



APPENDIX Q

EISPN Agency Comment and Response Letters



EISPN AGENCY COMMENT AND RESPONSE LETTERS

The EISPN was sent to agencies, organizations, and individuals as described in Chapter IX of the DEIS. The public comment period on the EISPN was from May 23, 2015 through June 22, 2015. The EISPN agency comment and response letters are included in Appendix L in the order listed below.

EISPN Agency Comment and Response Letters	Comment Date
1. State of Hawai'i, Department of Agriculture	June 22, 2015
2. State of Hawai 'i, Department of Accounting and General Services	May 28, 2015
3. State of Hawai'i, Department of Business. Economic Development and Tourism. Office of Planning	June 24, 2015
4. State of Hawai'i, Department of Defense	June 25, 2015
5. State of Hawai'i, Department of Education	June 5, 2015
6. State of Hawai'i, Office of Hawaiian Affairs	June 22, 2015
7. State of Hawai'i. Department of Health, Environmental Health Administration	June 19, 2015
8. State of Hawai'i. Department of Health, Safe Drinking Water Branch	June 1, 2015
9. State of Hawai'i. Department of Health, Clean Air Branch	June 3, 2015
10. State of Hawai'i. Department of Health, Clean Water Branch	June 9, 2015
11. State of Hawai'i. Department of Health, Maui District Office	June 23, 2015
12. State of Hawai'i. Department of Health, Wastewater Branch	June 25, 2015
13. State of Hawai'i, Department of Transportation	June 17, 2015
14. County of Maui, Department of Environmental Management	June 17, 2015
15. County of Maui, Department of Housing and Human Concerns	June 1, 2015
16. County of Maui, Department of Parks and Recreation	May 27, 2015
17. County of Maui, Department of Planning	June 9, 2015
18. County of Maui, Police Department	June 2, 2015
19. Department of the Interior, Fish and Wildlife Service	June 18, 2015
20. Department of Agriculture, National Resources Conservation Service	June 2, 2015

1. State of Hawai'i, Department of Agriculture

DAVID Y. IGE
Governor

SHAN S. TSUTSUI
Lt. Governor



State of Hawaii
DEPARTMENT OF AGRICULTURE
1428 South King Street
Honolulu, Hawaii 96814-2512
Phone: (808) 973-9600 FAX: (808) 973-9613

SCOTT E. ENRIGHT
Chairperson, Board of Agriculture

PHYLLIS SHIMABUKURO-GEISER
Deputy to the Chairperson

June 22, 2015

Mr. Michael Summers, President
Planning Consultants Hawaii, LLC
2331 W. Main Street
Wailuku, HI 96793

Dear Mr. Summers:

Subj: Environmental Impact Statement Preparation Notice (EISPN)
for Waikapu Country Town
Waikapu Properties
TMK: (2) 3-6-002:001; (2) 3-6-002:003; (2) 3-6-004:003;
(2) 3-6-004:006; (2) 3-6-005:007; (2) 3-6-006:036
Area: 1,576 acres

This is in response to your May 15, 2015 letter informing us of Waikapu Properties' (the Applicant) EISPN for Waikapu Country Town (Project), a master planned residential community in Central Maui.

Background:

The 1,576-acre project site is located on both sides of Honoapi'ilani Highway, two miles south of Wailuku. 1,562 acres is in the State Agricultural District and 14 acres in the Urban District. Of the lands in the State Agricultural District, approximately 92% (1,437 acres) are rated "A" or "B" with irrigation by the Land Study Bureau. Approximately 499 acres is planned for residential and commercial development in two phases, of which 485 acres is currently in the State Agricultural District. The Project includes a significant agricultural component, where approximately 1,077 acres is intended to remain in agriculture, with 800 acres to be dedicated in perpetuity by easement to agricultural use. Several hundred acres within the 800-acre agricultural easement is proposed to be developed as an agricultural park. The proposed agricultural park is intended to be "anchored" by "highly qualified farmers" who will grow crops ranging from fresh vegetables and fruits, taro, coconuts, coffee, sugarcane, bio-fuels and cattle.



The Applicant purchased the bulk of the Project property from the Wailuku Agribusiness Company from 2004-2006. Currently, the entire project site is used for sugarcane cultivation by Hawaiian Commercial & Sugar Company (HC&S) (1,230 acres), cattle grazing by Michael Atherton, and diversified agriculture including Kumu Farms (75 acres) and Hawaii Taro LLC (68 acres). The EISPN states that Kumu Farms and Hawaii Taro will relocate their operations to the proposed agricultural park and other lands within the Project area. HC&S may lose up to 405 acres from urbanization and the proposed agricultural park. The cattle herd will likely remain on the mauka agricultural lands even after urbanization occurs.

Surrounding uses of the Project site include agricultural lands to the south, owned by the Applicant and is leased by HC&S. To the west are agricultural lands that are in diversified agriculture and cattle grazing. To the east are agricultural lands owned by the County of Maui for a baseyard and regional park complex. The existing town of Waikapu abuts the northern boundary of the Project site.

We note that the Project appears to be consistent with the Maui Island Plan (MIP). Development of the Project will require: (1) State Land Use District Boundary Amendment from Agriculture to Urban and Rural for 485 acres; (2) Community Plan Amendment from Agriculture to Rural and Project District; and (3), Change In Zoning from Agricultural to Rural and Project District. A Community Plan Amendment is a trigger for an Environmental Impact Statement (EIS) under Chapter 343, Hawaii Revised Statutes (HRS).

Comments/Recommendations:


1. The EISPN states that 1,077 acres of land will remain in agriculture, with approximately 800 of those acres planned to be permanently dedicated to agricultural use through an agricultural easement. The EISPN states that the remaining 277 acres may be subdivided into as many as five large agricultural lots where farm dwellings may be permitted. The location of the easement area and the agricultural lands to be subdivided should be described in the EIS. The EIS should also include more information on the planned uses for the 1,077 acres that will remain in agriculture, including estimated irrigation demand, adequacy of supply, and the location and acreage of the agricultural park and how it will be managed.
2. Your cover letter mentions that the Applicant desires to establish "a limited amount of renewable energy production and other permissible uses on these lands." If photovoltaic systems (PV) are being considered on the project site, we would ask that they be located on lands not suited for agricultural cultivation.

Mr. Michael Summers, President
June 22, 2015
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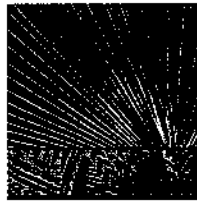
3. The EISPN notes that land use conflicts, such as the impact of dust, noise, and smoke from cane burning, can be a problem if not carefully managed (Agricultural Impact Assessment, p. 70). The Department of Agriculture would appreciate a plan be developed in the EIS in order to notify all prospective residential and commercial owners/lessees from the Project that farming operations and practices that may include potential nuisances from noise, odors, vectors, dust, fumes, spray, smoke, or vibration on adjacent or contiguous land in the State Agricultural District are protected under HRS Chapter 165, the Hawaii Right-to-Farm Law.

Thank you for the opportunity to provide our comments. Should you have any questions, please contact Earl Yamamoto at 973-9466 or by email at earl.j.yamamoto@hawaii.gov.

Sincerely,

for 
for Scott E. Enright, Chairperson
Board of Agriculture

c: Maui County Planning Department
Office of Planning



**PLANNING
CONSULTANTS
HAWAII, LLC**

URBAN & REGIONAL PLANNING

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January 7, 2016

Mr. Scott E. Enright
Chairperson
Board of Agriculture
State of Hawaii
Department of Agriculture
1428 South King Street
Honolulu, Hawaii 96814-2512

Dear Mr. Enright:

Re: **Environmental Assessment/ Environmental Impact Statement
Preparation Notice** for the Proposed Waikapu Country Town Project in
Waikapu, Maui, Hawaii; TMK Nos: (2) 3-6-002:001, (2) 3-6-002:003, (2) 3-6-
4:003, (2) 3-6-004:006, (2) 3-6-005:007 and (2) 3-6-006:036.

Thank you for your June 22, 2015 letter providing comments in response to the above-referenced project. In response to your comments, please find the following response:

- **Agricultural Land Dedication.** As described in the EISPN, and as further elaborated upon in the DEIS, the Project's agricultural component will include approximately 800 acres that will be dedicated in perpetuity to agricultural production and approximately 277 acres that will have subdivision potential for up to five agricultural lots. The DEIS identifies the lands to be dedicated and thoroughly describes the Project's agricultural component. As noted in the DEIS, the Applicant's agricultural lands are currently being farmed by well-established agricultural enterprises and it is expected that these operations will serve as anchor tenants for the agricultural preserve.

The future demand for irrigation water by future diversified agricultural operations will be served by a combination of non-potable

well water and available ditch water. Through the use of agricultural reservoirs, the Applicant is confident that future agricultural operations will have a reliable source of competitively priced irrigation water to support their farming activities.

- ***Renewable Energy Generation.*** The Applicant desires to incorporate a relatively small solar farm within the agricultural lands to generate additional revenues while off-setting the Project's demand for carbon based fossil fuels. Should such systems be economically and technologically feasible, the Applicant will seek to minimize the impact that these systems might have upon agricultural resources and ongoing agricultural endeavors.
- ***Agricultural Nuisance Impacts.*** As described in the EISPN and DEIS, agricultural operations can produce nuisance impacts to neighboring residential communities. The Applicant is committed to identifying appropriate counter measures to reduce potential impacts to future homeowners while providing assurances to farmers that their operations will be protected from such complaints.

Some measures that can help to minimize these conflicts include:

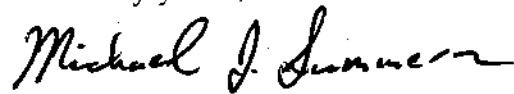
- Advising prospective homeowners in advance of purchasing property that neighboring lands are in agricultural use, that nuisance impacts may occur, and that agricultural uses are protected under HRS Chapter 165, the Hawaii Right-to-Farm Law.
- Establishing appropriate buffers between actively used agricultural lands and homes.
- Planting windbreaks planting within the buffer areas to further mitigate agricultural impacts to homeowners.
- Locating residential communities upwind of agricultural operations.
- Where feasible, locating the least noxious agricultural activities in closer proximity to urban uses while locating the more noxious activities further away.
- Requiring farmers to implement agricultural best management practices to reduce the potential for overspray from the use of pesticides and to implement erosion control measures to reduce

Mr. Scott E. Enright
Chairperson
Board of Agriculture
RE: Waikapu Country Town EA/EISPN
January 7, 2015
Page 3

dust and agricultural runoff from impacting neighboring properties.

The Applicant appreciates your interest in the project and we look forward to working with your Department through the development review and land use entitlement process. Should you have any questions, please contact me at (808) 269-6220 or by e-mail at msummers@planningconsultantshawaii.com.

Sincerely yours,

A handwritten signature in black ink that reads "Michael J. Summers". The signature is written in a cursive, flowing style.

Michael J. Summers
President

Attachment

c: Mr. Michael Atherton
Mr. Albert Boyce

2. State of Hawai'i, Department of Accounting and General Services

DAVID Y. IGE
GOVERNOR



DOUGLAS MURDOCK
Comptroller

AUDREY HIDANO
Deputy Comptroller

STATE OF HAWAII
DEPARTMENT OF ACCOUNTING AND GENERAL SERVICES

P.O. BOX 119, HONOLULU, HAWAII 96810-0119

MAY 28 2015

(P)1128.5

Mr. Michael J. Summers, President
Planning Consultants Hawaii, LLC
2331 W. Main Street
Wailuku, Hawaii 96793

Dear Mr. Summers:

Subject: Environmental Impact Statement Preparation Notice
Waikapu Country Town, Wailuku, Maui
TMK: (2) 3-6-002:001, (2) 3-6-002:003, (2) 3-6-004:003
(2) 3-6-004:006, (2) 3-6-005:007 and (2) 3-6-006:036

Thank you for the opportunity to provide comments for the subject project. The subject project does not affect any of the Department of Accounting and General Services' existing facilities and we have no comments to offer at this time.

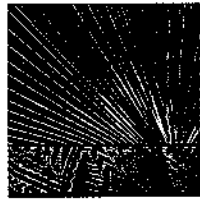
If you have any questions, your staff may call Ms. Gayle Takasaki of the Planning Branch at (808) 586-0584.

Sincerely,

A handwritten signature in black ink, appearing to read "James K. Kurata".

JAMES K. KURATA
Public Works Administrator

GT:lnn



**PLANNING
CONSULTANTS
HAWAII, LLC**

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January 7, 2016

Mr. James K. Kurata
Public Works Administrator
State Department of Accounting and General Services
P.O. Box 119
Honolulu, Hawaii 96810-0119

Dear Mr. Kurata:

Re: **Environmental Assessment / Environmental Impact Statement
Preparation Notice for the Proposed Waikapu Country Town Project in
Waikapu, Maui, Hawaii; TMK Nos: (2) 3-6-002:001, (2) 3-6-002:003, (2) 3-6-
4:003, (2) 3-6-004:006, (2) 3-6-005:007 and (2) 3-6-006:036.**

Thank you for your May 28, 2015 letter, which states that the Project will not affect any of the Department's facilities and that you have no comments at this time.

Should you have any questions, please contact me at (808) 269-6220 or by e-mail at msummers@planningconsultantshawaii.com.

Sincerely yours,

Michael J. Summers
President

Attachment

c: Mr. Michael Atherton
Mr. Albert Boyce

**3. State of Hawai'i, Department of Business Economic Development
and Tourism. Office of Planning**



OFFICE OF PLANNING STATE OF HAWAII

235 South Beretania Street, 6th Floor, Honolulu, Hawaii 96813
Mailing Address: P.O. Box 2359, Honolulu, Hawaii 96804

DAVID Y. IGE
GOVERNOR

LEO R. ASUNCION
ACTING DIRECTOR
OFFICE OF PLANNING

Telephone: (808) 587-2846
Fax: (808) 587-2824
Web: <http://planning.hawaii.gov/>

Ref. No. P-14789

June 24, 2015

Mr. Michael J. Summers, President
Planning Consultants Hawaii LLC
2331 W. Main Street
Wailuku, Hawaii 96793

Dear Mr. Summers:

Subject: Chapter 343, HRS Environmental Impact Statement Preparation Notice
LUC Docket No. A15-798
Waikapu Country Town
TMK: (2) 3-6-004: Portion of 003; (2) 3-6-005: Portion of 7; (2) 3-6-002: Portion
of 3; (2) 3-6-004:006; and (2) 3-6-005:007
Wailuku, Maui, Hawaii

2015 JUN 25 P 1:01
LAND USE COMMISSION
STATE OF HAWAII

Thank you for the opportunity to review the subject Environmental Impact Statement Preparation Notice (EISPN) for Waikapu Country Town. The proposed project encompasses 1,576 acres, of which approximately 485 acres would be reclassified from the State Agricultural District to the State Urban District and State Rural District. Approximately 1,077 acres of the Petition Area would remain in the State Agricultural District, of which approximately 800 acres would be permanently protected by the Petitioner through a conservation easement or similar mechanism. The remaining 14 acres of the Petition Area are already classified in the State Land Use Urban District and are utilized by the Maui Tropical Plantation. The Urban and Rural components of the project will include 1,433 residential units, 146 Ohana units, neighborhood retail, commercial, a school, parks, and open space.

The Office of Planning (OP) offers the following comments.

1. The majority of the Petition Area lies within the State Agricultural District. The proposal will require that the subject property be reclassified to the State Urban District and State Rural District through the Land Use Commission (LUC). OP represents the State as a mandatory party in proceedings before the LUC. In developing its position, OP evaluates whether the project meets the LUC decision-making criteria in HRS § 205-17, as well as its conformance with Coastal Zone Management objectives and policies in HRS § 205-A-2.

Attached for your consideration is a document entitled "Issues of Concern in District Boundary Amendment Proceedings Based on LUC Decision-Making Criteria." The Draft Environmental Impact Statement (DEIS) should address these issues and criteria – particularly the areas of State concern in this document and best practices that could or will be incorporated in the proposed project to address State priority guidelines for sustainability. A short list of resources related to best practices can be found at the OP website at http://hawaii.gov/dbedt/op/land_use.htm.

We also strongly recommend that petitioners consult with affected State agencies early in the project formulation process; and that they continue to do so in the preparation of any environmental compliance documents required under HRS Chapter 343, so that potential impacts to resources, facilities, and services managed or provided by the State and appropriate mitigation measures are identified in petitions and their environmental compliance documents.

2. We understand that several significant studies, including the Archaeological Inventory Survey, the Cultural Impact Assessment, the Traffic Impact Analysis Report (TIAR), the Preliminary Drainage Report, and the Preliminary Engineering Report (for water and wastewater), are still being prepared for this project and thus OP is unable to comment on them at this time. These studies, or the results of these studies, should be included in the DEIS.
3. The proposed project would result in the urbanization of approximately 485 acres of land rated "Prime" by the Agricultural Lands of Importance to the State of Hawaii (ALISH) rating system. We recognize, however, the Petitioner's efforts to mitigate this loss by including approximately 1,100 acres of mostly "Prime" agricultural land within the Petition Area, of which 800 acres would be permanently protected through a conservation easement. The DEIS should identify the accepting agency or organization of the conservation easement and discuss how the conservation easement is to be implemented and managed.
4. We understand the DEIS will include a more thorough analysis of the impact of the proposed project on area schools. This discussion should include the following:
 - a. Projected population increase for the Wailuku-Kahului region
 - b. Whether the Petitioner will be required to establish an Education Contribution Agreement with the State Department of Education
 - c. How the Petitioner intends to coordinate with the Waiale project for the development of the elementary or intermediate school as indicated in the EISPN.

5. The EISPN indicates that the proposed project will be implemented in two five year phases through 2026. In the DEIS, please provide a schedule of development for each phase of the total project and a map showing the location and timing of each phase of development. Regarding infrastructure (e.g., highway improvements), the Petitioner should discuss how improvements will be completed to ensure that mitigation coincides with the impact created by the proposed project.
6. In the DEIS, please include a map of existing uses within the Petition Area as well as on adjacent properties.
7. Several of the maps and figures in the EISPN were difficult to read and should be revised as follows:
 - a. All maps should be consistently formatted to include a north arrow, scale, and legend.
 - b. The resolution and clarity of some of the maps is poor and should be improved, specifically the Community Plan Map on page 52, the Petition Area Soils map on page 58, and the Character and Context map on page 74.
 - c. The Petition Area boundaries on several of the maps are unclear or missing and should be made more prominent, specifically the Maui Island Plan Directed Growth map on page 30, the Wailuku-Kahului Planned Growth Areas map on page 31, and the Community Plan Map on page 52.
8. Chapter 3, Section A, of the EISPN states that the Project will require amendments to the conditions placed upon the 14 acres of currently urbanized lands (p. 98). Please clarify in the DEIS the permit approval being referred to, which conditions will require amendments, and how the conditions will be amended.
9. OP provides technical assistance to state and county agencies in administering the statewide planning system in Hawaii Revised Statutes (HRS) Chapter 226, the Hawaii State Plan. The Hawaii State Plan provides goals, objectives, priorities, and priority guidelines for growth, development, and the allocation of resources throughout the State. The Hawaii State Plan includes diverse policies and objectives of state interest including but not limited to the economy, agriculture, the visitor industry, federal expenditure, the physical environment, facility systems, socio-cultural advancement, climate change adaptation, and sustainability.

We acknowledge that the EISPN document has identified the need to address the Hawaii State Plan. The Draft EIS should include an analysis that addresses whether the proposed project conforms or is in conflict with the objectives, policies, and priority guidelines listed in the Hawaii State Plan.

10. The coastal zone management area is defined as "all lands of the State and the area extending seaward from the shoreline to the limit of the State's police power and management authority, including the U.S. territorial sea" see HRS § 205A-1 (definition of "coastal zone management area").

We acknowledge that the EISPN document has identified the need to address the enforceable policies of the Hawaii Coastal Zone Management Program. HRS Chapter 205A requires all State and county agencies to enforce the coastal zone management (CZM) objectives and policies. The Draft EIS should include an assessment as to how the proposed project conforms to the CZM objectives and its supporting policies set forth in HRS § 205A-2. The assessment on compliance with HRS Chapter 205A is an important component for satisfying the requirements of HRS Chapter 343. These objectives and policies include: recreational resources, historic resources, scenic and open space resources, coastal ecosystems, economic uses, coastal hazards, managing development, public participation, beach protection, and marine resources.

11. According to the EISPN, pg. 96, the Draft EIS will contain a Drainage Report that will analyze drainage patterns, existing development, runoff totals, and analyze anticipated changes to stormwater runoff. Additionally, according to the review material, this project will need a National Pollutant Discharge Elimination System permit for construction activity to safeguard against erosion and sediment loss. In order to ensure the coastal waters of Kahului Bay and the nearshore waters of West Maui remain protected, the negative effects of both natural processes such as stormwater runoff and a wide range of human activities should be considered and mitigated. The Draft EIS should summarize the area's classification in the State Land Use Districts, its relation to wetlands and perennial streams, the tsunami evacuation zone, and flood zone. These items, as well as the nearshore water quality classification, should be considered when developing mitigation measures to protect the coastal ecosystem.

OP has a number of resources available to assist in the development of projects which ensure sediment and stormwater control on land, thus protecting the nearshore environment. OP recommends consulting these guidance documents and stormwater evaluative tools when developing strategies to address polluted runoff. They offer useful techniques to keep soil and sediment in place and prevent contaminating nearshore waters, while considering the practices best suited for each project. These three evaluative tools that should be used during the design process include:

- Hawaii Watershed Guidance provides direction on site-appropriate methods to safeguard Hawaii's watersheds and implement watershed plans
http://files.hawaii.gov/dbedt/op/czm/initiative/nonpoint/HI_Watershed_Guidance_Final.pdf

Mr. Michael J. Summers
June 24, 2015
Page 5

- Stormwater Impact Assessments can be used to identify and evaluate information on hydrology, stressors, sensitivity of aquatic and riparian resources, and management measures to control runoff, as well as consider secondary and cumulative impacts to the area
http://files.hawaii.gov/dbedt/op/czm/initiative/stormwater_impact/final_storm_water_impact_assessments_guidance.pdf
- Low Impact Development (LID), A Practitioners Guide covers a range of structural best management practices (BMP's) for stormwater control management, roadway development, and urban layout that minimizes negative environmental impacts
http://files.hawaii.gov/dbedt/op/czm/initiative/lid/lid_guide_2006.pdf

The responsiveness of the project and proposed petition to concerns identified in the environmental review process will strongly influence OP's evaluation and development of the State's position on the proposed petition to ensure conformance with Chapter 205, HRS.

Thank you for the opportunity to review this project. If you have any questions please call either Katie Mineo of our Land Use Division at (808) 587-2883 or Josh Hekekoa of our Coastal Zone Management Program at 587-2845.

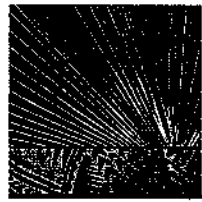
Sincerely,



Leo R. Asuncion
Acting Director

c: ✓ Land Use Commission

Enclosure



**PLANNING
CONSULTANTS
HAWAII, LLC**

URBAN & REGIONAL PLANNING

Land Use Planning • Sustainability Services • Community Planning • Development Permits

January 7, 2016

Mr. Leo R. Asuncion
Acting Director
State of Hawaii
Office of Planning
P.O. Box 2359
Honolulu, Hawaii 96804

Dear Mr. Asuncion:

Re: **Environmental Assessment / Environmental Impact Statement
Preparation Notice** for the Proposed Waikapu Country Town Project in
Waikapu, Maui, Hawaii; TMK Nos: (2) 3-6-002:001, (2) 3-6-002:003, (2) 3-6-
4:003, (2) 3-6-004:006, (2) 3-6-005:007 and (2) 3-6-006:036.

Thank you for your June 24, 2015 letter providing comments in response to the above-referenced project. In response to your comments, please find the following response:

- *"Issues of Concern in District Boundary Amendment Proceedings Based on LUC Decision-Making Criteria"*. The Applicant is aware of and acknowledges the areas of State concern identified in the above-referenced document. Moreover, the Applicant has and will continue to coordinate with State agencies through the development review and land use entitlement processes.
- *Supporting Technical Studies*. The DEIS includes numerous specialized technical studies to help document project impacts and appropriate mitigation measures. These studies include the following:
 - Archaeological Inventory Survey;
 - Cultural Impact Assessment;

- Waikapu History Report;
 - Preliminary Engineering and Drainage Report;.
 - Traffic Impact Analysis Report;
 - Air Quality Study;
 - Noise Assessment Report;
 - Agricultural Impact Assessment;
 - Botanical and Faunal Surveys, and
 - Market, Economic and Fiscal Impact Assessment.
- ***Agricultural Conservation Easement.*** As documented in the EISPN, and further described in the DEIS, the Project's agricultural component includes approximately 1077 acres of which about 800 acres will be permanently protected through an agricultural conservation easement. The remaining 277 acres will remain within the State Agricultural District. The conservation easement will limit the 800 acre reserve to only those uses permitted within the State Land Use Agricultural District and the County Agricultural District; however, the easement will prohibit farm and/or residential dwellings from being constructed and will only allow agricultural subdivisions to serve agricultural enterprises. The specific details of the conservation easement are still being considered.

