Meeting No. 5
Group Memory

Mayor's Advisory Committee on Landfill Site Selection
City and County of Honolulu

May 12, 2011

Attendance:

Committee Members Present: David Arakawa, Tom Arizumi, John Goody, Joe Lapilio, Tesha Malama, Richard Poirier, Chuck Prentiss, George West, Janice Masters

Committee Members Absent: None

Consultants: Brian Takeda, Gail Atwater, Mark White, Jim Dannemiller

Facilitator: Dee Dee Letts

Agenda:

Welcome and Introduction
Review of Mtg. No. 4
Public Comment
Discussion on Landfill Site Selection Criteria
Consultant's Next Steps
Thank You and Adjournment

The meeting was held in the Mayor's Conference Room, Honolulu Hale, starting at 9:00 AM, with a review of the agenda. The consultants then reported back to the committee on issues raised at the previous meeting.

- Copies of letters sent to the Department of Health and the Board of Water Supply requesting further information and assistance were provided to the committee. No response had been received from either agency at the time of the meeting.

- The consultants presented information on the Kunia area and its suitability for a landfill site. Maps were provided showing the tax map keys, state land use district, and agricultural ratings. Lands mauka of the State Agricultural District including the gulches are in the State Conservation District. All lands in the area were identified as agricultural lands of the highest quality. The area is also located in the state and city's underground injection control and groundwater protection zones. The Committee briefly discussed the information presented and no further action to consider this area was deemed necessary.

The Committee next invited comments from any member of the public in attendance. There were no comments.

Dr. Bruce Anderson submitted an e-mail resigning from the Committee on May 5, 2011 due to his new position which requires his full attention. Dr. Anderson's e-mail was shared with the Committee.

The Committee next reviewed the community criteria identified at the last meeting and discussed the language, descriptions, and opportunities for consolidation, or deletion of criteria. Below is a summary of the major changes (see attached Final Criteria List):

Summary List of Changes to Criteria

- The Committee was reminded that Criterion 1 – Potential for Worst Case Scenarios was moved from a criterion to a discussion point on worst case scenarios for the top ranked sites based on the individual characteristics of each site. This change will be included in the Committee's Report.

- Combined Criterion 3 – Location Relative to Educational Institutions, Health Care Facilities, or Parks and Recreation Facilities; Criterion 4 – Location Relative to Health Care Facilities; and Criterion 5 – Location Relative to Public Parks and Recreation Facilities.

- Combined Criterion 8 – Location Relative to Commercial Facilities and Local/Visitor Attractions, and Criterion 9 – Location Relative to Visitor Attractions.

- Combined Criterion 13 – Wear and Tear on Highways and Roadways which affects Roadway Usage, and Criterion 14 - Effect on Roadway Usage. The Committee requested that roadway congestion be included in this criterion and asked "Where does the residential road begin?" Residential roads will be evaluated on a case by case basis, but generally would begin on the secondary road serving the residences.

- Moved Criterion 15 – State Land Use Designation (SLUD) and County Zoning, to an item of discussion in the Committee's Report. The land use designation for a site does not by itself constitute a criterion because it can be changed. The Committee's Report should also discuss land use patterns discussed in the City's adopted Sustainable Communities Plans.

- Moved Criterion 16 – Ceded Land and Hawaiian Home Lands to a discussion item in the Committee's Report.

- Changed Criterion 17 – Location Relative to Identified Community Disamenities so that it will be based on ahapua'a boundaries rather than distance from the site. The Committee compiled a list of disamenities to include:

    - Existing landfills – closed and open
    - Power plants
    - Prisons, Juvenile Centers, Correction Facilities
    - Public Housing
    - Quarry Sites
    - Shelters
    - Waste Water Treatment Plants
    - Treatment Plants
    - Slaughter Houses

- Deleted Criterion 18 – Ingress and Egress to Landfill Site as it would be the same for each site.

- For Criterion 19 – Location Relative to H-POWER the Committee asked if there was a time element that should be considered based on the amount of time it takes ash to solidify in the trucks. Steve will check on this and get back to the Committee.

- Deleted Criterion 20 – Storm Water Control as it is covered in Criterion 21 – Effect of Precipitation on Landfill Operations, and Criterion 22 – Landfill Development, Operation and Closure Cost.

