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CITY AND COUNTY OF HONOLULU

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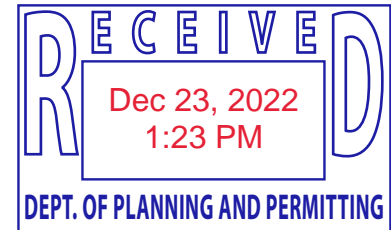
IN REPLY REFER TO:
DIR 22-98

December 22, 2022

VIA HAND-DELIVERY

Brian Lee, Chair
Planning Commission

c/o Dawn Takeuchi Apuna, Director Designate
Department of Planning and Permitting
City and County of Honolulu
650 South King Street, 7th Floor
Honolulu, Hawai'i 96813



Re: **Special Use Permit (SUP) No. 2008/SUP-2 (SP09-403); State Land Use Commission (LUC) Docket No. SP09-403; In re Department of Environmental Services, City and County of Honolulu; Application to Modify SUP No. 2008/SUP-2 (SP09-403) by Modifying (1) Condition No. 1 of the Planning Commission's Findings of Fact, Conclusions of Law, and Decision and Order, dated June 10, 2019 and (2) Condition No. 5 of the LUC's Findings of Fact, Conclusions of Law, and Decision and Order Approving with Modifications the City and County of Honolulu Planning Commission's Recommendation to Approve Special Use Permit, certified on November 1, 2019**

The Department of Environmental Services, City and County of Honolulu (the "Applicant" or "Department of Environmental Services"), respectfully moves the Planning Commission, City and County of Honolulu (the "Planning Commission"), for an Order modifying the State Special Use Permit ("SUP") No. 2008/SUP-2 (SP09-403), which superseded State SUP No. 86/SUP-5 and approved the SUP for the Waimanalo Gulch Sanitary Landfill ("WGSL" or "Landfill") subject to certain conditions.¹

Specifically, Applicant seeks to modify the conditions that set a December 31, 2022 deadline for Applicant to identify an alternative landfill site found in both the Planning Commission's Findings of Fact, Conclusions of Law, and Decision and Order,

¹ This Application is made in accordance with Section 2-38 and Section 2-49 of the Rules of the Planning Commission and Section 15-15-96.1 of the State of Hawai'i, Land Use Commission ("LUC") Rules.

dated June 10, 2019 ("Planning Commission's 2019 Decision") and the LUC's Findings of Fact, Conclusions of Law, and Decision and Order Approving with Modifications the City and County of Honolulu Planning Commission's Recommendation to Approve Special Use Permit, certified on November 1, 2019 ("LUC's 2019 Decision"). See Exhibits "A" and "B". The December 31, 2022 deadline appears to be a condition that originated with the Planning Commission that the LUC subsequently approved.

Applicant presents this request for modification to the Planning Commission, with the understanding that the modification of conditions for areas greater than fifteen acres will ultimately require the LUC's concurrence. See Rules of the Planning Commission § 2-49. This is also consistent with the process for Special Use Permit applications. See, e.g., Rules of the Planning Commission §§ 2-40, 2-46, 2-47; HRS § 205-6(a) - (d).

The basis for this Application is twofold: (1) Act 73 (Session Laws of Hawaii 2020) ("Act 73"), which was signed into law after the Planning Commission's and LUC's 2019 Decisions, placed new legal restrictions on potential landfill sites and left Applicant with a small selection of sites that are all located above O'ahu's drinking water aquifer system; and, (2) the Honolulu Board of Water Supply ("BWS") recently advised Applicant that it "does not approve any of the six proposed landfill sites that are located above (or mauka) the BWS' "No Pass Zone" and over O'ahu's drinking water aquifer system." See Exhibit "C", BWS' letter to Applicant dated November 16, 2022.

Applicant requests a two-year extension of time to reevaluate its options including, but not limited to, additional time to explore the use of federal lands outside the BWS No Pass Zone and work with the state legislature on new law or amendments to existing law, including Act 73, that would open up potential landfill sites outside the No Pass Zone.

Applicant believes this request for an extension of time is in the best interest of all O'ahu communities as this City administration, under the circumstances, refuses to default to pursuing an extension of the WGSL. Further, in light of the contamination of drinking water associated with leaking petroleum from the U.S. Navy's Red Hill Bulk Fuel Storage Facility,² Applicant believes it is obligated to proceed with extreme caution, taking into consideration any and all potential impacts such as that identified by the BWS, before identifying the next landfill site.

If the Planning Commission approves Applicant's request, then the entire record of this request will be transmitted to the LUC for its consideration and action. See Rules of the Planning Commission § 2-47.

² See, e.g., State of Hawai'i, Department of Health, Red Hill Water Information, <https://health.hawaii.gov/about/red-hill-water-information/> (last visited December 14, 2022).

I. BACKGROUND

A. WGS� Background³

The WGS� is located in Waimanalo Gulch, O'ahu, at 92-460 Farrington Highway, Kapolei, Hawai'i 96707, and Tax Map Key Nos. (1) 9-2-03:72 and 73⁴ (the "Property"). The Property consists of approximately 200 acres. The City and County of Honolulu ("City") has operated a portion of the Property as a landfill subject to a SUP since 1989. See Exhibit "B", at page 52, ¶¶ 276 and 279. The WGS� is the only permitted public municipal solid waste ("MSW") landfill on the island of O'ahu and the only permitted repository for the ash and residue produced by H-POWER.⁵ See Declaration of Roger W. Babcock Jr. ("Dec. Babcock") at 15.

Since 1989, due to the ongoing need for waste disposal via landfilling, Applicant conducted additional environmental reviews and studies to justify continued use of the WGS�, and the Planning Commission and LUC have approved extensions and expansions of the WGS� SUP. See, e.g., Exhibit "B", at pages 53-56 and 62, ¶¶ 280-281, 286, 288, 291, 294, and 311.

³ WGS�'s background, including its history of contested case hearings, has been documented extensively and most recently in the Planning Commission's 2019 Decision (see Exhibit "A", its Findings of Fact, at pages 2-62, ¶¶ 1-276) and the LUC's 2019 Decision (see Exhibit "B", its Findings of Fact, at pages 3-98, ¶¶ 1-458). Thus, Applicant provides a condensed background herein.

⁴ (1) 9-2-03:72 and 73 are the Tax Map Key ("TMK") numbers referenced in the applications and records of the Planning Commission and LUC, relating to their 2019 Decisions. Recently, it came to the Applicant's attention that the Property is also identified by TMK numbers (1) 9-2-050:005 and 006. Nevertheless, the Property at issue remains the same. Declaration of Roger W. Babcock Jr. at 14.

⁵ MSW can be defined as: "garbage, refuse, and other residential or commercial discarded materials, including solid, liquid, semisolid, or contained gaseous materials resulting from industrial, commercial, mining, and agricultural operations; sludge from waste treatment plants and water supply treatment plants; and residues from air pollution control facilities and community activities." HRS § 342G-1. The Honolulu Program of Waste Energy Recovery ("H-POWER") is the City's award-winning waste-to-energy facility, which began operations in 1990. One of H-POWER's permit conditions is that there must be a landfill to serve as not only a repository for ash but as the backup to H-POWER if there is an emergency that would render H-POWER less effective at disposing of waste or even unable to process waste.

More recently, the Planning Commission consolidated two contested case hearings involving: (1) Applicant's application for a new special use permit, the expansion of the WGS�, and the withdrawal of County Special Use Permit No. 86/SUP-5 (the "2008 Application"), and (2) Applicant's application to modify the LUC's Order Adopting the City and County of Honolulu Planning Commission's Findings of Fact, Conclusions of Law, and Decision and Order with Modifications dated October 22, 2009 for County Special Use Permit No. 2008/SUP-2, specifically to delete the July 31, 2012 deadline for the landfill to accept MSW (the "2011 Application"). Please see additional details regarding the 2008 and 2011 Applications and the various contested case hearings in the Planning Commission's 2019 Decision and/or the LUC's 2019 Decision. See Exhibits "A" (at pages 2-45) and "B" (at pages 3-43).

On or about June 10, 2019, the Planning Commission issued its 2019 Decision, which approved the Department of Environmental Services' Application to Modify the Special Use Permit No. 2008/SUP-2 by Modifying the Land Use Commission's Order Adopting the City and County of Honolulu Planning Commission's Findings of Facts, Conclusions of Law, and Decision and Order with Modifications dated October 22, 2009, through deleting Condition Nos. 4 and 14 and adding four conditions. As part of its decision and order, the Planning Commission added Condition No. 1, which set a December 31, 2022 deadline for the City to identify an alternative landfill site. See Exhibit "A", at page 65, ¶ 1.

Specifically, Condition No. 1 of the Planning Commission's 2019 Decision provides:

1. On December 31, 2022, the Applicant shall identify an alternative landfill site that may be used upon WGS� reaching its capacity at a future date. This identification shall have no impact on the closure date for the WGS� because the WGS� shall continue to operate until it reaches capacity. This identification does not require the alternative landfill to be operational on December 31, 2022 but is intended to require the Applicant to commit to the identification of an alternative landfill site that may replace WGS� when it reaches capacity at a future date. The identification of an alternative landfill site by December 31, 2022 is based on the evidence presented and that, as the Planning Commission discussed in 2017, a five year timeframe was sufficient time for the Applicant to identify an alternative landfill site before the WGS� nears capacity. Upon identification of the alternative landfill site, the Applicant shall provide written notice to the Planning Commission and the LUC.

Id. (emphases added).

On or about November 1, 2019, the LUC issued its 2019 Decision subject to certain conditions, including Condition No. 5 that also set a December 31, 2022 deadline to identify an alternative landfill site. See Exhibit “B”, at page 104, ¶ 5.

Specifically, Condition No. 5 from the LUC’s 2019 Decision provides:

5. By no later than December 31, 2022, the Applicant shall identify an alternative landfill site that may be used upon closure of WGSF. Upon identification of the alternative landfill site, the Applicant shall provide written notice to the Planning Commission and the LUC.

Id.

B. Act 73 Placed Additional Limitations on a New Landfill Site

Prior to the enactment of Act 73, existing regulations limited and/or restricted new landfills near airport runways, in floodplains, in wetlands, within two hundred feet of a fault, in seismic impact zones, in unstable areas, and in possible tsunami inundation areas. See HAR § 11-58.1-13.

In September 2020, approximately one year after the Planning Commission and LUC issued their respective 2019 Decisions, Governor David Y. Ige approved Act 73, which further restricted landfill siting by amending State law to (1) prohibit “waste or disposal facilities” (e.g., landfills) in conservation districts (see HRS § 183C-4(b)); and, (2) prohibit the construction of “waste or disposal facilities” within one-half mile from residential, school, or hospital property lines (see HRS § 342H-52(b)).⁶

The new restrictions imposed by Act 73 prohibit the City from siting a landfill in a significant portion of the island of O’ahu. The map in Figure 1 depicts the areas of O’ahu where a landfill cannot be sited as a result of the conservation district (green) and one-half mile buffer from residential areas zone (blue) restrictions in Act 73.⁷

⁶ The full text of Act 73 is available on the State Legislature’s website: https://www.capitol.hawaii.gov/slh/Years/SLH2020/SLH2020_Act73.pdf.

⁷ See Appendix B of the Landfill Advisory Committee’s Final Report, available at https://www.honolulu.gov/rep/site/env/envref/envref_docs/OLSS%20and%20LAC%20Final%20Report%2020220627_COMBINED%20r1.pdf, PDF at 89.

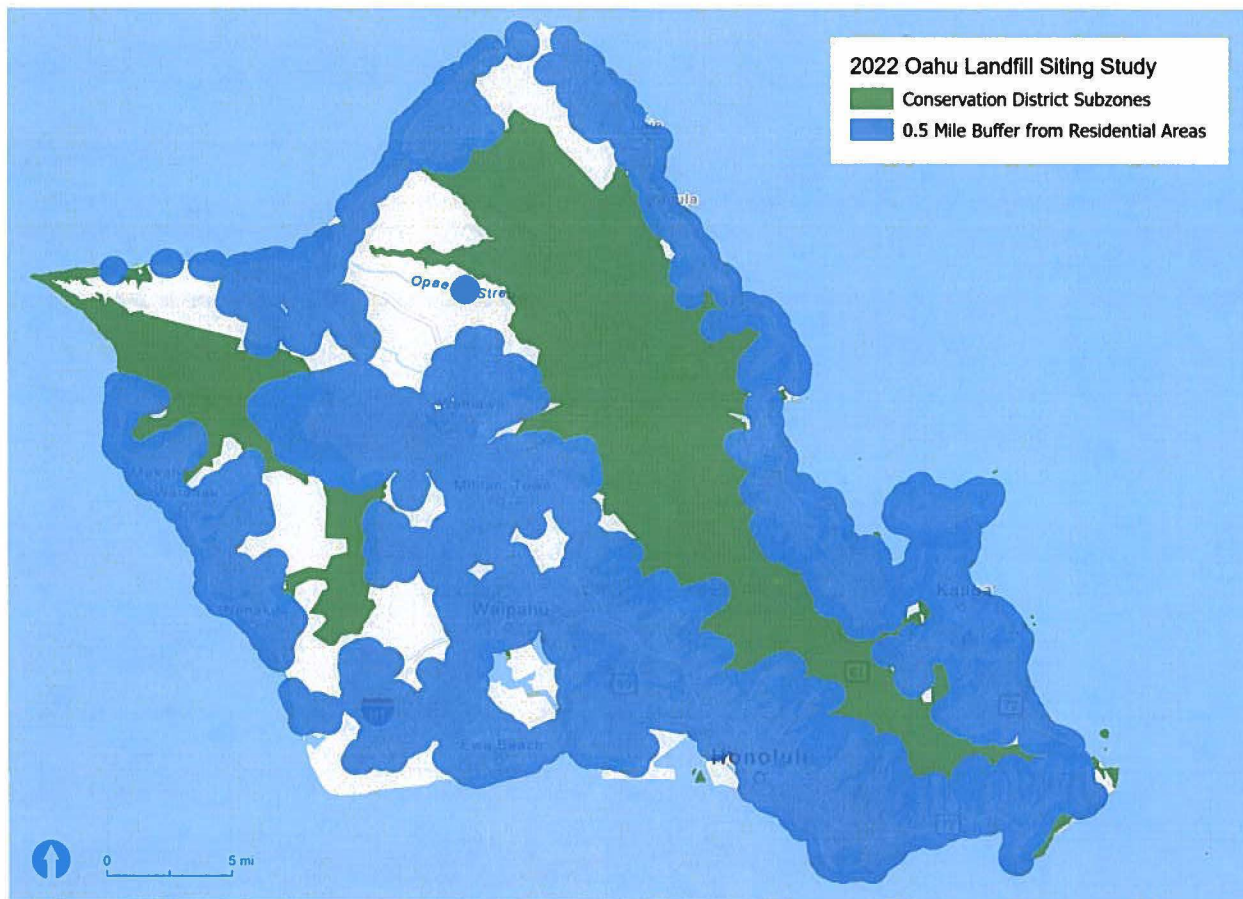


Figure 1

Figure 2 depicts the areas on a large portion of O‘ahu where a landfill cannot be sited as a result of Act 73 and pre-Act 73 regulations that limit and/or restrict new landfills, including airport buffer zones and tsunami zones.⁸ Developed and undevelopable lands,⁹ which are not feasible for landfill development, and federal lands¹⁰ are also indicated.

⁸ See Exhibit “D”, Landfill Advisory Committee’s Final Report (without appendices), at page no. “4-14”.

⁹ Developed lands are lands where a major building(s) exists, and undevelopable lands are lands that already have a planned development in place. Applicant removed developed/undevelopable lands from consideration also because those potential sites were too small or restricted by Act 73’s one-half mile buffer zone. See Dec. Babcock at 16.

¹⁰ Federal lands are lands owned by the federal government. Given the short deadline to identify a new site, Applicant removed federal lands from consideration because of the long lead-time it would take to negotiate and acquire federal land. Id.

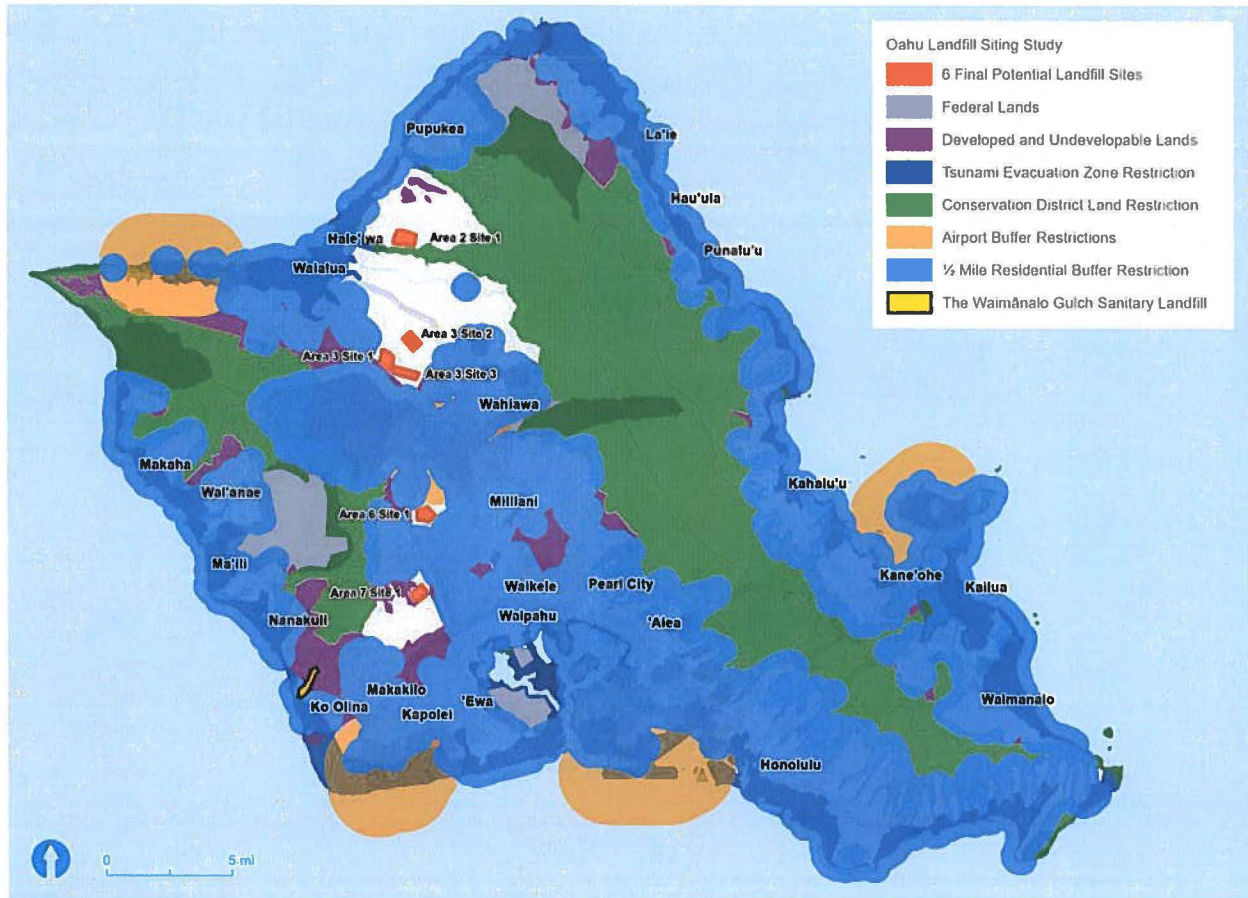


Figure 2

The white areas in Figure 2 represent the only areas where a landfill can be sited, after factoring in all restrictions. Applicant assessed these areas and identified the six proposed landfill sites that the Landfill Advisory Committee further evaluated and ranked. See Exhibit "D", at pages "4-5" to "4-6", "4-10" to "4-11".

Figure 3 adds the BWS No Pass Zone (which is bounded by the red dotted line) to all other restrictions (including restrictions imposed by Act 73), and indicates the proposed sites from previous 2012 and 2017 studies.¹¹ BWS asserts that no landfill should be cited "above (or mauka) the No Pass Zone and over Oahu's drinking water aquifer system." See Exhibit "C", at page 1. The No Pass Zone is further discussed in the next section.

¹¹ See Exhibit "D" at page no. "4-8".

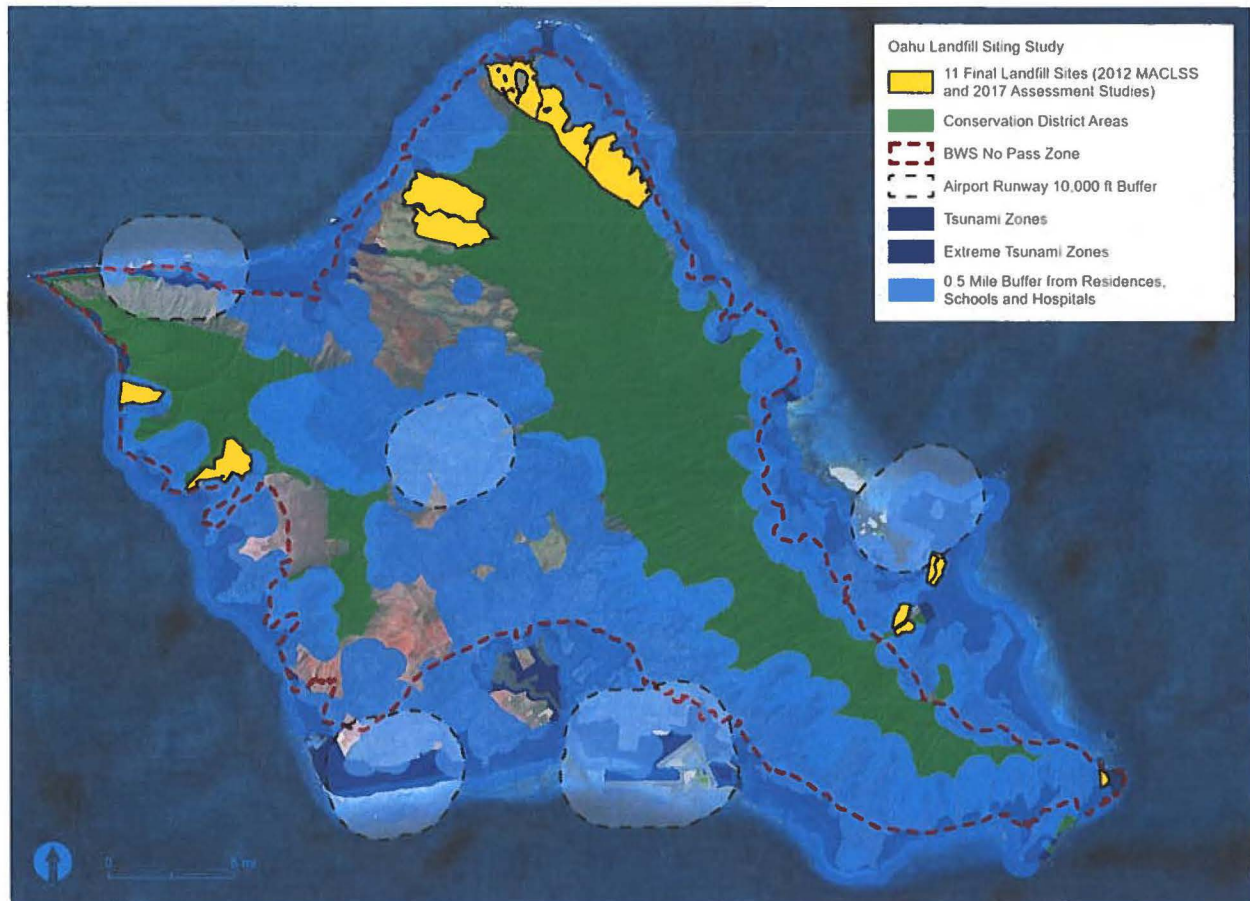


Figure 3

Act 73 eliminated the previously proposed landfill sites outside of the No Pass Zone (shown as yellow areas outside of the area demarcated by the red dotted line). When the No Pass Zone and Act 73 are applied as restrictions, there are zero potential new landfill sites on O'ahu.¹² See Dec. Babcock at 17.

C. The Landfill Advisory Committee Evaluated Six Proposed Sites

In light of the December 31, 2022 deadline, Mayor Rick Blangiardi appointed a new Landfill Advisory Committee ("LAC") in 2021 to assist with the evaluation and scoring of the six sites identified as the WGSL's potential replacement landfill sites.¹³ The LAC held eight public meetings between October 2021 and June 2022, during

¹² Not including federal lands. See also footnote 10.

¹³ The LAC was established in accordance with Section 4-103 of the Revised Charter of the City and County of Honolulu 1973 (Amended 2017 Edition) and as an advisory committee, its function was limited to counsel and advice. See Dec. Babcock at 18.

which it helped develop processes and criteria to evaluate and score the six Act 73 compliant landfill sites under consideration by the City. See Exhibit “D”, at page no. “1-1”.

During the LAC’s fourth meeting held on December 14, 2021, representatives of the BWS, including its Manager and Chief Engineer Ernest Y.W. Lau, P.E. (“Manager Lau”), presented the BWS’ perspective and concerns about siting a new landfill above the groundwater aquifer. The BWS highlighted the dangers of landfill leachate leaking into the aquifer, and presented literature from the Environmental Protection Agency that indicated that all landfills eventually leak. At the same meeting, the Department of Environmental Services’ consultant presented information relating to groundwater protection measures for MSW landfills. See Exhibit “D”, at pages “3-3” to “3-4”; see also Exhibit “E”, LAC Meeting #4 Minutes, at pages 4-6.

In subsequent LAC meetings, the LAC members expressed concern about the location of all proposed landfill sites in the BWS No Pass Zone and the potential implications it might have on the island’s drinking water resources.¹⁴ The LAC scored the six sites and approved a motion to recommend that none of the proposed sites is acceptable because of each site’s location in the No Pass Zone. See Exhibit “D”, at page no. “1-4”.

Details on the final site scoring and rankings can be found in the LAC’s final report titled “O’ahu Landfill Siting Study & Landfill Advisory Committee Recommendations” (dated June 2022) (“LAC’s Final Report”), which is publicly available on the Department of Environmental Services’ website.¹⁵ The following chart is included in the LAC’s Final Report:

¹⁴ According to the BWS, “[t]he No Pass Zone was derived from the review of geologic maps and borings that define the areas of thick caprock around Oahu. Areas that are below (or makai) the No Pass Zone are primarily located on thick caprock. ... Areas that are above the No Pass Zone, have no caprock and are located directly above the groundwater that is used for drinking water.” Exhibit “C”, at page 2. Although the BWS appears to refer to the No Pass Zone as the boundary-line between the areas above the drinking water aquifer and the areas above the thick caprock (i.e., the line/zone that should not be passed), its official rules seem to define the No Pass Zone as the actual areas of land situated above the drinking water aquifer. See BWS Rules and Regulations, Definitions (2010) (defining “No Pass Zone” to mean “areas in which the installation of waste disposal facilities, which may contaminate groundwater resources used or expected to be used for domestic water supplies, shall be prohibited.”).

¹⁵ See New Landfill Siting, Department of Environmental Services, <https://www.honolulu.gov/opala/newlandfill.html> (click on “Final Report”). This PDF also contains the Final Report’s Appendices (A to E), which approximates to 1,400 additional pages; see also Exhibit “D”, LAC’s Final Report (without appendices).

Table 1.1 Final Site Scoring and Ranking			
Rank	Area, Site	Location	Score
1	Area 6, Site 1	Wahiawā near Kunia Road	4,200
2	Area 7, Site 1	Kapolei/Waipahu near Kunia Road	4,061
3	Area 3, Site 1	Wahiawā	3,841
4	Area 3, Site 2	Wahiawā	3,685
5	Area 3, Site 3	Wahiawā	3,634
6	Area 2, Site 1	Hale'iwa near Kawaihoa Road	3,596

Figure 4

D. Applicant's Presentation to the BWS Board of Directors, and the BWS' Subsequent Position Letter and Presentation

On October 24, 2022, the Applicant, along with Mayor Blangiardi and other members of his administration, briefed the BWS Board about the landfill selection status, the urgency of the City's need to identify an alternative landfill site by December 31, 2022, and the LAC's reservations relating to the six proposed sites because they are located in the BWS No Pass Zone. See <https://www.boardofwatersupply.com/boardmeetings> (under "Recorded Board Meetings", select "October 24, 2022 – Board of Directors Meeting" recording), starting at 0:05:47. Applicant posed questions to the Board, specifically to ask for clarity on the BWS' legal authority over landfill siting in the No Pass Zone; whether that authority was exercised; and if not exercised, when the City should seek a determination from the BWS. *Id.* starting at 0:17:44.

On November 3, 2022, the Applicant sent a follow-up letter to BWS Manager Lau to formally ask for BWS' official position on the six potential landfill sites the LAC evaluated. Specifically, the Applicant asked if the Mayor were to select any of the six ranked sites on the LAC's list, "what would be the BWS' official response or position?" Exhibit "F", Applicant's letter to the BWS dated November 3, 2022.

On November 16, 2022, the BWS responded to Applicant via letter from Manager Lau, stating in part:

For the reasons set forth below, the BWS does not approve any of the six proposed landfill sites that are located above (or mauka) the No Pass Zone and over O'ahu's drinking water aquifer system.

All six of the proposed landfill sites are located above the BWS' No Pass Zone, and all six of the proposed landfill sites are located over Oahu's hydrogeologically-connected drinking water aquifer system. Never has the importance of this groundwater aquifer been more apparent, and never has our responsibility to protect it been more paramount. As you know, the people of Oahu are still coping with what the Hawaii Department of Health aptly described as "a humanitarian and environmental disaster" caused by fuel releases from the U.S. Navy's Red Hill Bulk Fuel Storage Facility that resulted in the contamination of Oahu's drinking water supply and the pollution of this island's irreplaceable sole-source groundwater aquifer. This unfortunate environmental catastrophe is a stark reminder that we all need to be proactive in protecting all of our precious drinking water resources from underground sources of contamination. Oahu's aquifer cannot be replaced.

Exhibit "C", BWS' letter to Applicant dated November 16, 2022 (footnote omitted). The BWS' letter is discussed further herein.

On November 28, 2022, the BWS (including Manager Lau, among others) briefed its Board and the public regarding landfill siting and the potential impact on water resources. See <https://www.boardofwatersupply.com/boardmeetings> (under "Recorded Board Meetings", select "November 28, 2022 – Board of Directors Meeting" recording), starting at 2:08:17.

E. Continued Waste Diversion

Consistent with the requirements of the LUC's 2019 Decision, Applicant has continued its efforts to use alternative technologies to provide a comprehensive waste stream management program.¹⁶ Over the years, Applicant has been able to divert more and more waste from the WGS to H-POWER. See Dec. Babcock at 19.

In Calendar Year 2010 approximately 1,214,904 tons of waste was generated on O'ahu. Of that amount, the Landfill received 163,736 tons of MSW and 179,946 tons of ash and residue from H-POWER (for a combined total of 343,682 tons). See Exhibit

¹⁶ Condition No. 6 of the LUC's 2019 Decision provides: "The Applicant shall continue its efforts to use alternative technologies to provide a comprehensive waste stream management program that includes H-POWER, plasma arc, plasma gasification and recycling technologies, as appropriate. The Applicant shall also continue its efforts to seek beneficial reuse of stabilized, dewatered sewage sludge." Exhibit "B", at page 104, ¶ 6.

“A”, Planning Commission’s 2019 Decision, at pages 50-51, ¶ 226; see also Dec. Babcock at 20. According to Applicant’s data, the landfill diversion rate for 2010 was 71.7%.¹⁷ See Dec. Babcock at 20.

In Calendar Year 2020, approximately 1,210,281 tons of waste was generated on O’ahu. Of that amount, the Landfill received 56,114 tons of MSW and 182,112 tons of ash and residue from H-POWER (for a combined total of 238,226 tons). See Exhibit “G”, chart (showing data for 2017 to 2021); see also Dec. Babcock at 21. According to Applicant’s data, the landfill diversion rate for 2020 was 82.2%. See Dec. Babcock at 21.

In Calendar Year 2021, approximately 1,215,467 tons of waste was generated on O’ahu. Of that amount, the Landfill received 106,723 tons of MSW and 157,531 tons of ash and residue from H-POWER (for a combined total of 264,254 tons). See Exhibit “G”; see also Declaration of Roger W. Babcock Jr. at 22. According to Applicant’s data, the landfill diversion rate for 2021 was 80.0%. See Dec. Babcock at 22.

Based upon data already collected, Applicant projects that for Calendar Year 2022, the Landfill will receive approximately 70,000 tons of waste and 160,000 tons of ash and residue from H-POWER (for a combined estimated total of 230,000 tons). Based upon current estimates, the MSW landfill diversion rate for 2022 is projected to be approximately 83%. See Dec. Babcock at 23.

In 2012, H-POWER’s capacity increased to 900,000 tons per year because of the addition of a third boiler. The third boiler is a mass burn unit, which can process waste streams that previously required landfilling, including sewage sludge, bulky waste, and treated medical waste (except medical sharps). See Dec. Babcock at 25.

In total, H-POWER’s original refuse derived fuel boilers and mass burn unit processes waste to reduce its volume by 90 percent, and as of 2021, approximately 750,000 tons per year of MSW and sludge are diverted from the WGSL. See Dec. Babcock at 26.

In addition, improvements at the H-POWER facility have resulted in an increased amount of metal recovered for recycling. Currently, H-POWER recovers about 25,000 tons of metal annually for recycling. See Dec. Babcock at 27.

¹⁷ For all of the referenced waste tonnage in this section (i.e., in Calendar Years 2010, 2020, 2021, and 2022), the amounts do not include the construction & demolition (“C&D”) waste received and/or recycled by the private PVT landfill. See Dec. Babcock at 24.

In July 2021, H-POWER began combusting its process residue on a trial basis.¹⁸ Operating data is being collected to determine whether to make the change permanent. This change has reduced the amount of process residue being disposed at the landfill from about 4,000 tons per month to zero (i.e., 48,000 tons per year). See Dec. Babcock at 29.

Applicant is also pursuing ash recycling to further decrease waste that must be landfilled. Applicant executed a contract for the processing and beneficial reuse of ash, and the first phase of the project is currently proceeding. The ash recycling project, once permitted and built, has the potential to divert at least 60% of the H-POWER ash that is currently landfilled at the WGSF. Based on 2021's reported tonnage, this approximates to at least 94,500 tons of ash per year that can eventually be diverted from the Landfill. See Dec. Babcock at 30.

Currently, approximately 30,000 tons per year of auto shredder residue ("ASR") is disposed at the WGSF. Although Applicant had envisioned ASR to be diverted to H-POWER, test data showed that the high fluorine and chlorine content of the material could be extremely harmful to the boiler. This matter is pending further evaluation and possible testing. The ash recycling project may consider ASR processing as a potential future option. See Dec. Babcock at 31.

The following graph (Figure 5) illustrates the reduction of MSW delivered to the WGSF over the years, generally because of source reduction and diverting more waste from the Landfill (red line) to H-POWER (blue line). The total MSW (black line) reflects the MSW reduction during the Great Recession that began in 2008, a slow but steady economic recovery, and another MSW reduction during the COVID-19 pandemic that began in 2019. Slightly higher landfill tonnages in 2017 and 2021 were due to facility refurbishment projects and major turbine-generator maintenance. See Dec. Babcock at 32.

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¹⁸ "Process Residue" is composed of fine (small particle size) materials in the waste stream such as glass, sand and dirt that are separated using trommel screens and removed during pre-combustion waste processing. See Dec. Babcock at 28.

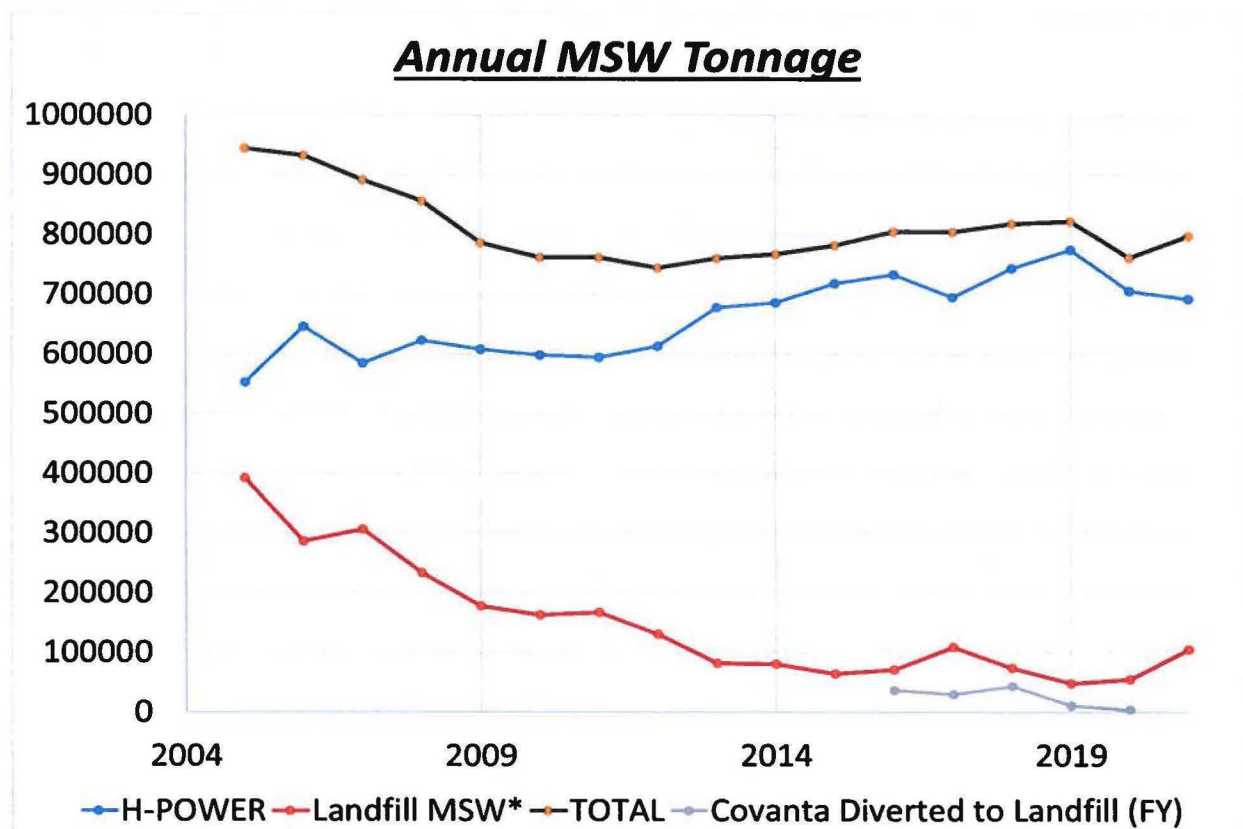


Figure 5

As the decreasing MSW tonnage to the WGS� over time shows, Applicant has continued its effort to significantly reduce solid waste disposal at the WGS� by expanding H-POWER and the waste to materials recycling programs, and developing alternative disposal options for materials presently being landfilled. Collectively, these actions have and will continue to divert significant amounts of waste from the Landfill. However, despite new technological solutions that Applicant continues to consider, Applicant cannot completely eliminate the need for a landfill at this time for reasons elaborated below. See Dec. Babcock at 33.

F. Purpose and Need for a Landfill

A landfill to dispose of MSW is required because there will always be material that cannot be combusted, recycled, reused or shipped. See Dec. Babcock at 34. A landfill also is essential because H-POWER cannot operate without the landfill as a backup disposal option. See Dec. Babcock at 35. Specifically, H-POWER's Solid Waste Management Permit issued by the Department of Health, provides in relevant part:

Section C. MSW Storage and Processing

20. In the event that the facility is unable to combust RDF/MSW or process MSW for more than 72 hours, the permittees shall cease from accepting any more MSW at the affected area until the equipment is back in operation. **During such times, waste shall be diverted to permitted storage and disposal facilities or to operational areas of the facility.** All other permit conditions, including capacity limits, shall be maintained.

Section E. Management and Testing of Pre-Combustion Residue

27. **The residue shall be transported to a permitted landfill for disposal.**

Section F. Management and Testing of Post-Combustion Ash

32. **The ash shall be transported to a permitted ash monofill for disposal.**

Exhibit "H", Solid Waste Management Permit No. IN-0049-11 (bold added).¹⁹

The importance of this condition was evident in Fiscal Year 2022 (July 1, 2021 to June 30, 2022), when H-POWER had approximately 36.5 days of downtime due to repair work, annual maintenance outage, and fire in the waste processing facility, whereby waste that would ordinarily go to H-POWER was diverted to the landfill. See Exhibit "I", Covanta's 2021-2022 annual summary report, under Attachment D. A landfill is also critical to the public health during natural disasters such as tsunamis or hurricanes and during times of emergency to control the rapid and massive accumulation of waste. See Dec. Babcock at 37.

Furthermore, because the PVT landfill stopped accepting asbestos containing material ("ACM") on or about January 1, 2021, the City's landfill took on this waste stream to provide an on-island disposal option.²⁰ It has been reported that the PVT landfill will reach capacity in eight years, after which all of PVT's waste must go to the

¹⁹ H-POWER is still operating under this permit, and Applicant is waiting for the permit renewal. See Dec. Babcock at 36.

²⁰ The PVT landfill is O'ahu's only C&D landfill, and has been in operation since 1985. See PVT Land Company, Ltd., <https://www.pvtland.com/landfill/> (last visited November 29, 2022). WGSL is permitted to receive ACM and other C&D waste. See Dec. Babcock at 39.

only remaining disposal site, the City's landfill).²¹ Applicant is gathering information to support legislation to facilitate C&D recycling by enforcing minimum requirements, practices, and procedures for certain construction projects. Applicant is also working to apply for permit modifications for H-POWER to be able to accept wood and combustible C&D waste. See Dec. Babcock at 38.

Therefore, a landfill is and will be necessary for proper solid waste management, the lack of which would potentially create serious health and safety issues for the residents of O'ahu. A landfill is a critical component of the City's overall Integrated Solid Waste Management Plan, which looks at all of the factors that make up solid waste management, including reuse and recycling, the H-POWER facility, and landfilling for material that cannot be recycled or burned for energy. See Dec. Babcock at 40.

II. REQUEST FOR MODIFICATION OF SUP No. 2008/SUP-2 (09-403)

Section 2-49 of the Rules of the Planning Commission provides, in relevant part:

(a) A petitioner who desires a modification or deletion of a condition imposed by the commission shall make such a request to the commission in writing. This request shall be processed in the same manner as the original petition for a SUP. A public hearing on the request shall be held prior to any commission action.

...

(c) . . . Modification of conditions for areas greater than fifteen (15) acres will require the concurrence of the land use commission.

Section 15-15-96.1 of the LUC Rules also provides:

Any request for modification of a special permit or modification, release, or deletion of a condition imposed on a special permit, whether imposed by the county planning commission or the commission, shall first be submitted to the appropriate county planning commission and, for special permits for land greater than fifteen acres in size, the commission, for consideration and decision.

²¹ See Michelle Van Dyke, What happens to Oahu's trash and recyclables?, Spectrum News (Oct. 22, 2022, 11:33 AM) <https://spectrumlocalnews.com/hi/hawaii/news/-/2022/10/20/what-happens-to-oahu-s-trash-and-recyclables->.

The decision of the county planning commission with respect to modification of a special permit, or modification, release or deletion of a condition to a special permit shall comply with the requirements of section 15-15-95 and 15-15-96.

Both the Planning Commission and the LUC imposed the December 31, 2022 deadline for Applicant to identify an alternative landfill site (Condition Nos. 1 and 5, respectively).

As discussed in this part, events since 2017 prevent Applicant from meeting the current deadline, so it is necessary and appropriate to grant a two-year extension to allow additional time to explore other options, for the following reasons.

A. The Deadline to Name an Alternative Landfill Site Could Not Account for Future Act 73

In setting the current deadline, the Planning Commission reasoned in June 2019 that “[t]he identification of an alternative landfill site by December 31, 2022 is based on the evidence presented and that, as the Planning Commission discussed in 2017, a five year timeframe was sufficient time for the Applicant to identify an alternative landfill site before the WGS� nears capacity.” Exhibit “A”, at page 65, ¶ 1.

In making the above finding to justify the December 2022 deadline, the Planning Commission and the LUC could not have known that Applicant’s existing list of proposed landfill sites, in which the Applicant invested years and undertook various studies to cultivate and refine, would essentially be wiped out the following year as a result of Act 73, and that Applicant would have to start from scratch to build and evaluate a new list of proposed sites while under a short deadline.²²

Upon Act 73 becoming law in September 2020, Applicant did just that – Applicant applied the Act 73 restrictions and pre-Act 73 regulations to a Geographical Information System (GIS) model of the entire island, identified and assessed the feasibility of twelve unrestricted areas, and narrowed the search to six entirely new potential sites to present to the LAC for its further review and evaluation. See Exhibit “D”, at pages “4-5” to “4-6”. But the six Act 73 compliant sites are all located in the BWS No Pass Zone, so although Act 73 and the No Pass Zone could result in the identification of viable landfill sites if the

²² Previously in 2012, Applicant narrowed its search to 11 potential sites. In 2017, Applicant’s consultant conducted a technical and logistical review, which narrowed those 11 sites to 5 proposed sites. See Exhibit “D”, at pages “1-2”, “2-2” to “2-3”, and “4-5” to “4-6”.

restrictions of each were applied independently, the combination of Act 73 restrictions and the No Pass Zone prevents Applicant from designating an alternative landfill site.²³

B. BWS' Letter and Presentation Disapproving All Six Proposed Landfill Sites Necessitates an Extension of Time for Applicant to Identify Other Viable Landfill Options

BWS set forth its official position disapproving Applicant's six proposed landfill sites for reasons including but not limited to the following:

- BWS asserts that its legal authority in regard to protecting O'ahu's drinking water arises from the Hawai'i Constitution and the public trust doctrine;
- "BWS' Rules and Regulations establish 'No Pass Zones' which generally prohibit the installation of waste disposal facilities, including landfills, in areas that may contaminate groundwater resources used or expected to be used for domestic water supplies";
- "When making the decision to approve or disapprove plans proposing certain waste disposal facilities, the No Pass Zone must be considered and the Manager and Chief Engineer may, at his discretion, withhold approval 'if there is any basis to expect that the operation of the proposed waste disposal facility and any wastewater therefrom may to any degree affect the quality and/or quantity of water resources used or expected to be used for domestic water'";
- "All six of the proposed landfill sites are located above the BWS' No Pass Zone";
- "The United States Geological Survey (USGS), citing EPA studies, has concluded that all landfills eventually will leak into the environment and that the fate and transport of leachate in the environment, from both old and modern landfills, is a potentially serious environmental problem";
- Landfill leachate "poses a considerable risk to both Oahu's groundwater aquifer and drinking water resources";
- "Accordingly, there is a compelling basis upon which to expect that any landfill sited at one of the six locations proposed by [the City] may impact

²³ Applicant's pre-Act 73 list of proposed sites included sites that were outside of the No Pass Zone.

the quality and/or quantity of the water resources used or expected to be used as drinking water”; and,

- Therefore, “BWS must disapprove all six of the proposed landfill sites above the No Pass Zone.”

See Exhibit “C” (letter); see also <https://www.boardofwatersupply.com/boardmeetings> (under “Recorded Board Meetings”, select “November 28, 2022 – Board of Directors Meeting” recording), starting at 2:08:17 (November 28, 2022 BWS presentation to the BWS Board of Directors).

To be clear, at this time, Applicant is not addressing each of the BWS’ allegations and assertions. Instead, in recognition of the BWS’ obligation and commendable efforts to protect the aquifer, particularly in light of the environmental and public health consequences of the Red Hill emergency, Applicant feels compelled to re-examine any and all possible alternatives.

Therefore, based on the BWS’ disapproval of the six sites as potentially threatening Oahu’s aquifer and only drinking water source, Applicant believes additional time is needed to identify an alternative landfill, so the December 31, 2022 deadline must be extended.

C. Applicant Will Use the Two-Year Extension to Work Towards Identifying an Alternative Site Outside of the No Pass Zone

As explained above, Applicant is not left with any viable new landfill site, so it will use the next two years to further evaluate and even create other options outside of the No Pass Zone. As recommended by the LAC, Applicant will: (1) seek a repeal of or amendment to Act 73; (2) continue discussions with the U.S. military regarding the acquisition of a site outside the No Pass Zone; and (3) evaluate the feasibility of acquiring (by eminent domain) residential properties adjacent to potential landfill sites to create sites that would comply with the one-half mile buffer from residential areas restriction in Act 73. Applicant will also continue to explore all other legally compliant options to identify a new site. See Exhibit “D”, LAC Final Report, at page nos. “6-4” to “6-5”; see also Dec. Babcock at 41.

1. Repeal or Amend Act 73 to Open up a Few Sites

Applicant will try to amend Act 73 in the upcoming 2023 and/or 2024 legislative sessions.²⁴ See Dec. Babcock at 42. The LAC had “expressed concerns that Act 73,

²⁴ Senator Maile Shimabukuro and Representative Darius Kila authored an opinion piece published in the Honolulu Star-Advertiser on December 7, 2022 asking the City to “carefully reconsider other sites such as the Ameron Hawaii Quarry on the Windward

along with time constraints placed upon the process by the LUC, may have limited the ability to perform a more extensive evaluation of sites outside the BWS No Pass Zone.” See Exhibit “D”, at page no. “6-4”.

The number of potential sites that will become available depends on the degree of success in amending Act 73 (e.g., reduction of the one-half mile buffer zone only; reduction of the one-half mile buffer zone and removal of the conservation district restriction; outright repeal of Act 73 or exemption). Most of these potential sites were previously identified in Applicant’s 2012 and 2017 studies, but there may also be new sites. Applicant would then be able to further evaluate and ultimately identify one of those potential sites as the alternative, by December 31, 2024. See Declaration of Dec. Babcock at 43.

2. Continue Discussions with U.S. Military for Potential Sites

The LAC also recommended “further efforts by the City to encompass federal lands for siting a landfill, including state controlled lands with leases set to expire or underutilized by the federal government.” See Exhibit “D”, at page no. “6-5”.

Applicant is working to identify all of these potential federal sites, and Applicant will continue discussions with the U.S. military regarding acquiring a site that is outside of the No Pass Zone. See Dec. Babcock at 44.

3. Evaluate Feasibility of Eminent Domain of Residential Property

Lastly, Applicant will evaluate sites outside the No Pass Zone that may have been eligible, but for a small number of residential properties that would place nearby landfill sites within the restricted Act 73 one-half mile buffer zone. Applicant will evaluate the feasibility of the eminent domain process to acquire these residential properties, and thereby remove the Act 73 impediment. See Dec. Babcock at 45.

D. An Extension of Time is in the Best Interest of the Entire Community

As BWS contends, a leak into and thus contamination of the drinking water aquifer, as in the case of Red Hill, could be catastrophic for the entire community because of the nature of the hydrogeologically-connected drinking water aquifer system.

side.” See Exhibit “J”; see also <https://www.staradvertiser.com/2022/12/07/editorial/-letters/letter-west-side-shouldnt-keep-hosting-landfill/>. The Ameron site, while outside of the No Pass Zone, was eliminated as a result of Act 73. Applicant hopes that State legislators, including the authors of the opinion piece, will support future legislation to amend or repeal Act 73 so that Applicant may identify a landfill site outside of the BWS No Pass Zone.

See Exhibit "C". Given the high stakes at issue and the BWS' dire warnings, Applicant feels a two-year extension to accomplish the time consuming efforts described above is in the best interest of the entire community. Again, the goal is to identify a site outside of the No Pass Zone that complies with all laws and regulations. See Dec. Babcock at 46.

E. If the Deadline is Not Extended, Applicant Will Be Forced to Select One of the Six Proposed Sites Not Approved By the BWS

As detailed herein, after the Planning Commission and LUC's 2019 Decisions, Applicant assessed and proposed six sites that complied with Act 73, appointed the LAC to further evaluate and score the sites, but ultimately faced the current No Pass Zone dilemma. Should the Planning Commission or LUC refuse Applicant's request for a two-year extension of time to identify a new landfill site to replace the WGS�, Applicant will be left with no choice but to promptly identify and pursue the development of one of the six proposed sites located in the BWS No Pass Zone, despite the LAC's and the BWS' concerns regarding protecting O'ahu's sole drinking water source. See Dec. Babcock at 47.

III. CONCLUSION

For the foregoing reasons, the Department of Environmental Services respectfully requests that the Planning Commission grant this application to modify the conditions of the WGS� SUP. Specifically, Applicant requests that the Planning Commission modify Condition No. 1 of the Planning Commission's 2019 Decision by extending Applicant's deadline to identify an alternative landfill site from December 31, 2022 to December 31, 2024.

Sincerely,




ROGER W. BABCOCK Jr., Ph.D. P.E.
Director
Department of Environmental Services

Attachs.

VERIFICATION

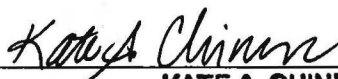
ROGER W. BABCOCK JR., Ph.D. P.E., being duly sworn, on oath,
deposes and says that he is the Director of the Department of Environmental Services,
City and County of Honolulu, and as such is authorized to make this verification on
behalf of the Department of Environmental Services; that he has read the foregoing
Application and knows the contents thereof; and that the same are true to the best of his
knowledge, information and belief.

DATED: Honolulu, Hawai'i, December 22, 2022.




ROGER W. BABCOCK JR., Ph.D. P.E.,
Director
Department of Environmental Services

Subscribed and sworn to me
this 22 day of December, 2022.



Name: KATE A. CHINEN
Notary Public, State of Hawai'i
My commission expires: 4/10/2024



Doc. Date: December 22, 2022 # Pages: 22
Name: Kate A. Chinen First Circuit
Doc. Description: SPECIAL USE PERMIT
No. 2008/SUP-2 (SPO9-403)
 12/22/2022
Notary Signature Date

NOTARY CERTIFICATION



DECLARATION OF ROGER W. BABCOCK JR.

I, ROGER W. BABCOCK JR., hereby declare as follows:

1. I am the Director for the Department of Environmental Services, City and County of Honolulu ("Department of Environmental Services").

2. I make this declaration based upon personal knowledge in support of the Department of Environmental Services' Application to Modify State Special Use Permit ("SUP") No. 2008/SUP-2 (SP09-403) by modifying (1) Condition No. 1 of the Planning Commission, City and County of Honolulu's ("Planning Commission") Findings of Fact, Conclusions of Law, and Decision and Order, dated June 10, 2019 and (2) Condition No. 5 of the State of Hawaii, Land Use Commission's ("LUC") Findings of Fact, Conclusions of Law, and Decision and Order Approving with Modifications the City and County of Honolulu Planning Commission's Recommendation to Approve Special Use Permit, certified on November 1, 2019, by extending the December 31, 2022 deadline to identify an alternative landfill site ("Application to Modify").

3. Attached hereto as Exhibit "A" is a true and correct copy of the Planning Commission's Findings of Fact, Conclusions of Law, and Decision and Order, dated June 10, 2019 ("Planning Commission's 2019 Decision").

4. Attached hereto as Exhibit "B" is a true and correct copy of the LUC's Findings of Fact, Conclusions of Law, and Decision and Order Approving with Modifications the City and County of Honolulu Planning Commission's Recommendation to Approve Special Use Permit, certified on November 1, 2019 ("LUC's 2019 Decision").

5. Attached hereto as Exhibit “C” is a true and correct copy of the Board of Water Supply’s (“BWS”) letter to the Department of Environmental Services dated November 16, 2022.

6. Attached hereto as Exhibit “D” is a true and correct copy of the Landfill Advisory Committee’s final report titled “O’ahu Landfill Study & Landfill Advisory Committee Recommendations”, dated June 2022, without Appendices (A-E).

7. The PDF containing the final report with appendices is available from the Department of Environmental Services’ website

(<https://www.honolulu.gov/opala/newlandfill.html>), or via the following URL:

https://www.honolulu.gov/rep/site/env/envref/envref_docs/OLSS%20and%20LAC%20Final%20Report%2020220627_COMBINED%20r1.pdf

8. Attached hereto as Exhibit “E” is a true and correct copy of the approved minutes of the Landfill Advisory Committee’s (“LAC”) December 14, 2021 meeting.

9. Attached hereto as Exhibit “F” is a true and correct copy of the Department of Environmental Services’ letter to the BWS, dated November 3, 2022.

10. Attached hereto as Exhibit “G” is a true and correct copy of a chart containing data collected by the Department of Environmental Services regarding Municipal Solid Waste Stream on O’ahu (for 2017-2021), which can also be found on the Department of Environmental Services’ website:

<https://www.honolulu.gov/opala/resources/rates-and-data.html>.

11. Attached hereto as Exhibit “H” contains a true and correct copy of Honolulu Program of Waste Energy Recovery’s (“H-POWER”) Solid Waste

Management Permit No. IN-0049-11 issued by the Department of Health. The Department of Environmental Services is currently awaiting the permit's renewal.

12. Attached hereto as Exhibit "I" is a true and correct copy of Covanta Honolulu Resource Recovery Venture, LLC's ("Covanta") annual summary report for fiscal year 2021 through 2022 (consisting of Attachments A to D), which was sent to the Solid and Hazardous Waste Branch, Hawaii State Department of Health. Covanta is the Department of Environmental Services' contractor that operates H-POWER.

13. Attached hereto as Exhibit "J" is a true and correct copy of a letter to the editor published in the Honolulu Star-Advertiser on December 7, 2022, which was authored by State Senator Maile Shimabukuro and State House Representative Darius Kila, which was obtained from the Star-Advertiser's website.

14. (1) 9-2-03:72 and 73 are the Tax Map Key ("TMK") numbers referenced in the applications and records of the Planning Commission and LUC, relating to their 2019 Decisions. Recently, it came to the attention of the Department of Environmental Services that the Property is also identified by TMK numbers (1) 9-2-050:005 and 006. Nevertheless, the Property at issue remains the same.

15. The Waimanalo Gulch Sanitary Landfill ("WGSL" or "Landfill") is the only permitted public municipal solid waste ("MSW") landfill on the island of O'ahu and the only permitted repository for the ash and residue produced by H-POWER.

16. Developed lands are lands where a major building(s) exists, and undevelopable lands are lands that already have a planned development in place. Federal lands are lands owned by the federal government. Given the short timeline to identify a new site, the Department of Environmental Services removed federal lands

from consideration because of the long lead-time it would take to negotiate and acquire federal land. The Department of Environmental Services removed developed and undevelopable lands from consideration because those potential sites were too small or also restricted by Act 73's one-half mile buffer zone.

17. In Figure 3 (on the following page), the proposed landfill sites outside of the No Pass Zone (shown as yellow areas outside of the area demarcated by the red dotted line) were eliminated by Act 73. When the No Pass Zone and Act 73 are applied as restrictions and federal lands are removed from consideration, there are zero potential new landfill sites on O'ahu.

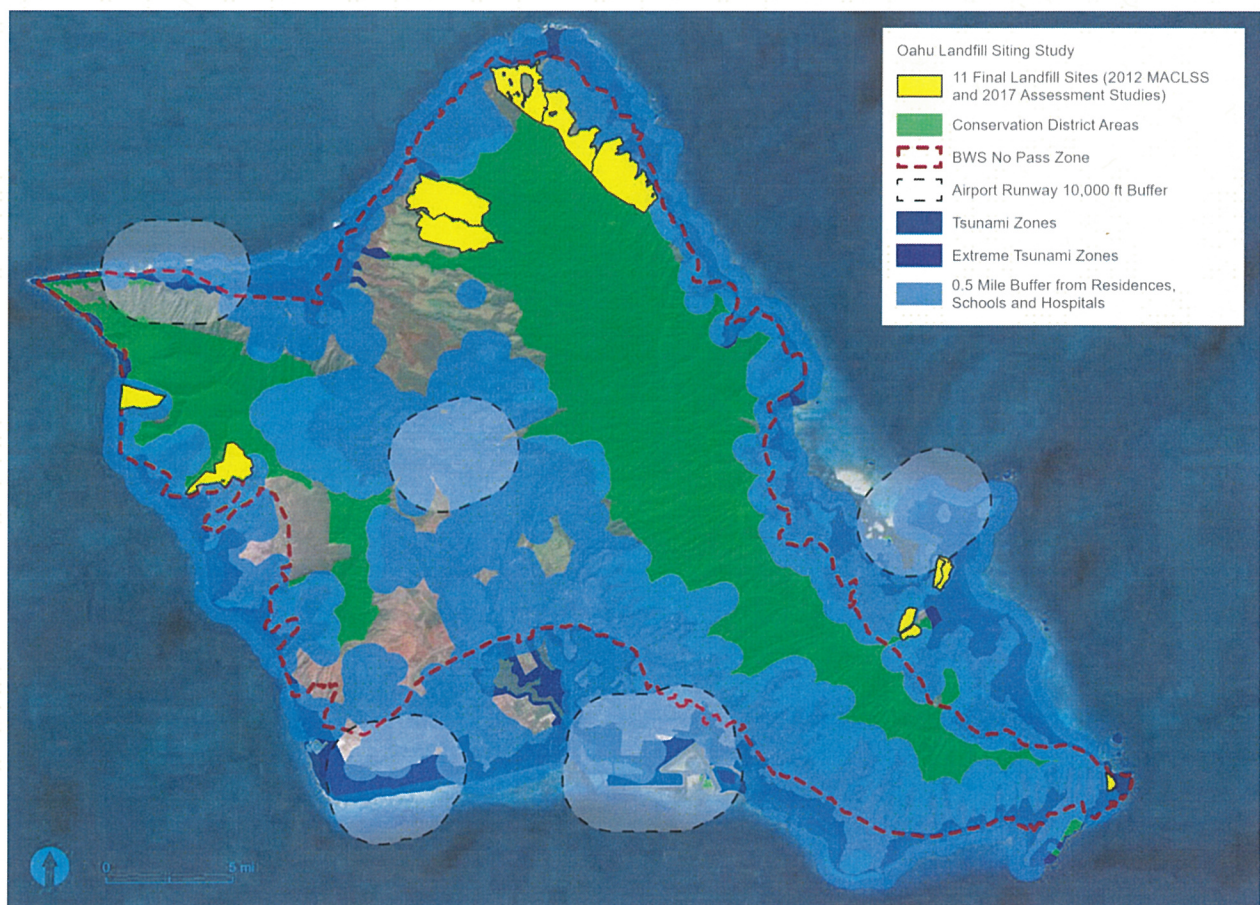


Figure 3

18. The LAC was established in accordance with Section 4-103 of the Revised Charter of the City and County of Honolulu 1973 (Amended 2017 Edition) and as an advisory committee, its function was limited to counsel and advice.

19. Consistent with the requirements of the LUC's 2019 Decision, the Department of Environmental Services has continued its efforts to use alternative technologies to provide a comprehensive waste stream management program. Over the years, the Department of Environmental Services has been able to divert more and more waste from the WGSJ to H-POWER.

20. In Calendar Year 2010 approximately 1,214,904 tons of waste was generated on O'ahu. Of that amount, the Landfill received 163,736 tons of MSW and 179,946 tons of ash and residue from H-POWER (for a combined total of 343,682 tons). According to Department of Environmental Services' data, the landfill diversion rate for 2010 was 71.7%

21. In Calendar Year 2020, approximately 1,210,281 tons of waste was generated on O'ahu. Of that amount, the Landfill received 56,114 tons of MSW and 182,112 tons of ash and residue from H-POWER (for a combined total of 238,226 tons). According to Department of Environmental Services' data, the landfill diversion rate for 2020 was 82.2%.

22. In Calendar Year 2021, approximately 1,215,467 tons of waste was generated on O'ahu. Of that amount, the Landfill received 106,723 tons of MSW and 157,531 tons of ash and residue from H-POWER (for a combined total of 264,254 tons). According to Department of Environmental Services' data, the landfill diversion rate for 2021 was 80.0%.

23. Based upon data already collected, the Department of Environmental Services projects that for Calendar Year 2022, the Landfill will receive approximately 70,000 tons of waste and 160,000 tons of ash and residue from H-POWER (for a combined estimated total of 230,000 tons). Based upon current estimates, the MSW landfill diversion rate for 2022 is projected to be approximately 83%.

24. For all waste tonnage data provided in paragraphs 20 through 23 of this declaration (i.e., for Calendar Years 2010, 2020, 2021, and 2022), the amounts do not include the construction and demolition ("C&D") waste received and/or recycled by the private PVT landfill.

25. In 2012, H-POWER's capacity increased to 900,000 tons per year because of the addition of a third boiler. The third boiler is a mass burn unit, which can process waste streams that previously required landfilling, including sewage sludge, bulky waste, and treated medical waste (except medical sharps).

26. In total, H-POWER's original refuse derived fuel boilers and mass burn unit processes waste to reduce its volume by 90 percent, and as of 2021, approximately 750,000 tons per year of MSW and sludge are diverted from the WGSL.

27. Improvements at the H-POWER facility has resulted in an increased amount of metal recovered for recycling. Currently, H-POWER recovers about 25,000 tons of metal annually for recycling.

28. "Process residue" is composed of fine (small particle size) materials in the waste stream such as glass, sand and dirt that are separated using trommel screens and removed during pre-combustion waste processing.

29. In July 2021, H-POWER began combusting its process residue on a trial basis. Operating data is being collected to determine whether to make the change permanent. This change has reduced the amount of process residue being disposed at the landfill from about 4,000 tons per month to zero (i.e., 48,000 tons per year).

30. The Department of Environmental Services is pursuing ash recycling to further decrease waste that must be landfilled. The Department of Environmental Services executed a contract for the processing and beneficial reuse of ash, and the first phase of the project is currently proceeding. The ash recycling project, once permitted and built, has the potential to divert at least 60% of the H-POWER ash that is currently landfilled at the WGS�. Based on 2021's reported tonnage, this approximates to at least 94,500 tons of ash per year that can eventually be diverted from the WGS�.

31. Currently, approximately 30,000 tons per year of auto shredder residue ("ASR") is disposed at the WGS�. Although the Department of Environmental Services had envisioned ASR to be diverted to H-POWER, test data showed that the high fluorine and chlorine content of the material could be extremely harmful to the boiler. This matter is pending further evaluation and possible testing. The ash recycling project may consider ASR processing as a potential future option.

32. The following graph (Figure 5) illustrates the reduction of MSW delivered to the WGS� over the years, generally because of source reduction and diverting more waste from the Landfill (red line) to H-POWER (blue line). The total MSW (black line) reflects the MSW reduction during the Great Recession that began in 2008, a slow but steady economic recovery, and another MSW reduction during the COVID-19 pandemic

that began in 2019. Slightly higher landfill tonnages in 2017 and 2021 were due to facility refurbishment projects and major turbine-generator maintenance.