The Applicant intends to maintain ownership of the agricultural preserve. However, it is possible that in the future the Applicant may decide to deed a portion and or all of the reserve to the State and or County for the purpose of establishing an Agricultural Park. Long-term ownership and management options are still being considered.

The DEIS includes a description of the Project's agricultural components and the Applicant's long-term vision for these lands.

- ***Schools.*** The Applicant has been consulting with the Department of Education's Facilities Development Branch regarding the

appropriate location, size and type of school facility to be incorporated into the Project site. The Applicant is also aware that the Project will be subject to a school facility impact fee to help address construction costs. The DEIS documents the projected population increase for the area, the population impact to the immediate area caused by the Project, and the expected student population created by the Project.

- **HRS Chapter 205A.** The DEIS addresses the Project's consistency with the objectives and policies of the Special Management Area.
- **NPDES Permit Requirements and Drainage and Erosion Control Measures.** The Applicant is aware that an NPDES permit will be required prior to grading of the subject property. The DEIS describes construction and operation phase drainage and erosion control BMPs that will be implemented to mitigate potential downstream impacts to nearshore ecosystems and coastal waters. The Applicant appreciates receiving the links to the Hawaii Watershed Guidance, Stormwater Impact Assessments, and Low Impact Development Techniques websites. These links have also been forwarded to the Project's Landscape Architect and Civil Engineer.

Thank you very much for your interest in the Project, while we look forward to working with your office through the development review and land use entitlement processes. Should you have any questions, please contact me at (808) 269-6220 or by e-mail at msummers@planningconsultantshawaii.com.

Sincerely yours,



Michael J. Summers
President

Attachment

c: Mr. Michael Atherton
Mr. Albert Boyce

Issues of Concern in District Boundary Amendment Proceedings Based on LUC Decision-Making Criteria

The following issues are commonly discussed and analyzed for project proposals in petitions and their supporting environmental assessments (EAs) or environmental impact statements (EISs) prepared pursuant to Hawaii Revised Statutes (HRS) Chapter 343. This list reflects the range of issues the State Land Use Commission (LUC) must take into consideration in its decision-making under HRS Chapter 205, and Hawaii Administrative Rules (HAR) Chapter 15-15. This list is not exhaustive or complete.

1. **Water Resources.** Groundwater and surface water resource protection and water quality are critical State issues. A thorough evaluation of these resources includes identifying and discussing: (a) estimated water demand by types of land use; (b) proposed potable and non-potable water sources to be used for the project and measures to reduce water demand and promote water reuse in the project; (c) whether the proposed project is within a designated Water Management Area; (d) the impact of the project on the sustainable yield and water quality of affected aquifers and surface water sources; (e) permits or other approvals required for proposed water source use; and (f) the consistency of the project and impact of the project in terms of proposed water use and system improvements and priorities contained in the county water use and development plan, prepared pursuant to the State Water Code, HRS Chapter 174C.
2. **Agricultural Lands.** Article XI, Section 3, of the Hawaii State Constitution provides that “[t]he State shall conserve and protect agricultural lands, promote diversified agriculture, increase agricultural self-sufficiency, and assure the availability of agriculturally suitable lands.” Protecting agriculture is a policy objective in the Hawaii State Plan, HRS Chapter 226, and in the State Administration’s New Day Comprehensive Plan, which is available at <http://hawaii.gov/gov/about/a-new-day>. Agricultural activity in the vicinity of the proposed project should be identified, and the impact of urban use or conversion of project lands on existing and future agricultural use and the viability of agricultural use of adjoining agricultural lands needs to be examined. Please discuss how the proposed project meets policy objectives to promote and protect agriculture, particularly in cases where the lands have high agricultural value.
3. **Affordable Housing.** Increasing the supply of affordable housing is a critical State and county issue. Every county has an affordable housing policy and both the Hawaii State Plan, HRS Chapter 226, and the State Administration’s New Day Comprehensive Plan identify affordable housing as a policy priority. If applicable, please discuss specifically how the proposed project will meet State and county affordable housing policy objectives, to include a discussion of how the project’s proposed residential product types will be allocated among the market and various affordable housing target populations, and the expected price ranges for the different product types.
4. **Coastal Zone Management (CZM).** The Office of Planning is the lead agency for the Hawaii CZM Program, which is a Federal-State partnership for protecting, restoring, and responsibly developing coastal communities and resources. The coastal zone is defined as all lands of the State and the area extending seaward from the shoreline to the limit of the State’s police power and management authority, including the United States territorial sea (HRS § 205A-1). EA/EISs should reference this definition of the coastal zone. State agency actions must be consistent with the CZM program objectives and policies under HRS § 205A-2. The EA/EIS needs to discuss the project in terms of its consistency with the following CZM objective areas.
 - a. **Coastal and Ocean Resources.** The State has an interest in protecting coastal and marine ecosystems and resources, as well as coastal and marine water quality. The EA/EIS should identify any coastal and marine resources and ecosystems that may be impacted by the proposed project, and the potential for nonpoint sources of pollution from the project to adversely affect coastal and marine water quality. Project impacts on existing site and offsite hydrology and measures to manage stormwater and runoff need to be discussed. The Office of Planning recommends the use of low impact development (LID) techniques and other best

management practices (BMPs) that promote onsite infiltration and minimize runoff from storm events. More information on LID and stormwater BMPs can be found at <http://hawaii.gov/dbedt/czm/initiative/lid.php>.

- b. **Coastal and Other Hazards.** The EA/EIS should describe any hazard risks that are relevant to the site and describe the measures that are proposed to mitigate any hazard impacts, such as from tsunami, hurricane, wind, storm wave, sea level rise, flood, erosion, volcanic activity, earthquake, landslide, subsidence, and point and nonpoint source pollution. This should include a discussion of any wildfire hazard and any mitigation measures that might be required to address potential threats from wildfires.

The EA/EIS process also provides an opportunity to address the sustainability of proposed projects in terms of natural hazards and hazard mitigation, and the potential impact of climate change on the proposed project over time. To this end, OP recommends the final EA/EIS include a discussion of the proposed project with respect to the *State Multi-Hazard Mitigation Plan, 2010 Update*, adopted in September 2010, available at <http://www.scd.hawaii.gov/documents/HawaiiMultiHazardMitigationPlan2010PUBLIC.pdf>, as well as the respective County Hazard Mitigation Plan.

- c. **Coastal-dependent Uses and Beach Protection.** If the project is located on or near the coast, the EA/EIS should discuss why the proposed development needs to be located on the coast, the economic uses that will be of benefit to the State, as well as potential impacts on beach access. The discussion should identify measures to protect beach systems and ensure short- and long-term public access to beaches.
- d. **Coastal Recreational Resources.** If the project is located on the coast, the EA/EIS should include a description of recreational uses and facilities on or near the project site, and discuss how the impact of increasing users on coastal and ocean recreational resources and competing uses will be mitigated and managed during project development and buildout.
- e. **Scenic Resources.** The EA/EIS should discuss the impact of the proposed project on scenic views to and from the coast and along the coast and coastal open space, and how any impacts on these scenic and open space resources will be avoided, minimized, or mitigated.
- f. **Special Management Area (SMA) Permitting.** The SMA is defined by the counties and includes areas in the coastal zone that are particularly sensitive so that it requires special attention. Please identify whether the proposed project is within the SMA and how SMA permitting requirements pursuant to HRS Chapter 205A, will be satisfied.

For additional resources and information, visit <http://hawaii.gov/dbedt/czm>.

- 5. **Cultural, Archaeological, and Historic Resources.** Another CZM objective is to protect, preserve, and where desirable, restore those natural and manmade historic and prehistoric resources in the coastal zone that are significant in Hawaiian and American history and culture. If archaeological or historic properties or artifacts, including native Hawaiian burials, are identified in an archaeological inventory survey on the property, the EA/EIS should discuss how the petitioner has consulted with the State Historic Preservation Division (SHPD), what plans will be prepared to monitor or protect identified resources, and how the petitioner intends to comply with HRS Chapter 6E, related to historic preservation, and the CZM objective and policies for historic resources contained in HRS §§ 205A-2(b) and (c). SHPD has information and guidance available at <http://hawaii.gov/dlnr/hpd/hpgrtg.htm>.

The EA/EIS document should identify any cultural resources and cultural practices associated with the property, including visual landmarks, if applicable, and discuss the impact of the proposed project on identified cultural resources and practices as well as proposed mitigation measures. The LUC is obligated under Article XII, Section 7 of the Hawaii State Constitution to protect the

reasonable exercise of customarily and traditionally exercised native Hawaiian rights. Thus, the LUC requires information as to the presence of cultural resources and cultural practices associated with the project site and vicinity for decision-making on petitions. The State Office of Environmental Quality Control (OEQC) provides guidance for preparing a cultural assessment at <http://oeqc.doh.hawaii.gov>, at "Environmental_Assessment_PrepKit." (http://oeqc.doh.hawaii.gov/Shared%20Documents/Preparation_of_Hawaii_Environmental_Policy_Act_Documents/Guidance_on_Cultural_Impact/1997%20Cultural%20Impacts%20Guidance.pdf)

6. **Biota.** The EA/EIS should include an inventory and assessment of flora and fauna, including invertebrates, found on or in proximity to the project site and in any lava tubes and caves on the property that are listed on the federal or State list of endangered or threatened species. Please also discuss species of concern and candidates for listing. The petitioner should consult with the Database Manager at the Hawaii Biodiversity and Mapping Program, Center for Conservation Research and Training, University of Hawaii, (808) 956-8094, as to the potential for the presence of rare species in the project area. The EA/EIS should discuss measures to be taken to protect rare, threatened, or endangered species or ecosystems of concern as required by law. The design of the biological survey should consider both wet and dry season observations to capture the fullest range of flora and fauna.
7. **Wastewater Treatment and Disposal.** The EA/EIS needs to identify the anticipated volume of wastewater to be generated by type of user, as well as the proposed means of wastewater treatment and disposal. A discussion of the availability of county wastewater collection and treatment capacity and its existing service levels, design capacity, and allocated capacity is also needed. The EA/EIS should also identify whether any facility improvements would be required to accommodate additional wastewater generated within the service area, including the proposed project. If a private wastewater treatment system is identified as the preferred option, the EA/EIS should discuss the type of plant to be used, permitting requirements, plans for reuse and/or disposal of treated effluent and waste solids, and how the private system will be operated and maintained.
8. **Energy Use and Impacts.** The State Hawai'i Clean Energy Initiative has adopted a goal of using efficiency and renewable energy resources to meet 70 percent of Hawaii's energy demand by 2030, with 30 percent from efficiency measures and 40 percent from locally-generated renewable sources. The EA/EIS should quantify the projected energy requirements of the project and discuss measures to be taken to reduce energy demand, promote energy efficiency, and to promote use of alternative, renewable energy sources. Please discuss how energy efficiency and energy demand reduction, including reduced transportation energy use will be incorporated in the design of the project and identify the kinds of green building and sustainable design practices that could be used to promote energy and resource conservation in the proposed project. Please also identify any generating or transmission capacity constraints that may arise as a result of the proposed project and other projects planned for the region.
9. **Impact on State Facilities and Resources.** The EA/EIS should quantify the impacts of the proposed project on State-funded facilities, including schools, highways, harbors, and airports, and discuss these impacts in terms of existing and planned capacity of the impacted facilities. The EA/EIS should cite the mitigation measures proposed to be used in the development of the project and describe efforts to address identified State agency concerns. Regarding transportation impacts, consider project design options that limit the need to drive, including mixed land uses, compact site design, walkable neighborhoods, and providing a variety of transportation choices (e.g., biking, public transit, etc.).
10. **Conservation District.** If the proposed project is within the State Conservation District, the EA/EIS should provide an inventory of conservation resources, and discuss how the loss of these resources (habitat, watershed area, etc.) will impact the public.

11. **Conformance with County Plan Designations and Urban Growth or Rural Community Boundaries.** Act 26, Session Laws of Hawaii (SLH) 2008, reaffirmed the Land Use Commission's duty to consider any proposed reclassification with respect to the counties' adopted general, community, or development plans. If the proposed project is not consistent with the county plans or lies outside a county urban growth or rural community boundary, the EA/EIS should provide an analysis and discussion of the following:
 - a. **Alternative Sites Considered.** Describe and discuss alternative sites that were considered for the project, and discuss why the project could not be accommodated on lands within the urban growth or rural community boundary, if the county plan delineates such boundaries, or on land already designated by the county for similar uses.
 - b. **Impact on Surrounding Lands.** Discuss what the impacts of changing the county plan designation or extending the urban growth or rural community boundary would have on the surrounding lands.
 - c. **Significant Public Benefit.** Discuss what, if any, public benefits are provided by the proposed project above that already required under existing approval and permitting requirements.
 - d. **Plan Amendment.** Provide a timeframe for application for and approval of any required plan amendment.
12. **Environmental Health Hazards.** The EA/EIS should discuss the potential for the project or project users to generate hazardous materials or release possible contaminants to the air, soil, or water, as well as measures to be taken to ensure that environmental and public health and safety will be protected during construction and after buildout. The EA/EIS should also identify and discuss any potential health and environmental threats that may be present due to site-specific contamination from past or current use. If contaminants of concern are identified for the project site, OP recommends that the petitioner consult with the State Department of Health's Hazard Evaluation and Emergency Response Office as to measures to be taken to address possible or actual contamination at the site.
13. **Solid Waste Management.** The EA/EIS should quantify the volume of solid waste likely to be generated by the project by types of users, and describe the impact the project will have on the county's existing and planned capacity for managing solid waste as represented in the county's solid waste management plan. The EA/EIS should discuss specific mitigation measures to be taken to reduce solid waste generation and ensure that recycling and reuse are incorporated within the project area by residential, commercial, and institutional users.
14. **Sustainability Analysis.** OP is implementing the sustainability elements of the State Administration's New Day Comprehensive Plan and Act 181, SLH 2011 (the new sustainability priority guideline of the Hawai'i State Planning Act) by requesting petitioners to prepare sustainability plans for their projects in district boundary amendment proceedings before the LUC. LUC Dockets A06-771, DR Horton-Schuler Homes (Hoopili) and A11-793, Castle & Cooke Homes (Koa Ridge Makai/Castle & Cooke Waiawa) provide a good point of reference for sustainability plans. The Koa Ridge Sustainability Plan and Hoopili Sustainability Plan can be found on the LUC's web site under each respective docket's exhibits.

To address the principles and priority guidelines for sustainability, OP recommends that a sustainability plan or relevant elements thereof be incorporated as part of program and plan development. The sustainability plan should be included as part of the applicant's submission for development review and approval, including environmental assessments or in petitions for district boundary amendment to the State Land Use Commission submitted pursuant to HRS Chapter 205. See Technical Assistance Memorandum 2013-1 in Planner's Toolbox available online at <http://planning.hawaii.gov>.

The sustainability plan should address the following areas:

- a. **Sustainable Development** - the development's contribution to creating a high quality of life and mutual supportive role among environmental, economic, and social equity concerns, as enumerated in HRS §226-108.
 - b. **Smart Growth and Livability Principles** - the principles that promote safety and options with transportation choices, the promotion of energy-efficient, equitable and affordable housing choices, the enhancement of economic competitiveness and support to the existing communities.
 - c. **Resource Conservation** -- incorporation of energy and water efficiencies, including the implementation of solid or liquid waste management through methods of recycle and reuse, low impact development with respect to site design considerations and structural best management practices to increase on-site infiltration and reduce off-site flows and pollution from stormwater runoff, and climate change and hazard mitigation and adaptation strategies.
 - d. **Green Building Standards** - the planned use of green building and sustainable design practices.
15. **Development Timetable.** The LUC requires that projects seeking reclassification be substantially completed within ten years or seek incremental approvals, pursuant to HAR § 15-15-50. The EA/EIS and/or petitioner should provide a schedule of development for each phase of the total project and a map showing the location and timing of each phase or increment of development. Regarding infrastructure (e.g., highway improvements), the petitioner should discuss how improvements will be completed to ensure that mitigation coincides with the impact created by the proposed project.

4. State of Hawai'i, Department of Defense

DAVID Y. IGE
GOVERNOR



ARTHUR J. LOGAN
BRIGADIER GENERAL
ADJUTANT GENERAL

KENNETH S. HARA
COLONEL
DEPUTY ADJUTANT GENERAL

STATE OF HAWAII
DEPARTMENT OF DEFENSE
OFFICE OF THE ADJUTANT GENERAL
3949 DIAMOND HEAD ROAD
HONOLULU, HAWAII 96816-4495

June 25, 2015

Mr. Michael Summers, President
Planning Consultants Hawaii, LLC
2331 West Main Street
Wailuku, Hawaii 96793

Attn: Mr. Summers

Subject: Environmental Impact Statement Preparation Notice for Waikapu County Town,
Wailuku, Maui, Hawaii, TMK: (2) 3-6-002:001, (2) 3-6-002:003, (2) 3-6-
004:003, (2) 3-6-004:006, (2) 3-6-005:007, and (2) 3-6-006:036

Dear Mr. Summers,

Thank you for the opportunity to comment on the above project.

The State of Hawaii Department of Defense recommends the provision of three (e) Omni-directional 121-db(c) solar-powered sirens mounted on 45-foot H2 rated composite poles. The Hawaii Emergency Management Agency will work with Waikapu Properties, LLC on the location of these sirens.

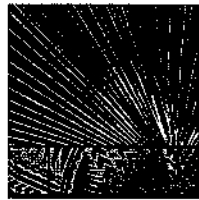
If you have any questions or concerns, please have your staff contact Mr. Lloyd Maki, Assistant Chief Engineering Officer at (808) 733-4250.

Sincerely,

A handwritten signature in black ink, appearing to read "Arthur J. Logan", written over a horizontal line.

ARTHUR J. LOGAN
Brigadier General
Hawaii National Guard
Adjutant General

c: Ms. Havinne Okamura, Hawaii Emergency Management Agency



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January 7, 2016

Mr. Arthur J. Logan
Brigadier General, State of Hawaii
Department of Defense
Office of the Adjunct General
3949 Diamond Head Road
Honolulu, Hawaii 96816-4495

Dear Mr. Logan:

Re: **Environmental Assessment / Environmental Impact Statement**
Preparation Notice for the Proposed Waikapu Country Town Project in
Waikapu, Maui, Hawaii; TMK Nos: (2) 3-6-002:001, (2) 3-6-002:003, (2) 3-6-
4:003, (2) 3-6-004:006, (2) 3-6-005:007 and (2) 3-6-006:036.

Thank you for your June 25, 2015 letter, which states that you recommend that three (e) Omnidirectional 121-db(c) solar-powered sirens be mounted on 45-foot H2 rated composite poles within the subject property. The Applicant will contact the Hawaii Emergency Management Agency to coordinate on the location of these sires.

Should you have any questions, please contact me at (808) 269-6220 or by e-mail at msummers@planningconsultantshawaii.com.

Sincerely yours,

Michael J. Summers
President

Attachment

c: Mr. Michael Atherton
Mr. Albert Boyce

5. State of Hawai'i, Department of Education



STATE OF HAWAII
DEPARTMENT OF EDUCATION
P.O. BOX 2360
HONOLULU, HAWAII 96804

OFFICE OF SCHOOL FACILITIES AND SUPPORT SERVICES

June 5, 2015

Mr. Michael J. Summers
Planning Consultants Hawaii, LLC
2331 West Main Street
Wailuku, Hawaii 96793

Re: Environmental Impact Statement Preparation Notice for Waikapu Country Town, Wailuku,
Maui TMK Numbers: (2)3-6-002:001, (2)3-6-002:003, (2)3-6-004:003, (2)3-6-004:006,
(2)3-6-005:007 and (2)3-6-006:036

Dear Mr. Summers:

The Department of Education (DOE) has reviewed the Environmental Impact Statement Preparation Notice for Waikapu Country Town.

The proposed project is located within the Central Maui School Impact District, which was adopted by the Board of Education on November 18, 2010, pursuant to Chapter 302A-1604, Hawaii Revised Statutes. The Waikapu County Town project will be required to pay school impact fees. Although there have been preliminary conversations about siting a public school site within the proposed project, Waikapu Properties, LLC is strongly encouraged to meet with the DOE, Facilities Development Branch to negotiate and execute an Educational Contribution Agreement before county entitlements are sought.

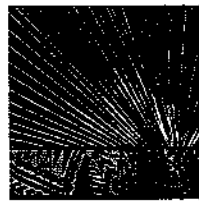
Thank you for the opportunity to comment. If you have any questions, please call Roy Ikeda of the Facilities Development Branch at (808) 377-8301.

Respectfully,

A handwritten signature in black ink, appearing to read "Kenneth G. Masden II".

Kenneth G Masden II
Public Works Manager
Planning Section

c: Alvin Shima, Complex Area Superintendent, Baldwin/King Kekaulike/Maui High Complex Areas



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January 7, 2016

Mr. Kenneth G. Masden II
Public Works Manager
State of Hawaii
Department of Education
P.O. Box 2360
Honolulu, HI 96804

Dear Ms. Masden:

Re: **Environmental Assessment/ Environmental Impact Statement
Preparation Notice for the Proposed Waikapu Country Town Project in
Waikapu, Maui, Hawaii; TMK Nos: (2) 3-6-002:001, (2) 3-6-002:003, (2) 3-6-
4:003, (2) 3-6-004:006, (2) 3-6-005:007 and (2) 3-6-006:036.**

Thank you for your June 5, 2015 letter providing comments in response to the above-referenced project.

The Applicant understands that the subject property is within the Central Maui School Impact Fee District and is subject to Chapter 302A-1604, Hawaii Revised Statutes. The Applicant met with the Department's Facilities Development Branch in Honolulu on January 17, 2014 to discuss the appropriate location of a school site and the State's impact fee requirements. Ongoing consultation with the Facilities Development Branch has occurred since this initial meeting

The Applicant also understands that the DOE advises that the Applicant enter into an Educational Contribution Agreement early in the process.

Thank you for your interest in the project, while we look forward to working with your office as we proceed through the development review and

Mr. Kenneth G. Masden II
State Department of Education
Public Works Director, Planning Section
RE: Waikapu Country Town EA/EISPN
January 7, 2015
Page 2

land use entitlement processes. Should you have any questions, please contact me at (808) 269-6220 or by e-mail at msummers@planningconsultantshawaii.com.

Sincerely yours,

A handwritten signature in black ink that reads "Michael J. Summers". The signature is written in a cursive style with a large, stylized "M" and "S".

Michael J. Summers
President

Attachment

c: Mr. Michael Atherton
Mr. Albert Boyce

6. State of Hawai'i, Office of Hawaiian Affairs



**STATE OF HAWAII
OFFICE OF HAWAIIAN AFFAIRS**
560 N. NIMITZ HWY., SUITE 200
HONOLULU, HAWAII 96817

HRD15/7503

June 25, 2015

Michael J. Summers, President
Planning Consultants Hawai'i, LLC
2331 W. Main Street
Wailuku, HI 96793

Re: Request for Comments on an Environmental Impact Statement Preparation Notice for the Waikapū Country Town
Waikapū Ahupua'a, Pū'ali Komohana Moku, Maui Moku
Tax map key (2) 3-6-002:001, (2) 3-6-002:003, (2) 3-6-004:003, (2) 3-6-004:006, (2) 3-6-005:007, and (2) 3-4-006:036

Aloha Mr. Summers:

The Office of Hawaiian Affairs (OHA) is in receipt of your June 8, 2015 letter requesting comments on an environmental impact statement preparation notice (EISP) for the Waikapū Country Town (WCT). The applicant is Planning Consultants Hawai'i, LLC on behalf of Waikapū Properties, LLC (applicant).

The WCT is a mixed-use residential community project on approximately 1,576 acres, of which 502 acres will encompass the WCT project and the remaining 1,074 will remain agricultural. The project site will include commercial space, an elementary school, park and open space areas, agricultural lands, and 1,433 residential units plus 146 'Ohana units. The residential units are divided among 970 single-family, 256 multi-family/town-home, 80 rural, and 127 country town mixed-use.

The project site is currently designated as an agricultural district by the State of Hawai'i Land use Commission (LUC), zoned by the Maui County as agricultural, and designated as a planned growth area in the Maui Island Plan. In order to comply with state and county laws, the

applicant is requesting a (1) district boundary amendment,¹ (2) County of Maui change-in-zoning,² (3) community plan amendment,³ (4) project district approval,⁴ (5) subdivision approval,⁵ (6) NPDES permit,⁶ and (7) building permits.⁷

Agricultural Lands

The applicant is requesting a change in classification for 485 of the 499 acres that are in the State of Hawai'i agricultural district and the Maui County agricultural zoning. The remaining 14 acres is designated urban. The entire 499-acre area is designated as a planned growth area in the Maui Island Plan, published in December 2012.

The project site is categorized as Agricultural Lands Important to the State of Hawai'i, and designated as A or B by the University of Hawai'i Land Study Bureau. The WCT agricultural lands are very high quality and an important resource to the State of Hawai'i.