- Criterion 21 – The Committee asked the consultants to include peak rainfall events and not just average rainfall.

- Criterion 22 – The cost of operations needs to include the cost for storm water control. Cost factors should include: costs of a system necessary to handle peak storm events, the cost per mile to H-POWER, displacement costs, and purchase costs.

- Deleted Criterion 23 – Opportunity Cost as it would be covered in zoning and other land use discussions.

- The Committee developed a new criterion, Displacement Costs, to assess costs associated with the displacement of a current land use, including but not limited to, impact on the local economy, tax base contributions, and costs to move the land use. This should include situations where an existing land use is stopped before a resource is exhausted.

- Combined Criterion 25 – Location Relative to Wetlands, and Criterion 29 - Location Relative to Areas in the Natural Area Reserve System (NARS).

- The Committee asked that Criterion 26 – Location Relative to Listed Threatened and Endangered Species include critical habitats identified by DLNR and U. S. Fish and Wildlife Service to insure coverage of both fauna and flora resources.

- Moved Criterion 27 – Location Relative to Groundwater Resources to serve as a filter.

- Moved Criterion 28 – Flooding Potential to serve as a filter.

- Deleted Criterion 30 – Location Relative to Class "AA" Waters and modified Criterion 22 – Landfill Development, Operation and Closure Cost, by adding costs for stormwater controls to address discharges to Class "AA" waters of the State.

- Changed Criterion 31 – Surface Water Resources, by changing the measurement to include the "potential to discharge untreated storm water runoff from a landfill site to an identified perennial or intermittent stream…"

- Combined Criterion 34 – Soils Suitable for Use as Daily Cover, with Criterion 22 – Landfill Development, Operation and Closure Cost.

The Committee next discussed the weighting process. Each Committee member will be assigned a given number of votes or points but only one vote or point per Committee member would be allowed to be given to any single criterion. In general the process will work like this:

Point values will be provided by the Consultants for each criterion but the weighting assigned to each criterion will be decided by the Committee in a closed-door meeting without the Consultants present.

The Consultants will work independently to complete the site data sheets providing scores for each criterion. The Committee will receive the results of the completed site data sheets but the landfill sites will remain anonymous, identified only with an alpha descriptor, e.g., A, B, C... The Consultants will answer any questions about how the criteria were measured and applied to obtain the point values.

After all questions from the Committee have been answered the Consultants will be presented with the Committee's weighting of the criteria, performed in an earlier step. The Consultants will next apply the weighting to each criterion to arrive at the final score for each landfill site evaluated. This is planned to be accomplished during the course of one of our meetings.

The preparation of the site data sheets and the analysis to complete them, including a summary of the results, is estimated to be completed in about two months. The Committee will be notified of progress being made during this period.

The meeting came to a close with a reminder of the date, time and place for the next meeting, which is tentatively set for July 21st, 9:00 AM. (Note: This meeting date has been changed to July 19th, 9:00 AM, and will be held in the Mayor's Conference Room). There will be no meeting the month of June to allow the consultants to prepare the data information sheets and conduct related research.

The meeting adjourned at 12:30 PM.

Attachment

Final Criteria List
Mayor's Advisory Committee on Landfill Site Selection
City and County of Honolulu

5-12-11

New #	As of 5/12 #	Criterion	Tentative Measurement Method	Measure	Score	Comments (Criterion # refers to "New #")
N/A	1	~~Potential for Worst-Case Scenarios~~ ***Moved from Criterion to Discussion Point in Report***	~~Number of people and/or the value of property within a specially-designed impact area (e.g., between the site and the nearest shoreline, to include an area extending into the ocean to the nearest reef).~~	~~Number of persons and/or current dollar value of developed properties in the area.~~	~~TBD~~	~~Committee chose to not make this a criterion based on several issues with measurement. Committee has recommended that for the top 3-4 sites that the potential worst case scenarios be identified and described in the Committee's Final Report.~~
1	2	Capacity	Estimate the number of years the landfill can be used.	The number of years between opening the landfill and filling the site.	The minimum acceptable years is 15. The years the site can be used as a landfill will be listed and transformed to deciles with 1 indicating the least number of years of use and 10 the greatest.	The minimum capacity in years was determined by the MACLSS with input from ENV.
2	3	Location Relative to Educational Institutions, Health Care Facilities, or Parks and Recreation Facilities ***Combined with Criteria 4 and 5***	Distance from the nearest landfill site boundary to the nearest boundary of an educational institution, health care facility, or park or recreational facility.	Number of miles measured along a point-to-point aerial path.	Transform the range into deciles[1] where 1 is the shortest distance from the nearest school and 10 is the greatest distance to the nearest school, health care facility, park or recreational facility.	"Educational Institutions" include any school for children up to age 18[2], public or private, academic or vocational; and public and private colleges and universities. It excludes commercial training institutions for adults, included in Criterion 8.