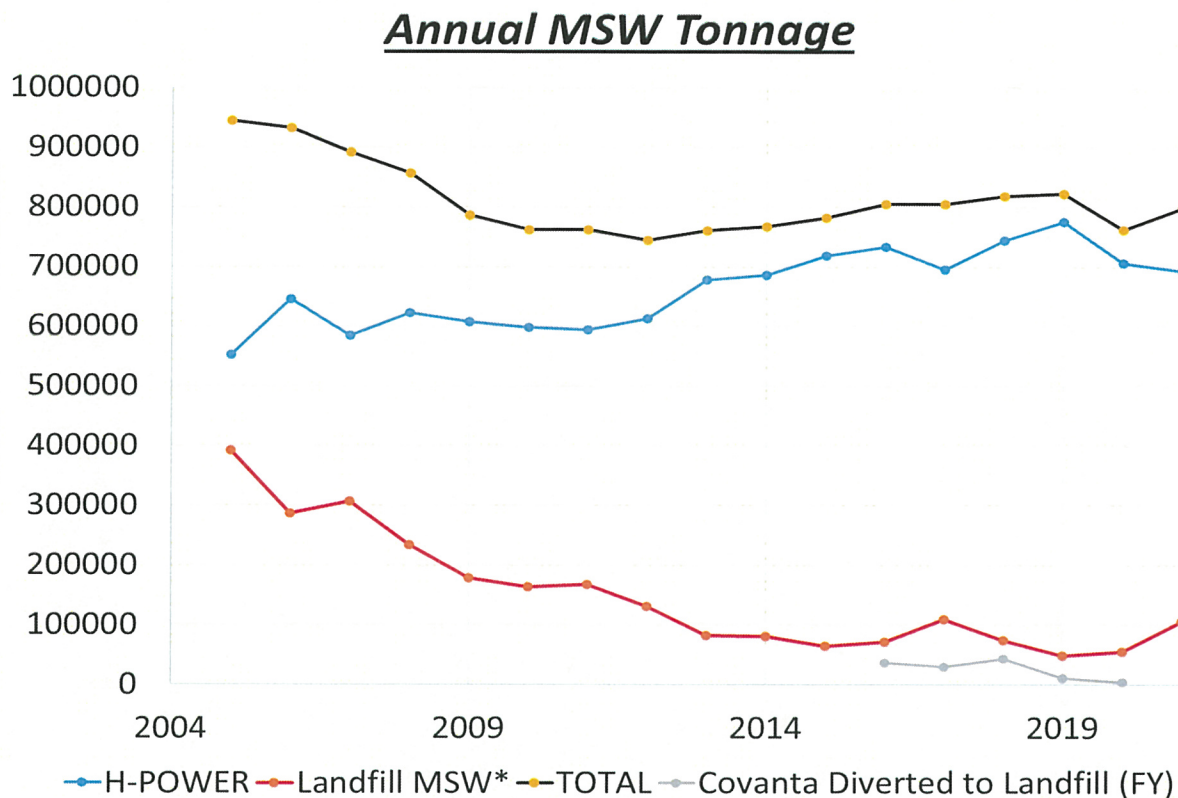


Figure 5

33. As the decreasing MSW tonnage to the WGSL over time shows, the Department of Environmental Services has continued its effort to significantly reduce solid waste disposal at the WGSL by expanding H-POWER and the waste to materials recycling programs, and developing alternative disposal options for materials presently being landfilled. Collectively, these actions have and will continue to divert significant amounts of waste from the Landfill. However, despite new technological solutions that it continues to consider, the Department of Environmental Services cannot completely eliminate the need for a landfill at this time for reasons elaborated in its Application to Modify.

34. A landfill to dispose of MSW is required because there will always be material that cannot be combusted, recycled, reused or shipped.

35. A landfill is essential because H-POWER cannot operate without the landfill as a backup disposal option.

36. H-POWER is operating under Permit No. IN-0049-11 (see Exhibit “H”), and the Department of Environmental Services is waiting for the permit renewal.

37. A landfill is critical to the public health during natural disasters such as tsunamis or hurricanes and during times of emergency to control the rapid and massive accumulation of waste.

38. The PVT landfill stopped accepting asbestos containing material (“ACM”) on or about January 1, 2021, so the City and County of Honolulu’s (“City”) landfill started accepting ACM to provide an on-island disposal option. It has been reported that the PVT landfill will reach capacity in eight years, after which all of PVT’s waste must go to the City’s landfill. The Department of Environmental Services is gathering information to support legislation that would facilitate C&D recycling by enforcing minimum requirements, practices, and procedures for certain construction projects. The Department of Environmental Services is also working to apply for permit modifications for H-POWER to be able to accept wood and combustible C&D waste.

39. WGSL is permitted to receive ACM and other C&D waste.

40. The City’s landfill is and will be necessary for proper solid waste management, the lack of which would potentially create serious health and safety issues for the residents of O’ahu. A landfill is a necessary and critical component of the City’s overall Integrated Solid Waste Management Plan, which looks at all of the factors

that make up solid waste management, including reuse and recycling, the H-POWER facility, and landfilling for material that cannot be recycled or burned for energy.

41. Due to the new legal restrictions imposed by Act 73 (Session Laws of Hawaii 2020) and the Board of Water Supply's strong opposition to the siting of any of the six proposed landfill sites because all sites are located in the BWS' "No Pass Zone", the Department of Environmental Services is left with no viable new landfill site. The Department of Environmental Services will use the next two years to further evaluate and even create other options outside of the No Pass Zone. As recommended by the LAC, the Department of Environmental Services will: (1) seek a repeal of or amendment to Act 73; (2) continue discussions with the U.S. military regarding the acquisition of a site outside the No Pass Zone; and (3) evaluate the feasibility of acquiring (by eminent domain) residential properties adjacent to potential landfill sites to create sites that would comply with the one-half mile buffer from residential areas restriction in Act 73. The Department of Environmental Services will also continue to explore all other legally compliant options to identify a new site.

42. The Department of Environmental Services will try to amend Act 73 in the upcoming 2023 and/or 2024 legislative sessions.

43. The number of potential sites that may become available depends on the degree of success in amending Act 73 (e.g., reduction of the one-half mile buffer zone only; reduction of the one-half mile buffer zone and removal of the conservation district restriction; outright repeal of Act 73 or exemption). Most of these potential sites were previously identified in the Department of Environmental Services' 2012 and 2017 studies, but there may also be new sites. The Department of Environmental Services

would then be able to further evaluate and ultimately identify one of those potential sites as the alternative, by December 31, 2024.

44. The Department of Environmental Services is also working to identify all potential federal sites, and it will continue discussions with the U.S. military regarding acquiring a site that is outside of the No Pass Zone.

45. The Department of Environmental Services will evaluate sites outside the No Pass Zone that may have been eligible, but for a small number of residential properties that would place nearby sites within the restricted Act 73 one-half mile buffer zone. The Department of Environmental Services will also evaluate the feasibility of the eminent domain process to acquire these residential properties, and thereby remove the Act 73 impediment.

46. Given the high stakes at issue and the BWS' dire warnings, the Department of Environmental Services feels a two-year extension to accomplish the time consuming efforts described in the Application to Modify is in the best interest of the entire community. The Department of Environmental Services' goal is to identify a site outside of the No Pass Zone that complies with all laws and regulations.

47. Should the Planning Commission or LUC refuse the Department of Environmental Services' request for a two-year extension of time to identify a new landfill site, the Department of Environmental Services will be left with no choice but to identify and pursue the development of one of the six proposed sites located in the BWS No Pass Zone, despite the LAC's and the BWS' concerns regarding protecting O'ahu's sole drinking water source.

I DECLARE UNDER PENALTY OF LAW THAT THE FOREGOING IS TRUE
AND CORRECT.

DATED: Honolulu, Hawai'i, DEC 22 2022.



ROGER W. BABCOCK JR., Ph.D. P.E.

BEFORE THE PLANNING COMMISSION
OF THE CITY AND COUNTY OF HONOLULU

RECEIVED
CORPORATION COUNSEL
C. AND C. OF HONOLULU

STATE OF HAWAII

'19 JUN 10 P4:21

In the Matter of the Application of

DEPARTMENT OF ENVIRONMENTAL
SERVICES, CITY AND COUNTY OF
HONOLULU

For a New Special Use Permit to Supersede
Existing Special Use Permit to Allow a
92.5-Acre Expansion and Time Extension for
Waimanalo Gulch Sanitary Landfill,
Waimanalo Gulch, O'ahu, Hawai'i, Tax Map
Key No. (1) 9-2-03: 72 and 73.

In the Matter of the Application of

DEPARTMENT OF ENVIRONMENTAL
SERVICES, CITY AND COUNTY OF
HONOLULU

To delete Condition No. 14 of Special Use
Permit No. 2008/SUP-2 (also referred to as
Land Use Commission Docket No. SP09-403)
which states as follows:

"14. Municipal solid waste shall be allowed at
the WGSL up to July 31, 2012, provided that
only ash and residue from H-POWER shall be
allowed at the WGSL after July 31, 2012."

FILE NO. 2008/SUP-2

FINDINGS OF FACT, CONCLUSIONS OF
LAW, AND DECISION AND ORDER

CERTIFICATE OF SERVICE

I certify that this is a full, true and
correct copy of the original document on
file with the Department of Planning
and Permitting/Planning Commission,
City and County of Honolulu.



June 10, 2019

DATE

**FINDINGS OF FACT,
CONCLUSIONS OF LAW, AND DECISION AND ORDER**

This matter is a consolidation of two contested case hearings before the Planning Commission, City and County of Honolulu (the "Planning Commission"). The first proceeding involves the Department of Environmental Services, City and County of Honolulu's ("Applicant" or "ENV") application for a new special use permit ("SUP"), the expansion of the

EXHIBIT "A"

Waimanalo Gulch Sanitary Landfill (“WGSL” or the “landfill”) and the withdrawal of County Special Use Permit No. 86/SUP-5. The second proceeding involves ENV’s application to modify the Land Use Commission (“LUC”) Order Adopting the City and County of Honolulu Planning Commission’s Findings of Fact, Conclusions of Law, and Decision and Order with Modifications dated October 22, 2009 (“2009 LUC Order”) for County Special Use Permit No. 2008/SUP-2 for the sole purpose of deleting the July 31, 2012 deadline for the landfill to accept municipal solid waste (“MSW”).

Based on the record in this consolidated matter, including the evidence adduced at the contested case hearings, the credibility of the witnesses testifying at the hearings, and the respective proposed findings of fact, conclusions of law, and decisions and orders submitted by the parties and their respective responses thereto, the Planning Commission hereby makes the following findings of fact, conclusions of law, and decision and order:

FINDINGS OF FACT

I. PROCEDURAL MATTERS

1. The WGSL is located at 92-460 Farrington Highway, Honouliuli, Ewa, Oahu. See Final Environmental Impact Statement, Waimanalo Gulch Sanitary Landfill Lateral Expansion, Waimanalo, Gulch, Oahu, Hawaii, TMKs: (1) 9-2-003:072 and 073, dated October 2008, included in 2011 Contested Case Hearing Exhibit (“2011 Exhibit”) “Exhibit A2.”

A. 2008 APPLICATION

2. On November 23, 2006, the Office of Environmental Quality Control, State of Hawaii (“OEQC”), published notice in The Environmental Notice that the Environmental Impact Statement (“EIS”) Preparation Notice for the expansion of WGSL was available for public review and comment. See Letter from David Tanoue, Director of the Department of Planning

and Permitting, to Karin Holma, Chair of the Planning Commission, dated May 1, 2009 ("DPP Recommendation") at 6.

3. On October 13, 2008, the Final Environmental Impact Statement, Waimanalo Gulch Sanitary Landfill Lateral Expansion, Waimanalo Gulch, Oahu, Hawaii, TMKs: (I) 9-2-003: 072 and 073, dated October 2008 ("2008 FEIS"), for the expansion of WGSL, was accepted on behalf of the Mayor by the Department of Planning and Permitting ("DPP"). Id.; Exhibit "7" to the Department of Environmental Services, City and County of Honolulu's July 6, 2009 Memorandum in Opposition to Intervenor's Motion to Dismiss the Application.

4. On October 23, 2008, OEQC published notice of the 2008 FEIS Acceptance in The Environmental Notice, in accordance with the Hawaii Environmental Policy Act ("HEPA"), Hawaii Revised Statutes ("HRS") Chapter 343. See DPP Recommendation at 6.

5. On December 3, 2008, the Department of Environmental Services, City and County of Honolulu ("Applicant" or "ENV"), filed a State Special Use Permit Application ("Application"), with DPP pursuant to HRS Section 205-6, and Rules of the Planning Commission, City and County of Honolulu ("RPC"), Subchapter 4, Rules Applicable to State Special Use Permits. See Application. The Application, designated as Special Use Permit Application File No. 2008/SUP-2, is for a new Special Use Permit ("SUP") for the use of the approximately 200.622-acre property (the "Property"), identified by Tax Map Key ("TMK") Nos. (1) 9-2-003: 072 and 073, in Waimanalo Gulch, Oahu, Hawaii. See Application at Figure 1-1 and Planning Division Master Application Form. The Application seeks to expand the current operating portion of the Property, approximately 107.5 acres, by approximately 92.5 acres (the "Project"). See Application at Planning Division Master Application Form and p. 1-2.

6. The Applicant concurrently seeks to withdraw its existing SUP permit for approximately 107.5 acres, Special Use Permit File No. 86/SUP-5, and the conditions imposed therein, if the Application for the new SUP permit is granted. See April 2, 2009 memorandum from Applicant to DPP; Transcript ("Tr.") 7/2/09, 20:4-10; DPP Recommendation at 3, 24.

7. The Applicant has also filed a petition with the Land Use Commission, State of Hawaii, for a district boundary amendment to reclassify the Property from the State Agricultural District to the Urban District, which may be withdrawn if the Application is granted. See Application at p. 2-2, fn.1.

8. The Planning Commission's public hearing to consider ENV's application was scheduled for May 6, 2009. On April 3, 2009, a notice of the hearing of the matter was published in the Honolulu Star-Bulletin.

9. On April 16, 2009, Ko Olina Community Association ("KOCA"), Colleen Hanabusa, and Maile Shimabukuro (collectively, "Intervenors") filed a Petition to Intervene in this matter. On April 24, 2009, Applicant filed a Memorandum in Opposition to Intervenors' Petition to Intervene.

10. On May 1, 2009, DPP transmitted its report and recommendation for approval of the Application to the Planning Commission. See DPP Recommendation.

11. On May 1, 2009, the Planning Commission conducted a site visit to the Property and to the H-POWER facility.

12. At the public hearing on May 6, 2009, at the City Council Committee Meeting Room, Second Floor, 530 South King Street, Honolulu, Hawaii, the Planning Commission heard public testimony. The Planning Commission was also scheduled to hear argument regarding Intervenors' Petition to Intervene. At Intervenors' request, however, the Planning Commission

continued the public hearing and consideration of Intervenor's Petition to Intervene to May 20, 2009.

13. On May 7, 2009, Todd K. Apo ("Apo") filed a Petition to Intervene in this matter. On May 18, 2009, Applicant filed a Memorandum in Opposition to Apo's Petition to Intervene.

14. On May 19, 2009, Intervenor's filed a Motion to Recuse Commissioner John Kaopua.

15. On May 20, 2009, the public hearing was continued at the City Council Committee Meeting Room, Second Floor, 530 South King Street, Honolulu, Hawaii. At the continued public hearing, the Planning Commission heard and granted Intervenor's Petition to Intervene. Pursuant to RPC Subchapter 5, the matter was noted as a contested case. The Planning Commission also began hearing argument regarding Apo's Petition to Intervene and continued that matter to June 10, 2009.

16. On June 5, 2009, Applicant filed a Memorandum in Opposition to Intervenor's Motion to Recuse Commissioner John Kaopua.

17. On June 10, 2009, the hearing was continued at the City Council Committee Meeting Room, Second Floor, 530 South King Street, Honolulu, Hawaii. The Planning Commission heard and granted Intervenor's Motion to Recuse Commissioner John Kaopua. The Planning Commission denied Apo's Petition to Intervene on the grounds that it was untimely filed, that Apo's position regarding that Application was substantially the same as the position of the Intervenor's, and that the proceeding will be inefficient and unmanageable if Apo was allowed to intervene. See Findings of Fact, Conclusions of Law, and Order issued on July 27, 2009. Thereafter, the Planning Commission closed the public hearing on the Application.

18. On June 15, 2009, Intervenors filed their List of Witnesses, listing 42 potential witnesses including Apo. Applicant also filed its List of Witnesses, listing six potential witnesses.

19. On June 22, 2009, the contested case hearing began on the Application at Kapolei Hale, 1000 Uluohia Street, Kapolei, Hawaii. The Applicant submitted Exhibits "A1" through "A31," which were accepted into the record by the Planning Commission. See Tr. 6/22/09, 29:2-13. The Applicant presented its first two witnesses: Brian Takeda, who was qualified as an expert in the field of urban and regional planning, and Hari Sharma ("Sharma"), who was qualified as an expert in the field of geotechnical and geo-environmental engineering. Id. at 33:5-8; 234:7-12. Intervenors offered, and the Planning Commission received into the record, Exhibits "B1" and "B4." Id. at 81:6-11; 226:14-15.

20. On June 24, 2009, the Planning Commission resumed the contested case hearing on the Application at the City Council Committee Meeting Room, Second Floor, 530 South King Street, Honolulu, Hawaii. The examination of Sharma was completed. The Applicant presented its third witness Joseph R. Whelan ("Whelan").

21. On June 29, 2009, Intervenors filed a Motion to Dismiss the Application, contending that the 2008 FEIS did not cover the entire 200.622-acre site and therefore, ENV's Application had to be dismissed.

22. On July 1, 2009, the Planning Commission resumed the contested case hearing on the Application at Kapolei Hale, 1000 Uluohia Street, Kapolei, Hawaii. The examination of Whelan was completed. The Applicant presented its fourth and fifth witnesses: Richard Von Pein, who was qualified as an expert in the field of landfill design and geotechnical engineering, and Frank Doyle, Chief of the Division of Refuse, City and County of Honolulu. See Tr. 7/1/09,

93:2-8; 176:4-9. Applicant offered, and the Planning Commission accepted for the record, Exhibit "A32." Id. at 168:16-17.

23. On July 2, 2009, the Planning Commission resumed the contested case hearing on the Application at the City Council Chambers, Third Floor, 530 South King Street, Honolulu, Hawaii. The Applicant offered no further witnesses and concluded its case-in-chief. See Tr. 7/2/09, 4:15-17. Intervenors began their case-in-chief and presented the following seven witnesses: Abbey Mayer; Josiah Hoohuli; William J. Aila, Jr.; Daniel Banchiu; Cynthia Rezentes; Maeda Timson; and Apo. The Applicant offered, and the Planning Commission received into the record, Exhibits "A33" and "A34." Id. at 32:20-25; 240:7-13. Intervenor offered, and the Planning Commission received into the record, Exhibit "B5." Id. at 185:21-23. Other documents were referenced by the Planning Commission and the parties as Exhibits "B2" through "B3." Intervenors rested their case. Id. at 279:15.

24. On July 6, 2009, Applicants filed a Memorandum in Opposition to Intervenors' Motion to Dismiss the Application.

25. On July 8, 2009, the Planning Commission resumed the contested case hearing on the Application at the City Council Committee Meeting Room, Second Floor, 530 South King Street, Honolulu, Hawaii. Applicant presented David M. Shideler as a rebuttal witness, who was qualified as an expert in archaeology and historical cultural resources. See Tr. 7/8/09, 11:15-21. Applicant offered, and the Planning Commission received into the record, Exhibits "A35," "A36," and "A37." Id. at 8:25-9:5, 65:14-22, 68:6-13. Intervenors made their witness, Apo, available for additional questions by Commissioner Beadie Dawson. The examination of Apo was completed.

26. On July 8, 2009, the Planning Commission also heard and denied Intervenor's Motion to Dismiss the Application on the grounds that the Planning Commission does not have jurisdiction to consider the sufficiency of the 2008 FEIS and that Intervenor Hanabusa had previously filed the appropriate matter contesting the sufficiency in State circuit court. The Planning Commission scheduled decision-making for the Application on July 31, 2009, at the City Council Committee Meeting Room, Second Floor, 530 South King Street, Honolulu, Hawaii. Id. at 110:15-25; 111:1-5, 20-21.

(1) **EXHIBITS AND WITNESSES**

27. The Applicant offered, and the Planning Commission received into the record, Exhibits "A1" to "A37," without objection.

28. Intervenor's offered, and the Planning Commission received into the record, Exhibits "B1," "B4," and "B5," without objection.

29. The Applicant called the following witnesses: Brian Takeda, who was qualified as an expert in the field of urban and regional planning; Hari Sharma, who was qualified as an expert in the field of geotechnical and geo-environmental engineering; Joseph R. Whelan; Richard Von Pein, who was qualified as an expert in the field of landfill design and geotechnical engineering; Frank Doyle; and David M. Shideler, who was qualified as an expert in the field of archaeology and historical cultural resources.

30. Dr. Sharma prepared a report entitled "Engineering Report for Landfill Expansion; Waimanalo Gulch Sanitary Landfill," dated March 12, 2008, which is Exhibit "A29." See Tr. 6/22/09, 235:4-25.

31. Intervenor's called the following witnesses: Abbey Mayer; Josiah Hoohuli; William Aila, Jr.; Daniel Banchiu; Cynthia Rezentes; Maeda Timson; and Todd Apo. Intervenor's did not move to qualify any of these persons as expert witnesses.

32. Intervenor Ko Olin Community Association, Colleen Hanabusa, and Maile Shimabukuro did not testify and did not submit any written testimony during the contested case hearing.

33. Mr. Doyle testified that the Applicant will begin in 2010 efforts to identify and develop a new landfill site to supplement WGS. See Tr. 7/1/09, 251:18-24.

34. Mr. Doyle also testified that it would take more than seven years to identify and develop a new landfill site. M. at 260:16-22; 261:3-22.

(2) POST-HEARING SUBMISSIONS BY THE PARTIES

35. On July 17, 2009, Applicant filed the Department of Environmental Services, City and County of Honolulu's Post-Hearing Brief and the Department of Environmental Services, City and County of Honolulu's Proposed Findings of Fact, Conclusions of Law, and Decision and Order; and Certificate of Service.

36. On July 17, 2009, Intervenor filed the Post Hearing Brief of Intervenor, Certificate of Service and Intervenor's Ko Olin Community Association, Colleen Hanabusa and Maile Shimabukuro Proposed Findings of Fact and Conclusions of law and Decision and Order, and Certificate of Service.

37. On July 29, 2009, Applicant filed that certain Department of Environmental Services, City and County of Honolulu's (1) Response to Post-Hearing Brief of Intervenor and (2) Exceptions to Intervenor's Proposed Findings of Fact, Conclusions of Law, and Decision and Order; Declaration of Gary Y. Takeuchi; Exhibits "1" — "3"; and Certificate of Service.

38. On July 29, 2009, Intervenor filed that certain Reply Brief of Intervenor, Certificate of Service.

B. THE PLANNING COMMISSION'S 2009 DECISION

39. On August 4, 2009, the Planning Commission entered its findings of fact, conclusions of law, and decision and order granting the 2008 Application ("2009 Planning Commission Decision").

(1) 2009 FINDINGS OF FACTS ("2009 FOF")

a. 2009 FOF: PROPOSAL FOR SPECIAL USE PERMIT

40. A special use permit is being sought for the continued use of the Property as a landfill. See Application at 1-1. The 107.5-acre portion of the Property currently used as a landfill is proposed to be expanded by the remaining approximately 92.5 acres. Id. Of the approximately 92.5 acres in the expansion area, approximately 37 acres will be utilized for landfill cells. See Exhibit "A1" at 3-1, 4-4, 11-1. In addition, the expansion area will include the development of landfill-associated support infrastructure, including drainage, access roadways, a landfill gas collection and monitoring system, leachate collection and monitoring systems, stockpile sites, a public drop-off center, and a landfill gas-to-energy system and other related features. Id.; see also Application at Part I.

41. The SUP will cover the entire Property. See Application at Part I.

b. 2009 FOF: DESCRIPTION OF THE PROPERTY

42. The Property is owned by the City and County of Honolulu ("City") and operated by Waste Management of Hawaii, Inc. ("Waste Management"). See Tr. 7/1/09, 179:4-8.

43. The state land use district designation for the Property is Agricultural District. See DPP Recommendation at 1; Application at Planning Division Master Application Form.

44. The existing City zoning district for the Property is AG-2, General Agricultural District. See Application at Planning Division Master Application Form; DPP Recommendation at 1.

45. The Ewa Development Plan recognizes the existing landfill. See Exhibit "A5"; DPP Recommendation at 1.

c. **2009 FOF: SURROUNDING USES**

46. Surrounding uses to the Property include the Hawaiian Electric Company Kahe Power Plant to the west, single-family dwellings and the Ko Olina Resort to the south, and vacant lands to the north and east. See Figure 7-3 of Exhibit "A1."

47. Farrington Highway is located south of the Property. Id:

48. The region east of Property comprises the Makaiwa Hills development, which is scheduled for development. See Tr. 6/22/09, 64:6-8; Figure 7-3 of Exhibit "A1." WGS� has been in operation since 1989. See Tr. 7/1/09, 179:9-10. In 2008, the Makaiwa Hills parcel was rezoned for single family, mixed and apartment use by Ordinance 8-26, Bill 47 (2008). See Exhibit "A36."

49. The Makaiwa Hills developer's intention, according to its Final EIS dated October 2007 (the "Makaiwa Hills HIS"), is to proceed with development from makai (south) proceeding in a mauka (north) direction, as well as proceeding from east to west. See Tr. 6/22/09, 167:6-25. The Makaiwa Hills EIS indicates that construction of the western portion of its development closest to WGS� will not proceed until 2015. Id. at 167:25-168; Exhibit "A37" at p. 4-60.

50. WGS� plans to initiate closure of the existing landfill cells in the area nearest Makaiwa Hills' proposed residences prior to 2015. See Tr. 6/22/09, 168:1-8; 188:17-25, 189:1-14. In particular, cell E2 and portions of cells E1, E3, and several other MSW cells (labeled

Closure Sequence "A" in Exhibit "A12") are anticipated to be covered, capped, and closed by 2012. See Exhibit "A12"; Tr. 6/24/09, 91:7-92:1.

51. There is a ridgeline between Makaiwa Hills and WGSL. See Tr. 6/22/09, 191:12-18. The area of Makaiwa Hills nearest to WGSL's landfill cells in the proposed expansion area is identified as open space on the Makaiwa Hills property and will not be developed. Id. at 191:4-8; Exhibit "A1 1."

52. The current landfill access road proceeds up to the scalehouse, past the ash cells, veers due west to the west side of the Property, and travels up the western side of the Property and into the proposed expansion area. See Tr. 6/24/09, 89:5-16. This course takes the road away from the eastern boundary of the Property and away from Makaiwa Hills. Id.

53. Waste Management documents and responds to complaints received about the operations of WGSL. Id. at 100:9-101:3. Waste Management received and investigated six complaints in 2007, three complaints in 2008, and three complaints to date in 2009. Id. at 101:4-7.

54. Daniel Banchiu, general manager of JW Marriott, Ihilani ("Marriott"), testified for Intervenors at the July 2, 2009 hearing on the Application. See Tr. 7/2/09, 99:1-13. The Marriott operates a hotel at the Ko Olina resort. Id. at 99:21-24. He testified that he is aware of view and odor complaints from his guests but that the Marriott has not notified Waste Management about any complaints. Id. at 100:14-101:12; 110:1-10. He also testified that guests complained of views of a smokestack in the distance. On cross-examination, however, he admitted that he has never been to the landfill and that the smokestack could be located at some other facility--perhaps a facility with a smokestack. Id. at 106:1-25; 107:1-12. WGSL does not have a smokestack, but the Kahe Power Plant, which is adjacent to the Property, does. See Exhibit "A1" at p. 5-93.

d. **2009 FOF: STABILITY, CONTROLLED BLASTING AND BERMS**

55. Pursuant to federal and state regulations governing landfills, a seismic hazard evaluation was performed to determine seismic slope stability of the landfill. See Tr. 6/22/09 at 238:21-239:5. Consistent with accepted industry practice, the Project was analyzed for a design earthquake of magnitude 7.0, with an acceleration of 0.25 G. Id. at 240:1-9.

56. Under the Resource Conservation and Recovery Act ("RCRA"), Subtitle D, Seismic Design Guidance document, the acceptable displacement of landfills due to a seismic event is 12 inches. Id. at 248:25-249:13. The seismic deformation analysis of the design for the expanded landfill showed that seismic deformations were six inches or less, meeting the seismic stability criteria. Id. at 249:14-23.

57. The use of controlled blasting at the Property, which is very common in many landfill excavations, will not affect the stability of WGSL because the imparted energy of controlled blasting is so small and significantly less than 0.1 G. M. at 240:12-23; 250:3-16; 253:3-7. Monitoring probes installed by the Hawaiian Electric Company near the western Property boundary to measure vibrations from controlled blasting efforts at the currently permitted landfill did not detect any measurable readings. See Tr. 6/22/09, 252:1-15.

58. In order to alleviate community concerns about controlled blasting, a blast test program will be implemented at the Property, wherein distance, velocity, and frequencies transmitted by controlled blasting will be monitored. Id. at 251:7-16; 252:16-253:2. According to Dr. Hari Sharma, if the controlled blasting affects the landfill or any of the structures nearby, adjustments will be made. Id. at 251:7-16. There are no concerns regarding stability during the blast test program itself. Id. at 251:17-19.

59. A slope stability study was also prepared for the proposed Project. Id. at 244:2-4; 250:15-17. The proposed design meets the required factors of safety of 1.3 and 1.5 for short-term and long-term conditions, respectively. Id. at 245:18-246:11.

60. The impact of accumulated leachate on stability was also studied. According to Dr. Sharma and Richard Von Pein, even under extreme circumstances of leachate accumulation, using worst case scenarios that have never been experienced, the landfill would remain stable. See Tr. 6/24/09, 61:2-24; Tr. 7/1/09, 170:16-25, 171:1-15.

61. Whenever new cells are designed, a seismic deformation analysis and slope stability analysis must be performed to determine how the design impacts the existing cells. See Tr. 6/24/09, 9:19-23.

62. Berms are included in the design for several reasons, including for diversion of the surface water to make sure leachate is contained within the landfill and to create airspace while ensuring stability. See Tr. 6/22/09, 236:18-237:2; Tr. 6/24/09, 24:13-20; Tr. 7/1/09, 100:12-15.

63. A small Ash Toe Berm was a part of the original design for WGSL. See Tr. 7/1/09, 142:12-15; 142:21-143:3. The Ash Toe Berm was expanded in 2005 to address a small area where the factor of safety was less than 1.5: Id. at 142:17-20.

64. The El and West Berms were a part of the 2002 design for the 14.9-acre landfill expansion. Id. at 168:19-170:1; Exhibit "A32."

65. The West Berm will be extended further into the canyon under the proposed design for the expansion. See Tr. 6/22/09, 237:3-23; Tr. 6/24/09, 36:25-38:11.

e. **2009 FOF: STORM WATER AND LEACHATE**

66. Leachate is rain water that falls on open landfill cells. See Tr. 7/1/09, 14:11. The bottom of the individual landfill cell is contoured to direct leachate to a low point ("sump") and has a multi-layered composite liner system. Id. at 15:4-13; 101:2-25; 102:1-4; Exhibit "A1" at Figure 4-3. Within the sump is a permanent riser that contains a pump, which pumps the leachate in a hard pipe up to the surface, where it is then pumped into a tank for disposal at a wastewater treatment facility. Id. at 15:4-13, 17:12-15. The wastewater treatment facility accepts the leachate for treatment after determining it meets the requirements of the wastewater treatment facility's own permits and would not violate the Clean Water Act. Id. at 18:6-15; Tr. 6/22/09, 144:7-19, 147:2-5. Each of the leachate sumps is equipped with an automated pump that activates at a preset level below the compliance level. Id. at 105: 9-12. There is an alarm that lets Waste Management know if the pump is no longer functioning. Id. at 105:13-16. In addition, Waste Management physically monitors the sumps. Id. at 105:13-16; 16:23-17:2.

67. Drainage for the Property is intended to capture storm water and divert it around the landfill if it originates off site (surface run-on) or into the existing sedimentation basin if it originates onsite (surface run-off). Id. at 13:16-25; Tr. 6/22/09, 119:17-25. The sedimentation basin is designed to allow storm water to settle so that dissolved solids that come off the landfill can settle out in that basin. See Tr. 7/1/09, 77:21-24. The water is eventually discharged to the ocean subject to State of Hawaii Department of Health ("DOH") permitting requirements under the national pollution discharge elimination system ("NPDES"). Id. at 77:19-78:6. A third-party company takes samples to ensure compliance with certain discharge limits. Id. at 78:7-79:5. In addition, DOH inspects Waste Management's ditches and slopes. Id. at 78:7-15.

68. Leachate does not come into contact with storm water. Id. at 76:21-23. The storm water or surface water system is separate from the leachate collection system. Id. at 76:25-77: 8; 97:15-98:8.

69. Groundwater in the area of the Property is monitored for leachate contamination. Id. at 98:12-17.

f. **2009 FOF: GAS COLLECTION AND CONTROL SYSTEM
AND EPA NOTICE OF VIOLATION**

70. On April 4, 2006, the Environmental Protection Agency ("EPA") issued a Notice of Violation to WSGSL, which included the late installation of a landfill gas collection and control system (the "GCCS") and alleged violations of reporting requirements. Id. at 19:3-8; Appendix B, Volume II of III, of Exhibit "A1." Both issues were resolved by August 2005. Tr. 7/1/09, 19:3-8. There are currently 40 gas wells at the Property. Id. at 22:18-25.

71. The GCCS collects landfill gases that are formed from the decomposition of the waste material. The gas is burned off at the onsite flare pursuant to a DOH-issued air quality permit. Id. at 23:6-11.

72. In installing the GCCS, elevated temperatures above the EPA's standard operating temperature of 131° Fahrenheit were discovered at WWSL. See Tr. 7/1/09, 112:7-10; 113:25-114:2. Waste Management has submitted a demonstration to the EPA establishing that WWSL can be safely operated at higher than the standard operating temperatures. Id. at 112:11-15.

73. The EPA Notice of Violation is pending resolution of two outstanding issues that evolved from the Notice of Violation: the temperature issue and a monetary settlement. Id. at 106:2-13.

74. The EPA has not issued any notice of violation for the elevated temperatures at WWSL. See Tr. 6/24/09, 21:18-22:1. There is no evidence that there has ever been, or that there

is currently, a landfill fire at WGSF. See Tr. 7/1/09, 108:8-14. If there was combustion at WGSF, Waste Management would implement its contingency plan, including turning off the gas wells in the area of the fire, thereby depriving the combustion area of needed oxygen, which is standard procedure for handling landfill oxidation events. Id. at 107:8-25; 108:1-7.

g. 2009 FOF: TRAFFIC

75. A traffic impact report ("TIR") was prepared for the Project. See Tr. 6/22/09, 51:6-17; Appendix I of Exhibit "A1." The TIR analyzes the amount of existing traffic transiting Farrington Highway on both the eastbound and westbound approaches, as well as the volume of traffic entering and coming out of the Property. Id.

76. The TIR concluded that even with the expansion of the landfill, the volume of traffic would not be expected to increase dramatically. Traffic going in and out of the landfill is less than approximately one percent of the total volume of traffic in the region. See Tr. 6/22/09, 51:18-24.

h. 2009 FOF: ARCHAEOLOGICAL AND CULTURAL RESOURCES

77. An Archaeological Inventory Survey, Waimanalo Gulch Landfill Expansion, 2008 ("AIS") and a Cultural Impact Assessment (Draft), Waimanalo Gulch Landfill Expansion, 2008 ("CIA") were prepared for the Property. See Appendices G and H of Exhibit "A1," respectively.

78. One historic property, State Inventory of Historic Properties ("SIHP") # 50-80-12-6903, was identified by the study. See AIS (Appendix G of Exhibit "A1") at 45. SIHP# 50-80-12-6903 consists of three large upright boulders potentially utilized as trail or boundary markers. Id.

79. Applicant proposes to address SIHP# 50-80-12-6903 within a mitigation/preservation plan to be reviewed and accepted by the State Historic Preservation

Division, Department of Land and Natural Resources, State of Hawaii ("SHPD"). See Tr. 6/22/09, 49:21-50:5; Exhibit "A3." Specifically, Applicant has proposed to temporarily relocate the upright stones to Battery Arizona, and return the upright stones as close as possible to their current locations after the landfill has been closed. See Tr. 6/22/09 at 49:5-20; Exhibit "A3."

80. SHPD has reviewed Applicant's proposed mitigation and determined that there is no effect to historic properties, as stated in a letter from Nancy McMahon, Deputy State Historic Preservation Officer of SHPD, to David Tanoue, Director of DPP, dated April 2, 2009. See Tr. 6/22/09, 49-20-51:1; Exhibit "A4."

81. No native Hawaiian customary and traditional rights or practices at the Property were identified. See CIA (Appendix "H" of Exhibit "A1") at 79.

i. **2009 FOF: PURPOSE AND NEED**

82. According to Joseph Whelan, as of March 16, 2009, there was approximately 12 month of landfill airspace capacity remaining in the municipal solid waste ("MSW") portion of the current SUP area, and approximately 24 months of landfill airspace capacity remaining in the ash portion of the current SUP area. See Tr. 6/24/09, 81:22-82:6; 83:1-14.

83. On December 1, 2004, the City Council adopted Resolution No. 04-349, CD1, FD1, which selected the Property as the site for the City's landfill. See Exhibit "A20."

84. The proposed expansion of the landfill within the Property is needed because WGSF is a critical part of the City's overall integrated solid waste management efforts. See Tr. 7/1/09, 181:4-8.

85. Continued availability of WGSF is required as a permit condition to operate H-POWER and to engage in interim shipping of waste, for cleanup in the event of a natural

disaster, and because there is material that cannot be combusted, recycled, reused, or shipped. Id. at 181:9-18; 182:2-4, 10-17; 197:2-22.

86. Therefore, a landfill is currently necessary for proper solid waste management, the lack of which would potentially create serious health and safety issues for the residents of Oahu. See Application at 2-6.

87. WGS� is the only permitted public MSW facility on the island of Oahu and the only permitted repository for the ash produced by H-POWER. Id. at 181:20-183:4.

88. WGS� is a critical portion of the City's overall Integrated Solid Waste Management Plan ("ISWMP"), which looks at all of the factors that make up solid waste management, including reuse and recycling, the H-POWER facility, and landfilling for material that cannot be recycled or burned for energy. Id. at 178:10-18; 181: 7-18. The ISWMP is required by State law and approved by DOH after public comments. Id. at 182:18-183: 25. One theme of the ISWMP is to minimize landfill disposal. Id. at 184:1-3.

89. Currently, approximately 1.8 million tons of waste is produced on Oahu per year. This does not include material deposited at the PVT Landfill. Id. at 179:11-23. Approximately, 340,000 tons of MSW in 2006, and approximately 280,000 tons of MSW in 2008, were landfilled at WGS�. Id. at 179:16-17. These amounts fluctuate based on such things as recycling and the economy. Id. at 179:18-19. Approximately 170,000 to 180,000 tons of ash from the H-POWER facility is deposited at WGS� each year. Id. at 179:24-25; 180:1-4.

90. Other items that cannot be recycled or burned at H-POWER are deposited at WGS�, such as screenings and sludge from sewage treatment plants, animal carcasses, tank bottom sludge, contaminated food waste that cannot be recycled, and contaminated soil that is below certain toxicity levels. Id. at 180:10-21.

91. The WGS� Oversight Advisory Committee consists of citizens primarily from the leeward communities, who meet periodically to discuss concerns with Waste Management and the Applicant regarding WGS� operations. Id. at 184:9-18.

92. The Community Benefits Advisory Committee advises the City on the spending of money for grants and improvements throughout the Waianae Coast. In fiscal year 2008, there was approximately \$2 million appropriated in the City budget, and for fiscal year 2009, approximately \$2.5 million, for this program. Id. at 184:19-25, 185:1-7.

93. The City is actively reducing waste volume that is directed to the landfill. The H-POWER plant is expanding and its capacity is expected to increase by an additional 300,000 tons of MSW per year by late 2011 or early 2012. Id. at 185:8-25. The expanded H-POWER facility will be able to burn items that the current facility cannot and which are therefore currently being sent to the landfill. Id. at 186: 17-25, 187: 1-12. The City is in the process of completing the full implementation of its island-wide, curbside recycling program by May 2010. Id. at 186:7-13. The City has a program of community recycling bins to encourage schools to recycle cardboard, as well as plastic bottles and cans. M. at 187:13-18. The City is currently in the process of procuring a new green waste recycling facility that will accept food waste and sewage sludge. Id. at 188:22-25. The City has a facility at the Sand Island Wastewater Treatment Plant that turns bio-solids into fertilizer pellets, with the goal of reusing 100 percent of the material for such uses as golf course fertilizer. Id. at 189:5-18. The City is also requesting technology demonstration proposals to explore alternate technologies. Id. at 194:11-25. ENV has looked at these technologies, like plasma arc and gasification, and to date they are not ready in the size the City needs, and are only demonstration technologies. Id. at 192:8-25; 193:1-25; 194:1-10.

94. By 2012, when H-POWER's third boiler is expected to be operational, the City, through its various solid waste management programs, expects to divert eighty (80) percent of the waste stream, with the remaining twenty (20) percent being landfilled at WGSL. Id. at 201:9-16. Id. at 195: 4-8.

95. In order to ensure there will be no cessation of waste disposal at the Property, construction of a new cell in the expansion area to be used when the capacity of the currently permitted cells is exhausted would need to begin on or around November 1, 2009, due to the amount of time that it takes for cell construction, liner placement, forming, etc. See Tr. 6/24/09, 84:8-20. Before construction can begin, an operating permit is required from DOH. Because the DOH operating permit can only be processed after a SUP or boundary amendment is granted, and given the time it takes to process the operating permit, the SUP or boundary amendment must be granted in August or September of 2009 so that construction can be timely started. See Tr. 6/24/09, 99:11-23.

j. **2009 FOF: STATE AND COUNTY LAND USE LAW AND REGULATIONS**

96. The Project complies with the guidelines as established by the Planning Commission. See Tr. 6/22/09, 68:3-13; Application at 2-1 through 2-28.

97. The Project is consistent with various provisions of the Hawaii State Plan. See Tr. 6/22/09, 69:4-6; Application at 2-2 through 2-8.

98. The Project is consistent with the energy functional plan. GSL is a generator of naturally occurring methane and other landfill gases, and these gases are planned to be recovered by the City for use in the generation of electricity through a landfill gas-to-energy system. See Exhibit "A1" at p. 8-9; Tr. 6/22/09, 70:1-12.

99. The Project is consistent with the recreational functional plan. The Property will be reclaimed for other purposes that include outdoor recreation; for example, Kakaako Waterfront Park once served as a landfill in Honolulu. See Exhibit "A1" at p. 8-10; Tr. 6/22/09, 70:13-71:2.

100. The Project is consistent with the City's general plan. WGSL is an important public facility that will provide a necessary facility to meet future population needs and accommodate growth in the region; WGSL's eventual closure will allow the Property to be reclaimed for other public uses; and WGSL is needed in the event of a natural disaster. See Tr. 6/22/09, 71:8-25; 72:1-25; Exhibit "A1" at pp. 8-25 through 8-28.

101. The Project is consistent with the Ewa Development Plan because the facilities map contained therein designates the landfill with the appropriate symbol. See Tr. 6/22/09, 73:9-74:11; Exhibit "A1" at pp. 8-28 through 8-29.

102. The Project is consistent with City zoning because a landfill is considered a "public use" under the Land Use Ordinance, and "public uses and structures" are deemed permitted uses in every City zoning district, without the need for a permit. See Application at 2-28 through 2-29; Tr. 6/22/09, 75:5-22.

(2) 2009 DECISION AND ORDER

103. The Planning Commission APPROVED Applicant's Special Use Permit Application File No. 2008/SUP-2 ("2008/SUP-2"), for a new SUP for the existing and proposed expansion of WGSL, located at Tax Map Key Nos. 9-2-3: Parcels 72 and 73, totaling approximately 200.622 acres, until capacity as allowed by the State Department of Health is reached, subject to the following conditions:

1. On or before November 1, 2010, the Applicant shall begin to identify and develop one or more new landfill sites that shall either replace or supplement the WGSL. The

Applicant's effort to identify and develop such sites shall be performed with reasonable diligence, and the Honolulu City Council is encouraged to work cooperatively with the Applicant's effort to select a new landfill site on Oahu. Upon the selection of a new landfill site or sites on Oahu, the Applicant shall provide written notice to the Planning Commission. After receipt of such written notice, the Planning Commission shall hold a public hearing to reevaluate 2008/SUP-2 and shall determine whether modification or revocation of 2008/SUP-2 is appropriate at that time.

2. The Applicant shall continue its efforts to use alternative technologies to provide a comprehensive waste stream management program that includes H-POWER, plasma arc, plasma gasification and recycling technologies, as appropriate. The Applicant shall also continue its efforts to seek beneficial reuse of stabilized, dewatered sewage sludge.
3. The Applicant shall provide, without any prior notice, annual reports to the Planning Commission regarding the status of identifying and developing new landfill sites on Oahu, the WGSF's operations, and Applicant's compliance with the conditions imposed herein. The annual reports also shall address the Applicant's efforts to use alternative technologies, as appropriate, and to seek beneficial re-use of stabilized, dewatered sewage sludge. The annual reports shall be submitted to the Planning Commission on June 1 of each year subsequent to the date of this Decision and Order.
4. Closure Sequence "A" for the existing landfill cells at WGSF as shown on Exhibit "A12" must be completed, and final cover applied, by December 31, 2012.
5. WGSF shall be operational only between the hours of 7:00 a.m. and 4:30 p.m. daily, except that ash and residue may be accepted at the Property 24-hours a day.
6. The Applicant shall coordinate construction of the landfill cells in the expansion area and operation of WGSF with Hawaiian Electric Company, with respect to required separation of landfill grade at all times and any accessory uses from overhead electrical power lines.
7. The operations of the WGSF under 2008/SUP-2 shall be in compliance with the requirements of Section 21-5.680 of the Revised Ordinances of the City and County of Honolulu 1990, to the extent applicable, and any and all applicable rules and regulations of the State Department of Health.
8. The Planning Commission may at any time impose additional conditions when it becomes apparent that a modification is necessary and appropriate.
9. Enforcement of the conditions to the Planning Commission's approval of 2008/SUP-2 shall be pursuant to the Rules of the Planning Commission, including the issuance of an order to show cause why 2008/SUP-2 should not be revoked if this Commission has reason to believe that there has been a failure to perform the conditions imposed herein by this Decision and Order.

10. The Applicant shall notify the Planning Commission of termination of the use of the Property as a landfill for appropriate action or disposition of 2008/SUP-2.

104. The Planning Commission also APPROVED the withdrawal of Special Use Permit File No. 86/SUP-5 upon 2008/SUP-2 taking effect and that all conditions previously placed on the Property under Special Use Permit File No. 86/SUP-5 shall be null and void. See the 2009 Planning Commission Decision.

C. THE LUC'S 2009 DECISION

105. The Planning Commission transferred the record and its 2009 Planning Commission Decision in the 2008 Application proceeding to the LUC.

106. The LUC considered the Planning Commission's 2009 Findings of Fact, Conclusions of Law, and Decision and Order, the oral arguments of the parties and record and files in the matter relating to the 2008 Application. On October 22, 2009, the LUC issued its written Order Adopting the City and County of Honolulu Planning Commission's Findings of Fact, Conclusions of Law, and Decision and Order as its own Findings of Fact, Conclusions of Law, and Decision and Order, subject to an additional six conditions ("2009 LUC Decision"). On October 22, 2009, the LUC filed its decision and imposed the following additional conditions:

14. Municipal solid waste shall be allowed at the WGSL up to July 31, 2012, provided that only ash and residue from H-POWER shall be allowed at the WGSL after July 31, 2012.

15. The Honolulu City Council through the City Administration shall report to the public every three months on the efforts of the City Council and the City Administration in regard to the continued use of the WGSL, including any funding arrangements that are being considered by the City Council and the City Administration.

16. The City Council and the City Administration shall have a public hearing every three months to report on the status of their efforts to either reduce or continue the use of the WGSL.

See the LUC's 2009 Decision.

D. THE PARTIES APPEALED THE LUC'S 2009 DECISION

107. ENV and Intervenors appealed the LUC's 2009 Decision.

108. On November 19, 2009, ENV filed a notice of appeal to the Circuit Court of the First Circuit, State of Hawai'i, challenging the LUC's Conditions 14, 15, and 16.

109. ENV did not challenge any conditions imposed by the Planning Commission. On November 19, 2009, Intervenors filed a notice of appeal challenging the LUC's Decision to permit the expansion of the Landfill and its continued operation.

110. On July 14, 2010, the circuit court held a hearing.

111. On September 21, 2010, the circuit court entered an order affirming the LUC's 2009 decision with modifications. The circuit court affirmed Condition 14. With respect to Conditions 15 and 16, the circuit court deleted the references to the Honolulu City Council and the City Administration and substituted ENV as the responsible body. The circuit court affirmed the LUC's decision in all other respects.

112. On October 19, 2010, the circuit court entered final judgment in both appeals.

113. On November 12, 2010, ENV filed its notice of appeal with the State of Hawai'i Intermediate Court of Appeals (the "ICA"). On appeal, ENV only challenged condition 14.

114. Intervenors did not appeal the circuit court ruling.

115. On July 14, 2011, ENV filed an application to transfer the case to the Hawai'i Supreme Court.

116. On August 1, 2011, the Hawai'i Supreme Court granted the application to transfer.

E. 2011 APPLICATION

117. On June 28, 2011, Applicant filed an Application to Modify the Special Use Permit No. 2008/SUP-2 by Modifying the Land Use Commission's Order Adopting the City and County of Honolulu Planning Commission's Findings of Fact, Conclusions of Law, and Decision and Order with Modifications dated October 22, 2009 ("2011 Application"), with DPP pursuant to RPC Sections 2-18 and 2-49, and the Rules of the State of Hawaii, Land Use Commission, Section 15-15-70. See 2011 Application. The 2011 Application specifically seeks the deletion of Condition No. 14 from the 2009 LUC Order. Condition No. 14 of the 2009 LUC Order provided that "Municipal solid waste shall be allowed at the WGSF up to July 31, 2012, provided that only ash and residue from H-POWER shall be allowed at the WGSF after July 31, 2012." Id. ENV sought to amend SUP Permit No. 2008/SUP-2 because there was no assurance that the Supreme Court would render a decision on the appeal of the 2009 LUC Order prior to the July 2012 deadline and it needed to ensure the continued operation of the landfill.

118. On September 4, 2011, a notice of the Planning Commission's public hearing to consider ENV's 2011 Application set for October 5, 2011, was published in the Honolulu Star-Bulletin.

119. On September 9, 2011, DPP transmitted its report to the Planning Commission, recommending approval of the 2011 Application. See 2011 DPP Recommendation.

120. On September 16, 2011, Ko Olina Community Association and Maile Shimabukuro (collectively, "Intervenor KOCA") filed a Motion to Recognize Ko Olina Community Association and Maile Shimabukuro as parties. On September 23, 2011, Applicant filed a Memorandum in Opposition to Intervenor's Motion to Recognize Ko Olina Community Association and Maile Shimabukuro as Parties. On September 30, 2011, Intervenor filed a

Reply Memorandum to Applicant's Memorandum in Opposition to Intervenor's Motion to Recognize Ko Olina Community Association and Maile Shimabukuro as parties.

121. On September 16, 2011, Schnitzer Steel Hawaii Corp. ("Intervenor Schnitzer") filed a Petition to Intervene.

122. At the public hearing on October 5, 2011, at the Mission Memorial Auditorium, 550 South King Street, Honolulu, Hawaii, the Planning Commission heard public testimony. The Planning Commission heard and granted Intervenor Schnitzer's Petition to Intervene. The Planning Commission heard and denied Intervenor KOCA's Motion to Recognize Ko Olina Community Association and Maile Shimabukuro as Parties but granted Intervenor KOCA's Motion to Intervene as joint intervenors. See Tr. 10/5/11, 35:5-23, 42:9-43:3. Thereafter, the Planning Commission closed the public hearing on the application.

123. On October 26, 2011, Applicant filed its List of Witnesses, consisting of five potential witnesses. Intervenor KOCA filed its List of Witnesses, consisting of 31 potential witnesses. Intervenor Schnitzer filed its List of Witnesses, consisting of one potential witness.

124. On November 7, 2011, Intervenor KOCA filed a Motion to Dismiss.

125. On November 9, 2011, the Planning Commission filed its Order Regarding Prehearing Conference.

126. On November 14, 2011, Applicant filed its Memorandum in Opposition to Intervenor KOCA's Motion to Dismiss. Intervenor Schnitzer also filed its Memorandum in Opposition to Intervenor KOCA's Motion to Dismiss.

127. On November 29, 2011, the parties filed their Stipulation to Amend Briefing Schedule as Provided in the Planning Commission of the City and County of Honolulu's Order Regarding Prehearing Conference Dated November 9, 2011.

128. On December 7, 2011, the Planning Commission conducted a hearing at the Mission Memorial Hearings Room, Mission Memorial Building, 550 South King Street, Honolulu, Hawaii, on Intervenor KOCA's Motion to Dismiss. The Planning Commission heard and denied Intervenor KOCA's Motion to Dismiss. Thereafter, the Planning Commission commenced the contested case hearing on the 2011 Application and the parties presented their opening statements. On December 13, 2011, the parties filed written direct testimony.

129. On January 11, 2012, the Planning Commission resumed the contested case hearing on the Application at the Mission Memorial Hearings Room, Mission Memorial Building, 550 South King Street, Honolulu, Hawaii. The Applicant began its case-in-chief and presented its first witness: Timothy Steinberger, Director of the Department of Environmental Services. See Tr. 01/11/12, 11:10-11. Intervenor KOCA offered, and the Planning Commission received into the record, Exhibits "K1" to "K162." Id. at 15:12-14; 17:22-23; 96:2-13. Intervenor Schnitzer moved to admit the court reporter's transcript of the October 5, 2011 public hearing so as to allow the public testimony to be made a part of the record. Id. at 15:18-22. The Planning Commission granted Intervenor Schnitzer's request. Id. at 15:23.

130. On January 25, 2012, the Planning Commission resumed the contested case hearing on the Application at the Mission Memorial Hearings Room, Mission Memorial Building, 550 South King Street, Honolulu, Hawaii. Applicant offered, and the Planning Commission received into the record, Exhibits "A1 to A33." Tr. 1/25/12, 6:13-20. The Applicant presented its second and final witness in its case-in-chief, Steven Y.K. Chang, Branch Chief, State of Hawaii, Department of Health ("DOH"), Solid and Hazardous Waste Branch. Id. at 6:21. Applicant offered no further witnesses and concluded its case-in-chief, but reserved the right to call rebuttal witnesses. Intervenor Schnitzer presented its first and only witness, Larry

Snodgrass, and concluded its case-in-chief. Id. at 72:4-5, 86:20. Intervenor KOCA offered, and the Planning Commission received into the record, Exhibit “K163.” Id. at 6:10-12. Intervenor KOCA offered, and the Planning Commission received into the record, Exhibits “K164” through “K169.” Id. at 38:14-19, 61:8-13; 55:11-15; 85:22–86:3.

131. On February 8, 2012, the Planning Commission resumed the contested case hearing on the 2011 Application at the Mission Memorial Hearings Room, Mission Memorial Building, 550 South King Street, Honolulu, Hawaii. Intervenor KOCA began its case-in-chief and presented the following four witnesses: Ken Williams; Beverly Munson; Cynthia Rezentes; and Paul Duke Hospodar. Tr. 02/08/12, 14:4-5, 56:13-14, 72:18-19, 82:15-16. ENV offered, and the Planning Commission received into the record, Exhibits “A34” and “A35.” Id. at 29:25-30:2, 56:6-8.

132. On March 7, 2012, the Planning Commission resumed the contested case hearing on the 2011 Application at the Mission Memorial Hearings Room, Mission Memorial Building, 550 South King Street, Honolulu, Hawaii. Intervenor KOCA presented its fifth and sixth witnesses: Shad Kane and Dwight Miller. The Planning Commission accepted Mr. Miller as an expert in solid waste management. Tr. 03/07/12, 5:20-21, 17:22-23, 19:19-25. Intervenor KOCA offered, and the Planning Commission received into the record, Exhibits “K170,” “K171,” “K173” to “K176,” “K178” and “K179.” Id. at 122:19-23; 152:20–153:4, 153:13, 155:4-5.

133. On April 4, 2012, the Planning Commission resumed the contested case hearing on the 2011 Application at the Mission Memorial Hearings Room, Mission Memorial Building, 550 South King Street, Honolulu, Hawaii. The parties agreed to take the remaining witnesses out of order due to scheduling difficulties. Intervenor Schnitzer first presented Tom Zelenka as a

rebuttal witness. Tr. 04/04/12, 7:19-20. Applicant then presented Janice Marsters as its first rebuttal witness. Id. at 30:4-5. Applicant offered, and the Planning Commission received into the record, Exhibit “A36.” Id. at 33:4-16. Intervenor KOCA presented its seventh and eighth witnesses: Maile Shimabukuro and Maeda Timson. Intervenor KOCA then rested its case. Id. at 123:18-19, 133:5-6. Applicant presented its second rebuttal witness, Gary Gill, Deputy Director, State of Hawaii, Department of Health, Environmental Management Division. Id. at 143:17. Intervenor KOCA offered, and the Planning Commission received into the record, Exhibits “K191,” “K194,” “K208,” “K215,” “K217,” “K218,” “K222,” “K223,” “K226,” and “K227.” Id. at 15:8-22, 18:24–19:3, 19:5-18, 24:4-16, 83:14-19, 101:15-19, 122:20-24, 143:4-10, 168:22–169:11.

134. On April 11, 2012, the Planning Commission resumed the contested case hearing on the Application at the Mission Memorial Hearings Room, Mission Memorial Building, 550 South King Street, Honolulu, Hawaii. Applicant presented its third and fourth rebuttal witnesses: Hari Sharma, who was qualified as an expert in landfill design and permitting, and Timothy Steinberger. See Tr. 04/11/12, 6:14-15, 69:4-5. Applicant offered, and the Planning Commission received into the record, Exhibits “A37” to “A50.” Id. at 13:1-9, 15:21-25, 16:1, 25:1-7, 36:10–37:20, 43:25–44:2, 105:11-15, and 138:1-5. Intervenor KOCA offered, and the Planning Commission received into the record, Exhibits “K189,” “K190,” “K193,” “K195,” “K196,” “K198,” “K230,” “K247,” and “K251.” Id. at 188:25–189:5. Applicant rested its case. Id. at 212:17-22.

135. On April 23, 2012, the Planning Commission resumed the contested case hearing on the Application at the Mission Memorial Hearings Room, Mission Memorial Building, 550 South King Street, Honolulu, Hawaii. Intervenor KOCA presented two rebuttal witnesses:

Dwight Miller and Eddie Belluomini. Intervenor KOCA then rested its case. See Tr. 04/23/12, 7:7-11, 36:6-10, 48:24. Intervenor KOCA offered, and the Planning Commission received into the record, Exhibits “K255,” “K257,” “K192,” “K220,” “K256,” and “K258.” Id. at 12:13-17, 15:16-21, 47:18-25, 48:1-23. The parties presented their closing arguments.

136. The Planning Commission scheduled decision-making for the 2011 Application on May 25, 2012, at the Mission Memorial Hearings Room, Mission Memorial Building, 550 South King Street, Honolulu, Hawaii. On April 24, 2012, Intervenor KOCA filed its Eighth Amended Exhibit List.

137. On April 27, 2012, Intervenor KOCA filed an Ex Parte Motion to Reopen the Contested Case Hearing to Admit Limited Additional Documentary Evidence After the Hearing Closed (“Motion to Reopen the Contested Case Hearing”). Intervenor KOCA sought to admit Exhibits “K259” and “K260” into the record.

138. On May 1, 2012, Applicant filed a Memorandum in Opposition to Intervenor KOCA’s Motion to Reopen the Contested Case Hearing.

139. On May 2, 2012, ENV, Intervenor Schnitzer and KOCA filed their respective proposed findings of fact, conclusions, of law, and decisions and orders (“proposed findings”).

140. On May 14, 2012, ENV filed a response, and Intervenor Schnitzer filed exceptions to Intervenor KOCA’s proposed findings. Intervenor KOCA also filed responses to ENV’s and Schnitzer’s proposed findings.

141. ENV offered, and the Planning Commission received into the record of the 2011 Application proceeding, Exhibits “A1” to “A42,” without objection, “A43” to “A46,” over objection of the Intervenor, and “A47” to “A50,” without objection.

142. Intervenor Schnitzer offered, and the Planning Commission received into the record, Exhibits “S1” to “S4.” Intervenor Schnitzer also requested to admit the court reporter’s transcript of the October 5, 2011 public hearing so that the public testimony would be made a part of the record. See Tr. 01/11/12, 15:18-22. The Planning Commission granted Intervenor Schnitzer’s request. Id. at 15:23.

143. Intervenor KOCA offered, and the Planning Commission received into the record, Exhibits “K1” to “K169,” over objection, “K170,” “K171,” “K173” to “K176,” “K178,” “K179,” “K189” to “K196,” “K198,” “K208,” “K215,” “K217,” “K218,” “K220,” “K222,” “K223,” “K226,” “K227,” “K230,” “K247,” “K251,” “K255” to “K258,” without objection.

**F. HAWAII SUPREME COURT DECISION AND LUC REMAND OF
THE 2008 APPLICATION TO THE PLANNING COMMISSION
FOR CONSOLIDATION WITH THE 2011 APPLICATION**

144. On May 4, 2012, the Hawaii Supreme Court ruled in favor of ENV and struck Condition No. 14. The Supreme Court ruled that the MSW deadline imposed by the LUC is inconsistent with the evidence in the record and not supported by substantial evidence. The Supreme Court also determined that because Condition No. 14 appeared to be material to the LUC’s approval of the SUP, the approval could not stand without further consideration. Accordingly, the Supreme Court remanded the matter to the LUC for further hearings as the LUC deems appropriate to determine whether the LUC would have reached the same conclusion without the imposition of Condition No. 14. *Dep’t of Env’tl. Servs. v. Land Use Comm’n*, 127 Haw. 5, 17-19 (2012).

145. By Order adopted October 8, 2012, the LUC remanded the 2008 Application to the Planning Commission for the expressed purpose of consolidating it with the proceeding on the 2011 Application, so that the Planning Commission may issue and transmit a single,

consolidated Findings of Fact, Conclusions of Law, and Decision and Order on the Matter to the LUC. See Order Remanding County Special Use Permit File No. 2008/SUP-2 to the City and County of Honolulu Planning Commission, dated October 8, 2012.

G. CONSOLIDATION OF PROCEEDINGS AND OTHER PROCEDURAL MATTERS

146. On January 15, 2013, Intervenor KOCA filed a Motion to Effect the Consolidation of the Separate Proceedings in 2008 SUP-2 as Ordered by the State Land Use Commission on October 8, 2012.

147. On January 23, 2013, ENV filed its Memorandum in Opposition to Intervenor Ko Olina Community Association and Maile Shimabukuro's Motion to Effect the Consolidation of the Separate Proceedings in 2008 SUP-2 as Ordered by the State Land Use Commission.

148. On February 19, 2013, the Planning Commission approved the stipulation and order to continue the hearing on the LUC's October 8, 2012, Order Remanding County Special Use Permit File No. 2008/SUP-2 to the City and County of Honolulu Planning Commission and Intervenor Ko Olina Community Association and Maile Shimabukuro's Motion to Effect the Consolidation of the Separate Proceedings in 2008 SUP-2, as Ordered by the State Land Use Commission on October 8, 2012. A hearing on the two above-described matters was scheduled for February 20, 2013, but continued to April 17, 2013. See Stipulation and Order to Continue the February 20, 2013 Hearing to April 17, 2013.

149. No further action was taken by the Planning Commission until August 17, 2016. On that date, the Planning Commission convened a hearing at the Mission Memorial Hearings Room, Mission Memorial Building, 550 South King Street, Honolulu, Hawaii, and considered Intervenor Ko Olina Community Association and Maile Shimabukuro's Motion to Effect the Consolidation of the Separate Proceedings in 2008/SUP-2, as Ordered by the State Land Use

Commission on October 8, 2012, and the Department of Environmental Services, City and County of Honolulu's Motion to Stay Proceedings to April 22, 2017. The Planning Commission ordered the consolidation of County Special Use Permit File No. 2008/SUP-2 and the proceedings on ENV's 2011 Application so that it may issue and transmit a single, consolidated Findings of Fact, Conclusions of Law, and Decision and Order to the LUC, and denied the City's Motion to Stay.

150. On September 30, 2016, ENV filed a Motion to Reopen the Contested Case Hearing for the Limited Purpose of Taking Official Notice of Facts. ENV sought to have the Planning Commission take official notice of the Sixth Annual Report of the Status of Actions Taken to Comply With the State Land Use Commission's Order Dated October 2, 2009 and Status of Operations of the Waimanalo Gulch Sanitary Landfill, which was submitted to the Planning Commission in compliance with Condition No. 6 of the 2009 LUC Order.

151. On October 5, 2016, ENV filed a Motion for Extension of Time to April 21, 2017, so that the parties may have adequate time to discuss a proposed deadline for the acceptance of MSW and draft a joint proposed findings of fact, conclusions of law, and decision and order. On October 6, 2016, Intervenor Schnitzer joined in the Motion for Extension of Time. On the same date, Intervenor KOCA joined in the request, subject to certain clarifications.

152. On October 7, 2016, Intervenor Colleen Hanabusa ("Intervenor Hanabusa") filed Intervenor Colleen Hanabusa's Statement Re: (1) Submission of Proposed Findings of Fact and Conclusions of Law and Decision and Order; (2) Various Parties' Submissions of Requests for Extensions of Time to Submit Proposed Findings of Fact, Conclusions of Law, and Decision and Order; (3) Department of Environmental Services, City and County of Honolulu's Motion to

Reopen the Contested Case Hearing for the Limited Purpose of Taking Official Notice of Facts, Filed on September 30, 2016.

153. On October 12, 2016, the Planning Commission heard ENV's Motion for Extension of Time, Intervenor KOCA's Motion to Reopen the Contested Case Hearing, and ENV's Motion to Reopen the Contested Case Hearing. During the hearing, ENV amended its request for an extension of time by requesting a shorter 90-day extension, which was granted. The Planning Commission denied the motions to reopen the contested case hearing.

154. On January 27, 2017, ENV filed the Department of Environmental Services, City and County of Honolulu's Proposed Findings of Fact, Conclusions of Law, and Decision and Order.

155. On January 27, 2017, Intervenor KOCA filed Intervenor Ko Olina Community Association and Maile Shimabukuro's Proposed Findings of Fact, Conclusions of Law, and Decision and Order, Findings of Fact, Conclusions of Law, and Decision and Order, and Exhibits 1 and 2.

156. On January 27, 2017, Intervenor Schnitzer filed Intervenor Schnitzer Steel Hawaii Corp.'s Proposed Findings of Fact, Conclusions of Law and Decision and Order.