OHA understands that a few of the dwellings will be categorized as rural residential subdivision, allowing for small-scale agriculture, and that 485 acres of the 1,576 overall agricultural acres are proposed to be reclassified as urban. However, the EISPN states that due to the rural residential subdivision and the remaining portions of agricultural land within the WCT, no mitigation is needed because there will be no impact upon the agricultural production on Maui Island. We respectfully disagree, as the development of large tracts of agricultural land takes them out of current and future agricultural use, whether cultivation or pasture, and has an impact upon the overall agricultural potential of the island and the state. All agriculturally designated lands play an important role in supporting the State of Hawai'i's food self-sufficiency goals, including the Aloha+ Challenge target of doubling local food production by 2030. Therefore, we ask that WCT propose mitigation efforts towards its proposed conversion of agricultural land.

Walking Community

OHA appreciates the Plan's emphasis on supporting non-automotive travel such as pedestrian and bike use within the community, and transit use for trips both within and outside the community.

One of OHA's strategic priorities is Maui Ola (Health), which represents our commitment to improve the conditions of Native Hawaiians and quality of life by reducing the onset of chronic diseases. In furtherance of this priority, and in line with Act 155 (Reg. Sess. 2014) and HRS § 226-20, we particularly support a public health approach that takes a holistic and systemic view in addressing obesity in Hawai'i's communities, *e.g.*, through the social

¹ Approval by State of Hawai'i Land Use Commission

² Approval by Maui County Planning Commission

³ Approval by Maui County Planning Commission

⁴ Approval by Maui County Planning Commission

⁵ Approval by Maui County Planning Commission

⁶ Approval by State of Hawai'i Department of Health, Clean Water Branch

⁷ Approval by Maui County Planning Commission

determinants of health. Community design, including complete streets designed for pedestrians, bicyclists, transit users, motorists, and persons of all ages and abilities, is one of the social determinants of health. Conversely, improper community design is well-documented as a major contributing factor to disproportionate chronic and co-morbid disease rates of a community's residents. OHA notes that HRS §226-20 requires all state agencies to strive for the elimination of the health disparities of Native Hawaiians and other communities, by identifying and addressing social determinants of health. This includes prioritizing interventions, such as walkable communities, that address the social determinants of health.

Affordable Housing

OHA appreciates that WCT will include workforce affordable homes in the project, and we look forward to reviewing the specifics in the draft EIS. We understand the need for affordable housing, as one of OHA's strategic priorities focuses on improving Native Hawaiians' economic self-sufficiency, centering its efforts on two critical goals: increasing homeownership and increasing family income in Native Hawaiians.

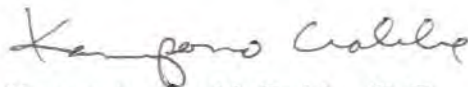
Archaeological and Cultural Resources

An archaeological inventory survey of the proposed project site parcels is being completed by Archaeological Services Hawai'i, LLC, and a cultural impact assessment (CIA) is being prepared by Hana Pono, LLC. OHA looks forward to reviewing the AIS, CIA, and the Draft EIS.

OHA understands that previous use of the land was sugarcane cultivation which would have likely disturbed or destroyed surface cultural sites. Nevertheless, OHA does request assurances that should iwi kūpuna or Native Hawaiian cultural deposits be identified during any ground altering activities, all work in the area will immediately cease and the appropriate agencies, including OHA, will be contacted pursuant to applicable law.

Mahalo for the opportunity to consult. Should you have any questions, please contact Jeannin Jeremiah at 594-1790 or by email at jeanninj@oha.org.

'O wau iho nō me ka 'oia 'i'o,

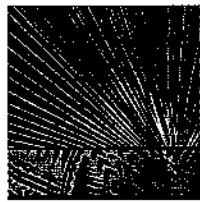


Kamana'opono M. Crabbe, Ph.D.
Ka Pouhana, Chief Executive Officer

KC:jj

**Please address replies and similar, future correspondence to our agency:*

*Dr. Kamana'opono Crabbe
Attn: OHA Compliance Enforcement
560 N. Nimitz Hwy, Ste. 200
Honolulu, HI 96817*



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January 7, 2016

Mr. Kamana'o pono M. Crabbe, Ph.D.
Ka Pouhana, Chief Executive Officer
State of Hawai'i
Office of Hawaiian Affairs
560 N. Nimitz Hwy., Suite 200
Honolulu, Hawai'i 96817

Dear Mr. Crabbe:

Re: **Environmental Assessment/ Environmental Impact Statement
Preparation Notice for the Proposed Waikapu Country Town Project in
Waikapu, Maui, Hawaii; TMK Nos: (2) 3-6-002:001, (2) 3-6-002:003, (2) 3-6-
4:003, (2) 3-6-004:006, (2) 3-6-005:007 and (2) 3-6-006:036.**

Thank you for your June 25, 2015 letter providing comments in response to the above-referenced project. Please find the following response to your comments:

- **Agricultural Lands.** The Applicant acknowledges that the subject project will result in the conversion of agricultural lands to urban use and that this will reduce the overall supply of agricultural land on Maui and in the State of Hawaii. However, as stated in the EISPN, and as further documented in the DEIS, there has been a significant transition of agricultural land out of sugar and pineapple on Maui and throughout the State over the last several decades. Much of this land remains fallow and could be used for diversified agricultural production.

As noted in the EISPN, and as further described in the DEIS, the Applicant will be placing a conservation easement on approximately 800 acres of the Applicant's agricultural land holdings to create a

2331 West Main Street, Wailuku, HI 96793 • Ph. 808-244-6231

msummers@planningconsultantshawaii.com

permanent agricultural production zone and open space separation between Waikapu Town and Maalaea to the south. The 800 acres will accommodate a public and/or private agricultural park, with its core tenants being the existing successful farmers that currently cultivate the Applicant's lands. Moreover, an additional 277 acres will be limited to just five agricultural lots, which will also make these lands very conducive to long-term agricultural production.

- ***Walking Community.*** The Applicant sincerely appreciates OHA's strong interest in the area of public health and its support for community design that promotes active transportation modes. As is documented in the DEIS, the Applicant is committed to designing a community that facilitates walking and bicycling and that lends itself to other forms of active and passive recreation and healthy lifestyles.
- ***Affordable Housing.*** The project will comply with the County's workforce housing ordinance, which currently requires that between 20- and 25 percent of the project's residential housing be sold at prices deemed affordable to homebuyers, or renters, earning between 80 and 140 percent of the County's median income. Workforce housing units are required to have deed restrictions that control resale prices for specified periods of time.

In addition to developing workforce housing, the Applicant will be developing market priced housing. In consideration of the project's Central Maui location, which largely caters to the local housing market; together with the Applicant's planned lot size and unit configurations, it is expected that about 85 percent of the market priced housing will be affordable to residents earning less than 140 percent of the County's median income.

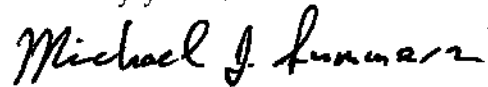
- ***Archaeological and Cultural Resources.*** The DEIS includes an Archaeological Inventory Survey and Cultural Impact Assessment that document existing archaeological and cultural resources on the property and potential impacts from development of the site. As noted in those reports, should any iwi kupuna or Native Hawaiian cultural deposits be identified during any ground altering activities, all

Mr. Kamana'o pono M. Crabbe, Ph.D.
Ka Pouhana, Chief Executive Officer
Office of Hawaiian Affairs
RE: Waikapu Country Town EA/EISPN
January 7, 2015
Page 3

work will immediately cease and the appropriate agencies, including OHA, will be contacted pursuant to applicable law.

Thank you again for your interest in the project. Should you have any questions, please contact me at (808) 269-6220 or by e-mail at msummers@planningconsultantshawaii.com.

Sincerely yours,

A handwritten signature in black ink that reads "Michael J. Summers". The signature is written in a cursive, flowing style.

Michael J. Summers
President

Attachment

c: Mr. Michael Atherton
Mr. Albert Boyce

**7. State of Hawai'i. Department of Health, Environmental Health
Administration**



STATE OF HAWAII
DEPARTMENT OF HEALTH
P. O. BOX 3378
HONOLULU, HI 96801-3378

In reply, please refer to:
File:

EPO 15-117

June 19, 2015

Mr. Michael Summers
President
Planning Consultants Hawaii, LLC
2331 W. Main Street
Wailuku, Hawaii 96793

Dear Mr. Summers:

SUBJECT: Comments on the Environmental Impact Statement Preparation Notice (EISPN) for the Proposed Waikapu Country Town Project, Waikapu, Island of Maui, Hawaii

The Department of Health (DOH), Environmental Planning Office (EPO), appreciates your letter that we received on May 19, 2015. EPO emailed the electronic link of the EISPN:

[http://oegc.doh.hawaii.gov/Shared%20Documents/EA and EIS Online Library/Maui/2010s/2015-05-23-MA-5E-Act-172-12-EISPN-Waikapu-Country-Town.pdf](http://oegc.doh.hawaii.gov/Shared%20Documents/EA%20and%20EIS%20Online%20Library/Maui/2010s/2015-05-23-MA-5E-Act-172-12-EISPN-Waikapu-Country-Town.pdf)

to various branches and offices. EPO recognizes that the State of Hawaii, Department of Health, Safe Drinking Water Branch provided you with three pages of comments on June 1st, 2015 and that the Clean Water Branch provided you with three pages of comments on June 9th, 2015. EPO agrees with all of their comments and would like to provide additional information.

1. National Pollutant Discharge elimination System (NPDES) permit coverage may be required for this project. The Clean Water Branch should be contacted at (808) 586-4309 and relevant information should be reviewed at:
 - a. <http://health.hawaii.gov/cwb>
 - b. <http://health.hawaii.gov/cwb/site-map/clean-water-branch-home-page/standard-npdes-permit-conditions>
 - c. <http://health.hawaii.gov/cwb/site-map/clean-water-branch-home-page/forms>
2. Should a subdivision exceed 50 lots, a Private Wastewater Treatment Plant is required or the project must connect to the County sewer system. The Wastewater Branch should be contacted at (808) 586-4294 and relevant information should be reviewed at: <http://health.hawaii.gov/wastewater>
3. The noise created during the construction phase of the project may exceed the maximum allowable levels as set forth in Hawaii Administrative Rules, Chapter 11-46, "Community Noise Control". A noise permit may be required and should be obtained before the commencement of work. Please call the Indoor and Radiological Health Branch at (808) 586-4700 and review relevant information online at:
 - a. <http://health.hawaii.gov/irhb>
 - b. <http://health.hawaii.gov/irhb/noise>

EPO further recommends that the Hazard Evaluation and Emergency Response (HEER) Office's Site Discovery and Response (SDAR) Section be contacted. The SDAR section protects human health and the environment by identifying, investigating, and remediating sites contaminated with hazardous substances (non-emergency site investigations and cleanup). The HEER Office's SDAR Section can be contacted at: (808) 586-4249 and relevant information can be reviewed at: <http://eha-web.doh.hawaii.gov/eha-cma/Leaders/HEER/site-assessment-and-cleanup-programs>

EPO also recommends that if a large amount of dust may be created during the construction phase of the project then the Clean Air Branch should be consulted at: Clean Air Branch Hawaii Department of Health 919 Ala Moana Blvd., Suite 203 Honolulu, Hawaii 96814 or via e-mail: cab@doh.hawaii.gov or via Phone: (808) 586-4200 between 7:45 a.m. and 4:15 p.m. or via Fax: (808) 586-4359. You may also wish to call toll-free from the neighbor islands. From Maui call 984-2400, then enter "64200".

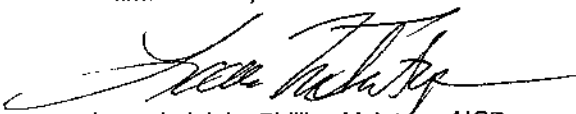
EPO strongly recommends that you review the standard comments and available strategies to support sustainable and healthy design provided at: <http://health.hawaii.gov/epo/home/landuse-planning-review-program/>. Projects are required to adhere to all applicable standard comments.

EPO encourages you to examine and utilize the Hawaii Environmental Health Portal. The portal provides links to our e-Permitting Portal, Environmental Health Warehouse, Groundwater Contamination Viewer, Hawaii Emergency Response Exchange, Hawaii State and Local Emission Inventory System, Water Pollution Control Viewer, Water Quality Data, Warnings, Advisories and Postings. The Portal is continually updated. Please visit it regularly at: <https://eha-cloud.doh.hawaii.gov>

You may also wish to review the revised Water Quality Standards Maps that have been updated for all islands. The Water Quality Standards Maps can be found at: <http://health.hawaii.gov/cwb/site-map/clean-water-branch-home-page/water-quality-standards/>.

We request that you utilize all of this information on your proposed project to increase sustainable, innovative, inspirational, transparent and healthy design.

Mahalo nui loa,



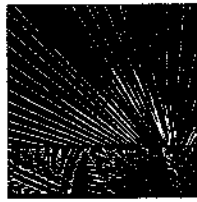
Laura Leialoha Phillips McIntyre, AICP
Program Manager, Environmental Planning Office

Attachments:

SDWB letter June 1, 2015

CWB letter June 9, 2015

- c: Mr. Michael Summers via hard and soft copy (via email to msummers@planningconsultantshawaii.com)
Mr. Daniel Orodener, Executive Officer, Land Use Commission – DBEDT (via email daniel.e.oredener@dbedt.hawaii.gov only)
Mr. Daniel Orodener, Executive Officer, Land Use Commission – DBEDT, P.O. Box 2359, Honolulu, HI 96804-2359
Mr. Michael Atherton, Member, Waikapu Properties, LLC, 1670 Honoapiilani Hwy., Wailuku, HI 96793
SDWB, CWB (06018PCTM.15), WWB, CAB, SHWB, IRHB, DHO Maui (via email only)



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January 7, 2016

Ms. Laura Leialoha Phillips McIntyre, AICP
Program Manager
Environmental Planning Office
State of Hawaii
Department of Health
P.O. Box 3378
Honolulu, HI 96801-3378

Dear Ms. McIntyre:

Re: **Environmental Assessment / Environmental Impact Statement**
Preparation Notice for the Proposed Waikapu Country Town Project in
Waikapu, Maui, Hawaii; TMK Nos: (2) 3-6-002:001, (2) 3-6-002:003, (2) 3-6-
4:003, (2) 3-6-004:006, (2) 3-6-005:007 and (2) 3-6-006:036.

Thank you for your June 19, 2015 letter providing comments in response to the above-referenced project. In response to your comments, please find the following responses:

- **NPDES Permit.** The Applicant will consult with the Clean Water Branch to confirm NPDES permit coverage requirements.
- **Private Wastewater Treatment Plan.** The Applicant will consult with the Wastewater Branch to confirm State requirements for the planning and development of a Private Wastewater Treatment Plant.
- **Community Noise Control.** The Applicant conducted a Noise Assessment Report to document construction and operation phase noise impacts that might be generated by the project. The report is included in the DEIS. Should a noise permit be required during construction, your office will be contacted and the proper permits obtained prior to initiation of construction.

- **HEER SDAR Office.** The Applicant appreciates the contact information provided for the SDAR office and will make contact with this office should issues related to hazardous substances arise.
- **Air Quality Impacts.** The Applicant conducted an Air Quality Study to document construction and operation phase project generated impacts to air quality. During the construction phase, it is anticipated that dust from construction activities could cause air quality impacts. As such, construction phase BMPs will be implemented. These measures are described in the DEIS.

The Applicant appreciates your sharing of the links to the Department's Hawaii Environmental Health Portal and Water Quality Standards Maps. Thank you again for your interest in the project, while we look forward to working with your office through the development review process.

Should you have any questions, please contact me at (808) 269-6220 or by e-mail at msummers@planningconsultantshawaii.com.

Sincerely yours,



Michael J. Summers
President

Attachment

c: Mr. Michael Atherton
Mr. Albert Boyce

**8. State of Hawai'i. Department of Health, Safe Drinking Water
Branch**



**STATE OF HAWAII
DEPARTMENT OF HEALTH
SAFE DRINKING WATER BRANCH**
919 ALA MOANA BLVD., ROOM 308
HONOLULU, HI 96814-4920

In reply, please refer to:
File: SDWB
WaikapuCountryTown1.docx

June 1, 2015

Mr. Michael Summers
Planning Consultants Hawai'i LLC
2331 W. Main Street
Wailuku, Hawaii 96793

Dear Mr. Summers:

SUBJECT: WAIKAPU COUNTRY TOWN
5(E) ACT 172-12 EISPN
WAIKAPU, MAUI, HAWAII
TMK: (2) 3-6-002:001, (2) 3-6-002:003, (2) 3-6-004:003, (2) 3-6-004:006,
(2) 3-6-005:007 AND (2) 3-6-006:036

The Safe Drinking Water Branch (SDWB) Engineering Section has reviewed the subject document and has the following comments:

1. The description of the project does not clearly identify the source of drinking water for the project. Please clearly identify the source of drinking water.
2. This project may qualify as a public water system. Federal and state regulations define a public water system as a system that serves 25 or more individuals at least 60 days per year or has at least 15 service connections. All public water system owners and operators are required to comply with Hawaii Administrative Rules (HAR), Chapter 11-20, "Rules Relating to Public Water Systems."
3. All new public water systems are required to demonstrate and meet minimum capacity requirements prior to their establishment. This requirement involves demonstration that the system will have satisfactory technical, managerial and financial capacity to enable the system to comply with safe drinking water standards and requirements in accordance with HAR Section 11-20-29.5, "Capacity demonstration and evaluation."
4. Projects that propose development of new sources of drinking water serving or proposed to serve a public water system must comply with the terms of HAR Section 11-20-29, "Use of new sources of raw water for public water systems." This section requires that all new public water system sources be approved by the Director of Health (Director) prior to its use. Such approval is based primarily upon the submission of a satisfactory engineering report which addresses the requirements set in HAR Section 11-20-29.
5. The engineering report must identify all potential sources of contamination and evaluate alternative control measures which could be implemented to reduce or eliminate the potential for contamination, including treatment of the water source. In addition, water quality analyses for all regulated contaminants, performed by a laboratory certified by

the State Laboratories Division of the State of Hawaii, must be submitted as part of the report to demonstrate compliance with all drinking water standards. Additional parameters may be required by the Director for this submittal or additional tests required upon his or her review of the information submitted.

6. All sources of public water systems must undergo a source water assessment which will delineate a source water protection area. This process is preliminary to the creation of a source water protection plan for that source and activities which will take place to protect the source of drinking water.
7. Projects proposing to develop new public water systems or proposing substantial modifications to existing public water systems must receive approval by the Director prior to construction of the proposed system or modification in accordance with HAR Section 11-20-30, "New and modified public water systems." These projects include treatment, storage and distribution systems of public water systems. The approval authority for projects owned and operated by a County Board or Department of Water or Water Supply has been delegated to them.
8. All public water systems must be operated by certified distribution system and water treatment plant operators as defined by Hawaii Administrative Rules, Chapter 11-25, "Rules Relating to Certification of Public Water System Operators."
9. All projects which propose the use of dual water systems or the use of a non-potable water system in proximity to an existing drinking water system to meet irrigation or other needs must be carefully designed and operated to prevent the cross-connection of these systems and prevent the possibility of backflow of water from the non-potable system to the drinking water system. The two systems must be clearly labeled and physically separated by air gaps or reduced pressure principle backflow prevention devices to avoid contaminating the drinking water supply. In addition backflow devices must be tested periodically to assure their proper operation. Further, all non-potable spigots and irrigated areas should be clearly labeled with warning signs to prevent the inadvertent consumption on non-potable water. Compliance with Hawaii Administrative Rules, Chapter 11-21, "Cross-Connection and Backflow Control" is also required.
10. All projects which propose the establishment of a potentially contaminating activity (as identified in the Hawai'i Source Water Assessment Plan) within the source water protection area of an existing source of water for a public water supply should address this potential and activities that will be implemented to prevent or reduce the potential for contamination of the drinking water source.
11. For further information concerning the application of capacity, new source approval, operator certification, source water assessment, backflow/cross-connection prevention or other public water system programs, please contact the Safe Drinking Water Branch at (808) 586-4258 or call from Maui the direct toll free number 984-2400, ext. 64258.

The SDWB Underground Injection Control (UIC) program provides the following comments:

1. The project is bisected by the UIC line. There are no known drinking water wells located within ¼ mile of the project site. Land areas above the UIC line are considered to overlie underground sources of drinking water; and
2. The UIC program regulates the construction and operation of wastewater disposal injection wells to prevent the contamination of our drinking water aquifers. If injection wells are being considered for stormwater management or wastewater disposal, the Draft Environmental Impact Statement should include a discussion of the proposed injection well use. The regulations for the construction and operation of an injection well are found in Hawaii Administrative Rules, Title 11, Chapter 23, Underground Injection Control. More UIC information can be found at the following website:
<http://health.hawaii.gov/sdwb/underground-injection-control-program/>
3. If you have any questions or comments on our project review or the UIC program, please contact Mr. Norris Uehara, Supervisor of the SDWB UIC Program at (808) 586-4258 or call from Maui the direct toll free number 984-2400, ext. 64258.

If there are any questions, please call Ms. Jennifer Nikaido of the Engineering Section at (808) 586-4258 or call from Maui the direct toll free number 984-2400, ext. 64258.

Sincerely,



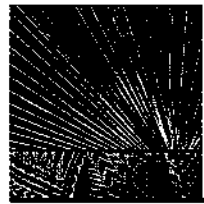
JOANNA L. SETO, P.E., CHIEF
Safe Drinking Water Branch

JN:cb

c: Waikapu Properties, LLC
1670 Honoapiʻilani Highway
Wailuku, Hawaii 96793

State of Hawaiʻi
Land Use Commission
Department of Business,
Economic Development and Tourism
P.O. Box 2359
Honolulu, Hawaii 96804-2359

EPO (EPO 117)



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January 7, 2016

Ms. Joanna L. Seto, P.E. Chief
Department of Health
Safe Drinking Water Branch
919 Ala Moana Blvd. Room 308
Honolulu, Hawaii 96814-4920

Dear Ms. Seto:

Re: **Environmental Assessment / Environmental Impact Statement**
Preparation Notice for the Proposed Waikapu Country Town Project in
Waikapu, Maui, Hawaii; TMK Nos: (2) 3-6-002:001, (2) 3-6-002:003, (2) 3-6-
4:003, (2) 3-6-004:006, (2) 3-6-005:007 and (2) 3-6-006:036.

Thank you for your June 1, 2015 letter providing comments in response to the above-referenced project. In response to your comments, please find the following responses:

- **Drinking water source.** Water and fire protection for the Project will be provided from a private onsite water system. Five (5) wells have been drilled on the site. Three (3) wells have been designated for potable use and two (2) for non-potable purposes. All of the wells are located within the Waikapu Aquifer. The three potable water wells have been approved by the State of Hawaii, Commission on Water Resource Management (CWRM) for a total pumping capacity of 2,300 gallons per minute (gpm). Water pumped from the non-potable wells will be used for agriculture and irrigation of parks, open space and irrigation of commercial and residential lots.
- **Public water system.** The Applicant understands that the Project's private water system may be subject to Federal and State regulations defining a public water system. The Applicant acknowledges that all public water system owners and operators are required to comply with HAR Chapter 11-20, "Rules Relating to Public Water Systems." The Applicant also understands that compliance with HAR Section 11-20-29.5, HAR Section

2331 West Main Street, Wailuku, HI 96793 • Ph. 808-244-6231

msummers@planningconsultantshawaii.com

11-20-29, HAR Section 11-20-30 and HAR Chapter 11-25, "Rules Relating to Certification of Public Water System Operators" is also required of such systems.

- **Dual water systems.** As noted, the Applicant does intend to use non-potable well water for agricultural irrigation, irrigation of parks and open space and irrigation of residential and commercial lots. The Applicant understands that measures must be taken to design and operate the dual system in a manner that will prevent backflow of water from the non-potable system to the drinking water system.
- **Potentially Contaminating Activities.** The Applicant is aware that any activities that are identified in the Hawai'i Source Water Assessment Plan, which are potentially contaminating and located within the source water protection area, should be addressed to mitigate potential impacts to the source.
- **Underground Injection Control.** The Applicant is aware that the Project is bisected by the UIC line. Wastewater will be treated in accordance with State and County requirements. Storm water will be retained on-site through a series of detention basins as is described within the Draft Environmental Impact Statement (DEIS).

Thank you for your interest in the project, while we look forward to working with your office as we proceed through the development review process. Should you have any questions, please contact me at (808) 269-6220 or by e-mail at msummers@planningconsultantshawaii.com.

Sincerely yours,



Michael J. Summers
President

Attachment

c: Mr. Michael Atherton
Mr. Albert Boyce

9. State of Hawai'i. Department of Health, Clean Air Branch



STATE OF HAWAII
DEPARTMENT OF HEALTH
P.O. Box 3378
HONOLULU, HAWAII 96801-3378

COPY
VIRGINIA PRESSLER, M.D.
DIRECTOR OF HEALTH

In reply, please refer to:
File:

15-366A CAB

June 3, 2015

Mr. Michael Summers
President
Planning Consultants Hawaii, LLC
2331 W. Main Street
Wailuku, Hawaii 96793

Dear Mr. Summers:

SUBJECT: **Environmental Impact Statement Preparation Notice
Proposed Waikapu Country Town Project
Waikapu, Wailuku, Maui**

A significant potential for fugitive dust emissions exists during all phases of construction. The activities must comply with the provisions of Hawaii Administrative Rules, §11-60.1-33 on Fugitive Dust.