[1] The method of calculating deciles here classifies cases in the lowest ten percent of the range from the lowest to highest measure as score=1, and so forth.

[2] Includes day care facilities.

New #	As of 5/12 #	Criterion	Tentative Measurement Method	Measure	Score	Comments (Criterion # refers to "New #")
						Health care facilities include medical and dental health centers/offices, hospitals (general, specialized, rehab), skilled nursing facilities, and clinics (except school clinics), and day care, elderly day care, or outpatient surgery centers. Public recreational facilities include national, state, and county parks, sports facilities, playgrounds (except school playgrounds), zoos, and community meeting centers. The concern regarding the proximity of schools (with playgrounds) to landfills is addressed in Criterion 3.
N/A	~~4~~	~~Location Relative to Health Care Facilities~~ ***Incorporated into Criterion 3 (New No. 2)***	~~Distance from the nearest landfill site boundary to the nearest boundary of a health care facility.~~	~~Number of miles measured along a point-to-point aerial path.~~	~~Transform the range into deciles where 1 is the shortest distance from the nearest health care facility and 10 is the greatest distance to the nearest health care facility.~~	
N/A	~~5~~	~~Location Relative to Public Parks and Recreation Facilities~~ ***Incorporated into Criterion 3 (New No. 2)***	~~Distance from the nearest landfill site boundary to the nearest boundary of a public recreational facility.~~	~~Number of miles measured along a point-to-point aerial path.~~	~~Transform the range into deciles where 1 is the shortest distance from the nearest public recreational facility and 10 is the greatest distance to the nearest public recreational facility.~~	

New #	As of 5/12 #	Criterion	Tentative Measurement Method	Measure	Score	Comments (Criterion # refers to "New #")
3	~~6~~	Location Relative to Residential Concentrations	Distance from the nearest landfill site boundary to the nearest boundary of a residential concentration.	Number of miles measured along a point-to-point aerial path.	Transform the range into deciles where 1 is the shortest distance from the nearest residential concentration and 10 is the greatest distance to the nearest residential concentration.	A residence is defined as an occupied housing unit.
4	~~7~~	Location Relative to Visitor Accommodations ***CAC commented: This is an "economic engine"***	Distance from the nearest landfill site boundary to the nearest boundary of a visitor accommodations facility.	Number of miles measured along a point-to-point aerial path.	Transform the range into deciles where 1 is the shortest distance from the nearest visitor accommodations facility and 10 is the greatest distance to the nearest visitor accommodations facility.	Visitor accommodations include hotels, motels, vacation condominium units, time share units, and hostels. Bed and breakfast and temporary visitor rentals are covered in the residential criterion and we know of no way to separate them out for treatment here.
5	8	Location Relative to Commercial Facilities and Local/Visitor Attractions (retail, office, paid attractions) ***Combined with Criteria 9***	Distance from the nearest landfill site boundary to the nearest boundary of a commercial or local/visitor attraction.	Number of miles measured along a point-to-point aerial path.	Transform the range into deciles where 1 is the shortest distance from the nearest commercial facility and 10 is the greatest distance to the nearest commercial facility.	Recommend combining Criteria 8 and 9 as many visitor attractions are commercial based and combining them would eliminate double counting. Commercial facilities include individual stores (except those attached to visitor accommodations facilities), shopping centers, and office buildings (except medical office buildings which would be considered a health care facility that is addressed in Criterion 4). Local/Visitor attractions include