157. On February 10, 2017, ENV filed the Department of Environmental Services, City and County of Honolulu's Response to Intervenor Ko Olina Community Association and Maile Shimabukuro's Proposed Findings of Fact, Conclusions of Law, and Decision and Order.

158. On February 10, 2017, Intervenor KOCA filed Intervenor Ko Olina Community Association and Maile Shimabukuro's Response to Intervenor Schnitzer Steel Hawaii Corp.'s January 27, 2017 Proposed Findings of Fact, Conclusions of Law, and Decision and Order, and Exhibits 1 – 2.

159. On February 10, 2017, Intervenor KOCA filed Intervenor Ko Olina Community Association and Maile Shimabukuro's Response to Department of Environmental Service [sic], City and County of Honolulu's January 27, 2017 Proposed Findings of Fact, Conclusions of Law, and Decision and Order, and Exhibits 1 – 2.

160. On February 10, 2017, Intervenor Hanabusa filed Intervenor Colleen Hanabusa's: (1) Renewal of Submission of Proposed Findings of Fact and Conclusions [sic] of Law, and (2) Objections and Rebuttals, Declaration of Counsel, and Exhibits "1" – "2".

161. On February 17, 2017, ENV filed the Department of Environmental Services, City and County of Honolulu's Motion to Strike Intervenor Colleen Hanabusa's (1) Renewal of Submission of Proposed Findings of Fact and Conclusions of Law, Memorandum in Support of Motion to Strike, Declaration of Kamilla C. K. Chan, and Exhibits "1" – "2".

162. On February 23, 2017, Intervenor Hanabusa filed Intervenor Colleen Hanabusa's Memorandum in Opposition to Department of Environmental Services, City and County of Honolulu's Motion to Strike Intervenor Colleen Hanabusa's (1) Renewal of Submission of Proposed Findings of Fact and Conclusions of Law, Filed on February 17, 2017.

163. The Planning Commission convened a hearing on March 1, 2017 and considered ENV's Motion to Strike Intervenor Hanabusa's Renewal of Submission of Proposed Findings of Fact and Conclusions of Law. The Planning Commission granted ENV's motion to strike.

164. Also on March 1, 2017, the Planning Commission considered the adoption of Findings of Fact, Conclusions of Law, and Decision and Order. During the hearing, Planning Commission Chair Dean I. Hazama and members Ken K. Hayashida, Wilfred A. Chang, Daniel S. M. Young, and Cord D. Anderson, each confirmed that they reviewed all evidence and the entire record from the 2008 and 2011 proceedings. The Planning Commission adopted ENV's

Proposed Findings of Fact, except findings of fact before 2011, and ENV's Conclusions of Law, and modified the LUC's order dated October 22, 2009 by deleting Condition No. 14 and adding several conditions. The Planning Commission set forth this approval in its Findings of Fact, Conclusions of Law, and Decision and Order, dated April 28, 2017 ("2017 Planning Commission Decision").

165. In its 2017 Planning Commission Decision, the Planning Commission added the following conditions:

- The Applicant shall provide semi-annual reports to the Planning Commission and LUC regarding (a) the status of the efforts to identify and develop a new landfill site on Oahu, (b) the WGSF's operations, including gas monitoring, (c) ENV's compliance with the conditions imposed herein, (d) the landfill's compliance with its Solid and Hazardous Waste Permit and all applicable federal and state statutes, rules and regulations, including any notice of violation and enforcement actions regarding the landfill, (e) the City's efforts to use alternative technologies, (f) the extent to which waste is being diverted from the landfill and (g) any funding arrangements that are being considered by the Honolulu City Council or the City Administration for activities that would further divert waste from the landfill.
- Public health and safety conditions: If the landfill releases waste or leachate, the ENV must immediately (a) notify the surrounding community, including the Makakilo/Kapolei/Honokai Hale, Waianae Coast and Nanakuli-Maili Neighborhood Boards, Intervenor Schnitzer Steel Hawaii Corp., Ko Olina Community Association, Maile Shimabukuro and Colleen Hanabusa and (b) take remedial actions to clean up the waste and to keep the waste from spreading. Such remedial actions shall include, but shall not be limited to, placing debris barriers and booms at the landfill's shoreline outfall to prevent waste from spreading into the ocean.
- The Applicant shall identify an alternative site by December 31, 2022, that will be used upon Waimanalo Gulch Sanitary Landfill reaching its capacity.
- The foregoing additional conditions shall supersede any inconsistent conditions in the 2009 LUC Order and shall otherwise supplement any and all existing conditions in the said 2009 LUC Order.

166. On May 1, 2017, the LUC received Planning Commission File No. 2008/SUP-2 Findings of Fact, Conclusions of Law and Decision and Order dated May 1, 2017.

167. On May 3, 2017, the LUC received the Consolidated Record from the Planning Commission, an index of the record and original and copies of the 2008 proceedings.

168. On May 12, 2017, the LUC received Intervenor Ko Olina Community Association and Maile Shimabukuro's Motion to Deny and Remand, Declaration of Christopher [sic] T. Goodin, and Exhibits A through D, and Intervenor Ko Olina Community Association and Maile Shimabukuro's Alternate Motion to Deny the Applications Unless Additional Conditions are Imposed, Declaration of Christopher T. Goodin, and Exhibits 1 through 5.

169. On May 19, 2017, the LUC received the Department of Environmental Services, City and County of Honolulu's Response to Intervenor Ko Olina Community Association and Maile Shimabukuro's Motion to Deny and Remand, Declaration of Dana Viola, and Exhibit 1 and the Department of Environmental Services, City and County of Honolulu's Memorandum in Opposition to Intervenor Ko Olina Community Association and Maile Shimabukuro's Alternate Motion to Deny the Application Unless Additional Conditions are Imposed, Declaration of Kamilla C. K. Chan, and Exhibit 1.

170. On May 22, 2017, the LUC received the State Office of Planning's public testimony statement recommending approval of ENV's special permit application.

171. On May 22, 2017, the LUC received Intervenor Colleen Hanabusa's Joinder to Intervenor Ko Olina Community Association and Maile Shimabukuro's Motion to Deny and Remand.

172. On May 22, 2017, the LUC received ENV's Amended Certificates of Service to: Department of Environmental Services, City and County of Honolulu's Response to Intervenor KOCA's Motion to Deny and Remand, and Department of Environmental Services, City and

County of Honolulu's Memorandum in Opposition to Intervenor KOCA's Alternate Motion to Deny the Application Unless Additional Conditions are Imposed.

173. On May 23, 2017, the LUC received correspondence from Intervenor KOCA and Shimabukuro regarding a Request to Settle the Proposed Form of Order Granting in Part Intervenor's Motion to Deny and Remand, and correspondence from Intervenor Schnitzer regarding its Statement of Position on Intervenor KOCA and Shimabukuro's Motion to Deny and Remand.

174. On May 24, 2017, the LUC considered Intervenor KOCA's Motion to Deny and Remand. The LUC ordered that the motion be granted in part and denied in part. Pursuant to HAR §15-15-96(a), the record in the 2008 Application and 2011 Application were remanded to the Planning Commission for further proceedings to:

- Clarify whether the Planning Commission followed Section 2-75 of the Rules of the Planning Commission in issuing its Findings of Fact, Conclusions of Law, and Decision and Order.
- Clarify the basis of the Planning Commission's proposed additional Condition No. 3, which specifies a December 31, 2022, date within which the Applicant is to identify an alternative site that will be used upon the WGSF reaching its capacity and the implications it has on the closure date of the WGSF to use and the subsequent commencement of operations at the alternative landfill site.
- Clarify whether the record needs to include updated information on the operation of the WGSF, the landfill site selection process, and the waste diversion efforts of the City and County of Honolulu.
- Assuming the Planning Commission eventually recommends approval of the matter, clarify the effective date of the Planning Commission's Findings of Fact, Conclusions of Law, and Decision and Order.
- Clarify whether the Planning Commission is ruling on both the 2008 Application and the 2011 Application in its Findings of Fact, Conclusions of Law, and Decision and Order.

175. On June 20, 2017, Intervenor KOCA filed with the Planning Commission Intervenor Ko Olina Community Association and Maile Shimabukuro's Motion for Recusal or Disqualification of Chair Dean Hazama, Memorandum in Support of Motion, Declaration of Christopher T. Goodin, and Exhibits A – E.

176. On June 26, 2017, ENV filed Department of Environmental Services, City and County of Honolulu's Response to Intervenor Ko Olina Community Association and Maile Shimabukuro's Motion for Recusal or Disqualification of Chair Dean Hazama.

177. On June 26, 2017, Intervenor Hanabusa filed Intervenor Colleen Hanabusa's Renewal of Objections to Chair Dean Hazama's Participation and Votes in the Instant Case and Joinder to Intervenor Ko Olina Community Association and Maile Shimabukuro's Motion for Recusal or Disqualification of Chair Dean Hazama, Filed on June 20, 2017.

178. On August 16, 2017, the Planning Commission heard Intervenor KOCA's Motion for Recusal or Disqualification of Chair Dean Hazama and Intervenor Hanabusa's Renewal of Objections and Joinder to Intervenor KOCA's Motion for Recusal or Disqualification of Chair Dean Hazama. At the hearing, Chair Hazama explained that he shared his inclinations about this matter after reviewing all evidence in this proceeding and stated that he could remain open and impartial. Accordingly, Chair Hazama declined to recuse himself.

179. On December 6, 2017, the Planning Commission adopted the proposed Findings of Fact, Conclusions of Law, and Decision and Order ("2017 Proposed Decision") and set February 5, 2018 as the deadline for the parties to file written objections and comments. The Planning Commission scheduled the next hearing for March 7, 2018. See Tr. 12/6/17, 10:11–11:11.

180. Also on December 6, 2017, the Planning Commission served on the parties its proposed Findings of Fact, Conclusions of Law, and Decision and Order dated December 6, 2017.

181. On February 5, 2018, ENV filed the Department of Environmental Services, City and County of Honolulu's Exceptions to Honolulu Planning Commission's Proposed Findings of Fact, Conclusions of Law, and Decision and Order Dated December 6, 2017.

182. On February 5, 2018, Intervenor Schnitzer filed Intervenor Schnitzer Steel Hawaii Corp.'s Exceptions to the Planning Commission's Proposed Findings of Fact, Conclusions of Law and Decision and Order, and Exhibit 1.

183. On February 5, 2018, Intervenor KOCA filed Intervenor Ko Olina Community Association and Maile Shimabukuro's Exceptions to Planning Commission's December 6, 2017 Proposed [sic] Findings of Fact, Conclusions of Law, and Decision and Order, Declaration of Christopher T. Goodin, and Exhibits 1-5.

184. On February 5, 2018, Intervenor Hanabusa filed Intervenor Colleen Hanabusa's Objections and Exceptions to Findings of Fact, Conclusions of Law, and Decision and Order, Dated December 6, 2017.

185. On February 13, 2018, Intervenor KOCA filed with the Planning Commission Intervenor Ko Olina Community Association and Maile Shimabukuro's Motion to Strike Schnitzer's February 2018 Proposed Findings, Memorandum in Support of Motion, Declaration of Christopher T. Goodin, and Exhibits 1-4.

186. On February 14, 2018, Intervenor Schnitzer filed Intervenor Schnitzer Steel Hawaii Corp.'s Memorandum in Opposition to Ko Olina Community Association and Maile Shimabukuro's Motion to Strike Schnitzer's February 2018 Proposed Findings.

187. On February 16, 2018, Intervenor KOCA filed Intervenor Ko Olina Community Association and Maile Shimabukuro's Response to Schnitzer Steel Hawaii Corp.'s February 5, 2018 Proposed Findings of Fact, Conclusions of Law and Decision and Order.

188. The Planning Commission convened a hearing on March 7, 2018 and considered Intervenor KOCA's Motion to Strike Schnitzer's February 2018 Proposed Findings. The motion to strike was granted.

189. Also on March 7, 2018, the Planning Commission considered Intervenor KOCA's Motion to Reopen the Contested Case Hearing and the adoption of Findings of Fact, Conclusions of Law, and Decision and Order. After hearing oral argument of the parties, the Planning Commission scheduled April 4, 2018, for decision-making on the motion to reopen and the adoption of the findings of fact, conclusions of law, and decision and order.

190. The hearing set for April 4, 2018, was subsequently cancelled because the Planning Commission lacked quorum to decide the case.

191. Pursuant to the Rules of the Planning Commission § 2-75, on January 15, 2019, the Planning Commission served on the parties its Proposed Findings of Fact, Conclusions of Law, and Decision and Order ("January 2019 Proposed Order"). The Planning Commission gave each party the opportunity to file written responses, exceptions, comments and objections to the January 2019 Proposed Order within twelve (12) days of service.

192. On February 7, 2019, Intervenor Hanabusa filed her Objections, Exceptions and Positions Re: Proposed Findings of Fact, Conclusions of Law, and Decision and Order.

193. On February 8, 2019, ENV filed its Exceptions to Honolulu Planning Commission's Proposed Findings of Fact, Conclusions of Law, and Decision and Order served on January 15, 2019.

194. On February 8, 2019, Intervenor Schnitzer filed its Exceptions to the Planning Commission's Proposed Findings of Fact, Conclusions of Law and Decision and Order.

195. On February 11, 2019, Intervenor KOCA filed its Exceptions to Planning Commission's January 15, 2019 Proposed Findings of Fact, Conclusions of Law, and Decision and Order ("KOCA's Exceptions").

196. On February 13, 2019, the parties filed a Stipulation Allowing an Extra Day to File Intervenor's KOCA's Exceptions to Planning Commission's January 15, 2019 Proposed Findings of Fact, Conclusions of Law, and Decision and Order. On February 8, 2019, Intervenor KOCA served on the other parties in this matter KOCA's Exceptions, however, Intervenor KOCA inadvertently filed its Exceptions with the Public Utilities Commission rather than the Planning Commission. Intervenor KOCA filed its Exceptions with the Planning Commission on February 11, 2019.

197. On February 28, 2019, the Planning Commission held the Continued Contested Case Hearing in the instant matter that was continued from March 7, 2018 and rescheduled from April 4, 2018 at the Mission Memorial Conference Room.

198. On February 28, 2019, before the Planning Commission heard oral arguments and/or considered the adoption of Findings of Fact, Conclusions of Law, and Decision and Order, Planning Commission Vice-Chair Cord D. Anderson and members Theresia C. McMurdo, Ken K. Hayashida, Gifford K. F. Chang, and Donald W. Y. Goo (Temporary Appointee), each attested to the fact that he or she reviewed the transcript of the proceedings for the date(s) that he or she was absent, and that he or she has studied, examined and understood the record of the hearings.

199. On February 28, 2019, the Planning Commission heard the parties' oral arguments in support of their respective Exceptions and their position on Intervenor's KOCA's Motion to Reopen the Contested Case Hearing that was also continued from the March 7, 2018 hearing.

200. On February 28, 2019, the Planning Commission denied Intervenor's KOCA's Motion to Reopen the Contested Case Hearing.

201. On February 28, 2019, at the conclusion of the parties' arguments regarding their respective Exceptions, the Planning Commission questioned the parties and discussed the adoption of the parties' exceptions, comments and suggestions to the January 2019 Proposed Order. The Planning Commission continued the discussion of the adoption of the January 2019 Proposed Order to April 11, 2019 at 1:30 p.m.

202. Based on the discussion at the February 28, 2019 hearing, ENV submitted to the Planning Commission on March 19, 2019 a published report entitled Assessment of Municipal Solid Waste Handling Requirements for the Island of O'ahu ("Landfill Report").

203. On March 18, 2019, ENV filed its Motion for Leave to File Supplemental Brief. ENV's Supplemental Brief was attached as Exhibit "1" to its Motion for Leave.

204. On March 25, 2019, Intervenor KOCA filed its Response to ENV's Motion for Leave to File Supplemental Brief filed March 18, 2019 and Objection to the Department's March 19, 2019 Submission.

205. On March 29, 2019, Intervenor KOCA filed its Submission of Materials Presented at the February 28, 2019 Planning Commission Hearing.

206. On April 11, 2019, the Planning Commission heard oral arguments on recent motions and continued discussion on the adoption of the January 2019 Proposed Order. At the

same hearing, the Planning Commission denied ENV's Motion for Leave to File Supplemental Brief and Memorandum in Support of Motion. See Tr. 4/11/19, 12:1-19.

207. Also on April 11, 2019, the Planning Commission voted to adopt the January 2019 Proposed Order including the exceptions provided in (1) ENV's Exceptions to Honolulu Planning Commission's Proposed Findings of Fact, Conclusions of Law, and Decision and Order filed on February 8, 2019 and, (2) Intervenor Schnitzer's Exceptions to the Planning Commission's Proposed Findings of Fact, Conclusions of Law and Decision and Order filed on February 8, 2019 and, (3) including paragraphs #89 through #102 of the 2009 Planning Commission Decision attached to Intervenor Schnitzer's Exceptions as Exhibit "1". See Tr. 4/11/19, 30:14-31:17.

II. PROPOSAL FOR SPECIAL USE PERMIT

A. LANDFILL SITING

208. Condition No. 1 of the 2009 Planning Commission Decision (Condition No. 4 of the 2009 LUC Order) requires the City, on or before November 1, 2010, to begin to identify and develop one or more new landfill sites that shall either replace or supplement the WGSF. See 2011 Exhibit "A18" at 25; 2011 Exhibit "A19" at 6. As part of preparing the updated Integrated Solid Waste Management Plan ("ISWMP"), the City allotted funds in the Fiscal Year 2010 budget to conduct a site selection study for a secondary landfill on Oahu in satisfaction of Condition No. 1. Thus, the Mayor's Landfill Site Selection Committee ("Site Selection Committee") was formed. See Written Direct Testimony of Timothy E. Steinberger dated December 13, 2011 ("Steinberger Written Testimony") at 11; Tr. 01/11/12, 54:24-55:6.

209. The Mayor chose 12 members to serve on the Landfill Advisory Committee based upon numerous criteria including technical expertise and experience, community involvement,

and availability to serve. The members were: David Arakawa, Thomas Arizumi, John Goody, Joe Lapilio, Tesha H. Malama, Janice Marsters, Richard Poirier, Chuck Prentiss, and George West (Bruce Anderson, David Cooper, and John DeSoto were originally appointed but have stepped down). Steinberger Written Testimony at 11-12.

210. The Mayor tasked the Site Selection Committee to provide the City with advisory recommendations concerning the selection of a future site for a landfill to replace or supplement WGSL by accepting MSW, ash and residue from facilities such as HPOWER, and construction and demolition debris waste (C&D) for the Island of Oahu. Id. at 12; Tr. 04/04/12, 35:1-8.

211. The Committee would not select one site, but would rank numerous sites according to criteria that it determines most appropriate for landfill sites to accommodate all three waste streams (MSW, ash and residue, and C&D debris). Steinberger Written Testimony at 12.

212. ENV contracted with R.M. Towill Corporation (“RMTC”) in June 2011 to assist the Committee with this process, specifically to research and provide the information required or requested by the Committee members. Id.

213. The Landfill Advisory Committee met on January 20, February 10, March 10 and 31, May 12, July 19, 2011, March 16, 2012, and April 20, 2012. See 2011 Exhibits “A31,” “A47,” and “K258.”

214. Over the course of multiple meetings, the Committee discussed numerous criteria for a new landfill, including, but not limited to the following:

- Location relative to identified disamenities
- Location relative to HPOWER
- Effect of precipitation on landfill operations
- Landfill development operation and closure costs
- Displacement costs
- Precipitation

- Ground water contamination
- Design issues
- Access issues
- Proximity to other land uses (residences, institutions, etc.)
- Traffic impacts on residential neighborhoods
- Infrastructure availability
- “Those criteria impacting people that live here 365 days a year”
- Feasibility and cost issues
- Infrastructure, engineering and sustainability issues
- Wind direction issues related to closeness to other activities
- Impact on agricultural lands

Steinberger Written Testimony at 12-13, see also 2011 Exhibit “A31.”

215. The Committee began by working with potential landfill sites identified by the City in previous studies. However, at the sixth meeting, the Committee requested that RMTC research and provide information on and analyses of additional sites to ensure a thorough vetting of appropriate sites on Oahu. Specifically, they tasked RMTC to research and include for consideration sites that are above or cross the no-pass or underground injection control (“UIC”) line. The City previously did not consider these sites because of its policy not to site landfills above the no-pass or UIC line to protect the island’s drinking water sources. The Committee also asked RMTC to review the Board of Water Supply capture zone maps and identify if there were any 100-acre or larger parcels that could be included on the list of potential landfill sites, even if the sites were above the no-pass or UIC line. Steinberger Written Testimony at 13-14, see also Tr. 04/04/12, 40:1–41:14.

216. The Committee also developed exclusionary criteria or factors for sites above the no-pass or UIC line based on the following information:

- State Land Use Districts (Conservation, Agricultural, and Urban); there are no Rural Districts on Oahu;
- Groundwater Resources (Board of Water Supply and Others);
- Land Ownership (Federal, State, City, and Private);
- U.S. Fish & Wildlife Services (USFWS) Critical Habitats;

- State Natural Area Reserve System (NARS);
- Impaired Water Bodies (per Department of Health and U. S. Environmental Protection Agency);
- Agricultural Land Ratings (Land Study Bureau (LSB) and Agricultural Lands of Importance to the State of Hawaii (ALISH));
- Commission on Water Resource Management (CWRM) Well Data; and
- Criteria protecting airports and airfields with a 10,000 linear foot buffer.

Steinberger Written Testimony at 14, see also Tr. 04/04/12, 42:1–45:23.

217. Upon applying the above exclusionary criteria, RMTC presented the Committee with two additional sites for consideration: (1) the Kahe Point Power Generating Station owned by Hawaiian Electric Company; and (2) the Makaiwa Hills subdivision owned by the James Campbell Trust Estate, which is part of a much larger parcel of land already under development. In addition, the second site was found to border the USFWS-designated critical habitat of the *Isodendron pyriformis* (critically imperiled Hawaiian shrub). RMTC noted that both sites should be considered as “non-sites” due to either existing or pending land uses. Steinberger Written Testimony at 14.

218. After discussion of these results, the Committee asked RMTC to undertake another review of potential sites, including the following land areas:

- Parcels that are 90 acres or more, but less than 100 acres in size;
- Land that is owned by the State of Hawaii, including agricultural district land, conservation district land, and land that is within a critical habitat; and
- Land that is outside of well capture zones and well buffer zones, but within the no-pass or UIC line.

Id. at 14-15, see also 2011 Exhibit “A31.”

219. The Committee reasoned that it is important that RMTC conduct this additional review because the Committee sought to understand the availability of sites only slightly smaller than 100 acres. Certain Committee members also expressed that this further consideration will

provide for more comprehensive review of potential sites. This additional request delayed final application of the criteria and its recommendations. Steinberger Written Testimony at 15.

220. At the time of the contested case hearing on the 2011 Application, the Committee's meetings were still ongoing. Id.

221. The City's effort to identify and develop one or more landfill sites has been performed with reasonable diligence.

222. Even after the City selects a new landfill site or sites, it will take ENV more than seven years to complete the tasks necessary to start operations at a new site(s). These tasks include, but are not limited to: (1) the preparation and processing of an EIS in full compliance with HRS Chapter 343 and related administrative rules for Oahu's next landfill site or sites (e.g., conducting site surveys or investigations, analyzing alternatives including alternative sites and technologies, obtaining public participation and comments); (2) the acquisition of landfill sites, which may require an appraisal of the land value, a determination by the City regarding the funding source for the acquisition, and approval for the expenditure of public funds by the Honolulu City Council; and (3) detailed engineering studies, construction and bid documents, and other approvals. Id. at 15-16.

223. The detailed engineering studies are needed to support the landfill design. These studies will include, but are not limited to: land surveys; geotechnical soils and structural investigations; hydrology and hydrogeological investigations. The completion of these studies is required so that the landfill construction drawings can incorporate civil design requirements, such as the provision of drainage, access roadways, and infrastructure, to support the use of the site. Coordination with governmental agencies, utilities, and adjoining landowners, consistent with mitigation measures identified in the EIS, will also be required to minimize disturbance to

nearby property owners and utilities. The length of time required for the completion of detailed engineering studies, construction drawings and bid documents, and the processing of procurements for the design and construction contractors (which could include the selection of a qualified landfill operator), as well as the acquisition of building permits, land use approvals such as SUP or district boundary amendment, depending on where the site(s) is located, and other necessary approvals, is estimated to be between one and three years. That is before the City even breaks ground on a new site. Id. at 16.

B. WASTE DIVERSION

224. Condition No. 2 of the 2009 Planning Commission Order (Condition No. 5 of the LUC Order) requires ENV to continue its efforts to use alternative technologies to provide a comprehensive waste stream management program. See 2011 Exhibits “A18” at 25, and “A19” at 6.

225. In 2010, the last year for which waste totals were available during the contested case hearings in this matter, ENV diverted 34.4% of the total MSW from the landfill to H-POWER. See 2011 Exhibit “A27.” In 2010, the ENV also diverted 36.9% of the total MSW from the landfill through general material recycling. Id. As of May 2010, ENV accomplished island wide-expansion of its curb-side green waste recycling program to over 150,000 residences. See Steinberger Written Testimony at 19. The City has a program of community recycling bins to encourage schools to recycle cardboard, as well as plastic bottles and cans. Id. at 20–21.

226. In Calendar Year 2010, approximately 1,214,904 tons of waste was generated on Oahu. Of the 1,214,904 tons, the landfill received only 163,736 tons of MSW and 179,946 tons of ash and residue from HPOWER. The amount of MSW deposited at WGSL reflects a steady

decrease from 2009. In FY09 the landfill received approximately 233,065 tons of MSW and in FY10 some 178,512 tons of MSW. In comparison, ash and residue has remained fairly constant. The 2010 disposal rate represents a total diversion of MSW from the landfill of 71.7%. See 2011 Exhibit "A27," see also 2011 Exhibit "A29."

227. As the decreasing MSW tonnage to WGS� shows, ENV is continuing its effort to significantly reduce solid waste disposal at the WGS� by expanding HPOWER, the waste to materials recycling programs, and developing alternative disposal options for materials presently being landfilled. Collectively, these actions have and will divert significant amounts of waste away from WGS�. In addition, new technology solutions continue to be evaluated. However, there still are no new technologies with proven reliability and performance that would completely eliminate the need for a landfill. Steinberger Written Testimony at 17.

228. The HPOWER facility began operations in 1990 and as of 2011, it successfully diverts approximately 600,000 tons per year of MSW from the WGS�. HPOWER reduces our dependence on fossil fuels. One ton of trash produces saleable energy the equivalent of one barrel of oil. Moreover, the facility converts more than 1,600 tons of waste per day into electricity sufficient to power more than 60,000 homes. As of December 2011, on an island-wide basis, HPOWER produced approximately 7% of Oahu's electricity. Id. at 18.

229. In addition, as of December 2011, almost 100% of the ferrous and non-ferrous metal in the MSW processed at HPOWER was recovered for recycling. At that time, approximately 18,000 tons of ferrous metals (e.g., tin cans) and 2,500 tons of non-ferrous metals (e.g., aluminum cans) are recycled annually. Id.

230. In December 2011, it was reported that the City would be adding a third boiler at HPOWER, which will increase the capacity of the facility to 900,000 tons per year. Id. at 18;

Tr. 4/11/12, 84:22–24. The amount of waste diverted from the landfill and recycled to energy will increase substantially. The third boiler was scheduled to begin operations in January 2013. Steinberger Written Testimony at 18.

231. The continued operation of the HPOWER facility, however, is dependent upon continued operation of the WGSF for disposal of ash and residue. Also, DOH requires as a condition of HPOWER's permit that HPOWER have a disposal alternative – the landfill – as a contingency for routine maintenance, natural disasters, and emergencies. *Id.*

232. As of 2010, material recycling programs account for a 29.7% landfill diversion rate, which means that approximately 448,000 tons per year is diverted out of the total waste stream of 1.5 million tons per year. The City is continuing to increase the 29.7% diversion rate by expanding and improving programs. See 2011 Exhibit "A30," see also 2011 Exhibit "A28."

233. The City's bulky item collection service is designed to provide residents with once-a-month pickup service of old appliances, furniture, etc. Recyclable items such as white goods, Freon containing appliances, tires, and used auto batteries and propane tanks are segregated and delivered to the respective recycling facilities. The remainder of bulky item collection is disposed of at the landfill. Steinberger Written Testimony at 19.

234. Residents also may self-haul their bulky items to City disposal sites, including three transfer stations and six convenience centers. Recyclable materials are segregated in separate bins or storage areas for delivery to recycling facilities. Materials that cannot be recycled is hauled to the landfill. *Id.*

235. The anticipated HPOWER expansion is a mass burn boiler that will accept and convert much of the bulky waste such as furniture, mattresses and carpet that presently go to the landfill, to energy and recycled metals. See Tr. 1/11/12, 65:9–10, 66:8-17. As of December

2011, the mass burn boiler was expected to be in operation by January 2013. Steinberger Written Testimony at 18.

236. As of November 2011, the City provides Green Waste Recycling to approximately 100,000 residences as part of the island-wide automated curbside recycling program. At that time, Oahu's capture rate for green waste was 77% which indicates a high level of participation at a high recovery level, either 85% participation at 90% recovery level or vice versa. (Capture rates are measured by the proportional amount of recyclable material collected relative to the total amount available in the specific waste stream. Capture rates do not denote the participation rate.) It is unlikely that this capture rate can get any higher. The City believes that the automated collection has encouraged more participation, further diverting materials from the landfill. Residents may self-haul green waste to City convenience centers or directly to the composting facility. All of the green waste is delivered to a private vendor that is contracted by the City to produce mulch and other products from the waste. Id. at 19-20.

237. All but incidental food waste and green waste is diverted from the WGS. Tr. 04/11/12, 114:1-14.

238. From a sustainability standpoint, green waste is one of the few recyclable materials that is all reused here on this Island. Most other recyclable materials are shipped to the mainland or to Asia. Steinberger Written Testimony at 20.

239. Curbside Recycling for Residential Mixed Recyclables continues to increase with island wide expansion – 160,000 residences – as of May 2010. Id.

240. During fiscal year 2011, the curbside collection system recovered 18,000 tons of mixed recyclables and 53,000 tons of green waste for a total of 71,000 tons recycled. This contributes to a full 6% to the overall reduction of MSW going to the landfill. Id.

241. The City continues to promote condominium recycling through a program that reimburses condominium properties for costs associated with the start-up of a recycling program. Id. at 21.

242. Most multi-family dwellings contract with private hauling companies to collect their refuse and would likewise need to establish their own recycling programs. Multi-family recycling is voluntary. Id.

243. Commercial recycling is taking place at commercial businesses through private recyclers. Id.

244. The City enacted ordinances that support this recycling effort:

- Cardboard. Commercial and government generators are partially banned from landfill disposal. Only 10% of a truckload can be composed of cardboard.
- Green waste. Commercial and government generators are partially banned from landfill disposal. Only 10% of a truckload can be composed of green waste.
- Tires, auto batteries, white goods and scrap metals. Banned from all disposal sites.
- Glass containers. Glass recycling is required for bars and restaurants.
- Paper Recycling. All office buildings of a certain size must conduct recycling of paper goods.
- Food Waste Recycling. All hotels, restaurants, grocery stores, food courts, food manufacturer processors and hospitals meeting a certain size are required to recycle food waste.
- City agencies are required to purchase recycled paper products and to recycle newspaper, cardboard, office paper, aluminum, glass, and plastics.

Id. at 21-22.

245. ENV coordinates numerous events year-round to educate the public about waste management and recycling. Public Education and Outreach Programs include (a) the City's www.opala.org website, which provides comprehensive and up-to-date information about the City's refuse and recycling programs and services; and (b) tours of City facilities and recycling businesses, whereby the public has an opportunity to get an up-close look at waste processing

and recycling operations and go behind the scenes at businesses that have instituted model recycling programs. Id. at 22.

246. The residual solids and semi-solids separated during the treatment of wastewater at wastewater treatment plans (“WWTPs”) are commonly referred to as sewage sludge or bio-solids. These materials have been landfilled, but ENV has been working to divert much of this waste stream from WGSL. As of December 2011, the Synagro facility at the Sand Island WWTP digested, dewatered, and heat-dried approximately 20,000 tons per year of sewage sludge. The end product is a pellet that can be used as a fertilizer or soil amendment material. Furthermore, as of December 2011, ENV was working with the operator of HPOWER, Covanta, to be able to burn sewage sludge for energy as part of the third boiler that was expected to be operational by January 2013. Id. at 22-23.

247. ENV completed a report, “Alternative Technologies for the Treatment and Minimization of Sewage Sludge,” that identifies potential sludge processing technologies that could be implemented to provide waste mitigation or improve operational performance at the City’s WWTPs. See 2011 Exhibit “A33.” The report discusses a wide range of technologies for different stages in the sludge treatment process and thus technologies cannot be directly compared outside their specific treatment and processing function. Accordingly, the report is a list of appropriate technologies for further consideration as part of the ongoing island-wide solids planning effort; it is not a decision-making document that recommends a best solution. Additional factors that will need to be considered as part of any evaluation and selection process include:

- An assessment of a particular alternative technology specific to the WWTP(s) with respect to the facilities already existing there.
- Capital and operation and maintenance costs specific to the WWTP(s) under consideration.

- Implementation timeline for planning, design, permitting, procurement, construction and startup.
- Compatibility of technology with overall Island-wide Solids Master Plan.
- New development and increased future capacity needs.
- Planned upgrades at the existing WWTPs (i.e., upgrade to secondary treatment)

Steinberger Written Testimony at 23-24.

248. The report points out that the technology and process selection for implementation at any of the WWTPs will need to be evaluated from an island-wide perspective due to the issues of combining/transporting solids between WWTPs as well as the identified end-user needs and beneficial use limitations. Other key elements that should be considered in evaluating these technologies and processes for the Island-wide Master Plan include eligibility and redundancy planning in the event that a WWTP treatment unit (i.e., centrifuge or digester) or solids outlet (i.e., landfill or composting facility) is temporarily out of service. *Id.* at 24.

249. Despite the City's successes in diverting sewage sludge from the landfill, it was reported in December 2011 that 15,000 to 20,000 tons per year of sewage sludge was still landfilled, and as of July 31, 2011, there was nowhere else to dispose of sewage sludge. *Id.*

C. LANDFILL DESIGN AND OPERATIONS

250. In landfill design and permit reports, the important elements that must be outlined are the boundaries for the waste, the height of the waste, and the containment system for the waste (i.e., the kind of landfill lining system). The designation in the design drawings of the different cells that will contain the waste are not distinctly outlined but are identified by geographical location, much like streets are identified. See Tr. 04/11/12, 18:1–19:21. Therefore, the numbering does not dictate the sequence of construction. The actual site conditions and location determine the sequence of construction. *Id.* at 23:7–24:19.

251. For effective design and permitting, the sequence of construction of the cells in the landfill is not outlined because the need for certain cells depends on variable factors like waste stream, how much waste is generated, and the type of waste received. Therefore, while the boundary, height and containment system are prescribed in landfill design and permitting documents, how the cell is built, the size of the cell, and the order of the construction of the cells are not constrained. On the contrary, if these latter aspects are prescribed, it may result in harm to human health and the environment because the landfill designer and operator would not have the flexibility to ensure the proper location for waste disposal. *Id.* at 18:5–19:21.

252. This flexibility in constructing the cells of a landfill is not unique to WGSF but is common practice in landfill design. *Id.* at 21:4-20.

253. The construction of cells E-5 and E-6 was not a digression from what was contained in the engineering report and FEIS because the size, sequence, and actual construction (whole or in parts) was not dictated by these reports. *Id.* at 25:3–26:24.

254. The size and sequence of construction of cells E-5 and E-6 did not increase the risk of public health hazards and did not contribute to the release of MSW that resulted from the December 2010 and January 2011 rain storms. On the contrary, the size and sequence of construction of cells E-5 and E-6 were more protective of public health because by building only a portion of the cell, the portion that is to be used, the liner is protected from long term exposure to the elements, rain and sun, and the integrity of the liner is maintained. *Id.*

255. In December 2010 and January 2011, WGSF was hit by a series of heavy rains that resulted in the flooding of areas within WGSF, including the active cell where MSW was being disposed. Steinberger Written Testimony at 26.

256. At that time, WMH was in the process of completing construction of the Western Surface Water Drainage System that was intended to divert stormwater around the landfill. The DOH Solid and Hazardous Waste Management permit for WGSL allowed the simultaneous construction and use of the cell and the Western Surface Water Drainage System. Id.

257. Because the heavy rains in December 2010 and January 2011 occurred before the Western Surface Drainage System was completed, the active cell that had been accepting waste at the WGSL was inundated with storm water, and the force and quantity of storm water breached the cell, causing a release of MSW, including treated medical waste, into the storm water and into the ocean. Id.

258. The City has been cooperating with Federal and State investigations concerning the release of MSW. WMH and the City worked with the U.S. Environmental Protection Agency (“EPA”) and the DOH in the aftermath of the storms, entering into an Administrative Order on Consent with EPA that outlined the remedial actions needed to address the MSW release and steps needed to reopen the landfill. The EPA issued a NOV on November 29, 2011, concerning the release of MSW into the storm water and into the ocean. EPA did not impose any penalties as part of the NOV and continues to monitor the WGSL operations closely. Id. at 26-27.

259. In September 2011, WMH notified the City, EPA, and DOH that it identified significant irregularities with landfill gas data that had purportedly been collected and recorded by its landfill gas technician at WGSL. Further investigation by WMH revealed that a rogue WMH employee had fabricated some wellhead gas parameter measurements instead of collecting the data through verifiable measurements. The employee failed to collect actual data from mid-2010 until August 2011. Id. at 27.

260. As a result of WMH's initial investigation, WMH hired an environmental consultant to perform a detailed assessment of (1) the current status of the wellfield and gas collection and control system to determine whether the fabricated data had concealed adverse changes in the wellfield, and (2) the past status of the wellfield based on verifiable data. Based upon the detailed assessment, WMH concluded that the wellfield and gas collection control system is performing within the expected range of monitored parameters at the facility and that there is no evidence that the wellfield has undergone any adverse changes in the last two years. Id.

261. Despite these events, the DOH, Solid and Hazardous Waste Branch, the branch that regulates the solid waste operations at WGS�, is not intending to take enforcement action relating to the operations at the WGS�. The DOH, Solid and Hazardous Waste Branch is satisfied with the operations at WGS�. See Tr. 01/25/12, 59:19–61:12. The DOH, Solid and Hazardous Waste Branch expressed concern about the imposition of the July 31, 2012 deadline for MSW at the point in time when there were not disposal options for certain types of waste which may potentially threaten human health or the environment. See id. at 12:15-19.

262. Despite pending enforcement and alleged EPA violations, in April 2012, Gary Gill, the Deputy Director of the DOH, Environmental Management Division, the individual heading the agency responsible for regulating WGS�, still insisted that Oahu needs a landfill, that WGS� is the only landfill for MSW and ash, and that shutting down the landfill before other options are available will endanger public health. See Tr. 04/04/12, 149:2–151:4.

III. PURPOSE AND NEED

263. WGS� is the only permitted public MSW facility on the island of Oahu. Thus, the WGS� is the only landfill option for disposal of MSW for the general public and the only permitted repository for the ash produced by HPOWER. See Tr. 01/25/12, 58:22-25, 59:1-9.

264. WGS� is a critical portion of the City's overall ISWMP, which looks at all of the factors that make up solid waste management, including reuse and recycling, the H-POWER facility, and landfilling for material that cannot be recycled or burned for energy. See Steinberger Written Testimony at 2, 4.

265. In Calendar Year 2010, approximately 1,214,904 tons of waste was generated on Oahu. Of the 1,214,904 tons, the landfill received only 163,736 tons of MSW and 179,946 tons of ash and residue from HPOWER. The amount of MSW deposited at the WGS� reflects a steady decrease from 2009. In FY09 the landfill received approximately 178,512 tons of MSW and in FY10 some 233,065 tons of MSW. In comparison, ash and residue has remained fairly constant. The 2010 disposal rate represents a total diversion of MSW from the landfill of 71.7%. See 2011 Exhibit "A27."

266. Other items that cannot be recycled or burned at HPOWER are deposited at the WGS�. At the time of the contested case hearing on the 2011 Application, items such as screenings and sludge from sewage treatment plants, animal carcasses, tank bottom sludge, contaminated food waste that cannot be recycled, medical sharps, auto shredder residue, and contaminated soil that is below certain toxicity levels were landfilled at the WGS�. See Tr. 01/25/12, 10:6-12:14; TR. 04/11/12, 118:16-119:23.

267. The City is actively reducing waste volumes that are directed to the landfill. H-POWER capacity will increase with its expansion so that it can receive an additional 300,000

tons per year of MSW by 2013. See Steinberger Written Testimony at 18. The expanded HPOWER facility will be able to burn items that the current facility cannot, and which therefore have been sent to the landfill. See Steinberger Written Testimony at 19.

268. The City continues to increase its recycling efforts and has accomplished expansion of island-wide curbside recycling – 160,000 residences – as of May 2010. Steinberger Written Testimony at 20.

269. The City has a facility at the Sand Island Wastewater Treatment Plant that digests, dewateres, and heat-dries approximately 20,000 tons per year of sewage sludge and turns the biosolids that might otherwise be sent to a landfill into pellets that can be used as a fertilizer or soil amendment material. Steinberger Written Testimony at 23.

270. Despite progress made to divert waste from the landfill via recycling, burning waste for energy, and reuse, a landfill is still needed on Oahu. See Tr. 01/25/12, 12:7-14; 03/07/12, 99:22–100:1; 04/11/12, 117:5–121:5.

271. The continued availability of WGSL to dispose of MSW is needed because WGSL is required as a permit condition to operate H-POWER. Steinberger Written Testimony at 29.

272. The continued availability of WGSL to dispose of MSW is needed for cleanup in the event of a natural disaster. See Tr. 01/25/12, 12:8-14; Tr. 04/04/12, 150:10-15.

273. The continued availability of WGSL to dispose of MSW is needed because there will always be material that cannot be combusted, recycled, reused or shipped. See Tr. 04/11/12, 117–122:5; 2011 Exhibit “A18.”

274. It will take at least seven years from site selection for a new landfill site to be operational. See Tr. 04/04/12, 56:1–58:17; Tr. 4/11/12, 41:2–42:6; Tr. 04/11/12, 73:19–74:5; 122:6–123:12.

275. Therefore, the WGS� is currently necessary for proper solid waste management, the lack of which would potentially create serious health and safety issues for the residents of Oahu. See Tr. 01/25/12, 12:15-19, 65:14-20; 04/04/12, 149:24–150:25.

276. Closing the WGS� to MSW without alternative disposal options will endanger public health. See Tr. 01/25/12, 12:15-19; 04/04/12, 149:2–151:4.

PROPOSED FINDINGS OF FACT OR CONDITIONS

Any proposed findings of fact or conditions submitted by the Applicant or Intervenor that are not expressly ruled upon by the Planning Commission by adoption herein, or rejected by clearly contrary findings of fact, are hereby denied and rejected.

LABELING OF FINDINGS OF FACT AND CONCLUSIONS OF LAW

To the extent that any of the foregoing Findings of Fact are more properly deemed to be Conclusions of Law, they are incorporated herein as Conclusions of Law. Should any of the following Conclusions of Law be more properly deemed Findings of Fact, they are incorporated herein as Findings of Fact.

CONCLUSIONS OF LAW

The Planning Commission hereby concludes as follows:

1. The Planning Commission has jurisdiction to hold public hearings and make recommendations on all proposals to adopt or amend the general plan, development plans and zoning ordinances, and to approve special use permits for unusual and reasonable uses within agricultural and rural districts other than those for which the district is classified in accordance

with the RPC. Section 6-1506(b), Revised Charter of the City and County of Honolulu 1973 (2017 Edition); HRS Section 205-6(a).

2. HRS Section 91-10(5) provides that:

[T]he party initiating the proceeding shall have the burden of proof, including the burden of producing evidence as well as the burden of persuasion. The degree or quantum of proof shall be a preponderance of the evidence.

The Applicant has the burden of proof to show by a preponderance of the evidence that the Application meets the provisions of Section 2-45 of the RPC.

3. In the Special Use Permit No. 2008/SUP-2 application, the Applicant sought a new State SUP. Chapter 2, Subchapter 4 of the RPC, sets forth the rules applicable to State SUPs. Section 2-45 of the RPC provides as follows:

Test to be applied. Certain 'unusual and reasonable' uses within agricultural districts other than those for which the district is classified may be permitted. The following guidelines are established in determining an 'unusual and reasonable' use:

(a) Such use shall not be contrary to the objectives sought to be accomplished by the state land use law and regulations.

(b) That the desired use would not adversely affect the surrounding property.

(c) Such use would not unreasonably burden public agencies to provide roads and streets, sewers, water, drainage and school improvements, and police and fire protection.

(d) Unusual conditions, trends and needs have arisen since the district boundaries and regulations were established.

(e) That the land upon which the proposed use is sought is unsuited for the uses permitted within the district.

4. Based on the findings set forth in its August 4, 2009 Findings of Fact, Conclusions of Law, and Decision and Order and on the findings set forth above, the Planning Commission concludes that the Applicant's 2008 application for a new State SUP and the Applicant's 2011 Application to Modify (a) are not contrary to the objectives sought to be accomplished by the state land use law and regulations; (b) would not adversely affect

surrounding property as long as operated in accordance with governmental approvals and requirements, and mitigation measures are implemented in accordance with the Applicant's representations as documented in the 2008 FEIS; and (c) would not unreasonably burden public agencies to provide roads and streets, sewers, water, drainage and school improvements, or police and fire protection. The Planning Commission further concludes that the same unusual conditions, trends and needs that existed at the time the original SUP was granted continue to exist and that the land on which the WGSL is located continues to be unsuited for agricultural purposes.

5. The Planning Commission concludes that the Applicant has met its burden of proof with respect to the provisions set forth in Section 2-45 of the RPC.

6. The Planning Commission concludes that it denied the parties' motions to re-open the case to supplement the record after closing the evidentiary portion of the contested case hearing on April 23, 2012 because it had sufficient evidence to render its decision. Therefore, any and all evidence that the parties attempted to enter into the record after April 23, 2012 is not part of the record, specifically post-April 23, 2012 operations of the WGSL, post-April 23, 2012 landfill site selection processes, and post-April 23, 2012 waste diversion efforts by the Applicant.

7. The subject of the remand from the Supreme Court of the State of Hawaii was the deadline for the disposal of MSW imposed by Condition No. 14 of the 2009 LUC Order. The Planning Commission never imposed such a deadline for the disposal of MSW at the WGSL at any point of the proceedings in these consolidated cases. Therefore, the Planning Commission concludes that Condition No. 14 of the 2009 LUC Order, which imposed the July 31, 2012 deadline for municipal solid waste disposal at the WGSL, was not material to its conclusions above relating to the Applicant's 2008 Application.

DECISION AND ORDER

Pursuant to the foregoing Findings of Fact and Conclusions of Law, it is the decision and order of the Planning Commission to APPROVE Applicant's Application to Modify the Special Use Permit No. 2008/SUP-2, by Modifying the Land Use Commission's Order Adopting the City and County of Honolulu Planning Commission's Findings of Fact, Conclusions of Law, and Decision and Order with Modifications dated October 22, 2009, by deleting Condition Nos. 4 and 14, and adding the following conditions:

1. On December 31, 2022, the Applicant shall identify an alternative landfill site that may be used upon WGS� reaching its capacity at a future date. This identification shall have no impact on the closure date for the WGS� because the WGS� shall continue to operate until it reaches capacity. This identification does not require the alternative landfill to be operational on December 31, 2022 but is intended to require the Applicant to commit to the identification of an alternative landfill site that may replace WGS� when it reaches capacity at a future date. The identification of an alternative landfill site by December 31, 2022 is based on the evidence presented and that, as the Planning Commission discussed in 2017, a five year timeframe was sufficient time for the Applicant to identify an alternative landfill site before the WGS� nears capacity. Upon identification of the alternative landfill site, the Applicant shall provide written notice to the Planning Commission and the LUC.

2. The Applicant shall provide semi-annual reports to the Planning Commission and the LUC regarding (a) the status of the efforts to identify and develop a new landfill site on O'ahu, (b) the WGS�'s operations, including gas monitoring, (c) the ENV's compliance with the conditions imposed herein, (d) the landfill's compliance with its Solid Waste Management

Permit issued by the Department of Health and all applicable federal and state statutes, rules and regulations, including any notice of violation and enforcement actions regarding the landfill, (e) the City's efforts to use alternative technologies, (f) the extent to which waste is being diverted from the landfill and (g) any funding arrangements that are being considered by the Honolulu City Council or the City Administration for activities that would further divert waste from the landfill.

3. Public health and safety conditions: If the landfill releases waste or leachate, the ENV must immediately (a) notify the surrounding community, including the Makakilo/Kapolei/Honokai Hale, Waianae Coast and Nanakuli-Maili Neighborhood Boards, Intervenors Schnitzer Steel Hawaii Corp., Ko Olina Community Association, Maile Shimabukuro and Colleen Hanabusa and (b) take remedial actions to clean up the waste and to keep the waste from spreading. Such remedial actions shall include, but shall not be limited to, placing debris barriers and booms at the landfill's shoreline outfall to prevent waste from spreading into the ocean.

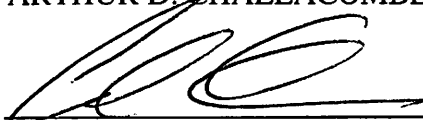
The Planning Commission further orders that pursuant to its consolidation of County Special Use Permit File No. 2008/SUP-2 and the proceedings on Applicant's 2011 Application, the 2009 LUC Order is incorporated by reference herein in order to issue this single, consolidated Findings of Fact, Conclusions of Law, and Decision and Order. The foregoing Findings of Fact, Conclusions of Law, and additional conditions shall supersede any inconsistent finding, conclusion, or condition in the 2009 LUC Order and shall otherwise supplement any and all existing findings, conclusions and conditions in said 2009 LUC Order.

The effective date is the date of this Decision and Order below.

Dated at Honolulu, Hawaii, this 10th day of June, 2019.

PLANNING COMMISSION
CITY AND COUNTY OF HONOLULU

By (Recused)
ARTHUR D. CHALLACOMBE, Chair

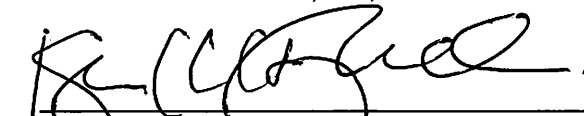
By 
CORD D. ANDERSON, Vice Chair

By (Recused)
ARTHUR B. TOLENTINO, Member

By (Recused)
STEVEN S. C. LIM, Member

By 
THERESIA C. McMURDO, Member

By (Recused)
WILFRED A. CHANG, JR., Member

By 
KEN K. HAYASHIDA, Member

By 
GIFFORD K. F. CHANG, Member

By 
DONALD W. Y. GOO, Temporary Appointee

By _____
9th member - Vacant

BEFORE THE PLANNING COMMISSION
OF THE CITY AND COUNTY OF HONOLULU

STATE OF HAWAII

In the Matter of the Application of

DEPARTMENT OF ENVIRONMENTAL
SERVICES, CITY AND COUNTY OF
HONOLULU

For a New Special Use Permit to Supersede
Existing Special Use Permit to Allow a
92.5-Acre Expansion and Time Extension for
Waimanalo Gulch Sanitary Landfill,
Waimanalo Gulch, O'ahu, Hawai'i, Tax Map
Key No. (1) 9-2-03: 72 and 73.

FILE NO. 2008/SUP-2

CERTIFICATE OF SERVICE

In the Matter of the Application of

DEPARTMENT OF ENVIRONMENTAL
SERVICES, CITY AND COUNTY OF
HONOLULU

To delete Condition No. 14 of Special Use
Permit No. 2008/SUP-2 (also referred to as
Land Use Commission Docket No. SP09-403)
which states as follows:

"14. Municipal solid waste shall be allowed at
the WGSL up to July 31, 2012, provided that
only ash and residue from H-POWER shall be
allowed at the WGSL after July 31, 2012."

CERTIFICATE OF SERVICE

I HEREBY CERTIFY that a copy of the Planning Commission, City and County of
Honolulu, Proposed Findings of Fact, Conclusions of Law, and Decision and Order was duly

served by either hand delivery or certified mail, return receipt requested, to the following on the date below, addressed as follows:

	<u>Certified Mail</u>	<u>Hand Delivery</u>
PAUL S. AOKI Acting Corporation Counsel KAMILLA C. K. CHAN Deputy Corporation Counsel City and County of Honolulu 530 South King Street, Room 110 Honolulu, Hawaii 96813 Attorneys for Applicant DEPARTMENT OF ENVIRONMENTAL SERVICES, CITY AND COUNTY OF HONOLULU		X
IAN L. SANDISON, ESQ. JOYCE W.Y. TAM-SUGIYAMA, ESQ. Watanabe Ing LLP First Hawaiian Center 999 Bishop Street, Suite 1250 Honolulu, Hawaii 96813 Attorneys for Intervenor SCHNITZER STEEL HAWAII CORP.	X	
CALVERT G. CHIPCHASE, ESQ. CHRISTOPER T. GOODIN, ESQ. Cades Schutte LLP 1000 Bishop Street, Suite 1200 Honolulu, Hawaii 96813 Attorneys for Intervenor KO OLINA COMMUNITY ASSOCIATION and MAILE SHIMABUKURO	X	

Certified Mail Hand-Delivery

RICHARD N. WURDEMAN, ESQ.
1003 Bishop Street, Suite 720
Honolulu, Hawaii 96813-6419

X

Attorney for Intervenor
COLLEEN HANABUSA

DATED: Honolulu, Hawaii, June 10, , 2019

A handwritten signature in black ink, appearing to read 'Gloria C. Takara', is written over a horizontal line.

Gloria C. Takara
Planning Commission
Secretary-Hearings Reporter



LAND USE COMMISSION
STATE OF HAWAII

2019 NOV - 1 A 8:21

BEFORE THE LAND USE COMMISSION
OF THE STATE OF HAWAII

In The Matter Of The Application Of The
DEPARTMENT OF ENVIRONMENTAL
SERVICES, CITY AND COUNTY OF
HONOLULU

For A New Special Use Permit To Supersede
Existing Special Use Permit To Allow A 92.5-Acre
Expansion And Time Extension For Waimānalo
Gulch Sanitary Landfill, Waimānalo Gulch,
O`ahu, Hawai`i, Tax Map Key: 9-2-003: 072 And
073

-----In The
Matter Of The Application Of The
DEPARTMENT OF ENVIRONMENTAL
SERVICES, CITY AND COUNTY OF
HONOLULU

To Delete Condition No. 14 Of Special Use Permit
No. 2008/SUP-2 (Also Referred To As Land Use
Commission Docket No. SP09-403) Which States
As Follows:

"14. Municipal Solid Waste Shall Be Allowed At
The WGS� Up To July 21, 2012, Provided That
Only Ash And Residue From H-POWER Shall Be
Allowed At The WGS� After July 31, 2012."

) DOCKET NO. SP09-403

)
)
) FINDINGS OF FACT, CONCLUSIONS OF
) LAW, AND DECISION AND ORDER
) APPROVING WITH MODIFICATIONS THE
) CITY AND COUNTY OF HONOLULU
) PLANNING COMMISSION'S
) RECOMMENDATION TO APPROVE
) SPECIAL USE PERMIT; AND CERTIFICATE
) OF SERVICE

This is to certify that this is a true and correct
copy of the document on file in the office of the
State Land Use Commission, Honolulu, Hawaii.

11/01/19

Date

by

Executive Officer

FINDINGS OF FACT, CONCLUSIONS OF LAW, AND DECISION AND ORDER APPROVING WITH
MODIFICATIONS THE CITY AND COUNTY OF HONOLULU PLANNING COMMISSION'S
RECOMMENDATION TO APPROVE SPECIAL USE PERMIT

AND

CERTIFICATE OF SERVICE

EXHIBIT "B"



LAND USE COMMISSION
STATE OF HAWAII

2019 NOV -1 A 8:21

BEFORE THE LAND USE COMMISSION
OF THE STATE OF HAWAII

In The Matter Of The Application Of The) DOCKET NO. SP09-403
)
DEPARTMENT OF ENVIRONMENTAL)
SERVICES, CITY AND COUNTY OF) FINDINGS OF FACT, CONCLUSIONS OF
HONOLULU) LAW, AND DECISION AND ORDER
) APPROVING WITH MODIFICATIONS THE
For A New Special Use Permit To Supersede) CITY AND COUNTY OF HONOLULU
Existing Special Use Permit To Allow A 92.5-Acre) PLANNING COMMISSION'S
Expansion And Time Extension For Waimānalo) RECOMMENDATION TO APPROVE
Gulch Sanitary Landfill, Waimānalo Gulch,) SPECIAL USE PERMIT; AND CERTIFICATE
O'ahu, Hawai'i, Tax Map Key: 9-2-003: 072 And) OF SERVICE
073)
)

-----In The)
Matter Of The Application Of The)
)
DEPARTMENT OF ENVIRONMENTAL)
SERVICES, CITY AND COUNTY OF)
HONOLULU)
)
To Delete Condition No. 14 Of Special Use Permit)
No. 2008/SUP-2 (Also Referred To As Land Use)
Commission Docket No. SP09-403) Which States)
As Follows:)
)

"14. Municipal Solid Waste Shall Be Allowed At)
The WGSU Up To July 21, 2012, Provided That)
Only Ash And Residue From H-POWER Shall Be)
Allowed At The WGSU After July 31, 2012.")
)
)

FINDINGS OF FACT, CONCLUSIONS OF LAW, AND DECISION AND ORDER APPROVING WITH
MODIFICATIONS THE CITY AND COUNTY OF HONOLULU PLANNING COMMISSION'S
RECOMMENDATION TO APPROVE SPECIAL USE PERMIT

AND

CERTIFICATE OF SERVICE



LAND USE COMMISSION
STATE OF HAWAII

2019 NOV -1 A 8:21

BEFORE THE LAND USE COMMISSION
OF THE STATE OF HAWAII

In The Matter Of The Application Of The) DOCKET NO. SP09-403
DEPARTMENT OF ENVIRONMENTAL)
SERVICES, CITY AND COUNTY OF) FINDINGS OF FACT,
HONOLULU) CONCLUSIONS OF LAW, AND
For A New Special Use Permit To) DECISION AND ORDER
Supersede Existing Special Use Permit To) APPROVING WITH
Allow A 92.5-Acre Expansion And Time) MODIFICATIONS THE CITY AND
Extension For Waimānalo Gulch Sanitary) COUNTY OF HONOLULU
Landfill, Waimānalo Gulch, O'ahu,) PLANNING COMMISSION'S
Hawai'i, Tax Map Key: 9-2-003: 072 And) RECOMMENDATION TO APPROVE
073) SPECIAL USE PERMIT
)

In The Matter Of The Application Of The)
DEPARTMENT OF ENVIRONMENTAL)
SERVICES, CITY AND COUNTY OF)
HONOLULU)

To Delete Condition No. 14 Of Special)
Use Permit No. 2008/SUP-2 (Also)
Referred To As Land Use Commission)
Docket No. SP09-403) Which States As)
Follows:)

"14. Municipal Solid Waste Shall Be)
Allowed At The WGSL Up To July 21,)
2012, Provided That Only Ash And)
Residue From H-POWER Shall Be)
Allowed At The WGSL After July 31,)
2012.")
)

FINDINGS OF FACT, CONCLUSIONS OF LAW, AND DECISION AND ORDER
APPROVING WITH MODIFICATIONS THE CITY AND COUNTY OF HONOLULU
PLANNING COMMISSION'S RECOMMENDATION TO APPROVE SPECIAL USE
PERMIT

The State of Hawai'i Land Use Commission ("LUC"), having examined the complete record of the City and County of Honolulu Planning Commission's ("Planning Commission") consolidated proceedings on the Department of Environmental Services, City and County of Honolulu's ("Applicant") application for a new special use permit to supersede the special use permit issued in LUC Docket No. SP87-362 (County Special Use Permit File No. 86/SUP-5) to allow a 92.5-acre expansion and time extension for the Waimānalo Gulch Sanitary Landfill ("WGSL") located at Waimānalo Gulch, 'Ewa, O'ahu, Hawai'i, identified as Tax Map Key ("TMK"): 9-2-003: 072 and 073, filed on December 3, 2008 (hereinafter "2008 Application"), and application to modify Land Use Commission's October 22, 2009 Order Adopting the City and County of Honolulu Planning Commission's Findings of Fact, Conclusions of Law, and Decision and Order With Modifications, filed on June 28, 2011 (hereinafter "2011 Application") (the 2008 Application and 2011 Application are collectively referred herein as, "Applications"), and upon consideration of the matters discussed therein, at its meetings on October 9 and 10, 2019, hereby makes the following findings of fact, conclusions of law, and decision and order:

FINDINGS OF FACT

BACKGROUND OF THE APPLICATIONS

2008 Application

1. On November 23, 2006, the State of Hawai'i Office of Environmental Quality Control of the State of Hawai'i ("OEQC") published notice that the environmental impact statement for the expansion of the WGS� was available for public review and comment. *See* 2008 Application Proceeding ("2008AP") 5/1/09 Department of Planning and Permitting of the City and County of Honolulu findings of fact, conclusions of law and decision and recommendation ("DPP's 2009 Recommendation") at 6
2. On October 13, 2008, the DPP accepted a final environmental impact statement for the expansion of the WGS� ("2008 FEIS") on behalf of the Mayor of the City and County of Honolulu. 2008AP DPP's 2009 Recommendation at 6; 2008AP 8/11/09 ENV's opp. to Intervenor's motion to dismiss, Ex. 7.
3. On October 23, 2008, OEQC published notice of the 2008 FEIS acceptance. 2008AP DPP's 2009 Recommendation at 6.
4. On December 3, 2008, the Applicant filed the 2008 Application to expand the 107.5-acre operating portion of the WGS� by approximately 92.5 acres for a total of approximately 200 acres. 2008 Application at 1-1.

5. Of the approximately 92.5 acres in the expansion area, approximately 37 acres were to be utilized for landfill cells and related uses. 2008 Application at 1-2.

6. The expansion area also was to include the development of landfill-associated support infrastructure, including drainage, access roadways, a landfill gas collection and monitoring system, leachate collection and monitoring systems, stockpile sites, a public drop-off center, a landfill gas-to-energy system, and other related features. 2008 Application at Part 1.

7. In the 2008 Application, the Applicant sought to withdraw its existing special use permit for approximately 107.5 acres, Special Use Permit File No. 86/SUP-5, and the conditions imposed therein, if the request for the new special use permit was granted. 2008AP DPP's 2009 Recommendation at 3.

8. The Planning Commission scheduled a public hearing to consider the Applicant's 2008 Application for May 6, 2009.

9. On April 3, 2009, a notice of the hearing of the matter was published in the *Honolulu Star-Bulletin*.

10. On April 16, 2009, the Ko Olina Community Association ("KOCA"), Maile Shimabukuro ("Shimabukuro"), and Colleen Hanabusa ("Hanabusa")

filed a Petition to Intervene; Memorandum in Support; Verification; Exhibit "A"; and Certificate of Service (collectively "Petition to Intervene").

11. On April 24, 2009, the Applicant filed a Memorandum in Opposition to the Petition to Intervene.

12. On May 1, 2009, the DPP transmitted its report and recommendation for approval of the 2008 Application to the Planning Commission.

13. On May 1, 2009, the Planning Commission conducted a site visit to the WGSL and the H-POWER facility.

14. On May 6, 2009, the Planning Commission held a public hearing at the City Council Committee Meeting Room, Second Floor, 530 South King Street, Honolulu, Hawai'i, and heard public testimony.

15. On May 7, 2009, Todd K. Apo filed a Petition to Intervene; Verification; and Certificate of Service.

16. On May 18, 2009, the Applicant filed a Memorandum in Opposition to Mr. Apo's Petition to Intervene; Exhibits "1" through "4"; and Certificate of Service.

17. On May 20, 2009, KOCA, Shimabukuro, and Hanabusa filed a Motion to Recuse Commissioner John Kaopua; Memorandum in Support of Motion; Exhibit "A" and "B"; Declaration of Colleen Hanabusa; and Certificate of Service (collectively "Motion to Recuse").

18. On May 20, 2009, the Planning Commission resumed the public hearing at the City Council Committee Meeting Room, Second Floor, 530 South King Street, Honolulu, Hawai'i.

19. The Planning Commission heard and granted the Petition to Intervene filed by KOCA, Shimabukuro, and Hanabusa.

20. Pursuant to Planning Commission Rules Subchapter 5, the matter was noted as a contested case.

21. The Planning Commission also heard argument on Mr. Apo's Petition to Intervene.

22. On June 5, 2009, the Applicant filed a Memorandum in Opposition to the Motion to Recuse and Certificate of Service.

23. On June 10, 2009, the hearing resumed at the City Council Committee Meeting Room, Second Floor, 530 South King Street, Honolulu, Hawai'i.

24. The Planning Commission heard and granted the Motion to Recuse Commissioner Kaopua filed by Intervenor KOCA, Shimabukuro, and Hanabusa.
2008AP 6/10/09 Minutes at 9.

25. The Planning Commission denied Mr. Apo's Petition to Intervene on the grounds that it was untimely filed; that Mr. Apo's position regarding the 2008 Application was substantially the same as the position of Intervenor KOCA,

Shimabukuro, and Hanabusa; and that the proceeding would be inefficient and unmanageable if Mr. Apo were allowed to intervene. 2008AP 7/27/09 Planning Commission's findings of fact, conclusions of law, and order at 3.

26. The Planning Commission closed the public hearing on the 2008 Application.

27. On June 15, 2009, Intervenor KOCA, Shimabukuro, and Hanabusa filed their List of Witnesses naming 42 potential witnesses, including Mr. Apo. The Applicant also filed its List of Witnesses, naming six potential witnesses.

28. On June 22, 2009, the Planning Commission commenced the contested case hearing at Kapolei Hale, 1000 Uluohia Street, Kapolei, Hawai'i.

29. The Applicant offered Exhibits A1 through A31, which were accepted into the record by the Planning Commission.

30. The Applicant called Brian Takeda, who was qualified as an expert in the field of urban and regional planning, and Hari Sharma, Ph.D., who was qualified as an expert in the field of geotechnical and geo-environmental engineering, to testify. 2008AP 6/22/09 Tr. At 33:5-8 (Takeda), 234:7-12 (Sharma).

31. Intervenor KOCA, Shimabukuro, and Hanabusa offered, and the Planning Commission received into the record, Exhibits B1 and B4. 2008AP 6/22/09 Tr. at 81:6-11, 226:14-15.

32. On June 24, 2009, the Planning Commission resumed the contested case hearing at the City Council Committee Meeting Room, Second Floor, 530 South King Street, Honolulu, Hawai'i.