We encourage the contractor to implement a dust control plan, which does not require approval by the Department of Health, to comply with the fugitive dust regulations. The dust control measures listed in your document should be implemented where appropriate; additional measures may include, but are not limited to, the following:

- a) Planning the different phases of construction, focusing on minimizing the amount of dust-generating materials and activities, centralizing on-site vehicular traffic routes, and locating potential dust-generating equipment in areas of the least impact;
- b) Providing an adequate water source at the site prior to start-up of construction activities;
- c) Landscaping and providing rapid covering of bare areas, including slopes, starting from the initial grading phase;
- d) Minimizing dust from shoulders and access roads;
- e) Providing adequate dust control measures during weekends, after hours, and prior to daily start-up of construction activities; and
- f) Controlling dust from debris being hauled away from the project site. Also, controlling dust from daily operations of material being processed, stockpiled, and hauled to and from the facility.

If you have any questions, please contact Mr. Barry Ching of the Clean Air Branch at (808) 586-4200.

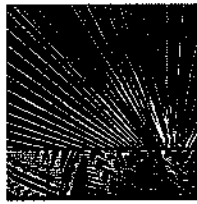
Sincerely,

NOLAN S. HIRAI, P.E.
Manager, Clean Air Branch

BC:rg

c: Daniel Orodener, Executive Officer, State Land Use Commission, DBED&T
Michael Atherton, Waikapu Properties, LLC

LAND USE COMMISSION
STATE OF HAWAII
2015 JUN 12 A 8:53



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January 7, 2016

Mr. Nolan S. Hirai, P.E.
Manager
Clean Air Branch
State of Hawaii
Department of Health
P.O. Box 3378
Honolulu, HI 96801-3378

Dear Mr. Hirai:

Re: **Environmental Assessment** / Environmental Impact Statement
Preparation Notice for the Proposed Waikapu Country Town Project in
Waikapu, Maui, Hawaii; TMK Nos: (2) 3-6-002:001, (2) 3-6-002:003, (2) 3-6-
4:003, (2) 3-6-004:006, (2) 3-6-005:007 and (2) 3-6-006:036.

Thank you for your June 3, 2015 letter providing comments in response to
the above-referenced project.

Please note that an Air Quality Study was prepared to address
construction and operation phase air quality impacts associated with the project.
It is expected that during the construction phase, impacts to neighboring
properties from wind born dust could arise if an appropriate dust control plan is
not implemented. The Applicant acknowledges the following additional
mitigation measures offered to address fugitive dust emissions during
construction:

- Planning the different phases of construction, focusing on minimizing the amount of dust-generating materials and activities, centralizing on-site vehicular routes, and locating potential dust-generating equipment in areas of least impact;
- Providing an adequate water source at the site prior to start-up of construction activities;

Mr. Nolan S. Hirai, P.E.
Manager
Department of Health, Clean Air Branch
RE: Waikapu Country Town EA/EISPN
January 7, 2015
Page 2

- Landscaping and providing rapid covering of bare areas, including slopes, starting from the initial grading phase;
- Minimizing dust from shoulders and access roads;
- Providing adequate dust control measures during weekends, after hours, and prior to daily start-up of construction activities; and
- Controlling dust from debris being hauled away from the project site. Also, controlling dust from daily operations of material being processed, stockpiled, and hauled to and from the facility.

Thank you very much for your interest in the project. Should you have any questions, please contact me at (808) 269-6220 or by e-mail at msummers@planningconsultantshawaii.com.

Sincerely yours,

A handwritten signature in black ink, reading "Michael J. Summers". The signature is fluid and cursive, with a long horizontal flourish at the end.

Michael J. Summers
President

Attachment

c: Mr. Michael Atherton
Mr. Albert Boyce

10. State of Hawai'i, Department of Health, Clean Water Branch



STATE OF HAWAII
DEPARTMENT OF HEALTH
P. O. BOX 3378
HONOLULU, HI 96801-3378

In reply, please refer to:
File:

06018PCTM.15

June 09, 2015

Mr. Michael Summers
President
Planning Consultants Hawaii, LLC
2331 W. Main Street
Wailuku, Hawaii 96793

Dear Mr. Summers:

**SUBJECT: Comments on the Environmental Impact Statement Preparation
Notice (EISP) for Proposed Waikapu Country Town Project
Waikapu, Island of Maui, Hawaii**

The Department of Health (DOH), Clean Water Branch (CWB), acknowledges receipt of your letter, dated May 11, 2015, requesting comments on your project. The DOH-CWB has reviewed the subject document and offers these comments. Please note that our review is based solely on the information provided in the subject document and its compliance with the Hawaii Administrative Rules (HAR), Chapters 11-54 and 11-55. You may be responsible for fulfilling additional requirements related to our program. We recommend that you also read our standard comments on our website at: <http://health.hawaii.gov/epo/files/2013/05/Clean-Water-Branch-Std-Comments.pdf>

1. Any project and its potential impacts to State waters must meet the following criteria:
 - a. Antidegradation policy (HAR, Section 11-54-1.1), which requires that the existing uses and the level of water quality necessary to protect the existing uses of the receiving State water be maintained and protected.
 - b. Designated uses (HAR, Section 11-54-3), as determined by the classification of the receiving State waters.
 - c. Water quality criteria (HAR, Sections 11-54-4 through 11-54-8).
2. You may be required to obtain National Pollutant Discharge Elimination System (NPDES) permit coverage for discharges of wastewater, including storm water runoff, into State surface waters (HAR, Chapter 11-55).

For NPDES general permit coverage, a Notice of Intent (NOI) form must be submitted at least 30 calendar days before the commencement of the discharge. An application for a NPDES individual permit must be submitted at least 180 calendar days before the commencement of the discharge. To request NPDES permit coverage, you must submit the applicable form ("CWB Individual NPDES Form" or "CWB NOI Form") through the e-Permitting Portal and the hard copy certification statement with the respective filing fee (\$1,000 for an individual NPDES permit or \$500 for a Notice of General Permit Coverage). Please open the e-Permitting Portal website located at: <https://eha-cloud.doh.hawaii.gov/epermit/>. You will be asked to do a one-time registration to obtain your login and password. After you register, click on the Application Finder tool and locate the appropriate form. Follow the instructions to complete and submit the form.

3. If your project involves work in, over, or under waters of the United States, it is highly recommended that you contact the Army Corp of Engineers, Regulatory Branch (Tel: 835-4303) regarding their permitting requirements.

Pursuant to Federal Water Pollution Control Act [commonly known as the "Clean Water Act" (CWA)], Paragraph 401(a)(1), a Section 401 Water Quality Certification (WQC) is required for "[a]ny applicant for Federal license or permit to conduct any activity including, but not limited to, the construction or operation of facilities, which may **result** in any discharge into the navigable waters..." (emphasis added). The term "discharge" is defined in CWA, Subsections 502(16), 502(12), and 502(6); Title 40 of the Code of Federal Regulations, Section 122.2; and Hawaii Administrative Rules (HAR), Chapter 11-54.


4. Please note that all discharges related to the project construction or operation activities, whether or not NPDES permit coverage and/or Section 401 WQC are required, must comply with the State's Water Quality Standards. Noncompliance with water quality requirements contained in HAR, Chapter 11-54, and/or permitting requirements, specified in HAR, Chapter 11-55, may be subject to penalties of \$25,000 per day per violation.
5. It is the State's position that all projects must reduce, reuse, and recycle to protect, restore, and sustain water quality and beneficial uses of State waters. Project planning should:
 - a. Treat storm water as a resource to be protected by integrating it into project planning and permitting. Storm water has long been recognized as a source of irrigation that will not deplete potable water resources. What is often overlooked is that storm water recharges ground water supplies and feeds streams and estuaries; to ensure that these water cycles are not disrupted, storm water cannot be relegated as a waste product of impervious surfaces. Any project planning must recognize storm water as an asset that sustains and protects natural ecosystems and traditional beneficial uses of State waters, like community beautification, beach going, swimming, and fishing. The approaches necessary to do so, including low impact development methods or ecological

bio-engineering of drainage ways must be identified in the planning stages to allow designers opportunity to include those approaches up front, prior to seeking zoning, construction, or building permits.

- b. Clearly articulate the State's position on water quality and the beneficial uses of State waters. The plan should include statements regarding the implementation of methods to conserve natural resources (e.g. minimizing potable water for irrigation, gray water re-use options, energy conservation through smart design) and improve water quality.
- c. Consider storm water Best Management Practice (BMP) approaches that minimize the use of potable water for irrigation through storm water storage and reuse, percolate storm water to recharge groundwater to revitalize natural hydrology, and treat storm water which is to be discharged.
- d. Consider the use of green building practices, such as pervious pavement and landscaping with native vegetation, to improve water quality by reducing excessive runoff and the need for excessive fertilization, respectively.
- e. Identify opportunities for retrofitting or bio-engineering existing storm water infrastructure to restore ecological function while maintaining, or even enhancing, hydraulic capacity. Particular consideration should be given to areas prone to flooding, or where the infrastructure is aged and will need to be rehabilitated.

If you have any questions, please visit our website at: <http://health.hawaii.gov/cwb/>, or contact the Engineering Section, CWB, at (808) 586-4309.

Sincerely,



ALEC WONG, P.E., CHIEF
Clean Water Branch

CTM:ay

C: Mr. Daniel Orodener, Land Use Commission – DBEDT
[via e-mail daniel.e.ordenker@dbedt.hawaii.gov only]
DOH-EPO #15-117 (via e-mail only)



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January 7, 2016

Mr. Alec Wong, P.E., Chief
Department of Health
Clean Water Branch
P.O. Box 3378
Honolulu, HI 96801-3378

Dear Mr. Wong:

Re: **Environmental Assessment / Environmental Impact Statement
Preparation Notice** for the Proposed Waikapu Country Town Project in
Waikapu, Maui, Hawaii; TMK Nos: (2) 3-6-002:001, (2) 3-6-002:003, (2) 3-6-
4:003, (2) 3-6-004:006, (2) 3-6-005:007 and (2) 3-6-006:036.

* Thank you for your June 9, 2015 letter providing comments in response to the above-referenced project. In response to your comments, please find the following responses:

- ***Compliance with Hawaii Administrative Rules.*** The Applicant understands that the Project must be in compliance with HAR, Section 11-54-1.1 (Antidegradation policy), HAR, Section 11-54-3 (Designated uses), and HAR, Sections 11-54-4 through 11-54-8) (Water quality criteria).
- ***NPDES Permit.*** The Applicant understands that the Project may be subject to NPDES permit coverage and will comply with the requirements of HAR, Chapter 11-55.
- ***Waters of the United States.*** The WCT does not anticipate any work that will encroach upon navigable waters of the U.S. or that will produce discharges into U.S. waters. However, should such activities be proposed, the Applicant will obtain all required Federal and State permits before commencing such activities.

- **Water Conservation and Reuse.** The Applicant is committed to reducing the Project's potable water demand through conservation and reuse. The Applicant will require that water conserving low flow fixtures be installed throughout the development. The Applicant is also developing non-potable wells to be used for irrigation of parks and open space as well as the irrigation of individual commercial and residential lots. It is expected that potable water demand will be reduced by at least one-third through the investment into a dual water system.

Regarding storm water, this resource will be directed into on-site detention basins where the water will be collected and will be allowed to recharge the aquifer. Grassed swales, parks, and open space areas will also be maintained with appropriate grasses and ground covers to allow natural filtration and percolation into the soils. The Applicant is also investigating the feasibility of storm water storage and reuse to see if it is an economically and environmentally feasible measure to reuse storm water for irrigation.

Thank you for your interest in the project, while we look forward to working with you Department as we proceed through the development review process. Should you have any questions, please contact me at (808) 269-6220 or by e-mail at msummers@planningconsultantshawaii.com.

Sincerely yours,



Michael J. Summers
President

Attachment

c: Mr. Michael Atherton
Mr. Albert Boyce

11. State of Hawai'i. Department of Health, Maui District Office



STATE OF HAWAII
DEPARTMENT OF HEALTH
MAUI DISTRICT HEALTH OFFICE
54 HIGH STREET
WAILUKU, HAWAII 96793-3378

LORRIN W. PANG, M.D., M.P.H.
DISTRICT HEALTH OFFICER

June 23, 2015

Mr. Michael Summers
President
Planning Consultants Hawaii, LLC
2331 West Main Street
Wailuku, Hawai'i 96793

Dear Mr. Summers:

Subject: EISPN for the Proposed Waikapu Country Town Project, Maui, Hawaii
TMK: (2) 3-6-002:001, 3-6-002:003, 3-6-004:003, 3-6-004:006,
3-6-005:007 and 3-6-006:036

Thank you for the opportunity to review this project. We have the following comments to offer:

1. National Pollutant Discharge Elimination System (NPDES) permit coverage maybe required for this project. The Clean Water Branch should be contacted at 808 586-4309.
2. The Wastewater Branch cannot make comments as the wastewater disposal method for the proposed project was not addressed on the EISPN. Please provide us with the wastewater disposal method for our review and comments under Chapter 11-62, "Wastewater Systems" if applicable. If you have any questions, please call Roland Tejano, Environmental Engineer, at 808 984-8232.
3. Project land was formerly used in sugar cane production. Please consult with the Hazard Evaluation and Emergency Response (HEER) Office of the Department of Health. Please contact them at 808 586-4249.

It is strongly recommended that the Standard Comments found at the Department's website: <http://health.hawaii.gov/epo/home/landuse-planning-review-program/> be reviewed and any comments specifically applicable to this project should be adhered to.

Mr. Michael Summers

June 23, 2015

Page 2

Should you have any questions, please contact me at patricia.kitkowski@doh.hawaii.gov or 808 984-8230.

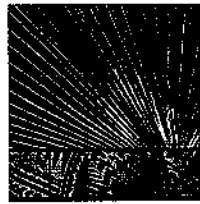
Sincerely,

A handwritten signature in black ink that reads "Patti Kitkowski". The signature is written in a cursive, flowing style.

Patti Kitkowski

District Environmental Health Program Chief

- c EPO
- Daniel Orodener, DBEDT
- Michael Atherton, Waikapu Properties LLC



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January 7, 2016

Ms. Patti Kitkowski
District Environmental Health Program Chief
State of Hawaii
Department of Health
Maui District Health Office
54 High Street
Wailuku, HI 96793-3378

Dear Ms. Kitkowski:

Re: **Environmental Assessment/ Environmental Impact Statement
Preparation Notice** for the Proposed Waikapu Country Town Project in
Waikapu, Maui, Hawaii; TMK Nos: (2) 3-6-002:001, (2) 3-6-002:003, (2) 3-6-
4:003, (2) 3-6-004:006, (2) 3-6-005:007 and (2) 3-6-006:036.

Thank you for your June 23, 2015 letter providing comments in response to the above-referenced project. In response to your comments, please find the following responses:

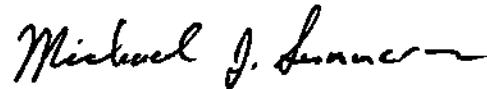
- **NPDES Permit.** The Applicant understands that the Project may be subject to NPDES permit coverage and will consult with the Clean Water Branch at the appropriate time.
- **Wastewater Disposal.** The DEIS describes the wastewater disposal options being considered for the Project. The Applicant will coordinate with the County Department of Environmental Management and the Clean Water Branch to finalize plans for the Project's wastewater treatment.

Ms. Patti Kitkowski
District Environmental Health Program Chief
Department of Health
Maui District Office
RE: Waikapu Country Town EA/EISPN
January 7, 2015
Page 2

- *Hazard Evaluation and Emergency Response Office (HEER)*. The Applicant will consult with the HEER Office regarding concerns they may have with potential contaminants.

Thanks you for your interest in the project, while we look forward to working with your office as we proceed through the development review process. Should you have any questions, please contact me at (808) 269-6220 or by e-mail at msummers@planningconsultantshawaii.com.

Sincerely yours,

A handwritten signature in black ink that reads "Michael J. Summers" followed by a stylized flourish.

Michael J. Summers
President

Attachment

c: Mr. Michael Atherton
Mr. Albert Boyce

12. State of Hawai'i. Department of Health, Wastewater Branch



STATE OF HAWAII
DEPARTMENT OF HEALTH
P. O. BOX 3378
HONOLULU, HI 96801-3378

In reply, please refer to:
File:

LUD - 2 3 6 002 001 EISPN
Waikapu Country Town-ID2269

June 9, 2015

Mr. Michael Summers, President
Planning Consultants Hawaii, LLC
2331 West Main Street
Wailuku, Maui, Hawaii 96793
Dear Mr. Summers:

Subject: EISPN for the proposed Waikapu Country Town Project
TMK (2) 3-6-002: 001, 3-6-004: 003, 3-6-005: 007 and 3-6-006: 036

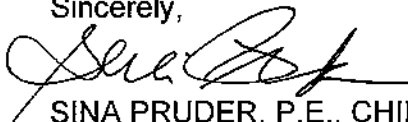
Thank you for allowing us the opportunity to provide comments on the above subject project. We have the following information to offer.

The subject project is located in the critical wastewater disposal area as determined by the Maui County Wastewater Advisory Committee. However, we are unable to offer approval or any further comments on the proposed project at this time as domestic wastewater collection, treatment, and disposal have not been addressed in the subject document. Information pertaining to the wastewater collection, treatment, and disposal system should be provided in order that we may be able to evaluate and make any determinations related to the wastewater plans for the subject project.

Please be informed that the proposed wastewater systems for the subdivision/development may have to include design considerations to address any effects associated with the construction of and/or discharges from the wastewater systems to any public trust, Native Hawaiian resources or the exercise of traditional cultural practices. In addition, all wastewater plans must conform to applicable provisions of the Hawaii Administrative Rules, Chapter 11-62, "Wastewater Systems."

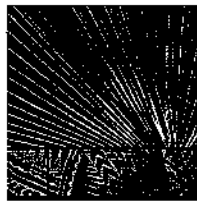
Should you have any questions, please contact Mr. Mark Tomomitsu of my staff at (808) 586-4294.

Sincerely,


SINA PRUDER, P.E., CHIEF
Wastewater Branch

LM/MST:lmj

c: State of Hawaii, Land Use Commission
Mr. Michael Atherton, Waikapu Properties, LLC
Ms. Laura McIntyre, DOH-Environmental Planning Office (15-117)
Ms. Patricia Kitkowski, DOH-DEHP Maui Chief
Mr. Roland Tejano, OOH-WWB's Maui Staff
Mr. Kurt Wollenhaupt, County of Maui, Department of Planning



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January 7, 2016

Ms. Sina Pruder, P.E. Chief
State of Hawaii
Department of Health
Wastewater Branch
P.O. Box 3378
Honolulu, HI 96801-3378

Dear Ms. Pruder:

Re: **Environmental Assessment / Environmental Impact Statement
Preparation Notice** for the Proposed Waikapu Country Town Project in
Waikapu, Maui, Hawaii; TMK Nos: (2) 3-6-002:001, (2) 3-6-002:003, (2) 3-6-
4:003, (2) 3-6-004:006, (2) 3-6-005:007 and (2) 3-6-006:036.

Thank you for your June 25, 2015 letter providing comments in response to the above-referenced project. In response to your comments, please find the following responses:

- **Critical Wastewater Disposal Area.** The Applicant understands that the subject project is located in a critical wastewater disposal area and that future wastewater treatment plans must comply with Hawaii Administrative Rules, Chapter 11-62, "Wastewater Systems."

Information pertaining to future wastewater treatment is provided in the Draft Environmental Impact Statement (DEIS) and the Applicant will work closely with your Division as plans are further developed.

Thank you for your interest in the project. Should you have any questions, please contact me at (808) 269-6220 or by e-mail at insummers@planningconsultantshawaii.com.

Ms. Sina Pruder, P.E., Chief
Department of Health, Wastewater Branch
RE: Waikapu Country Town EA/EISPN
January 7, 2015
Page 2

Sincerely yours,

A handwritten signature in black ink, reading "Michael J. Summers". The signature is written in a cursive style with a long, sweeping underline.

Michael J. Summers
President

Attachment

c: Mr. Michael Atherton
Mr. Albert Boyce

13. State of Hawai'i, Department of Transportation



STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
869 PUNCHBOWL STREET
HONOLULU, HAWAII 96813-5097

IN REPLY REFER TO:
STP 8.1814

June 17, 2015

Mr. Michael J. Summers
President
Planning Consultants Hawaii, LLC
2331 West Main Street
Wailuku, Hawaii 96793

Dear Mr. Summers:

Subject: Waikapu Country Town
Environmental Impact Statement Preparation Notice (EISPN)
Waikapu, Maui, Hawaii
TMK: (2) 3-6-002:001 and 003, 3-6-004:003 and 006, 3-6-005:007 and
3-6-006:036

Our Department of Transportation (DOT) comments on the subject project are as follows:

DOT Airports Division

1. Federal Aviation Administration (FAA) Advisory Circular 150/5200-33B, Hazardous Wildlife Attractants On or Near Airports (copy attached), recommends a distance of five (5) statute miles between the farthest edge of the airfield's Air Operations Area and land use activities that could attract hazardous wildlife movement into or across aircraft approach or departure space. The subject project is of concern because it is within five (5) statute miles from Kahului Airport (OGG).
2. According to an earlier illustration of the Waikapu County Town Master Plan, several existing plantation reservoirs were identified as detention basins. To prevent the attraction of hazard wildlife, the FAA recommends that stormwater detention ponds be designed, engineered, constructed, and maintained for a maximum 48-hour detention period after the design storm and remain completely dry between storms.
3. According to the EISPN, photovoltaic (PV) panels are located above the large rural lots in the mauka agricultural lands. PV systems can create a hazardous condition for a pilot due to possible glint and glare reflected from the PV array. If glint or glare from the PV array creates a hazard condition for pilots, the applicant must be prepared to immediately mitigate the hazard, upon notification by the DOT Airports Division or the FAA. The following website may assist the applicant with preparation of a glint and glare analysis in order to minimize any potential hazard: www.sandia.gov/glare.

4. The project lies within the approach surface to the Kahului Airport and will be subject to aircraft overflights and noise.

DOT Highways Division

1. The Traffic Impact Analysis Report (TIAR) should be submitted to the DOT Highways Division for review and acceptance.
2. Project construction plans, including grading and drainage plans, within or affecting the highways rights-of-way must be submitted to DOT Highways Division for review and approval.
3. No additional surface water run-off from the project will be permitted onto Honoapiilani Highway rights-of-way.
4. The developer should be aware of DOT's plans for a bikeway on Honoapiilani Highway.
5. The developer is required to obtain a permit from DOT Highways Division, Maui District Office, for the transport of oversized and/or overweight materials and equipment on State highway facilities.

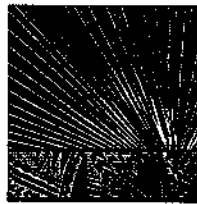
If there are any questions, please contact Mr. Norren Kato of the DOT Statewide Transportation Planning Office at telephone number (808) 831-7976.

Sincerely,



FORD N. FUCHIGAMI
Director of Transportation

Attachment: FAA Advisory Circular 150/5200-33B



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January 7, 2016

Mr. Ford N. Fuchigami
Director of Transportation
State of Hawaii
Department of Transportation
869 Punchbowl Street
Honolulu, HI 96813-5097

Dear Ms. Fuchigami:

Re: **Environmental Assessment / Environmental Impact Statement
Preparation Notice** for the Proposed Waikapu Country Town Project in
Waikapu, Maui, Hawaii; TMK Nos: (2) 3-6-002:001, (2) 3-6-002:003, (2) 3-6-
4:003, (2) 3-6-004:006, (2) 3-6-005:007 and (2) 3-6-006:036.

Thank you for your June 17, 2015 letter providing comments in response to the above-referenced project. The following response is provided in response to your comments:

DOT Airports Division

1. **Federal Aviation Administration (FAA) Advisory Circular 150/5200-33B).** The DEIS documents existing agricultural reservoirs and proposed future agricultural reservoirs and detention basins planned on the property. The Applicant will consider the recommendations provided in the design, operation and maintenance of these facilities.
2. **Photovoltaic (PV) Panels.** The Applicant acknowledges the concern regarding possible glint and glare created by PV panels and will carefully consider this issue in locating and designing such facilities.
3. **Kahului Airport.** The Applicant acknowledges that the project site may be subject to aircraft overflight and noise.

DOT Highways Division

1. The TIAR has been summarized in the DEIS and incorporated into the report as an Appendix. The Applicant will have the traffic engineer contact your office to coordinate the review and acceptance of the report.
2. The Applicant acknowledges that project construction, grading and drainage plans, within or affecting the rights-of-way must be submitted to the DOT Highways Division for review and approval.
3. The Applicant understands that no additional surface runoff will be permitted onto Honoapiilani Highway.
4. The Applicant is pleased to hear that the DOT is planning to install a bikeway along Honoapiilani Highway. We will coordinate with the Highways Division on the implementation of this improvement.
5. The Applicant understands that a permit is required from the DOT Highways Division, Maui District Office, for the transport of oversized and/or overweight materials and equipment on State highway facilities.

Thank you for your interest in the project, while we look forward to working with your office as we proceed through the development review process. Should you have any questions, please contact me at (808) 269-6220 or by-mail at msummers@planningconsultantshawaii.com.