New #	As of 5/12 #	Criterion	Tentative Measurement Method	Measure	Score	Comments (Criterion # refers to "New #")
						visitor centers, major attractions (public and private), and museums.
N/A	9	~~Location Relative to Visitor Attractions~~ ***Incorporated into Criterion 8 (New No 5)***	~~See above~~	~~See above~~	~~See above~~	~~See above~~
6	10	Effect on Established Public View Planes	Measure whether or not a landfill at a specific site will obstruct or otherwise affect established public view planes.	Binary measure, 0 or 1.	0 = any effect on established view planes; 1 = no effect on established public view planes	The Consultants will develop measure based on existing public policy documents relating to public view planes.
7	11	Wind Direction Relative to Landfill Site	Prevailing wind direction and velocity as measured by available data at each Landfill Site (LS) relative to location of residential concentrations, visitor accommodation facilities, and commercial land uses.	Single measure that combines prevailing wind direction and velocity at LS relative to affected or target areas.	~~Transform the range into deciles where 1 is the least appropriate prevailing wind pattern and 10 is the most appropriate wind rose pattern for all sites.~~ ***Change scale to 1 to 10.***	This criterion measures the effects of wind on the transmittal of dust, litter, and odor from a landfill.
8	12	Effect on Local Roads and Traffic in Residential Neighborhoods ***CAC commented: consider secondary roads leading to the landfill through residential areas; not residences on main roads, e.g. Farrington Highway***	Measure the estimated distance that must be traveled through residential neighborhoods to reach a LS.	Miles of roadways leading to the LS that pass through residential areas.	Transform the range into deciles where 1 is the largest distance in vehicle miles and 10 is the smallest distance in vehicle miles.	The measure will reflect both the increased traffic and the length of a roadway when passing through a residential neighborhood is required to access a LS. This will require obtaining DOT and County traffic data and assessing their availability.

New #	As of 5/12 #	Criterion	Tentative Measurement Method	Measure	Score	Comments (Criterion # refers to "New #")
9	13	Wear and Tear on Highways and Roadways Which Affects Roadway Usage ***Combined with Criterion 14***	Measure the estimated cost of upgrading affected roadways serving each LS to a standard suitable for usage by landfill associated traffic.	The estimated average cost per mile to upgrade roadways along the LS access roadway to a level sufficient for heavy truck traffic.	Transform the range into deciles where 1 is the highest average cost per mile and 10 is the lowest average cost per mile.	Recommend combining Criteria 13 and 14 as they are essentially similar. Calculate costs in current dollars. Include construction and maintenance costs for 15 years. Values will be expressed as the average cost per mile to avoid duplication of the impact of vehicle miles in Criterion 12. Estimates of the required level of change will be based on current roadway type.
N/A	14	~~Effect on Roadway Usage (Recommend Combining with Criterion 13, above)~~ ***Incorporated into Criterion 13 (New No. 9)***	~~Combined with Criterion 13. See above.~~	~~Combined with Criterion 13. See above.~~	~~Combined with Criterion 13. See above.~~	
N/A	15	~~State Land Use Designation (SLUD) and County Zoning or land use in APPROVED Development Plan or Sustainable Communities Plan~~ ***Moved from Criterion to Discussion Point in Report***	~~Measure whether or not current SLUD and County Zoning designations and DP allows landfills as a land use.~~	~~Measure as allowed under both SLUD and County Zoning or not. Binary measure, 0 or 1.~~	~~0 = landfills are not allowed under either SLUD or County Zoning, and 1 = landfills are allowed under both SLUD and County Zoning.~~	~~Consultants will review each LS's SLUD and City & County of Honolulu zoning.~~