33. On June 24, 2009, the Applicant filed List of Exhibits; Exhibits "A1"-"A31"; and Certificate of Service.

34. During the June 24, 2009, contested case hearing, the examination of Dr. Sharma was completed.

35. The Applicant called Joseph R. Whelan, who was the General Manager of Waste Management of Hawaii, Inc. ("WMH"), which operates the WGSL, to testify.

36. On June 29, 2009, Intervenor KOCA, Shimabukuro, and Hanabusa filed a Motion to Dismiss Application; Memorandum in Support of Motion to Dismiss; Declaration of Colleen Hanabusa; Exhibits "A"-"E"; and Certificate of Service (collectively "Motion to Dismiss"). Intervenor contended that the 2008 FEIS did not cover the entire 200-acre site, and therefore the 2008 Application must be dismissed.

37. On July 1, 2009, the Planning Commission resumed the contested case hearing at Kapolei Hale, 1000 Uluohia Street, Kapolei, Hawai'i.

38. During the July 1, 2009, contested case hearing, the examination of Mr. Whelan was completed.

39. The Applicant called Richard Von Pein, who was qualified as an expert in the field of landfill design and geotechnical engineering, and Frank Doyle, who at the time was the Chief of the Division of Refuse, City and County of Honolulu, to testify. 2008AP 7/1/09 Tr. at 93:2-8 (Von Pein); 176:4-9 (Doyle).

40. The Applicant offered, and the Planning Commission accepted for the record, Exhibit A32. 2008AP 7/1/09 Tr. at 168:16-17.

41. On July 2, 2009, the Planning Commission resumed the contested case hearing at the City Council Chambers, Third Floor, 530 South King Street, Honolulu, Hawai'i.

42. The Applicant offered no further witnesses and concluded its case-in-chief. 2008AP 7/2/09 Tr. at 4:15-17.

43. Intervenor KOCA, Shimabukuro, and Hanabusa began their case-in-chief and presented testimony from Abbey Mayer; Josiah Ho'ohuli; William J. Aila, Jr.; Daniel Banchiu; Cynthia K. L. Rezentes; Maeda Timson; and Todd Apo.

44. The Applicant offered, and the Planning Commission received into the record, Exhibits A33 and A34. 2008AP 7/2/09 Tr. at 32:20-25, 240:7-13.

45. Intervenor KOCA, Shimabukuro, and Hanabusa offered, and the Planning Commission received into the record, Exhibit B5. 2008AP 7/2/09 Tr. at 185:21-23.

46. Other documents were referenced by the Planning Commission and the parties as Exhibits B2 and B3, but the documents were not received into evidence. 2008AP 7/2/09 Tr. at 9:4-6, 21:25.

47. At the conclusion of their case-in-chief, Intervenor KOCA, Shimabukuro, and Hanabusa rested their case. 2008AP 7/2/09 Tr. at 279:15.

48. On July 6, 2009, the Applicant filed a Memorandum in Opposition to the Motion to Dismiss; Declaration of Gary Y. Takeuchi; Exhibits "1"-"8"; and Certificate of Service.

49. On July 8, 2009, the Planning Commission resumed the contested case hearing at the City Council Committee Meeting Room, Second Floor, 530 South King Street, Honolulu, Hawai'i.

50. The Applicant presented as a rebuttal witness David M. Shideler, who was qualified as an expert in archaeology and historical cultural resources. 2008AP 7/8/09 Tr. at 11:16-21.

51. The Applicant offered, and the Planning Commission received into the record, Exhibits A35, A36 and A37. 2008AP 7/8/09 Tr. at 8:25-9:5, 65:14-22, 68:6-13.

52. Intervenor KOCA, Shimabukuro, and Hanabusa made their witness, Mr. Apo, available for additional questions by Commissioner Beadie Dawson.

53. Upon the conclusion of questioning, the examination of Mr. Apo was completed.

54. The Planning Commission heard and denied the Motion to Dismiss filed by Intervenors KOCA, Shimabukuro, and Hanabusa.

55. On July 17, 2009, the Applicant filed its Post-Hearing Brief; Proposed Findings of Fact, Conclusions of Law, and Decision and Order; and Certificate of Service. Intervenors KOCA, Shimabukuro, and Hanabusa also filed their Post-Hearing Brief; Proposed Findings of Fact and Conclusions of Law and Decision and Order; and Certificate of Service.

56. On July 28, 2009, the Planning Commission filed its Findings of Fact, Conclusions of Law, and Order and Certificate of Service denying Mr. Apo's Petition to Intervene.

57. On July 29, 2009, the Applicant filed (1) Response to Post-Hearing Brief of Intervenors and (2) Exceptions to Intervenors' Proposed Findings of Facts, Conclusions of Law, and Decision and Order; Declaration of Gary Y. Takeuchi; Exhibits "1"- "3"; and Certificate of Service. Intervenors KOCA, Shimabukuro, and Hanabusa filed a Reply Brief.

58. On August 4, 2009, the Planning Commission entered its Findings of Fact, Conclusions of Law, and Decision and Order granting the 2008 Application ("Planning Commission's 2009 Decision").

59. In its decision, the Planning Commission imposed several conditions, including the following:

1. On or before November 1, 2010, the Applicant shall begin to identify and develop one or more new landfill sites that shall either replace or supplement the WGSJ. The Applicant's effort to identify and develop such sites shall be performed with reasonable diligence, and the Honolulu City Council is encouraged to work cooperatively with the Applicant's effort to select a new landfill site on O'ahu. Upon the selection of a new landfill site or sites on O'ahu, the Applicant shall provide written notice to the Planning Commission. After receipt of such written notice, the Planning Commission shall hold a public hearing to reevaluate 2008/SUP-2 and shall determine whether modification or revocation of 2008/SUP-2 is appropriate at that time.
2. The Applicant shall continue its efforts to use alternative technologies to provide a comprehensive waste stream management program that includes H-POWER, plasma arc, plasma gasification and recycling technologies, as appropriate. The Applicant shall also continue its efforts to seek beneficial reuse of stabilized, dewatered sewage sludge.
3. The Applicant shall provide, without any prior notice, annual reports to the Planning Commission regarding the status of identifying and developing new landfill sites on O'ahu, the WGSJ's operations, and Applicant's compliance with the conditions imposed herein. The annual reports also shall address the Applicant's efforts

to use alternative technologies, as appropriate, and to seek beneficial re-use of stabilized, dewatered sewage sludge. The annual reports shall be submitted to the Planning Commission on June 1 of each year subsequent to the date of this Decision and Order.

....

5. WGS� shall be operational only between the hours of 7:00 a.m. and 4:30 p.m. daily, except that ash and residue may be accepted at the Property 24-hours a day.
6. The Applicant shall coordinate construction of the landfill cells in the expansion area and operation of WGS� with Hawaiian Electric Company, with respect to required separation of landfill grade at all times and any accessory uses from overhead electrical power lines.
7. The operations of the WGS� under 2008/SUP-2 shall be in compliance with the requirements of Section 21-5.680 of the Revised Ordinances of the City and County of Honolulu 1990, to the extent applicable, and any and all applicable rules and regulations of the State Department of Health.
8. The Planning Commission may at any time impose additional conditions when it becomes apparent that a modification is necessary and appropriate.
9. Enforcement of the conditions to the Planning Commission's approval of 2008/SUP-2 shall be pursuant to the Rules of the Planning Commission, including the issuance of an order to show cause why 2008/SUP-2 should not be revoked if this Commission has reason to believe that there has been a failure to perform the conditions imposed herein by this Decision and Order.
10. The Applicant shall notify the Planning Commission of termination of the use of the Property as a landfill for appropriate action or disposition of 2008/SUP-2.

2011AP Ex. K12 at 25-26 (Planning Commission's 2009 Decision).

60. The Planning Commission transmitted the record and its decision in the 2008 Application proceeding to the LUC.

61. On September 10, 2009, Intervenors KOCA, Shimabukuro, and Hanabusa filed a Motion to Intervene; Memorandum in Support; and Certificate of Service (collectively "Motion to Intervene") before the LUC.

62. On September 17, 2009, the Applicant filed a Memorandum in Opposition to the Motion to Intervene filed by Intervenors KOCA, Shimabukuro, and Hanabusa.

63. On September 21, 2009, Intervenors KOCA, Shimabukuro, and Hanabusa filed a Motion to Deny the 2008 Application; Memorandum in Support of Motion; Declaration of Colleen Hanabusa; Exhibit "A," and Certificate of Service (collectively "Motion to Deny").

64. On September 22, 2009, the State of Hawai'i Office of Planning ("OP") filed testimony recommending that the 2008 Application be denied, that the request to withdraw 86/SUP-05 be denied, and that it instead be extended for three years, with additional expansion space of one cell for ash and two cells for municipal solid waste. OP further recommended that the Applicant be required to complete a public site selection process within 12 months of the date of the Decision and Order

followed by the City Council being required to select a site(s) based on the recommendations within an additional six months, with an automatic expiration of the permit if this condition is violated. In the alternative, OP recommended that the matter be remanded to the Planning Commission.

65. On September 23, 2009, the Applicant filed a Memorandum in Opposition to the Motion to Deny filed by Intervenor KOCA, Shimabukuro, and Hanabusa.

66. On September 24, 2009, the LUC conducted a meeting on the 2008 Application in the Kaua'i Meeting Room, Sheraton Waikiki Hotel, Honolulu, Hawai'i. The LUC held a hearing and recognized Intervenor KOCA, Shimabukuro, and Hanabusa as having intervenor status based their intervenor status before the Planning Commission.

67. At the meeting, the LUC heard argument from the Applicant and Intervenor KOCA, Shimabukuro, and Hanabusa regarding the 2008 Application.

68. Following discussion, the LUC granted the 2008 Application.

69. On October 22, 2009, the LUC filed its Order Adopting the City and County of Honolulu Planning Commission's Findings of Fact, Conclusions of Law, and Decision and Order With Modifications ("LUC's 2009 Order") and imposed the following additional conditions:

14. Municipal solid waste shall be allowed at the WGSL up to July 31, 2012, provided that only ash and residue from H-POWER shall be allowed at the WGSL after July 31, 2012.
15. The Honolulu City Council through the City Administration shall report to the public every three months on the efforts of the City Council and the City Administration in regard to the continued use of the WGSL, including any funding arrangements that are being considered by the City Council and the City Administration.
16. The City Council and the City Administration shall have a public hearing every three months to report on the status of their efforts to either reduce or continue the use of the WGSL.

2011AP Ex. K15 at 8-9 (LUC 10/22/09 Order)

70. The Applicant and Intervenors KOCA, Shimabukuro, and Hanabusa appealed the LUC's 2009 decision.

71. On October 29, 2009, the Applicant filed a Motion for Reconsideration; Memorandum in Support of Motion for Reconsideration; and Certificate of Service.

72. On November 12, 2009, Intervenors KOCA, Shimabukuro, and Hanabusa filed a Memorandum in Opposition to Department of Environmental Services, City and County of Honolulu's Motion for Reconsideration.

73. On November 19, 2009, the Applicant filed a Notice of Appeal to Circuit Court; Exhibit "A," "B," and "C"; Statement of the Case; Designation of

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Findings of Fact, Conclusions of Law, and Decision and Order Approving With Modifications The City and County of Honolulu Planning Commission's Recommendation to Approve Special Use Permit

the Record on Appeal; Order for Certification and Transmission of Record; Request for Written Briefs and Oral Argument; and Certificate of Service, challenging the LUC's Condition Nos. 14, 15, and 16.

74. The Applicant did not challenge any conditions imposed by the Planning Commission.

75. On November 19, 2009, Intervenors KOCA, Shimabukuro, and Hanabusa filed a Notice of Appeal to Circuit Court; Exhibit "A," "B," and "C"; Statement of the Case; Designation of the Record on Appeal; Order for Certification and Transmission of Record; Request for Written Briefs and Oral Argument; and Certificate of Service, challenging the LUC's decision to permit the expansion of the WGSF and its continued operation.

76. On July 14, 2010, the Circuit Court held a hearing.

77. On September 21, 2010, the Circuit Court entered an order affirming the LUC's 2009 decision with modifications. The Circuit Court affirmed Condition No. 14. With respect to Condition Nos. 15 and 16, the Circuit Court deleted the references to the Honolulu City Council and the City administration and substituted the Applicant as the responsible body. The Circuit Court affirmed the LUC's decision in all other respects.

78. On October 19, 2010, the Circuit Court entered final judgment in both appeals.

79. On November 12, 2010, the Applicant filed its Notice of Appeal with the State of Hawai'i Intermediate Court of Appeals ("ICA"). On appeal, the Applicant challenged only Condition No. 14.

80. Intervenor KOCA, Shimabukuro, and Hanabusa did not appeal the Circuit Court's ruling.

81. On July 14, 2011, the Applicant filed an application to transfer the case to the Hawai'i Supreme Court.

82. On August 1, 2011, the Hawai'i Supreme Court granted the application to transfer.

2011 Application¹

83. While the Applicant's appeal of Condition No. 14 was pending, on June 28, 2011, the Applicant filed the 2011 Application to modify the special use permit by deleting the LUC's Condition No. 14. 2011AP Ex. K161 at 1 (2011 Application)

84. The 2011 Application sought to "modify the LUC's Order Adopting the City and County of Honolulu Planning Commission's Findings of Fact, Conclusions of Law, and Decision and Order with Modifications, dated October 22, 2009, by deleting

¹ Hanabusa did not file a motion to intervene or otherwise seek to participate in the proceedings on the 2011 Application.

the July 31, 2012, deadline to cease disposal of municipal solid waste at [the Waimanalo Gulch Sanitary Landfill], as set forth in Condition No. 14 of said Order.” 2011AP Ex. K161 at 3 (6/28/11 Steinberger letter).

85. By requesting the deletion of Condition No. 14, the Applicant sought to use the WGSL until it reaches its permitted capacity. 2011AP Ex. K161 at 3 (6/28/11 Steinberger letter).

86. The basis for the 2011 Application was the Applicant’s belief that the currently permitted area of the WGSL, consisting of approximately 200 acres, had a useful life well beyond July 31, 2012. 2011AP Ex. K161 at 4 (6/28/11 Steinberger letter).

87. It was the Applicant’s belief that it was in the public interest to use the WGSL to its capacity. 2011AP Ex. K161 at 4 (6/28/11 Steinberger letter).

88. On September 4, 2011, a notice of the Planning Commission’s public hearing to consider the 2011 Application set for October 5, 2011, was published in the *Honolulu Star-Bulletin*.

89. On September 9, 2011, the DPP Director sent the Planning Commission a report and recommendation for approval of the 2011 Application. *See* Planning Commission Rules § 2-41(d).

90. On September 16, 2011, KOCA/Shimabukuro filed a Motion to Recognize them as Parties or, Alternatively, to Intervene.

91. On September 16, 2011, Schnitzer Steel Hawai'i Corp. ("Schnitzer") filed a Motion to Intervene.

92. On September 23, 2011, the Applicant filed a Memorandum in Opposition to Intervenors KOCA/Shimabukuro's Motion to Recognize them as Parties or, Alternatively, to Intervene.

93. On September 30, 2011, KOCA/Shimabukuro filed a Reply to the Applicant's Memorandum in Opposition.

94. On October 5, 2011, the Planning Commission held a public hearing on the 2011 Application at the Mission Memorial Auditorium, 550 South King Street, Honolulu, Hawai'i.

95. The Planning Commission heard testimony in favor of the 2011 Application from Raymond Young of DPP; Lee Mansfield of Hawaii American Water; Edwin Arellano of Hawaii Bio-Waste; Matt McKinney of 1-800-GotJunk; Kris Gourlay of Rolloffs Hawaii; and John Tsukada of Island Commodities. 2011AP 10/5/11 Tr. at 5:3, 19:6, 20:6, 25:13, 28:8, 31:17.

96. The Planning Commission heard testimony in opposition to the 2011 Application from Councilmember Tom Berg of the Honolulu City Council; Patty Teruya of Nānākuli-Mā'ili Neighborhood Board No. 36; Celeste Lacuesto; and Evelyn Souza. 2011AP 10/5/11 Tr. at 15:4, 22:21, 29:4, 30:11.

97. The Planning Commission granted Schnitzer's Petition to Intervene, granted KOCA/Shimabukuro's Motion to Intervene, and denied KOCA/Shimabukuro's Alternative Motion for Continued Recognition as Party Intervenors. 2011AP 10/5/11 Tr. at 35:5-23, 42:9-43:3.

98. Pursuant to Planning Commission Rule § 2-56(c), the 2011 Application was processed as a contested case.

99. On October 14, 2011, the Planning Commission held a prehearing conference with the parties and the Chair of the Planning Commission.

100. On October 26, 2011, the Applicant filed a List of Witnesses naming five potential witnesses. Intervenors KOCA/Shimabukuro filed a List of Witnesses naming 31 potential witnesses. Intervenor Schnitzer filed a List of Witnesses naming one potential witness.

101. On November 9, 2011, the Planning Commission entered an order regarding the prehearing conference. The order stated in relevant part that "[t]he deadline for filing and serving written direct testimony and exchanging exhibits shall be November 30, 2011" and that "[a]t the contested case hearing, all written direct testimony shall be preceded by an oral summary of no more than 10 minutes." 11/9/11 order regarding prehearing conference at 2-3 (¶ 10).

102. On November 7, 2011, Intervenors KOCA/Shimabukuro filed a Motion to Dismiss the 2011 Application for Lack of Jurisdiction (“Motion to Dismiss”). Intervenors KOCA/ Shimabukuro asserted that the Planning Commission did not have jurisdiction to decide the 2011 Application because (1) the LUC’s 2009 decision was on appeal to the Hawai’i Supreme Court; and (2) the LUC has original and exclusive jurisdiction to consider modifications of its own conditions.

103. On November 14, 2011, the Applicant and Intervenor Schnitzer filed Memoranda in Opposition to KOCA/Shimabukuro’s Motion to Dismiss.

104. On November 29, 2011, the parties stipulated to amend the briefing schedule set forth in the order regarding the prehearing conference. The parties agreed that “[t]he deadline for filing and serving written testimony and exchanging exhibits shall be December 13, 2011.”

105. On December 7, 2011, the Planning Commission held a hearing on Intervenors KOCA/Shimabukuro’s Motion to Dismiss at the Mission Memorial Hearings Room, Mission Memorial Building, 550 South King Street, Honolulu, Hawai’i (“Mission Memorial Hearings Room”).

106. After hearing argument from the parties, the Planning Commission went into executive session.

107. Following the executive session, the Planning Commission denied Intervenor KOCA/Shimabukuro's Motion to Dismiss.

108. Thereafter, the parties made opening statements.

109. On December 13, 2011, the parties filed written direct testimony.

110. The Applicant filed the written direct testimony of its Director Timothy E. Steinberger and State of Hawai'i Department of Health ("DOH") Solid and Hazardous Waste Branch Chief Steven Y.K. Chang.

111. Intervenor Schnitzer attempted to file the written direct testimony of Schnitzer General Manager Larry Snodgrass. Because Mr. Snodgrass did not sign his written direct testimony, it was not admissible in the contested case hearing.

112. Intervenor KOCA/Shimabukuro filed the written direct testimony of Ken Williams, General Manager of the Association; Ms. Shimabukuro; Beverly Munson, Ko Olina resident; Paul Duke Hospodar, Ko Olina Security Director, Resort Operations Director, resident and AOA board member; Cynthia K. L. Rezentes, Waianae resident, Nānākuli-Mā'ili Neighborhood Board No. 36 member and 2003 Blue Ribbon Landfill Site Selection Committee ("SSC") member; Maeda Timson, Kapolei resident and Makakilo/Kapolei/Honokai Hale Neighborhood Board No. 34 member; Shad Kane, Native Hawaiian cultural practitioner and 2003 Blue Ribbon Landfill SSC member; and Dwight Miller, P.E.

113. On December 14, 2011, the Applicant, Intervenor Schnitzer, and Intervenor KOCA/Shimabukuro filed Pre-Contested Case Hearing Statements.

114. On January 6, 2012 at the request of Intervenor KOCA/Shimabukuro, the Planning Commission issued a Subpoena Duces Tecum ("Subpoena") to WMH, which operates the WGSL. 2011AP Ex. K164 (subpoena duces tecum).

115. The Subpoena directed the production of, among other things, "all documents containing or evidencing fabricated readings; all investigation reports related to the fabricated readings; all assessment documents related to the fabricated readings; . . . and all documents related to remedial actions taken to address the fabricated readings." 2011 AP Ex. K164 (subpoena duces tecum at 2).

116. On January 20, 2012, WMH filed a Response and Objections to the Subpoena.

117. On February 8, 2012, the Planning Commission heard argument on WMH's objections.

118. WMH represented that it had produced all responsive documents, and that it had no additional documents to produce related to its internal investigation regarding fabricated gas wellhead readings or any other matter responsive to the Subpoena. 2011AP 2/8/12 Tr. 9:17-13:21.

119. Based on these representations, the Planning Commission did not order WMH to produce further documents.

120. On January 11, 2012, the Planning Commission resumed the contested case hearing at the Mission Memorial Hearings Room.

121. The Applicant called Director Steinberger to testify.

122. The Planning Commission received into evidence, without objection, the October 5, 2011, transcript of proceedings and, over the partial objection of the Applicant, Intervenor KOCA/Shimabukuro's Exhibits K1-K162. 2011AP 1/11/12 Tr. at 15:12-17:23, 96:2-4.

123. On January 25, 2012, the Planning Commission resumed the contested case hearing at the Mission Memorial Hearings Room.

124. The Applicant called Branch Chief Chang to testify. Intervenor Schnitzer called Mr. Snodgrass to testify.

125. The Applicant rested, subject to its right to call rebuttal witnesses. Intervenor Schnitzer rested without reserving the right to call rebuttal witnesses. 2011AP 1/25/12 Tr. at 71:17-72:1, 86:20.

126. The Applicant indicated that it intended to call two rebuttal witnesses. 2011AP 1/25/12 Tr. at 87:12-16.

127. Intervenors KOCA/Shimabukuro objected to the Applicant's intention to call these witnesses as rebuttal witnesses rather than as direct witnesses. 2011 AP 1/25/12 Tr. at 87:17-24, 88:24-89:10. The Planning Commission overruled Intervenors KOCA/Shimabukuro's objection. 2011AP 1/25/12 Tr. at 89:16-17.

128. Without objection, the Planning Commission received into evidence the Applicant's Exhibits A1–A33 and Intervenors KOCA/Shimabukuro's Exhibits K163–K169. 2011AP 1/25/12 Tr. at 6:10-20, 37:14-20, 51:8-13, 55:12-16, 85:22-86:3.

129. On February 8, 2012, the Planning Commission resumed the contested case hearing at the Mission Memorial Hearings Room.

130. Intervenors KOCA/Shimabukuro called Mr. Williams, Ms. Munson, Ms. Rezentes, and Mr. Hospodar to testify.

131. Without objection, the Planning Commission received into evidence the Applicant's Exhibits A34 and A35. 2011AP 2/8/12 Tr. at 29:25-30:2, 56:6-9.

132. On March 7, 2012, the Planning Commission resumed the contested case hearing at the Mission Memorial Hearings Room.

133. Intervenors KOCA/Shimabukuro called Mr. Kane and Mr. Miller to testify.

134. Without objection, the Planning Commission admitted Mr. Miller as an expert witness in “solid waste management, including landfill siting and design and comprehensive solid waste management.” 2011AP 3/7/12 Tr. at 17:25-19:25.

135. Without objection, the Planning Commission received into evidence Intervenor KOCA/Shimabukuro’s Exhibits K170, K171, K173, K174, K175, K176, K178, and K179. 2011AP 3/7/12 Tr. at 152:19-155:5, 122:17-123:1.

136. At the conclusion of the March 7, 2012, hearing, the Applicant renewed its right to call rebuttal witnesses. The Applicant identified four rebuttal witnesses: Director Steinberger, Dr. Sharma, and DOH Deputy Director Gary Gill. 2011AP 3/7/12 Tr. at 218:7-15.

137. Intervenor KOCA/Shimabukuro renewed their objection to those rebuttal witnesses on the grounds that Director Steinberger had already been called and that Dr. Sharma and Deputy Director Gill should have been direct witnesses. 2011AP 3/7/12 Tr. at 218:18-219:1.

138. The Planning Commission overruled Intervenor KOCA/Shimabukuro’s objection. 2011AP 3/7/12 Tr. at 219:6-7.

139. Intervenor Schnitzer also announced that it would be calling an unnamed rebuttal witness on the “H-POWER issue.” 2011AP 3/7/12 Tr. at 219:8-13.

140. On April 4, 2012, the Planning Commission resumed the contested case hearing at the Mission Memorial Hearings Room.

141. The parties agreed to take the remaining witnesses out of order due to scheduling difficulties. 2011AP 4/4/12 Tr. at 6:6-7-15.

142. Intervenor Schnitzer called Tom Zalenka, vice president of environmental affairs for Schnitzer, as a rebuttal witness.

143. The Applicant called Janice Marsters, current Landfill SSC member, and Deputy Director Gill as rebuttal witnesses.

144. Intervenor KOCA/Shimabukuro called Ms. Shimabukuro and Ms. Timson to testify.

145. Intervenor KOCA/Shimabukuro rested subject to their right to call rebuttal witnesses. 2011AP 4/4/12 Tr. at 143:11-13.

146. Without objection, the Planning Commission received into evidence the Applicant's Exhibit A36 and Intervenor KOCA/Shimabukuro's Exhibits K191, K194, K208, K215, K217, K218, K222, K223, K226, and K227. 2011AP 4/4/12 Tr. at 15:18-22, 18:24-19:18, 24:4-16, 33:4-16, 83:14-19, 101:14-19, 122:20-123:3, 143:4-10, 168:22-169:11.

147. On April 11, 2012, the Planning Commission resumed the contested case hearing at the Mission Memorial Hearings Room.

148. The Applicant called Dr. Sharma and Director Steinberger as rebuttal witnesses.

149. Without objection, the Planning Commission qualified Dr. Sharma as an expert in landfill design and permitting. 2011AP 4/11/12 Tr. at 9:11-20.

150. The Planning Commission received into evidence the Applicant's Exhibits A37–A50. 2011AP 4/11/12 Tr. at 13:1-9, 15:21-16:1, 25:1-7, 36:10-37:20, 43:11-44:13, 105:11-16, 138:1-5. Intervenor KOCA/Shimabukuro objected to the admission of Exhibits A43–A46. The Planning Commission overruled Intervenor KOCA/Shimabukuro's objections. 2011AP 4/4/12 Tr. at 36:15-17, 37:7-12.

151. Without objection, the Planning Commission also received into evidence Intervenor KOCA/Shimabukuro's Exhibits K189, K190, K193, K195, K196, K198, K230, K247, and K251. 2011AP 4/11/12 Tr. at 191:19-21.

152. On April 23, 2012, the Planning Commission resumed the contested case hearing at the Mission Memorial Hearings Room.

153. Intervenor KOCA/Shimabukuro called Mr. Miller and Eddie Belloumini of Ko Olina Resort Operations as rebuttal witnesses.

154. Without objection, the Planning Commission received into evidence Intervenor KOCA/Shimabukuro's Exhibits K192, K220, K255, K256, K257, and K258. 4/23/12 Tr. at 12:13-17, 15:16-21, 47:19-48:23.

155. The Planning Commission subsequently closed the evidentiary portion of the hearing. 2011AP 4/23/12 Tr. at 49:16-21.

156. The Planning Commission heard closing arguments from the parties. 2011AP 4/23/12 Tr. at 49:22-80:7.

157. The Planning Commission scheduled decision-making for the 2011 Application on May 25, 2012, at the Mission Memorial Hearings Room.

158. On April 27, 2012, Intervenor KOCA/Shimabukuro filed a Motion to Reopen the Contested Case Hearing To Admit Limited Additional Documentary Evidence to Correct an Error that was Discovered After the Hearing Closed; Declaration of Calvert G. Chipchase; Exhibits A-B; and Certificate of Service (collectively "Motion to Reopen"), pursuant to Planning Commission Rule § 2-71(f), for the limited purpose of admitting additional documentary evidence to correct an error in the SSC's scores identified in Intervenor KOCA/Shimabukuro's Exhibit K258 that was discovered after the hearing closed.

159. Intervenor KOCA/Shimabukuro's Motion to Reopen was based on the disclosure of the SSC's prime consultant, R.M. Towill Corporation ("RMTC"), and its subconsultant, SMS Research ("SMS"), on April 25, 2012, that SMS had made an error in ranking the sites. Because of the error, SMS provided new scores for the sites, a new ranking list, and a new map of the ranked sites. Based on the new list, the scores

and map entered into evidence as Intervenor KOCA/Shimabukuro's Exhibit K258 were no longer accurate.

160. Intervenor KOCA/Shimabukuro attached proposed Exhibit K259, which explained the error, and proposed Exhibit K260, which was composed of the corrected list of sites and a new map of the sites, to correct their Exhibit K258.

161. On May 1, 2012, the Applicant filed a Memorandum in Opposition to Intervenor KOCA/Shimabukuro's Motion to Reopen.

162. On May 2, 2012, the Applicant, Intervenor Schnitzer, and Intervenor KOCA/Shimabukuro filed their respective proposed findings of fact, conclusions of law, and decisions and orders.

163. On May 14, 2012, the Applicant filed a response and Intervenor Schnitzer filed exceptions to Intervenor KOCA/Shimabukuro's proposed findings. Intervenor KOCA/Shimabukuro also filed responses to the Applicant's and Intervenor Schnitzer's proposed findings.

164. On May 4, 2012, the Hawai'i Supreme Court decided the Applicant's appeal of the LUC's 2009 decision.

165. The Hawai'i Supreme Court held that Condition No. 14 was "not supported by substantial evidence in the record," and therefore could not be affirmed.

Department of Environmental Services. v. Land Use Commission, 127 Hawai'i 5, 17, 275 P.3d 809, 821 (2012).

166. The Hawai'i Supreme Court further concluded that, "[h]aving held that Condition 14 cannot stand because it is inconsistent with the evidence shown in the record and not supported by substantial evidence, the LUC's approval of SUP-2 also cannot stand because Condition 14 was a material condition to the LUC's approval." *Id.* at 17-18, 275 P.2d at 821-22.

167. The Hawai'i Supreme Court vacated the Circuit Court's judgment affirming the LUC decision and remanded the case on the 2008 Application "to the LUC for further hearings as the LUC deems appropriate." *Id.* at 18, 275 P.2d at 822.

168. In remanding the 2008 Application proceeding, the Hawai'i Supreme Court acknowledged the 2011 Application proceeding pending before the Planning Commission and "encourage[d] the LUC to consider any new testimony developed before the Planning Commission in that case." *Id.* at 19 n. 16, 275 P.2d at 823 n. 16.

169. On May 15, 2012, the Applicant filed a notification of the Hawai'i Supreme Court's decision on Condition No. 14 or, alternatively, a Motion to Stay Proceedings on the 2011 Application during the pendency of the remand proceedings before the LUC.

170. On May 22, 2012, Intervenor KOCA/Shimabukuro filed a Memorandum in Opposition to the Applicant's Motion to Stay Proceedings.

171. On May 22, 2012, LUC Chair Normand R. Lezy sent a letter on behalf of the LUC to Planning Commission Chair Gayle Pingree urging the Planning Commission to stay its proceedings on the 2011 Application until the LUC remanded the 2008 Application proceedings to the Planning Commission.

172. Based on the Hawai'i Supreme Court's recommendation for the LUC to consider the new testimony in the 2011 Application proceeding, Chair Lezy explained that consolidation on remand of the 2008 and 2011 Application proceedings would serve the public interest and provide a more economical disposition of both matters.

173. In the letter, Chair Lezy noted that, if the Planning Commission stayed the proceedings on the 2011 Application, the LUC would forward the record on remand for the 2008 Application proceeding to the Planning Commission.

174. On May 25, 2012, the Planning Commission held a hearing in the contested case at the Mission Memorial Hearings Room.

175. Planning Commission Chair Pingree confirmed that the hearing portion of the contested case hearing was not closed. 2011AP 5/25/12 Tr. at 11:5-7.

176. The Planning Commission entered a six-month stay of the 2011 Application proceeding pending the decision of the LUC on the 2008 Application proceeding or any future request by the parties to the Planning Commission. 2011AP 5/25/12 Tr. at 11:14-13:2. Based on its disposition, the Planning Commission did not decide Intervenor KOCA/ Shimabukuro's Motion to Reopen the Contested Case Hearing or the Applicant's Motion to Stay Proceedings.

177. On May 29, 2012, Planning Commission Chair Pingree sent a letter to LUC Chair Lezy explaining that on May 25, 2012, the Planning Commission had decided that a six-month stay of its proceedings on the 2011 Application was warranted pending the LUC's decision on the 2008 Application proceeding after remand or a future request to the Planning Commission by any party.

178. Planning Commission Chair Pingree stated that it was unnecessary for the LUC to remand the 2008 Application proceeding to the Planning Commission.

179. Planning Commission Chair Pingree noted that, as an exception to the stay, the Planning Commission would transmit the record for the 2011 Application proceeding to the LUC for its consideration.

180. On July 5, 2012, the LUC met in Leiopapa A Kamehameha, Conference Room 204, Second Floor, 235 South Beretania Street, Honolulu, Hawai'i.

The purpose of the meeting was to discuss and deliberate on the procedural issues arising from the remand from the Hawai'i Supreme Court.

181. At the meeting, the LUC heard public testimony from Ian Sandison, Esq., on behalf of Intervenor Schnitzer.

182. Following public testimony, the LUC heard oral argument on the procedural options available to the LUC. The Applicant orally moved for, and the LUC granted, an additional two weeks for the parties to file written briefs to more fully address the procedural issues.

183. On July 12, 2012, the LUC filed an order granting the Applicant's request to submit additional briefing.

184. On July 18, 2012, Intervenor Schnitzer filed a statement regarding procedural issues and next steps in light of the Hawai'i Supreme Court's decision.

185. On July 19, 2012, Intervenor KOCA/Shimabukuro filed a brief in support of remand with instructions. The Applicant filed a brief in support of the LUC retaining jurisdiction. Intervenor Hanabusa filed a memorandum regarding procedural issues. OP filed a brief on procedural issues.

186. On September 14, 2012, the LUC met at Ihilani Hotel, Lurline Room, 92-1001 Olani Street, Ko Olina, Hawai'i, to continue discussion and deliberation on procedural issues.

187. After receiving public testimony, the LUC heard argument from the parties on the procedural issues and options available to the LUC.

188. On October 8, 2012, the LUC entered an order remanding the 2008 Application proceeding to the Planning Commission “for the expressed purpose of consolidating it with the proceeding on the [2011 Application] in order that the Planning Commission may issue and transmit a single, consolidated Findings of Fact, Conclusions of Law, and Decision and Order on the matter to the LUC for further action pursuant to section 205-6, HRS, and sections 15-15-95 and 15-15-96, HAR.”

189. On December 19, 2012, the Planning Commission held a hearing at the Mission Memorial Hearings Room to discuss the 2008 and 2011 Applications and the remand order from the LUC.

190. At the hearing, the Applicant asked the Planning Commission to continue the proceeding to allow the parties an opportunity to discuss the submission of joint findings and conclusions. Intervenors KOCA/Shimabukuro joined in the request. Intervenors Hanabusa and Schnitzer did not object.

191. The Planning Commission continued the hearing.

192. On January 15, 2013, Intervenors KOCA/Shimabukuro filed a Motion to Effect the Consolidation of the Separate Proceedings in 2008 SUP-2 as

Ordered by the State Land Use Commission on October 8, 2012; Exhibits 1-3; and Certificate of Service (collectively "Motion to Effect the Consolidation").

193. On January 23, 2013, the Applicant filed a Memorandum in Opposition to Intervenor KOCA/Shimabukuro's Motion to Effect the Consolidation.

194. On February 20, 2013, the Planning Commission resumed the hearing at the Mission Memorial Hearings Room.

195. The hearing concerned the LUC's October 8, 2012, remand order and Intervenor KOCA/Shimabukuro's Motion to Effect the Consolidation.

196. At the hearing, the parties filed a Stipulation to continue the hearing so that the parties could discuss a resolution of this matter.

197. The Planning Commission continued the hearing to April 17, 2013.

198. On April 17, 2013, the Planning Commission continued the hearing to allow the parties to attempt to reach a stipulated order to be presented to the Planning Commission for review and decision.

199. On October 22, 2015, the LUC held a meeting at the Airport Conference Center, 400 Rodgers Boulevard, Suite 700, Room #3, Honolulu, Hawai'i, at which time the Applicant and Intervenor KOCA/Shimabukuro updated the LUC on the parties' negotiations.

200. On May 18, 2016, the LUC held a meeting at State Office Tower, Leiopapa A. Kamehameha Building, Conference Room 405, Honolulu, Hawai'i, at which time the Applicant updated the LUC on the parties' negotiations.

201. At the meeting, the LUC directed that a letter be written to the Planning Commission to inquire about the status of proceedings.

202. On May 25, 2016, the Planning Commission wrote a letter to the parties requesting a status report.

203. By letter dated June 3, 2016, the Applicant advised that all parties, except for Intervenor Hanabusa, had signed a stipulation to stay proceedings and that the Applicant was preparing a motion to stay proceedings.

204. On June 13, 2016, OP submitted a status report to the Planning Commission.

205. On June 22, 2016, the Applicant filed a Motion to Stay Proceedings to April 22, 2017; Memorandum in Support of Motion to Stay; Exhibit A; and Certificate of Service (collectively "Motion to Stay Proceedings"), so that the parties could continue to explore a stipulated resolution of the matter.

206. Intervenor KOCA/Shimabukuro filed a Joinder to the Applicant's Motion to Stay Proceedings, and Intervenor Schnitzer filed a Joinder to Intervenor KOCA/Shimabukuro's Joinder.

207. On August 17, 2016, the Planning Commission held a hearing at Mission Memorial Hearings Room.

208. The Planning Commission granted Intervenor KOCA/Shimabukuro's Motion to Effect the Consolidation. 2011AP 8/17/16 Tr. at 32:21-33:16. The Planning Commission denied the Applicant's Motion to Stay Proceedings. 2011AP 8/17/16 Tr. at 33:19-34:2.

209. On September 22, 2016, Intervenor Hanabusa filed a statement regarding Intervenor KOCA/Shimabukuro's Motion to Reopen.

210. On September 30, 2016, the Applicant filed a Motion to Reopen the Contested Case Hearing for the Limited Purpose of Taking Official Notice of Facts; Memorandum in Support of Motion to Reopen the Contested Case Hearing for the Limited Purpose of Taking Official Notice of Facts; Attachment 1; and Certificate of Service (collectively "Motion to Reopen the Contested Case Hearing").

211. On October 5, 2016, the Applicant filed a Motion for Extension of Time; Memorandum in Support of Motion for Extension of Time; Declaration of Kamilla C. K. Chan; and Certificate of Service (collectively "Motion for Extension of Time") for the filing of proposed findings of fact, conclusions of law, and decision and order and consideration of and decision-making on all motions pending before the Planning Commission.

212. On October 6, 2016, Intervenor Schnitzer filed a Joinder to the Applicant's Motion to Reopen the Contested Case Hearing.

213. On October 6, 2016, Intervenor KOCA/Shimabukuro filed a response to the Applicant's Motion to Reopen the Contested Case Hearing.

214. On October 7, 2016, Intervenor KOCA/Shimabukuro filed a response to the Applicant's Motion to Reopen the Contested Case Hearing and Intervenor Hanabusa filed a statement.

215. On October 12, 2016, the Planning Commission held a hearing in the Mission Memorial Hearings Room.

216. The Planning Commission denied Intervenor KOCA/Shimabukuro's Motion to Reopen filed April 27, 2012; denied the Applicant's Motion to Reopen the Contested Case Hearing filed September 30, 2016; and granted in part the Applicant's Motion for Extension of Time to the extent that the motion requested additional time for the filing of proposed findings.

217. On January 27, 2017, the parties filed proposed findings of fact, conclusions of law, and decisions and orders.

218. On February 10, 2017, the parties filed responses to the other parties' proposed findings of fact, conclusions of law, and decisions and orders.

219. On February 10, 2017, Intervenor Hanabusa filed her (1) renewal of submission of proposed findings of fact and conclusions of law, and (2) objections and rebuttals.

220. On February 17, 2017, the Applicant filed a Motion to Strike Intervenor Colleen Hanabusa's (1) Renewal of Submission of Proposed Findings of Fact and Conclusions of Law; Memorandum in Support of Motion to Strike; Declaration of Kamilla C. K. Chan; Exhibits "1" - "2"; and Certificate of Service (collectively "Motion to Strike").

221. On February 23, 2017, Intervenor Hanabusa filed a Memorandum in Opposition to the Applicant's Motion to Strike.

222. On March 1, 2017, the Planning Commission held a hearing at Mission Memorial Hearings Room. The Planning Commission granted the Applicant's Motion to Strike. The Planning Commission voted to adopt findings of fact, conclusions of law, and decision and order.

223. On or about April 28, 2017, the Planning Commission filed Findings of Fact, Conclusions of Law, and Decision and Order. Among other things, the Planning Commission imposed the following condition: "3. The Applicant shall identify an alternative site by December 31, 2022, that will be used upon Waimanalo Gulch Sanitary Landfill reaching its capacity."

224. On May 3, 2017, the LUC received the consolidated record from the Planning Commission, an index of the record, and original and copies of the 2008 proceedings.

225. On May 12, 2017, Intervenor KOCA/Shimabukuro filed a Motion to Deny and Remand and an Alternate Motion to Deny the Applications Unless Additional Conditions are Imposed.

226. On May 19, 2017, the Applicant filed responses to Intervenor KOCA/Shimabukuro's motions.

227. On May 22, 2017, OP filed a written statement recommending approval of the Applicant's special use permit application with additional and amended conditions.

228. On May 22, 2017, Intervenor Hanabusa filed a Joinder to Intervenor KOCA/Shimabukuro's Motion to Deny and Remand.

229. On May 23, 2017, the LUC received correspondence from Intervenor KOCA/Shimabukuro regarding a request to settle the proposed form of order granting in part their motion to deny and remand, and correspondence from Intervenor Schnitzer regarding its statement of position on Intervenor KOCA/Shimabukuro's Motion to Deny and Remand.

230. On May 24, 2017, the LUC met in Honolulu, Hawai'i, to consider Intervenor KOCA/Shimabukuro's Motion to Deny and Remand. The LUC granted in part and denied in part the motion and remanded the record on the 2008 and 2011 Applications to the Planning Commission pursuant to Hawai'i Administration Rules ("HAR") § 15-15-96(a) for further proceedings to (1) clarify whether the Planning Commission followed Section 2-75 of the Rules of the Planning Commission in issuing its Findings of Fact, Conclusions of Law, and Decision and Order; (2) clarify the basis of the Planning Commission's proposed additional Condition No. 3, which specifies a December 31, 2022, date within which the Applicant is to identify an alternative site that will be used upon the WGS� reaching its capacity and the implications it has on the closure date of the WGS� to use and the subsequent commencement of operations at the alternative landfill site; (3) clarify whether the record needs to include updated information on the operation of the WGS�, the landfill site selection process, and the waste diversion efforts of the City and County of Honolulu; (4) assuming the Planning Commission eventually recommends approval of the matter, clarify the effective date of the Planning Commission's Findings of Fact, Conclusions of Law, and Decision and Order; and (5) clarify whether the Planning Commission is ruling on both the 2008 Application and the 2011 Application in its Findings of Fact, Conclusions of Law, and Decision and Order.

REMANDED PROCEEDINGS OF THE PLANNING COMMISSION

231. On June 20, 2017, Intervenor KOCA/Shimabukuro filed a Motion for Recusal or Disqualification of Chair Hazama; Memorandum in Support of Motion; Declaration of Christopher T. Goodin; Exhibits A-E; and Certificate of Service (collectively “Motion for Recusal or Disqualification”).

232. On June 26, 2017, the Applicant filed a Response to Intervenor KOCA/Shimabukuro’s Motion for Recusal or Disqualification and Certificate of Service.

233. On June 26, 2017, Intervenor Hanabusa filed a Renewal of Objections to Chair Dean Hazama’s Participation and Votes in the Instant Case and Joinder to Intervenor KOCA/Shimabukuro’s Motion for Recusal or Disqualification and Certificate of Service.

234. On August 16, 2017, the Planning Commission held a hearing in the Mission Memorial Hearings Room. At the hearing, Chair Hazama declined to recuse himself.

235. On October 23, 2017, Intervenor KOCA/Shimabukuro filed Objections to Adoption of Proposed Findings of Fact, Conclusions of Law, and Decision and Order; Declaration of Christopher T. Goodin; Exhibit A; and Certificate of Service.

236. On November 22, 2017, Intervenor KOCA/Shimabukuro filed a Motion to Reopen the Contested Case Hearing; Memorandum in Support of Motion; Declaration of Christopher T. Goodin; Exhibits A-B; and Certificate of Service.

237. On November 30, 2017, Intervenor KOCA/Shimabukuro filed Objections to Agenda for December 6, 2017; Declaration of Christopher T. Gooden; Exhibits 1-2; and Certificate of Service.

238. On December 4, 2017, the Applicant filed a Memorandum in Opposition to Intervenor KOCA/Shimabukuro's Motion to Reopen the Contested Case Hearing; Declaration of Kamilla C. K. Chan; Exhibits "1" through "3"; and Certificate of Service.

239. On December 4, 2017, Intervenor Hanabusa filed a Joinder to Intervenor KOCA/Shimabukuro's Objections to Agenda for December 6, 2017, filed on November 30, 2017 and Certificate of Service.

240. On December 5, 2017, the Applicant filed a Response to Intervenor KOCA/Shimabukuro's Objections to Agenda for December 6, 2017; Declaration of Kamilla C. K. Chan; Exhibits "1" through "4"; and Certificate of Service.

241. On December 6, 2017, the Planning Commission held a hearing at the Mission Memorial Hearings Room. The Planning Commission voted to adopt Proposed Findings of Fact, Conclusions of Law, and Decision and Order.

242. On or about December 6, 2017, the Planning Commission circulated Proposed Findings of Fact, Conclusions of Law, and Decision and Order.

243. On February 5, 2018, the parties filed Exceptions to the Proposed Findings of Fact, Conclusions of Law, and Decision and Order of the Planning Commission with Certificates of Service. Intervenor Schnitzer's submission included Proposed Findings of Fact, Conclusions of Law, and Decision and Order (Exhibit 1). Intervenor KOCA/ Shimabukuro's submission included the Declaration of Christopher T. Goodin; and Exhibits 1-5.

244. On February 13, 2018, Intervenor KOCA/Shimabukuro filed a Motion to Strike Schnitzer's February 2018 Proposed Findings; Memorandum in Support of Motion; Declaration of Christopher T. Goodin; Exhibits 1-4; and Certificate of Service (collectively "Motion to Strike").

245. On February 14, 2018, Intervenor Schnitzer filed a Memorandum in Opposition to Intervenor KOCA/Shimabukuro's Motion to Strike and Certificate of Service.

246. On February 16, 2018, Intervenor KOCA/Shimabukuro filed a Response to Schnitzer's February 5, 2018 Proposed Findings of Fact, Conclusions of Law, and Decision and Order; Declaration of Christopher T. Goodin; Exhibits 1-5; and Certificate of Service.

247. On March 7, 2018, the Planning Commission held a hearing in the Mission Memorial Hearings Room. The Planning Commission granted Intervenor KOCA/Shimabukuro's Motion to Strike and denied their Motion to Reopen the Contested Case Hearing. The Planning Commission also heard argument from the parties regarding the proposed decision.

248. On April 11, 2018, the Planning Commission advised the parties that the matter could not be scheduled for further hearing due to lack of quorum.

249. On January 7, 2019, Intervenor KOCA/Shimabukuro filed a Position Statement regarding the process for adoption of any decision and order.

250. On January 15, 2019, the Planning Commission circulated Proposed Findings of Fact, Conclusions of Law, and Decision and Order to the parties.

251. On February 7, 2019, Intervenor Hanabusa filed Objections, Exceptions, and Positions Re: Proposed Findings of Fact, Conclusions of Law, and Decision and Order; Declaration of Counsel; Exhibit "1"; and Certificate of Service.

252. On February 8, 2019, the Applicant filed Exceptions to the Planning Commission's Proposed Findings of Fact, Conclusions of Law, and Decision and Order Served on January 15, 2019 and Certificate of Service. Intervenor Schnitzer also filed Exceptions to the Planning Commission's Proposed Findings of Fact, Conclusions of Law, and Decision and Order; Exhibit A; and Certificate of Service.

253. On February 11, Intervenor KOCA/Shimabukuro filed Exceptions to Planning Commission's January 15, 2019 Proposed Findings of Fact, Conclusions of Law, and Decision and Order; Declaration of Christopher T. Goodin; Exhibits 1-5; and Certificate of Service.

254. On February 13, 2019, Intervenor KOCA/Shimabukuro filed a Stipulation Allowing an Extra Day to File Their Exceptions to Planning Commission's January 15, 2019 Proposed Findings of Fact, Conclusions of Law, and Decision and Order.

255. On February 28, 2019, the Planning Commission held a hearing in the Mission Memorial Hearings Room. The Planning Commission approved the Stipulation. The Planning Commission heard argument regarding the proposed decision. The Planning Commission continued the hearing based on Commissioner Hayashida's request to review the record.

256. On March 18, 2019, the Applicant filed a Motion for Leave to File Supplemental Brief; Memorandum in Support of Motion; Declaration of Kamilla C. K. Chan; Exhibit "1"; and Certificate of Service (collectively "Motion for Leave").

257. On March 19, 2019, the Applicant filed a published report entitled *Assessment of Municipal Solid Waste Handling Requirements for the Island of O`ahu* ("March 19, 2019 Submission").

258. On March 25, 2019, Intervenor KOCA/Shimabukuro filed a Response to the Applicant's Motion for Leave to File Supplemental Brief Filed March 18, 2019 and Objection to the Department's March 19, 2019 Submission.

259. On April 10, 2019, Intervenor Schnitzer filed a Statement of Position on the Planning Commission's Proposed Condition Concerning Closure of the Waimānalo Gulch Sanitary Landfill and Certificate of Service.

260. Intervenor Schnitzer filed a Notice of Appearance and Request for Service of Notices and Papers and Certificate of Service.

261. On April 11, 2019, the Planning Commission held a hearing at the Mission Memorial Hearings Room in which it denied the Applicant's Motion for Leave. The Planning Commission also voted to adopt Findings of Fact, Conclusions of Law, and Decision and Order, including the exceptions provided by the Applicant and Intervenor Schnitzer and paragraphs 89 through 102 of the 2009 Planning Commission Findings of Fact, Conclusions of Law, and Decision and Order granting the 2008 Application.

262. On June 10, 2019, the Planning Commission filed its Findings of Fact, Conclusions of Law, and Decision and Order ("Planning Commission's 2019 Decision").

DESCRIPTION OF THE WGS� SITE

263. The WGS� is owned by the City and operated by WMH. *See* 2008AP 7/1/09 Tr. at 179:4-8 (Doyle).

264. The WGS� site is designated within the State Land Use Agricultural District. 2011AP DPP's 2011 Recommendation at 1.

265. The existing City zoning district for the site is AG-2, General Agricultural District. 2011AP DPP's 2011 Recommendation at 1.

266. The 'Ewa Development Plan recognizes the WGS� 2011AP DPP's 2011 Recommendation at 1.

267. Existing uses of the site are landfill and open space. 2011AP DPP's 2011 Recommendation at 1.

268. Elevations at the site range from a low of approximately 70 feet above mean sea level ("msl") to approximately 940 feet above msl in the northern portion. Except for areas of fill, the steep-sloped valley contains dryland grasses and an abundance of rock outcrops. 2008AP DPP's 2009 Recommendation at 8.

269. The soil found at the site consists primarily of Rock Land (rRK), with small amounts of Stony Steep Land (rSY). 2008AP Application at 2-30.

270. The Agricultural Lands of Importance to the State of Hawai'i ("ALISH") system does not classify the site as Prime Agricultural Land, Unique

Agricultural Land, or Other Important Agricultural Lands. 2008AP Ex. A1 at 8-13 (2008 FEIS).

271. The University of Hawai'i Land Study Bureau overall master productivity rating for the site is "E," which indicates very poor crop productivity potential. 2008 Application at 2-31.

272. The Federal Emergency Management Agency Flood Insurance Rate Map identifies the WGS� site as within "Zone D," an area in which flood hazards are undetermined. 2008AP Ex. A1 at 5-31 to 5-32 (2008 FEIS)

273. The WGS� site is not located within the City's Special Management Area. 2008AP Ex. A1 at 8-12, 8-14 (2008 FEIS).

HISTORY OF THE WGS�

274. Because the WGS� is located with the State Land Use Agricultural District, and a landfill is not a use expressly allowed under Hawai'i Revised Statutes ("HRS") chapter 205, the landfill operations require a special use permit pursuant to HRS § 205-6. 2011AP Ex. K155 at 17 (¶ 7) (LUC 3/14/08 Order).

275. Because the area is more than 15 acres, the Planning Commission and the LUC have permitting responsibility and oversight for the WGS�. 2011AP 4/11/12 Tr. at 185:15-18 (Steinberger).

276. The WGS� received a special use permit in 1987 to operate on 60.5 acres. In its Findings of Fact, Conclusions of Law and Decision and Order approving the special use permit, the LUC noted that the WGS� was proposed to “serve the Leeward Communities for disposing raw refuse and [was] projected to have an eight year life and a capacity of 6.65 million cubic yards.” The “projected full-life” of the WGS� was “approximately eight years.” 2011AP Ex. K69 7 (¶ 29) (LUC 4/20/87 Order).

277. The WGS� was permitted to accept MSW and sewage sludge.

278. MSW is defined as “garbage, refuse, and other residential or commercial discarded materials, including solid, liquid, semisolid, or contained gaseous materials resulting from industrial, commercial, mining, and agricultural operations; sludge from waste treatment plants and water supply treatment plants; and residues from air pollution control facilities and community activities. This term does not include solid or dissolved materials in domestic sewage or other substances in water sources, such as silt, dissolved or suspended solids in industrial wastewater effluents, dissolved materials in irrigation return flows, or other common water pollutants.” HRS § 342G-1; *See also* HAR § 11-58.1-03.

279. The WGS� began operations in 1989. 2011AP Ex. K93 at 2 (9/08 ENV status report).

280. On October 31, 1989, the site was expanded by an additional 26 acres. 2011AP Ex. K70 at 5 (¶ 18), 9 (LUC 10/31/89 Order).

281. As the WGS� approached capacity, the Applicant proposed that the site be expanded by 60 acres and extended “for another fifteen years.” 2011AP Ex. K85 at 96:18-20 (3/27/03 Tr.: Doyle).

282. In addition to citing health and safety concerns, the community objected to the expansion and identified a promise by Mayor Frank Fasi that the WGS� would only be used until the original acreage was filled. 2011AP Rezentes Written Direct Testimony at 3-4 (¶¶ 8-10).

283. The Applicant represented to the community that it intended to close the landfill in 2008 if it were allowed to expand the WGS�. During the LUC’s 2003 proceedings to expand the WGS�, the Applicant expressed its “commitment” to close the WGS� in 2008. 2011AP Rezentes Written Direct Testimony at 4 (¶ 12); 2011AP Ex. K85 at 96:18-22, 125:7-11, 128:2-5, 145:21-146:2 (3/27/03 Tr.:Doyle), 117:11-13 (3/27/03 Tr.: Apo); *See also* 1/11/12 Tr. at 32:3-7 (Steinberger).

284. In the 2003 proceeding before the LUC, Mr. Doyle explained the compromise that the Applicant had made with the community regarding the operation of the WGS�. The original plan was to have the WGS� operate for another 15 years. After discussions with the community and hearing their concerns, the operating time

period for the WGS� was reduced to five years. 2011AP Ex. K85 at 96:18-22 (3/27/03 Tr.: Doyle); *see also* 1/11/12 Tr. at 32:3-7 (Steinberger); 2011AP Ex. K85 at 117:11-13 (3/27/03 Tr.: Apo); 2011AP Ex. K220 at 177:1-9 (7/1/09 Tr.: Doyle).

285. In the 2003 proceedings, Mr. Doyle repeatedly expressed the Applicant's "commitment" to close the WGS� in 2008. 2011AP Ex. K85 at 125:7-11, 128:2-5, 145:21-146:2 (3/27/03 Tr.).

286. On June 9, 2003, the LUC approved the expansion of the WGS� by an additional 21 acres. With this expansion, the WGS� consisted of approximately 107.5 acres. The LUC also required that within five years from the date of the approval or the date of the Solid Waste Management Permit approval for the expansion, whichever occurred first but not beyond May 1, 2008, the WGS� shall be restricted from accepting any additional waste material and be closed. The LUC further required the selection of a new landfill site by June 1, 2004, or the special use permit would immediately expire. 2011AP Ex. K2 at 7 (¶ 1), 9 (¶ 12), 10 (¶15) (LUC 6/9/03 Order).

287. In 2003, the Applicant convened the Landfill SSC, which identified several potential sites for a new landfill, none of which included the WGS�. This recommendation was consistent with the Applicant's representations to the LUC that the committee would not be able to select the existing WGS� as the "new" landfill.

2011AP 1/11/12 Tr. at 50:17-21 (Steinberger); 2011AP Ex. K58 at 5 (12/1/03 SSC report); 2011AP Ex. K85 at 177:22-25 (3/27/03 Tr.: Doyle).

288. The City Council received an extension of the June 1, 2004, deadline from the LUC to December 1, 2004. 2011AP Ex. A10 at 6 (LUC 5/10/04 Order).

289. In 2004, the City Council did not follow the committee's recommendation and instead passed a resolution to select the existing WGS� as the "new" landfill. 2011AP 1/11/12 Tr. at 52:6-15 (Steinberger).

290. In 2007, the Applicant filed an "application to amend Condition Number 10 of the Planning Commission's Findings of Fact, Conclusions, and Decision dated March 13, 2003, by extending the deadline to accept solid waste at the Landfill from May 1, 2008, to May 1, 2010, to extend the closure deadline to May 1, 2010, or until the WGS� reaches its permitted capacity, whichever occurs first." 2011AP Ex. K155 at 1-2 (LUC 3/14/08 Order).

291. In its Findings of Fact, Conclusions of Law, and Decision and Order Adopting With Modifications, the City and County of Honolulu Planning Commission's Recommendation to Approve Amendment to Special Use Permit dated March 14, 2008, the LUC amended the condition to extend the closure deadline of the WGS� to November 1, 2009, or until the approved area reaches its permitted capacity, whichever occurs first. 2011AP Ex. K155 at 18 (¶ 12) (LUC 3/14/08 Order)

292. The WGS� solid waste management permit issued by the DOH states that the WGS� “may accept MSW and ash for disposal until the date specified in the associate[d] Special Use Permit or until the landfill/monofill reaches the permitted capacity, whichever comes first.” 2011AP Ex. A4 (6/4/10 solid waste management permit).

293. On December 3, 2008, the Applicant filed the 2008 Application for a new special use permit to expand the existing approximately 107.5-acre WGS� by an additional 92.5 acres for a total of approximately 200 acres. 2011AP Ex. K12 at 2 (§ 5) (LUC 8/4/09 Order).

IMPACTS UPON RESOURCES OF THE AREA FROM THE WGS� EXPANSION

Archaeological and Cultural Resources

294. In connection with the expansion of the WGS�, an Archaeological Inventory Survey, Waimānalo Gulch Landfill Expansion, 2008 (“AIS”), and a Cultural Impact Assessment (Draft), Waimānalo Gulch Landfill Expansion, 2008 (“Cultural Impact Assessment”) were prepared. 2008AP Ex. A1, Appendices G and H, respectively (2008 FEIS).

295. One historic property, State Inventory of Historic Properties (“SIHP”) #50-80-12-6903, was identified by the study. SIHP# 50-80-12-6903 consists of

three large upright boulders potentially utilized as trail or boundary markers. 2008AP Ex. A1, Appendix G at 45 (2008 FEIS).

296. The Applicant proposed to address SIHP# 50-80-12-6903 within a mitigation/preservation plan to be reviewed and accepted by the State of Hawai'i, Department of Land and Natural Resources, State Historic Preservation Division ("SHPD"). 2008AP 6/22/09 Tr. at 49:21-50:5 (Takeda); 2008AP Ex. A3 (3/4/09 letter from ENV to SHPD). Specifically, the Applicant proposed to temporarily relocate the upright stones to Battery Arizona and return the upright stones as close as possible to their current locations after the WGS� has been closed. 2008AP 6/22/09 Tr. at 49:5-20 (Takeda); 2008AP Ex. A3 (3/4/09 letter from ENV to SHPD).

297. The SHPD reviewed the Applicant's proposed mitigation and determined that there is no effect to historic properties, as stated in a letter from SHPD to the DPP April 2, 2009. 2008AP 6/22/09 Tr. at 49:20-51:1 (Takeda); 2008AP Ex. A4 (4/2/09 letter from SHPD to DPP).

298. Based on the Cultural Impact Assessment, the LUC finds that the importation of landfill material over the past 15 years has most likely eliminated any historic properties and plant resources related to Hawaiian cultural practices and beliefs that may have been present within the bounds of the WGS� property. 2008AP Ex. A1, Appendix H at 79 (2008 FEIS); *See also* 2008 Application at 2-98.

Groundwater Resources

299. There are no drinking water groundwater resources that could be adversely affected by the expansion of the WGS. There is potential for leachate from the WGS entering brackish groundwater in the area of the WGS. Mitigation to address this issue is currently provided through the existing Leachate Collection and Removal System design. As required, this design will be modified to ensure against the potential for adverse effects to groundwater and hydrogeological resources of the site. 2008AP Application at 2-19.

Scenic Resources

300. Portions of the WGS are visible from various locations along Farrington Highway and the Ko Olina Resort. Mitigation for the proposed expansion involves the following: (1) the location of the planned area of expansion further mauka and within the Waimānalo Gulch to minimize views into active areas of landfilling; and (2) the use of landscaping with trees and vegetative cover. While not all elements of the WGS expansion can be completely screen from view, the location of work and the careful placement of landscaping elements are expected to significantly reduce the potential for viewplane and aesthetic impacts. 2008AP Application at 2-19.

ENVIRONMENTAL QUALITY

Noise

301. Mitigation of noise from the operation of engines and earthwork will involve compliance with the provisions of HAR chapter 11-43, Community Noise Control. All internal combustion powered vehicles and equipment will be equipped with mufflers or other noise attenuation devices. 2008AP Ex. A1 at 5-63.

302. Noise associated with construction activities and rock crushing are not anticipated to generate adverse impacts to the surrounding area because (1) the majority of work will be limited to the area of the lateral expansion; (2) the work required will be substantively similar to the existing work; (3) the location of the work will be within a relatively isolated portion of the WGS� that is distant from Farrington Highway. Portions of the work that may affect the adjoining Makaīwa Gulch and the planned Makaīwa Hills development will be buffered by a ridge separating the Makaīwa and Waimānalo gulches. 2008AP Ex. A1 at 5-62 through 5-66.

303. Controlled blasting at the WGS� is used for landfill excavations. A blast test program will be implemented at the WGS�, wherein distance, velocity, and frequencies transmitted by the controlled blasting will be monitored. If the controlled blasting affects the WGS� or any of the structures nearby, adjustments will be made. It is anticipated that controlled blasting will involve not more than one blast per day on

an infrequent basis consisting of approximately one to three days per week and occurring in the late afternoon. 2008AP Ex. A1 at 5-65 through 5-66.

Air Quality

304. To reduce and mitigate the potential for the release of fugitive dust from the site, preventive measures will be practiced by the operator in accordance with the provisions of HAR chapter 11-60.1-33, Fugitive Dust. These measures will include regular spraying of water to suppress dust and the use of dust screens. 2008AP Application at 2-16.

305. Exhaust emissions are mitigated by commercial and private vehicle operators' compliance with HAR chapter 60-1, Air Pollution Controls, subpart 1.34, Motor Vehicles. The site operator will also ensure that all vehicles and equipment associated with landfill operations are properly muffled and maintained in good operating condition. 2008AP Application at 2-17.

306. Potential sources of odor include the delivery of refuse vehicles containing putrescible waste, sewage solids that cannot be further processed by wastewater treatment plants, and other types of waste. Onsite odor management will involve: (1) refuse vehicle processing and control; (2) limiting the size of the daily disposal area; and (3) use of an odor neutralizing system. 2008AP Application at 2-17.

307. At the time of the 2008 Application, the solid sewage sludge from the Sand Island Wastewater Treatment Plant, which was previously disposed of at the WGS�, was already being treated in a waste digester installed at the plant. The system is fully operational and significantly decreased the amount of treated sludge solids that required landfilling at the WGS�, thereby decreasing this source of odorous waste from the WGS�. 2008AP Application at 2-17.

308. The generation of landfill gas is controlled by the use of a landfill gas collection and control system that was installed in 2005. The system is operating in accordance with requirements and no adverse effects from the performance of the system are anticipated. 2008AP Application at 2-18.

309. Landfill gases at the WGS� are monitored in compliance with RCRA Subtitle D regulations, HAR chapter 11-58, and the WGS�'s Solid Waste Permit. No adverse effects from landfill associated gases including methane, hydrogen, and other potential emissions are anticipated. 2008AP Application at 2-18.

Litter

310. Measures to mitigate the potential for windblown litter include the use of permanent, temporary, and portable litter fences. Waste is and will continue to be processed and covered with cover material as soon as practicable. In addition, on-call or standby work crews are deployed concurrent with the acceptance of refuse at the

WGSL. The Applicant will enforce existing rules, regulations, and procedural practices to reduce the incidence of windblown litter. WMH also enforces the rule requiring all loads entering the WGSL to be secured by the use of a tarp, cover, or enclosure. 2008AP Application at 2-18.

ADEQUACY OF PUBLIC SERVICES AND FACILITIES

Highway Facilities

311. In addition to completing an FEIS for the expansion of the WGSL, the Applicant obtained a traffic impact report ("TIR"). The TIR analyzed the existing traffic transiting Farrington Highway on both the eastbound and westbound approaches as well as the volume of traffic entering and exiting the WGSL. 2008AP Tr. 6/22/09 51:6-11 (Takeda); 2008AP Ex. A1, Appendix I (2008 FEIS).

312. Even with the expansion of the WGSL, the volume of traffic would not be expected to increase dramatically. Traffic going in and out of the WGSL is less than approximately 1 percent of the total volume of traffic in the region. 2008AP Tr. 6/22/09 51:18-24 (Takeda).

Wastewater Disposal

313. The WGSL is served by an existing onsite wastewater disposal system that handles domestic flows from the administrative and service buildings of the site. The continuing use of this existing system will be adequate for the expansion as

there are no major increases in wastewater flows or demands for use of the system anticipated. 2008AP Application at 2-20.

Water Supply

314. The WGS� expansion will be served by the existing BWS main along Farrington Highway. No major new construction involving the use of new water supply will be required for the lateral expansion of the WGS�. 2008AP Application at 2-20.

Drainage

315. Expansion of the WGS� will involve a review of the existing drainage system and its capacity to handle the planned area of expansion. Design, engineering, and construction will be reviewed by regulatory agencies. 2008AP Application at 2-20; 2011AP Steinberger Written Direct Testimony at 16.