Sincerely yours,



Michael J. Summers
President

Attachment

c: Mr. Michael Atherton
Mr. Albert Boyce



U.S. Department
of Transportation

Federal Aviation
Administration

Advisory Circular

**Subject: HAZARDOUS WILDLIFE
ATTRACTANTS ON OR NEAR
AIRPORTS**

Date: 8/28/2007

AC No: 150/5200-33B

Initiated by: AAS-300 **Change:**

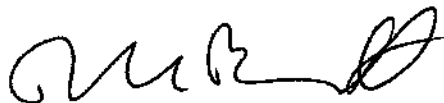
1. **PURPOSE.** This Advisory Circular (AC) provides guidance on certain land uses that have the potential to attract hazardous wildlife on or near public-use airports. It also discusses airport development projects (including airport construction, expansion, and renovation) affecting aircraft movement near hazardous wildlife attractants. Appendix 1 provides definitions of terms used in this AC.
2. **APPLICABILITY.** The Federal Aviation Administration (FAA) recommends that public-use airport operators implement the standards and practices contained in this AC. The holders of Airport Operating Certificates issued under Title 14, Code of Federal Regulations (CFR), Part 139, Certification of Airports, Subpart D (Part 139), may use the standards, practices, and recommendations contained in this AC to comply with the wildlife hazard management requirements of Part 139. Airports that have received Federal grant-in-aid assistance must use these standards. The FAA also recommends the guidance in this AC for land-use planners, operators of non-certificated airports, and developers of projects, facilities, and activities on or near airports.
3. **CANCELLATION.** This AC cancels AC 150/5200-33A, *Hazardous Wildlife Attractants on or near Airports*, dated July 27, 2004.
4. **PRINCIPAL CHANGES.** This AC contains the following major changes, which are marked with vertical bars in the margin:
 - a. Technical changes to paragraph references.
 - b. Wording on storm water detention ponds.
 - c. Deleted paragraph 4-3.b, *Additional Coordination*.
5. **BACKGROUND.** Information about the risks posed to aircraft by certain wildlife species has increased a great deal in recent years. Improved reporting, studies, documentation, and statistics clearly show that aircraft collisions with birds and other wildlife are a serious economic and public safety problem. While many species of wildlife can pose a threat to aircraft safety, they are not equally hazardous. Table 1

ranks the wildlife groups commonly involved in damaging strikes in the United States according to their relative hazard to aircraft. The ranking is based on the 47,212 records in the FAA National Wildlife Strike Database for the years 1990 through 2003. These hazard rankings, in conjunction with site-specific Wildlife Hazards Assessments (WHA), will help airport operators determine the relative abundance and use patterns of wildlife species and help focus hazardous wildlife management efforts on those species most likely to cause problems at an airport.

Most public-use airports have large tracts of open, undeveloped land that provide added margins of safety and noise mitigation. These areas can also present potential hazards to aviation if they encourage wildlife to enter an airport's approach or departure airspace or air operations area (AOA). Constructed or natural areas—such as poorly drained locations, detention/retention ponds, roosting habitats on buildings, landscaping, odor-causing rotting organic matter (putrescible waste) disposal operations, wastewater treatment plants, agricultural or aquaculture activities, surface mining, or wetlands—can provide wildlife with ideal locations for feeding, loafing, reproduction, and escape. Even small facilities, such as fast food restaurants, taxicab staging areas, rental car facilities, aircraft viewing areas, and public parks, can produce substantial attractions for hazardous wildlife.

During the past century, wildlife-aircraft strikes have resulted in the loss of hundreds of lives worldwide, as well as billions of dollars in aircraft damage. Hazardous wildlife attractants on and near airports can jeopardize future airport expansion, making proper community land-use planning essential. This AC provides airport operators and those parties with whom they cooperate with the guidance they need to assess and address potentially hazardous wildlife attractants when locating new facilities and implementing certain land-use practices on or near public-use airports.

6. MEMORANDUM OF AGREEMENT BETWEEN FEDERAL RESOURCE AGENCIES. The FAA, the U.S. Air Force, the U.S. Army Corps of Engineers, the U.S. Environmental Protection Agency, the U.S. Fish and Wildlife Service, and the U.S. Department of Agriculture - Wildlife Services signed a Memorandum of Agreement (MOA) in July 2003 to acknowledge their respective missions in protecting aviation from wildlife hazards. Through the MOA, the agencies established procedures necessary to coordinate their missions to address more effectively existing and future environmental conditions contributing to collisions between wildlife and aircraft (wildlife strikes) throughout the United States. These efforts are intended to minimize wildlife risks to aviation and human safety while protecting the Nation's valuable environmental resources.



DAVID L. BENNETT
Director, Office of Airport Safety
and Standards

Table 1. Ranking of 25 species groups as to relative hazard to aircraft (1=most hazardous) based on three criteria (damage, major damage, and effect-on-flight), a composite ranking based on all three rankings, and a relative hazard score. Data were derived from the FAA National Wildlife Strike Database, January 1990–April 2003.¹

Species group	Ranking by criteria			Composite ranking ²	Relative hazard score ³
	Damage ⁴	Major damage ⁵	Effect on flight ⁶		
Deer	1	1	1	1	100
Vultures	2	2	2	2	64
Geese	3	3	6	3	55
Cormorants/pelicans	4	5	3	4	54
Cranes	7	6	4	5	47
Eagles	6	9	7	6	41
Ducks	5	8	10	7	39
Osprey	8	4	8	8	39
Turkey/pheasants	9	7	11	9	33
Hérons	11	14	9	10	27
Hawks (buteos)	10	12	12	11	25
Gulls	12	11	13	12	24
Rock pigeon	13	10	14	13	23
Owls	14	13	20	14	23
H. lark/s. bunting	18	15	15	15	17
Crows/ravens	15	16	16	16	16
Coyote	16	19	5	17	14
Mourning dove	17	17	17	18	14
Shorebirds	19	21	18	19	10
Blackbirds/starling	20	22	19	20	10
American kestrel	21	18	21	21	9
Meadowlarks	22	20	22	22	7
Swallows	24	23	24	23	4
Sparrows	25	24	23	24	4
Nighthawks	23	25	25	25	1

¹ Excerpted from the *Special Report for the FAA, "Ranking the Hazard Level of Wildlife Species to Civil Aviation in the USA: Update #1, July 2, 2003"*. Refer to this report for additional explanations of criteria and method of ranking.

² Relative rank of each species group was compared with every other group for the three variables, placing the species group with the greatest hazard rank for ≥ 2 of the 3 variables above the next highest ranked group, then proceeding down the list.

³ Percentage values, from Tables 3 and 4 in Footnote 1 of the *Special Report*, for the three criteria were summed and scaled down from 100, with 100 as the score for the species group with the maximum summed values and the greatest potential hazard to aircraft.

⁴ Aircraft incurred at least some damage (destroyed, substantial, minor, or unknown) from strike.

⁵ Aircraft incurred damage or structural failure, which adversely affected the structure strength, performance, or flight characteristics, and which would normally require major repair or replacement of the affected component, or the damage sustained makes it inadvisable to restore aircraft to airworthy condition.

⁶ Aborted takeoff, engine shutdown, precautionary landing, or other.

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SECTION 1.

GENERAL SEPARATION CRITERIA FOR HAZARDOUS WILDLIFE ATTRACTANTS ON OR NEAR AIRPORTS.

1-1. INTRODUCTION. When considering proposed land uses, airport operators, local planners, and developers must take into account whether the proposed land uses, including new development projects, will increase wildlife hazards. Land-use practices that attract or sustain hazardous wildlife populations on or near airports can significantly increase the potential for wildlife strikes.

The FAA recommends the minimum separation criteria outlined below for land-use practices that attract hazardous wildlife to the vicinity of airports. Please note that FAA criteria include land uses that cause movement of hazardous wildlife onto, into, or across the airport's approach or departure airspace or air operations area (AOA). (See the discussion of the synergistic effects of surrounding land uses in Section 2-8 of this AC.)

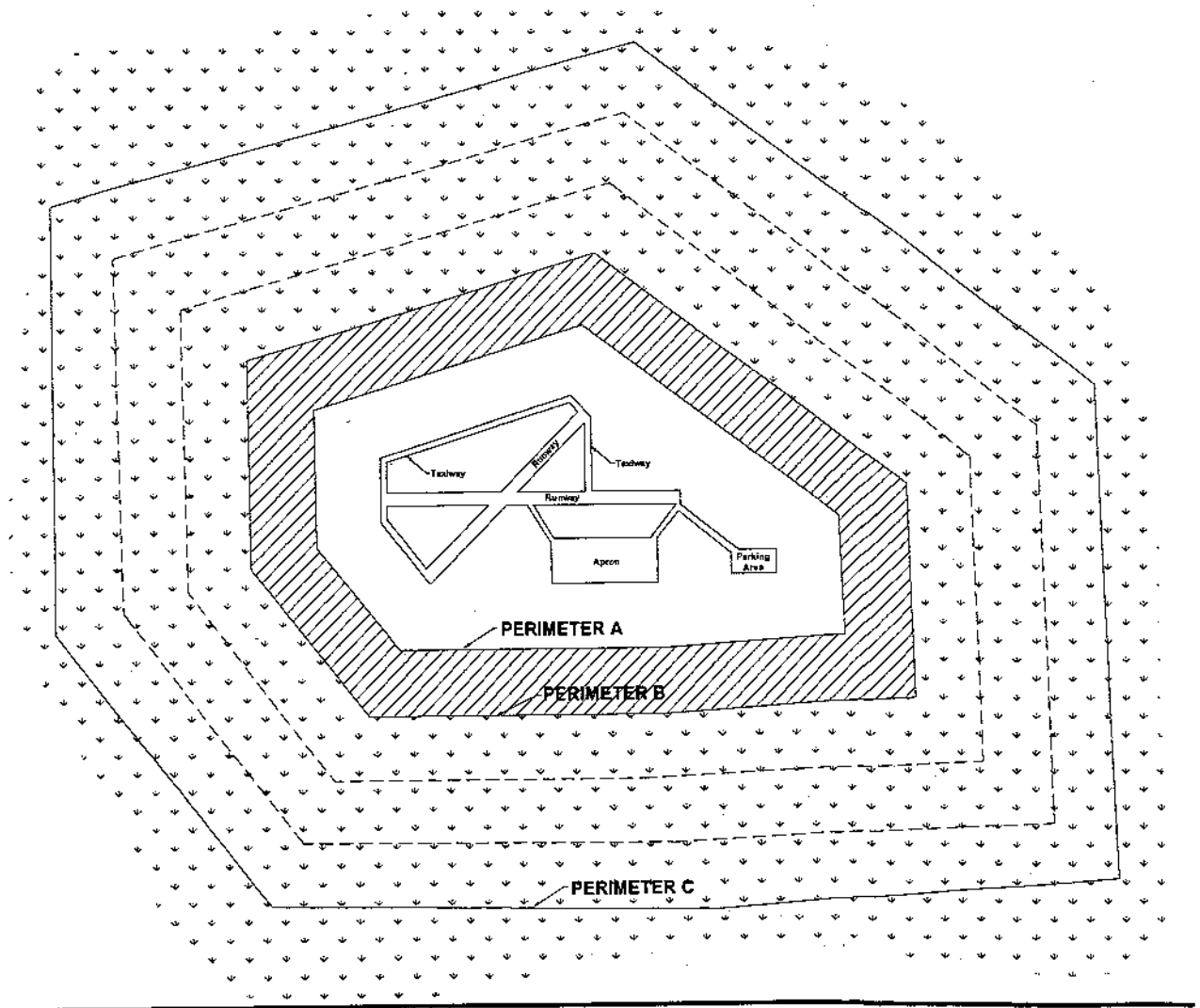
The basis for the separation criteria contained in this section can be found in existing FAA regulations. The separation distances are based on (1) flight patterns of piston-powered aircraft and turbine-powered aircraft, (2) the altitude at which most strikes happen (78 percent occur under 1,000 feet and 90 percent occur under 3,000 feet above ground level), and (3) National Transportation Safety Board (NTSB) recommendations.

1-2. AIRPORTS SERVING PISTON-POWERED AIRCRAFT. Airports that do not sell Jet-A fuel normally serve piston-powered aircraft. Notwithstanding more stringent requirements for specific land uses, the FAA recommends a separation distance of 5,000 feet at these airports for any of the hazardous wildlife attractants mentioned in Section 2 or for new airport development projects meant to accommodate aircraft movement. This distance is to be maintained between an airport's AOA and the hazardous wildlife attractant. Figure 1 depicts this separation distance measured from the nearest aircraft operations areas.

1-3. AIRPORTS SERVING TURBINE-POWERED AIRCRAFT. Airports selling Jet-A fuel normally serve turbine-powered aircraft. Notwithstanding more stringent requirements for specific land uses, the FAA recommends a separation distance of 10,000 feet at these airports for any of the hazardous wildlife attractants mentioned in Section 2 or for new airport development projects meant to accommodate aircraft movement. This distance is to be maintained between an airport's AOA and the hazardous wildlife attractant. Figure 1 depicts this separation distance from the nearest aircraft movement areas.

1-4. PROTECTION OF APPROACH, DEPARTURE, AND CIRCLING AIRSPACE. For all airports, the FAA recommends a distance of 5 statute miles between the farthest edge of the airport's AOA and the hazardous wildlife attractant if the attractant could cause hazardous wildlife movement into or across the approach or departure airspace.

Figure 1. Separation distances within which hazardous wildlife attractants should be avoided, eliminated, or mitigated.



PERIMETER A: For airports serving piston-powered aircraft, hazardous wildlife attractants must be 5,000 feet from the nearest air operations area.

PERIMETER B: For airports serving turbine-powered aircraft, hazardous wildlife attractants must be 10,000 feet from the nearest air operations area.

PERIMETER C: 5-mile range to protect approach, departure and circling airspace.

SECTION 2.

LAND-USE PRACTICES ON OR NEAR AIRPORTS THAT POTENTIALLY ATTRACT HAZARDOUS WILDLIFE.

2-1. GENERAL. The wildlife species and the size of the populations attracted to the airport environment vary considerably, depending on several factors, including land-use practices on or near the airport. This section discusses land-use practices having the potential to attract hazardous wildlife and threaten aviation safety. In addition to the specific considerations outlined below, airport operators should refer to *Wildlife Hazard Management at Airports*, prepared by FAA and U.S. Department of Agriculture (USDA) staff. (This manual is available in English, Spanish, and French. It can be viewed and downloaded free of charge from the FAA's wildlife hazard mitigation web site: <http://wildlife-mitigation.tc.FAA.gov/>.) And, *Prevention and Control of Wildlife Damage*, compiled by the University of Nebraska Cooperative Extension Division. (This manual is available online in a periodically updated version at: ianrwww.unl.edu/wildlife/solutions/handbook/.)

2-2. WASTE DISPOSAL OPERATIONS. Municipal solid waste landfills (MSWLF) are known to attract large numbers of hazardous wildlife, particularly birds. Because of this, these operations, when located within the separations identified in the siting criteria in Sections 1-2 through 1-4, are considered incompatible with safe airport operations.

- a. Siting for new municipal solid waste landfills subject to AIR 21.** Section 503 of the Wendell H. Ford Aviation Investment and Reform Act for the 21st Century (Public Law 106-181) (AIR 21) prohibits the construction or establishment of a new MSWLF within 6 statute miles of certain public-use airports. Before these prohibitions apply, both the airport and the landfill must meet the very specific conditions described below. These restrictions do not apply to airports or landfills located within the state of Alaska.

The airport must (1) have received a Federal grant(s) under 49 U.S.C. § 47101, et. seq.; (2) be under control of a public agency; (3) serve some scheduled air carrier operations conducted in aircraft with less than 60 seats; and (4) have total annual enplanements consisting of at least 51 percent of scheduled air carrier enplanements conducted in aircraft with less than 60 passenger seats.

The proposed MSWLF must (1) be within 6 miles of the airport, as measured from airport property line to MSWLF property line, and (2) have started construction or establishment on or after April 5, 2001. Public Law 106-181 only limits the construction or establishment of some new MSWLF. It does not limit the expansion, either vertical or horizontal, of existing landfills.

NOTE: Consult the most recent version of AC 150/5200-34, *Construction or Establishment of Landfills Near Public Airports*, for a more detailed discussion of these restrictions.

- b. Siting for new MSWLF not subject to AIR 21.** If an airport and MSWLF do not meet the restrictions of Public Law 106-181, the FAA recommends against locating MSWLF within the separation distances identified in Sections 1-2 through 1-4. The separation distances should be measured from the closest point of the airport's AOA to the closest planned MSWLF cell.
- c. Considerations for existing waste disposal facilities within the limits of separation criteria.** The FAA recommends against airport development projects that would increase the number of aircraft operations or accommodate larger or faster aircraft near MSWLF operations located within the separations identified in Sections 1-2 through 1-4. In addition, in accordance with 40 CFR 258.10, owners or operators of existing MSWLF units that are located within the separations listed in Sections 1-2 through 1-4 must demonstrate that the unit is designed and operated so it does not pose a bird hazard to aircraft. (See Section 4-2(b) of this AC for a discussion of this demonstration requirement.)
- d. Enclosed trash transfer stations.** Enclosed waste-handling facilities that receive garbage behind closed doors; process it via compaction, incineration, or similar manner; and remove all residue by enclosed vehicles generally are compatible with safe airport operations, provided they are not located on airport property or within the Runway Protection Zone (RPZ). These facilities should not handle or store putrescible waste outside or in a partially enclosed structure accessible to hazardous wildlife. Trash transfer facilities that are open on one or more sides; that store uncovered quantities of municipal solid waste outside, even if only for a short time; that use semi-trailers that leak or have trash clinging to the outside; or that do not control odors by ventilation and filtration systems (odor masking is not acceptable) do not meet the FAA's definition of fully enclosed trash transfer stations. The FAA considers these facilities incompatible with safe airport operations if they are located closer than the separation distances specified in Sections 1-2 through 1-4.
- e. Composting operations on or near airport property.** Composting operations that accept only yard waste (e.g., leaves, lawn clippings, or branches) generally do not attract hazardous wildlife. Sewage sludge, woodchips, and similar material are not municipal solid wastes and may be used as compost bulking agents. The compost, however, must never include food or other municipal solid waste. Composting operations should not be located on airport property. Off-airport property composting operations should be located no closer than the greater of the following distances: 1,200 feet from any AOA or the distance called for by airport design requirements (see AC 150/5300-13, *Airport Design*). This spacing should prevent material, personnel, or equipment from penetrating any Object Free Area (OFA), Obstacle Free Zone (OFZ), Threshold Siting Surface (TSS), or Clearway. Airport operators should monitor composting operations located in proximity to the airport to ensure that steam or thermal rise does not adversely affect air traffic. On-airport disposal of compost by-products should not be conducted for the reasons stated in 2-3f.

- f. Underwater waste discharges.** The FAA recommends against the underwater discharge of any food waste (e.g., fish processing offal) within the separations identified in Sections 1-2 through 1-4 because it could attract scavenging hazardous wildlife.
- g. Recycling centers.** Recycling centers that accept previously sorted non-food items, such as glass, newspaper, cardboard, or aluminum, are, in most cases, not attractive to hazardous wildlife and are acceptable.
- h. Construction and demolition (C&D) debris facilities.** C&D landfills do not generally attract hazardous wildlife and are acceptable if maintained in an orderly manner, admit no putrescible waste, and are not co-located with other waste disposal operations. However, C&D landfills have similar visual and operational characteristics to putrescible waste disposal sites. When co-located with putrescible waste disposal operations, C&D landfills are more likely to attract hazardous wildlife because of the similarities between these disposal facilities. Therefore, a C&D landfill co-located with another waste disposal operation should be located outside of the separations identified in Sections 1-2 through 1-4.
- i. Fly ash disposal.** The incinerated residue from resource recovery power/heat-generating facilities that are fired by municipal solid waste, coal, or wood is generally not a wildlife attractant because it no longer contains putrescible matter. Landfills accepting only fly ash are generally not considered to be wildlife attractants and are acceptable as long as they are maintained in an orderly manner, admit no putrescible waste of any kind, and are not co-located with other disposal operations that attract hazardous wildlife.

Since varying degrees of waste consumption are associated with general incineration (not resource recovery power/heat-generating facilities), the FAA considers the ash from general incinerators a regular waste disposal by-product and, therefore, a hazardous wildlife attractant if disposed of within the separation criteria outlined in Sections 1-2 through 1-4.

2-3. WATER MANAGEMENT FACILITIES. Drinking water intake and treatment facilities, storm water and wastewater treatment facilities, associated retention and settling ponds, ponds built for recreational use, and ponds that result from mining activities often attract large numbers of potentially hazardous wildlife. To prevent wildlife hazards, land-use developers and airport operators may need to develop management plans, in compliance with local and state regulations, to support the operation of storm water management facilities on or near all public-use airports to ensure a safe airport environment.

- a. Existing storm water management facilities.** On-airport storm water management facilities allow the quick removal of surface water, including discharges related to aircraft deicing, from impervious surfaces, such as pavement and terminal/hangar building roofs. Existing on-airport detention ponds collect storm water, protect water quality, and control runoff. Because they slowly release water

after storms, they create standing bodies of water that can attract hazardous wildlife. Where the airport has developed a Wildlife Hazard Management Plan (WHMP) in accordance with Part 139, the FAA requires immediate correction of any wildlife hazards arising from existing storm water facilities located on or near airports, using appropriate wildlife hazard mitigation techniques. Airport operators should develop measures to minimize hazardous wildlife attraction in consultation with a wildlife damage management biologist.

Where possible, airport operators should modify storm water detention ponds to allow a maximum 48-hour detention period for the design storm. The FAA recommends that airport operators avoid or remove retention ponds and detention ponds featuring dead storage to eliminate standing water. Detention basins should remain totally dry between rainfalls. Where constant flow of water is anticipated through the basin, or where any portion of the basin bottom may remain wet, the detention facility should include a concrete or paved pad and/or ditch/swale in the bottom to prevent vegetation that may provide nesting habitat.

When it is not possible to drain a large detention pond completely, airport operators may use physical barriers, such as bird balls, wires grids, pillows, or netting, to deter birds and other hazardous wildlife. When physical barriers are used, airport operators must evaluate their use and ensure they will not adversely affect water rescue. Before installing any physical barriers over detention ponds on Part 139 airports, airport operators must get approval from the appropriate FAA Regional Airports Division Office.

The FAA recommends that airport operators encourage off-airport storm water treatment facility operators to incorporate appropriate wildlife hazard mitigation techniques into storm water treatment facility operating practices when their facility is located within the separation criteria specified in Sections 1-2 through 1-4.

- b. New storm water management facilities.** The FAA strongly recommends that off-airport storm water management systems located within the separations identified in Sections 1-2 through 1-4 be designed and operated so as not to create above-ground standing water. Stormwater detention ponds should be designed, engineered, constructed, and maintained for a maximum 48-hour detention period after the design storm and remain completely dry between storms. To facilitate the control of hazardous wildlife, the FAA recommends the use of steep-sided, rip-rap lined, narrow, linearly shaped water detention basins. When it is not possible to place these ponds away from an airport's AOA, airport operators should use physical barriers, such as bird balls, wires grids, pillows, or netting, to prevent access of hazardous wildlife to open water and minimize aircraft-wildlife interactions. When physical barriers are used, airport operators must evaluate their use and ensure they will not adversely affect water rescue. Before installing any physical barriers over detention ponds on Part 139 airports, airport operators must get approval from the appropriate FAA Regional Airports Division Office. All vegetation in or around detention basins that provide food or cover for hazardous wildlife should be eliminated. If soil conditions and other requirements allow, the FAA encourages

the use of underground storm water infiltration systems, such as French drains or buried rock fields, because they are less attractive to wildlife.

- c. **Existing wastewater treatment facilities.** The FAA strongly recommends that airport operators immediately correct any wildlife hazards arising from existing wastewater treatment facilities located on or near the airport. Where required, a WHMP developed in accordance with Part 139 will outline appropriate wildlife hazard mitigation techniques. Accordingly, airport operators should encourage wastewater treatment facility operators to incorporate measures, developed in consultation with a wildlife damage management biologist, to minimize hazardous wildlife attractants. Airport operators should also encourage those wastewater treatment facility operators to incorporate these mitigation techniques into their standard operating practices. In addition, airport operators should consider the existence of wastewater treatment facilities when evaluating proposed sites for new airport development projects and avoid such sites when practicable.
- d. **New wastewater treatment facilities.** The FAA strongly recommends against the construction of new wastewater treatment facilities or associated settling ponds within the separations identified in Sections 1-2 through 1-4. Appendix 1 defines wastewater treatment facility as "any devices and/or systems used to store, treat, recycle, or reclaim municipal sewage or liquid industrial wastes." The definition includes any pretreatment involving the reduction of the amount of pollutants or the elimination of pollutants prior to introducing such pollutants into a publicly owned treatment works (wastewater treatment facility). During the site-location analysis for wastewater treatment facilities, developers should consider the potential to attract hazardous wildlife if an airport is in the vicinity of the proposed site, and airport operators should voice their opposition to such facilities if they are in proximity to the airport.
- e. **Artificial marshes.** In warmer climates, wastewater treatment facilities sometimes employ artificial marshes and use submergent and emergent aquatic vegetation as natural filters. These artificial marshes may be used by some species of flocking birds, such as blackbirds and waterfowl, for breeding or roosting activities. The FAA strongly recommends against establishing artificial marshes within the separations identified in Sections 1-2 through 1-4.
- f. **Wastewater discharge and sludge disposal.** The FAA recommends against the discharge of wastewater or sludge on airport property because it may improve soil moisture and quality on unpaved areas and lead to improved turf growth that can be an attractive food source for many species of animals. Also, the turf requires more frequent mowing, which in turn may mutilate or flush insects or small animals and produce straw, both of which can attract hazardous wildlife. In addition, the improved turf may attract grazing wildlife, such as deer and geese. Problems may also occur when discharges saturate unpaved airport areas. The resultant soft, muddy conditions can severely restrict or prevent emergency vehicles from reaching accident sites in a timely manner.

