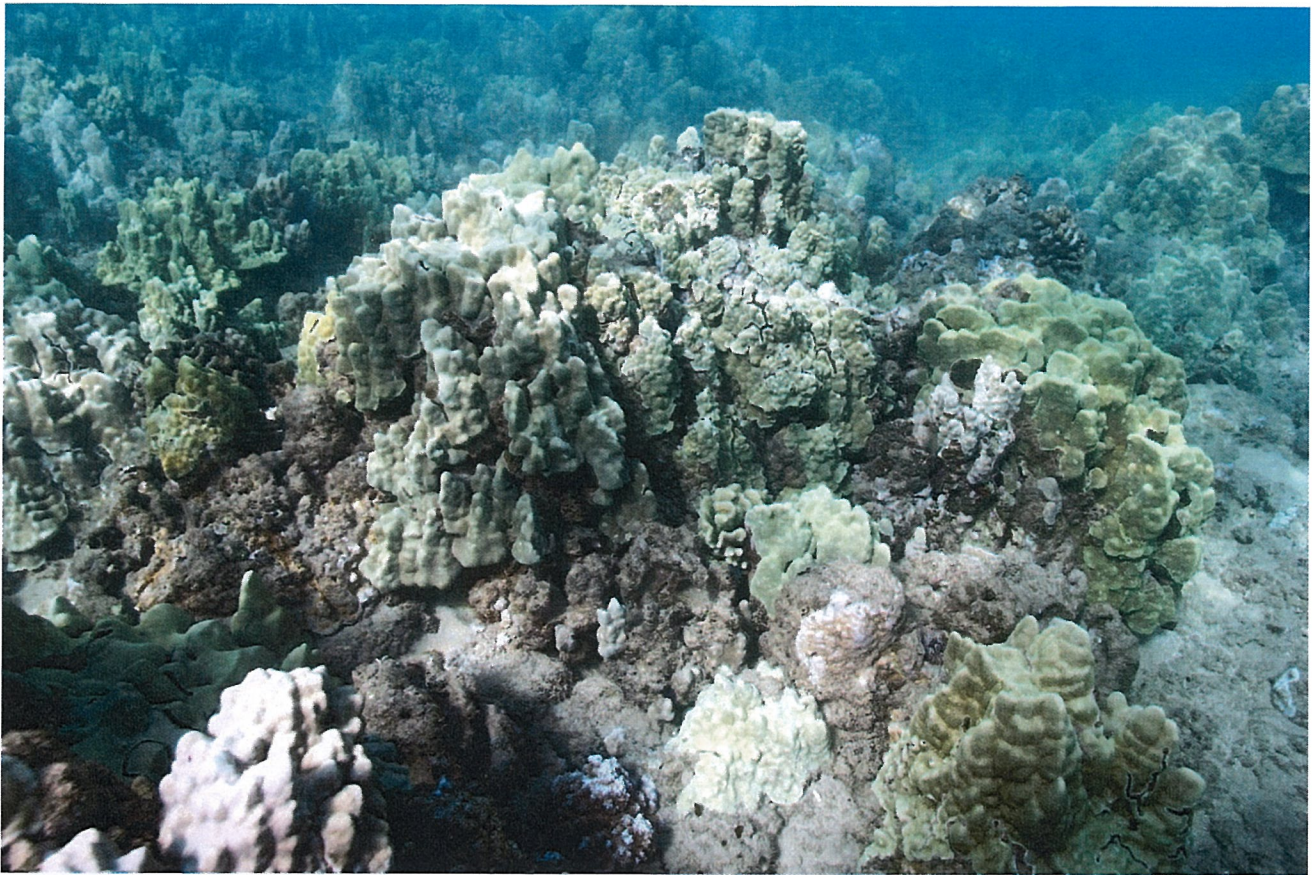


EXHIBIT 6. Typical coral community structure in Inner Shallow Aggregate reef zone off Kahekili Beach located approximately 10 meters (30 feet) from South Seep Group. Both photos shows large colonies of lobe coral (*Porites lobata*) that are at least 50 years old indicating that they have been growing during the entire time the Lahaina Wastewater Treatment Plant has been in operation.