School and Park Facilities

316. Expansion of the WGS� will not affect the availability nor will it increase the demand for schools or parks located in the region. 2008AP Application at 2-20.

Police and Fire Protection

317. The current level of police and fire service provided to the WGS� is expected to be sufficient. The Applicant and WMH will maintain fire apparatus

access throughout the site to ensure that fire fighting vehicles and equipment are capable of mobilizing to all locations. 2008AP Application at 2-20.

Community Issues

318. The Leeward community has opposed the continued operation of the WGS�.

319. The WGS� is located across the street from Ko Olina Resort. 2011Ap 2/8/12 Tr. at 57:5-8 (Munson). The Resort is a 642-acre resort master planned community with a combination of resort, residential, commercial, and recreational uses. 2011AP Williams Written Direct Testimony at 2 (¶ 5).

320. Before the WGS� was permitted, the area where Ko Olina Resort sits was intended to be a resort. 2011AP Williams Written Direct Testimony at 2-3 (¶¶ 7-9); 2011AP Ex. K132 at 3, 7 (Ewa Development Plan).

321. By the time Ko Olina was developed, the WGS� was supposed to have been closed. 2011AP Williams Written Direct Testimony 9 (¶ 3); 2011AP Ex. K69 at 7 (¶ 28) (LUC 4/20/87 Order).

322. Ko Olina is home to thousands of residents and dozens of business. 2011AP 2/8/12 Tr. at 47:11-48:22 (Williams). Ko Olina includes hotels, timeshares, residential projects, commercial businesses, including retail centers and shops, a golf course, and a marina. These amenities cater to residents and to visitors from around the

world and contribute to the tourist industry. 2011AP 2/8/12 at 14:214-15:3, 47:15-22, 48:23-49:1 (Williams).

323. Ko Olina is an economic engine for the west side of O`ahu and the State of Hawai`i. Ko Olina generates approximately \$520 million in direct spending annually, 2,800 jobs locally, indirect and induced benefits of approximately \$280 million, 1,500 additional jobs, and approximately \$60.7 million in annual taxes to the City and State. 2011AP 2/8/12 Tr. at 21:8-14 (Williams).

324. At full build-out, the economic benefits of Ko Olina are projected to reach approximately \$1.4 billion in total economic activities, 8,000 jobs, approximately \$138 million in taxes to the City and the State, and a \$194 million one-time tax from construction period spending. 2011AP 2/8/12 Tr. at 21:15-20 (Williams).

325. Construction period impacts will generate approximately \$3.7 billion in direct spending, approximately \$2 billion in indirect and induced economic benefits, and 26,700 jobs. 2011AP 2/8/12 Tr. at 21:21-22:1 (Williams).

326. These benefits could be jeopardized by the continued operation of the WGSL without the implementation of measures to mitigate potential impacts of the continued operation and expansion of the WGSL. 2011AP 2/8/12 Tr. at 15:15-17 (Williams); 2011AP Hospodar Written Direct Testimony at 11-12 (§ 25).

327. Ko Olina's residents, workers, and visitors have expressed concerns regarding the odors, noise, dust, blasting, visual blight, truck traffic and flying litter from the WGS. 2011AP Williams Written Direct Testimony at 9 (§ 29).

328. In addition to Ko Olina, the Makakilo/Kapolei/Honokai Hale, Wai`anae Coast, and Nānākuli-Mā`ili Neighborhood Boards have consistently voted to close the WGS. 2011AP 10/5/11 Tr. at 23:6-7, 24:1-6, 24:23-25:2 (Patty Teruya, Chair of the Nānākuli-Mā`ili Neighborhood Board); 2011AP 4/4/12 Tr. at 131:12-14 (Shimabukuro); 2011AP 3/7/12 Tr. at 134:22-135:1 (Timson); 2011AP Ex. K47 (8/17/11 letter from George S. Yamamoto, Chair of the Makaikilo/Kapolei/Honokai Neighborhood Board).

329. The Leeward coast has a larger share of environmental burdens, including the military bases, Kahe Power Plant, H-POWER, and the Honouliuli Waste Treatment Plant. 2011AP 3/7/12 Tr. at 127:9-20 (Shimabukuro).

330. To address the concerns of the community, the Applicant is required to, among other things, continue to ensure that effective dust control measures during all phases of development, construction, and operation of the landfill expansion are provided to minimize or prevent any visible dust emission from impacting surrounding areas, and in the event the WGS releases waste or leachate, immediately (a) notify the surrounding community, including the

Makakilo/Kapolei/ Honokai Hale, Wai`anae Coast and Nānākuli-Mā`ili Neighborhood

Boards, Intervenor Schnitzer Steel Hawaii Corp., Ko Olina Community Association, Maile Shimabukuro and Colleen Hanabusa and (b) take remedial actions to clean up the waste and to keep the waste from spreading. *See* Condition Nos. 3 and 17.

VIOLATIONS AT THE WGSL

331. Since 2006, the DOH has found the following violations at the WGSL:

- a. On January 31, 2006, the DOH issued a notice of violation ("NOV") to WMH and the City, containing 18 counts. 2011AP Ex. K59 (1/31/06 NOV). These counts included exceeding permitted fill grades, failure to maintain records and record location of asbestos disposal at the WGSL, and failure to submit annual surface water management plan.
- b. On October 25, 2006, the DOH sent a warning letter to WMH and the Applicant, identifying five potential violations. 2011AP Ex. K101 (10/25/06 warning letter). These potential violations included exceeding permitted fill grades and failure to monitor leachate levels. 2011AP Ex. K101 at 2 (10/25/06 warning letter). Additionally, WMH was required to resubmit its storm water management system design to ensure compliance with applicable regulations and the special use permit. 2011AP Ex. K101 at 2 (10/25/06 warning letter).
- c. On May 3, 2007, the DOH sent a warning letter to WMH and the Applicant identifying three potential violations. 2011AP Ex. K125 (5/3/07 warning letter). These potential violations included exceeding permitted fill grades, failure to monitor leachate levels and inadequate soil cover. 2011AP Ex. K125 at 2 (5/3/07 warning letter).

- d. On September 5, 2008, the DOH sent a warning letter to WMH and the Applicant identifying three potential violations. 2011AP Ex. K82 (9/5/08 warning letter). These potential violations included unauthorized storage of materials and the failure to submit written notification of the exceedance and verification of methane gas monitoring results. 2011AP Ex. K82 at 2 (9/5/08 warning letter).
- e. On May 13, 2010, the DOH issued an NOV to WMH and the City, containing three counts. 2011AP Ex. K66 (5/13/10 NOV); 2011AP 1/25/12 Tr. at 17:6-34:1 (Chang). These counts included the failure to construct the final cover and West Berm in accordance with design specifications, failure to notify the DOH of noncompliance, and failure to submit interim status reports on the construction. 2011AP Ex. K66 (5/13/10 NOV).

332. Since 2006, the DOH has assessed close to \$2,000,000 in fines against the WGS�. 2011AP Ex. K59 (1/31/06 NOV); 2011AP Ex. K66 (5/13/10 NOV).

333. In 2011, the Applicant disclosed that a WMH employee had falsified landfill gas readings from mid-2010 to August 2011. 2011AO Steinberger Written Direct Testimony at 27 (¶ 82). The failure to monitor gas readings was a threat to public health and safety. 2011AP 3/7/12 Tr. at 131:23-132:10 (Miller); 2011AP 1/11/12 Tr. at 91:1-92:3, 93:3-6 (Steinberger).

334. In addition to the foregoing, at the time of the hearing in 2011, the DOH had a pending enforcement case against the WGS�. 2011AP 4/4/12 Tr. at 156:20-22, 157:10-12 (Gill).

335. Since 2006, the United States Environmental Protection Agency (“EPA”) has issued the following NOV’s against the Applicant and WMH:

- a. On April 5, 2006, the EPA issued a NOV for violations of the Clean Air Act. 2011AP Ex. K60 (4/5/06 NOV).
- b. On November 29, 2011, the EPA issued a NOV for violations of the Clean Water Act concerning the release of leachate and waste into the ocean in December 2010 and January 2011. 2011AP Ex. K123 (letter at 1; 11/29/11 NOV at 4-5).

336. The City and WMH have taken actions to remedy the violations. 2011AP 1/11/12 Tr. at 147:23-149:1 (Steinberger); 2011AP 1/25/12 Tr. at 59:10-22 (Chang); 2011AP Steinberger Written Direct Testimony at 26-27 (¶ 81).

337. In December 2010 and January 2011, the WGSL experienced heavy rains. 2011AP Ex. K97 at 3 (1/11/11 DOH inspection report). On December 23, 2010, the DOH, Clean Water Branch, documented the unauthorized pumping of leachate from Cell E6 into State waters on December 19 and 23, 2010, due to a failure in the WGSL’s storm water bypass system. 2011AP Ex. K52 (12/23/10 DOH investigation report).

338. On January 12, 2012, the WGSL received heavy rains. 2011AP Ex. K56 at 1 (1/12/11 and 1/13/11 station summaries from Palehua Hawaii).

339. As a result of the heavy rains, the WGSL’s temporary drainage system failed again, which allowed storm water to flow into Cell E6. 2011AP Ex. K97 (1/11/11 DOH inspection report at 5).

340. The water dislodged unknown quantities of MSW, sewage sludge, leachate and medical solid waste from Cell E6 into coastal waters. 2011AP Williams Written Direct Testimony at 18 (§ 43); 2011AP Ex. K52 at 2 (12/23/10 DOH investigation report).

341. The medical solid waste included sharps, chemotherapy wastes, and pathological wastes. 2011AP Ex. K73 at 2 (1/27/11 Honolulu Civil Beat article); 2011AP Williams Written Direct Testimony at 18 (§ 43).

342. By the morning of January 13, 2011, significant quantities of medical waste and other WGSL debris were washing up in the Ko Olina lagoons. 2011AP Williams Written Direct Testimony at 18 (§ 44).

343. The waste spread to beaches up the Leeward coast as far as Pōka`i Bay and east as far as Nimitz Beach. 2011AP Shimabukuro Written Direct Testimony at 7 (§ 10.e); 2011AP Williams Written Direct Testimony at 18 (§ 44).

344. The reason for the flood was that the western diversion channel had not been completed at the time of the rain events. 2011AP 4/4/12 Tr. Supp. at 8:7-13 (Gill); *See also* 2011AP 4/11/12 Tr. at 65:11-16, 67:1-4 (Sharma); 2011AP 3/7/12 Tr. at 29:1-6, 39:12-21 (Miller).

345. The industry standard is to have necessary drainage systems completed before filling cells at a landfill. 2011AP 3/7/12 Tr. at 39:25-40:4, 126:13-20, 128:14-129:13, 172:19-173:3 (Miller); 2011AP 4/11/12 Tr. at 31:24-32:10 (Sharma).

346. The WGSL's design plans contemplated that the diversion channel would be in place before Cell E6 was filled. 2011AP 4/11/12 Tr. at 66:7-9, 66:15-17 (Sharma); 2011AP 4/11/12 Tr. at 74:10-15 (Steinberger). However, the Applicant stated that WMH had to begin filling Cell E6 before the western diversion channel was in place. 2011AP 4/11/12 Tr. at 33:12-21 (Sharma); 75:13-18 (Steinberger).

347. The Applicant claimed that permitting and processing delays pushed the Applicant and WMH into a situation where there was no safely useable space for the waste. 2011AP 4/11/12 Tr. at 145:6-12 (Steinberger); 2011AP 4/11/12 Tr. at 47:22-24, 67:5-9 (Sharma).

348. Given the state and federal NOV's and pending enforcement actions, the Applicant is required to continue to obtain all necessary approvals from the DOH, State of Hawai'i Department of Transportation, State of Hawai'i Commission on Water Resource Management, and the City & County of Honolulu Board of Water Supply ("BWS") for all onsite and offsite improvements involving access, storm drainage, leachate control, water, well construction, and wastewater disposal. *See* Condition No. 2.

CURRENT WASTE STREAM

349. The MSW in the City's current waste stream includes putrescible waste, such as sewage sludge, biosolids, food waste, and green waste. 2011AP 3/7/12 Tr. at 100:16-17, 102:9-12 (Miller).

350. Putrescible waste is of one of the greatest concerns because it decomposes and causes odors that burden the community. 2011AP 3/7/12 Tr. at 23:5-7, 98:11-14, 102:9-12 (Miller).

351. Currently, all putrescible waste that is not burned or recycled is taken to the WGS. 2011AP 1/11/12 Tr. at 68:11-15 (Steinberger); 2011AP 4/11/12 Tr. at 114:9-14, 123:20-24 (Steinberger).

352. The Applicant and private business engage in various efforts to divert MSW and certain other wastes from the WGS. In 2010, the last year for which waste totals are available in the contested case proceeding, the Applicant diverted 34.4 percent of the total MSW from the WGS to H-POWER. 2011AP Ex. A27 (O'ahu MSW waste stream chart). In 2010, the Applicant also diverted 36.9 percent of the total MSW from the WGS through general material recycling. 2011AP Ex. A27 (O'ahu MSW waste stream chart). In May 2010, the Applicant accomplished island wide-expansion of its curb-side green waste recycling program to 160,000 residences. 2011AP Steinberger Written Direct Testimony at 19 (¶ 56). The City has a program of

community recycling bins to encourage schools to recycle cardboard, as well as plastic bottles and cans. 2011AP Steinberger Written Direct Testimony at 20-21 (¶¶ 61-62).

353. Despite these efforts, in 2010 the WGS� still accepted 163,736 tons of MSW. 2011AP Ex. A27 (O`ahu MSW waste stream table).

354. The continued volume of MSW at the WGS� is due, in part, to the fact that the City is behind other municipalities with respect to its recycling efforts. 2011AP 4/4/12 Tr. Supp. at 12:5-6 (Gill).

Sewage Sludge and Biosolids

355. The record shows that particular areas for improvement are the sewage sludge and biosolids programs. 2011AP 1/11/12 Tr. at 68:13-15 (Steinberger); 2011AP 1/25/12 Tr. 54:3, 54:11-13 (Chang).

356. Sewage sludge refers to the raw sludge from wastewater prior to processing in a treatment system where the biosolids are extracted. 2011AP 4/11/12 Tr. at 77:19-22 (Steinberger).

357. As of 2011, approximately 65 percent of the island's generated sewage sludge goes to the WGS�. 2011AP 1/11/12 Tr. at 68:13-15 (Steinberger). The Applicant took 15,000 to 20,000 tons per year of sewage sludge to the WGS�. 2011AP Steinberger Written Direct Testimony at 24 (¶ 74).

358. Sewage sludge can be burned and that other municipalities do burn sewage sludge. As of the close of evidence in this matter, the Applicant did not burn

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sewage sludge. 2011AP 1/25/12 Tr. 54:3, 54:11-13 (Chang); *See also* 2011AP 1/11/12 Tr. 68:12-15, 17 (Steinberger).

359. Biosolids are what can be extracted from the sludge and left after exiting a treatment system. 2011AP 4/11/12 Tr. at 77:22-24 (Steinberger). Class A biosolids may be used as a “growth enhancer,” similar to fertilizer. 2011AP 4/11/12 Tr. at 78:3-4, 79:12-16 (Steinberger). Class B biosolids have restricted uses, such as spreading over forage crops for cattle. 2011AP 4/11/12 Tr. at 78.4, 80:16-19 (Steinberger).

360. While other municipalities began biosolids programs in the 1970s and 1980s, the Applicant did not establish a biosolids program for Honolulu until 2006. 2011AP Ex. K189 at 1 (Los Angeles biosolids webpage); 2011AP Ex. K190 at 2 (King County biosolids webpage); 2011AP Ex. K148 at 10 (Parametrix alternatives memorandum); 2011AP 3/7/12 Tr. at 139:11-140:4 (Miller). Approximately 35 percent of the island’s sewage sludge was reused as biosolids. 2011AP 1/11/12 Tr. at 68:13-15 (Steinberger).

361. The City’s current alternative sewage sludge and biosolids management includes a digester or “egg” at the Synagro facility located at 1350 Sand Island Parkway, Honolulu, Hawai‘i 96819 (“Synagro Facility”). 2011AP 4/11/12 Tr. at 179:4-9 (Steinberger). This facility can only handle approximately 20,000 tons per year of sewage sludge. 2011AP Steinberger Written Direct Testimony at 23 (¶ 71).

362. The Applicant has conducted studies on sewage sludge management. Those studies recommended incineration at H-POWER and a second digester at the Synagro Facility. 2011AP 4/11/12 Tr. at 178:6-7, 178:20-179:3 (Steinberger).

363. Approximately 65 percent of the island's generated sewage sludge goes to the WGSL. This is inconsistent with best practices and with the national standard. 2011AP 1/11/12 Tr. at 68:13-15 (Steinberger); 2011AP 3/7/12 Tr. at 22; 18-20, 96:4-7, 98:17-22, 139:11-140:4 (Miller).

Food Waste and Green Waste

364. Another area for improvement is food waste recycling. At the close of evidence, the Applicant had no food waste collection program. 2011AP Ex. K195 at 2, 4 (12/09 food waste article); 2011AP Ex. K148 at 4 (Parametrix alternatives memorandum). Although the Applicant has entered into a contract for an In-Vessel Conversion Facility, which was expected be able to process green waste, food waste and biosolids, the facility was not expected to be operational until early 2013. 2011AP Steinberger Written Direct Testimony at 20 (§ 58).

365. Food waste can be disposed at H-POWER. 2011AP 1/11/12 Tr. at 71:7-10 (Steinberger); 2011AP 4/11/12 Tr. at 114:25-115:5, 123:23-24 (Steinberger).

366. Green waste that is not composted can be disposed of at H-POWER.

Medical Waste

367. Another area for improvement is the disposal of medical waste. 2011AP Ex. K247 at 613 (Sharma, Geoenvironmental Engineering). While the prevailing trend is to burn medical waste, the Applicant continues to take medical waste to the WGS.

ALTERNATIVE MEANS OF DIVERTING SEWAGE SLUDGE, FOOD WASTE, AND GREEN WASTE FROM THE WGS

368. The Applicant will have the ability to recycle green waste, food waste, and biosolids through its In-Vessel Conversion Facility, which is scheduled to be operational in 2013. 2011AP 4/11/12 Tr. at 79:2-3, 87:25-88:2, 176:11-13 (Steinberger); 2011AP Steinberger Written Direct Testimony at 20 (¶ 58); 2011AP Ex. K148 at 4 (Parametrix alternatives memorandum).

369. The facility will be able to take 15,000 to 20,000 tons of sewage sludge annually. 2011AP 4/11/12 Tr. at 177:3-10 (Steinberger).

370. In addition to the In-Vessel Conversion Facility, the Applicant is also seeking to construct a second "egg" digester at its Sand Island facility. 2011AP 4/11/12 Tr. at 179:10-11 (Steinberger).

371. The second digester would provide redundancy for the existing facility and "take the over-capacity off the current digester." 2011 AP 4/11/12 Tr. at 179:6-9 (Steinberger).

372. These facilities will provide alternatives to incineration that might allow the City to achieve a higher and better use of sewage sludge, green waste, and food waste through recycling or reuse. 2011AP 3/7/12 Tr. at 140:14-141:12, 176:22-177:1, 210:14-22 (Miller).

373. All of the biosolids that are produced on O`ahu will ultimately go into some type of beneficial reuse as a class A biosolid. The product will be distributed as a plant growth enhancer. 2011AP 4/11/12 Tr. 79:3-6, 81:19-20 (Steinberger).

374. Until the Applicant achieves that goal, burning sewage sludge, any biosolids that are not beneficially reused, green waste, and food waste at H-POWER is a better use of those resources than landfilling them. 2011AP 3/7/12 Tr. at 176:22-177:1 (Miller).

375. The Applicant is required to continue with its efforts to use alternative technologies to provide a comprehensive waste stream management program that includes H-POWER, plasma arc, plasma gasification and recycling technologies, as appropriate. The Applicant is also required to continue its efforts to seek beneficial reuse of stabilized, dewatered sewage sludge. *See* Condition No. 6.

ADDITIONAL CAPACITY AT H-POWER

376. The existing H-POWER facility requires pre-preparation of waste so that it can be accommodated in the burn unit. 2011AP 1/11/12 Tr. at 65:14-17

(Steinberger). All non-burnable materials need to be separated out. 2011AP 1/11/12 Tr. Docket No. SP09-403 Department of Environmental Services, City and County of Honolulu

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at 65:18-21 (Steinberger). The raw MSW comes through a tipping floor and goes through a processing unit that develops "RDF," or refuse-derived fuel. 2011AP 1/11/12 Tr. at 65:22-66:1 (Steinberger). The RDF goes into a holding barn and the material, the residue, and any recyclable material are separated. 2011AP 1/11/12 Tr. at 66:1-4 (Steinberger). This pre-preparation requires worker handling of the waste. 2011AP 1/11/12 Tr. at 66:18-22 (Steinberger).

377. Worker handling of the waste has been proffered as the reason the Applicant and Covanta, the H-POWER operator, have hesitated to take sewage sludge and medical waste in the past. 2011AP 4/11/12 Tr. at 170:22-171:10 (Steinberger).

378. No one from Covanta testified in these proceedings.

379. At the close of evidence, a third H-POWER boiler was expected to be operational by October or November 2012. 2011AP 4/11/12 Tr. at 176:7-10, 211:12-15 (Steinberger).

380. The third boiler was anticipated to have the capacity to take 300,000 tons of MSW a year. 2011AP Steinberger Written Direct Testimony at 18 (¶ 47, 50); 2011AP 4/11/12 Tr. at 84:22-24 (Steinberger).

381. With the third boiler, the Applicant represented that it will achieve a diversion rate of 90 percent. (2011AP Ex. K251 at 1-2 (5/5/11 ENV press release).

382. In 2010, the last year for which waste totals are available, the WGSL accepted 163,736 tons of MSW. 2011AP Ex. A26 (O`ahu waste stream table).

383. The third boiler is known as a "mass burn unit." 2011AP 1/11/12 Tr. at 65:9-10 (Steinberger). A mass burn unit can accept larger pieces of material, such as furniture, mattresses, and carpet, and requires less pre-preparation of waste. 2011AP 1/11/12 Tr. at 66:8-10 (Steinberger). With less pre-preparation, there is less worker interaction with the waste. 2011AP 1/11/12 Tr. at 66:18-21 (Steinberger).

384. With the third boiler, the Applicant will have the capacity to burn the 15,000 to 20,000 tons of sewage sludge presently disposed of at the WGSL. 2011AP Steinberger Written Direct Testimony at 23 (¶ 71).

385. The Applicant had instituted a change order to be able to burn sewage sludge. 2011AP 4/11/12 Tr. at 90:9-10, 90:20-21 (Steinberger).

386. With the third boiler operational, the Applicant could stop sending sewage sludge to the WGSL by fall 2012. 2011AP 4/11/12 Tr. at 90:3-20, 174:1-6, 203:25 (Steinberger).

387. The third boiler will also have the capacity to burn the 10,000 tons of medical waste that currently goes to the WGSL. 2011AP 1/11/12 Tr. at 75:13-18 (Steinberger); 2011AP 4/11/12 Tr. at 163:12-16 (Steinberger).

388. With the third boiler operational, the Applicant could stop sending medical waste to the WGS� by fall 2012. 2011AP 1/11/12 Tr. 75:19-22 (Steinberger); 2011AP 4/11/12 Tr. 171:16-172:10, 196:20-24 (Steinberger); *cf.* 2011AP 3/7/12 Tr. at 209:12-25 (Miller).

389. With the added capacity provided by the third H-POWER boiler, the Applicant will not need to landfill putrescible waste or any combustible MSW. 2011AP 3/7/12 Tr. at 22:24-23:7 (Miller).

390. The remaining items that will not be accepted at H-POWER after the third boiler becomes operational will consist primarily of materials that cannot be combusted. 2011AP 1/11/12 Tr. at 77:7-13 (Steinberger).

391. Some of these materials can go to the PVT C&D landfill, including resins and chemical debris and petroleum contaminated soil. 2011AP 1/11/12 Tr. at 47:19-22, 145:4-146:1 (Steinberger); 2011AP 1/25/12 Tr. at 12:2-3, 44:12-14 (Chang).

392. After the third boiler is operational, but before a new landfill is operational, the only time sewage sludge and other putrescible waste or any combustible MSW would need to go to the WGS� is (1) during times when H-POWER is down for maintenance and cannot accept waste or (2) when there are wastes reasonably related to a public emergency, such as disaster debris, that cannot be

disposed of at H-POWER. 2011AP 4/11/12 Tr. at 118:9-15, 125:15-126:4, 189:13-17, 201:20-202:1 (Steinberger); 20112AP 3/7/12 Tr. at 24:23-24:7 (Miller).

393. The WGS� could be permitted by the DOH to accept waste for those specific contingencies. 2011AP 1/25/12 at 54:20-24, 55:4-9 (Chang).

394. With respect to H-POWER downtime in particular, the bypass waste should be minimal. 2011AP 3/7/12 Tr. at 100:10-12 (Miller).

395. H-POWER is generally burning twenty-four hours a day, seven days a week. 2011AP Ex. K220 at 220:23-223:1 (7/1/09 Tr.: Doyle); 2011AP 4/23/12 Tr. at 23:27 (Miller).

396. Only one H-POWER boiler is generally taken offline at a time and total shutdowns are typically not required. 2011AP Ex. K220 at 223:6-9 (7/1/09 Tr.:Doyle); cf. 2011AP 3/7/12 Tr. at 101:4-8 (Miller).

397. Unexpected shutdowns at waste-to-energy facilities are rare. 2011AP 3/7/12 Tr. at 101:12-14 (Miller).

398. H-POWER has to be reliable and predictable because, with the addition of the third boiler, it will be providing 8 percent of O`ahu's power. 2011AP Ex. K251 at 1-2 (5/5/11 ENV press release).

399. Because putrescible waste decomposes, ending the acceptance of putrescible waste at the WGS� would likely eliminate more than 90 percent of the odor issues. 2011AP 3/76/12 Tr. 206:6-10 (Miller).

NEED FOR THE EXPANSION OF THE WGS�

400. The proposed expansion of the WGS� is needed because the WGS� remains a critical part of the City's overall integrated solid waste management efforts. 2011AP Steinberger Written Direct Testimony at 2, 4.

401. As of March 19, 2009, there was approximately 12 months of landfill airspace capacity remaining in the MSW portion of the current special use permit area and approximately 24 months of landfill airspace capacity remaining in the ash portion of the existing special use permit area of 107.5 acres. 2011AP 6/24/09 Tr. at 81:22-82:6, 83:1-14 (Whelan).

402. The WGS� is the only permitted public MSW facility on the island of O`ahu. Thus, the WGS� is the only landfill option for disposal of MSW for the general public and the only permitted repository for the ash produced by H-POWER. 2011AP 7/1/09 Tr. at 181:20-183:4 (Doyle); 2011AP 1/25/12 Tr. at 58:22-25, 59:1-9 (Chang).

403. In addition to MSW and ash, other items that cannot be recycled or burned at H-POWER are deposited at the WGS�. At the time of the contested case hearing on the 2011 Application, items such as screenings and sludge from sewage

treatment plants, animal carcasses, tank bottom sludge, contaminated food waste that cannot be recycled, medical sharps, auto shredder residue, and contaminated soil that is below certain toxicity levels were landfilled at the WGS. 2011AP 1/25/12 Tr. at 10:6-12:14 (Chang); 2011AP 4/11/12 Tr. at 118:16-119:23 (Steinberger).

THE CITY'S ADDITIONAL SITE SELECTION EFFORTS

404. Condition No. 1 of the Planning Commission's 2009 Decision required the City to begin to identify and develop one or more new landfill sites that shall either replace or supplement the WGS on or before November 1, 2010. 2011AP Ex. K12 at 25 to 26 (Planning Commission Decision)

405. Condition No. 4 of the LUC's 2009 Order directed that, "On or before November 1, 2010, the Applicant shall begin to identify and develop one or more new landfill sites that shall either replace or supplement the WGS. The Applicant's effort to identify and develop such sites shall be performed with reasonable diligence...." 2011AP Ex. K15 at 6 (§ 4) (LUC 10/22/09 Order).

406. Thus, as of October 22, 2009, the Applicant knew or should have known that it needed to exert reasonable diligence in identifying and developing a new landfill site to replace or supplement the WGS.

407. As part of preparing the updated Integrated Solid Waste Management Plan, the City allotted funds in the Fiscal Year 2010 budget to conduct a

site selection study for a secondary landfill on O`ahu. The Landfill SSC was subsequently formed to carry out this process. 2011AP Steinberger Written Direct Testimony at 11; 2011AP 1/11/12 Tr. at 54:24-55:6 (Steinberger).

408. Twelve members served on the Landfill SSC. They were tasked with providing advisory recommendations concerning the selection of a future site for landfill to replace or supplement the WGSF by accepting MSW, ash and residue from facilities such as H-POWER, and C&D debris for the island of O`ahu. 2011AP Steinberger Written Direct Testimony at 11-12.

409. Under this process, the Landfill SSC would rank numerous sites according to criteria that it determined most appropriate for landfill sites to accommodate all three waste streams. 2011AP Steinberger Written Direct Testimony at 12.

410. The Applicant contracted with RMTC in June 2011 to assist the Landfill SSC with this process, specifically to research and provide the information required or requested by the members. Id.

411. The Landfill SSC met on January 20, 2011; February 10, 2011; March 10, 2011; March 31, 2011; May 12, 2011; July 19, 2011; March 16, 2012; and April 20, 2012. 2011AP Exs. A31, A47, and K258.

412. Over the course of multiple meetings, the Landfill SSC discussed numerous criteria for a new landfill, including, but not limited to the following:

- Location relative to identified disamenities
- Location relative to H-POWER
- Effect of precipitation on landfill operations
- Landfill development operation and closure costs
- Displacement costs
- Precipitation
- Groundwater contamination
- Design issues
- Access issues
- Proximity to other land uses (e.g., residences, institutions)
- Traffic impacts on residential neighborhoods
- Infrastructure availability
- “Those criteria impacting people that live here 365 days a year”
- Feasibility and cost issues
- Infrastructure, engineering, and sustainability issues
- Wind direction issues related to closeness to other activities
- Impact on agricultural lands

2011AP Steinberger Written Direct Testimony at 12-13; *See also* 2011AP Ex. A31.

413. The Landfill SSC began by working with potential landfill sites identified by the City in previous studies. However, at the sixth meeting, the Landfill SSC requested that RMTC research and provide information on and analyses of additional sites to ensure a thorough vetting of appropriate sites on O`ahu. Specifically, they tasked RMTC to research and include for consideration sites that are above or cross the no-pass or underground injection control (“UIC”) line. The City had not considered these sites because of its policy not to site landfills above the no-pass or UIC line to

protect the island's drinking water sources. The Landfill SSC also asked RMTC to review the BWS capture zone maps and identify if there were any 100-acre or larger parcels that could be included on the list of potential landfill sites, even if the sites were above the no-pass or UIC line. 2011AP Steinberger Written Direct Testimony at 13-14; *See also* 2011AP 4/4/12 Tr. at 40:1-41:14.

414. The Landfill SSC also developed exclusionary criteria or factors for sites above the no-pass or UIC line based on the following information:

- State Land Use Districts
- Groundwater resources
- Land Ownership
- United States Fish & Wildlife Services Critical Habitat
- State Natural Area Reserve System
- Impaired Water Bodies
- Agricultural Land Ratings
- Commission on Water Resource Management Well Data
- Criteria protecting airports and airfields with a 10,000 linear foot buffer

2011AP Steinberger Written Direct Testimony at 14; *See also* 2011AP 4/4/12 Tr. at 42:1-45:23.

415. Upon applying the exclusionary criteria, RMTC presented the Landfill SSC with two additional sites for consideration: (1) the Kahe Point Power Generating Station owned by Hawaiian Electric Company; and (2) the Makaīwa Hills subdivision owned by the James Campbell Trust Estate. In addition, the second site was found to border the USFWS-designated critical habitat of the *Isodendron pyrifolium*

(critically imperiled Hawaiian shrub). RMTC noted that both sites should be considered as “non-sites” due to either existing or pending land uses. 2011AP Steinberger Written Direct Testimony at 14.

416. After discussion of these results, the Landfill SSC asked RMTC to undertake another review of potential sites, including the following land areas:

- Parcels that are 90 acres or more, but less than 100 acres in size;
- Land that is owned by the State of Hawai‘i, including agricultural district land, conservation district land, and land that is within a critical habitat; and
- Land that is outside of well capture zones and well buffer zones but within the no-pass or UIC line

This additional request delayed final application of the criteria and its recommendations. 2011AP Steinberger Written Direct Testimony at 14-15; *See also* 2011AP Ex. A31.

417. At the time of the contested case hearing on the 2011 Application, the Landfill SSC’s meetings were still ongoing. 2011AP Steinberger Written Direct Testimony at 15.

THE TIME REQUIRED TO SITE AND DEVELOP A NEW LANDFILL

418. It took the Applicant approximately 2 1/2 years to identify, permit, and have the WGSF operational. 2011AP Ex. K220 at 244:16-19 (7/1/09 Tr.:Doyle).

419. There have been different estimates regarding the minimum time it will take to site and develop a new landfill, ranging between as little as three to five years, to as much as a minimum of seven years.

420. The three to five years estimate was proffered by Mr. Miller, who was admitted as an expert witness in solid waste management, including landfill siting and design and comprehensive solid waste management. According to Mr. Miller, it should take 18 months to two years for design, design review, and development of a landfill. The EIS process should take a year to a year and a half. The addition of land acquisition to the process would probably take a total of three to five years. 2011AP 3/7/12 Tr. at 17:25-19:25, 199:24-200:1, 201:1-24, 202:14-203:6 (Miller).

421. Mr. Miller's estimate was consistent with an estimate provided by Mr. Doyle. Mr. Doyle indicated that it would take "at least three, probably four years just to get ourselves up and operational on that landfill site." 2011AP Ex. K85 at 95:6-8, 100:23-25 (3/27/03 Tr.:Doyle)

422. The five to seven years estimate was proffered by Ms. Marsters, who stated that she believes it will take "somewhere in excess of five to seven years." 2011AP 4/4/12 Tr. at 56:17-18 (Marsters).

423. The minimum seven years estimate was proffered by Mr. Steinberger. This estimate was based on tasks necessary to start operation at a new site

which include, but are not limited to, compliance with HRS chapter 343, land acquisition, engineering studies, construction and bid documents, and other approvals. 2011AP 4/11/12 Tr. at 122:25 (Steinberger); Steinberger Written Direct Testimony at 15-16.

424. Based on the evidence, the LUC finds that a minimum of five to seven years is a reasonable time within which a landfill can be sited and developed if the Applicant proceeds with reasonable diligence.

425. The LUC finds that, as of the date of this Order, the March 2, 2028 closure date imposed below affords more than seven years to site and develop a new landfill and as such, constitutes a reasonable amount of time.

426. The LUC further finds that when calculated from October 22, 2009 (the most recent date upon which the Applicant knew or should have known that it needed to exert reasonable diligence in identifying and developing a new landfill site to replace or supplement the WGSL) to the March 2, 2028 closure date imposed below, the Applicant will have been afforded a minimum of 18 years to site and develop a new landfill.

CONFORMANCE WITH THE SPECIAL USE PERMIT GUIDELINES

427. HAR § 15-15-95(c) sets forth the special use permit guidelines in determining an “unusual and reasonable use” with the State Land Use Agricultural District as follows:

1. The use shall not be contrary to the objectives sought to be accomplished by chapters 205 and 205A, HRS, and the rules of the LUC.
2. The proposed use would not adversely affect surrounding property.
3. The proposed use would not unreasonably burden public agencies to provide roads and streets, sewers, water, drainage, and school improvements, and police and fire protection.
4. Unusual conditions, trends, and needs have arisen since the district boundaries and rules were established.
5. The land upon which the proposed use is sought is unsuited for the uses permitted within the district.

428. Based on the evidence in the record and the findings set forth above, and subject to the conditions imposed below, the LUC finds that the expansion of the WGS� is not contrary to the objectives sought to be accomplished by HRS chapter 205 and the rules of the LUC.

429. Based on the evidence in the record and the findings set forth above, and subject to the conditions imposed below, the LUC finds that the expansion of the WGS� is not contrary to the to the applicable objectives, policies, and guidelines

of the Coastal Zone Management program under HRS chapter 205A. 2008AP Ex. A1 at 8-12 to 8-25 (2008 FEIS).

430. Based on the evidence in the record and the findings set forth above, the LUC finds that the expansion of the WGSL will not adversely affect surrounding properties as long as (1) it is operated in accordance with the conditions imposed below and government approvals and requirements; and (2) mitigation measures are implemented in accordance with the Applicant's representations in the 2008 FEIS.

431. Based on the evidence in the record and the findings set forth above, and subject to the conditions imposed below, the LUC finds that the expansion of the WGSL will not unreasonably burden public agencies to provide roads and streets, sewers, water, drainage, and school improvements, and police and fire protection.

432. Based on the evidence in the record and the findings set forth above, unusual conditions, trends, and needs have arisen since the district boundaries and regulations were established that requires the expansion of the WGSL.

433. Based on the evidence in the record and the findings set forth above, the land on which the expansion of the WGSL is proposed is unsuited for agricultural purposes.

LUC 2019 PROCEEDINGS

PROCEDURAL MATTERS

434. On September 11, 2019, the LUC received a portion of the record of the Planning Commission proceedings on remand regarding the Applicant's 2008 and 2011 Applications

435. On September 20, 2019, the LUC received the remaining portion of the record, thereby completing the record.

436. On September 17, 2019, Intervenor KOCA/Shimabukuro filed Objections to the Planning Commission's Findings of Fact, Conclusions of Law, and Decision and Order, Dated June 10, 2019; Declaration of Christopher T. Goodin; Exhibits 1-7; and Certificate of Service.

437. On September 17, 2019, Intervenor KOCA/Shimabukuro filed a Summary of Objections to the Planning Commission's Findings of Fact, Conclusions of Law, and Decision and Order, Dated June 10, 2019; and Certificate of Service.

438. On September 24, 2019, Intervenor Hanabusa filed a Position Statement and Objections to the Planning Commission's Findings of Fact and Conclusions of Law, and Decision and Order, Dated June 10, 2019; and Certificate of Service.

439. On September 24, 2019, Intervenor Hanabusa filed an Amended Certificate of Service.

440. On September 25, 2019, the Applicant filed a Response to Intervenor Ko Olina Community Association and Maile Shimabukuro's Objections to Planning Commission's Findings of Fact, Conclusions of Law, and Decision and Order, Dated June 10, 2019; Declaration of Kamilla C.K. Chan; Exhibits 1-7; and Certificate of Service.

441. On September 25, 2019, Intervenor Schnitzer filed Comments to Intervenor Ko Olina Community Association and Maile Shimabukuro's Objections to the Planning Commission's Findings of Fact, Conclusions of Law, and Decision and Order, Dated June 10, 2019; and Certificate of Service.

442. On October 1, 2019, OP filed a Memorandum recommending approval of the Special Permit Application, SP09-403, as approved by the Planning Commission, with additional and amended conditions.

443. On October 2, 2019, Intervenor KOCA/Shimabukuro filed a Reply in Support of Their Objections to Planning Commission's Findings of Fact, Conclusions of Law, and Decision and Order, Dated June 10, 2019; and Certificate of Service.

444. On October 4, 2019, Intervenor Schnitzer filed Comments to Intervenor Colleen Hanabusa's Position Statement and Objections to the Planning

Commission's Findings of Fact, Conclusions of Law, and Decision and Order, Dated June 10, 2019, Filed Herein September 24, 2019; and Certificate of Service.

445. On October 7, 2019, Intervenor KOCA/Shimabukuro filed a Reply to the State Office of Planning's October 1, 2019 Letter Regarding the Planning Commission's Findings of Fact, Conclusions of Law, and Decision and Order, Dated June 10, 2019; Declaration of Christopher T. Goodin; Exhibit 1; and Certificate of Service.

446. On October 7, 2019, the Applicant filed a letter providing comments on the recommendations in the Office of Planning's memorandum dated October 1, 2019.

447. On October 9, 2019, the LUC met at the Airport Conference Center, Room #IIT#3, Honolulu Hawai'i, to consider the Planning Commission's Findings of Fact, Conclusions of Law, and Decision and Order relating to proceedings on remand regarding the Applicant's 2008 and 2011 Applications.² Kamilla C.K. Chan, Esq.,

² At the start of the meeting, Commissioner Okuda disclosed that he was familiar with Intervenor KOCA/Shimabukuro's counsel as a fellow attorney but did not socialize with him. Commissioner Okuda further disclosed that he represents the Tojo Revocable Trust in two actions involving the City and County of Honolulu Department of Planning and Permitting ("DPP"). He noted that his knowledge of Mr. Chipchase and these two cases would not affect his decision-making in this matter.

Commissioner Chang disclosed that she was part of a litigation trial team in the representation of a defendant in federal court involving the WGS�. She confirmed that this would not affect her ability to remain fair and impartial in this case.

Chair Scheuer disclosed that his wife worked at the Department of Environmental Services in the Recycling Division for three years from 1999 to 2002 but had no involvement with the WGS�. He
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appeared on behalf of the Applicant. Calvert G. Chipchase, Esq., and Christopher T. Goodin, Esq., appeared on behalf of Intervenor KOCA/Shimabukuro. Richard N. Wurdeman, Esq., appeared on behalf of Intervenor Hanabusa. Ian L. Sandison, Esq., appeared on behalf of Intervenor Schnitzer. Dina Wong appeared on behalf of the DPP. Bryan C. Yee, Esq.; Mary Alice Evans; and Aaron Setogawa appeared on behalf of OP.

448. At the October 9, 2019, meeting, OP filed a letter dated October 8, 2019, notifying the LUC that OP and the Applicant had jointly agreed to amended conditions to the Planning Commission's Findings of Fact, Conclusions of Law, and Decision and Order.

449. At the October 9, 2019, meeting, the LUC heard public testimony from Thomas-Ryan Cleek³ and Cynthia K. L. Rezentes.

450. Following presentations by the Applicant, Intervenor Schnitzer, Intervenor KOCA/Shimbakuro, Intervenor Hanabusa, and OP, the LUC recessed the matter to the following day, October 10, 2019.

451. On October 10, 2019, the LUC resumed consideration of the Planning Commission's Findings of Fact, Conclusions of Law, and Decision and Order

additionally disclosed that he went to 'Iolani with Intervenor Maile Shimabukuro. He believed that neither of these events would prevent him from being fair and impartial in this matter. The parties voiced no objections to the continued participation of Commissioners Okuda, Chang, and Scheuer in these proceedings.

³ Mr. Cleek filed written testimony with the LUC via e-mail on October 7, 2019.

relating to proceedings on remand regarding the Applicant's 2008 and 2011 Applications at the Airport Conference Center, Room #IIT#3, Honolulu Hawai'i, with the parties' same representatives in attendance.⁴ Upon resumption of the proceeding, each party was afforded an opportunity to provide rebuttal to the arguments of the other parties made during their respective presentations as well as to provide final comments.

452. Thereafter, the LUC entered into deliberations on the matter.

Following discussion, a motion was made and seconded to approve with modifications the Planning Commission's recommendation to approve the special use permit with a closure date of the WGSJ of March 2, 2028. After additional discussion, a vote was taken on this motion. There being a vote tally of 6 ayes and 2 nays, the motion passed.⁵

453. Thereafter, the LUC Chair requested that no later than October 18, 2019, the Applicant, Intervenor KOCA/Shimabukuro, Intervenor Schnitzer, Intervenor Hanabusa, and OP provide the LUC with proposed findings of fact and conclusions of law consistent with the LUC's decision on this matter.

454. On October 17, 2019, Intervenor Hanabusa filed Further Objections to the LUC's Approval With Modifications of Special Use Permit and Any Proposed

⁴ There was no representative of the DPP appearing before the LUC at the continued meeting.

⁵ There are currently eight sitting members on the LUC. The ninth seat is currently vacant.
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Findings of Fact, Conclusions of Law, and Decision and Order, and the Final Findings of Fact and Conclusions of Law, and Decision and Order to be Entered by the LUC.

455. On October 18, 2019, the Applicant and Intervenor KOCA/Shimabukuro each filed a Proposed Findings of Fact, Conclusions of Law, and Decision and Order.

456. On October 18, 2019, Intervenor Schnitzer filed a Jointer in the Applicant's Proposed Findings of Fact, Conclusions of Law, and Decision and Order.

457. On October 18, 2019, OP filed a letter stating that as it is not a party in this matter, it will not be filing a Proposed Findings of Fact, Conclusions of Law, and Decision and Order.

458. On October 31, 2019, the LUC held a meeting to adopt the form of the Order simultaneously by interactive conference technology, pursuant to HRS § 92-3.5. The meeting utilized the Video Conference Centers located at the Kalanimoku Building, State of Hawai'i Department of Land and Natural Resources Conference Room #132, Honolulu, Hawai'i; the Wailuku State Office Building, Wailuku, Hawai'i; the Hilo State Office Building, Hilo, Hawai'i; and the Līhu'e State Office Building, Līhu'e, Hawai'i. At the meeting, the LUC heard public testimony from Katherine Kamada and Lily Cabinatan. Thereafter, a motion was made and seconded to adopt the form of the Order with an amendment to Condition No. 16 to require that the Applicant

have a public hearing every three months in either Wai`anae, Mā`ili, or Nānākuli to report on the status of their efforts to either reduce or continue the use of the WGS�. After discussion, a vote was taken on this motion. There being a vote tally of 8 ayes and 0 nays, the motion passed.

RULINGS ON PROPOSED FINDINGS OF FACT AND CONCLUSIONS OF LAW

Any of the proposed findings of fact submitted by any party not already ruled upon by the LUC by adoption, or rejected by clearly contrary findings of fact, are hereby denied and rejected.

Any conclusion of law herein improperly designated as a finding of fact should be deemed or construed as a conclusion of law; any finding of fact herein improperly designated as a conclusion of law should be deemed or construed as a finding of fact.

CONCLUSIONS OF LAW

1. Subject to HRS § 205-6, the county planning commission may permit certain unusual and reasonable uses within agricultural and rural districts other than those for which the district is classified. *See* HRS § 205-6(a).
2. The WGS� requires a special use permit for its operations.
3. Pursuant to HRS § 205-6(d), special permits for land the area of which is greater than fifteen acres shall be subject to approval by the LUC.

4. Pursuant to HAR § 15-15-95(b), special permits for areas greater than fifteen acres require approval of both the county planning commission and the LUC.

5. Because the Applications seek a special use permit for land the area of which is greater than fifteen acres, the LUC has jurisdiction over this matter pursuant to HRS § 205-6 and HAR § 15-15-95.

6. Pursuant to HAR § 15-15-95(c), the following guidelines have been established for purposes of determining whether a proposed use is “unusual and reasonable:”

- (a) The use shall not be contrary to the objectives sought to be accomplished by chapters 205 and 205A, HRS, and the rules of the LUC.
- (b) The proposed use would not adversely affect surrounding property.
- (c) The proposed use would not unreasonably burden public agencies to provide roads and streets, sewers, water, drainage, and school improvements, and police and fire protection.
- (d) Unusual conditions, trends, and needs have arisen since the district boundaries and rules were established.
- (e) The land upon which the proposed use is sought is unsuited for the uses permitted within the district.

7. Based upon the record and files herein and the findings set forth above, and pursuant to HRS § 205-6 and HAR § 15-15-95, the LUC concludes that the

WGSL is an “unusual and reasonable use” within the State Land Use Agricultural District.

8. Within forty-five days after receipt of the complete record from the county planning commission, the LUC shall act to approve, approve with modification, or deny the petition. *See* HRS § 205-6(e).

9. The LUC may impose additional restrictions as may be necessary or appropriate in granting the approval, including the adherence to representations made by the Applicant. *See* HRS § 205-6(d).

10. The LUC is authorized to impose restrictive conditions in its approval of special use permits provided its decision to impose such a restriction is supported by substantial evidence in the record. *Dept. of Environmental Services v. Land Use Comm’n*, 127 Hawai`i at 13, 275 P.3d at 817.

11. Based upon the record and files herein and the findings set forth above, the LUC concludes that there is substantial evidence in the record to support the conditions imposed below, including but not limited to a March 2, 2028 closure date for the WGSL.

12. Based upon the record and files herein and the findings set forth above, the LUC further concludes that the conditions imposed below are necessary or

appropriate to protect public health, safety, and welfare, and are material to the LUC's approval.

13. Based upon the record and files herein and the findings set forth below, the LUC further concludes that the conditions imposed below are necessary or appropriate in granting the approval, including but not limited to, ensuring the adherence to representations made by the Applicant.

14. Article XI, section 1, of the Hawai'i State Constitution requires the State to conserve and protect Hawai'i's natural beauty and all natural resources, including land, water, air, minerals, and energy sources, and to promote the development and utilization of these resources in a manner consistent with their conservation and in furtherance of the self-sufficiency of the State.

15. Article XI, section 3, of the Hawai'i State Constitution requires the State to conserve and protect agricultural lands, promote diversified agriculture, increase agricultural self-sufficiency, and assure the availability of agriculturally suitable lands.

16. Article XII, section 7, of the Hawai'i State Constitution requires the LUC to protect Native Hawaiian traditional and customary rights. The State reaffirms and shall protect all rights, customarily and traditionally exercised for subsistence, cultural, and religious purposes and possessed by ahupua'a tenants who are

descendants of Native Hawaiians who inhabited the Hawaiian Islands prior to 1778, subject to the right of the State to regulate such rights.

17. The State and its agencies are obligated to protect the reasonable exercise of customarily and traditionally exercised Native Hawaiian rights to the extent feasible. *Public Access Shoreline Hawai'i v. Hawai'i County Planning Commission*, 79 Hawai'i 425, 903, P.2d 1246, *certiorari denied*, 517 U.S. 1163, 116 S.Ct. 1559, 134 L.Ed.2d 660 (1996).

18. The LUC is empowered to preserve and protect customary and traditional rights of Native Hawaiians. *Ka Pa`akai O Ka `Aina v. Land Use Commission*, 94 Hawai'i 31, 7 P.3d 1068 (2000).

DECISION AND ORDER

Having duly considered the consolidated record of proceedings, the Planning Commission's Findings of Fact, Conclusions of Law, and Decision and Order dated June 10, 2019, the oral arguments of the parties and the record and files herein, the LUC, through a motion having been duly made and seconded at a meeting conducted on October 10, 2019, in Honolulu, Hawai'i, and the motion having received the affirmative votes required by HAR § 15-15-13, and there being good cause for the motion, hereby adopts with modifications the Planning Commission's

recommendations to approve a special use permit for the WGS�, and APPROVES WITH MODIFICATIONS the Applications, subject to the following conditions:

1. The WGS� shall close by no later than March 2, 2028. The WGS� shall not accept any form of waste after March 2, 2028.
2. The Applicant shall obtain all necessary approvals from the State Department of Health, Department of Transportation, Commission on Water Resource Management, and Board of Water Supply for all onsite and offsite improvements involving access, storm drainage, leachate control, water, well construction, and wastewater disposal.
3. In accordance with Chapter 11-60.1 "Air Pollution Control," Hawai'i Administrative Rules, the Applicant shall be responsible for ensuring that effective dust control measures during all phases of development, construction, and operation of the landfill expansion are provided to minimize or prevent any visible dust emission from impacting surrounding areas. The Applicant shall develop a dust control management plan that identifies and addresses all activities that have a potential to generate fugitive dust.
4. That the City and County of Honolulu shall indemnify and hold harmless the State of Hawai'i and all of its agencies and/or employees for any lawsuit or

legal action relating to any groundwater contamination and noise and odor pollution relative to the operation of the landfill.

5. By no later than December 31, 2022, the Applicant shall identify an alternative landfill site that may be used upon closure of WGSL. Upon identification of the alternative landfill site, the Applicant shall provide written notice to the Planning Commission and the LUC.

6. The Applicant shall continue its efforts to use alternative technologies to provide a comprehensive waste stream management program that includes H-POWER, plasma arc, plasma gasification and recycling technologies, as appropriate. The Applicant shall also continue its efforts to seek beneficial reuse of stabilized, dewatered sewage sludge.

7. The Applicant shall provide semi-annual reports to the Planning Commission and the Land Use Commission regarding (a) the status of the efforts to identify and develop a new landfill site on O`ahu, (b) the WGSL's operations, including gas monitoring, (c) the Applicant's compliance with the conditions imposed herein, (d) the landfill's compliance with its Solid Waste Management Permit issued by the Department of Health and all applicable federal and state statutes, rules and regulations, including any notice of violation and enforcement actions regarding the landfill, (e) the City's efforts to use alternative technologies, (f) the extent to which

waste is being diverted from the landfill and (g) any funding arrangements that are being considered by the Honolulu City Council or the City Administration for activities that would further divert waste from the landfill.

8. Closure Sequence "A" for the existing landfill cells at WGSF as shown on Exhibit "A12" must be completed, and final cover applied, by December 31, 2012.

9. WGSF shall be operational only between the hours of 7:00 a.m. and 4:30 p.m. daily, except that ash and residue may be accepted at the Property 24 hours a day.

10. The Applicant shall coordinate construction of the landfill cells in the expansion area and operation of WGSF with Hawaiian Electric Company, with respect to required separation of landfill grade at all times and any accessory uses from overhead electrical power lines.

11. The operations of the WGSF under 2008/SUP-2 (SP09-403) shall be in compliance with the requirements of Section 21-5.680 of the Revised Ordinances of the City and County of Honolulu 1990, to the extent applicable, and any and all applicable rules and regulations of the State Department of Health.

12. The Planning Commission may at any time impose additional conditions when it becomes apparent that a modification is necessary and appropriate.

13. Enforcement of the conditions to the Planning Commission's approval of 2008/SUP-2 (SP09-403) shall be pursuant to the Rules of the Planning Commission, including the issuance of an order to show cause why 2008/SUP-2 (SP09-403) should not be revoked if the Planning Commission has reason to believe that there has been a failure to perform the conditions imposed herein by this Decision and Order.

14. The Applicant shall notify the Planning Commission and Land Use Commission of termination of the use of the Property as a landfill for appropriate action or disposition of 2008/SUP-2 (SP09-403).

15. The Applicant shall report to the public every three months on the efforts of the City Council and the City Administration in regard to the continued use of the WGSL, including any funding arrangements that are being considered by the City Council and the City Administration.

16. The Applicant shall have a public hearing every three months in either Wai'anae, Mā'ili, or Nānākuli to report on the status of their efforts to either reduce or continue the use of the WGSL.

17. If the landfill releases waste or leachate, the Applicant must immediately (a) notify the surrounding community, including the Makakilo/Kapolei/Honokai Hale, Wai'anae Coast and Nānākuli-Mā'ili Neighborhood Boards, Intervenor Schnitzer Steel Hawaii Corp., Ko Olina Community Association, Maile Shimabukuro

and Colleen Hanabusa and (b) take remedial actions to clean up the waste and to keep the waste from spreading. Such remedial actions shall include, but shall not be limited to, placing debris barriers and booms at the landfill's shoreline outfall to prevent waste from spreading into the ocean.

ADOPTION OF ORDER

This ORDER shall take effect upon the date this ORDER is certified by this Commission.

Done at Honolulu, Hawai'i, this 1st, day of November, 2019, per motion on October 10, 2019.

LAND USE COMMISSION

APPROVED AS TO FORM

STATE OF HAWAII


Deputy Attorney General

By 
JONATHAN SCHEUER
Chairperson and Commissioner

Filed and effective on:

11/1/19

Certified by:


DANIEL ORODENKER
Executive Officer



LAND USE COMMISSION
STATE OF HAWAII

2019 NOV -1 A 8:21

BEFORE THE LAND USE COMMISSION
OF THE STATE OF HAWAII

In The Matter Of The Application Of The)	DOCKET NO. SP09-403
DEPARTMENT OF ENVIRONMENTAL)	
SERVICES, CITY AND COUNTY OF)	CERTIFICATE OF SERVICE
HONOLULU)	
For A New Special Use Permit To Supersede)	
Existing Special Use Permit To Allow A 92.5-Acre)	
Expansion And Time Extension For Waimānalo)	
Gulch Sanitary Landfill, Waimānalo Gulch,)	
O'ahu, Hawai'i, Tax Map Key: 9-2-003: 072 And)	
073)	
-----In The)	
Matter Of The Application Of The)	
DEPARTMENT OF ENVIRONMENTAL)	
SERVICES, CITY AND COUNTY OF)	
HONOLULU)	
To Delete Condition No. 14 Of Special Use Permit)	
No. 2008/SUP-2 (Also Referred To As Land Use)	
Commission Docket No. SP09-403) Which States)	
As Follows:)	
"14. Municipal Solid Waste Shall Be Allowed At)	
The WGSL Up To July 21, 2012, Provided That)	
Only Ash And Residue From H-POWER Shall Be)	
Allowed At The WGSL After July 31, 2012.")	
_____)	

CERTIFICATE OF SERVICE

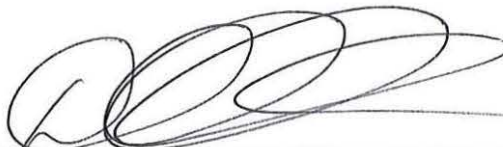
I hereby certify that a copy of the FINDINGS OF FACT, CONCLUSIONS OF LAW, AND DECISION AND ORDER APPROVING WITH MODIFICATIONS THE CITY AND COUNTY OF HONOLULU PLANNING COMMISSION'S RECOMMENDATION TO APPROVE SPECIAL USE PERMIT was served

upon the following by either hand delivery or depositing the same in the U. S. Postal Service by regular or certified mail as noted:

DEL.	MARY ALICE EVANS, Director Office of Planning P. O. Box 2359 Honolulu, Hawaii 96804-2359
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CERT. CADES SCHUTTE LLP
CHRISTOPHER G. CHIPCHASE
CHRISTOPHER T. GOODIN
1000 Bishop St. Suite 1200
Honolulu, HI 96813

Dated: November 1, 2019, Honolulu, Hawaii.

A handwritten signature in dark ink, consisting of several overlapping loops and a long horizontal stroke extending to the right.

Daniel Orodener, Executive Officer

BOARD OF WATER SUPPLY

CITY AND COUNTY OF HONOLULU
630 SOUTH BERETANIA STREET
HONOLULU, HI 96843
www.boardofwatersupply.com



November 16, 2022

RICK BLANGIARDI, MAYOR

BRYAN P. ANDAYA, Chair
KAPUA SPROAT, Vice Chair
MAX J. SWORD
NA'ALEHU ANTHONY
JONATHAN KANESHIRO

JADE T. BUTAY, Ex-Officio
DAWN B. SZEWCZYK, P.E., Ex-Officio

ERNEST Y. W. LAU, P.E.
Manager and Chief Engineer

ERWIN M. KAWATA
Deputy Manager

Roger Babcock, Jr., Ph.D., P.E.
Director
City and County of Honolulu
Department of Environmental Services

Dear Dr. Babcock,

Subject: Response to November 3, 2022 Letter Regarding the Board of Water Supply's Official Position on the Six Potential Landfill Sites

The Honolulu Board of Water Supply (BWS) is in receipt of your November 3, 2022 letter, in which the City and County of Honolulu Department of Environmental Services (ENV) "formally ask[s] for the BWS' official position on the six potential landfill sites" that were evaluated by the Landfill Advisory Committee (LAC)¹ for possible use upon the closure of the Waimanalo Gulch Sanitary Landfill and "clarity on BWS' legal authority over landfill siting."² For the reasons set forth below, the BWS does not approve any of the six proposed landfill sites that are located above (or mauka) the No Pass Zone and over Oahu's drinking water aquifer system.

The Board of Water Supply's Legal Authority Concerning Plans Proposing Waste Disposal Facilities

Safeguarding Oahu's water supply from sources of potential contamination is not a matter of discretion; it is constitutionally mandated. The Hawaii Constitution guarantees that "[a]ll public natural resources are held in trust for the benefit of the people" and directs the State, and by extension the BWS, "to protect, control and regulate the use of Hawaii's water resources for the benefit of its people." Haw. Const. art. XI, §§ 1, 7. As the largest municipal drinking water utility in Hawaii, the BWS has a constitutional public trust responsibility to protect the water resources it manages and to preserve the rights of present and future generations in the waters of Hawaii. See *Kauai Springs, Inc. v. Planning Comm'n of Cnty. of Kauai*, 133 Haw. 141, 171, 324 P.3d 951 (2014) (holding

¹ See *O'ahu Landfill Siting Study & Landfill Advisory Committee Recommendations: Final Report* (June 2022) ("LAC Final Report").

² At the October 28, 2022 meeting of the BWS Board of Directors, ENV posed similar questions during an item for information before BWS Board. However, ENV's November 3, 2022 letter is directed to the BWS Manager and Chief Engineer.

that the Hawaii State Constitution “mandates that the ‘State and its subdivisions shall conserve and protect’ the State’s water resources” (emphasis in original)). Specifically, the State and the BWS have “the duty and authority to maintain the purity and flow of our waters for future generations and to assure that the waters of our land are put to reasonable and beneficial uses.” *Id.* at 172.³ Pertinent here, drinking water is among the highest beneficial uses of groundwater. See *In re Water Use Permit Application*, 94 Haw. 97, 136-37, 9 P.3d 409 (2000).⁴

Partially because of its public trust obligation to protect Oahu’s drinking water, the BWS was granted the legal authority to “[p]rescribe and enforce rules and regulations having the force and effect of the law to carry out ... the prevention of waste and pollution of water ... and [] other matters having for their object the proper conservation and beneficial use of the water resources available for the city.” Revised Charter of the City and County of Honolulu § 7-105(j) (see also H.R.S. § 54-33). To ensure that groundwater resources utilized for domestic purposes are protected, the BWS has exercised this authority to require that waste disposal facilities, including municipal landfills, can only be sited if the plans for the same receive written approval from the BWS Manager and Chief Engineer. BWS Rules and Regulations § 3-301(1).

The BWS’ Rules and Regulations establish “No Pass Zones” which generally prohibit the installation of waste disposal facilities, including landfills, in areas that may contaminate groundwater resources used or expected to be used for domestic water supplies. See BWS Rules and Regulations Definitions, § 3-301(2).⁵ The No Pass Zone was derived from the review of geologic maps and borings that define the areas of thick caprock around Oahu. Areas that are below (or makai) the No Pass Zone are primarily located on thick caprock. The caprock formation enables the aquifer to replenish within the No Pass Zone by restricting the seaward movement of infiltrated rainwater that falls on the island. The caprock also serves as a barrier to prevent surface contamination from reaching the underlying geology. Areas that are above the No Pass Zone, have no caprock and are located directly above groundwater that is used for drinking water. When making the decision to approve or disapprove plans proposing certain waste disposal facilities, the No Pass Zone must be considered and the Manager and Chief Engineer may, at his discretion, withhold approval “if there is any basis to expect that

³ The Supreme Court of Hawaii has made clear that this responsibility is “unlimited by any surface-ground distinction,” extending to all water resources, including groundwater. *In re Water Use Permit Applications*, 94 Haw. 97, 133-135, 139, 9 P.3d 409 (2000).

⁴ State policy for water resources in Hawaii is likewise directed toward achieving the highest water quality consistent with maximum benefit to the people of the State and “shall be liberally interpreted to obtain maximum beneficial use of the waters of the State” H.R.S. § 174C-2(c).

⁵ The BWS Rules and Regulations are clear that the BWS “may establish ‘No Pass Zones’ which ... shall be used as guidelines in implementing this Section” regulating waste disposal facilities. BWS Rules and Regulations § 3-301(2) (emphasis added). No Pass Zone “means areas in which the installation of waste disposal facilities, which may contaminate groundwater resources used or expected to be used for domestic water supplies, shall be prohibited.” *Id.* at Definitions (emphasis added).

the operation of the proposed waste disposal facility and any wastewater therefrom may to any degree affect the quality and/or quantity of water resources used or expected to be used for domestic water.” BWS Rules and Regulations § 3-301(2)-(3).

**The Board of Water Supply’s Response to the Six Potential Landfill Sites
Evaluated by the Landfill Advisory Committee**

All six of the proposed landfill sites are located above the BWS’ No Pass Zone, and all six of the proposed landfill sites are located over Oahu’s hydrogeologically-connected drinking water aquifer system.⁶ Never has the importance of this groundwater aquifer been more apparent, and never has our responsibility to protect it been more paramount. As you know, the people of Oahu are still coping with what the Hawaii Department of Health aptly described as “a humanitarian and environmental disaster” caused by fuel releases from the U.S. Navy’s Red Hill Bulk Fuel Storage Facility that resulted in the contamination of Oahu’s drinking water supply and the pollution of this island’s irreplaceable sole-source groundwater aquifer. This unfortunate environmental catastrophe is a stark reminder that we all need to be proactive in protecting all of our precious drinking water resources from underground sources of contamination. Oahu’s aquifer cannot be replaced.

As we explained in prior correspondence and presentations to the LAC, the BWS understands the need for a new landfill as well as the challenges associated with finding a new landfill site. We also recognize that modern landfill design and engineering can attempt to reduce the risk that contaminant constituents will adversely impact the environment. However, all six of the potential landfill sites evaluated by the LAC are located above the designated No Pass Zone and all six sit directly over Oahu’s drinking water aquifer system. The United States Geological Survey (USGS), citing EPA studies, has concluded that all landfills eventually will leak into the environment and that the fate and transport of leachate in the environment, from both old and modern landfills, is a potentially serious environmental problem. USGS Fact Sheet FS-040-03 (Aug. 2003).

Available data demonstrates that landfill leachates can and do contain a wide range of harmful inorganic and organic chemical constituents in varying concentrations—such as heavy metals, chlorides, volatile and semi-volatile organic, and per- and polyfluorinated substances (PFAS)—that, if released into the environment, have the potential to

⁶ Two of these landfill sites also sit directly above Oahu’s federally designated sole-source groundwater aquifer, the Southern Oahu Basal Aquifer, from which the BWS supplies 77 percent of the total island-wide water supply. In 1987, the United States Environmental Protection Agency (EPA) determined that this hydrogeologically-connected aquifer is the “principal source of drinking water” for the island, and that “[i]f contaminated, would create a significant hazard to public health.” Southern Oahu Basal Aquifer in the Pearl Harbor Area at Oahu; Principal Source Aquifer Determination, 52 Fed. Reg. 45496, at 45497 (Nov. 30, 1987).

adversely affect drinking water resources.⁷ For example, the Waimanalo Gulch Sanitary Landfill generates approximately 3.6 million gallons of leachate annually that contains elevated concentrations of heavy metals, chlorides, sodium, total dissolved solids (TDS), phenols, and amines well above their respective EPA drinking water maximum contaminant levels (MCLs).⁸ Heavy rainfall can exacerbate landfill leachate containment problems. Indeed, intense storms that occurred on Oahu in December 2010 and January 2011 resulted in the generation of additional leachate at the Waimanalo Gulch Landfill and ultimately gave rise to illegal discharges of municipal debris, medical waste, and leachate to the nearby Waimanalo Gulch stream and ultimately the Pacific Ocean.⁹ Thus, leachate from any of the proposed landfill sites would constitute a significant source of potential contamination that could impact Oahu's groundwater aquifer system.