2-4. WETLANDS. Wetlands provide a variety of functions and can be regulated by local, state, and Federal laws. Normally, wetlands are attractive to many types of wildlife, including many which rank high on the list of hazardous wildlife species (Table 1).

NOTE: If questions exist as to whether an area qualifies as a wetland, contact the local division of the U.S. Army Corps of Engineers, the Natural Resources Conservation Service, or a wetland consultant qualified to delineate wetlands.

- a. **Existing wetlands on or near airport property.** If wetlands are located on or near airport property, airport operators should be alert to any wildlife use or habitat changes in these areas that could affect safe aircraft operations. At public-use airports, the FAA recommends immediately correcting, in cooperation with local, state, and Federal regulatory agencies, any wildlife hazards arising from existing wetlands located on or near airports. Where required, a WHMP will outline appropriate wildlife hazard mitigation techniques. Accordingly, airport operators should develop measures to minimize hazardous wildlife attraction in consultation with a wildlife damage management biologist.
- b. **New airport development.** Whenever possible, the FAA recommends locating new airports using the separations from wetlands identified in Sections 1-2 through 1-4. Where alternative sites are not practicable, or when airport operators are expanding an existing airport into or near wetlands, a wildlife damage management biologist, in consultation with the U.S. Fish and Wildlife Service, the U.S. Army Corps of Engineers, and the state wildlife management agency should evaluate the wildlife hazards and prepare a WHMP that indicates methods of minimizing the hazards.
- c. **Mitigation for wetland impacts from airport projects.** Wetland mitigation may be necessary when unavoidable wetland disturbances result from new airport development projects or projects required to correct wildlife hazards from wetlands. Wetland mitigation must be designed so it does not create a wildlife hazard. The FAA recommends that wetland mitigation projects that may attract hazardous wildlife be sited outside of the separations identified in Sections 1-2 through 1-4.
 - (1) **Onsite mitigation of wetland functions.** The FAA may consider exceptions to locating mitigation activities outside the separations identified in Sections 1-2 through 1-4 if the affected wetlands provide unique ecological functions, such as critical habitat for threatened or endangered species or ground water recharge, which cannot be replicated when moved to a different location. Using existing airport property is sometimes the only feasible way to achieve the mitigation ratios mandated in regulatory orders and/or settlement agreements with the resource agencies. Conservation easements are an additional means of providing mitigation for project impacts. Typically the airport operator continues to own the property, and an easement is created stipulating that the property will be maintained as habitat for state or Federally listed species.

Mitigation must not inhibit the airport operator's ability to effectively control hazardous wildlife on or near the mitigation site or effectively maintain other aspects of safe airport operations. Enhancing such mitigation areas to attract hazardous wildlife must be avoided. The FAA will review any onsite mitigation proposals to determine compatibility with safe airport operations. A wildlife damage management biologist should evaluate any wetland mitigation projects that are needed to protect unique wetland functions and that must be located in the separation criteria in Sections 1-2 through 1-4 before the mitigation is implemented. A WHMP should be developed to reduce the wildlife hazards.

(2) Offsite mitigation of wetland functions. The FAA recommends that wetland mitigation projects that may attract hazardous wildlife be sited outside of the separations identified in Sections 1-2 through 1-4 unless they provide unique functions that must remain onsite (see 2-4c(1)). Agencies that regulate impacts to or around wetlands recognize that it may be necessary to split wetland functions in mitigation schemes. Therefore, regulatory agencies may, under certain circumstances, allow portions of mitigation to take place in different locations.

(3) Mitigation banking. Wetland mitigation banking is the creation or restoration of wetlands in order to provide mitigation credits that can be used to offset permitted wetland losses. Mitigation banking benefits wetland resources by providing advance replacement for permitted wetland losses; consolidating small projects into larger, better-designed and managed units; and encouraging integration of wetland mitigation projects with watershed planning. This last benefit is most helpful for airport projects, as wetland impacts mitigated outside of the separations identified in Sections 1-2 through 1-4 can still be located within the same watershed. Wetland mitigation banks meeting the separation criteria offer an ecologically sound approach to mitigation in these situations. Airport operators should work with local watershed management agencies or organizations to develop mitigation banking for wetland impacts on airport property.

2-5. DREDGE SPOIL CONTAINMENT AREAS. The FAA recommends against locating dredge spoil containment areas (also known as Confined Disposal Facilities) within the separations identified in Sections 1-2 through 1-4 if the containment area or the spoils contain material that would attract hazardous wildlife.

2-6. AGRICULTURAL ACTIVITIES. Because most, if not all, agricultural crops can attract hazardous wildlife during some phase of production, the FAA recommends against the use of airport property for agricultural production, including hay crops, within the separations identified in Sections 1-2 through 1-4. If the airport has no financial alternative to agricultural crops to produce income necessary to maintain the viability of the airport, then the airport shall follow the crop distance guidelines listed in the table titled "Minimum Distances between Certain Airport Features and Any On-Airport Agricultural Crops" found in AC 150/5300-13, *Airport Design*, Appendix 17. The cost of wildlife control and potential accidents should be weighed against the income produced by the on-airport crops when deciding whether to allow crops on the airport.

- a. **Livestock production.** Confined livestock operations (i.e., feedlots, dairy operations, hog or chicken production facilities, or egg laying operations) often attract flocking birds, such as starlings, that pose a hazard to aviation. Therefore, The FAA recommends against such facilities within the separations identified in Sections 1-2 through 1-4. Any livestock operation within these separations should have a program developed to reduce the attractiveness of the site to species that are hazardous to aviation safety. Free-ranging livestock must not be grazed on airport property because the animals may wander onto the AOA. Furthermore, livestock feed, water, and manure may attract birds.
- b. **Aquaculture.** Aquaculture activities (i.e. catfish or trout production) conducted outside of fully enclosed buildings are inherently attractive to a wide variety of birds. Existing aquaculture facilities/activities within the separations listed in Sections 1-2 through 1-4 must have a program developed to reduce the attractiveness of the sites to species that are hazardous to aviation safety. Airport operators should also oppose the establishment of new aquaculture facilities/activities within the separations listed in Sections 1-2 through 1-4.
- c. **Alternative uses of agricultural land.** Some airports are surrounded by vast areas of farmed land within the distances specified in Sections 1-2 through 1-4. Seasonal uses of agricultural land for activities such as hunting can create a hazardous wildlife situation. In some areas, farmers will rent their land for hunting purposes. Rice farmers, for example, flood their land during waterfowl hunting season and obtain additional revenue by renting out duck blinds. The duck hunters then use decoys and call in hundreds, if not thousands, of birds, creating a tremendous threat to aircraft safety. A wildlife damage management biologist should review, in coordination with local farmers and producers, these types of seasonal land uses and incorporate them into the WHMP.

2-7. GOLF COURSES, LANDSCAPING AND OTHER LAND-USE CONSIDERATIONS.

- a. **Golf courses.** The large grassy areas and open water found on most golf courses are attractive to hazardous wildlife, particularly Canada geese and some species of gulls. These species can pose a threat to aviation safety. The FAA recommends against construction of new golf courses within the separations identified in Sections 1-2 through 1-4. Existing golf courses located within these separations must develop a program to reduce the attractiveness of the sites to species that are hazardous to aviation safety. Airport operators should ensure these golf courses are monitored on a continuing basis for the presence of hazardous wildlife. If hazardous wildlife is detected, corrective actions should be immediately implemented.
- b. **Landscaping and landscape maintenance.** Depending on its geographic location, landscaping can attract hazardous wildlife. The FAA recommends that airport operators approach landscaping with caution and confine it to airport areas not associated with aircraft movements. A wildlife damage management biologist should review all landscaping plans. Airport operators should also monitor all landscaped areas on a continuing basis for the presence of hazardous wildlife. If

hazardous wildlife is detected, corrective actions should be immediately implemented.

Turf grass areas can be highly attractive to a variety of hazardous wildlife species. Research conducted by the USDA Wildlife Services' National Wildlife Research Center has shown that no one grass management regime will deter all species of hazardous wildlife in all situations. In cooperation with wildlife damage management biologist, airport operators should develop airport turf grass management plans on a prescription basis, depending on the airport's geographic locations and the type of hazardous wildlife likely to frequent the airport.

Airport operators should ensure that plant varieties attractive to hazardous wildlife are not used on the airport. Disturbed areas or areas in need of re-vegetating should not be planted with seed mixtures containing millet or any other large-seed producing grass. For airport property already planted with seed mixtures containing millet, rye grass, or other large-seed producing grasses, the FAA recommends disking, plowing, or another suitable agricultural practice to prevent plant maturation and seed head production. Plantings should follow the specific recommendations for grass management and seed and plant selection made by the State University Cooperative Extension Service, the local office of Wildlife Services, or a qualified wildlife damage management biologist. Airport operators should also consider developing and implementing a preferred/prohibited plant species list, reviewed by a wildlife damage management biologist, which has been designed for the geographic location to reduce the attractiveness to hazardous wildlife for landscaping airport property.

- c. **Airports surrounded by wildlife habitat.** The FAA recommends that operators of airports surrounded by woodlands, water, or wetlands refer to Section 2.4 of this AC. Operators of such airports should provide for a Wildlife Hazard Assessment (WHA) conducted by a wildlife damage management biologist. This WHA is the first step in preparing a WHMP, where required.
- d. **Other hazardous wildlife attractants.** Other specific land uses or activities (e.g., sport or commercial fishing, shellfish harvesting, etc.), perhaps unique to certain regions of the country, have the potential to attract hazardous wildlife. Regardless of the source of the attraction, when hazardous wildlife is noted on a public-use airport, airport operators must take prompt remedial action(s) to protect aviation safety.

2-8. SYNERGISTIC EFFECTS OF SURROUNDING LAND USES. There may be circumstances where two (or more) different land uses that would not, by themselves, be considered hazardous wildlife attractants or that are located outside of the separations identified in Sections 1-2 through 1-4 that are in such an alignment with the airport as to create a wildlife corridor directly through the airport and/or surrounding airspace. An example of this situation may involve a lake located outside of the separation criteria on the east side of an airport and a large hayfield on the west side of an airport, land uses that together could create a flyway for Canada geese directly across the airspace of the airport. There are numerous examples of such situations;

therefore, airport operators and the wildlife damage management biologist must consider the entire surrounding landscape and community when developing the WHMP.

SECTION 3.

PROCEDURES FOR WILDLIFE HAZARD MANAGEMENT BY OPERATORS OF PUBLIC-USE AIRPORTS.

3.1. INTRODUCTION. In recognition of the increased risk of serious aircraft damage or the loss of human life that can result from a wildlife strike, the FAA may require the development of a Wildlife Hazard Management Plan (WHMP) when specific triggering events occur on or near the airport. Part 139.337 discusses the specific events that trigger a Wildlife Hazard Assessment (WHA) and the specific issues that a WHMP must address for FAA approval and inclusion in an Airport Certification Manual.

3.2. COORDINATION WITH USDA WILDLIFE SERVICES OR OTHER QUALIFIED WILDLIFE DAMAGE MANAGEMENT BIOLOGISTS. The FAA will use the Wildlife Hazard Assessment (WHA) conducted in accordance with Part 139 to determine if the airport needs a WHMP. Therefore, persons having the education, training, and expertise necessary to assess wildlife hazards must conduct the WHA. The airport operator may look to Wildlife Services or to qualified private consultants to conduct the WHA. When the services of a wildlife damage management biologist are required, the FAA recommends that land-use developers or airport operators contact a consultant specializing in wildlife damage management or the appropriate state director of Wildlife Services.

NOTE: Telephone numbers for the respective USDA Wildlife Services state offices can be obtained by contacting USDA Wildlife Services Operational Support Staff, 4700 River Road, Unit 87, Riverdale, MD, 20737-1234, Telephone (301) 734-7921, Fax (301) 734-5157 (<http://www.aphis.usda.gov/ws/>).

3-3. WILDLIFE HAZARD MANAGEMENT AT AIRPORTS: A MANUAL FOR AIRPORT PERSONNEL. This manual, prepared by FAA and USDA Wildlife Services staff, contains a compilation of information to assist airport personnel in the development, implementation, and evaluation of WHMPs at airports. The manual includes specific information on the nature of wildlife strikes, legal authority, regulations, wildlife management techniques, WHAs, WHMPs, and sources of help and information. The manual is available in three languages: English, Spanish, and French. It can be viewed and downloaded free of charge from the FAA's wildlife hazard mitigation web site: <http://wildlife-mitigation.tc.faa.gov/>. This manual only provides a starting point for addressing wildlife hazard issues at airports. Hazardous wildlife management is a complex discipline and conditions vary widely across the United States. Therefore, qualified wildlife damage management biologists must direct the development of a WHMP and the implementation of management actions by airport personnel.

There are many other resources complementary to this manual for use in developing and implementing WHMPs. Several are listed in the manual's bibliography.

3-4. WILDLIFE HAZARD ASSESSMENTS, TITLE 14, CODE OF FEDERAL REGULATIONS, PART 139. Part 139.337(b) requires airport operators to conduct a Wildlife Hazard Assessment (WHA) when certain events occur on or near the airport.

Part 139.337 (c) provides specific guidance as to what facts must be addressed in a WHA.

3-5. WILDLIFE HAZARD MANAGEMENT PLAN (WHMP). The FAA will consider the results of the WHA, along with the aeronautical activity at the airport and the views of the airport operator and airport users, in determining whether a formal WHMP is needed, in accordance with Part 139.337. If the FAA determines that a WHMP is needed, the airport operator must formulate and implement a WHMP, using the WHA as the basis for the plan.

The goal of an airport's Wildlife Hazard Management Plan is to minimize the risk to aviation safety, airport structures or equipment, or human health posed by populations of hazardous wildlife on and around the airport.

The WHMP must identify hazardous wildlife attractants on or near the airport and the appropriate wildlife damage management techniques to minimize the wildlife hazard. It must also prioritize the management measures.

3-6. LOCAL COORDINATION. The establishment of a Wildlife Hazards Working Group (WHWG) will facilitate the communication, cooperation, and coordination of the airport and its surrounding community necessary to ensure the effectiveness of the WHMP. The cooperation of the airport community is also necessary when new projects are considered. Whether on or off the airport, the input from all involved parties must be considered when a potentially hazardous wildlife attractant is being proposed. Airport operators should also incorporate public education activities with the local coordination efforts because some activities in the vicinity of your airport, while harmless under normal leisure conditions, can attract wildlife and present a danger to aircraft. For example, if public trails are planned near wetlands or in parks adjoining airport property, the public should know that feeding birds and other wildlife in the area may pose a risk to aircraft.

Airport operators should work with local and regional planning and zoning boards so as to be aware of proposed land-use changes, or modification of existing land uses, that could create hazardous wildlife attractants within the separations identified in Sections 1-2 through 1-4. Pay particular attention to proposed land uses involving creation or expansion of waste water treatment facilities, development of wetland mitigation sites, or development or expansion of dredge spoil containment areas. At the very least, airport operators must ensure they are on the notification list of the local planning board or equivalent review entity for all communities located within 5 miles of the airport, so they will receive notification of any proposed project and have the opportunity to review it for attractiveness to hazardous wildlife.

3-7 COORDINATION/NOTIFICATION OF AIRMEN OF WILDLIFE HAZARDS. If an existing land-use practice creates a wildlife hazard and the land-use practice or wildlife hazard cannot be immediately eliminated, airport operators must issue a Notice to Airmen (NOTAM) and encourage the land-owner or manager to take steps to control the wildlife hazard and minimize further attraction.

SECTION 4.

FAA NOTIFICATION AND REVIEW OF PROPOSED LAND-USE PRACTICE CHANGES IN THE VICINITY OF PUBLIC-USE AIRPORTS

4-1. FAA REVIEW OF PROPOSED LAND-USE PRACTICE CHANGES IN THE VICINITY OF PUBLIC-USE AIRPORTS.

- a. The FAA discourages the development of waste disposal and other facilities, discussed in Section 2, located within the 5,000/10,000-foot criteria specified in Sections 1-2 through 1-4.
- b. For projects that are located outside the 5,000/10,000-foot criteria but within 5 statute miles of the airport's AOA, the FAA may review development plans, proposed land-use changes, operational changes, or wetland mitigation plans to determine if such changes present potential wildlife hazards to aircraft operations. The FAA considers sensitive airport areas as those that lie under or next to approach or departure airspace. This brief examination should indicate if further investigation is warranted.
- c. Where a wildlife damage management biologist has conducted a further study to evaluate a site's compatibility with airport operations, the FAA may use the study results to make a determination.

4-2. WASTE MANAGEMENT FACILITIES.

- a. **Notification of new/expanded project proposal.** Section 503 of the Wendell H. Ford Aviation Investment and Reform Act for the 21st Century (Public Law 106-181) limits the construction or establishment of new MSWLF within 6 statute miles of certain public-use airports, when both the airport and the landfill meet very specific conditions. See Section 2-2 of this AC and AC 150/5200-34 for a more detailed discussion of these restrictions.

The Environmental Protection Agency (EPA) requires any MSWLF operator proposing a new or expanded waste disposal operation within 5 statute miles of a runway end to notify the appropriate FAA Regional Airports Division Office and the airport operator of the proposal (40 CFR 258, *Criteria for Municipal Solid Waste Landfills*, Section 258.10, *Airport Safety*). The EPA also requires owners or operators of new MSWLF units, or lateral expansions of existing MSWLF units, that are located within 10,000 feet of any airport runway end used by turbojet aircraft, or within 5,000 feet of any airport runway end used only by piston-type aircraft, to demonstrate successfully that such units are not hazards to aircraft. (See 4-2.b below.)

When new or expanded MSWLF are being proposed near airports, MSWLF operators must notify the airport operator and the FAA of the proposal as early as possible pursuant to 40 CFR 258.

- b. Waste handling facilities within separations identified in Sections 1-2 through 1-4.** To claim successfully that a waste-handling facility sited within the separations identified in Sections 1-2 through 1-4 does not attract hazardous wildlife and does not threaten aviation, the developer must establish convincingly that the facility will not handle putrescible material other than that as outlined in 2-2.d. The FAA strongly recommends against any facility other than that as outlined in 2-2.d (enclosed transfer stations). The FAA will use this information to determine if the facility will be a hazard to aviation.
- c. Putrescible-Waste Facilities.** In their effort to satisfy the EPA requirement, some putrescible-waste facility proponents may offer to undertake experimental measures to demonstrate that their proposed facility will not be a hazard to aircraft. To date, no such facility has been able to demonstrate an ability to reduce and sustain hazardous wildlife to levels that existed before the putrescible-waste landfill began operating. For this reason, demonstrations of experimental wildlife control measures may not be conducted within the separation identified in Sections 1-2 through 1-4.

4-3. OTHER LAND-USE PRACTICE CHANGES. As a matter of policy, the FAA encourages operators of public-use airports who become aware of proposed land use practice changes that may attract hazardous wildlife within 5 statute miles of their airports to promptly notify the FAA. The FAA also encourages proponents of such land use changes to notify the FAA as early in the planning process as possible. Advanced notice affords the FAA an opportunity (1) to evaluate the effect of a particular land-use change on aviation safety and (2) to support efforts by the airport sponsor to restrict the use of land next to or near the airport to uses that are compatible with the airport.

The airport operator, project proponent, or land-use operator may use FAA Form 7460-1, *Notice of Proposed Construction or Alteration*, or other suitable documents similar to FAA Form 7460-1 to notify the appropriate FAA Regional Airports Division Office. Project proponents can contact the appropriate FAA Regional Airports Division Office for assistance with the notification process.

It is helpful if the notification includes a 15-minute quadrangle map of the area identifying the location of the proposed activity. The land-use operator or project proponent should also forward specific details of the proposed land-use change or operational change or expansion. In the case of solid waste landfills, the information should include the type of waste to be handled, how the waste will be processed, and final disposal methods.

- a. Airports that have received Federal grant-in-aid assistance.** Airports that have received Federal grant-in-aid assistance are required by their grant assurances to take appropriate actions to restrict the use of land next to or near the airport to uses that are compatible with normal airport operations. The FAA recommends that airport operators to the extent practicable oppose off-airport land-use changes or practices within the separations identified in Sections 1-2 through 1-4 that may attract hazardous wildlife. Failure to do so may lead to noncompliance with applicable grant assurances. The FAA will not approve the placement of airport

development projects pertaining to aircraft movement in the vicinity of hazardous wildlife attractants without appropriate mitigating measures. Increasing the intensity of wildlife control efforts is not a substitute for eliminating or reducing a proposed wildlife hazard. Airport operators should identify hazardous wildlife attractants and any associated wildlife hazards during any planning process for new airport development projects.

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APPENDIX 1. DEFINITIONS OF TERMS USED IN THIS ADVISORY CIRCULAR.

1. GENERAL. This appendix provides definitions of terms used throughout this AC.

1. **Air operations area.** Any area of an airport used or intended to be used for landing, takeoff, or surface maneuvering of aircraft. An air operations area includes such paved areas or unpaved areas that are used or intended to be used for the unobstructed movement of aircraft in addition to its associated runway, taxiways, or apron.
2. **Airport operator.** The operator (private or public) or sponsor of a public-use airport.
3. **Approach or departure airspace.** The airspace, within 5 statute miles of an airport, through which aircraft move during landing or takeoff.
4. **Bird balls.** High-density plastic floating balls that can be used to cover ponds and prevent birds from using the sites.
5. **Certificate holder.** The holder of an Airport Operating Certificate issued under Title 14, Code of Federal Regulations, Part 139.
6. **Construct a new MSWLF.** To begin to excavate, grade land, or raise structures to prepare a municipal solid waste landfill as permitted by the appropriate regulatory or permitting agency.
7. **Detention ponds.** Storm water management ponds that hold storm water for short periods of time, a few hours to a few days.
8. **Establish a new MSWLF.** When the first load of putrescible waste is received on-site for placement in a prepared municipal solid waste landfill.
9. **Fly ash.** The fine, sand-like residue resulting from the complete incineration of an organic fuel source. Fly ash typically results from the combustion of coal or waste used to operate a power generating plant.
10. **General aviation aircraft.** Any civil aviation aircraft not operating under 14 CFR Part 119, Certification: Air Carriers and Commercial Operators.
11. **Hazardous wildlife.** Species of wildlife (birds, mammals, reptiles), including feral animals and domesticated animals not under control, that are associated with aircraft strike problems, are capable of causing structural damage to airport facilities, or act as attractants to other wildlife that pose a strike hazard.
12. **Municipal Solid Waste Landfill (MSWLF).** A publicly or privately owned discrete area of land or an excavation that receives household waste and that is not a land application unit, surface impoundment, injection well, or waste pile, as those terms are defined under 40 CFR § 257.2. An MSWLF may receive

other types wastes, such as commercial solid waste, non-hazardous sludge, small-quantity generator waste, and industrial solid waste, as defined under 40 CFR § 258.2. An MSWLF can consist of either a stand alone unit or several cells that receive household waste.

13. **New MSWLF.** A municipal solid waste landfill that was established or constructed after April 5, 2001.
14. **Piston-powered aircraft.** Fixed-wing aircraft powered by piston engines.
15. **Piston-use airport.** Any airport that does not sell Jet-A fuel for fixed-wing turbine-powered aircraft, and primarily serves fixed-wing, piston-powered aircraft. Incidental use of the airport by turbine-powered, fixed-wing aircraft would not affect this designation. However, such aircraft should not be based at the airport.
16. **Public agency.** A State or political subdivision of a State, a tax-supported organization, or an Indian tribe or pueblo (49 U.S.C. § 47102(19)).
17. **Public airport.** An airport used or intended to be used for public purposes that is under the control of a public agency; and of which the area used or intended to be used for landing, taking off, or surface maneuvering of aircraft is publicly owned (49 U.S.C. § 47102(20)).
18. **Public-use airport.** An airport used or intended to be used for public purposes, and of which the area used or intended to be used for landing, taking off, or surface maneuvering of aircraft may be under the control of a public agency or privately owned and used for public purposes (49 U.S.C. § 47102(21)).
19. **Putrescible waste.** Solid waste that contains organic matter capable of being decomposed by micro-organisms and of such a character and proportion as to be capable of attracting or providing food for birds (40 CFR §257.3-8).
20. **Putrescible-waste disposal operation.** Landfills, garbage dumps, underwater waste discharges, or similar facilities where activities include processing, burying, storing, or otherwise disposing of putrescible material, trash, and refuse.
21. **Retention ponds.** Storm water management ponds that hold water for several months.
22. **Runway protection zone (RPZ).** An area off the runway end to enhance the protection of people and property on the ground (see AC 150/5300-13). The dimensions of this zone vary with the airport design, aircraft, type of operation, and visibility minimum.
23. **Scheduled air carrier operation.** Any common carriage passenger-carrying operation for compensation or hire conducted by an air carrier or commercial

operator for which the air carrier, commercial operator, or their representative offers in advance the departure location, departure time, and arrival location. It does not include any operation that is conducted as a supplemental operation under 14 CFR Part 119 or as a public charter operation under 14 CFR Part 380 (14 CFR § 119.3).