New #	As of 5/12 #	Criterion	Tentative Measurement Method	Measure	Score	Comments (Criterion # refers to "New #")
N/A	16	~~Ceded Land and Hawaiian Home Lands~~ ***Moved from Criterion to Discussion Point in Report***	~~Measure whether or not LS includes ceded lands according to the Office of Hawaiian Affairs (OHA) or lands belonging to the Department of Hawaiian Home Lands (DHHL).~~	~~Measure based on land ownership and tax map key records. Binary measure, 0 or 1.~~	~~0 = one or more parcels comprising a LS contains ceded lands or is owned by DHHL, and 1 = no subject parcel contains ceded lands or is owned by DHHL.~~	~~Consultants request input from the Committee regarding the expectations of this criterion[3]. Please see footnote.~~
10	17	Location Relative to Identified Community Disamenities ***Changed to base measurements on ahupua'a boundary.***	Measure the number of community disamenities within the ahupua'a containing a landfill site.	No. of sites considered a community disamenity, e.g., waste water treatment plants, slaughterhouses, other landfill sites, public housing, correctional facilities, operating quarry sites, power plants	Transform the range into deciles where 1 is the lowest number of sites or 0 and 10 is the highest number of sites considered as a community disamenity.	Use ahupua'a maps available from Bishop Museum (circa 1850).
N/A	~~18~~	~~Ingress and Egress to LS~~ ***Deleted by Committee***	~~Measure the number of points of vehicular ingress and egress at each LS.~~	~~Number of points of ingress and egress.~~	~~Transform the range into deciles where 1 is the lowest number of points and 10 is the highest number of ingress and egress points.~~	~~For most sites we will have one or two points of ingress and egress. This criterion may be the same for all sites, so may be considered for elimination.~~

[3] The criterion seems to treat lands under the control of OHA and DHHL as if they cannot be used for a landfill. Consultants are aware of no ordinance that suggests this is true. Private, preliminary, and unofficial conversations with DHHL and persons familiar with ceded land issues suggest that some benefit might accrue to Native Hawaiians and their representative agencies from using their lands as landfill sites. Either agency, for instance, might wish to trade a landfill-suitable parcel for land located elsewhere better suited to residential or commercial uses. It was also noted that either agency might wish to become a partner in the landfill enterprise and receive a percentage of operating revenues for their investment.

New #	As of 5/12 #	Criterion	Tentative Measurement Method	Measure	Score	Comments (Criterion # refers to "New #")
11	19	Location Relative to H-POWER ***Action Item: Steve Serikaku to check on time it takes for ash to solidify in trucks***	Measure the distance along suitable truck accessible roadways from the H-POWER facility to each LS.	Distance in miles.	Transform the range into deciles where 1 is the greatest distance and 10 is the shortest distance.	This is a measure of the distance trucks will have to travel from H–POWER to the site. (Note: This is to reflect the H-POWER contract which has cost adjustments for distances > 12 miles.)
N/A	20	~~Storm Water Control~~ ***Deleted by Committee (Issue addressed in Criterion 21 and 22)***	~~Measure the annual rainfall, average slope, soil types, and vegetation at the LS, in terms of their contribution to the need for greater storm water runoff control efforts at the site.~~	~~Sum the scores for each of the four items to get an overall storm water control score.~~	~~Transform the range into deciles where 1 is the greatest need for storm water control and 10 is the lowest need for storm water control.~~	~~This criterion is redundant to the other criteria and is recommended for removal: Criterion 21 – measures the effects of precipitation important to the operation of earthmoving equipment and the generation of leachate; Criterion 22 – accounts for the cost of developing a site to address stormwater runoff; and Criterion 28 – accounts for the location of a LS relative to the Federal Emergency Management Agency's designation of a flood plain.~~
12	21	Effect of Precipitation on Landfill Operations ***CAC commented: Add peak events as well as average precipitation, and cumulative rainfall (such as in the Ameron Quarry where no discharge off-site is allowed)***	Measure inches of annual rainfall.	Inches of rainfall.	Transform the range into deciles where 1 is the greatest rainfall and 10 is the least rainfall.	Compare to Criterion 20. It would be better to have precipitation as a stand-alone criterion. It impacts landfill operations from the standpoint of affecting earthmoving machinery and generating leachate which will need to be controlled.