Since Oahu's groundwater is hydrogeologically connected and groundwater is always moving, contamination in one part of the aquifer can spread to and impact other parts of the aquifer. Further, groundwater flow can be unpredictable and can move relatively quickly (greater than ten feet per day in some instances). Because of this, contaminant migration along preferential flow paths will likely elude even a robust monitoring well network, and undetected contaminants could make their way to drinking water production wells before any corrective action can occur. As a result, contamination from landfill leachate poses a considerable risk to both Oahu's groundwater aquifer and drinking water resources. If such contamination were to occur, it could—as was the case for Red Hill—eventually cause the BWS to shut down its water supply wells in the vicinity of the source of contamination at the landfill.

Accordingly, there is a compelling basis upon which to expect that any landfill sited at one of the six locations proposed by ENV may impact the quality and/or quantity of the water resources used or expected to be used as drinking water. See BWS Rules and

⁷ Aptim. 2021. First Semi-Annual 2021 Monitoring Report, Waimanalo Gulch Sanitary Landfill, Kapolei, Oahu, Hawaii. Prepared for Waste Management of Hawaii. August 2021. Submitted to the State of Hawaii Department of Health, Solid & Hazardous Waste Branch on August 23, 2021 (https://www.honolulu.gov/rep/site/env/envref/envref_docs/WGSL_1SA21_GWMMR_Final.pdf); United States Environmental Protection Agency (EPA). 2020. Interim Guidance on the Destruction and Disposal of Perfluoroalkyl and Polyfluoroalkyl Substances and Materials Containing Perfluoroalkyl and Polyfluoroalkyl Substances. Interim Guidance for Public Comment. December 18, 2020 (https://www.epa.gov/system/files/documents/2021-11/epa-hq-olem-2020-0527-0002_content.pdf); Michigan Waste & Recycling Association. 2019. Statewide Study on Landfill Leachate PFOA and PFOS Impact on Water Resource Recovery Facility Influent. Technical Report. Completed in Collaboration with Michigan Department of Environmental Quality. March 1 (Section Revision March 6) (<https://www.bridgemi.com/sites/default/files/mwra-technical-report.pdf>).

⁸ *Id.*

⁹ Complaint ¶¶ 20-25, 54-63, 82-88, *United States v. Waste Management of Haw.*, No 19-224 (D. Haw. 2019); Margo Perez-Sullivan, *EPA Resolves Clean Water Act Violations with Honolulu and Waste Management at Waimanalo Gulch Landfill*, EPA (Apr. 29, 2019), <https://www.epa.gov/newsreleases/epa-resolves-clean-water-act-violations-honolulu-and-waste-management-waimanalo-gulch>.

Roger Babcock, Jr., Ph.D., P.E.
November 16, 2022
Page 5

Regulations § 3-301(3). Upon due consideration of the requisite guidelines and pertinent factors, the BWS must disapprove all six of the proposed landfill sites above the No Pass Zone.¹⁰

The No Pass Zone was established to protect Oahu's drinking water from underground sources of contamination. The BWS continues to urge ENV to explore new landfill sites that are below the No Pass Zone, including, where appropriate, requesting additional time from the Land Use Commission to explore other siting options.

If you have any questions, please feel free to contact me at (808) 748-5061.

Very truly yours,



ERNEST Y.W. LAU, P.E.
Manager and Chief Engineer

cc.: The Honorable Rick Blangiardi, Mayor, City and County of Honolulu
Michael D. Formby, Managing Director, Department of Environmental Services
Michael O'Keefe, Deputy Director, Department of Environmental Services
Brian Andaya, Chair, BWS
Erwin Kawata, Deputy Manager, BWS

¹⁰ The City Council of the City and County of Honolulu agreed when it adopted Resolution 03-09, FD1 (April 16, 2003). In that resolution, the Council resolved to establish a policy "of the city that municipal solid waste landfills should not be located anywhere ... within the [BWS'] groundwater protection zone, or over any of the City's drinking water sources." This resolution was partially a result of the Council's finding that "there is no current landfill technology that can guarantee that hazardous or other harmful substances from a ... landfill placed over the city's aquifer will not, over the long-term, enter the city's drinking water sources and pose a risk to the public health and welfare of Honolulu's citizens."

The LAC came to similar a conclusion in its Final Report, specifically noting the importance of the "Board of Water Supply No Pass Zone" in not recommending any of the final landfill sites. Indeed, "[a]ll LAC members expressed concerns related to the location of the proposed sites in the No Pass Zone and, consequently, the potential implications for O'ahu's drinking water resources" (LAC Final Report 1-4) and "[t]he LAC strongly felt that they could not support a landfill sited within the BWS No Pass Zone due to their convictions in ensuring preservation of groundwater resources on O'ahu" (LAC Final Report 6-4).



O'ahu Landfill Siting Study & Landfill Advisory Committee Recommendations

Final Report

City and County of Honolulu, Hawai'i

June 2022

Department of Environmental Services
Refuse Division
City and County of Honolulu

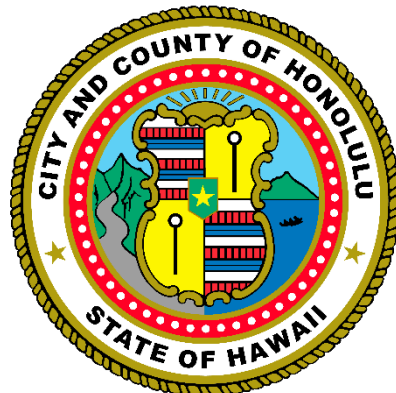


EXHIBIT "D"

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O'ahu Landfill Siting Study & Landfill Advisory Committee Recommendations
Final Report
City and County of Honolulu

June 2022

The Mayor's Landfill Advisory Committee (LAC):

Steven Chang

Suzanne Jones

Ken Kawahara

Emmett Kinney

Brennon Morioka

James Nakatani

Cynthia Rezentes

Trisha Kehaulani Watson

Department of Environmental Services

Refuse Division

City and County of Honolulu

Technical Consultants:

HDR Engineering, Inc.

Wilson Okamoto Corporation

Meeting Facilitator:

The Limtiaco Consulting Group

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Appendices

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APPENDIX B: LAC Meeting Agendas, Minutes, Written Public Comment and Presentation Materials

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- Appendix B - 2: LAC Meeting 2
- Appendix B - 3: LAC Meeting 3
- Appendix B - 4: LAC Meeting 4
- Appendix B - 5: LAC Meeting 5
- Appendix B - 6: LAC Meeting 6
- Appendix B - 7: LAC Meeting 7
- Appendix B - 8: LAC Meeting 8
- Appendix B - 9: Public Comments

APPENDIX C: Public Outreach Documents

APPENDIX D: Example Scoring Forms

APPENDIX E: Evaluation Criteria Technical Supporting Documents

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1 Executive Summary

1.1 Introduction

The City and County of Honolulu (City), Department of Environmental Services (ENV), is conducting a landfill siting study on the island of O'ahu as an initial step in replacing the existing Waimānalo Gulch Sanitary Landfill (WGSL), based on conditions added to the Special Use Permit (SUP) SP09-403 for extending the time of operation for WGSL by the State of Hawai'i Land Use Commission (LUC) on November 1, 2019, as follows:

Condition No. 1 – “The WGSL shall close by no later than March 2, 2028. The WGSL shall not accept any form of waste after March 2, 2028.”

Condition No. 5 – “By no later than December 31, 2022, the Applicant shall identify an alternative landfill site that may be used upon closure of WGSL. Upon identification of the alternative landfill site, the Applicant shall provide written notice to Planning Commission and the LUC.”

With the pending closure of the WGSL, it has become essential for the City to plan for sufficient future landfill capacity for continued management of municipal solid waste (MSW) diverted from H-POWER, ash and residue byproducts from H-POWER, and other special waste, non-recyclable waste, and disaster debris beyond 2028. Additionally, to compensate for the impending closure of PVT Landfill, the only construction and demolition landfill on O'ahu, the next City landfill must be planned to incorporate the addition of that waste stream.

This report documents the process of and includes recommendations from the Landfill Advisory Committee (LAC) appointed by the Mayor to assist in development of the landfill siting study. The LAC evaluated and scored potential new landfill sites. The O'ahu Landfill Siting Study & Landfill Advisory Committee Recommendations Report (report) is the initial step in identifying potential new landfill sites on O'ahu and allows ENV to prepare technical studies and analyses in support of future design and permitting efforts.

1.2 Role of the Landfill Advisory Committee

The Mayor appointed a nine-member LAC for the purpose of providing a representative community voice in assisting the City in completion of the landfill siting study (note: one member later resigned due to scheduling conflicts). The LAC assisted, in an advisory role, in evaluating, scoring, and ranking potential landfill sites under consideration with the understanding that the final determination on a final landfill site location will rest with the City.

LAC members attended a series of eight public meetings between October 2021 and June 2022 to help develop processes to evaluate and score potential landfill sites.

The meetings were conducted by City staff and the City's consultants to present information and answer questions, but they did not actively participate in the site evaluation or scoring process. The LAC process was conducted in compliance with the Sunshine Law. See Section 3 for discussion of the LAC's role and appointment, and overview of the LAC process.

1.3 Site Identification Process Overview

In 1991, the United States Environmental Protection Agency set forth regulations governing the design and operation of MSW landfills under the Resource Conservation and Recovery Act (RCRA). These regulations deal with MSW and are referred to as RCRA Subtitle D regulations.

The State of Hawai'i Department of Health Hawai'i Administrative Rules, which incorporated the RCRA Subtitle D regulations and additional state-specific requirements, includes restrictions on new MSW landfill locations that are specific to wetlands, floodplains, airport safety, fault areas, seismic impact zones, unstable areas, and tsunami zones; these restrictions are detailed in Section 4.1. In addition, state legislation was adopted through passage of State House Bill 2386 (Act 73) in September 2020, prohibiting location of a waste disposal facility in a conservation district and within one-half mile of residences, schools, and hospitals.

ENV established conceptual grading design criteria to evaluate potential site locations as discussed in Section 4, of which a minimum 20-year life cycle was of most importance.

1.3.1 GIS-Based Evaluation

ENV used a Geographical Information System (GIS)-based desktop-level evaluation of the island of O'ahu using readily available State of Hawai'i, City and County government agency data supplemented by consultation with technical experts. The GIS based approach is discussed in detail in Section 4.3.

1.3.2 Review of Previous Siting Studies

Individual base layers were developed in the GIS model using the regulatory restrictions discussed in Section 4.3.1. The 43 preliminary and 11 final potential landfill sites from the *2012 Report of the Mayor's Advisory Committee on Landfill Site Selection* (2012 MACLSS) and *2017 Assessment of Municipal Solid Waste Handling Requirements for the Island of Oahu* studies were added to the GIS model and compared against the regulatory restrictions. The majority of the previous study sites were eliminated as potential sites.

1.3.3 Development of Areas/Sites for Evaluation

ENV initially identified 12 areas that appeared to meet the regulatory restrictions using the GIS model. After additional review, eight of those areas were eliminated

and, from within the four remaining areas, six potential landfill sites meeting the minimum required waste disposal capacity were identified for evaluation by the LAC.

1.4 Site Evaluation and Recommendations

A methodology was developed to evaluate the six potential landfill sites using the following four steps:

- Develop objective and subjective evaluation criteria.
- Develop weighting, rating, scoring, and ranking method.
- Research and collect data to develop potential landfill site technical support information for rating and scoring.
- Apply weights, ratings, scoring, and final site rankings.

1.4.1 Evaluation Criteria Process

ENV used the 2012 MACLSS study as a basis to develop a draft list of site evaluation criteria for discussion with the LAC. ENV incorporated the LAC's comments, particularly their concerns related to protecting O'ahu's drinking water resources following the Board of Water Supply's presentation, into a revised final list of evaluation criteria consisting of 9 objective criteria and 8 subjective criteria, which are discussed in Section 5.2. The LAC scored and ranked the sites using the methodology described in Section 5.3.

1.4.2 Site Scoring and Ranking

The final site scoring and ranking was presented to the LAC in April 2022 for discussion. The final site rankings and total scores are shown in Table 1.1, and the LAC's observations and recommendations from that discussion are presented in Section 6.3.

Table 1.1 Final Site Scoring and Ranking			
Rank	Area, Site	Location	Score
1	Area 6, Site 1	Wahiawā near Kunia Road	4,200
2	Area 7, Site 1	Kapolei/Waipahu near Kunia Road	4,061
3	Area 3, Site 1	Wahiawā	3,841
4	Area 3, Site 2	Wahiawā	3,685
5	Area 3, Site 3	Wahiawā	3,634
6	Area 2, Site 1	Hale'iwa near Kawaihoa Road	3,596

Note: The LAC ranked the sites but generally agreed that landfills should not be developed over drinking water resources.

1.4.3 LAC Recommendations

Evaluating and scoring potential landfill sites is an extremely challenging undertaking, especially in consideration of the fact that all proposed sites are in or near culturally, ecologically and/or environmentally sensitive areas, including the Board of Water Supply No Pass Zone. All LAC members expressed concerns related to the location of the proposed sites in the No Pass Zone and, consequently, the potential implications for O'ahu's drinking water resources. The LAC approved a motion not recommending any of the final landfill sites due to their location within the No Pass Zone and made additional recommendations for the City as follows:

- Explore amending Act 73 to allow more suitable sites outside of the No Pass Zone.
- Request more time from the LUC to explore amending Act 73, and thoroughly evaluate federal owned and leased land, and eminent domain options for parcels outside the No Pass Zone.

LAC members' concerns and objections related to the proposed landfill sites are captured in Section 6.3, individual member statements are provided in Appendix A, and meeting minutes are provided in Appendix B.

City administration will carefully evaluate the information, findings and opinions contained in the report as it proceeds with naming a new landfill site, pursuant to the 2019 Hawaii State Land Use Commission decision and order.

2 Introduction

This O'ahu Landfill Siting Study & Landfill Advisory Committee Recommendations Report (report) documents the activities of the City and County of Honolulu (City), Department of Environmental Services (ENV), in conducting a landfill siting study on the island of O'ahu and recommendations by the Landfill Advisory Committee (LAC) that evaluated, scored, and ranked potential new landfill sites. The LAC was appointed by the Mayor of the City for the purpose of providing a representative community voice to assist the City in completing the landfill siting study. The siting study is intended to be the initial step in identifying potential new landfill sites on O'ahu and to allow the ENV to move forward with technical studies and analyses in support of the design and permitting efforts, including the preparation of an environmental impact statement (EIS).

2.1 Need for a New Landfill Site

A municipal solid waste (MSW) landfill is an integral component of the City's solid waste management system and is a vital element for responsible management of MSW generated on O'ahu. Providing for and preserving future sufficient landfill capacity is necessary for the disposal of non-combustible MSW, construction and demolition (C&D) waste, Honolulu Program of Waste Energy Recovery (H-POWER)-related ash and residue, and other non-recyclable waste generated on O'ahu. A landfill provides a critical backup disposal site when H-POWER and other diversion facilities are unable to accept waste for processing (e.g., during periods of maintenance or repair). With the pending closure of the privately owned PVT Integrated Solid Waste Management Facility (PVT C&D Landfill), a City owned landfill becomes a critical component for the City's *Disaster Debris Management Plan*. Although the City will continue to develop and advance waste recycling and source reduction alternatives to reduce the need for a landfill, at present there are no alternative processes that do not generate waste by-products that cannot be further reused, recycled, or otherwise combusted. An MSW and ash monofill landfill remains, at this time, the most viable alternative for handling of refuse and by-products by the City and the residents it serves.

2.2 History and Lead Up to the LAC

ENV has completed several past landfill siting and environmental studies that led up to the permitting the Waimānalo Gulch Sanitary Landfill (WGSL) in the 1980s. Primary studies completed are listed below:

- *Inventory of Potential Sanitary and Demolition Landfill Sites*, August 1977.
- *Supplement to Inventory of Potential Sanitary and Demolition Landfill Sites*, November 1979.

- *Revised Environmental Impact Statement for Leeward Sanitary Landfill at Waimānalo Gulch Site and Ohikilolo Site*, 1984.
- *Final Supplemental Environmental Impact Statement for the Waimānalo Gulch Sanitary Landfill Expansion*, 2002.
- *Final Environmental Impact Statement for the Waimānalo Gulch Sanitary Landfill Lateral Expansion*, 2008.

In permitting WGSL, ENV was required under Hawai'i Administrative Rules (HAR) to obtain a Special Use Permit (SUP) from the State of Hawai'i Land Use Commission (LUC). HAR require an SUP to operate a landfill on Agricultural-zoned land. ENV operated WGSL under SUP No. 86/SUP-5 and SUP No. 2008/SUP-2 up until October 2009, whereupon the LUC granted the ENV SUP No. SP09-403 on October 22, 2009, authorizing a 92.5-acre lateral expansion and an extension of time to operate WGSL until July 31, 2012.

Condition No. 4 of SUP No. P09-403 required ENV to identify and develop one or more new landfill sites that shall either replace or supplement the existing WGSL on or before November 1, 2010. H-POWER ash and residue could continue to be accepted at WGSL beyond July 2012. The July 2012 date had been established by the LUC based on the estimated remaining MSW volume capacity at the WGSL and anticipated closure in 2012. In 2012, ENV completed the following site selection study to identify and rank potential landfill sites for consideration by the City in response to Condition No. 4:

- *Report of the Mayor's Advisory Committee on Landfill Site Selection (MACLSS)*, September 2012.

During the 2012 MACLSS process, ENV was instructed by the Mayor that the Committee was not to consider WGSL in their deliberations, as the current WGSL could not supplement or replace itself. ENV presented the Committee with the following instructions:

- The MACLSS's identification of landfill sites should include the provision for accepting MSW, C&D waste, and ash and residue from H-POWER.
- The City's intention is to utilize WGSL until its full capacity is reached. An important reason for this is that the City considers land a precious resource. Should a landfill site not be utilized to its full potential and capacity, it would represent an inefficient use of the land and public treasury since it would prematurely require the use of a new landfill site and involve new, major capital expenditures for development.
- The sites the Committee will evaluate and rank will be considered for future use by the City as it proceeds with its site selection and EIS process once the WGSL waste capacity is reached.

The 2012 MACLSS identified 11 potential landfill sites that were ranked based on community criteria developed by the Committee and ENV.

In 2017, ENV completed a study to assess the City's solid waste management system, materials requiring landfill disposal, the remaining lifespan of WGS�, and the year the City should begin development of a future MSW landfill. The study, listed below, also reviewed the 11 sites identified by the 2012 MACLSS selection study and examined them based on a technical and logistical review:

- *Assessment of Municipal Solid Waste Handling Requirements for the Island of Oahu*, November 2017.

The 2017 Assessment concluded that based on current waste projections, the WGS� would have capacity until 2038, and assuming a conservative timeline of 10 years to develop a new landfill, it was recommended to begin the siting process for a new landfill in 2028. It was also recommended that during the period between 2028 and 2037, the City should reanalyze the sites ranked in the report and investigate potential new landfill sites; conduct the site selection; undertake land acquisition (e.g., negotiation, condemnation, purchase); obtain environmental permits, land use permits, and operating permits; and conduct site planning, design, engineering, and construction.

Upon the granting of SUP SP09-403 on October 22, 2009, several appeals were filed by intervenors between 2009 and 2019 to inhibit the expansion and extension of time for WGS�. Additionally, over that period, ENV filed applications to extend or remove the July 2014 date requiring WGS� to cease accepting waste and close. The 2017 Assessment had shown that the remaining waste capacity of WGS� was estimated to extend well beyond 2014 due to the expansion of the H-POWER facility in 2012 and recycling efforts implemented by the City which significantly reduced the MSW volume being landfilled. After several hearings, the LUC granted revised conditions to SUP SP09-403 on November 1, 2019, that authorized an extension of time for WGS� to cease accepting waste and close. The revised conditions superseded the existing conditions of SUP SP09-403 while still allowing the 92.5-acre lateral expansion. Significant changes to conditions in revised SUP SP09-403 that "led up" to the appointment of the LAC and completion of this study are as follows:

Condition No. 1 – "The WGS� shall close by no later than March 2, 2028. The WGS� shall not accept any form of waste after March 2, 2028."

Condition No. 5 – "By no later than December 31, 2022, the Applicant shall identify an alternative landfill site that may be used upon closure of WGS�. Upon identification of the alternative landfill site, the Applicant shall provide written notice to Planning Commission and the LUC."

Copies of the documents listed in this section can be obtained at the ENV Refuse Division website: <https://www.honolulu.gov/opala/newlandfill.html>.

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3 Landfill Advisory Committee

As discussed in Section 2, the LAC was appointed by the Mayor for the purpose of providing a representative community voice in assisting the City in completion of the landfill siting study. This section further describes the LAC's role, appointment, and overview of the LAC process.

3.1 LAC Role

The members of the LAC were asked to assist in evaluating and scoring potential landfill sites under consideration by the City. The LAC was tasked with this undertaking with the understanding that its role is advisory and that the final determination on landfill site location will rest with the City. After the LAC completes its assignment, the committee will conclude. The City will then make its determination and begin the planning, permitting, and development process for a new landfill, which will involve preparation of an EIS and implementation of local community outreach programs.

LAC members were asked to attend scheduled meetings, review information, ask questions, and assist the City's technical consultants in the processes developed for evaluating and scoring a list of potential landfill sites. LAC members were asked to participate with an open mind and raise questions and concerns with the intent of working through any issues in a productive and respectful manner. As LAC members representing the residents of O'ahu, their participation was critical to ensure that the landfill site selection process is transparent and instill confidence in the results. It was discussed with the LAC that in order to maintain neutrality during the process, City staff would not actively participate in the site evaluation or scoring process, but would be present at LAC meetings only to assist the City's technical consultants in presenting information for discussion and answering questions from LAC members or the public.

3.2 Appointment of the LAC

After starting with a list of over 30 candidates and careful consideration of their backgrounds, availability, and potential willingness to serve, ENV prepared a list of 11 individuals approved by the Mayor to serve on the LAC. The individuals represented a wide range of professional backgrounds and community involvement, including government, University of Hawai'i affiliation, neighborhood boards, and industrial, construction, engineering, cultural, environmental, and other businesses. The intent was to select individuals within the community who could offer an understanding of issues and concerns from the community's point of view and whose voices would

add significant value to the LAC to ensure that the site selection process produced the best result for the residents of O'ahu.

ENV sent a letter to each of the 11 individuals informing them that they were selected as possible member candidates and inviting them to attend a planned Virtual Pre-LAC Meeting where detailed information about their involvement in the advisory committee and an overview of the site selection process would be shared. The meeting was held on August 30, 2021. Information presented and provided at the meeting is provided in Appendix A.

Following the meeting, the 11 individuals were contacted by ENV to confirm their desire to be members of the LAC. Nine of the contacted individuals confirmed their desire to be members, with one of those members resigning from the committee halfway through the process due to schedule conflicts. The final eight individuals who participated during the entire LAC process are listed in Table 3.1.

Table 3.1 LAC Members	
Member	Industry Affiliation
Steven Chang	Environmental Regulation
Suzanne Jones	Solid Waste/Recycling
Ken Kawahara	Professional Engineer/Civil Engineering
Trisha Kehaulani Watson	Environmental Justice/Cultural Resources
Emmett Kinney	General Contracting
Brennon Morioka	Professional Engineer/Civil Engineering
James Nakatani	Agribusiness Development
Cynthia Rezentes	Classical Electrical Engineering/Community Advocate

3.3 Overview of the LAC Process

The process utilized by the LAC was established by the City to follow a timeframe that included a pre-committee meeting and eight LAC meetings over a 9-month period. Meeting dates and topics discussed by the LAC are outlined in Table 3.2.

Table 3.2 Landfill Advisory LAC Meeting Summary

Meeting Number	Meeting Date	Meeting Topics
Pre-Committee Meeting	August 30, 2021	<ul style="list-style-type: none"> • Mayor and ENV Director welcome • Introduction of Project Team – ENV, Refuse Division, and Consultants • ENV Presentation – Introduction of LAC member expectations • ENV Presentation – Landfill history • ENV Presentation – Purpose of the LAC • ENV Presentation – Expectations of committee members & proposed meeting schedule/platform
1	October 4, 2021	<ul style="list-style-type: none"> • Introduction of LAC members and Project Team • ENV Presentation – LAC purpose, expectations, meeting process, role of the LAC, and anticipated LAC meeting schedule • City Department of Corporate Counsel Presentation – Sunshine Law • ENV Presentation – Overview of Existing Solid Waste Program • ENV Presentation – Regulatory Requirements for New Landfill Design and Operation • Discussion on Limited Meeting Requirements for Site Tours
2	October 25, 2021	<ul style="list-style-type: none"> • ENV Presentation and Adoption – LAC Rules • ENV Presentation and Approval – Limited Meeting #3 Site Tours
3	November 3, 2021 (Limited Meeting)	<ul style="list-style-type: none"> • Tour of PVT C&D Landfill, Waimānalo Gulch Sanitary Landfill, and H-POWER
4	December 14, 2021	<ul style="list-style-type: none"> • ENV Presentation – LAC Meeting #3 Recap • ENV Presentation – Results of Resident Landfill Survey • BWS Presentation – O'ahu's Groundwater Aquifer and Siting a New Landfill • ENV Presentation – Groundwater Protection

Table 3.3 Landfill Advisory LAC Meeting Summary Cont.		
Meeting Number	Meeting Date	Meeting Topics
		<ul style="list-style-type: none"> Measures for Municipal Solid Waste Landfills ENV Presentation – Site Evaluation Criteria
5	February 7, 2022	<ul style="list-style-type: none"> Introduction of the New Director of the Department of Environmental Services BWS Presentation – Board of Water Supply ENV Presentation and Approval – Final Site Evaluation Criteria ENV Presentation –Evaluation Scoring Methodology
6	March 7, 2022	<ul style="list-style-type: none"> ENV Presentation – Landfill Location and Drinking Water Protection ENV Presentation – Potential Landfill Sites ENV Presentation – Subjective Evaluation and Scoring Methodology
7	April 4, 2022	<ul style="list-style-type: none"> ENV Presentation – Objective Criteria Evaluation ENV Presentation – Site Scores and Rankings ENV Presentation ENV Presentation – Contents of the LAC Report ENV Presentation – Potential Benefits for Landfill Host Community
8	June 6, 2022	<ul style="list-style-type: none"> Draft Report Revisions and Potential Community Benefits Conclusions

All meetings were conducted remotely using interactive conference technology except Meeting 7, which was held in person at Kapolei Hale, and Meeting 8, which was conducted both in person at Kapolei Hale and remotely using interactive conference technology. Remote virtual meetings were conducted pursuant to Governor David Y. Ige's Emergency Proclamations Related to the COVID-19 Response, issued and updated at various times during the LAC meeting schedule. Remote meetings using interactive conference technology were conducted to allow

LAC and public participation in a manner consistent with safe practices and social distancing requirements.

All LAC meetings were conducted in compliance with the Sunshine Law, which is Hawai'i's open meeting law as outlined in Hawai'i Revised Statutes (HRS), Part 1, Chapter 92 Public Agency Meetings and Records. The intent of the Sunshine Law is to establish policy that allows discussions, deliberations, decisions, and actions of governmental agencies to be conducted as openly as possible to public scrutiny and participation. The Sunshine Law was applicable to the LAC process because the LAC was an advisory body to the Mayor. The LAC received training on the Sunshine Law at LAC Meeting 1 from the City's Department of Corporate Counsel.

The LAC conducted one "Limited Meeting" in compliance with the Sunshine Law coordinated by ENV for three refuse facility tours on November 3, 2021. The on-site Limited Meeting was approved by the LAC due to health and safety requirements necessary to tour the facilities that would make it impracticable for the public to attend because of the practices and social distancing requirements of the COVID-19 Emergency Proclamations. Site tours were conducted at H-POWER, PVT C&D Landfill, and WGSF facilities.

In addition to complying with Sunshine Law requirements, LAC Rules were adopted by the LAC at Meeting 2 on October 25, 2021. The intent of the LAC Rules was to outline the framework under which the meetings will be conducted and the member participation and responsibilities that will allow the LAC to complete their assigned tasks.

The LAC Rules included the following items:

- Authority and Membership
- Purpose and Objective
- Quorum and Voting
- Meetings
- Agenda
- Public Testimony
- Correspondence
- Action by LAC
- Minutes
- Evaluation and Scoring of Landfill Sites
- Conflicts of Interest
- Amendment of Rules
- Effective Date

LAC meeting agendas, minutes, written public comment, and presentation materials are provided in Appendix B. LAC rules are provided in Appendix B-2.

3.4 Public Outreach and Incorporation into the LAC Process

The City informed O'ahu's residents about the landfill siting process and educated them about on-island solid waste management through multiple means. The City also encouraged residents to get involved in the process. A description of each of the various efforts follows.

3.4.1 Dedicated Webpage

The "New Landfill Siting" webpage was created on ENV's Refuse Division website during the early stages of the landfill siting process in Summer 2021. The page included information about the siting process, LAC members, and LAC meetings along with downloadable copies of the meeting materials. In addition, the page detailed the restrictions to the landfill siting process and included a link to an interactive map that overlaid the restrictions for an easy-to-use visual guide. An email address (newlandfill@honolulu.gov) was provided on the webpage for visitors to send any comments or questions to City staff involved with the project. Any comments from the public were shared with the LAC, when applicable. Questions received were presented on the Questions and Answers section of the site along with responses and related information. ENV staff updated the webpage as comments were received and as LAC meetings occurred. The webpage can be found at <https://www.honolulu.gov/opala/newlandfill.html>.

3.4.2 C&C of Honolulu ENV Refuse Division Resident Landfill Survey

The "C&C of Honolulu ENV Refuse Division Resident Landfill Survey" was formed to bring awareness to the public about the landfill siting process. The tool was also used to determine O'ahu residents' knowledge of the current solid waste program and to obtain input for consideration during the siting process. The survey utilized a user-friendly, online format for ease of dissemination and was promoted through the ENV Refuse Division website, advertisement posters displayed at City facilities, advertisements on the Department of Transportation Services' TheBus, Refuse Division social media platforms, and announcements at early LAC meetings. The survey was launched in August 2021 and was closed in January 2022. It received 561 responses and the results of the survey were presented in LAC Meeting 4. As an additional incentive for residents to complete the survey, ENV worked with the Honolulu Zoo to grant a one-year membership to an individual survey-taker by way of a randomized raffle.

3.4.3 Bus Advertisement Posters

ENV utilized the Department of Transportation Services' TheBus advertising agreement to display advertisement posters spreading awareness about the landfill siting process and to encouraging riders to participate in the "C&C of Honolulu ENV Refuse Division Resident Landfill Survey." The posters were displayed for a month, through October 2021, in 540 buses encompassing 100 bus routes that covered streets from Mākaha to Makapu'u and Waikīkī to Turtle Bay. According to TheBus' contracted advertisement agency, annual ridership is approximately 70 million, which averages to almost 6 million per month. The advertisement poster is provided in Appendix C.

3.4.4 Advertisement Posters at City Halls and Satellite City Halls

Advertisement posters were displayed at City facilities with high public foot traffic. These facilities included: Fasi Municipal Building, Honolulu Hale, Kapālama Driver Licensing Center, Kapālama Hale, Kapolei Driver Licensing Center, Kapolei Hale, Ko'olau Driver Licensing Center, Pearl City Commercial Driver Licensing Center, Wahiawā Driver Licensing Center, and Wai'anae Driver Licensing Center. The posters were intended to spread awareness about the landfill siting process and to encourage residents to participate in the "C&C of Honolulu ENV Refuse Division Resident Landfill Survey." They were displayed throughout the duration of the survey. The advertisement poster is provided in Appendix C.

3.4.5 Social Media

Social Media outlets were important tools that allowed ENV to engage with a large number of residents in a quick time frame for minimal to no cost. In addition, it allowed residents who are interested in solid waste issues to contact ENV easily and interact with ongoing topics.

ENV used Facebook, Twitter, and YouTube platforms to inform and educate followers about the landfill siting process and the current solid waste management program on O'ahu. There have been 59 posts, and outreach by this method will continue for the foreseeable future. Posts were created by ENV staff and were published on Facebook and Twitter routinely to maintain a steady source of information and updates. LAC meeting recordings were uploaded to YouTube for viewing. To further ENV's outreach, a Facebook post related to the "C&C of Honolulu ENV Refuse Division Resident Landfill Survey" was boosted to reach an extended audience. By boosting the post, it was made visible to Facebook users on O'ahu beyond those who already follow the Refuse Division page. The boosted post received 11,000 impressions, reached 5,100 people, and had 300 engagements. The boosted Facebook post is provided in Appendix C. ENV's Refuse Division

Facebook page is @HNL.Opala, and the ENV department-wide Twitter profile is @HNL_ENV.

3.4.6 Neighborhood Board Meetings

Messages with important updates on the LAC process were presented by the mayor's representatives at neighborhood board meetings.

3.4.7 Press releases

Four press releases were initiated for key points in the project. These included the announcement of the formation of the LAC, the release of the survey, a survey reminder and extension, and the announcement of the *Insights on PBS Hawai'i* broadcast (see Section 3.4.10).

3.4.8 City Council Presentations

A presentation regarding compliance with Act 73 and the remaining areas eligible for siting a landfill was provided to the City Council Joint Committee on Zoning and Planning and Transportation, Sustainability and Health on April 27, 2021, and another presentation on the formation of the LAC and updating the status of the landfill siting process was provided to the full City Council on August 26, 2021.

3.4.9 Council Member/State Representative/Senate Messages

Twenty different emails were sent to City Council, State Representative, and State Senators' offices to let them know about various updates to the landfill siting process, including topics such as announcement of the LAC, LAC meeting agendas and recordings, survey invitations, and the *Insights on PBS Hawai'i* broadcast (see Section 3.4.10).

3.4.10 Cable Broadcast Interview

In April 2022, *Insights on PBS Hawai'i* aired a special titled, "In Search for a New Landfill on O'ahu" that included ENV Director Roger Babcock, Jr. Ph.D., P.E. as one of the panelists to discuss the landfill siting process from the City's standpoint. ENV collaborated with *Empowered Hawai'i* for the "Earth Day: Trash to Treasure" episode in April 2022. The episode discussed the importance of reducing waste and recycling to prevent material ending up at the landfill.

3.4.11 Public Presentations

ENV Refuse Division, Recycling Branch and H-POWER conducted 28 educational presentations regarding refuse and recycling, including ties to the landfill, at schools and community group meetings from January 2021 through June 2022.

3.4.12 Tradeshow Event

Between January 2021 and June 2022, the ENV Refuse Division, Recycling Branch attended one tradeshow event to interest and educate the public about the Refuse Division's work.

3.4.13 Tours at Refuse Facilities

Between January 2021 and June 2022, the ENV Refuse Division, Recycling Branch and H-POWER hosted 20 tours at H-POWER, the landfill, and other Refuse facilities.

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4 Identification of Potential Landfill Sites

4.1 Restrictions and Parameters for Landfill Siting

4.1.1 Federal and State Solid Waste Management Rules

In 1991, under the federal Resource Conservation and Recovery Act (RCRA), the United States (U.S.) Environmental Protection Agency (EPA) promulgated regulations governing the design and operation of MSW landfills. These regulations pertained to RCRA Subtitle D, which deals with MSW, and are commonly referred to as Subtitle D regulations.

In January 1994, the State of Hawai'i Department of Health (DOH) adopted HAR, Title 11, Chapter 11, Solid Waste Management Control. These state rules incorporated the federal Subtitle D regulation requirements and additional state-specific requirements. As with the federal regulations, the Hawai'i rules include restrictions regarding new MSW landfill locations. These restrictions are summarized in Table 4.1. One listed siting restriction - Airport Safety - requires a specific setback distance, and one additional siting restriction - Tidal Wave (Tsunami) Zones - is exclusionary; both were applied directly in this siting study. The remaining restrictions are specific to the technical characteristics (e.g., geology, hydrogeology, seismic) of the site location. Until further technical analyses and field investigations can be completed for a selected site location, technical assumptions are made to determine whether these restrictions are met or if engineering measures can be incorporated in the design that meet the restrictions.

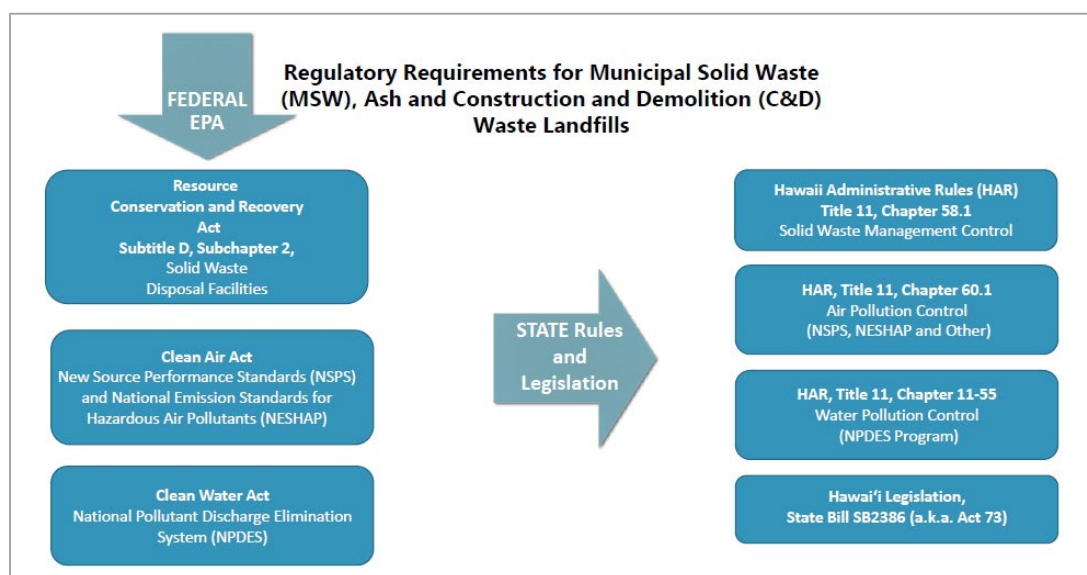
Table 4.1 Federal and State Landfill Site Analysis Restrictions

Restriction	Definition
Wetlands	Must not be located in wetlands or must demonstrate that the landfill will not cause violations to applicable state and federal water standards, including the Clean Water and Endangered Species Acts.
Floodplains	Must not be located in a 100-year floodplain or must demonstrate that the landfill will not restrict the flow of a 100-year flood, reduce the floodplain's temporary water storage capacity, or result in MSW washout.
Airport Safety	Must meet 10,000-foot setback requirements from airport runways used by turbojets or must demonstrate that the landfill will not pose a bird hazard to aircraft.

Table 4.1 Federal and State Landfill Site Analysis Restrictions Cont.	
Restriction	Definition
Fault Areas	Must not be located within 200 feet of a fault that has had displacement in Holocene time or must demonstrate that an alternative setback distance will maintain the landfill's structural integrity.
Seismic Impact Zones	Must not be located in seismic impact zones or must demonstrate that all liners, leachate collection systems, surface water controls, and other systems are designed to resist maximum horizontal accelerations.
Unstable Areas	Must not be located in an unstable area or must demonstrate that engineering measures have been incorporated in the design that will maintain the landfill's structural integrity.
Tidal Wave (Tsunami Zones)	Must not be located in a possible tsunami or extreme tsunami inundation area.

In addition to the federal and state-adopted Subtitle D rules, state legislation was adopted through passage of State House Bill (SB)2386 in September 2020. This bill, now known as Act 73, prohibits a waste disposal facility from being located in a conservation district and within one-half mile of residences, schools, and hospitals. Similar to the Airport Safety restriction described Table 4.1, setback distance requirements in Act 73 were applied directly in the siting evaluation. Figure 4.1 illustrates the federal and state regulations and rules related to solid waste management.

Figure 4.1 Federal and State Solid Waste Management Rules



4.1.2 City Ordinances and Resolutions

City ordinances are laws, or decrees, enacted by the City Council that typically regulate specific activities, whereas resolutions express the City Council's opinion or the City's policy on an issue or subject. Resolutions can also request an action by the City Administration or state government and, unlike ordinances, are not considered laws.

The City adopted Council Resolution 03-09, FD1, in April 2003, which established policy that MSW landfills should not be located anywhere above the DOH's Underground Injection Control (UIC) line, within the Board of Water Supply's (BWS) groundwater protection zone (No Pass Zone), or over any of the City's underground drinking water sources. In response to the City resolution, the BWS included the following definition of the No Pass Zone in their Rules and Regulations:

- No Pass Zone means areas in which the installation of waste disposal facilities, which may contaminate groundwater resources used or expected to be used for domestic water supplies, shall be prohibited.

The DOH UIC line per HAR, Title 11, Chapter 23, is defined as:

- UIC line or "the line" means the line on the DOH UIC maps that separates, in plain view, exempted aquifers and an underground drinking water source.

There are no City-adopted ordinances related to siting of MSW landfills on O'ahu.

4.1.3 Planning Horizon and Landfill Sizing

In managing a community solid waste management system, it is important to evaluate and develop a planning horizon, particularly for feasible and cost-effective options for MSW disposal. Section 2.1 describes, in more detail, why this step is crucial for the City. ENV established the goal early in the planning process to site a new landfill with a minimum life cycle of 20 years due to the time and effort required to complete the full siting, permitting, design, and development processes.

Estimating the minimum disposal capacity for 20 years required projecting future volumes of MSW, H-POWER ash and residue, asbestos, and C&D waste over the entire 20-year period. Additionally, current waste densities (airspace utilization factors) for the WGSF were used, and various recycling rates for C&D waste were assumed for the estimate. Current and projected waste volumes and population data were obtained from the City's *2019 Integrated Solid Waste Management Plan* (ISWMP) and estimated for the period 2028 through 2048. The period start date represents the date when a new landfill is fully operational. The volume estimates presented in Table 4.2 show that approximately 21.5 million cubic yards (mcy) of waste disposal capacity is needed for a minimum 20-year site life at a 25 percent recycling rate (75 percent disposal column).

Table 4.2 20 Year Waste Disposal Volume Estimates									
TOTAL ASSUMED DISPOSAL VOLUMES (TNS)						C&D DISPOSAL (% & TNS)			
Year	MSW/Ash/Residue	MSW	Ash	Residue	Asbestos	C&D 100%	C&D 75%	C&D 50%	C&D 25%
2028	287,500	67,083	172,500	47,917	5,000	338,835	254,126	169,417	63,531
2029	293,250	68,425	175,950	48,875	5,000	345,611	259,208	172,806	64,802
2030	299,115	69,794	179,469	49,853	5,000	352,523	264,393	176,262	66,098
2031	305,097	71,189	183,058	50,850	5,000	359,574	269,680	179,787	67,420
2032	311,199	72,613	186,720	51,867	5,000	366,765	275,074	183,383	68,769
2033	317,423	74,065	190,454	52,904	5,000	374,101	280,576	187,050	70,144
2034	323,772	75,547	194,263	53,962	5,000	381,583	286,187	190,791	71,547
2035	330,247	77,058	198,148	55,041	5,000	389,214	291,911	194,607	72,978
2036	336,852	78,599	202,111	56,142	5,000	396,999	297,749	198,499	74,437
2037	343,589	80,171	206,153	57,265	5,000	404,939	303,704	202,469	75,926
2038	350,461	81,774	210,277	58,410	5,000	413,037	309,778	206,519	77,445
2039	357,470	83,410	214,482	59,578	5,000	421,298	315,974	210,649	78,993
2040	364,620	85,078	218,772	60,770	5,000	429,724	322,293	214,862	80,573
2041	371,912	86,779	223,147	61,985	5,000	438,319	328,739	219,159	82,185
2042	379,350	88,515	227,610	63,225	5,000	447,085	335,314	223,543	83,828
2043	386,937	90,285	232,162	64,490	5,000	456,027	342,020	228,013	85,505
2044	394,676	92,091	236,806	65,779	5,000	465,147	348,860	232,574	87,215
2045	402,569	93,933	241,542	67,095	5,000	474,450	355,838	237,225	88,959
2046	410,621	95,812	246,372	68,437	5,000	483,939	362,954	241,970	90,739
2047	418,833	97,728	251,300	69,806	5,000	493,618	370,213	246,809	92,553
2048	427,210	99,682	256,326	71,202	5,000	503,490	377,618	251,745	94,404
Total (20 YR TNS)	7,412,704	1,729,631	4,447,622	1,235,451	105,000	8,736,279	6,552,210	4,368,140	1,638,052
Total (20 YR CYS)	8,276,766	2,162,039	4,360,414	1,544,313	210,000	17,472,559	13,104,419	8,736,279	3,276,105
Total Including C&D (20 YR TNS)						16,148,983	13,964,913	11,780,843	9,050,756
Total Including C&D (20 YR CYS)						25,749,324	21,591,185	17,013,045	11,552,871

- Total assumed volumes at year 2028 are average 2020 volumes received at WGSL and reported PVT C&D volumes (inflated 2% annually to 2048 volumes).
- MSW/Ash/Residual and C&D annual increase assumed at 2% (2019 ISWMP).
- Density/airspace utilization factors (AUF) (tons/cy) from WGSL 2019 Annual Operating Report.
 - MSW and Residue = 0.80 TNS/CY
 - Ash and Asbestos = 1.02 TNS/CY
 - Asbestos = 0.50 TNS/CY
- Airspace utilization factors (AUF) (tons/cy) from example mainland C&D facilities.
 - C&D = 0.50 TNS/CY

Although C&D waste recycling rates typically range between 50 percent and 75 percent nationally, ENV assumed a more conservative rate of 25 percent because of the uncertainty in PVT C&D Landfill's scheduled closure and the need to identify, fund, and develop C&D waste recycling programs that will achieve a higher recycling and diversion rate.

4.2 Prior Landfill Siting Studies

Prior landfill siting studies completed by the City and relevant to this study are the 2012 MACLSS and 2017 Assessment studies described in Section 2.3. The approach to this siting study utilized general information presented in the prior studies. This includes the evaluation of the 43 preliminary sites listed in the 2012 MACLSS study and the 11 proposed final sites listed in both the 2012 MACLSS and 2017 Assessment studies for conformance with Act 73. The evaluation's results are described in Section 4.3. The screening criteria and approach in ranking and scoring the landfill sites in the 2012 MACLSS study were also reviewed and were considered applicable for this study.

4.3 Geographic Information System Based Evaluation

This section describes ENV's methodology in using a Geographical Information System (GIS) based evaluation approach for this study. ENV selected the use of a GIS-based approach due to the capacity to evaluate the entirety of the island of O'ahu using readily available information resources maintained by the State of Hawai'i, City, and County government agencies. However, the GIS-based system was selected with the following understandings:

- A GIS-based analysis is not a substitute for a more formal evaluation of a landfill site, which would be performed by the City in an EIS. An EIS level of assessment and evaluation must be performed for the proper identification of any landfill site prior to it being developed.
- A GIS-based analysis involves a desktop level of study, meaning basic research will be performed using only existing data sources supplemented by consultation with experts in other technical fields, as applicable, to the nature of the study. Fieldwork, including site surveys and detailed investigations, are not usually performed.

GIS-based evaluation of the final ranked and scored landfill sites is described in the following sections.

4.3.1 Step 1 - Review of Previous Siting Studies

Individual base layers were developed in the GIS model for four restrictions (two setback and two exclusionary types):

- Act 73 – One-half mile setback from residences, schools, and hospitals.

- Airport Safety – 10,000-foot setback from airport runways used by turbojet aircraft.
- Tidal Wave (Tsunami Zones) – Not located within a tsunami or extreme tsunami zone.
- BWS No Pass Zone – Not located within the BWS No Pass Zone.

ENV consulted the City Department of Planning and Permitting (DPP) requesting feedback for parcels that were not listed as residential-zoned but did show assessed building values with residential classifications in the real property records maintained by the City Department of Budget and Fiscal Services, Real Property Assessment Division. ENV requested confirmation from DPP whether legally permitted residences were located on certain parcels and, if so, the one-half mile residential setback was updated accordingly in the GIS base layer.

The 43 preliminary and 11 final potential landfill sites described in Section 4.2 were added as base layers in the GIS model and compared with the four regulatory restrictions. The majority, if not all, of the sites were eliminated as potential landfill sites due to one or more of the listed restrictions. These sites are shown in Figures 4.2 and 4.3.

4.3.2 Step 2 – Development of Final Four Areas

Using information developed in Step 1 and shown in Figures 4.2 and 4.3, ENV established twelve unrestricted areas to further evaluate as the next step. The twelve areas are shown in Figure 4.4. After further review, ENV eliminated eight of the areas for the following reasons:

- Federal parcels in Area 1 were eliminated due to ongoing military activities and other structures present on the parcel that would make the siting process very difficult, if not unattainable. ENV also understands that the purchase and/or use of federal property would require U.S. Congressional approval, which they believed would likely hinder the ability to meet the 2028 deadline imposed by the LUC.
- ENV continued consideration of federally owned Area 10 because ENV had operated the Waipahu Ash Landfill on the parcel through the late 1980s. ENV anticipated siting a new landfill in the Area could be less onerous than other federal parcels due to past ash landfilling activities that occurred on the parcel and current, active lease agreements with the U.S. Government for the parcel. However, ENV consulted with DOH to confirm if the extreme tsunami zone would restrict the siting of a landfill in the area. DOH informed the ENV that the extreme tsunami zone boundary shown would be enforced in the State permitting process. ENV eliminated Area 10 from further consideration due to the position taken by DOH and the remaining unrestricted area would not accommodate a landfill meeting the minimum disposal capacity.

Figure 4.2 43 Potential Landfill Sites (2012 MACLLS Study)

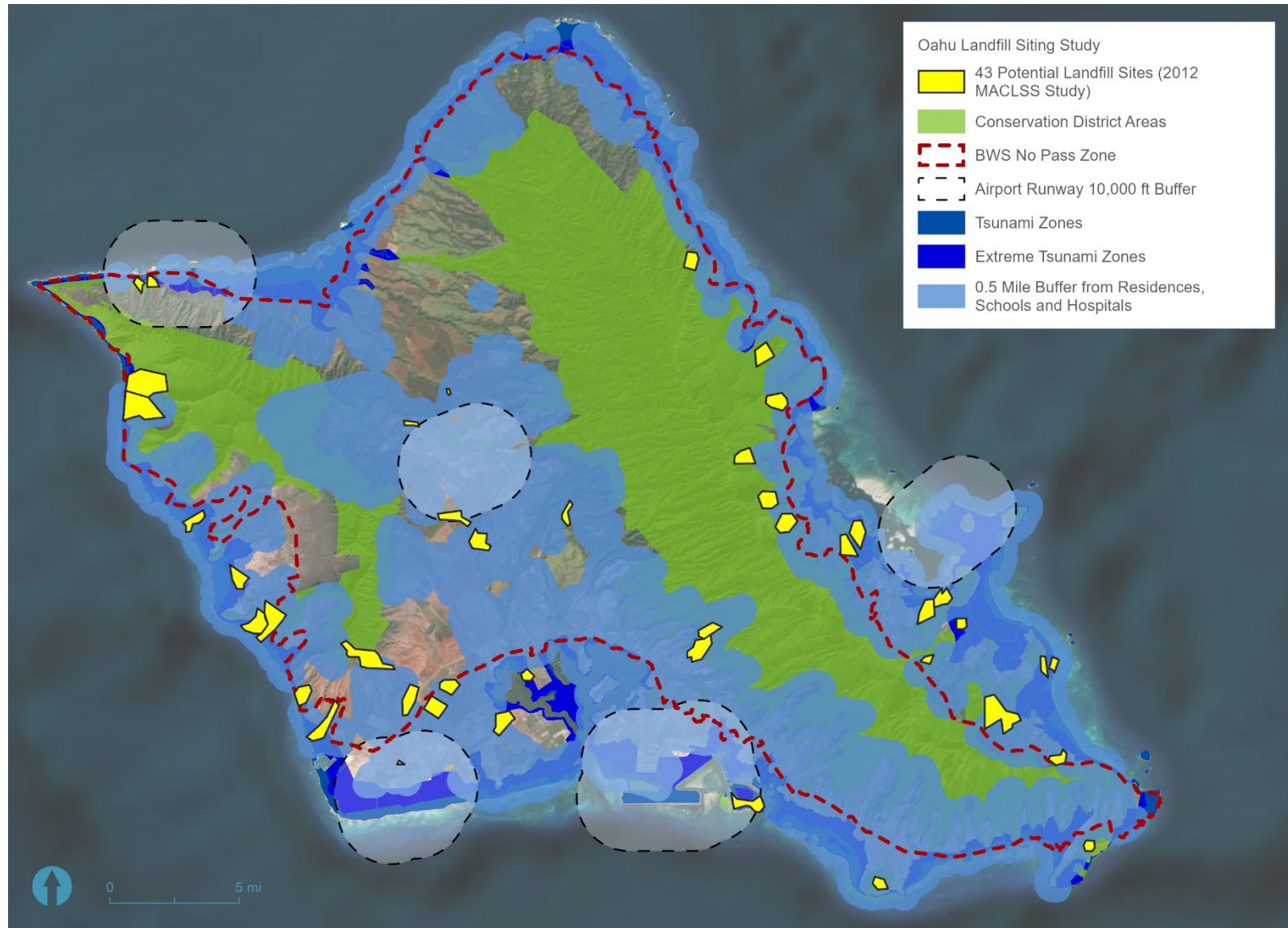


Figure 4.3 11 Final Landfill Sites (2012 MACLSS and 2017 Assessment Studies)

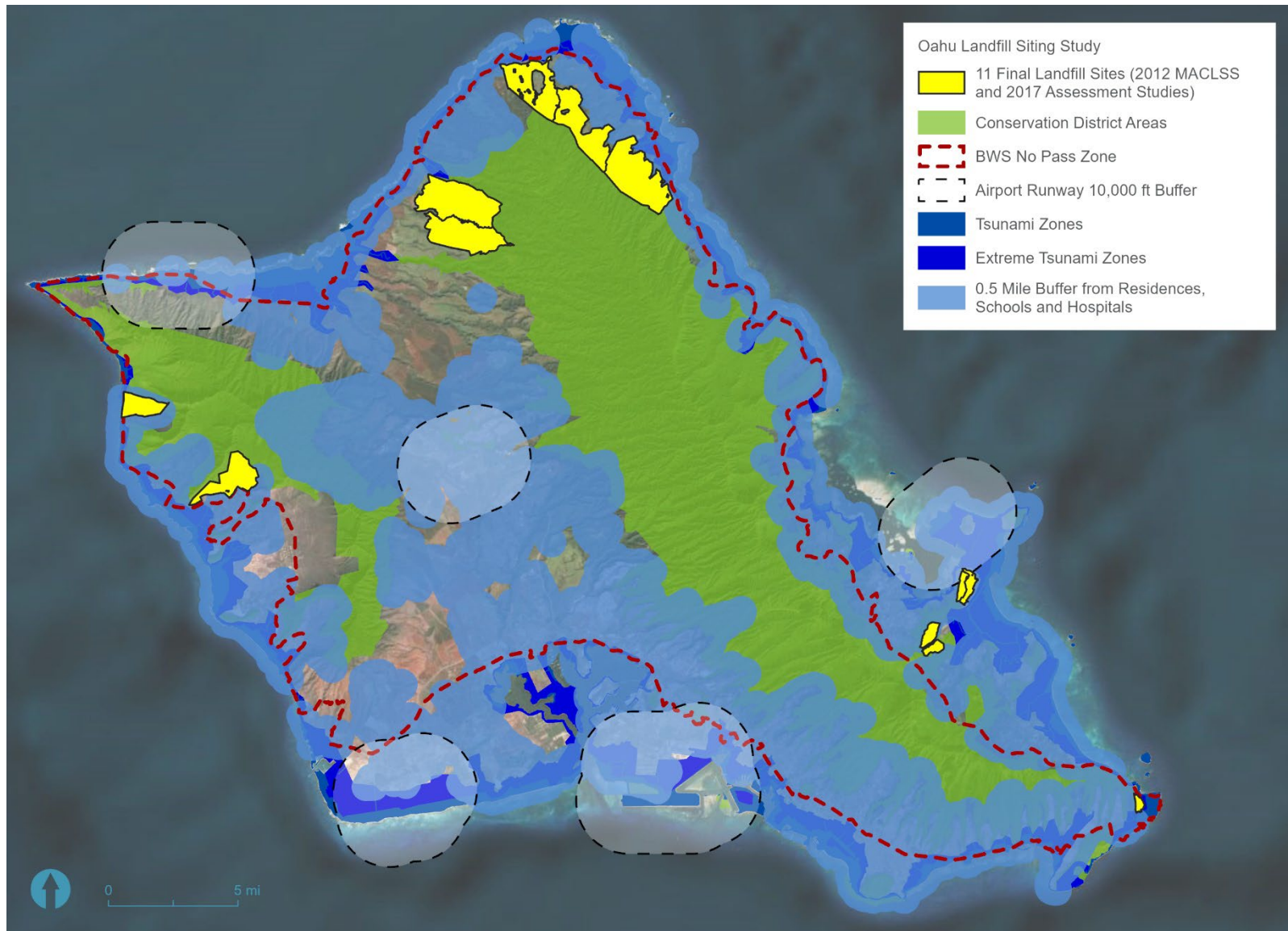
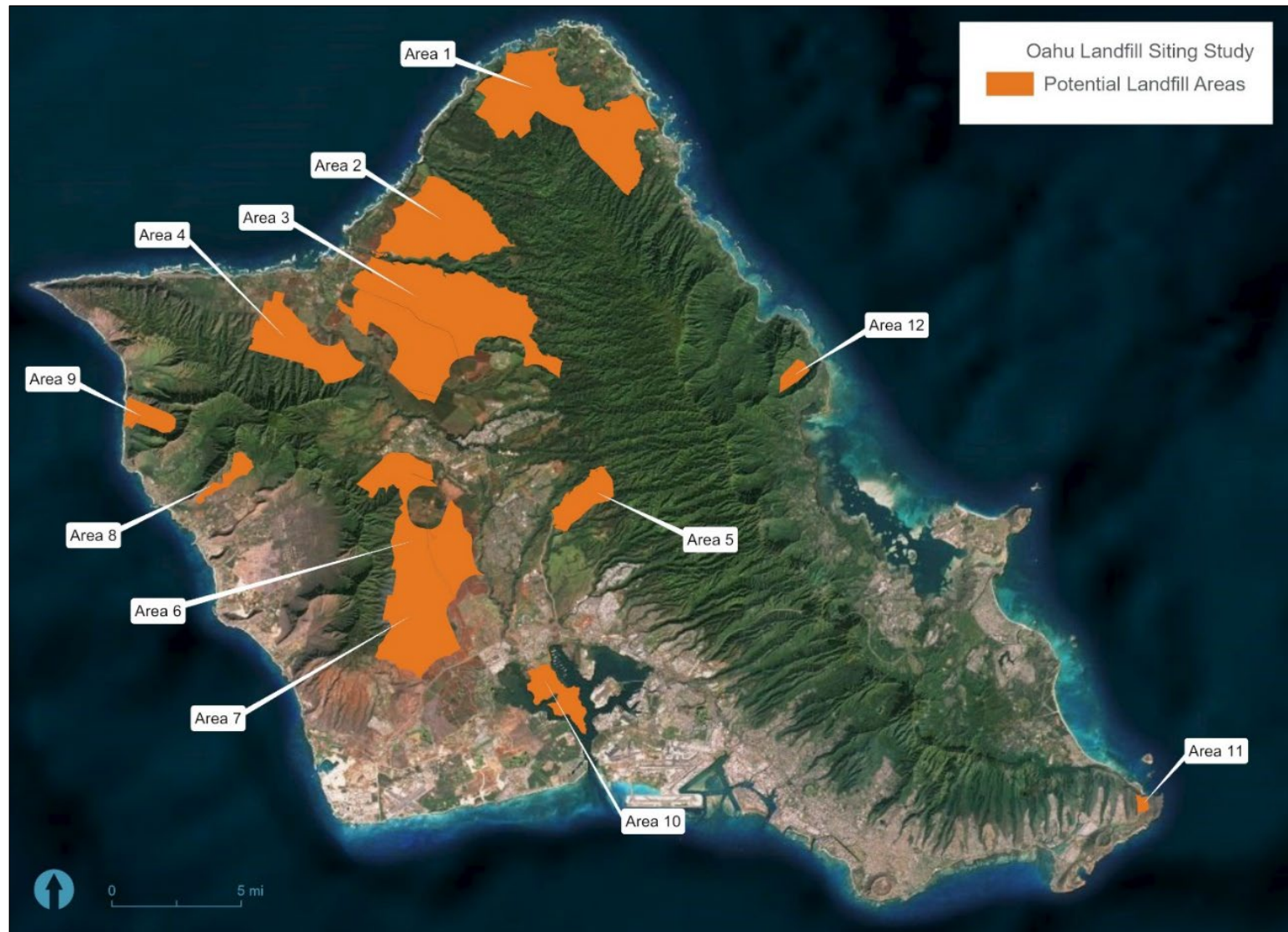


Figure 4.4 12 Areas for Potential Landfill Sites



- ENV eliminated all parcels that have a permitted residential structure in accordance with Act 73. ENV did not consider property condemnation to acquire and eliminate the residential structures. This decision eliminated Areas 9 and 12, and parcels in Areas 3, 4, and 7.
- ENV evaluated areas for access issues (e.g., limited or no access to available land); terrain issues (e.g., steep slopes); and planned, permitted, and existing developments that would make developing a parcel economically impractical. This effort eliminated Areas 8 and 11, and parcels in Areas 4, 5, and 6.

After eliminating the areas described above, the final four areas shown in Figure 4.5 became ENV's focus in completing the remaining steps for the study.

4.3.3 Step 3 - Landfill Site Locations and Conceptual Grading

During Step 3, ENV evaluated parcels in the final four areas to determine where potential landfill sites could be located that would meet the minimum waste disposal capacity described in Section 4.1.3. ENV established the following landfill design parameters to assist in evaluating landfill sites in the areas:

- 3:1 side slopes with 15-foot wide benches at 30-foot vertical intervals.
- 100-foot maximum height.
- 5 percent minimum sloped top area.
- 150-acre waste disposal footprint.
- 20-foot average excavation across entire footprint.
- Maintain one-half mile setback distance from residences.

The combined footprint area (plan view of disposal boundary), height, and other listed design parameters generally allow a minimum waste disposal capacity of 21.5 mcy, if located on flatter parcels. The parameters were adjusted, as necessary, to accommodate variations in terrain and for canyon type fills to achieve the minimum disposal capacity. A conceptual grading plan example is shown in Figure 4.6.