24. **Sewage sludge.** Any solid, semi-solid, or liquid residue generated during the treatment of domestic sewage in a treatment works. Sewage sludge includes, but is not limited to, domestic septage; scum or solids removed in primary, secondary, or advanced wastewater treatment process; and a material derived from sewage sludge. Sewage does not include ash generated during the firing of sewage sludge in a sewage sludge incinerator or grit and screenings generated during preliminary treatment of domestic sewage in a treatment works. (40 CFR 257.2)
25. **Sludge.** Any solid, semi-solid, or liquid waste generated from a municipal, commercial or industrial wastewater treatment plant, water supply treatment plant, or air pollution control facility or any other such waste having similar characteristics and effect. (40 CFR 257.2)
26. **Solid waste.** Any garbage, refuse, sludge, from a waste treatment plant, water supply treatment plant or air pollution control facility and other discarded material, including, solid liquid, semisolid, or contained gaseous material resulting from industrial, commercial, mining, and agricultural operations, and from community activities, but does not include solid or dissolved materials in domestic sewage, or solid or dissolved material in irrigation return flows or industrial discharges which are point sources subject to permits under section 402 of the Federal Water Pollution Control Act, as amended (86 Stat. 880), or source, special nuclear, or by product material as defined by the Atomic Energy Act of 1954, as amended, (68 Stat. 923). (40 CFR 257.2)
27. **Turbine-powered aircraft.** Aircraft powered by turbine engines including turbojets and turboprops but excluding turbo-shaft rotary-wing aircraft.
28. **Turbine-use airport.** Any airport that sells Jet-A fuel for fixed-wing turbine-powered aircraft.
29. **Wastewater treatment facility.** Any devices and/or systems used to store, treat, recycle, or reclaim municipal sewage or liquid industrial wastes, including Publicly Owned Treatment Works (POTW), as defined by Section 212 of the Federal Water Pollution Control Act (P.L. 92-500) as amended by the Clean Water Act of 1977 (P.L. 95-576) and the Water Quality Act of 1987 (P.L. 100-4). This definition includes any pretreatment involving the reduction of the amount of pollutants, the elimination of pollutants, or the alteration of the nature of pollutant properties in wastewater prior to or in lieu of discharging or otherwise introducing such pollutants into a POTW. (See 40 CFR Section 403.3 (q), (r), & (s)).

- 30. Wildlife.** Any wild animal, including without limitation any wild mammal, bird, reptile, fish, amphibian, mollusk, crustacean, arthropod, coelenterate, or other invertebrate, including any part, product, egg, or offspring thereof (50 CFR 10.12, *Taking, Possession, Transportation, Sale, Purchase, Barter, Exportation, and Importation of Wildlife and Plants*). As used in this AC, wildlife includes feral animals and domestic animals out of the control of their owners (14 CFR Part 139, Certification of Airports).
- 31. Wildlife attractants.** Any human-made structure, land-use practice, or human-made or natural geographic feature that can attract or sustain hazardous wildlife within the landing or departure airspace or the airport's AOA. These attractants can include architectural features, landscaping, waste disposal sites, wastewater treatment facilities, agricultural or aquaculture activities, surface mining, or wetlands.
- 32. Wildlife hazard.** A potential for a damaging aircraft collision with wildlife on or near an airport.
- 33. Wildlife strike.** A wildlife strike is deemed to have occurred when:
- a. A pilot reports striking 1 or more birds or other wildlife;
 - b. Aircraft maintenance personnel identify aircraft damage as having been caused by a wildlife strike;
 - c. Personnel on the ground report seeing an aircraft strike 1 or more birds or other wildlife;
 - d. Bird or other wildlife remains, whether in whole or in part, are found within 200 feet of a runway centerline, unless another reason for the animal's death is identified;
 - e. The animal's presence on the airport had a significant negative effect on a flight (i.e., aborted takeoff, aborted landing, high-speed emergency stop, aircraft left pavement area to avoid collision with animal) (Transport Canada, Airports Group, *Wildlife Control Procedures Manual*, Technical Publication 11500E, 1994).

2. RESERVED.

14. County of Maui, Department of Environmental Management

ALAN M. ARAKAWA
Mayor

KYLE K. GINOZA, P.E.
Director

MICHAEL M. MIYAMOTO
Deputy Director



MICHAEL RATTE
Solid Waste Division

ERIC NAKAGAWA, P.E.
Wastewater Reclamation Division

**COUNTY OF MAUI
DEPARTMENT OF
ENVIRONMENTAL MANAGEMENT**

2050 MAIN STREET, SUITE 1C
WAILUKU, MAUI, HAWAII 96793

June 17, 2015

Planning Consultants Hawaii LLC
2331 W. Main Street
Wailuku, Hawaii 96793

**SUBJECT: WAIKAPU COUNTRY TOWN
ENVIRONMENTAL IMPACT STATEMENT PREPARATION NOTICE
TMK (2) 3-6-002:001, (2) 3-6-002:003, (2) 3-6-004:003, (2) 3-6-
004:006, (2) 3-6-005:007, (2) 3-6-006:036, WAILUKU, MAUI**

We reviewed the subject application and have the following comments:

1. Solid Waste Division comments:
 - a. Estimate quantities for the types of construction waste that will be landfilled.
2. Wastewater Reclamation Division (WWRD) comments:
 - a. The development will not be allowed to connect to the existing County wastewater collection system and treatment plant as its ultimate disposal plan.
 - b. The Wailuku-Kahului Wastewater Reclamation Facility does not have the capacity to accept flows from outside the current service area in perpetuity without a project to increase its capacity.
 - c. The existing collection system is inadequate and unable to accept flows from this development without significant upgrades.
 - d. Developer shall work with the County of Maui and adjacent developers to complete a master planned treatment solution for the Waikapu area.
 - e. Developer shall contribute their fair share to the implementation of the final treatment solution.
 - f. The Department of Environmental Management and the Wastewater Reclamation Division will provide additional comments upon review of the Preliminary Engineering Report prepared for the EIS.

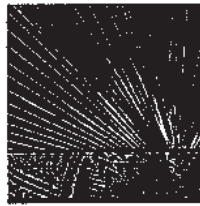
Planning Consultants Hawaii LLC
June 17, 2015
Page 2 of 2

If you have any questions regarding this memorandum, please contact Michael Miyamoto at 270-8230.

Sincerely,

A handwritten signature in black ink, appearing to read 'K. Ginoza', with a long horizontal stroke extending to the right.

KYLE K. GINOZA, P.E.
Director of Environmental Management



**PLANNING
CONSULTANTS
HAWAII, LLC**

URBAN & REGIONAL PLANNING

Land Use Planning • Sustainability Services • Community Planning • Development Permits

January 7, 2016

Mr. Stewart Stant
Director of Environmental Management
County of Maui
Department of Environmental Management
2050 Main Street, Suite 1C
Wailuku, Maui, Hawaii 96793

Dear Mr. Stant:

Re: **Environmental Assessment / Environmental Impact Statement**
Preparation Notice for the Proposed Waikapu Country Town Project in
Waikapu, Maui, Hawaii; TMK Nos: (2) 3-6-002:001, (2) 3-6-002:003, (2) 3-6-
4:003, (2) 3-6-004:006, (2) 3-6-005:007 and (2) 3-6-006:036.

This is in response to former Director Kyle Ginoza's letter dated June 17, 2015 regarding the above-referenced project. In response to the Department's comments, please find the following responses:

- **Solid Waste Division**

Construction Waste. During the construction phase, construction activities will require the disposal of the existing on-site waste, as well as cleared vegetation and construction-related solid waste. Using a 2003 publication by the Environmental Protection Agency (EPA) entitled "Estimating 2003 Building-Related Construction and Demolition Material Amounts", multipliers of 4.39 pounds per square feet of construction for residential and 4.34 pounds per square feet of construction for commercial buildings were used to determine potential construction waste generated by the Project. Using these factors, it is estimated that during the construction phase (2017-2026) residential construction waste might total approximately 8.7 million pounds or 4,350 tons of waste. The commercial component would generate approximately 736,000 pounds or 368 tons of waste through 2026.

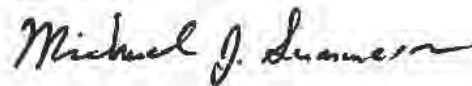
- **Wastewater Division Comments**

Wailuku-Kahului Wastewater Reclamation Facility. The Applicant has consulted with the Wastewater Division to discuss wastewater treatment options for the project since 2013. During these meetings, and in a subsequent letter dated July 16, 2013 from the Division, it was noted that significant off-site improvements to the transmission system would be required to accept additional flows from the project (See Exhibit 1, "Letter date July 16, 2013" and Exhibit 2, "Meeting Minutes dated November 25, 2013"). The Division has stated that a master planned wastewater treatment system to accommodate growth within the Waikapu area will be required for full built-out of the Project, as well as for other proposed developments within the immediate area.

The Applicant intends to continue working with the Department to develop a wastewater treatment program for the Project that best serves the immediate and long-term needs of the County.

Should you have any questions, please contact me at (808) 269-6220 or by e-mail at msummers@planningconsultantshawaii.com.

Sincerely yours,



Michael J. Summers
President

Attachment

c: Mr. Michael Atherton
Mr. Albert Boyce

15. County of Maui, Department of Housing and Human Concerns



DEPARTMENT OF
HOUSING AND HUMAN CONCERNS
HOUSING DIVISION
COUNTY OF MAUI

ALAN M. ARAKAWA
Mayor

JO-ANN T. RIDAO
Director

JAN SHISHIDO
Deputy Director

35 LUNALILO STREET, SUITE 102 • WAILUKU, HAWAII 96793 • PHONE (808) 270-7351 • FAX (808) 270-6284

June 1, 2015

Mr. Michael J. Summers, President
Planning Consultants Hawaii LLC
2331 W. Main Street
Wailuku, HI 96793

Dear Mr. Summers:

**Subject: Environmental Impact Statement Preparation Notice (EISPN)
for Waikapu Country Town of Maui, Hawaii. TMK's (2) 3-6-
002:001, (2) 3-6-002:003, (2) 3-6-004:003, (2) 3-6-004:006, (2) 3-
6-005:007 and (2) 3-6-006:036**

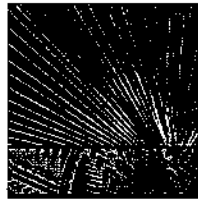
Thank you for the opportunity to review the Environmental Impact Statement Preparation Notice for the subject property. Based on our review, we have determined that the subject project is subject to Chapter 2.96, Maui County Code that a Residential Workforce Housing agreement is required with the Department of Housing and Human Concerns. At the present time, the Department has no additional comments to offer.

Please call Mr. Veranio Tongson Jr. of our Housing Division at 270-1741 if you have any questions.

Sincerely,

WAYDE T. OSHIRO
Housing Administrator

cc: Director of Housing and Human Concerns
Land Use Commission



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HAWAII, LLC**

URBAN & REGIONAL PLANNING

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January 7, 2016

Mr. Wayde T. Oshiro
Housing Administrator
County of Maui
Department of Housing and Human Concerns
35 Lunalilo Street, Suite 102
Wailuku, Maui, Hawaii 96793

Dear Mr. Oshiro:

Re: **Environmental Assessment / Environmental Impact Statement
Preparation Notice** for the Proposed Waikapu Country Town Project in
Waikapu, Maui, Hawaii; TMK Nos: (2) 3-6-002:001, (2) 3-6-002:003, (2) 3-6-
4:003, (2) 3-6-004:006, (2) 3-6-005:007 and (2) 3-6-006:036.

Thank you for your letter dated June 1, 2015 regarding the above-referenced project.

The Applicant acknowledges that the project will be subject to the requirements of Chapter 2.96, Maui County Code, which requires that the Applicant enter into a workforce housing agreement with the Department.

Thank you for your interest in the project. The Applicant looks forward to working closely with the Department as the project proceeds through the land use entitlement process. Should you have any questions, please contact me at (808) 269-6220 or by e-mail at msummers@planningconsultantshawaii.com.

Mr. Wade T. Oshiro
Housing Administrator
Department of Housing and Human Concerns
RE: Waikapu Country Town EA/EISPN
January 7, 2015
Page 2

Sincerely yours,

A handwritten signature in black ink that reads "Michael J. Summers". The signature is written in a cursive style with a long, sweeping underline.

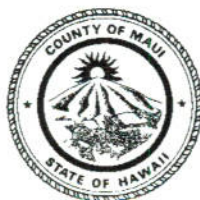
Michael J. Summers
President

Attachment

c: Mr. Michael Atherton
Mr. Albert Boyce

16. County of Maui, Department of Parks and Recreation

ALAN M. ARAKAWA
Mayor



KA'ALA BUENCONSEJO
Director

BRIANNE L. SAVAGE
Deputy Director

DEPARTMENT OF PARKS & RECREATION

700 Hali'a Nakoa Street, Unit 2, Wailuku, Hawaii 96793

(808) 270-7230
FAX (808) 270-7934

May 27, 2015

Mr. Michael Summers, President
Planning Consultants Hawaii, LLC
2331 West Main Street
Wailuku, Hawaii 96793

Dear Mr. Summers:

**SUBJECT: ENVIRONMENTAL IMPACT STATEMENT PREPARATION NOTICE
(EISPN) FOR PROPOSED WAIKAPU COUNTRY TOWN AT
TMK: (2) 3-6-002:001, (2) 3-6-002:003, (2) 3-6-004:003, (2) 3-6-004:006,
(2) 3-6-005:007 AND (2) 3-6-006:036
WAILUKU, MAUI, HAWAII**

Thank you for the opportunity to review and comment on the subject project.

The Department of Parks & Recreation has concerns regarding the effect the proposed project will have on the neighboring Waikapu Park and Community Center, and future County Baseyard and Central Maui Regional Park. We request for the EIS to address these concerns, as well as include detailed plans for the park areas proposed to be developed. We reserve further comments until such detailed plans for the park areas can be reviewed.

Should you have any questions or concerns, please feel free to contact me, or Robert Halvorson, Chief of Planning and Development, at 270-7931.

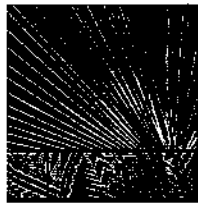
Sincerely,

A handwritten signature in black ink, appearing to read "Ka'ala Buenconsejo".

KA'ALA BUENCONSEJO
Director of Parks & Recreation

c: Robert Halvorson, Chief of Planning and Development

KB:RH:csa



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January 7, 2016

Mr. Ka`ala Buenconsejo
Director of Environmental Management
County of Maui
Department of Parks & Recreation
700 Hali`a Nakoa Street, Unit 2
Wailuku, Maui, Hawaii 96793

Dear Mr. Buenconsejo:

Re: **Environmental Assessment** / Environmental Impact Statement
Preparation Notice for the Proposed Waikapu Country Town Project in
Waikapu, Maui, Hawaii; TMK Nos: (2) 3-6-002:001, (2) 3-6-002:003, (2) 3-6-
4:003, (2) 3-6-004:006, (2) 3-6-005:007 and (2) 3-6-006:036.

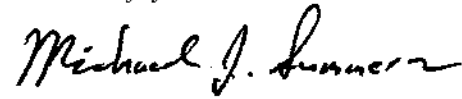
Thank you for your letter dated May 27, 2015 regarding the above-referenced project.

The Project will include active and passive recreation opportunities in a variety of configurations throughout the project site. The proposed park sites are identified and described in the DEIS. Moreover, the DEIS documents the Project's impacts upon neighboring lands uses, including County park facilities.

The Applicant looks forward to working closely with the Department of Parks and Recreation to ensure that the Project's park facilities adequately serve the needs of future project residents as well as current and future residents of Waikapu. Should you have any questions, please contact me at (808) 269-6220 or by e-mail at msummers@planningconsultantshawaii.com.

Mr. Ka'ala Buenconsejo
Director
Department of Parks and Recreation
RE: Waikapu Country Town EA/EISPN
January 7, 2015
Page 2

Sincerely yours,

A handwritten signature in black ink that reads "Michael J. Summers". The signature is written in a cursive style with a large, stylized "M" and a long, sweeping underline.

Michael J. Summers
President

Attachment

c: Mr. Michael Atherton
Mr. Albert Boyce

17. County of Maui, Department of Planning

ALAN M. ARAKAWA
Mayor

WILLIAM R. SPENCE
Director

MICHELE CHOUTEAU McLEAN
Deputy Director



COUNTY OF MAUI
DEPARTMENT OF PLANNING

June 9, 2015

Mr. Michael J. Summers, President
Planning Consultants Hawaii, LLC
2331 West Main Street
Wailuku, Hawaii 96793

Dear Mr. Summers:

SUBJECT: REQUEST FOR COMMENT ON EARLY CONSULTATION FOR THE PREPARATION OF A DRAFT ENVIRONMENTAL IMPACT STATEMENT (EIS) PREPARED FOR A PETITION FOR A STATE LAND USE DISTRICT BOUNDARY AMENDMENT AND ANTICIPATED APPLICATIONS FOR A COMMUNITY PLAN AMENDMENT, CHANGE IN ZONING, AND PROJECT DISTRICT FOR THE PROPOSED WAIKAPU COUNTRY TOWN, LOCATED AT WAIKAPU, ISLAND OF MAUI, HAWAII; TMK: (2) 3-6-002:003 (POR), (2) 3-6-004:003 (POR), (2) 3-6-004:006 (POR), AND (2) 3-6-005:007 (POR) (RFC 2015/0069)

The Department of Planning (Department) is in receipt of the above-referenced document for the proposed Waikapu Country Town (Project). The Department concurred with the Petitioner that the State of Hawaii Land Use Commission should be the Accepting Authority for an environmental document and that an EIS is the appropriate document and that the Petitioner should proceed in the preparation of an EIS. On April 29, 2015, the State of Hawaii Land Use Commission agreed to be the Accepting Authority pursuant to Chapter 343, Hawaii Revised Statutes; and, determined that the proposed action may have a significant impact upon the environment to warrant proceeding directly to the preparation of an EIS.

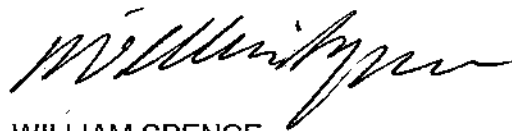
Based on the foregoing, the Department provides the following comments with regards to the scope of work for the proposed Project and related District Boundary Amendment, Community Plan Amendment, Change in Zoning, and Project District applications:

1. Clearly outline how the Project is consistent with and meets the policies, goals, objectives, and implementing actions of the Maui County General Plan with an in-depth review of the Maui Island Plan, the Wailuku-Kahului Community Plan, and County Zoning;
2. Provide an in-depth analysis of Project impacts and mitigation measures to: 1) roadway infrastructure, 2) utilities, 3) drainage, 4) water supply, 5) wastewater, and any other public services;

3. Particular attention should be made to the Project's impact to views along the Honoapiilani Highway (Highway) of proposed construction. View simulations along the Highway should be included in the presentation and measures implemented to minimize impacts to views especially to the West Maui mountains;
4. Provide model streetscape scenes in various Project locations in order to help the Commissioners visualize the final build-out of the Project;
5. Outline road, infrastructure, landscape, and design connections of the proposed Project to adjacent neighborhoods; and
6. Outline energy, water, and other conservation measures to be employed during and after construction of the Project.

Thank you for the opportunity to comment on this Project of considerable magnitude and impact to the Maui Island community. The complexity of this Project is reflected in the decision to move forward on an EIS. The Department appreciates your anticipated responsiveness to the above comments regarding the proposed Draft EIS and will be reviewing the Draft EIS in detail along with submitting the Draft EIS for review and comment by the Maui Planning Commission prior to deliberations by the State of Hawaii Land Use Commission. Should you have any questions about the comments in this letter, please contact Staff Planner Kurt Wollenhaupt by email at kurt.wollenhaupt@mauicounty.gov or by phone at (808) 270-1789.

Sincerely,

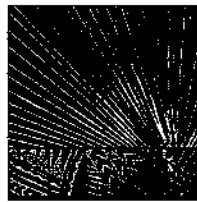


WILLIAM SPENCE
Planning Director

xc: Clayton I. Yoshida, AICP, Planning Program Administrator (PDF)
John S. Rapacz, Planning Program Administrator (PDF)
Kurt F. Wollenhaupt, Staff Planner (PDF)
Project File
General File

WRS:KFW:nt

K:\WP_DOCS\PLANNING\RFC\2015\0069_WaikapuCountryTown\WaikapuCTEISPN_Comments.DOC



**PLANNING
CONSULTANTS
HAWAII, LLC**

URBAN & REGIONAL PLANNING

Land Use Planning • Sustainability Services • Community Planning • Development Permits

January 7, 2016

Mr. William Spence
Planning Director
County of Maui
Department of Planning
One Main Plaza Building
2200 Main Street, Suite 315
Wailuku, Maui, Hawaii 96793

Dear Mr. Spence:

Re: **Environmental Assessment** / Environmental Impact Statement
Preparation Notice for the Proposed Waikapu Country Town Project in
Waikapu, Maui, Hawaii; TMK Nos: (2) 3-6-002:001, (2) 3-6-002:003, (2) 3-6-
4:003, (2) 3-6-004:006, (2) 3-6-005:007 and (2) 3-6-006:036.

Thank you for your letter dated June 9, 2015 regarding the above-referenced project. In response to your comments, please find the following responses:

1. The Draft Environmental Impact Statement (DEIS) provides an in-depth discussion of the Project's consistency with the goals, objectives, policies and implementing actions of the Maui Island Plan, Wailuku-Kahului Community Plan and County Zoning.
2. The DEIS provides an in-depth analysis of the Project's potential impacts and mitigation measures to infrastructure and public facilities including the following: 1) roadways, 2) utilities, 3) drainage, 4) water supply, 5) wastewater and other infrastructure and public facility systems.

3. The DEIS addresses the Project's visual impacts along the Honoapiilani Highway. Visual simulations of expected post-project conditions have been conducted and are included in the report.
4. The DEIS includes model streetscape renderings in various project locations. These design renderings provide a sense of vision and place that the Applicant and Design Team hope to achieve through development of the project site in accordance with the to be adopted project district ordinance and supporting design guidelines.
5. The DEIS identifies and describes infrastructure and public facility connectivity between the Project and present and future neighboring residential and commercial developments.
6. The DIES includes a thorough description of energy, water and other conservation measures to be implemented by the Project. Sustainability goals, objectives and policies are included in the DEIS and a more detailed Sustainability Plan is being prepared.

Thank you very much for your interest in the project, while we look forward to working with your office as we proceed through the land use entitlement process. Should you have any questions, please contact me at (808) 269-6220 or by e-mail at msummers@planningconsultantshawaii.com.

Sincerely yours,

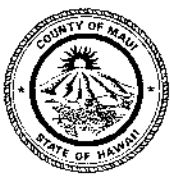


Michael J. Summers
President

Attachment

c: Mr. Michael Atherton
Mr. Albert Boyce

18. County of Maui, Police Department



ALAN M. ARAKAWA
MAYOR

OUR REFERENCE

YOUR REFERENCE

POLICE DEPARTMENT

COUNTY OF MAUI

55 MAHALANI STREET
WAILUKU, HAWAII 96793
(808) 244-6400
FAX (808) 244-6411



TIVOLI S. FAAUMU
CHIEF OF POLICE

DEAN M. RICKARD
DEPUTY CHIEF OF POLICE

June 2, 2015

Mr. Michael J. Summers
President
Planning Consultants Hawaii LLC
2331 W. Main Street
Wailuku, HI 96793

Dear Mr. Summers:

SUBJECT: Waikapu Country Town

This is in response to your letter, requesting comments and information on the above project.

We have reviewed the Environmental Impact Statement prepared for the project. Please refer to the enclosed copy of a report submitted by Officer Aylett Wallwork from Wailuku Patrol.

Thank you for giving us the opportunity to comment on this project.

Sincerely,

Assistant Chief Victor K. Ramos
for: Tivoli S. Faaumu
Chief of Police

c: Mr. Will Spence, Planning Dept.

Enclosure

TO : TIVOLI S. FAAUMU, CHIEF OF POLICE, COUNTY OF MAUI

VIA : CHANNELS

FROM : AYLETT WALLWORK, POLICE OFFICER III, COMMUNITY
POLICING

SUBJECT : WAIKAPU COUNTRY TOWN PROJECT

[Signature]
Victor K. Ramos
Assistant Chief
06/01/15

This communication is submitted regarding the Waikapu Country Town project's request for any additional comments or questions that the department would like addressed in their Draft Environmental Impact Statement (DEIS).

In review of the submitted documents, concerns from the police perspective are upon the safety of pedestrian and vehicular movement. However a Traffic Impact Analysis Report (TIAR) will be conducted at a later date.