New #	As of 5/12 #	Criterion	Tentative Measurement Method	Measure	Score	Comments (Criterion # refers to "New #")
13	22	Landfill Development, Operation and Closure Cost ***CAC commented: Should include cost for stormwater controls including storm water and peak rain events (Criterion 20); stormwater containment and/or treatment (Criterion 30); cost per mile to HPOWER (Criterion 19), opportunity cost (Criterion 23); soil suitability for daily cover (Criterion 34); displacement cost (new) and cost to purchase LS land.***	Estimate the total cost of site acquisition, site development, landfill operation, and closure.	Net present value of annualized cost of acquisition, development, operation, and closure over the number of years the LS will be active.	Transform the range into deciles where 1 is the highest estimated annual cost and 10 is the lowest estimated annual cost.	To eliminate duplication, we should consider deleting the costs for off-site road improvements shown in Criteria 18 and 19, and any other criteria measuring project costs.
N/A	23	~~Opportunity Cost~~ ***Deleted by Committee. CAC comment: There is no limit to what could be done with land and is impossible to quantify. Future uses should be as described in approved DPs and SCPs. Covered in Criterion 15. See new Criterion 14, DISPLACEMENT COST.***	~~Estimate the economic benefit foregone by landowners (some with entitlements) for alternative land uses.~~	~~TBD~~	~~TBD~~	~~Suggest removing this criterion. Serious problems exist in determining which possible land uses might be applied to each LS. However, the cost of land acquisition is factored in Criterion 22 – Landfill Development, Operation and Closure Cost.~~

New #	As of 5/12 #	Criterion	Tentative Measurement Method	Measure	Score	Comments (Criterion # refers to "New #")
14		***Displacement Cost New Criterion***	Cost of displacing current land use. Community will lose economy, tax base contribution and cost to move the facility. Also includes situation where existing use is stopped prior to resource being exhausted.	TBD	TBD	
15	24	Potential for Solid Waste-Related Land Uses ***CAC commented: Ability to put these uses within the LS is best. Has less potential for impact on surrounding community.***	Measure acres of suitable land near LS to accommodate businesses that would benefit from operating close to the landfill (e.g., metal and other material recyclers, farms, etc.)	Acres of contiguous developable land.	Use 1 to 10 scoring system.	Land located within the LS might be treated as being more suitable than off-site land. Will discuss further with the Committee.
16	25	Location Relative to Wetlands and Natural Area Reserve System (NARS). ***Combined with Criterion 29.*** ***CAC commented: Combine with No.29 because both are sensitive receptors.***	Distance from the nearest LS boundary to the nearest boundary of a parcel classified as containing wetlands.	Number of miles measured along a point-to-point aerial path.	Transform the range into deciles where 1 is the shortest distance from the nearest wetlands and 10 is the greatest distance to the nearest wetlands parcel.	The official classification of wetlands is by the U. S. Army Corps of Engineers. However, for the MACLSS evaluation, a biological assessment can be undertaken including the basis for the designation of a site as a wetland.
17	26	Location Relative to Listed Threatened and Endangered Species	Distance from the nearest boundary of each LS to the nearest boundary of a land parcel classified as a habitat for listed threatened or endangered plants or	Number of miles measured along a point-to-point aerial path.	Transform the range into deciles where 1 is the shortest distance from the nearest habitat and 10 is the greatest distance to the nearest habitat for listed	Habitats for threatened or endangered plants or animals are identified by the U. S. Fish & Wildlife Service and DLNR. Both will be consulted for this assessment.