The evaluation and conceptual grading effort resulted in ENV selecting six potential landfill site locations, which are identified by area and site number. The final landfill sites selected by ENV and presented to LAC for scoring and final ranking are listed below and shown in Figures 4.7 through 4.12:

- | | |
|------------------|------------------|
| • Area 2, Site 1 | • Area 3, Site 3 |
| • Area 3, Site 1 | • Area 6, Site 1 |
| • Area 3, Site 2 | • Area 7, Site 1 |

Figure 4.5 Final Four Areas for Potential Landfill Sites

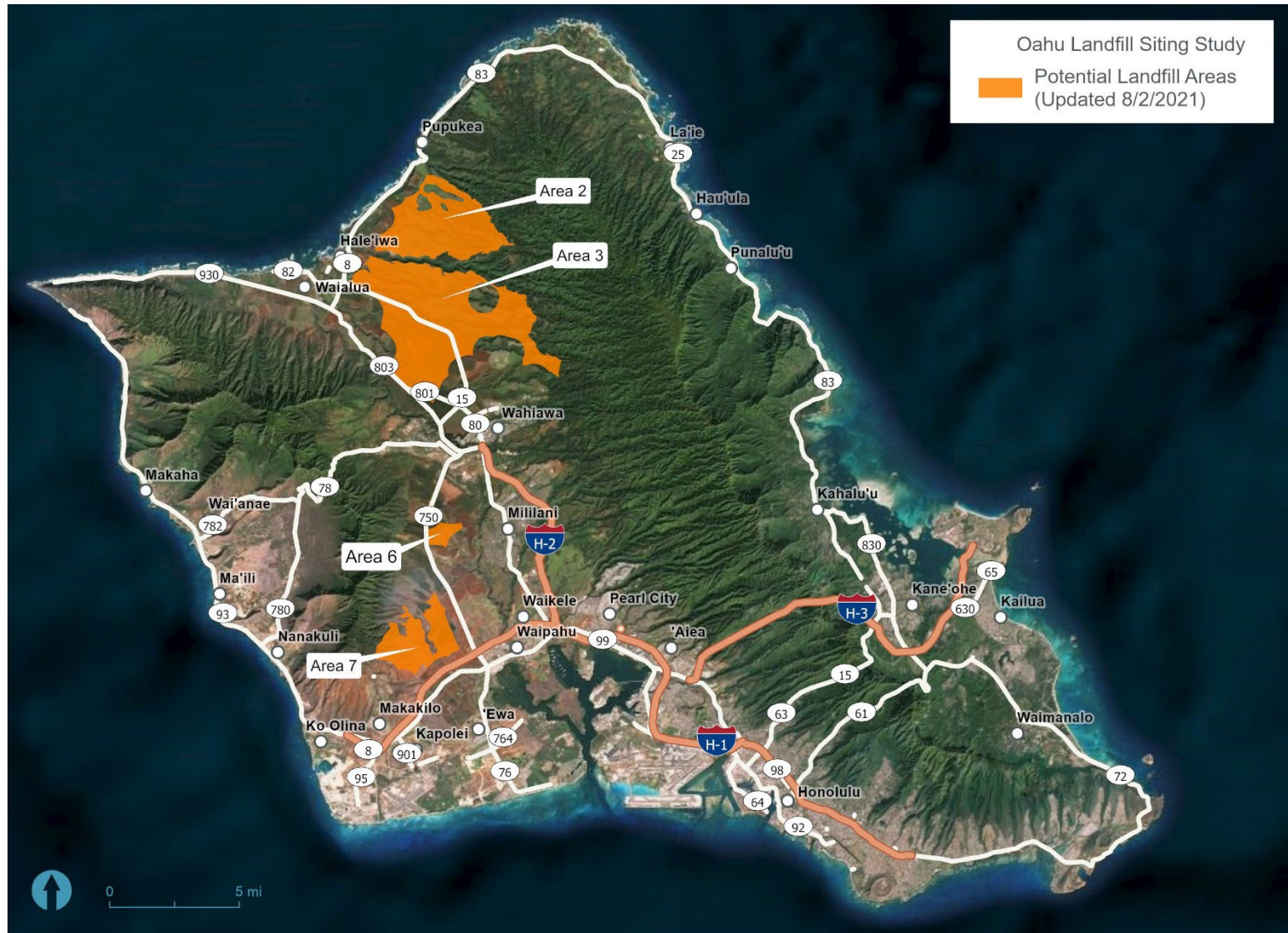
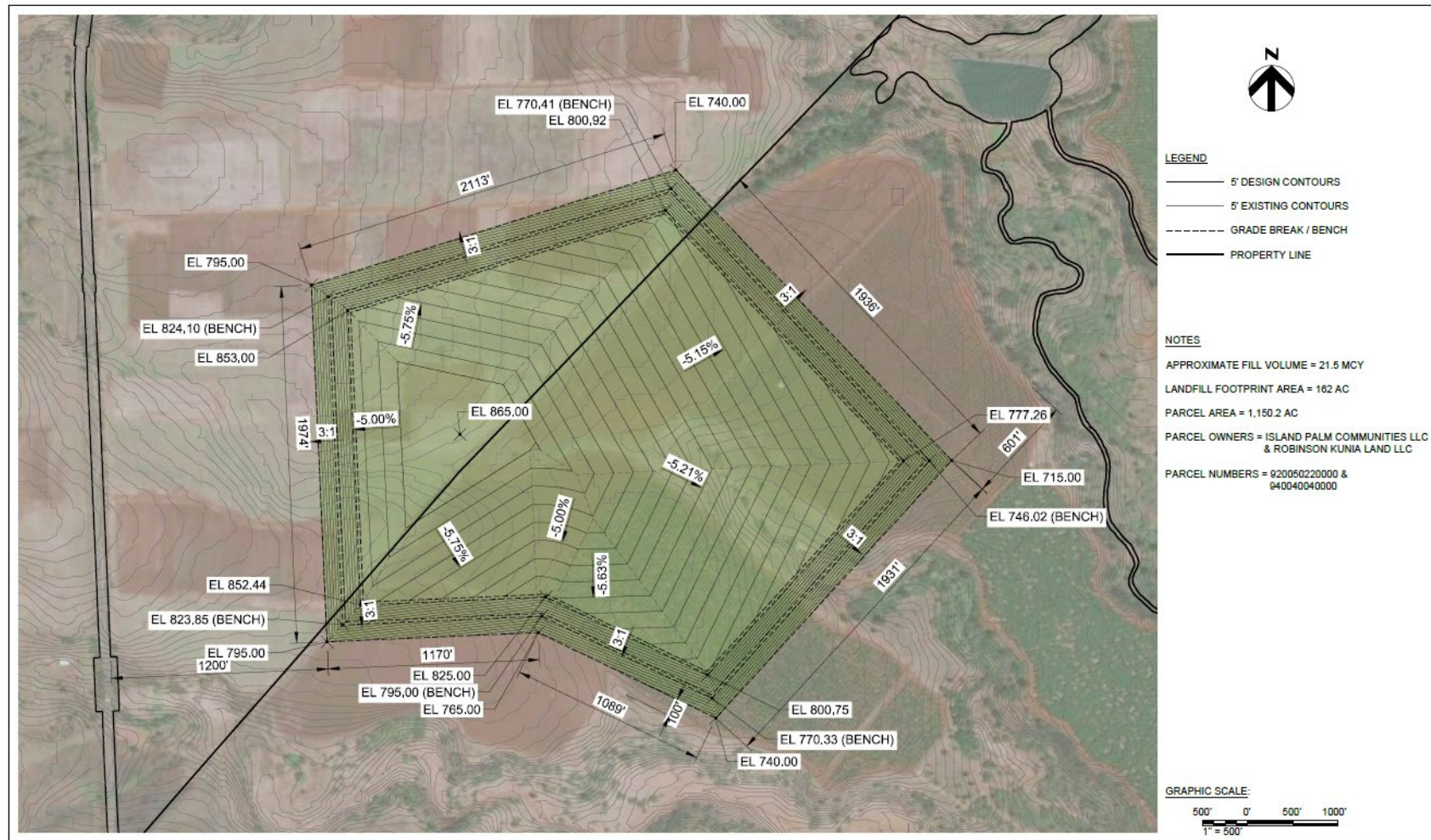


Figure 4.6 Conceptual Grading Plan Example



**OAHU LANDFILL SITING STUDY
AREA 6, SITE 1
CONCEPTUAL GRADING PLAN**

DATE
2/20/2022
FIGURE
1

Figure 4.7 Overview of Potential Landfill Sites



Figure 4.8 Overview of Potential Landfill Sites with Restrictions

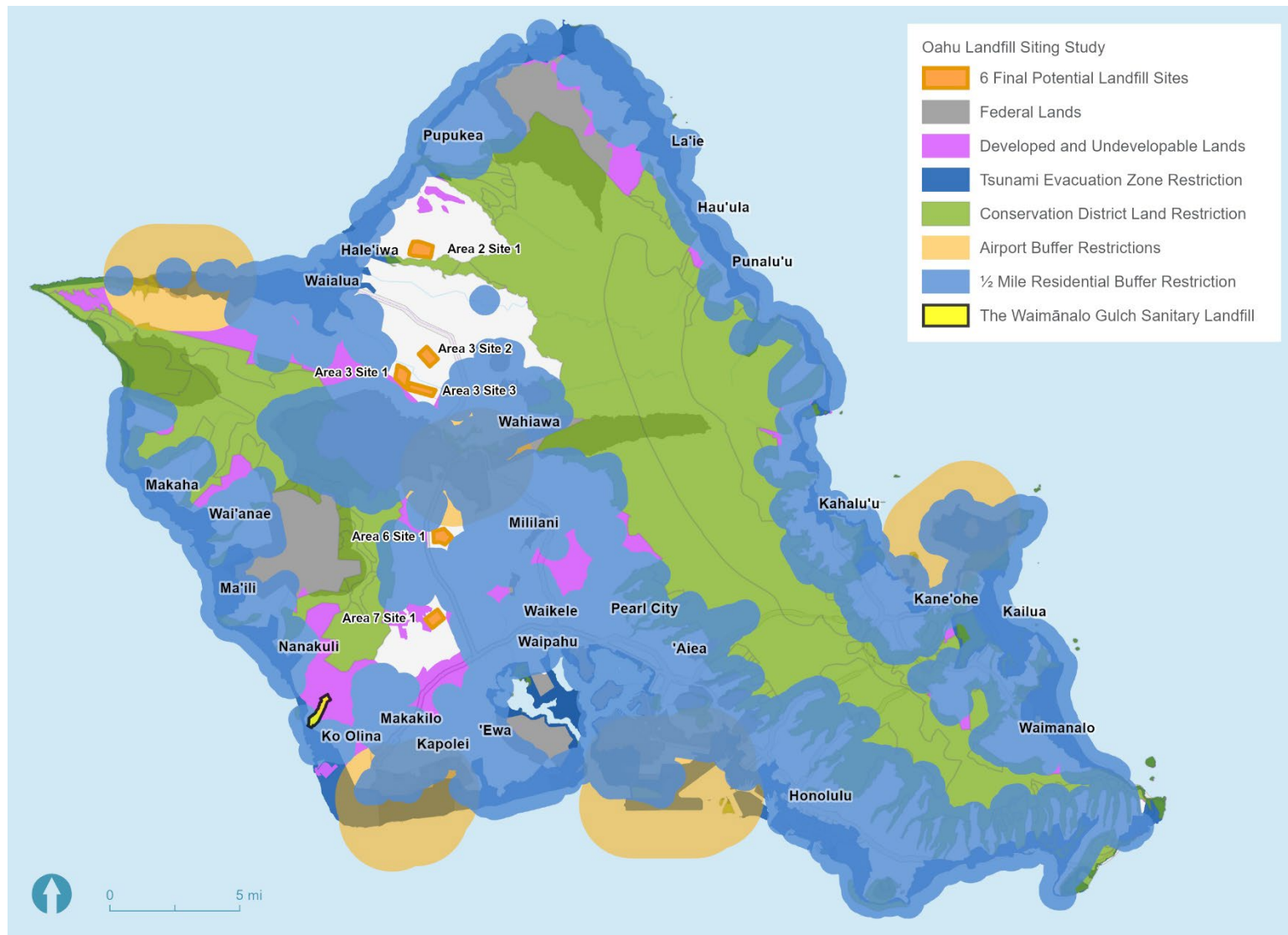


Figure 4.9 Location of Area 2, Site 1

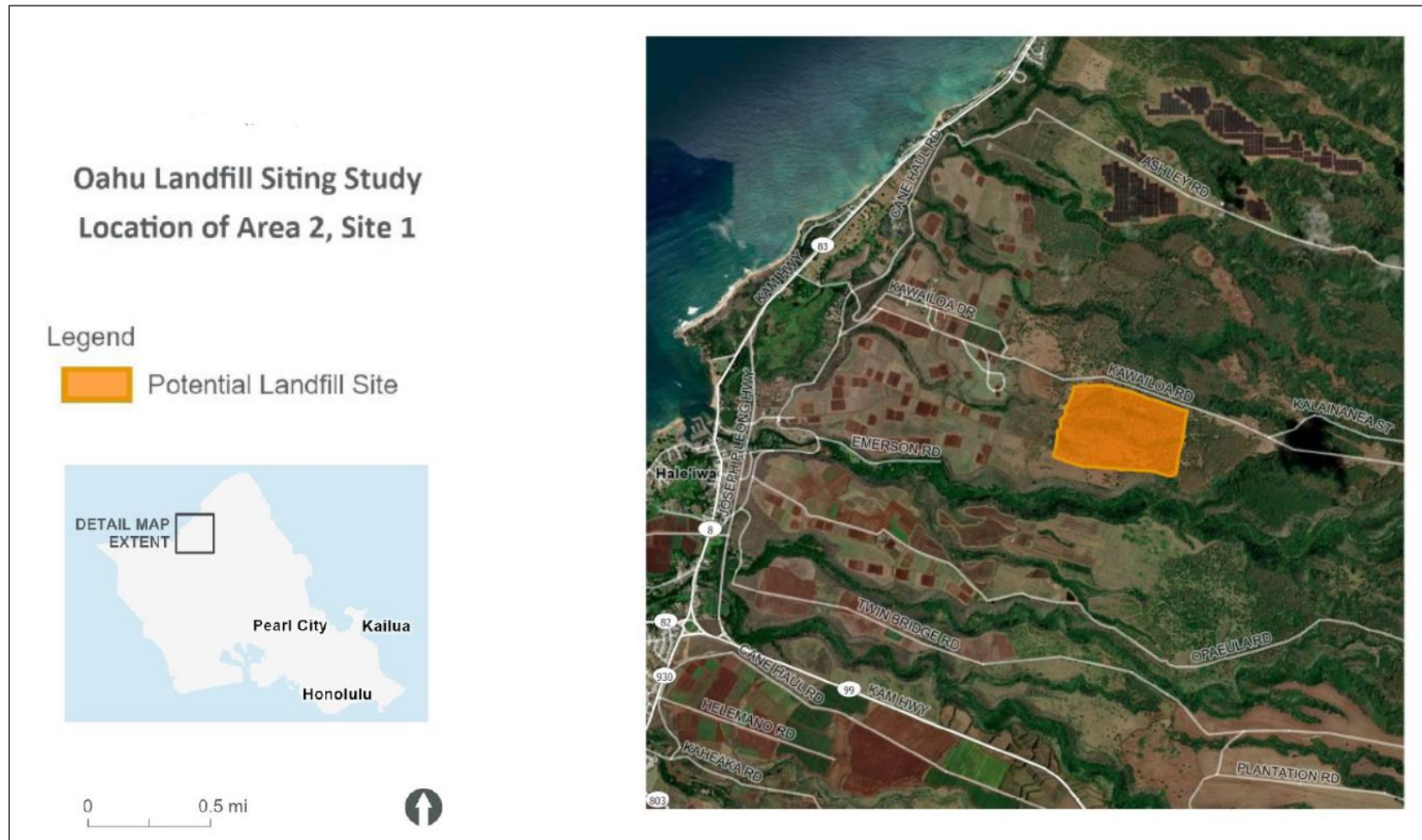


Figure 4.10 Locations of Area 3, Sites 1 through 3

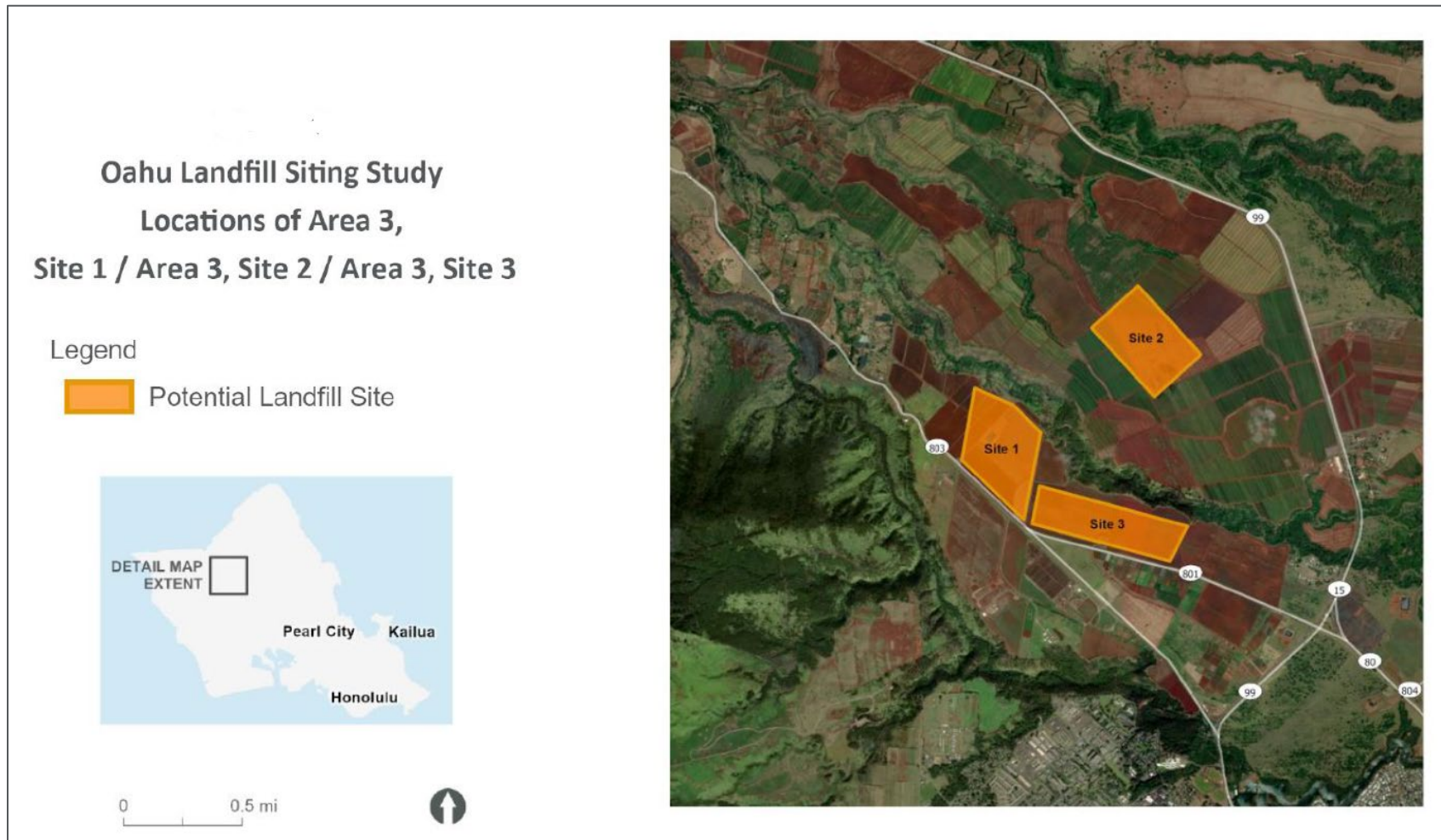
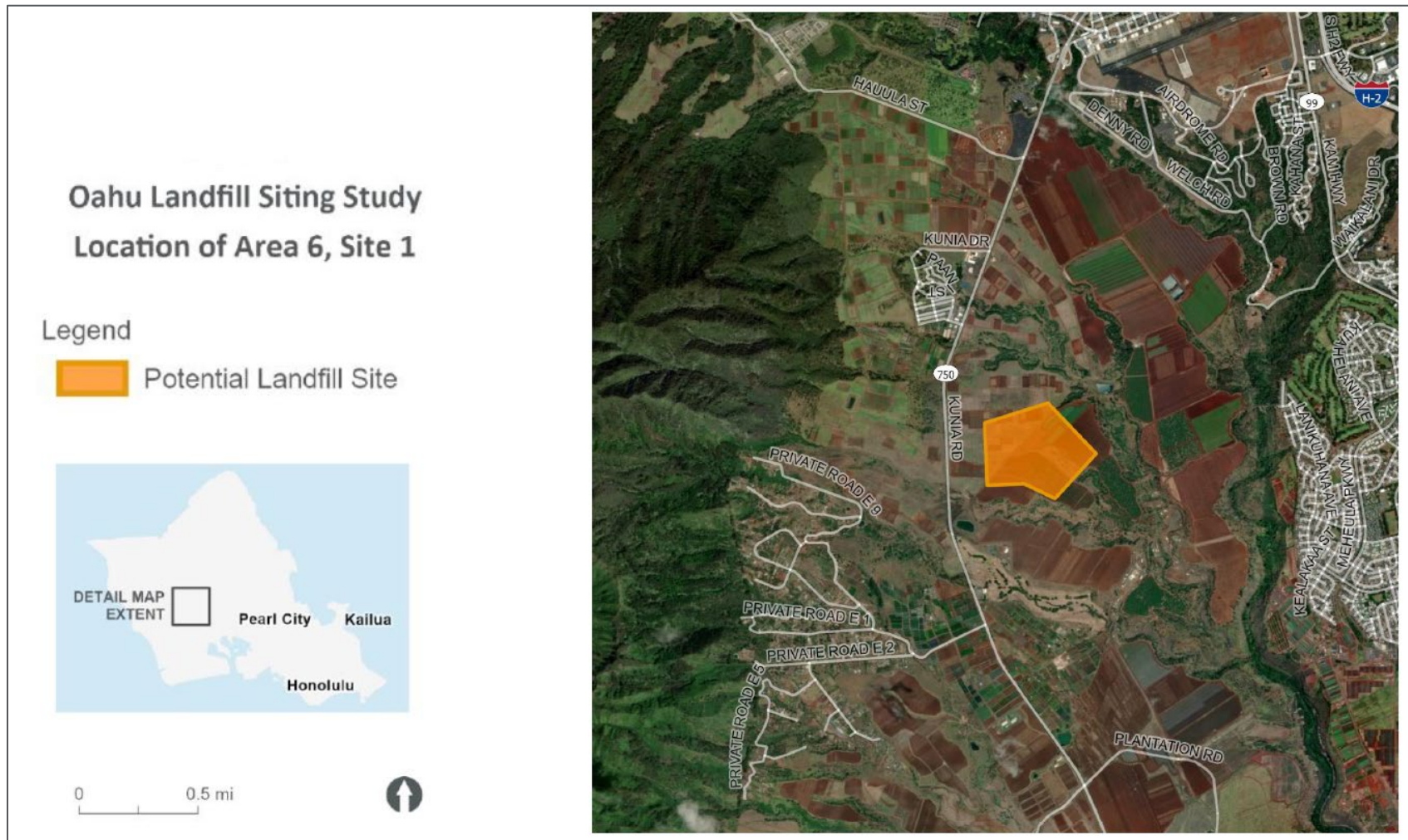


Figure 4.11 Location of Area 6, Site 1



Oahu Landfill Siting Study
Location of Area 7, Site 1

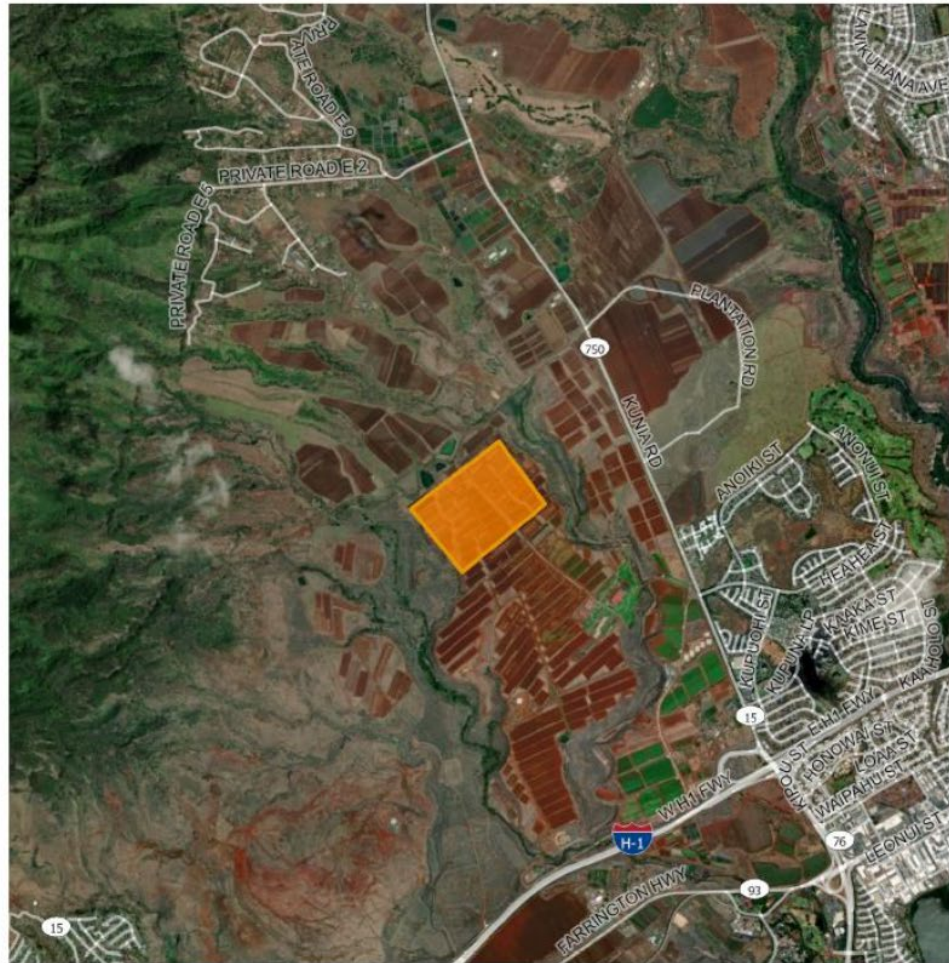


DETAIL MAP EXTENT

Pearl City Kailua

Honolulu

Figure 1 is a map of the study area. It shows a road network with a scale bar indicating 0.5 miles. The study site is marked with a dot, and the study area is indicated by a dashed line. The map includes labels for '0' and '0.5 mi'.



5 Site Scoring Methodology

5.1 Site Evaluation Method

The landfill site evaluation methodology was developed in four steps:

- Developing the objective and subjective evaluation criteria to be weighted, rated, scored, and used in the site ranking.
- Developing the weighting, rating, scoring, and ranking method.
- Researching and collecting data to develop potential landfill site technical support information for reference in rating and site scoring.
- Applying LAC's weights, ratings, scoring, and final site ranking.

Several of these steps were started simultaneously, and all steps coordinated to complete the evaluation and final site scoring process. The following sections provide more detailed information on the site evaluation methodology and scoring process presented to the LAC in Meetings 4, 5, and 6. Final scoring results and site rankings are provided in Section 6.

5.2 Site Evaluation Criteria

ENV used the 2012 MACLSS study as a basis to develop the site evaluation criteria for this study. ENV reviewed the 19 final evaluation criteria in the 2012 MACLSS study and eliminated all inapplicable criteria (e.g., location relative to residential concentrations) or revised the criteria to align with this study approach (e.g., combined location relative to wetlands, location relative to surface water resources). A draft list of evaluation criteria, divided into objective and subjective categories, was prepared containing 11 and 8 initial criteria in each category, respectively.

The draft list of objective and subjective evaluation criteria and definitions were presented to the LAC for discussion in Meeting 4. ENV incorporated the LAC's comments from Meeting 4 and presented a revised final list of evaluation criteria, with descriptions and explanations, to the LAC in Meeting 5 February 7, 2022. The final list consisted of 9 objective criteria and 8 subjective criteria, which are summarized in Tables 5.1 and 5.2. Definitions presented at Meeting 4 are listed below:

- Objective Criteria – Criteria based on unbiased, quantifiable facts and observations that are not influenced by personal feelings, perceptions, or desires.
- Subjective Criteria – Criteria based on personal opinions, experiences, knowledge, interpretations, assumptions, points of view, emotions, and judgement.

Table 5.1 Objective Site Evaluation Criteria Description and Explanation		
Criteria	Description	Explanation
1. Landfill Capacity	Total amount of waste that can be placed in the landfill	The City and County of Honolulu (CCH), Department of Environmental Services (ENV) intends to develop a new landfill with a minimum 20-year site life, which equates to an estimated 21.5 mcy of disposal capacity. This estimated disposal capacity is based on standard assumptions, including projected waste generation and recycling rates, waste compaction densities, and the estimated closure date of the PVT C&D Landfill. A larger landfill would typically require more land and capital costs; however, due to the lengthy permitting and development timeline for a new landfill (roughly 10 years), the anticipated high cost associated with siting and development, as well as an increasingly limited amount of land available for landfills, among several other factors, it is impractical to design a landfill with a lifespan of less than 20 years.
2. Land Acquisition, Landfill Development, and Roadway Improvement and Infrastructure Costs	Cost to acquire land, develop the landfill site, and complete all required roadway and infrastructure improvements to support the landfill	ENV anticipates that developing a new landfill will require a significant financial investment by CCH. Total development cost estimates will be completed for each landfill site, including acquisition, design, permitting, and construction costs, as well as required ancillary infrastructure improvements in the vicinity of the site to support heavy truck traffic. Differences in development cost estimates for each site reflects variations in site conditions and locations.
3. Time to Acquire Land and Develop Landfill	Time to complete the land acquisition process and develop the landfill site for waste acceptance	The land acquisition process will need to be completed either through condemnation, direct purchase, or a long-term lease. The time it will take to acquire and develop each site will be estimated by ENV and its consultants. Development planning and design is closely tied to the land acquisition method and timeline. When acquiring and developing the landfill site, ENV will strive to create scheduling efficiencies to reduce the project timeline to the greatest extent possible. The current landfill is mandated to stop accepting waste on March 2, 2028.
4. Location Relative to H-POWER	Driving distance to/from H-POWER	The location of the new landfill directly affects ENV's operational and contractual costs, including the costs to transport waste, ash, and residue from H-POWER. If the landfill is more than 12 miles from H-POWER, by contract, ENV incurs additional ash and residue hauling fees.

Table 5.1 Objective Site Evaluation Criteria Description and Explanation Cont.		
Criteria	Description	Explanation
		Additionally, the further away the landfill is from population centers, transportation of waste to the landfill when necessary will be more costly.
5. Effect on Traffic and Roadway System	The landfill's effect on traffic and the roadway system	ENV anticipates increased traffic and roadway system impacts in the vicinity of the new landfill site, as well as between the new landfill site and H-POWER. The extent of roadway system impacts is commensurate with the driving distances between H-POWER and the landfill. Additionally, increased waste hauler traffic could impact local traffic and roadway systems. Actual impacts would be addressed during the EIS process.
6. Effect of Precipitation on Landfill Operations	Effect of precipitation on operation of the landfill	The amount of precipitation a landfill site receives directly impacts landfilling operations and costs, and could increase environmental and human health risks. The more precipitation a landfill site receives, the greater the likelihood of challenging operational conditions and environmental effects related to stormwater runoff and leachate management.
7. Location with Regard to Important Agricultural Lands (IAL) of the Hawai'i LUC	Location of the landfill site within or outside of IAL designated by the Hawai'i LUC	A landfill site located in IAL areas will limit the use of that land for agricultural purposes. Additionally, due to restrictive land use requirements, permitting and developing a landfill site may become more challenging the closer that site is to IAL.
8. Location with Regard to the BWS Supply No Pass Zone	Location of the landfill site within or outside of the No Pass Zone established by BWS	The No Pass Zone is defined as "areas in which the installation of waste disposal facilities, which may contaminate groundwater resources used or expected to be used for domestic water supplies, shall be prohibited".
9. Municipal Water Wells within 1,000 feet	Municipal water wells within a 1,000-foot buffer zone	Standard solid waste industry practice is not to site a landfill in close proximity to a municipal or community water well. The U.S. EPA does not regulate set-back requirements; however, many states have established their own minimum requirements. The Hawai'i Wellhead Protection Program requires a minimum 1,000-foot setback from potential contaminating activities, such as a landfill site.

Table 5.2 Subjective Site Evaluation Criteria Description and Explanation

Criteria ¹	Description	Explanation
10. Significance of Land Use Displacement	Significance of existing land use displacement	Land use information identified through review of various Hawai'i and CCH department records for the landfill site is provided for reference and consideration.
11. Significance of Proximity to Ecologically Important Areas	Significance of the direct and indirect effects to identified ecologically important areas within a one-half-mile buffer zone	A list of ecologically important areas, as identified through review of various federal agency and Hawai'i department records, within a one-half-mile buffer zone of the landfill site is provided for reference and consideration.
12. Significance of Proximity to Nearby Surface Water	Significance of the direct and indirect effects to identified surface water bodies within a one-half-mile buffer zone	A list of surface water bodies, as identified through review of various federal agency and Hawai'i department records, within a one-half-mile buffer of the landfill site is provided for reference and consideration.
13. Significance of Proximity to Nearby Archaeological and Cultural Resources	Significance of the direct and indirect effects to identified archaeological and cultural resources within a one-half-mile buffer zone	A list of archaeological and cultural resources, as identified through review of State of Hawai'i Department of Land and Natural Resources, State Historic Preservation Division records, within the landfill site boundary and within one-half-mile buffer of the site is provided for reference and consideration.
14. Significance of Proximity to Nearby Parks and Recreation Facilities	Significance of the direct and indirect effects to identified parks and recreation facilities within a one-half-mile buffer zone	A list of parks and recreation facilities, as identified through review of various federal agency and Hawai'i and CCH department records, within a one-half-mile buffer zone of the landfill site is provided for reference and consideration.
15. Significance of Proximity to Nearby Public Commercial Facilities	Significance of the direct and indirect effects to identified public use commercial facilities within a one-half-mile buffer zone	A list of public use commercial facilities, as identified through review of CCH Department of Planning and Permitting records, within a one-half-mile buffer zone of the landfill site is provided for reference and consideration.

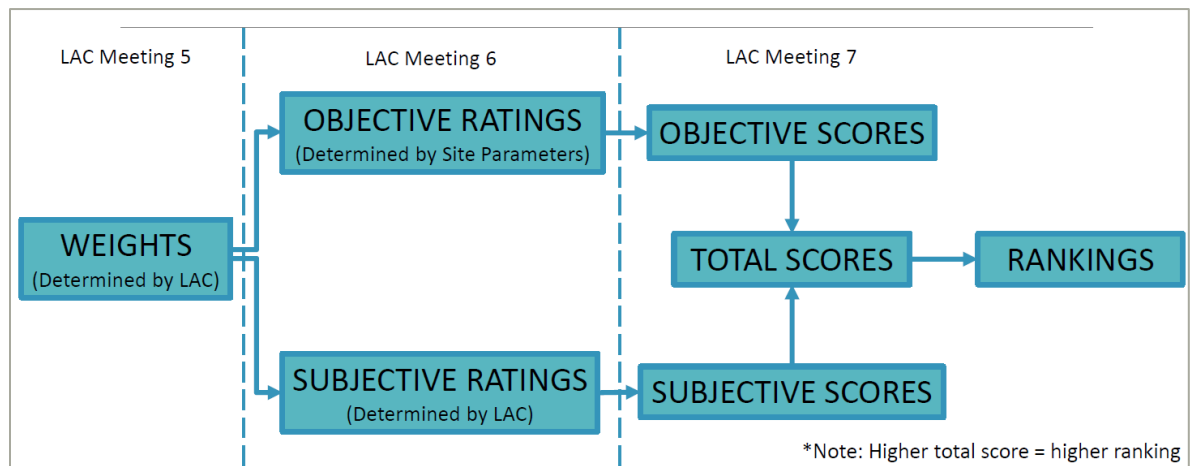
Table 5.2 Subjective Site Evaluation Criteria Description and Explanation Cont.		
Criteria ¹	Description	Explanation
16. Environmental Justice: Significance of Location Relative to Identified Community Disamenities	Significance of the landfill site location relative to identified community disamenities	A list of operational community disamenities, including landfills, power plants, wastewater treatment plants, and petroleum refineries, on O'ahu, as identified through review of various federal agency and Hawai'i and CCH department records, is provided for reference and consideration.
17. Significance of Effect on Established Public View Planes	Significance of effect on established public view planes for local communities	A list of communities where public view planes could potentially be affected from development of the landfill site is provided for reference and consideration.

1. Subjective criteria numbering sequential from Table 5.1.

5.3 Site Scoring Methodology

A multi-criteria decision-making analysis (MCDA) method was used to score and rank the final sites listed in Section 4.3.3. The MCDA method is amenable when decisions by a group involves ranking or choosing between alternatives. One variation of the MCDA method is to develop and apply weights and ratings to multiple criteria in scoring of alternatives. The weights and ratings reflect the relative importance of each member of the group in the decision-making process. Weighting and rating the evaluation criteria, described in Section 5.2, avoided the need for consensus among LAC members and allowed for an independent ranking of the final sites. The site scoring process using the MCDA method is described in the following sections and illustrated in Figure 5.1.

Figure 5.1 Site Scoring Process Flow Diagram



5.3.1 Evaluation Criteria Weighting

Evaluation criteria weighting involves assigning a numeric weight to each evaluation criteria. The composite average weights are then used with the criteria ratings to calculate a final score for each site. Each LAC member gives each evaluation criteria a weight value from 1 to 100, with weights being relative from one criterion to another to differentiate the importance of one criterion over another. As an example, if one LAC member determines that landfill capacity is the most important criteria, it would be assigned a weight of 100. If the same LAC member determines that the time to acquire land and develop the landfill is half as important as landfill capacity, that criteria would be assigned a value of 50. That LAC member could also determine the site's relative location to H-POWER is of no consequence and assign a value of 1. Weighting use in the scoring calculations is described in Section 5.4.3.

5.3.2 Evaluation Criteria Rating and Method

Criteria rating involves applying a numerical value in the scoring of each site to allow influence in the scoring process. The numerical value is based on the site's actual or judged performance in relationship to the criteria. Ratings developed in the site scoring are determined by actual site parameters for the objective criteria and by LAC member judgement for the subjective criteria, as shown on Figure 5.1.

The objective criteria ratings are determined by ENV because the site's performance on the criteria is measurable and not subject to LAC member judgement. Objective ratings are categorized by three different methods (or types) depending on the intended influence of the rating on the score: direct, inverse or binary. In this study, the resulting numerical rating value is zero to six for direct and inverse rating types, and zero or six if binary in nature. Figures 5.2 through 5.4 show examples of each objective criteria rating type.

Figure 5.2 Objective Rating – Direct Type Example

- Based on the favorability of a site relative to the most favorable site
- Higher number = more favorable
- Example 1: Landfill Capacity
 - Site 1: $50 \text{ M yd}^3 \times \frac{1}{50 \text{ M yd}^3} \times 6 = 6$
 - Site 2: $25 \text{ M yd}^3 \times \frac{1}{50 \text{ M yd}^3} \times 6 = 3$

Figure 5.3 Objective Rating – Inverse Type Example

- Based on the favorability of a site relative to the most favorable site
- Lower number is more favorable
- Example 2: Location Relative to H-POWER

- Site 1: 20 mi $\frac{10 \text{ mi}}{20 \text{ mi}} \times 6 = 3$

- Site 2: 10 mi $\frac{10 \text{ mi}}{10 \text{ mi}} \times 6 = 6$

Figure 5.4 Objective Rating – Binary Example

- Based on whether a site is “within or outside of”
- Higher number is more favorable
- Example 3: Location with regard to Important Agricultural Lands of the Hawai'i Land Use Commission

- Site 1: Within IAL = 0

- Site 2: Outside of IAL = 6

Subjective criteria ratings are determined by LAC because the site performance on the criteria is based on each LAC members judgment. Each LAC member applies a numerical value from zero to six to each criterion, which represents a members judgement of the significance of the effect each site has on the criteria being rated. All subjective ratings are categorized as reverse type, meaning the more significantly the criteria are rated by each LAC member the less favorable the site is in the final ranking. Figure 5.5 shows an example of reverse rating for subjective criteria.

Figure 5.5 Subjective Rating – Reverse Type Rating

- Lower number (less significant effect) is more favorable
- Applied rating is reverse of submitted rating
- Example:
 - Significance of Proximity to Nearby Ecologically Important Areas (direct and indirect effects of the location of the landfill relative to ecologically important areas within one-half-mile, with 0 being no effect and 6 being extremely significant effect)
 - Site 1 Submitted Rating = 4, based on a significant effect to a bird sanctuary 0.1 miles away
 - Applied Rating = $6 - 4 = 2$

5.4 Site Scoring Process

This section describes the scoring process completed by the LAC, which was based on the scoring methodology described in the previous sections. ENV provided examples and instructions on the overall scoring process during LAC Meetings 5 and 6. LAC members were provided prepared forms in Microsoft (MS) Forms during scoring, whereupon each LAC member could apply weights and ratings to the evaluation criteria anonymously. The weights and ratings provided by each LAC member were transferred into MS Excel scoring spreadsheets containing formulas to calculate the final scores described in the following sections.

5.4.1 Criteria Weights

ENV presented the methodology and instructions on how to weight each objective and subjective criteria to the LAC during Meeting 5. LAC members were provided a weight question form to record weights for each of the 17 evaluation criteria and a weight assistance form with descriptions of the criteria for reference. Weights were accepted from LAC members until February 22, 2022. Criteria weighting results are provided in Section 6. Example forms provided to the LAC are provided in Appendix D.

5.4.2 Subjective Criteria Ratings

ENV presented the methodology for rating the subjective criteria during Meeting 5 and provided instructions to the LAC on how to rate the criteria during Meeting 6. LAC members were provided a rating assistance form, rating question form, and the technical support documents described in Section 5.6 for use in the criteria rating exercise. Ratings were accepted from LAC members until March 24, 2022. Criteria rating results are provided in Section 6.

5.4.3 Final Scoring

ENV presented the evaluation criteria weighting and rating scoring method to the LAC during Meeting 6. Criteria weights and subjective criteria ratings received from LAC members were inserted into the MS excel scoring spreadsheet and an average weight and rating calculated for each site. Objective criteria ratings calculated by ENV are added directly into the same spreadsheet and averaged. Figure 5.6 shows an example of the output data when the subjective criteria ratings are transferred from the rating question form provided to the LAC. Figure 5.7 shows an example of the reverse calculation using the average subjective criteria rating and the resulting value used in the final score calculation. Figure 5.8 shows final scoring calculation using the average weights and average reverse ratings. The reverse calculation is not performed on the objective criteria ratings.

Figure 5.6 Example Output Table of Criteria Rating (Site Averages)

LAC Member	Site 2.1	Site 3.1	Site 3.2	Site 3.3	Site 6.1	Site 7.1
1	0	0	0	0	0	4
2	1	0	0	0	0	0
3	1	2	6	6	4	2
4	3	2	2	2	2	1
5	0	2	3	4	5	6
6	3	1	1	1	1	2
7	4	3	3	3	3	4
8	2	5	5	5	5	6
Average Rating	1.75	1.88	2.50	2.63	2.50	3.13

Figure 5.7 Example of Reverse Calculation of Subjective Rating

Proximity to Nearby Ecologically Important Areas (½-mile from landfill site)

0 = no potential effects (a good thing)

6 = potential significant effects (a bad thing)

The rating must then be reversed to be applicable with the rest of the scoring.

Example: Site 2.1 Average Rating = 1.75 (minimal impact, mostly good)

Average Reversed Rating = $6 - 1.75 = 4.25$

4.25 is entered into the scoring formula

Figure 5.8 Example Final Score Calculation for Sites by Criteria

Proximity to Nearby Ecologically Important Areas (½-mile from landfill site)

Average Weight x Average Reversed Rating (per Site) = Score

Average Weight		60.83				
X						
	Site 2.1	Site 3.1	Site 3.2	Site 3.3	Site 6.1	Site 7.1
Ave. Reversed Rating	4.25	4.13	3.50	3.38	3.50	2.88
=						
Score	258.53	250.92	212.91	205.30	212.91	174.89

5.5 Research and Data Collection

ENV performed technical research for all objective and subjective criteria for each site and provided technical support documents to the LAC for reference during subjective criteria rating. Technical support documents were also prepared and used by ENV to complete the objective criteria rating. ENV presented examples of subjective criteria support documents to the LAC in Meeting 6. Final technical support documents are provided Appendix E.

6 Results of Site Scoring and Ranking, and LAC Recommendations

Results of the final site scoring, rankings, and LAC recommendations are presented in this section. Scoring was performed according to the methodology described in Section 5, and results were presented to the LAC at Meeting 7.

6.1 Results of Site Scoring and Ranking

6.1.1 Criteria Weighting Results

Following Meeting 5, criteria weights were obtained from six out of eight LAC members. Average weights for the objective and subjective criteria are summarized in Tables 6.1 and 6.2.

Table 6.1 Average Criteria Weights – Objective Criteria	
Criteria	Average Weight (1 to 100)
1. Landfill Capacity	86.7
2. Landfill Acquisition, Landfill Development, and Roadway Improvement/Infrastructure Costs	59.2
3. Time to Acquire Land and Develop Landfill	47.5
4. Location Relative to H-POWER	60.8
5. Effect on Traffic and Roadway System	68.3
6. Effect of Precipitation on Landfill Operations	71.7
7. Location with regard to Important Agricultural Lands (IAL) of the Hawaii LUC	61.7
8. Location with regard to the BWS No Pass Zone	91.7
9. Municipal Water Well within 1,000 feet	91.7

Table 6.2 Average Criteria Weights – Subjective Criteria	
Criteria	Average Weight (1 to 100)
10. Significance of Land Use Displacement/Beneficial Reuse	52.5
11. Significance of Proximity to Ecologically Important Areas	60.8
12. Significance of Proximity to Nearby Surface Water	59.2
13. Significance of Proximity to Nearby Archaeological & Cultural Resources	48.3
14. Significance of Proximity to Nearby Parks & Recreation Facilities	47.5
15. Significance of Proximity to Nearby Public Commercial Facilities	36.0
16. Significance of Location Relative to Identified Community Disamenities	52.5
17. Significance of Effect on Established Public View Planes	33.3

6.1.2 Criteria Ratings and Scoring Results

Final average ratings and site scores for objective and subjective criteria are summarized in Tables 6.3 through 6.6. LAC members as a whole submitted subjective criteria ratings.

Table 6.3 Final Average Ratings – Objective Criteria									
Site	Criteria Number and Rating ¹								
	1	2	3	4	5	6	7	8	9
2.1	6	2.8	6	2.3	1.5	3.6	6	0	6
3.1	6	4.8	6	3.5	1.4	4.7	0	0	6
3.2	6	6	6	3.2	1.8	4.3	6	0	0
3.3	6	5.4	6	3.4	1.4	4.3	6	0	0
6.1	6	4.3	6	5.3	3.1	5.1	6	0	6
7.1	6	4.6	6	6	6	6	0	0	6

1. Refer to Tables 6.1 and 6.2 for criteria names.

Table 6.4 Final Site Scores – Objective Criteria

Site	Criteria Number and Scores									Objective Subtotal
	1	2	3	4	5	6	7	8	9	
2.1	520.0	162.6	285.0	141.6	103.7	259.5	370.0	0	550.0	2392.5
3.1	520.0	281.3	285.0	213.3	97.4	319.8	0	0	550.0	2281.4
3.2	520.0	355.0	285.0	193.7	119.4	308.1	370.0	0	0	2151.3
3.3	520.0	321.7	285.0	205.3	97.4	308.1	370.0	0	0	2107.5
6.1	520.0	256.6	285.0	322.0	210.0	365.6	370.0	0	550.0	2879.2
7.1	520.0	272.2	285.0	366.0	410.0	430.0	0	0	550.0	2832.3

Table 6.5 Final Average Ratings – Subjective Criteria

Site	Criteria Number and Rating							
	10	11	12	13	14	15	16	17
2.1	0.8	2.5	2.4	1.9	5.5	5.5	3.5	4.1
3.1	3.5	2.5	3.9	4.6	5.5	4.1	4.5	3.8
3.2	3.8	2.1	2.4	4.8	5.5	5.5	4.5	4.3
3.3	3.5	2.6	3.8	4.0	5.5	3.9	4.4	4.1
6.1	2.0	3.1	2.6	2.9	3.3	5.4	5.0	3.6
7.1	0.9	4.4	3.0	2.1	1.6	5.4	4.8	3.5

Table 6.6 Final Site Scores – Subjective Criteria

Site	Criteria Number and Scores								Subjective Subtotal
	10	11	12	13	14	15	16	17	
2.1	39.4	152.0	140.5	90.6	261.2	198.0	183.8	137.5	1203.0
3.1	183.8	152.0	229.3	223.5	261.2	148.5	236.3	125.0	1559.6
3.2	196.9	129.2	140.5	229.6	261.2	198.0	236.3	141.7	1533.4
3.3	183.8	159.7	221.9	193.3	261.2	139.5	229.7	137.5	1526.6
6.1	105.0	190.0	155.3	139.0	154.4	193.5	262.5	120.8	1320.6
7.1	45.9	266.1	177.5	102.7	77.2	193.5	249.4	116.7	1229.0

6.2 Site Ranking

Final site ranking and total scores are summarized in Table 6.7.

Rank	Area, Site	Location	Score
1	Area 6, Site 1	Wahiawa near Kunia Road	4,200
2	Area 7, Site 1	Kapolei/Waipahu near Kunia Road	4,061
3	Area 3, Site 1	Wahiawa	3,841
4	Area 3, Site 2	Wahiawa	3,685
5	Area 3, Site 3	Wahiawa	3,634
6	Area 2, Site 1	Haleiwa near Kawaihoa Road	3,596

6.3 LAC Recommendations of Siting Results

Final site scoring and ranking was presented to the LAC in Meeting 7 as described in previous sections. During Meeting 7, LAC members were encouraged to openly discuss the site evaluation, scoring and ranking process, final site locations, and any other concerns or recommendations for inclusion in the final report. The following presents discussions and recommendations from the LAC as a whole. Appendix A includes written statements from LAC members who wished to provide further comment.

- The LAC observed that all final six landfill sites are located within the BWS No Pass Zone. During discussion, members were in majority agreement that the LAC does not recommend any of the final landfill sites due to their location within the BWS No Pass Zone. The LAC strongly felt that they could not support a landfill sited within the BWS No Pass Zone due to their convictions in ensuring preservation of groundwater resources on O'ahu.
- LAC discussed options that the City could consider in re-evaluating potential landfill sites outside of the BWS No Pass Zone. One recommended option included amending Act 73 to allow more geographic diversity in searching for additional sites. Potential amendment options discussed included reducing the one-half mile residential setback distance or removal of specific conservation subzones (e.g., General Subzone). The LAC expressed concerns that Act 73, along with time constraints placed upon the process by the LUC, may have limited the ability to perform a more extensive evaluation of sites outside the BWS No Pass Zone.
- LAC recommended additional evaluation of parcels below the BWS No

Pass Zone that may be more suitable for landfill siting through initiation of an eminent domain process (e.g., minimal residences on parcel). Acquiring a smaller number of residential properties to meet the requirements of Act 73 and remain outside the BWS No Pass Zone may be more conducive to preservation of groundwater and agricultural resources.

- LAC recommended further efforts by the City to encompass federal lands for siting a landfill, including state controlled lands with leases set to expire or underutilized by the federal government.

6.4 Community Benefits/Future Public Outreach

ENV included a landfill host community benefits (HCBs) presentation at the conclusion of Meeting 7. ENV explained the importance of HCBs as part of the overall process and requested LAC discussion and recommendation. Examples were presented of HCBs established for the WGSF, outer island landfills, U.S. EPA, and other governmental municipalities. The following recommendations were made by the LAC:

- LAC recommended that a HCBs package be established not only for the next community to host a landfill, but also include communities that have borne the burden of past O'ahu landfills.
- LAC recommended an advisory committee be established to assist in identification of host community concerns and the management of potential endowments. Community participation should play an important role in the process.

Landfill Advisory Committee (LAC)
Meeting #4
Tuesday, December 14, 2021 – 10:00 am
Virtual WebEx

MEETING MINUTES

ATTENDANCE

LAC Members Present:

Steven Chang, Suzanne Jones, Ken Kawahara, Emmett Kinney, James Nakatani, Cynthia Rezentes

Honolulu Board of Water Supply Team Present:

Ernie Lau (BWS Energy and Chief Engineer), Erwin Kawata (Head of Water Quality Division), Barry Usagawa (Head of Water Resources Division), Kathleen Elliott-Pahinui (Head of Communications Office).

Project Team Present:

Wesley Yokoyama (ENV Director), Michael O'Keefe (ENV Deputy Director), Markus Owens (Public Information Officer), Chris Hirota (Refuse Division Chief), Ahmad Sadri (Energy Recovery Administrator), Josh Nagashima (Project Manager), Julie Leano (Planner), Luciana Bishay (IT), John Katahira (Limtiaco Consulting Group), Mike Kaiser (HDR), Ayako Nakasato (HDR)

I. CALL TO ORDER (*John Katahira, Facilitator*)

John Katahira welcomed the group and called the meeting to order at 10:06 am.

John Katahira opened the meeting noting that this meeting is being held pursuant to Governor David Ige's Emergency Proclamation Related to the State's COVID-19 Delta Response issued on November 29, 2021 and in order to follow public participation in this meeting in a manner consistent with safe practices and social distancing requirements, this meeting is being conducted as a remote meeting by interactive conference technology.

John Katahira reviewed and summarized the agenda items:

- Call to Order/Roll Call/Public Comment Period
- Approval of Prior Meeting Minutes
- Presentation and Discussion
- Announcements and Adjournment

II. ROLL CALL (*John Katahira, Facilitator*)

John Katahira proceeded with roll call in alphabetical order. Six LAC members were present. All present members stated that there was no one present at their location.

III. ORAL COMMENTS ON ALL AGENDA ITEMS REMOTELY VIA VIDEO CONFERENCE OR PHONE

John Katahira reminded everyone that the meeting is being recorded and will be posted on the ENV website. He stated that the members of the public may participate in this meeting by interactive conference technology from remote locations and present oral testimony by video conference or phone. The following procedures were in effect for the meeting and read aloud by John Katahira:

1. Remote testimony will be accepted on all agenda items. Each speaker will be limited to 2 minutes per person.
2. All participants will enter the remote meeting with view-only privileges. For individuals providing remote testimony, staff will bring you into the meeting and unmute you at the time you are called to present comments. When reminded of the time limit, please conclude your remarks as promptly as possible.
3. For those who joined by telephone only, your name will not be known so you will be identified by the prefix of your phone number.
4. Public comments will be taken from each person on the registered list.
5. If you did not previously register and wish to provide comments, please raise your hand on WebEx. If you have joined by telephone, press *3 to raise your hand if you would like to provide comments.
6. When your name or telephone prefix is called, you will be given a few moments to respond. If you do not respond after a few moments, we will move on to the next person. Please state your name and identify the agenda item on which you are speaking on.

John Katahira indicated that no one on the preregistered list would be providing comments. Josh Nagashima (ENV Project Manager) and Luciana Bishay (IT host) confirmed there were no raised hands in the meeting.

An opportunity was provided for other participants to raise their hand and provide comments before proceeding.

Joelle Simonpietri made a request to have the public commentary after the presentation in future meetings.

John Katahira proceeded to the next agenda item to approve the prior meeting minutes.

IV. APPROVAL OF MINUTES

John Katahira explained that meeting minutes from the three previous meetings needed to be approved. It was noted that the minutes were provided to the LAC members in advance for review. The minutes are also available on the website.

1. John Katahira proceeded with requesting a motion to approve the meeting minutes for LAC Meeting #1 – October 4, 2021. A motion was made by Cynthia Rezentes and seconded by Suzanne Jones. Ken Kawahara indicated no objections. John Katahira noted no objections from the committee members and the minutes were approved.
2. John Katahira requested a motion to approve the meeting minutes for LAC Meeting #2 – October 25, 2021. A motion was made by Cynthia Rezentes and seconded by Suzanne Jones. John Katahira noted no objections from the committee members and the minutes were approved.

3. John Katahira requested a motion to approve the limited meeting minutes for LAC Meeting #3 – November 3, 2021. A motion was made by Cynthia Rezentes and seconded by Suzanne Jones. John Katahira noted no objections from the committee members and the minutes were approved.

V. DISCUSSION

John Katahira provided a brief recap of the LAC Meeting #3 held on November 3, 2021 for site visits to PVT Landfill, Waimānalo Gulch Sanitary Landfill, and H-POWER. Due to health and safety reasons, this was a limited meeting because of limitations on the number of attendees at the sites as well as the sites being active facilities. A bus tour of 20 people started at Kapolei Hale, proceeded on to PVT Landfill, Waimānalo Gulch Sanitary Landfill, and ended at H-POWER before returning to Kapolei Hale. The intent of the meeting was for the committee members to learn how each facility operates as well as having a firsthand view of the environmental impacts of each site. John Katahira acknowledged and thanked the tour guides and bus driver from the tour.

John Katahira asked if there were any questions or discussion from the committee members regarding meeting #3. There were no questions or discussion presented at this time.

John Katahira proceeded on to the next agenda item to discuss the Resident Survey Results.

VI. PRESENTATION AND DISCUSSION

1. Resident Survey Results (*Josh Nagashima, ENV PM*)

Josh Nagashima noted that the LAC Meeting #3 video is available on the ENV site where the resident survey is also located. He proceeded explaining that the survey will be online until the end of the month. The main purpose of the survey is to provide a way for residents to be involved and provide comments throughout the process. The survey was described as a Microsoft Forms Survey with about 20 questions. The survey was officially kicked-off on the ENV website on August 27 and is advertised through the website, Facebook, Twitter, and TheBus Ad. There are currently 489 responses.

Josh Nagashima presented the demographics and analysis of the resident survey responses as of December 7th with 476 responses logged at that point. A summary of the results are listed below:

- Majority of the residents are in age groups 36-50 and 51-65;
- Majority of residents are from 96797;
- Majority are 20+ year residents;
- 3.69 out of 5 have knowledge of trash handling on O'ahu;
- 4.47 out of 5 know the importance of reduction, reuse, and recycling in daily life;
- Over 40% of residents have visited WGSL; and
- Residents rated the appearance of WGSL 3.5 out of 5.

Josh Nagashima indicated that all the responses from the survey are posted on the website. He proceeded with highlighting a few of the responses.

- Importance of landfills: H-POWER is dependent on a landfill as a backup disposal site.
- Trash Destination: Only 6% of O'ahu's trash goes directly into the landfill and the remaining trash goes to H-POWER.
- Significance of Criteria: Distance to surface and drinking water was rated the most significant.
- Landfill Location: Location that ranks highest when considering all the criteria received the most responses.
- Landfill Beneficial Use: Majority responded that they would not be open to having a landfill in their community even if it was planned for a beneficial use. A considerable number responded maybe. The City is considering a community benefits package.

There were no questions or discussion from the committee members on the resident survey results. Josh Nagashima emphasized that the City is trying to get community involvement as much as possible and shared the Refuse Division's Facebook, Twitter, and website.

John Katahira proceeded with the presentation items on the agenda. He acknowledged and thanked BWS for their commitment to present in this meeting in light of the recent Red Hill situation. He noted that questions and discussion from the committee members will be taken after BWS and HDR complete their presentations.

John Katahira proceeded to introduce Wesley (Wes) Yokoyama (ENV Director) for a few comments.

Wes Yokoyama thanked the committee members and indicated that the advisory portion of their work will begin today. He described that prior meetings provided background information to assist the LAC in the process. He indicated that LAC member Cynthia Rezentes introduced the concern on groundwater supply and the possible effects from a landfill which prompted ENV to reach out to the BWS for information. He stated that nothing is as important as clean water, but identifies there is also a great need to address solid waste. He understands that there may be conflicting needs on available space but indicated that the criteria and ranking of the sites will ultimately reflect the importance and priorities.

2. Oahu's Groundwater Aquifer and Siting a New Landfill (***Erwin Kawata, Honolulu Board of Water Supply***)

Ernie Lau, BWS Energy and Chief Engineer, opened by thanking ENV for being invited to the meeting. He understands the committee has difficult challenges in siting a new landfill. He noted that this presentation is from the BWS perspective and that their mission is "Water is Life" but understands that waste also needs to be managed. He introduced the BWS team of Erwin Kawata (Head of Water Quality Division), Barry Usagawa (Head of Water Resources Division), and Kathleen Elliott-Pahinui (Head of Communications Office).

Erwin Kawata began with thanking the committee for the opportunity to share BWS' perspectives on siting a new landfill in relation to the groundwater aquifer. He proceeded with the slide presentation and provided the topics for the discussion. He described the basics of O'ahu's groundwater resource using a schematic chart. It was explained that caprock helps to prevent the fresh water

from leaking into the ocean. The water that is held back by the caprock over time builds up to form a groundwater aquifer that is hydrologically connected throughout the entire system and resides under the entire island. It was described that there are various ways to extract water from the aquifer including an inclined shaft that takes water from the surface and deep wells drilled into the formation where water is then pumped out. It was noted that this aquifer formation is one of a kind on island.

Erwin Kawata provided a map of the commission of water resources management hydrologic units and explained it was a way of managing the amount of water drawn from each part of the aquifer. He clarified that the lines dividing the areas are only for administrative purposes and do not represent any actual subsurface boundaries or divide. The entire system is hydrologically connected and water is always moving through the system. It was noted that areas of the aquifer such as Waimalu can produce up to 45 million gallons of water per day and other areas such as Waialae-East produce 2 million gallons per day.

A map of Oahu's groundwater bodies and caprock was presented. It was indicated there is substantial amount of caprock around the island.

Another map showing the UIC (Underground Injection Control) line was presented. It was indicated that the areas below the UIC line are allowed for underground disposal of waste and the areas above the line are designated as the fresh water aquifer. This line is also commonly referred to as the Pass/No Pass Line. It was noted that the line in some areas match where the caprock is located where other areas are directly over the caprock.

Another map showing the BWS facilities including the pumping wells that are tapping the aquifer to provide drinking water was provided for reference.

A map of the potential landfill sites in the uncolored regions was presented. It was indicated that these areas are directly over the drinking water aquifer. One area containing existing wells was pointed out. This area includes the Ewa Shaft which is slated to provide a significant amount of water to Leeward Oahu.

It was stated that landfills have a long history and there is literature provided by EPA that landfill products eventually leak into the environment even with leachate protection technologies. It was noted that WGSF generates about 3.6 MG leachate annually (9,800 gallons per day) which is a sizable amount in BWS' perspective.

Landfill leachate and groundwater data from the WGSF First Semi-Annual 2021 report was presented. BWS analyzed the data to show the concentrations detected in leachates from the ash and groundwater monitoring wells. It was indicated that there were concerns about potential contaminants in landfills that could escape into the environment that were larger in magnitude in comparison to the fresh water wells operated by BWS.

In summary, BWS' position is that Oahu is 100% dependent on its groundwater aquifer for drinking water. Preservation and protection of this resource is

necessary to ensure sustainable aquifer water quantity and quality into the future.

3. Groundwater Protection Measure for Municipal Solid Waste Landfills (**Mike Kaiser, HDR**)

Mike Kaiser described that his presentation would be on the technology adopted by the solid waste industry for groundwater protection for municipal solid waste (MSW) landfills. He noted that in Meeting #1 it was explained that the EPA and the State Department of Health regulate the MSW landfills through the Resource Conservation and Recovery Act and the Hawaii Administrative Rules. He continued explaining that in permitting, design, and operation of a landfill the following criteria need to be met: Site Analysis, Design Criteria, and Operating Criteria. The Design Criteria was described as playing a very important role in the defense of groundwater protection. The Design Criteria includes the Base and Closure Cap Liner Systems, Leachate Management System, and the Groundwater Monitoring Program. The Site Analysis was described as providing the support to the design. For example, a landfill would not be sited in unstable areas that may potentially damage the liner system. Also, when hazardous waste are excluded out of the landfill, it would reduce the likelihood of pollutants getting into the leachate and overall reduces the threat to public health and to the environment.

Mike Kaiser then discussed leachate as it is defined in the solid waste industry. It was explained that leachate is basically wastewater in the solid waste industry. Rainfall percolates through the waste and is captured in the leachate collection. It is then transported to a sump area and is pumped out by riser pipes to be treated and disposed.

A cross section of a typical MSW landfill was presented showing a base liner system with leachate collection pipes, groundwater monitoring well, gas monitoring probe, and a gas monitoring system. The fill sequencing of a landfill was described as filling across the floor to come up to the next level to fill across while adding daily cover soil over the waste. Once an area is filled up to grade, it typically goes through a partial closure. The closure design consists of solid components and geosynthetic membrane and a drainage net.

A proposed base and side slope liner system was presented. The proposed base liner system was described as starting as subgrade, followed with a geosynthetic clay liner, impermeable polyethylene liner, drainage net liner and then doubled with a clay liner, geomembrane liner, drainage net liner and finally topped with a protective soil. It was stated that the City is committed to installing a double liner system in areas above the No Pass Line which meets and exceeds the EPA requirements for a hazardous waste landfill.

A cross section of a leachate collection trench which will run down the middle of a landfill was presented. It was explained that in a double liner system, there will be a primary leachate pipe with the primary liner system. There will also be a secondary leachate pipe and liner system to capture leachate that did not go through the primary system. A leachate pipe will be encased in gravel and then wrapped in geotextile fabric.

A cross section of the leachate collection sump was presented. The sump will also have a primary and secondary. The leachate trenches will connect into the sump and with larger pipes (riser pipes) feed the leachate out of the sump into the exterior of the landfill. Submersible pumps will be installed in the riser pipes and connected to automated equipment. It is required to maintain the leachate levels to 12 inches or less in the sumps. It was noted that there should be no leachate ponding and if the landfill is operating correctly, the only leachate in the landfill should be in the sump area.

The Construction Quality Assurance Testing Plan was presented. It was explained that extensive testing of the geomembrane liner systems is performed at the manufacturer level as well as at a third party owner representative level. The installers also perform quality assurance testing on the liner using pressure and vacuum testing at every inch of seam that is installed. The installers set up mobile laboratories to perform testing on site and it was noted that the third party testers send all samples to an outside laboratory for testing.

Groundwater and leachate monitoring requirements were presented as follows:

- Groundwater monitoring is required at a network of upgradient and downgradient monitoring wells. Leachate monitoring is required at the sumps.
- Some states establish minimum spacing for upgradient and downgradient wells, others leave it up to the enforcement agency to decide based on the groundwater monitoring program.
- Sampling of the wells are typically done quarterly.
- Constituents for analysis are established by the EPA that would be indicative of a release of leachate from a landfill. Site specific indicator parameters are also developed for a site (COD, nitrates, chlorides, pH, etc.).
- Owner is required to do a statistical analysis to confirm elevated detections or anomalies in results.
- Waimānalo Gulch Sanitary Landfill groundwater sampling results have not indicated a release of leachate since the landfill first opened in 1989 (9 wells sampled).

John Katahira opened up for comments and discussion on the material presented thus far.

James Nakatani inquired about the sample of the two wells in BWS' presentation, why there is a difference, and where the analytes of the Honouliuli wells were coming from. Erwin Kawata responded that the analytes shown in the Honouliuli wells are those that are naturally occurring, and the wells are located in the Honouliuli area that are identified as potential new landfill sites. The WGSL data was used for comparative purposes to show what was in the leachate and groundwater testing to illustrate what could potentially be available in a landfill if the leachate system was not operating properly and the potential effect it could have on the wells. It was clarified that WGSL is not in an area to affect the wells but a new site might be in an area where wells are affected. A site at or below the No Pass or UIC line would be ideal from the perspective of protecting the aquifer.

Suzanne Jones inquired on the ability to clean and remove the contaminants from the drinking water in the event of leakage in the aquifer and also to contain any further leakage. Erwin Kawata responded that it is dependent on the type of contaminant,

complexity of the contaminant and the amount of contaminant. He explained that treatment will not be an option if the amount exceeds the ability to treat. He confirmed that Oahu is 100% dependent on groundwater and that there are parts of the aquifer that can produce a substantial amount of water that allows us to sustain for the long term and for the population of the island.

Suzanne Jones commented that in the past, all potential sites were below the UIC but now the LAC is potentially looking at sites above UIC line and would need to have a good understanding of the risks for the future (e.g. 50-80 years down the line and even after the landfill is closed) in the event of a failure in the liner system. Also, need to understand what this means for our drinking water and to the life of our island. She then inquired what the options are in the event of a failure. She also wanted to confirm whether the eliminated sites on the Leeward side were above/below UIC line. Mike Kaiser responded that options are dependent on what constituents are found in the leakage. He explained that assessing the health based risks and performing various analyses to determine course of action may be used. Testing the transport of the constituents can be done to understand how they travel and whether it can be treated through geology and hydrogeology. Ultimately, options are dependent on the type and levels of release. Suzanne Jones further commented that she wants to understand the potential effects if the engineering and technology that will be used will be upheld in the latter years and what type of legacy will be left by the committee when the landfill site is determined. Ernie Lau commented that the technology for Red Hill may have been state of the art at the time but need to make decisions based on a long-term basis. BWS' preference is to protect the water resource in its purist form rather than to treat it or use treatment technology. Mike Kaiser confirmed that the sites eliminated from the State legislation were below the UIC line.

Wesley Yokoyama commented that the areas being proposed are not preferred areas but areas that are left to choose from and which are allowable by regulation, legislation, and by law. Ernie Lau commented that this may be an opportunity to revisit constraints specifically those created by State legislation based on the protection of drinking water discussions.

John Katahira requested ENV to briefly summarize the State Legislation Act 73. Wesley Yokoyama indicated that ENV looked at areas below the no pass line and in combination with Act 73 determined that there are no viable sites. Other options such as shipping were also looked into but are not going to be feasible. He explained that Act 73 was passed in 2020 and the law states that a landfill cannot be placed within a ½ mile of any residences, hospitals, schools, habitable areas/structures or on a zoned conservation land. He stated that this Act eliminated a lot of sites that were studied previously from 2012 and 2017. He explained that the new administration started looking for new sites this year and the four areas were identified after going through the process of reviewing the regulations and legislation.

Cynthia Rezentes requested clarification on whether the UIC and Pass/No Pass Lines are one in the same. She commented that in the past, the Pass/No pass line (BWS) and the UIC line (DOH) did not match up. She also commented that although leachate did not escape into the groundwater monitoring wells at WGSL, the landfill was fined \$2.8M for violations which included leachate being higher than 12 inches at the bottom of the landfill. John Katahira summarized Cynthia Rezentes' comments as requesting clarification on UIC and Pass/No Pass Lines and its differences and to address past events at WGSL.

Barry Usagawa responded that the lines are not the same. He explained both lines are regulatory tools to protect groundwater but from different pathways. UIC is Underground Injection Control and regulates injection wells described as a hole in the ground that is deeper than it is wide. The UIC is more seaward, more conservative, and managed by DOH. It is set by the amount of chlorides in the groundwater at 10,000 mg/L and is in the coastal areas. The Pass/No Pass Line is an estimate of areas of thick caprock and is used to guide decisions around ground disposal primarily around individual wastewater systems such as cesspools.