New #	As of 5/12 #	Criterion	Tentative Measurement Method	Measure	Score	Comments (Criterion # refers to "New #")
			animals.		threatened or endangered species.	
N/A	27	~~Location Relative to Groundwater Resources~~ ***Moved from Criterion to a Filter for the evaluation of sites.***	~~Classify each LS according to its location relative to the Groundwater Protection Zone (GPZ) and Underground Injection Control (UIC) Zone boundaries.~~	~~GPZ/UIC status. Binary measure, 0 or 1.~~	~~0 = located in a Groundwater Protection Zone or UIC Pass Zone; 1 = located in neither.~~	~~This exclusionary criterion is duplicative of the initial screening process where groundwater resources are evaluated. Suggest deletion.~~
N/A	28	~~Flooding Potential~~ ***Moved from Criterion to a Filter for the evaluation of sites.***	~~Determine whether or not each LS is located within a flood plain or tsunami evacuation zone.~~	~~Location in flood plain and tsunami evacuation zone.~~	~~0 = located in either a flood plain or a tsunami evacuation zone; 1 = not located in a flood zone or tsunami evacuation zone.~~	~~Assign 0 if any part of the LS is located in a flood plain or tsunami evacuation zone. Flood plain designations include High Risk and Moderate Risk areas among others so the scaling list could be revised.~~
N/A	29	~~Location Relative to Areas in the NARS~~ ***Incorporated into Criterion 25 (New No. 16)***	~~Distance from the nearest boundary of each LS to the nearest boundary of the nearest NAR.~~	~~Number of miles measured along a point-to-point aerial path.~~	~~Transform the range into deciles where 1 is the shortest distance from the nearest NAR and 10 is the greatest distance to the nearest NAR.~~	~~There are three NAR facilities on O'ahu, managed by the Department of Land and Natural Resources, the NARS government affiliate.~~
N/A	30	~~Location Relative to Class "AA" Waters~~ ***Incorporated into Criterion 22 (New No. 13)***	~~Classify each LS according to its possibility of discharging runoff into Class "AA" marine waters.~~	~~Location which would make discharge of runoff Class "AA" marine waters possible. Binary measure, 0 or 1.~~	~~0 = possibility of LS discharging untreated runoff into Class "AA" marine waters; 1 = no possibility of discharging runoff into Class "AA" marine waters.~~	~~Assign 0 if runoff from any part of the LS can discharge into Class AA marine waters.~~

New #	As of 5/12 #	Criterion	Tentative Measurement Method	Measure	Score	Comments (Criterion # refers to "New #")
18	31	Surface Water Resources ***CAC modified criterion language***	~~Distance~~ Potential to discharge untreated stormwater runoff from LS to identified perennial streams or intermittent streams classified as important in the Hawai'i Stream Assessment Report, Department of Land and Natural Resources (DLNR).	~~Number of miles measured along a point-to-point aerial path.~~ Under Revision	~~Transform the range into deciles where 1 is the greatest distance from the nearest perennial stream or intermittent stream classified as important and 10 is the shortest distance to the nearest such stream.~~ Under Revision	~~Protected intermittent streams have been identified in the Hawai'i Stream Assessment Report, Department of Land and Natural Resources (DLNR).~~
19	32	Noise from Landfill Operations	Measure the potential for adverse impacts of noise from construction and operations of a solid waste landfill at each LS, as noise affects nearby residential or visitor accommodations, health care facilities, and educational institutions.	Sum the scores for each of these potential adverse impacts to get an overall noise impact score.	Transform the range into deciles where 1 is the highest adverse impact score and 10 is the lowest adverse impact score.	Suggest measurement based on evaluation of terrain and distance from sensitive noise receptors.
20	33	Archaeological and Culturally Significant Resources	Measure the distance from the nearest boundary of each LS to the nearest boundary of an identified archaeological or culturally significant resource.	Number of miles measured along a point-to-point aerial path.	Transform the range into deciles where 1 is the shortest distance from the nearest archaeological or culturally significant resource and 10 is the greatest distance to the nearest such resource.	Archaeological and cultural resources include all sites listed or eligible for listing on the State Register of Historic Places or are identified as a culturally significant site by the DLNR, State Historic Preservation Division (SHPD).
N/A	34	~~Soils Suitable for Use as Daily Cover~~ ***CAC commented: Include cost for daily cover.*** ***Incorporated into Criterion 22 (New No. 13)***	~~Measure the suitability of LS soils for landfill use as daily cover, including soil association.~~	~~TBD~~	~~Transform the range into deciles where 1 is the lowest suitability score and 10 is the highest suitability score.~~	~~The soils classification system in Hawai'i has been updated and is managed by the Department of Agriculture.~~ ~~Compare to Criterion 35.~~

New #	As of 5/12 #	Criterion	Tentative Measurement Method	Measure	Score	Comments (Criterion # refers to "New #")
21	35	Quality of Agricultural Lands ***CAC commented: Include "Important Agricultural Lands" (IAL) in analysis.***	Measure the suitability of LS soils for agricultural uses.	Agricultural Lands of Importance to the State of Hawai'i (ALISH) rating system to develop an overall score.	TBD	The value of agricultural lands will be identified using the ALISH classification system.