In response to Cynthia Rezentes' second comment, Josh Nagashima commented that mistakes were made in the past and lessons learned are being reviewed with progresses such as setting consent decrees being put in place. He added that WGSL was originally designed to be single liner system and the newer cells improved to a double liner around 2010 with even newer technology since then. Ahmad Sadri added that there are good references regarding the past events at WGSL on the Honolulu.gov/opala website by searching "landfill status". There are quarterly public meeting notes that contain a lot of information as well as information in respect to the 2010 and 2011 storms that created the flooding at the landfill.

Suzanne Jones inquired whether the heavy rainfall from 2010/2011 was associated with the leachate that almost overflowed at the landfill. She noted that the risks of heavy rain/storm that could potentially overwhelm the leachate system should be considered. Cynthia Rezentes responded that it is not definite if the heavy rainfall had direct relation to the leachate system but emphasized that the leachate violation was significantly out of management control with overages in feet and not less than 12 inches. She added this was in combination with pumps and other issues around the same time. Josh Nagashima commented that the past events are being considered in the design of the new landfill.

Cynthia Rezentes noted a question in the chat from Barry Usagawa to explain how stormwater is managed at the existing and proposed landfills and if there are contaminants to note that could run off the site and/or can infiltrate the groundwater. An explanation on how the runoff would be handled was also added. Mike Kaiser responded that any runoff has to be managed through a NPDES program but the design will have the runoff go into the retention pond and released to the determined release point. He added that during the operation of the landfill, the runoff will need to be treated as leachate if it comes in contact with waste. Suzanne Jones followed up by commenting that in 2010/2011 storms there were a lot of discussion on how to build a retention pond to handle a 100 year storm and recalls it was not feasible for these unusual events. She added that the LAC needs to consider the risks of all types of events. Cynthia Rezentes commented that 6-inches worth of cover is easily washed off and referred to the storm this past weekend which resulted in 1-2 feet of soil and rocks being washed away in Makaha Valley.

John acknowledged that a public comment was made but noted that public comments would not be taken at this time. He added that a response would be provided at a later time.

James Nakatani commented that there is discussion on risks and requested clarification on what exactly could go wrong at the landfill. He asked what the biggest fear for our landfill failures is nation-wide and if there are any examples with double liners not performing. Mike Kaiser responded that one can find information on mainland landfills that are lined to Subtitle D standards that are known to have a release as well as those that did not have a release. He pointed out that what is not known are the factors (e.g.,

design, construction, quality assurance, etc.) associated with releases and the difficulty to pinpoint the source of such releases. In HDR's research, there were no EPA reports found that contained data on all the landfills in one report. The design, installation, quality assurance and operations all factor on the success of the liners. Ahmad Sadri added that SWANA (Solid Waste Association of North America) has a couple of publications with their applied research group on the performance of liner systems and the environmental performance of landfills. He indicated that the reports are still being reviewed to see if it is relevant to the current siting work. Suzanne Jones inquired whether the LAC will be receiving this information. Ahmad Sadri responded that links to the reports will be provided.

John Katahira identified Steven Chang's comment in the chat and read it aloud. The comment indicated that the stormwater overflow was due to the 2010 rainfall event and the exceedance of leachate levels was due to a previous DOH enforcement action.

Steven Chang added that the concern on leachate levels is the moisture at the bottom of the landfill that could create a condition of heat being generated and initiate smoldering solid waste which will potentially damage the liner. He pointed out that the liner will be a plastic membrane as opposed to a clay liner. It is important to prevent creating another source of energy to destroy the liner. Steven Chang described his background as the Program Manager for solid and hazardous waste at the State for 22+ years and was involved with various solid waste recycling activities at the State level.

Josh Nagashima noted that this discussion has prompted a need to be more involved with the design of the liner but that the current design is taking storm events into consideration. He requested the LAC to send him any parameters needed to make their evaluation of the criteria.

Suzanne Jones requested clarification on whether there are 4 potential sites being evaluated. John Katahira clarified that it is 4 areas and within each area there are potential sites. Josh Nagashima confirmed that all 4 areas are located above UIC line and located over groundwater and aquifers. Suzanne Jones sought clarification on whether there would be any sites to evaluate if the LAC considered the criteria of groundwater and aquifer as extremely important. Wesley Yokoyama responded that the LAC has the authority to decide whether the distance to the aquifer and the risks are an overriding factor. He explained that an extension would be requested should the LAC decide to take this route so that alternatives such as an exemption or changing Act 73 law can be visited. He indicated, however, that this is not the preferred route which will require a lot of discussion and communication with the administration. Suzanne Jones commented that it is good to know there are options. John Katahira iterated that the milestone for the LAC is to select a site by 2022, and if there any hurdles that prohibit the timeline, then that's what needs to be considered.

John Katahira thanked BWS for their participation and moved on to the next agenda item.

4. Introduction to Site Evaluation Criteria (**Mike Kaiser, HDR**)

Mike Kaiser presented the Site Evaluation Criteria and briefly described the approach of the meeting schedule. He proceeded with the definitions of objective and subjective criteria. Objective Criteria was explained as being based on unbiased, quantifiable facts and observations, while not being influenced by personal feelings, perceptions, or desires. Subjective Criteria was described as being based on personal opinions,

experiences, knowledge, interpretations, assumptions, points of view, emotions, and judgement. An example for the types of criteria were provided.

A total list of 18 Objective/Subjective criteria was presented. It was indicated that the scoring and the weighting of the scoring will be provided in the next meeting. Josh Nagashima noted that the criteria list is an introductory list and was provided to the LAC and is available on the ENV site. It was clarified that the criteria will be utilizing the Pass/No Pass (BWS) Line. The criteria list will also be finalized by the next meeting. It was requested to send any other criteria suggestions to Josh Nagashima for further consideration. Cynthia Rezentes had an inquiry regarding the example provided for objective and subjective criteria. Josh Nagashima further explained the criteria type differences with regards to the example.

John Katahira sought clarification on the work to be done by the next LAC meeting. It was confirmed that the criteria list will be finalized for LAC #5. Josh Nagashima added that the list will be provided by ENV but the LAC will be the one to perform the evaluation and can provide suggestions to amend the list by the end of December. Suzanne Jones inquired whether the LAC has any input only whether a particular criteria should disqualify sites. Josh Nagashima responded that the current structure involves combined scores but recognizes that there are critical criteria that may influence or eliminate a site. Suzanne Jones further inquired if LAC has any input on establishing a threshold to meet in order for a site to be considered acceptable. Josh Nagashima explained that this can be determined by the LAC.

John Katahira summarized the discussion as follows:

- LAC should provide comments regarding the criteria by Dec 31st.
- City will take the criteria comments and finalize the criteria list that will be presented at the next LAC meeting #5

James Nakatani inquired how the 1,000 feet was established on criteria no. 10. Josh Nagashima responded that 1,000 feet is the general measurement DOH uses when analyzing a site for contamination in response to a release in wells.

VII. ANNOUNCEMENTS (*John Katahira, Facilitator*)

- Next Meeting Date – LAC #5 February 7, 2022, 2pm-4pm (Tentative)

VIII. ADJOURNMENT

John Katahira requested a motion to adjourn the meeting. Ken Kawahara made a motion to adjourn. Suzanne Jones seconded the motion. No objections were noted and John Katahira adjourned LAC Meeting #4 at 12:10 pm.

DEPARTMENT OF ENVIRONMENTAL SERVICES
CITY AND COUNTY OF HONOLULU

1000 ULUOHIA STREET, SUITE 308, KAPOLEI, HAWAII 96707
TELEPHONE: (808) 768-3486 • FAX: (808) 768-3487 • WEBSITE: <http://envhonolulu.org>



RICK BLANGIARDI
MAYOR

ROGER BABCOCK, JR., Ph.D., P.E.
DIRECTOR

MICHAEL O'KEEFE
DEPUTY DIRECTOR

IN REPLY REFER TO:
DIR 22-88

November 3, 2022

SENT VIA EMAIL

Ernest Y. W. Lau, P.E.
Manager and Chief Engineer
Honolulu Board of Water Supply
elau@hbws.org

Dear Ernest:

Thank you for your time and attention during the October 24, 2022, Board of Water Supply (BWS) board meeting. This letter follows up on the item for information, "Briefing by the Department of Environmental Services on their Landfill Siting" that was on that meeting's agenda.

At that meeting we briefed the board that BWS presented on groundwater and landfills to the Landfill Advisory Committee (LAC) and the LAC, based on BWS' presentation, despite evaluating and ranking six sites did not recommend any of the six sites as an alternative to the existing landfill (please see attachment A for final report).

Given this sequence of events, at the October 24 BWS board meeting, I requested clarity on BWS' legal authority over landfill siting and whether that authority was exercised, and if not exercised, when the City should seek a determination.

In order to clarify BWS' position and due to the impending deadline set by the State Land Use Commission Decision and Order for the Department of Environmental Services to "identify an alternative landfill site that may be used upon closure of WGSL [Waimanalo Gulch Sanitary Landfill]" by December 31, 2022, I am writing this letter to formally ask for BWS' official position on the six potential landfill sites (please see attachment B for details on those six sites) the LAC evaluated. Specifically, were Mayor to select any of the six ranked sites off the LAC's list, what would be BWS' official response or position?

EXHIBIT "F"

Ernest Y.W. Lau, P.E.
November 3, 2022
Page 2

Given the timeline before us, I would appreciate a response as soon as possible.
Please contact me at 768-3486 if you have any questions with respect to the foregoing.

Sincerely,



Digitally signed by O'Keefe,
Michael
Date: 2022.11.03 11:33:02
-10'00'

For Roger Babcock, Jr., Ph.D., P.E.
Director

APPROVED:



Digitally signed by Formby,
Michael
Date: 2022.11.03 13:59:17
-10'00'

Michael D. Formby, Managing Director
Office of the Managing Director

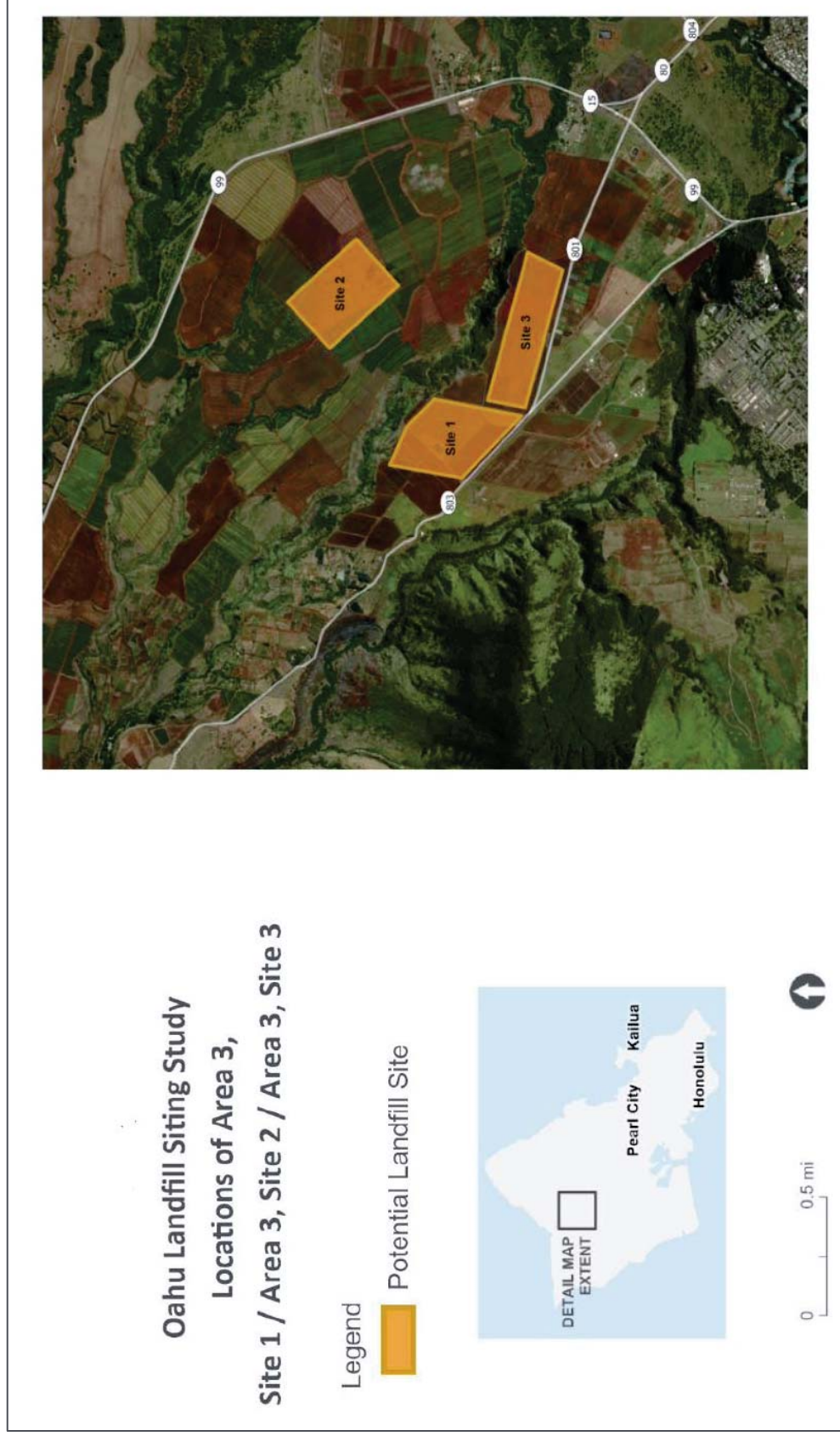
Attachments: A - LAC Report [Here](#)
B - Sites

cc: Rick Blangiardi, Mayor
Brian Andaya, Chair, Board of Water Supply

Figure 4.9 Location of Area 2, Site 1



Figure 4.10 Locations of Area 3, Sites 1 through 3

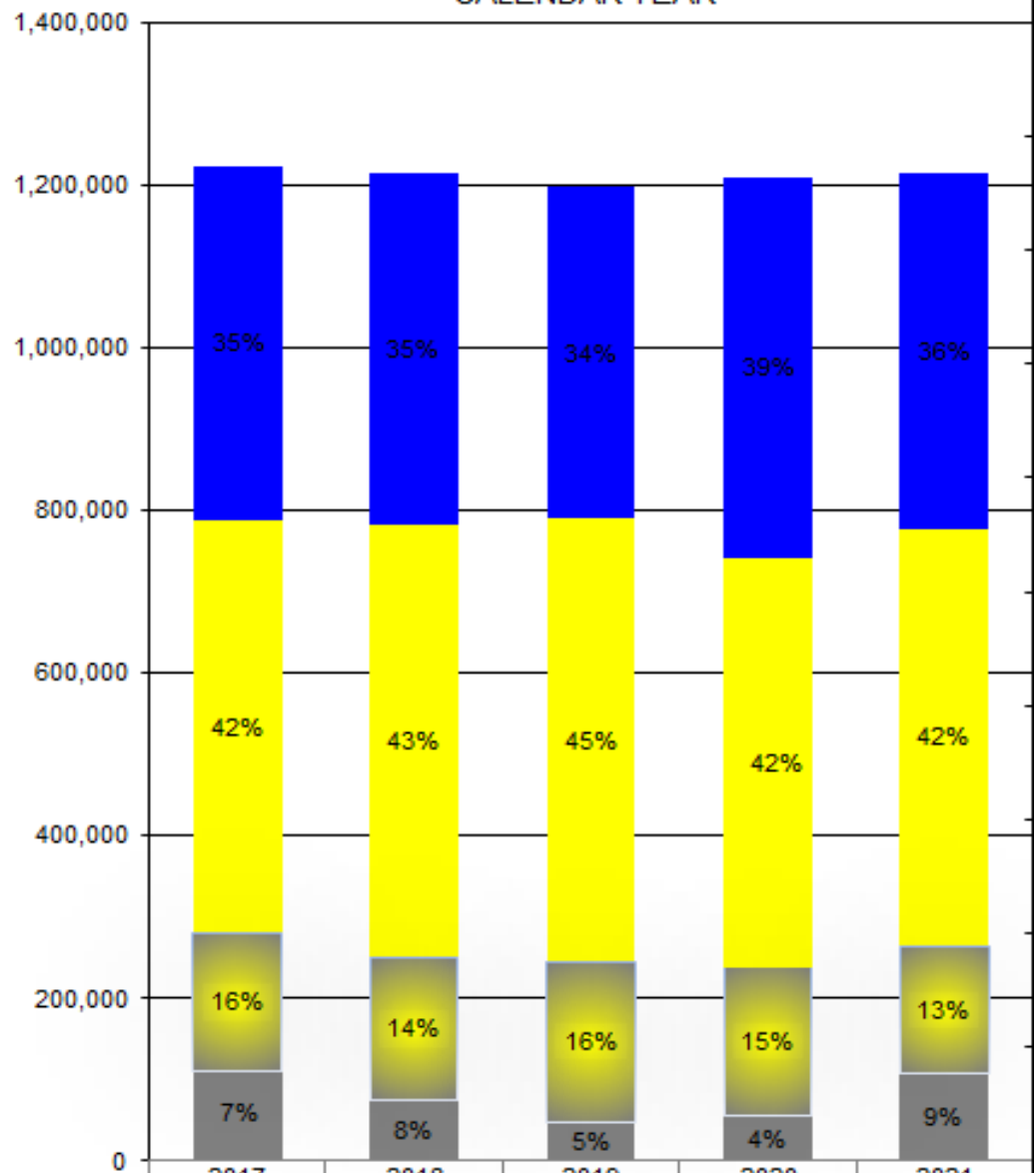


Municipal Solid Waste Stream on Oahu (Tons)

CALENDAR YEAR

MSW =
Municipal
Solid
Waste

*HPOWER
Ash/Residue tons are
shown separately to
avoid double counting
in both HPOWER and
landfill receivables.



	2017	2018	2019	2020	2021
■ General Material Recycling (MSW)	434,933	431,911	407,566	469,703	437,578
■ HPOWER - Waste-To-Energy (MSW)	507,929	531,975	544,311	502,352	513,635
■ HPOWER (Ash & Residue - Landfill)*	170,730	175,721	196,606	182,112	157,531
■ MSW Landfill	109,696	74,427	48,644	56,114	106,723
Total Landfill Diversion % (MSW)	78.4%	82.4%	82.3%	82.2%	80.0%
TOTAL Tonnage (MSW)	1,223,288	1,214,034	1,197,127	1,210,281	1,215,467



**STATE OF HAWAII
DEPARTMENT OF HEALTH**

P.O. BOX 3378
HONOLULU, HI 96801-3378

In reply, please refer to:
EMD/SHWB

December 22, 2011

S1227JKF

**CERTIFIED MAIL NO. 7010 2780 0000 4780 4493
RETURN RECEIPT REQUESTED**

Mr. Stephen Langham
Energy Recovery Administrator
Department of Environmental Services
City and County of Honolulu
1000 Uluohia Street, Suite 308
Kapolei, Hawaii 96707

**CERTIFIED MAIL NO. 7010 2780 0000 4780 3151
RETURN RECEIPT REQUESTED**

Mr. Robert Webster, Facility Manager
Covanta Energy
Honolulu Resource Recovery Venture
91-174 Hanua Street
Kapolei, Hawaii 96707

Dear Messrs. Langham and Webster:

SUBJECT: Solid Waste Management Permit No. IN-0049-11
Covanta Honolulu Resource Recovery Venture
Waste to Energy Facility
Located at: 91-174 Hanua Street, Kapolei, Hawaii 96707
(TMK No. 9-1-26:30)

The Department of Health (DOH), Solid and Hazardous Waste Branch (SHWB) received your permit renewal application for a solid waste management permit with no modifications. The renewal application was received on February 7, 2011, and additional information was received on July 19, 2011. The application has been reviewed and approved. The enclosed permit modification is issued under the provisions of Hawaii Revised Statutes (HRS), Chapter 342H, and the Hawaii Administrative Rules, Title 11, Chapter 58.1, "Solid Waste Management Control."

EXHIBIT "H"

Mr. Stephen Langham
Mr. Robert Webster
December 22, 2011
Page 2

Please note that your permit contains the following sections:

Part I – Standard Conditions

Part II - Special Conditions

Section A. Facility and Operational Controls

Section B. Waste Acceptance and Screening

Section C. MSW Storage and Processing

Section D. Sample Collection and Analysis

Section E. Management and Testing of Pre-Combustion Residue

Section F. Management and Testing of Post-Combustion Ash

Section G. Recordkeeping and Reporting

The permittees may appeal to the Director of Health any of the conditions to the subject permit. The appeal must be in writing and submitted to the Director of Health within twenty (20) days after the receipt of this notice.

HRS 342H-14 states that unless the submitted documents and other information secured by the DOH from the permittees contain confidential information, such as secret processes or methods of manufacture, they shall be made available for inspection by the public. Please notify the SHWB within twenty (20) days of the receipt of this letter if you would like to make a claim of confidentiality; otherwise, your entire application will be available for public inspection.

If you have any questions regarding this letter, please contact Ms. Janice Fujimoto of the Solid and Hazardous Waste Branch at (808) 586-4226.

Sincerely,



STUART YAMADA, P.E., CHIEF
Environmental Management Division

Enclosure: Permit No. IN-0049-11

c: Department of Health, Clean Water Branch (w/o enclosure)

PERMITTEES:

Owner: City and County of Honolulu
Operator: Covanta Honolulu Resource
Recovery Venture
91-174 Hanua Street
Kapolei, HI 96707

Permit Number:

IN-0049-11

Date of Issuance:

December 22, 2011

Date of Expiration:

February 28, 2016

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SOLID WASTE MANAGEMENT PERMIT

This permit is issued under the provisions of Hawaii Revised Statutes (HRS), Chapter 342H, "Solid Waste Pollution," and Hawaii Administrative Rules (HAR), Title 11, Chapter 58.1, "Solid Waste Management Control." The above-named permittees are hereby authorized to operate the facility shown on the approved application, additional submittals, and other approved documents on file with the Department of Health (DOH).

To Operate: A waste-to-energy facility. The facility operations include the acceptance of municipal solid waste (MSW), processing, and incineration for energy recovery and waste reduction.

The operation of Units 1 and 2 includes the operation and maintenance of an MSW processing plant to produce refuse derived fuel (RDF), RDF boiler units, and associated appurtenances. The maximum operating capacity of Units 1 and 2 is 14,760 tons of MSW per week, and the maximum incineration capacity is 12,096 tons of RDF per week.

The operation of Unit 3 includes the construction, operation, and maintenance of a mass burn waterwall municipal waste combustor unit and associated appurtenances. The maximum incineration capacity of Unit 3 is 900 tons of municipal solid waste (MSW) per day.

The operations shall be consistent with the application and operations manual received on February 7, 2011, additional information received on July 19, 2011, other approved documents on file at the Department of Health, and any approved subsequent submissions. Should there be any discrepancies between the submitted materials and permit conditions, the permit conditions shall take precedence.

Location: The facility is located at 91-174 Hanua Street, Kapolei, Hawaii 96707
TMK No. 9-1-026:030

Subject to: HRS Chapters 342H and HAR 58.1, Part I - Standard Conditions, and Part II - Special Conditions.

Acceptance of this permit constitutes an acknowledgment and agreement that the holder will comply with all rules, regulations, and orders of the DOH and the conditions precedent to the granting of this permit.

PERMITTEES:

Owner: City and County of Honolulu
Operator: Covanta Honolulu Resource
Recovery Venture
91-174 Hanua Street
Kapolei, HI 96707

Permit Number: IN-0049-11
Date of Issuance: December 22, 2011
Date of Expiration: February 28, 2016
Page: 2 of 20

This permit supersedes solid waste management permit no. IN-0050-05 in its entirety.



(For) Director of Health
State of Hawaii

PERMITTEES:

Owner: City and County of Honolulu
Operator: Covanta Honolulu Resource
Recovery Venture
91-174 Hanua Street
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Permit Number:

IN-0049-11

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Date of Expiration:

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The solid waste management facility is subject to HRS Chapter 342H, "Solid Waste Pollution," HAR Chapter 11-58.1, "Solid Waste Management Control," and the following conditions:

PART I - STANDARD CONDITIONS

1. The terms, conditions, requirements, limitations, and restrictions set forth herein are "Permit Conditions" and as such are binding upon the permittees and enforceable, pursuant to the authority of HRS Chapter 342H. The DOH will review this permit periodically and may initiate enforcement action for any violation of the "Permit Conditions" by the permittees, their agents, employees, servants, or representatives.
2. This permit shall be kept at or near the operation site for which the permit is issued and shall be available upon request [HAR §11-58.1-04(f)]. A request for a duplicate permit shall be made in writing to the director within ten (10) days after the destruction, loss, or defacement of this permit. A fee of \$50 shall be submitted with the request [HAR §11-58.1-04(h)(3)].
3. This permit is non-transferable whether by operation of law or otherwise, either from one location to another, from one solid waste disposal operation to another, or from one person to another without the written approval of the director [HAR §11-58.1-04(e)(2)].
4. This permit (a) shall not in any manner affect the title of the premises upon which the facility is or will be located; (b) does not release the permittees from any liability for any loss due to personal injury or property damage caused by, resulting from, or arising out of the design, installation, construction, operation, maintenance, or closure of the facility; (c) does not release the permittees from compliance with other applicable statutes and regulations of the State of Hawaii or with applicable federal or local laws, regulations, or ordinances; (d) in no way implies or suggests that the State of Hawaii, or its officers, agents, or employees assumes any liability, directly or indirectly, for any losses due to personal injury or property damage caused by, resulting from, or arising out of the design, construction, operation or maintenance of the facility; and (e) shall not constitute nor be construed to be an approval of the design, construction, operation, maintenance, closure and post-closure of the facility beyond the regulatory requirements mandated by HRS Chapter 342H and HAR §11-58.1.
5. The permittees shall submit complete and detailed plans and reports of any significant proposed addition to, modification of, or alteration of any such systems that affects the facility's equipment, operations or procedures, or which could threaten human health and the environment and contain the information requested by the

PERMITTEES:

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DOH in the form prescribed by the DOH. The plans and reports shall be prepared by a competent person acceptable to the DOH, and at the expense of the permittees. This requirement includes, but is not limited to, notification of changes that may affect the long-term operating capacity, combustion efficiency, or ash composition.

6. This permit is valid only for the specific processes and operations applied for and indicated in the submitted application and additional submissions on file with the DOH. Any unauthorized deviation that affects the facility's operations or procedures, or which could threaten human health and the environment, from the submitted application, approved drawings, operations manual, and additional submissions or conditions of this permit may constitute grounds for revocation of this permit, and/or enforcement action by the DOH. Should there be any discrepancies between the submitted documents and the permit conditions, the permit conditions shall take precedence. A copy of the submitted application and additional submissions shall be maintained at the facility.
7. The permittees shall at all times properly operate and maintain the facility and systems of process and control (and related appurtenances) that are installed or used by the permittees to achieve compliance with the conditions of this permit, as required by the DOH rules. The facility shall be designed, constructed, and equipped in accordance with best practicable technology so as to operate without causing a violation of applicable rules and regulations.
8. Issuance of this permit does not preclude the permittees' responsibility to obtain any and all necessary approvals and permits from the appropriate federal, state, and local agencies, including zoning clearances, prior to the start of operations.
9. The DOH may, on its own motion, modify, suspend, or revoke a permit if, after affording the applicant a hearing in accordance with HRS Chapter 91, the DOH determines that any permit condition, rule, or provision of HRS Chapter 342H has been violated or that such is in the public interest [HAR §11-58.1-04(d)].
10. Notification requirements. The permittees are required to notify the DOH, in writing or facsimile, whenever there are incidents such as fire, explosion, or release of regulated material/waste which could threaten human health or the environment (i.e., air, soil, or surface and subsurface waters). Initial notification may be by phone or fax and reported within eight (8) hours, whenever possible, and no more than twenty-four (24) hours. The notification report shall be completed and submitted by an Environmental Compliance Officer or other responsible official within seven (7) days and shall include:
 - a. name, address, and telephone number of the owner and operator;

PERMITTEES:

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Kapolei, HI 96707

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- b. name, address, and telephone number of the facility at which the incident occurred;
- c. date, time, and type of incident (i.e., fire, explosion, release, etc.);
- d. name and quantity of material(s) involved;
- e. the extent of injuries, if any;
- f. an assessment of actual or potential hazards to human health or the environment, where this is applicable; and
- g. estimated quantity and disposition of recovered and unrecovered material that resulted from the incident.

Notification requirements for releases only apply to releases of a quantity equal to or exceeding the reportable quantity listed in HAR §11-451.

11. If, for any reason, the permittees do not comply with, or will be unable to comply with, any condition or limitation specified in the permit, the permittees shall notify the DOH verbally within twenty-four (24) hours followed by a written report within seven (7) days of the verbal notification. The written report shall be completed by an Environmental Compliance Officer or other responsible official and shall contain the following information:

- a. description and cause of noncompliance;
- b. period of noncompliance, including exact dates and times; and, if not corrected, the anticipated duration that the noncompliance is expected to continue;
- c. steps that will be taken to correct the area of noncompliance; and
- d. steps being taken to prevent recurrence of the noncompliance.

The permittees may be subject to enforcement action by the DOH, penalties, or revocation of this permit.

The use of an electronic facsimile device (FAX) for notifications is acceptable. Any data transmission or detailed explanations transmitted shall be accompanied by regular mail submittals. Failure to notify in accordance with this requirement may initiate enforcement action.

12. The DOH requires that the permittees provide such facilities as necessary for sampling and testing to determine the degree of pollution from the solid waste facility, in accordance with HAR 11-58.1-04(c)(6)(B). In the event of an incident that requires notification under Special Condition No. 10 or permit noncompliance, the DOH may require complete and detailed plans or reports on existing solid waste management systems.

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13. Unless the submitted documents and other information secured by the DOH from the permittees contain confidential information, such as secret processes or methods of manufacture, they shall be made available for inspection by the public (HRS §342H-14). The permittees shall be responsible for identifying, in writing, the specific information asserted to be confidential. The DOH shall review the permittees' assertion and determine if confidentiality is indeed warranted.
14. The director may, in accordance with HRS §342H-6, enter and inspect the facility for the purpose of (a) investigating an actual or suspected source of solid waste or other pollution; (b) ascertaining compliance or noncompliance with any rule, regulation, permit condition, or standard promulgated by the DOH; and (c) conducting tests in connection therewith (including collecting soil, water, air, ash, and any other material or samples).
15. The permittees shall comply with the following monitoring and recordkeeping requirements:
 - a. Upon request, the permittees shall furnish all records and plans outlined in Special Conditions, Section G of this permit, as required by the DOH. The retention period for all records shall be a minimum of five (5) years; however, there shall be an indefinite retention period for all records associated with any unresolved enforcement action as determined by the DOH.
 - b. The permittees shall retain at the facility or other location designated by this permit, records of all monitoring information (including all calibration and maintenance records and all original recordings of monitoring instrumentation), copies of all reports required by this permit, and records of all data used to complete the application for this permit. The retention period shall be a minimum of five (5) years from the date of the sample, measurement, report, or application unless otherwise specified by the DOH rule.
16. If the DOH determines that the permittees have violated or are violating any provision of HRS Chapter 342H, HAR Chapter 11-58.1, or these permit conditions, the DOH may pursue enforcement action in accordance with HRS §342H-7, *Enforcement*; §342H-9, *Penalties*; §342H-10, *Administrative Penalties*; and §342H-11, *Injunctive and other relief*, or any other pertinent rules.
17. If the governor or the director determines that an imminent peril to the public health and safety is, or will be, caused by the disposal of solid waste or any combination of discharges of other waste that requires immediate action, the governor or the director, without a public hearing, may order the permittees to immediately reduce or

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stop the disposal, discharge, or process, and may take any and all other actions as may be necessary (HRS §342H-8).

18. Should the permittees decide to continue operation of the solid waste facility beyond the expiration date of the permit or propose a modification to the permit, the permittees shall submit a complete permit renewal or modification application at least one hundred eighty (180) days prior to the date of permit expiration or proposed modification.
19. Should the permittees decide to terminate the facility operation (or be facing lease termination or eviction), the permittees shall perform necessary closure activities including, but not limited to, the removal of all remaining solid waste and performing appropriate site assessments and remedial activities. Prior to the termination of the operation, the permittees shall also notify the DOH in writing at least within ninety (90) calendar days of the facility's closure [HAR §11-58.1-04(e)(3)]. The written notification shall include an updated closure plan, which should accomplish the following objectives:
 - a. Provide an assessment of the site's present and future threat to public health and the environment due to contaminants possibly left on site from the facility's operation.
 - b. Provide a plan of action to minimize or mitigate any threats to public health and the environment due to contaminants possibly left on-site by the facility's operation.
 - c. Provide a schedule to implement the plan of action.

Upon DOH approval of the closure plan, the permittees shall implement the plan in accordance with the approved implementation schedule.

20. Compliance with this permit does not in any way relieve the owner or operator of the solid waste management facility from compliance with other federal, state, or local laws, regulations, or requirements.

PART II - SPECIAL CONDITIONS**Section A. Facility and Operational Controls**

1. This facility may receive, store, process, and incinerate MSW for energy recovery. The permittees shall operate the facility in accordance with HAR §11-58.1-20, the application and operations plan received on February 7, 2011, additional information

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received on July 19, 2011, approved subsequent submissions, and the conditions of this permit. Should there be any discrepancies among the aforementioned documents, HAR and permit conditions shall take precedence.

2. If the permittees provide spoken notification of a proposed plan revision that would not trigger a permit modification, within seven (7) days prior to submission, and the DOH does not respond to the proposed plan revision within thirty (30) days of the plan submission, the request is considered to be approved. This automatic approval does not apply to ash/residue sampling, analysis, disposal or reuse.
3. The facility shall be supervised, secured by gates, fences, or other measures to control unauthorized access to the facility.
4. The facility shall have a permanent sign identifying the facility, hours of operation, and a contact in case of emergencies.
5. Suitable means shall be provided to prevent and minimize fire hazards, and shall comply with the Fire Prevention and Response Plan section of the Operation and Maintenance Plan received on February 7, 2011. Access lanes shall be provided to allow for fire response. The permittees shall maintain written documentation of inspections and tests, as referenced in the Operation and Maintenance Plan.
6. The facility shall design and implement methods to control litter, insects, odors, and vectors. The facility shall maintain a neat and orderly appearance and must be screened and buffered to minimize nuisances to neighboring properties. The DOH may require the installation and implementation of additional controls and systems, as appropriate to address nuisances. Access lanes shall be provided to allow for vector control. The permittees shall complete the Grounds Task List, as provided on April 7, 2006, on a daily/weekly basis, or approved subsequent submissions.
7. The permittees shall provide adequate drainage to prevent standing water and to control run-on and run-off of rainwater.
8. Measures shall be taken to prevent waste spills and leachate from being discharged or allowed to enter into sewers, drainage systems, surface or groundwater, water courses, marine waters, or onto the ground. Measures include the use of structural catchment systems or absorbent materials. Discharges of wash water and wastewater from the facility processes and cleaning operations shall be in accordance with all applicable state and local rules and ordinances.

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9. All waste pickup, handling, transport, storage, processing, and disposal shall be in accordance with applicable procedures and operations plan, as set forth in the permittees' application, unless otherwise revised.
10. Scavenging at the facility is prohibited.
11. If contamination of the environment resulting from the storage and processing of MSW, associated waste streams, and by-products is detected, appropriate measures shall be taken to assess and mitigate the contamination.

Section B. Waste Acceptance and Screening

12. MSW that is considered acceptable waste, after meeting screening requirements of Special Conditions Nos. 12 through 14, shall be incinerated for energy recovery. MSW intended for incineration in Units 1 and 2 shall be processed into RDF prior to incineration. Acceptable waste is defined in the operations plan received on February 7, 2011, and approved subsequent submissions. Acceptable waste includes, but is not limited to, garbage, trash, rubbish, and refuse normally disposed of by and collected from residential, commercial, military, institutional and industrial establishments within the City and County of Honolulu.
13. All incoming loads shall be screened to prevent the acceptance of radioactive wastes. Radioactive wastes shall be managed in accordance with HAR 11-58.1-64. In the event that a radioactive load is identified, the facility shall follow the procedures in the Operation and Maintenance Plan, and approved subsequent submissions. The permittees shall complete and submit the Radiation Monitoring Report form, documenting the date, time, actions taken, and resolution of the event.
14. The facility shall make every practicable effort to screen waste and prevent unacceptable waste from entering the facility. The facility shall also screen waste that enters the facility and make every practicable effort to prevent further processing and combustion of unacceptable waste. The facility shall post a sign on the property that lists unacceptable wastes. The facility shall conduct random visual surveillance of loads to spot check for unacceptable wastes. Operators shall receive training on visual surveillance and unacceptable waste handling procedures set forth in the Operation and Maintenance Plan. Unacceptable waste is defined in the operations plan received on February 7, 2011 and approved subsequent submissions, and the following:
 - a. Regulated hazardous waste, as defined in HAR §11-261 through 11-268.

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- b. Radioactive waste, which shall be managed in accordance with HAR 11-58.1-64.
 - c. Electrical transformers with oil or polychlorinated biphenyls or when generated from other than demolition projects, in accordance with HAR 11-58.1-20(e).
 - d. Pesticide containers, unless they meet the requirements of HAR 11-261-7 and 11-261.4(b) household waste.
 - e. Liquids as defined in HAR §11-58.1-03, except wastewater treatment plant sludge handled in accordance with an approved Operations Plan.
 - f. Untreated infectious waste, excluding infectious waste generated within the household, in accordance with HAR 11-58.1-53.
 - g. Greater than 25% of commercially-generated greenwaste and greater than 50% of household-generated greenwaste on an annual basis, in accordance with HAR 11-58.1-65(b).
 - h. Scrap automobiles, white goods, and motor vehicle tires, in accordance with HAR 11-58.1-65(c); however, incidental amounts of motor vehicle tires may be accepted.
 - i. Lead-acid batteries, in accordance with HRS 342I.
 - j. Asbestos-containing material.
15. Waste shall be screened on the tipping floor to identify unacceptable waste and to prevent further processing and incineration of unacceptable waste. Should unacceptable waste be identified at the facility or on the tipping floor, the permittees shall separate the waste and manage it in accordance with the operations plan and applicable laws and rules.
- a. Unacceptable wastes identified at the facility shall not be processed or incinerated for energy recovery.
 - b. Unacceptable waste shall be stored in a manner that will minimize the generation of leachate, will not cause spills or leachate to be released, and will not cause any health or safety hazard, littering, odor, dust, or other nuisances. For example, white goods shall be stored in an upright position and shall not be stacked, and lead-acid batteries shall be placed in a covered storage area on an impervious surface with berms/catch pans or in a covered leak-proof

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container. The waste shall be transported from the facility prior to posing a nuisance, health, or safety concern.

- c. Unacceptable waste shall be transported to a permitted solid waste management facility allowed and willing to accept such waste, or out-of-state recycling/disposal facility.
- d. Unacceptable waste shall be fully containerized or covered during transport from the facility.
- e. The permittees shall maintain a daily log of unacceptable waste turned away from the facility, including date, hauler, and waste type. The permittees shall also maintain records of unacceptable waste removed from the facility. The records shall include the date of removal from facility, waste type, estimated quantity, and recycling/disposal method and destination.

Section C. MSW Storage and Processing

- 16. The facility shall be limited to the following storage and processing capacities:
 - a. MSW delivered to the waste processing area associated with Units 1 and 2 shall be processed into RDF within three (3) days of receipt at the facility.
 - b. MSW delivered to the tipping floor associated with Unit 3 shall be incinerated within three (3) days of receipt at the facility.
 - c. During annual maintenance outages and equipment testing or repair situations, MSW may be stored for longer than three (3) days provided that written notification of such event is provided to the DOH, in accordance with Special Condition No. 20, and the permittees maintain compliance with all other permit conditions.
- 17. The RDF/MSW storage areas shall not exceed three (3) days capacity, or less as necessary for fire prevention and safety. Piles of RDF/MSW shall be managed to prevent hot spots and fires, and protect worker safety. A fire suppression system shall be maintained in the RDF/MSW storage area, with regular inspections and tests to ensure the system is operational.
- 18. Recyclable materials, including pre- and post-combustion metals, shall be separated, stored, and transported as follows. The permittees shall take reasonable measures to separate metals and other recyclable materials from the MSW, RDF, and post-combustion waste streams.

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- a. Recyclable materials shall be stored in a manner that will minimize the generation of leachate, will not cause leachate to be released, and will not cause any health or safety hazard, littering, odor, dust, or other nuisances. Recyclable materials shall be transported from the facility prior to posing a nuisance, health, or safety concern.
 - b. All reasonable efforts shall be made to limit the storage of recyclable material to eighteen (18) full containers and to remove full containers within one week. In the event that on-site storage for more than one week is necessary, the containers may be temporarily stored for up to two weeks, provided they are properly containerized and covered, until said transport can be arranged.
 - c. Recyclable metals shall be transported to a permitted recycling facility allowed to accept such metals (i.e., contaminated post-combustion metal) or out-of-state markets. Other recyclable materials shall be transported to permitted recycling facilities allowed to accept such materials or out-of-state markets.
 - d. Recyclable materials, including metals, shall be fully containerized or covered to prevent the scattering of ash, residue, or dust during storage and transport. Appropriate controls shall be instituted and implemented to prevent the scattering of ash, residue, or dust during loading and unloading of recyclable materials.
19. The permittees shall perform periodic cleaning of the tip floors, MSW/RDF storage area, and other areas of the facility that store or handle MSW/RDF, as may be required in order to maintain the plant in a vector free, sanitary, and clean condition.
20. In the event that the facility is unable to combust RDF/MSW or process MSW for more than 72 hours, the permittees shall cease from accepting any more MSW at the affected area until the equipment is back in operation. During such times, waste shall be diverted to permitted storage and disposal facilities or to operational areas of the facility. All other permit conditions, including capacity limits, shall be maintained.
- a. The permittees shall notify the DOH of proposed or actual suspended operation. Initial notification may be by phone prior to, or within 24-hours of suspended operation. Written notification shall be provided prior to, or within seven (7) days, of suspended operation. Facsimile transmissions are acceptable. The permittees shall specify:
 - i. date and time that the facility suspends, or proposes to suspend, operation;

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- ii. reason for suspended operation;
 - iii. actions that will be taken to address the situation;
 - iv. actions that will be taken to address other potential impacts of suspended operation (for example: odor control, litter management, any special operating procedures to respond to the situation);
 - v. anticipated schedule for resuming operation; and
 - vi. any other pertinent information.
- b. The permittees shall notify the DOH when operations resume. Initial notification may be by phone within 24-hours of resuming operations. Written notification shall be provided within seven (7) days of resuming operations. Facsimile transmissions are acceptable. The permittees shall specify:
- i. date and time that the facility resumed operation;
 - ii. estimated quantities of MSW and RDF present at the facility during the period of suspended operation;
 - iii. schedule to process existing MSW, combust existing RDF, and resume acceptance of MSW at the facility;
 - iv. actions that will be taken to prevent future recurrences; and
 - v. any other pertinent information.

Section D. Sample Collection and Analysis

- 21. All sample collection, handling, and management shall be conducted in accordance with EPA SW-846, *Test Methods for Evaluating Solid Waste*, and EPA Office of Solid Waste, *Guidance for the Sampling and Analysis of Municipal Waste Combustion Ash* (June 1995).
- 22. Each sample shall be properly collected, identified, contained, and preserved. The name of the person who collected the sample shall be included in the records. A chain of custody shall be maintained from the time of sample collection through the final analysis and disposition.

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23. Sample analysis shall be conducted by an independent third party with appropriate credentials and performed at the expense of the permittees.
24. Samples shall be analyzed as specified in the operations manual, approved subsequent submissions, and the conditions of this permit. Samples shall be analyzed in accordance with the following EPA SW-846 Methods:
 - a. Method 9045 for pH;
 - b. Method 6010 for total metals;
 - c. Method 7471 for mercury;
 - d. Method 3060A/7199 for hexavalent chromium;
 - e. Method 1311 for toxicity characteristic leaching procedure (TCLP);
 - f. Method 8290 for dioxins/furans; or
 - g. other methods provided in approved application submissions and approved by the DOH.
25. Practical quantitation limits (PQLs) shall be equivalent, or lower, than the PQLs submitted with the operations plan and approved subsequent submissions.

Section E. Management and Testing of Pre-Combustion Residue

26. Pre-combustion residue (residue) shall be managed in accordance with the operations manual and approved subsequent submissions. Residue shall be loaded directly into residue trailers with top covers for immediate transport from the facility. All reasonable efforts shall be made to remove the collected residue from the facility within 24 hours. In the event that temporary on-site storage in excess of 24 hours is necessary, the residue may be temporarily stored along the west wall in the MSW tip floor building, until said transport can be arranged.
27. The residue shall be transported to a permitted landfill for disposal. The residue shall be fully containerized or covered to prevent it from scattering during transport. Appropriate controls shall be instituted and implemented to prevent the scattering of residue or dust during loading and unloading.
28. The permittees shall collect and analyze residue samples in accordance with the Residue Sampling Protocol received on February 7, 2011; Section D, Sample Collection and Analysis; approved subsequent submissions; and other applicable conditions of this permit. Samples shall be collected and analyzed, in accordance with Special Condition No. 29, on an annual basis.

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29. Chemical testing shall be performed on the residue for pH, total metals (arsenic, barium, cadmium, chromium, lead, mercury, selenium, and silver), and hexavalent chromium.
30. Monitoring reports shall be submitted to the DOH within sixty (60) days of the end of each annual testing period, and in accordance with Section G, Recordkeeping and Reporting.

Section F. Management and Testing of Post-Combustion Ash

31. Post-combustion ash (ash) includes fly ash and bottom ash generated at the facility. Ash shall be managed in accordance with the operations manual and approved subsequent submissions. The ash shall be loaded directly into ash trailers with top covers for immediate transport from the facility. All reasonable efforts shall be made to remove the collected ash from the facility within 24 hours. In the event that temporary onsite storage in excess of 24 hours is necessary, the ash may be temporarily stored in trailers, provided they are properly containerized and covered, until said transport can be arranged.
32. The ash shall be transported to a permitted ash monofill for disposal. The ash shall be fully containerized or covered to prevent it from scattering during transport. Appropriate controls shall be instituted and implemented to prevent the scattering of ash or dust during loading and unloading.
33. The ash and transporting trailer shall not contain excessive moisture that would freely drain from the ash. The permittees shall take adequate measures to ensure the reduction of moisture present in the ash and to drain excessive moisture prior to transport from the facility. Any moisture collected shall be managed in accordance with applicable rules and regulations.
34. The permittees shall collect ash samples from Units 1 and 2 in accordance with Special Conditions No. 34.a or 34.b, as follows. Samples shall be collected and analyzed in accordance with Special Condition Nos. 37 and 38, on a quarterly basis. Compliance with these sampling and analytical requirements does not relieve the permittees from compliance with all other applicable regulations.
 - a. In accordance with Section D, Sample Collection and Analysis, a revised Ash Sampling Protocol as approved by the DOH, and any additional conditions, or
 - b. In accordance with the Ash Sampling Protocol received on February 7, 2011; additional information received on February 13, 2006, Section D, Sample Collection and Analysis; other applicable conditions of this permit, approve subsequent submissions, and as follows.

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- i. The ash samples shall be prepared utilizing a 60% bottom ash/40% fly ash split (by weight), or as otherwise specified by the DOH.
 - ii. The permittees shall collect bottom ash after the bottom ash metals removal system (BAMR).
 - iii. By March 30, 2012, the permittees shall implement the December 1, 2010 engineering study plan to re-evaluate the ratio of fly ash and bottom ash, as approved by the DOH.
 - iv. The permittees shall notify the DOH of the implementation schedule for this study. The DOH personnel shall be allowed to attend the study. The data, results, and facility-specific ratio recommendation shall be provided to the DOH within forty-five (45) days of completion of the study.
 - v. Upon approval of a facility-specific ratio, the permittees shall implement approved ratio at the next quarterly sampling event. If the next quarterly sampling event is scheduled within forty-five (45) days of approval, the facility may use the 60%/40% ratio. All subsequent sampling events shall be performed using the facility-specific ratio approved by the DOH.
35. The permittees shall collect ash samples from Unit 3 in accordance with the Ash Sampling Protocol received on February 7, 2011; additional information received on February 13, 2006, March 27, 2009, April 22, 2009, and April 27, 2009, Section D, Sample Collection and Analysis; other applicable conditions of this permit; and approved subsequent submissions. Samples shall be collected and analyzed, in accordance with Special Condition Nos. 37 and 38, on a quarterly basis. Compliance with these sampling and analytical requirements does not relieve the permittees from compliance with all other applicable regulations.
- a. The permittees shall collect ash samples in accordance with the Ash Sampling Protocol received on February 7, 2011, and additional information received on March 27, 2009, April 22, 2009, and April 27, 2009. Unit 3 will produce a bottom ash waste stream and a blended ash waste stream.
 - b. The blended ash waste stream shall consist of a 64% bottom ash (wet) and 36% conditioned fly ash (wet), $\pm 1\%$, by weight, or other approved ratio. The permittees shall collect the blended ash sample after the rotary drum mixer.
 - c. The bottom ash waste stream sample shall be collected after the BAMR.
 - d. The sampling frequency, sampling interval, and number of samples shall be consistent with the Sampling Protocol for Units 1 and 2. Six (6) sub-samples of blended ash and bottom ash shall be collected in 10-minute

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intervals, over the course of an hour. Fourteen (14) separate samples (1-hour sample period each) shall be collected and analyzed for each waste stream.

36. The permittees shall inspect the truck wash sump and settling basin weekly. The sump waste and settling basin waste (from Unit 3) shall be removed based on the weekly inspection.
 - a. The permittees shall collect and analyze ash from the sump near the truck wash area in accordance with Section D, Sample Collection and Analysis, approved subsequent submissions, and other applicable conditions of this permit. Samples shall be collected and analyzed, in accordance with Special Condition No. 37, on an annual basis. Reporting shall also describe sample collection procedures.
 - b. The permittees may dispose of collected waste from Unit 3 settling basin without additional sampling. Waste from Unit 3 settling basin shall not be recycled, reused, or combined with bottom ash slated for recycling/reuse.
37. Chemical testing shall be performed on the ash for pH, dioxins/furans, total metals (arsenic, barium, cadmium, chromium, lead, mercury, selenium, and silver), hexavalent chromium, and TCLP (heavy metals).
38. Organics testing shall be performed on the ash in accordance with the Ash Sampling Protocol received on February 7, 2011; analytical method received on December 2, 2005; Section D, Sample Collection and Analysis; other applicable conditions of this permit; and approved subsequent submissions. The ash shall contain less than ten percent organic matter by weight. Reporting shall show that the reported organic fraction, by weight, is representative of the entire ash waste stream and accounts for unburned waste visible in the ash.
39. Following a minimum of two (2) years of accumulated quarterly data for all parameters after the implementation of a new sampling ratio or method, or new waste stream, the permittees may petition the DOH for a reduction in testing. The proposed reduction may be for organics, TCLP, and hexavalent chromium testing frequency, provided that testing shows statistically insignificant variation in organic content by weight and constituent concentrations, respectively. The permittees shall submit the request in writing, including rationale for the change and statistical analysis of existing data. The permittees must receive written approval from the DOH prior to implementation of any change in sampling frequency. If other data analyses show a change in the characteristics of the ash, the DOH may reinstate the original testing and frequency requirements.

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40. Monitoring reports for chemical and organics testing shall be submitted to the DOH within sixty (60) days of each applicable testing period, and in accordance with Section G, Recordkeeping and Reporting. A summary of analytical results shall also be provided to facilities that accept post-combustion metals coated with ash.
41. Should the permittees propose to reuse or recycle the ash, the permittees shall submit a written request to the DOH. The DOH may require additional testing, analysis, risk evaluation, and other applicable information to evaluate any proposed reuse alternative. The facility must receive written approval from the DOH prior to implementation of any reuse or recycling alternative.

Section G. Recordkeeping and Reporting

42. The permittees shall maintain the following records for the existing and expanded areas of the facility:
 - a. daily quantity (tons) of MSW entering each area of the facility;
 - b. daily number of MSW-transporting vehicles entering each area of the facility;
 - c. daily record of hauler, type of hauler (private or commercial), and weight of load;
 - d. daily quantity (tons) of MSW rejected from each area of the facility, reason for rejection, responsible hauler, and waste load number;
 - e. daily quantity (tons) of residue transported from the facility and destination;
 - f. daily quantity (tons) of combined ash from Units 1 and 2, combined ash from Unit 3, and bottom ash from Unit 3 transported from the facility and destination;
 - g. daily records of unacceptable waste rejected from each area of the facility, including date, hauler, and waste type.
 - h. records of unacceptable waste removed from the facility, including date of removal from facility, waste type, estimated quantity, and recycling/disposal method and destination;
 - i. daily/monthly quantity of ferrous metal and non-ferrous metal (pre- and post-combustion) transported from each area of the facility and destination of each type of metal;

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- j. record of other recyclable materials removed from each area of the facility, including removal dates, estimated quantity, and destination for each type of recyclable material;
- k. record of housekeeping practices and nuisance mitigation efforts;
- l. record of fire suppression system inspections and tests;
- m. record of radioactive load detection occurrences;
- n. record of periods when the facility is not in operation. The record shall include items specified in Special Condition No. 20;
- o. record of all sample testing and associated monitoring reports, including date and time of sample collection, type of sample, and analytical results;
- p. daily weight records for bottom ash discharged prior to the rotary drum mixer;
- q. daily weight records for bottom ash and daily weight records for conditioned fly ash that are fed to the rotary drum mixer; and
- r. equipment operating records showing operating parameters (such as equipment processing data, operating temperature and pressure, lime injection rates, residence time, bottom ash/conditioned fly ash ratio of blended ash in the rotary drum mixer; etc.) that may impact operating capacity, combustion efficiency, or ash composition.

The permittees shall maintain records on any conversion factor used to convert volume and weight. The conversion factor shall be clearly documented and maintained with the records.

43. **Monitoring Reports.** The permittees shall submit a monitoring report to the DOH within sixty (60) days of the end of each quarter, or other applicable reporting period. At a minimum, the monitoring reports shall include the following information:

- a. sample collection dates, location, and time of sampling/measurements;
- b. sample collection methodology;
- c. the person responsible for performing the sampling or measurements;
- d. identification of third party entity that performed the sample analysis;
- e. sampling records, analytical techniques/method used, and analytical results; and
- f. analysis of test results.

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44. Annual Report. The permittees shall prepare and submit an annual report to the DOH, reviewing the operations for the previous fiscal year (July 1 to June 30). Reports shall be submitted by July 31 of each year and shall include:
- a. type and tonnage or volumes of waste received, recycled, incinerated, and disposed of from each area of the facility;
 - b. tonnage or volumes of ash (identified by type of ash) and residue generated and disposed of from each area of the facility;
 - c. identification of disposition location for each waste stream from each area of the facility; and
 - d. dates, total number of days, and reason that each area of the facility was not accepting MSW or was not in operation.

Reports shall be submitted to:

Department of Health
Environmental Management Division
Office of Solid Waste Management
P.O. Box 3378
Honolulu, Hawaii 96801-3378



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July 14, 2022

Lene Ichinotsubo, P.E., Acting Chief
Solid and Hazardous Waste Branch
Environmental Management Division
Hawaii State Department of Health
2827 Waimano Home Road, Rm. #100
Pearl City, HI 96782

Subject: Honolulu Resource Recovery Venture (HRRV)
2021-2022 Annual Solid Waste Report

Ms. Lene Ichinotsubo,

Attached please find HRRV's annual summary report for the fiscal year 2021 through 2022 per Part II - Special Conditions, Section G. No. 44 of Solid Waste Permit No. IN-0049-11. We have separated the report into four attachments:

- Attachment A – Inbound Receipts. Type and tonnage or volumes of waste received, recycled, combusted, and disposed of from each area of the facility.
- Attachment B – Outbound Residue. Tonnage or volumes of ash and residue generated and disposed from each area of the facility.
- Attachment C – Storage Locations. Identification of disposition location for each waste stream from each area of the facility.
- Attachment D – Full Area Diversions. Dates, total number of days, and reasons that each area of the facility was not accepting MSW or was not in operation.

If there are any further questions, please call me at 682-0201 or Ms. Katelyn Asato at 808-682-0264.

Very truly yours,

Tony Waldo
Facility Manager

KTA:jt
220706tw

Attachments

cc: Ahmad Sadri, City and County of Honolulu
George Drew (Covanta), E-mail

EXHIBIT "I"

Attachment A
Inbound Receipts

Attachment A – Inbound Receipts. Type and tonnage or volumes of waste received, recycled, combusted and disposed of from each area of the facility.

Material Type	Destination or Origination & Plant	Material Code	Tonnage Received (1)	Recycled (2)	Combusted	Disposed
Municipal Solid Waste		01, 02, 03, 04, 05, 06	732,956			
	RDF	MOR	445,531	See Metals Recovered	417,716	See Attachment B
	Mass Burn	MOR	305,494		300,579	See Attachment B
	Waste Auxiliary Building		2,543			See Attachment B
Special Waste			1,285			
	RDF	MOR	17	See Metals Recovered	17	See Attachment B
	Mass Burn	MOR	1,268		1,268	See Attachment B
Unacceptable Waste (UAW) (3)	RDF & Mass Burn	13	22			See Attachment B
	RDF UAW to Mass Burn	15	-*		See note*	
Metals Recovered				Sent to a Permitted Recycler (Island Recycling, Refrigerant Recycling, or Schnitzer Steel)		
	RDF, Pre-Burn Ferrous	20, 23	9,796			
	RDF, BAMR Ferrous	22	1,832			
	RDF, BAMR Non-Ferrous	21	776			
	Mass Burn, BAMR Ferrous	32, 33	10,109			
	Mass Burn, BAMR Non-Ferrous	31	1,637			
Sludge	Mass Burn	52, 55	16,869		16,869	See Attachment B
Tires (4)	Mass Burn	WPF	33,596		33,596	See Attachment B

(1) The tonnage is rounded up to a whole number.

(2) Recycled tonnage is tonnage extracted in the Waste Process Facility, and from the Bottom Ash Metals Recovery System

(3) The program PC Scale does not distinguish which facility the unacceptable material originated from.

(4) Tires tonnage is a total number of tires, not a tonnage of the tires.

*Small quantities of WPF UAW were taken to Mass Burn. The tonnage combusted at Mass Burn is inclusive of the RDF UAW tonnage.

Attachment B
Outbound Residue

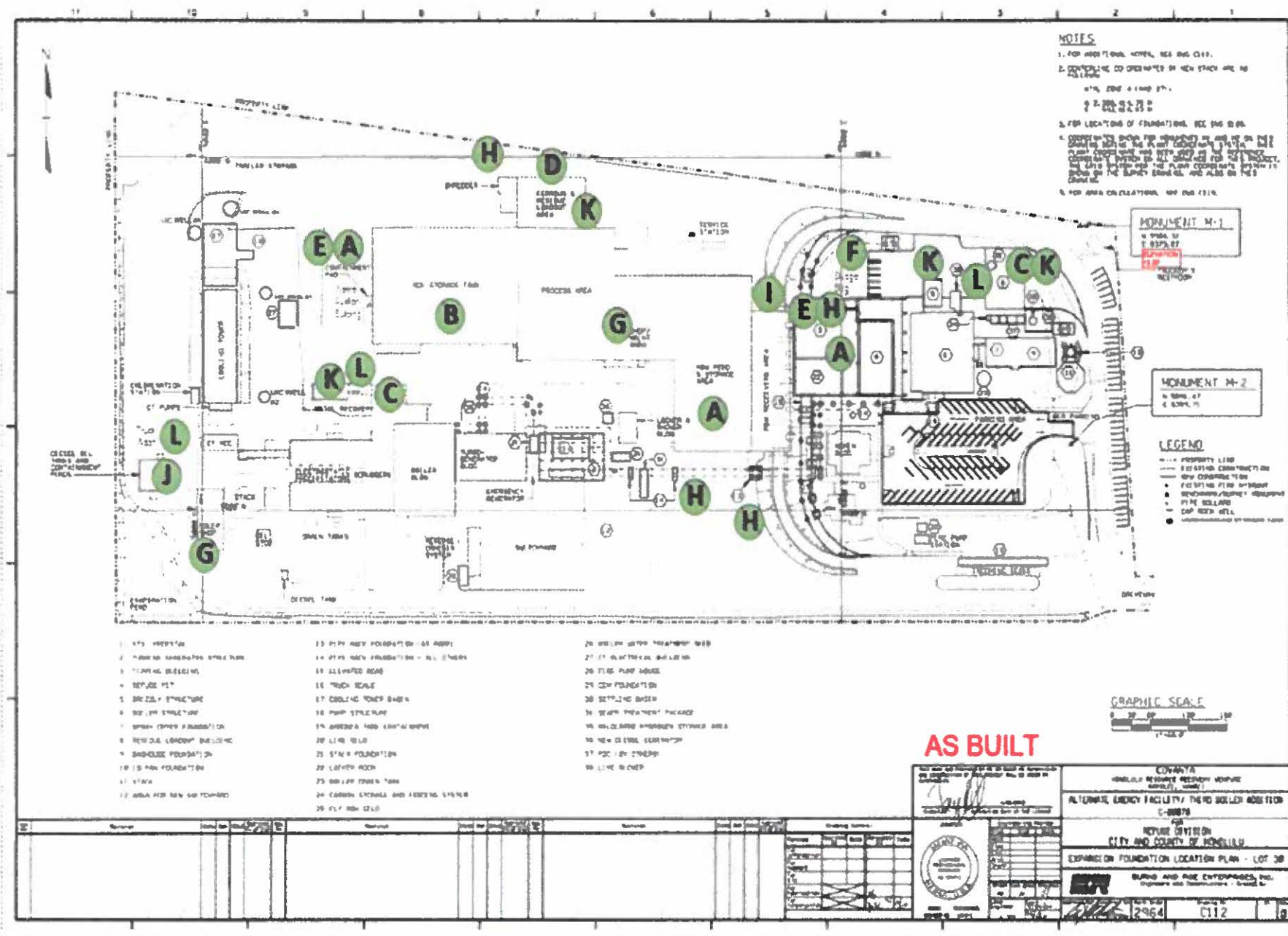
Attachment B – Outbound Residue. Tonnage or volumes of ash and residue generated and disposed from each area of the facility.

[illegible]

Attachment C
Storage Locations

Attachment C – Storage Locations. Identification of disposition location for each waste stream from each area of the facility.

Map Code	Waste Stream	Waste Disposition	Disposal Method
A	Municipal Solid Waste	Household trash, supplemental waste, and all other approved forms of waste.	Combustion or Processed into Refuse Derived Fuel (RDF).
B	Refuse Derived Fuel	MSW that was processed through a series of shredders, trommels, magnets, to refine MSW into a lighter highly combustible fuel source.	Combustion, RDF Plant
C	Combined Ash	Post-combustion residue, inert material.	Disposal at Waimanalo Gulch Sanitary Landfill
D	Process Residue	Fall-out MSW from process equipment (trommel), normally comprised of glass, plastic, sand, dirt, and non-combustible MSW.	Disposal at Waimanalo Gulch Sanitary Landfill
E	Tires	Passenger tires from C&C of Honolulu collection systems.	Combustion, Mass Burn
F	Sludge	Wastewater treatment plant biosolids; 20-25% moisture, non-hazardous material.	Combustion, Mass Burn
G	Solvent	Non-combustable liquid solvent for parts and painting equipment	Recycled - Unitek Solvent Services
H	Unacceptable Waste	White goods, bulky metals (metal bookshelves, metal furniture), compressed cylinders, etc.	Recycled - Transferred to either Schnitzer Steel Hawaii, or Island Recycling. Temporarily stored on tipping floors or just outside in large trailers until enough is generated to move offsite to recycler.
I	Universal Waste	Lamps, Bulbs, batteries	Treated - EnviroServices
J	Used Oil	Recyclable liquid product generated from fleet, heavy, and plant equipment maintenance.	Recycled - Cameron Chemical
K	Ferrous/Non-Ferrous Metal	Pre-burn and post-burn recovered ferrous and non-ferrous metal.	Recycled - Transferred to either Schnitzer Steel Hawaii, or Island Recycling
L	Sump Sludge	Mostly liquid material mixed with ash and road grime; non-hazardous.	Recycled - Mixed with ash discharger to cool the ash.



Attachment D
Full Area Diversions

Attachment D – Full Diversions. Dates, total number of dates, and reasons that each area of the facility was not accepting MSW or was not in operation.

Dates	Number of Days	Reason for Diversion or Downtime
10/7/2021 - 10/11/2021	3.5	Boiler #3 offline for feed chute damage repair. Please refer to correspondence dated 10/12/2021.
11/8/2021 - 11/12/2021	4	Boiler #3 feed table door repairs. Sludge was diverted during this period. Please refer to correspondence dated 10/12/2021.
2/19/2022 - 3/8/2022	17	Boiler #3 annual maintenance outage. Please refer to correspondence dated 3/15/2022.
5/1/2022 - 5/5/2022	3	Boiler #3 tube rupture repair. Please refer to correspondence dated 5/13/2022.
5/10/2022 - 5/17/2022	7	RDF Boilers 1 and 2 common outage for turbine repairs. Please refer to correspondence dated 5/18/2022.
6/29/2022 - 7/7/2022*	8	Fire in the Waste Processing Facility (WPF). Please refer to correspondence dated 7/12/2022.

*The Annual Report covers July 1, 2021 - June 30, 2022. This instance of downtime is being included in this report for consistency due to the overlapping of periods.



Wednesday, December 7, 2022 | Today's Paper | 82°

EDITORIAL | LETTERS

Letter: West Side shouldn't keep hosting landfill

Today • Updated 12:11 am

The Hawaii Land Use Commission has ordered the Waimanalo Gulch Sanitary Landfill in Nanakuli to be closed by 2028, and for the city to identify a new landfill site by Dec. 31, 2022.

A Star-Advertiser article (["BWS chief blocks mayor's landfill request over aquifer concerns,"](#) Nov. 25) reported that all six possible sites considered by the Landfill Advisory Committee were rejected for either being located in the Honolulu Board of Water Supply's "No Pass Zone" and/or above an aquifer. This *again* leaves Nanakuli the most probable next site.

We strongly feel that the city should carefully reconsider other sites, such as the Ameron Hawaii Quarry on the Windward side. In April 2012, the Landfill Advisory Committee's consultant ranked the quarry as the most favorable location for the next landfill; it is outside the "No Pass Zone" and not located above an aquifer.

Oahu's West Side has done far more than its fair share. We are the home of landfills, refineries, the HPOWER plant, burgeoning homeless and more. Enough is enough. No more landfills on the West Side!

Sen. Maile Shimabukuro

State Senate District 22



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Rep. Darius Kila

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