Police coverage should be addressed, due to the study on Police protection that was done in 2005, and since then there has been several new developments such as Department of Hawaiian Homelands (Waiehu Kou, 2005 – 2014), Wailuku Country Estates (2005), Kehalani (2007 - 2020), Waikapu Gardens (2007 – 2016), Waiolani Phase II (2009), and Maui Lani (1998 – 2018). Waikapu County Town will be adding over 1,400 new residences, taxing the Police Department services. Fire and other emergency services have been considered for this project, but not Police Services.

CONCLUSION:

Draft Environmental Impact Statement should include the results of the Traffic Impact Analysis Report (TIAR). The impact upon Police services should also be considered as over 1,400 new residences will be added to Waikapu. As a result, Police services in Wailuku and Kahului will be directly affected.

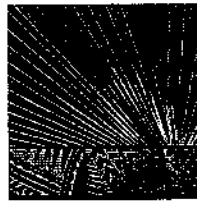
Respectfully submitted,

[Signature] 11764
Aylett WALLORK e#11764
P.O.III, Wailuku Patrol, Community Policing
05/26/2015@1215 hours

[Signature]
6/1/15

Off Aylett Wallwork points out that with a new development, the traffic will definitely impact the area (Waikapu). Safety of pedestrian and vehicular movement is also affected. Other concerns are the effects upon all emergency services.

Sgt R. [Signature] 05/26/15 @ 0745 hrs



**PLANNING
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January 7, 2016

Mr. Tivoli S. Faaumu
Chief of Police
County of Maui
Police Department
55 Mahalani Street
Wailuku, Maui, Hawaii 96793

Dear Mr. Faaumu:

Re: **Environmental Assessment / Environmental Impact Statement
Preparation Notice** for the Proposed Waikapu Country Town Project in
Waikapu, Maui, Hawaii; TMK Nos: (2) 3-6-002:001, (2) 3-6-002:003, (2) 3-6-
4:003, (2) 3-6-004:006, (2) 3-6-005:007 and (2) 3-6-006:036.

Thank you for your letter dated June 2, 2015 regarding the above-referenced project.

The Applicant acknowledges your concerns regarding the impact that the Project may have upon traffic and the additional demand it may generate for Police Department services. A Traffic Impact Analysis Report (TIAR) was prepared and has been incorporated into the Draft Environmental Impact Statement (DEIS). The DEIS also addresses the Project's impact upon Police Department services.

We look forward to working with your office as we proceed through the development review and land use entitlement processes. Should you have any questions, please contact me at (808) 269-6220 or by e-mail at msummers@planningconsultantshawaii.com.

Mr. Tivoli S. Faaumu
Chief of Police
Police Department
RE: Waikapu Country Town EA/EISPN
January 7, 2015
Page 2

Sincerely yours,

A handwritten signature in black ink, reading "Michael J. Summers". The signature is written in a cursive style with a long, horizontal flourish at the end.

Michael J. Summers
President

Attachment

c: Mr. Michael Atherton
Mr. Albert Boyce

19. Department of the Interior, Fish and Wildlife Service



United States Department of the Interior



FISH AND WILDLIFE SERVICE
Pacific Islands Fish and Wildlife Office
300 Ala Moana Boulevard, Room 3-122
Honolulu, Hawaii 96850

In Reply Refer To:
01EPIF00-2015-TA-0283

JUN 18 2015

Mr. Michael J. Summers, President
Planning Consultants Hawaii, LLC
2331 West Main Street
Wailuku, Hawaii 96793

Subject: Technical Assistance for Proposed Development of Waikapu Country Town,
Wailuku, Maui

Dear Mr. Summers:

The U.S. Fish and Wildlife Service (Service) received your correspondence on May 22, 2015, requesting technical assistance regarding possible presence of endangered, threatened or protected flora and fauna on 499 acres of land located in central Maui at Waikapu that is proposed for urban and rural development (Waikapu Country Town). Lands not proposed for urban or rural development will remain within the State Agricultural District. The entire property, including the land to remain in agricultural use, comprises 1,576 acres and is identified by Tax Map Key Numbers (TMKs) (2) 3-6-005:007; (2) 3-6-002:001 and 003; (2) 3-6-006:036; and (2) 3-6-004:003 and 006. The property proposed for development as Waikapu Country Town includes TMKs (2) 3-6-004: Portion of 003; (2) 3-6-005: Portion of 007; (2) 3-6-002: Portion of 003; (2) 3-6-004:006; and (2) 3-6-005:007.

Based on information you provided and pertinent information in our files, including data compiled by the Hawaii Biodiversity and Mapping Project, there are three listed animals, the endangered Hawaiian hoary bat (*Lasiurus cinereus semotus*), Hawaiian petrel (*Pterodroma phaeopygia sandwichensis*), and the threatened Newell's shearwater (*Puffinus auricularis newelli*), and one endangered insect, the Blackburn's sphinx moth (*Manduca blackburni*) within or near the project area. There is no proposed or designated final critical habitat within the described project footprint. To help you minimize potential impacts to listed species, the Service is providing you the following avoidance and minimization measures. Please note that implementation of these measures does not ensure that impacts to listed species can be avoided, and further coordination with the Service on compliance with the ESA may be required.

Hawaiian hoary bat

The Hawaiian hoary bat is known to occur across a broad range of habitats throughout the State of Hawaii. This bat roosts in both exotic and native woody vegetation and, while foraging, leaves young unattended in "nursery" trees and shrubs. If trees or shrubs suitable for bat roosting are cleared during the Hawaiian hoary bat breeding season (June 1 to September 15),

there is a risk that young bats that cannot yet fly on their own could inadvertently be harmed or killed. As a result, the Service recommends that woody plants greater than 15 feet tall should not be removed or trimmed during the Hawaiian hoary bat breeding season. Additionally, Hawaiian hoary bats forage for insects from as low as three feet to higher than 500 feet above the ground. When barbed wire is used in fencing, Hawaiian hoary bats can become entangled. The Service, therefore, recommends that barbed wire not be used for fencing as part of this proposed action. Although bats were not documented as part of the 2013 surveys, please be aware that Hawaiian hoary bats are a cryptic species and have seasonal variations in range and distribution. Therefore, the Service recommends the incorporation of the above avoidance measures into the project description.

Seabirds

Hawaiian petrels and Newell's shearwaters (collectively known as seabirds) may transit over the proposed project area when flying between the ocean and nesting sites in the mountains during their breeding season (March through November). Seabird fatalities resulting from collisions with artificial structures that extend above the surrounding vegetation have been documented in Hawaii where high densities of transiting seabirds occur. Additionally, artificial lighting, such as flood lighting for construction work and site security, can adversely impact seabirds by causing disorientation which may result in collision with utility lines, buildings, fences and vehicles. Fledgling seabirds are especially affected by artificial lighting and have a tendency to exhaust themselves while circling the light sources and become grounded. Too weak to fly, these birds become vulnerable to depredation by feral predators such as cats (*Felis catus*), dogs (*Canis familiaris*), and small Indian mongoose (*Herpestes auropunctatus*). Therefore the Service recommends that any telecommunications towers be unguyed and without lighting. We also recommend that night work requiring artificial illumination be avoided during the seabird fledging season (approximately September 15 through December 15). All project-related installed lighting should be minimized and shielded so the bulb is not visible at or above bulb-height.

Blackburn's sphinx moth

Blackburn's sphinx moths feed on nectar from native plants, including beach morning glory (*Ipomoea pes-caprae*), iliee (*Plumbago zeylanica*), and maiapilo (*Capparis sandwichiana*); larvae feed upon non-native tree tobacco (*Nicotiana glauca*) and native aiea (*Nothocestrum latifolium*). Tree tobacco is a weed species that grows rapidly and inhabits disturbed places, roadsides, urban waste areas, gravel quarries, landscaped sites, and natural communities, including riparian areas, grassland, and woodland. Mature tree tobacco can grow between 2 and 7 meters tall and Blackburn's sphinx moths may occupy tree tobacco that is less than 1-meter tall. Blackburn's sphinx moth pupae may occupy the soil within 250 feet of larval host plants for up to a year.

Two tree tobacco plants were found during surveys of the proposed project area at the northern end of a series of sugar cane fields at the base of a stockpiled sand pile. These two plants were carefully examined for eggs, larvae and signs of feeding. One plant was found to have two mature eggs on separate leaves. The eggs had turned brown, indicating they were ready to hatch out young larvae. As the site becomes disturbed, tree tobacco will spread and it is likely Blackburn's sphinx moth will utilize these plants. Tree tobacco plants are not native to Hawaii, but fall under the protection of the ESA during the period of their association with the endangered Blackburn's sphinx moth. We therefore recommend that you include an invasive species policy to remove all tree tobacco before it reaches 1-meter tall. All tree tobacco plants

greater than 1-meter may have Blackburn's sphinx moth eggs and/or larvae and should not be cut or otherwise disturbed. In addition, pupae may be in the ground near these plants. Therefore, we recommend all ground disturbing activities be avoided within 250 feet of tree tobacco that is greater than 1-meter tall.

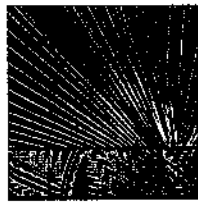
Because surveys were conducted in 2013 (two years ago), we recommend that a qualified biologist survey the project area for the presence of Blackburn's sphinx moth and its host plants prior to construction. We further recommend that these surveys be conducted during the wettest portion of the year (usually November-April) and approximately four to eight weeks following a significant rainfall event. Surveys should include looking for eggs, larvae, and signs of larval feeding (chewed stems, frass, or leaf damage). If present, we recommend you coordinate with the Service to develop appropriate avoidance and minimization measures dependent upon the site specific information.

Thank you for your efforts to conserve listed species and native habitats. Please contact Fish and Wildlife Biologist Jay Nelson (808-792-9441) if you have any questions or for further guidance.

Sincerely,

A handwritten signature in black ink, appearing to read "Michelle Bogardus", with a long, sweeping horizontal line extending to the right.

Michelle Bogardus
Island Team Leader
Maui Nui and Hawaii Island



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January 7, 2016

Ms. Michelle Bogardus
Island Team Leader
Maui Nui and Hawaii Island
United States Department of the Interior
Fish and Wildlife Service
Pacific Island Fish and Wildlife Office
300 Ala Moana Boulevard, Room 3-122
Honolulu, Hawaii 96850

Dear Ms. Bogardus:

Re: **Environmental Assessment** / Environmental Impact Statement
Preparation Notice for the Proposed Waikapu Country Town Project in
Waikapu, Maui, Hawaii; TMK Nos: (2) 3-6-002:001, (2) 3-6-002:003, (2) 3-6-
4:003, (2) 3-6-004:006, (2) 3-6-005:007 and (2) 3-6-006:036.

Thank you for your June 18, 2015 letter providing comments in response
to the above-referenced project.

The Draft Environmental Impact Statement (DEIS) incorporates the
additional guidance provided in your letter regarding the Hawaiian hoary bat
(*Lasiurus cinereus semotus*), Hawaiian petrel (*Pterodroma phaeopygia
sandwichensis*), Newell's shearwater (*Puffinus auricularis newelli*) and Blackburn's
sphinx moth (*Manduca blackburni*). In response to your comments regarding the
Blackburn's sphinx moth, we consulted with Recovery Biologist Rachel Rounds
of your office and were provided with the additional guidance attached as
Exhibit 1.

Thank you for your interest in the project, while we look forward to
coordinating with your office as we proceed through the development review
process. Should you have any questions, please contact me at (808) 269-6220 or
by e-mail at msummers@planningconsultantshawaii.com.

2331 West Main Street, Wailuku, HI 96793 • Ph. 808-244-6231
msummers@planningconsultantshawaii.com

Ms. Michelle Bogardus
Island Team Leader
Maui Nui and Hawaii Island
United States Department of the Interior
Fish and Wildlife Service
RE: Waikapu Country Town EA/EISPN
January 7, 2015
Page 2

Sincerely yours,

A handwritten signature in black ink that reads "Michael J. Summers". The signature is written in a cursive, flowing style.

Michael J. Summers
President

Attachments

c: Mr. Michael Atherton
Mr. Albert Boyce

From: Rachel Rounds <rachel_rounds@fws.gov>
Sent: Friday, December 18, 2015 10:19 AM
To: msummers@planningconsultantshawaii.com
Subject: Blackburn's sphinx moth guidance

Below find our latest Blackburn's sphinx moth guidance. Please let me know if you have any questions.

Rachel

Blackburn's sphinx moth – Adult Blackburn's sphinx moths feed on nectar from native plants, including pohuehue (*Ipomoea pescaprae*), iliee (*Plumbago zeylanica*), and maiapilo (*Capparis sandwichiana*). Blackburn's sphinx moth larvae feed upon the native aiea (*Nothocestrum sp.*), which is found in dry to moist forests at elevations ranging from 1,500 to 5,000 ft, and also the non-native tree tobacco (*Nicotiana glauca*), which occupies disturbed areas such as open fields and roadway margins.

1. Survey protocol:

Surveys for Blackburn's sphinx moth and its potential host plants will be conducted by a qualified individual during the wettest portion of the year (Hawaii Island: January to April; Maui North shore: November to April; rest of Maui: October to April – early surveys can be done if there have been Kona storms), approximately four to eight weeks following a significant rainfall event. In some cases, multiple surveys may be recommended.

If *Nothocestrum sp.* or *N. glauca* are detected during surveys, the plants will be visibly marked with flagging and the following documented: 1) general larval plant density; 2) proximity of larval plants to project sites; 3) average height of the larval plants; 4) signs of larval feeding damage on leaves; and 5) presence of Blackburn's sphinx moth larvae on leaves.

2. Avoidance and minimization: *N. glauca* frequently occurs in disturbed areas. Blackburn's sphinx moth adults lay eggs on *N. glauca* and moth larvae feed on the leaves of the plant before they crawl from the plant and burrow into the soil or crevices in rock where they pupate for up to a year or longer. They are most likely to pupate within 33 ft (10 m) of the larval host plant, although they may transit farther over paved and hardened surfaces to find a suitable site to enter the ground. The minimization measures below are conservative because our understanding of the species' resource limitations and behavior is limited. Clearing of the *N. glauca* would be completed using the following safeguards to ensure the potential for direct effects to Blackburn's sphinx moth eggs, larvae, and pupae are minimized:

- If *N. glauca* is less than three feet in height and no Blackburn's sphinx moth eggs, larvae, or signs indicating the possibility of pupating larvae (such as frass, chewed stems or other browsing characteristics) are detected, the entire plant(s) may be removed and the soil within 33 ft (10 m) may be disturbed.
- If *N. glauca* is more than three feet in height, it is possible that the signs of Blackburn's sphinx moth foraging have been shed and pupating larvae may be in the ground in the area beneath the plant(s). Therefore, if there are no signs of Blackburn's sphinx moth on *N. glauca* more than three feet in height, the above-ground portion of the plant(s) may be cut off and removed and the following measures implemented to minimize the potential for future use of the plant by Blackburn's sphinx moth and potential impact to a pupae that may already be in the soil near the plant:
 - Stems will be treated with herbicide or re-trimmed to prevent leaf growth and potential use by the Blackburn's sphinx moth.
 - A 33-ft (10-m) disturbance-free buffer will be established around the plant's location for one year. After one year, the plant roots may be removed and the soil disturbed if necessary. The one-year waiting period will ensure any larvae pupating in the soil will have pupated and emerged from the soil prior to disturbance of the plant(s) or soil.

Rachel Rounds
Recovery Biologist
Maui Nui/Hawaii Island Team

Exhibit 1, "E-mail from Rachel Rounds"

**20. Department of Agriculture, National Resources Conservation
Service**



June 2, 2015

Planning Consultants Hawaii LLC
Attn: Michael J. Summers
2331 W. Main Street
Wailuku, Hawaii 96793

Subject: USDA-NRCS Review for Waikapu Country Town Environmental Impact Statement Preparation Notice (EISPN)

Dear Mr. Summers,

Thank you for providing the NRCS the opportunity to review and comment on the EISPN for the proposed Waikapu Country Town project.

The majority of the project area proposed for Waikapu Country Town is classified by Agricultural Lands Important to the State of Hawaii (ALISH) as "Prime Agricultural Lands", as shown in Figures 18a and 18b of Appendix C "Agricultural Impact Assessment" of the "Environmental Impact Statement Preparation Notice for Waikapu Country Town". Furthermore, as shown in Table 11 and Figure 19 of Appendix C, the soils are considered "prime farmland if irrigated" according to the United States Department of Agriculture (USDA) soil survey.

As defined by "Agricultural Lands of Importance to the State of Hawaii Revised" (State Department of Agriculture, November, 1977), "Prime Agricultural Land" is:

"...land best suited for the production of food, feed, forage and fiber crops. The land has the soil quality, growing season, and moisture supply needed to produce sustained high yields of crops economically when treated and managed, including water management, according to modern farming methods."

Typically, a Farmland Impact Conversion Rating Form (AD-1006) is needed on projects that convert farmlands into non-farmland uses, and which have federal programs attached to the project. Federal programs are activities or responsibilities of a Federal agency that involve undertaking, financing, or assisting construction or improvement projects, or acquiring, managing, or disposing of Federal lands and facilities. See the website link below for more information on the Farmland Protection Policy Act and a copy of the AD-1006 form with instructions.

There are no hydric soils mapped within the Project Area, though this does not mean they do not exist. There are small areas identified as "Water (W)" on the USDA soil map that are identified as "Unknown Hydric", as shown in the attached map.

If wetlands do exist, any proposed impacts to these wetlands would need to demonstrate compliance with the Clean Water Act, and may need an Army Corp of Engineers 404 permit.

The NRCS Soil Survey is a general planning tool and does not eliminate the need for an onsite investigation. If you have any questions concerning the soils or interpretations for this project, please contact Tony Rolfes, Assistant Director for Soil Science and Natural Resource Assessment, at (808) 541-2600 x119, or by email at Tony.Rolfes@hi.usda.gov.

NRCS - Farmland Protection Policy Act Website:

<http://www.nrcs.usda.gov/wps/portal/nrcs/main/national/landuse/fppa/>

Sincerely,

Jason W. Peel, Acting FOR:

BRUCE PETERSEN

Director

Pacific Islands Area

cc: Tony Rolfes, Assistant Director for Soil Science and Natural Resource Assessment, NRCS, Honolulu, HI

Enclosures (1): Hydric soil map

Soil and Hydric Rating Map Waikapu Country Town, Maui



Proposed project area shown in blue.
TMKs: (2) 3-6-002:001; (2) 3-6-002:003; (2) 3-6-004:003
(2) 3-6-004:006; (2) 3-6-005:007; (2) 3-6-006:036

Legend

Major Roads

Project Area

Soil Survey

Hydric Rating

Not Hydric

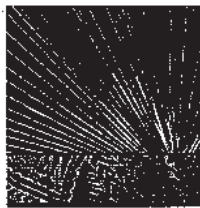
Unknown Hydric

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1:24,000



United States Department of Agriculture
Natural Resources Conservation Service



**PLANNING
CONSULTANTS
HAWAII, LLC**

URBAN & REGIONAL PLANNING

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January 7, 2016

Mr. Bruce Peterson
Director
Pacific Island Area
United States Department of Agriculture
Natural Resource Conservation Service
P.O. Box 50004 Rm. 4-118
Honolulu, HI 96850-0050

Dear Mr. Peterson:

Re: **Environmental Assessment / Environmental Impact Statement
Preparation Notice** for the Proposed Waikapu Country Town Project in
Waikapu, Maui, Hawaii; TMK Nos: (2) 3-6-002:001, (2) 3-6-002:003, (2) 3-6-
4:003, (2) 3-6-004:006, (2) 3-6-005:007 and (2) 3-6-006:036.

Thank you for your June 2, 2015 letter providing comments in response to the above-referenced project. In response to your comments, please find the following response:

- ***Farmland Impact Conversion Rating Form (AD-1006).*** Please note that while the project will convert farmland to non-farm use there are no Federal programs attached to the project. As such, it is our understanding that the subject form is not required.
- ***Hydric Soils / Wetlands.*** Please note that the areas identified as "Water (W)" on the USDA soil map are man-made agricultural reservoirs. The area proposed for development has been predominately in sugar production through the prior century and wetlands are not present on the site.

Mr. Bruce Peterson
Director
Pacific Island Areas
United States Department of Agriculture
Natural Resources Conservation Service
RE: Waikapu Country Town EA/EISPN
January 7, 2015
Page 2

Thank you for your interest in the project. Should you have any questions, please contact me at (808) 269-6220 or by e-mail at msummers@planningconsultantshawaii.com.

Sincerely yours,

A handwritten signature in black ink that reads "Michael J. Summers". The signature is written in a cursive style with a large, stylized "M" and "J".

Michael J. Summers
President

Attachment

c: Mr. Michael Atherton
Mr. Albert Boyce



United States Department of the Interior



FISH AND WILDLIFE SERVICE
Pacific Islands Fish and Wildlife Office
300 Ala Moana Boulevard, Room 3-122
Honolulu, Hawaii 96850

In Reply Refer To:
01EPIF00-2015-TA-0283

JUN 18 2015

Mr. Michael J. Summers, President
Planning Consultants Hawaii, LLC
2331 West Main Street
Wailuku, Hawaii 96793

Subject: Technical Assistance for Proposed Development of Waikapu Country Town,
Wailuku, Maui

Dear Mr. Summers:

The U.S. Fish and Wildlife Service (Service) received your correspondence on May 22, 2015, requesting technical assistance regarding possible presence of endangered, threatened or protected flora and fauna on 499 acres of land located in central Maui at Waikapu that is proposed for urban and rural development (Waikapu Country Town). Lands not proposed for urban or rural development will remain within the State Agricultural District. The entire property, including the land to remain in agricultural use, comprises 1,576 acres and is identified by Tax Map Key Numbers (TMKs) (2) 3-6-005:007; (2) 3-6-002:001 and 003; (2) 3-6-006:036; and (2) 3-6-004:003 and 006. The property proposed for development as Waikapu Country Town includes TMKs (2) 3-6-004: Portion of 003; (2) 3-6-005: Portion of 007; (2) 3-6-002: Portion of 003; (2) 3-6-004:006; and (2) 3-6-005:007.

Based on information you provided and pertinent information in our files, including data compiled by the Hawaii Biodiversity and Mapping Project, there are three listed animals, the endangered Hawaiian hoary bat (*Lasiurus cinereus semotus*), Hawaiian petrel (*Pterodroma phaeopygia sandwichensis*), and the threatened Newell's shearwater (*Puffinus auricularis newelli*), and one endangered insect, the Blackburn's sphinx moth (*Manduca blackburni*) within or near the project area. There is no proposed or designated final critical habitat within the described project footprint. To help you minimize potential impacts to listed species, the Service is providing you the following avoidance and minimization measures. Please note that implementation of these measures does not ensure that impacts to listed species can be avoided, and further coordination with the Service on compliance with the ESA may be required.

Hawaiian hoary bat

The Hawaiian hoary bat is known to occur across a broad range of habitats throughout the State of Hawaii. This bat roosts in both exotic and native woody vegetation and, while foraging, leaves young unattended in "nursery" trees and shrubs. If trees or shrubs suitable for bat roosting are cleared during the Hawaiian hoary bat breeding season (June 1 to September 15),

there is a risk that young bats that cannot yet fly on their own could inadvertently be harmed or killed. As a result, the Service recommends that woody plants greater than 15 feet tall should not be removed or trimmed during the Hawaiian hoary bat breeding season. Additionally, Hawaiian hoary bats forage for insects from as low as three feet to higher than 500 feet above the ground. When barbed wire is used in fencing, Hawaiian hoary bats can become entangled. The Service, therefore, recommends that barbed wire not be used for fencing as part of this proposed action. Although bats were not documented as part of the 2013 surveys, please be aware that Hawaiian hoary bats are a cryptic species and have seasonal variations in range and distribution. Therefore, the Service recommends the incorporation of the above avoidance measures into the project description.

Seabirds

Hawaiian petrels and Newell's shearwaters (collectively known as seabirds) may transit over the proposed project area when flying between the ocean and nesting sites in the mountains during their breeding season (March through November). Seabird fatalities resulting from collisions with artificial structures that extend above the surrounding vegetation have been documented in Hawaii where high densities of transiting seabirds occur. Additionally, artificial lighting, such as flood lighting for construction work and site security, can adversely impact seabirds by causing disorientation which may result in collision with utility lines, buildings, fences and vehicles. Fledgling seabirds are especially affected by artificial lighting and have a tendency to exhaust themselves while circling the light sources and become grounded. Too weak to fly, these birds become vulnerable to depredation by feral predators such as cats (*Felis catus*), dogs (*Canis familiaris*), and small Indian mongoose (*Herpestes auropunctatus*). Therefore the Service recommends that any telecommunications towers be unguyed and without lighting. We also recommend that night work requiring artificial illumination be avoided during the seabird fledging season (approximately September 15 through December 15). All project-related installed lighting should be minimized and shielded so the bulb is not visible at or above bulb-height.

Blackburn's sphinx moth

Blackburn's sphinx moths feed on nectar from native plants, including beach morning glory (*Ipomoea pes-caprae*), iliee (*Plumbago zeylanica*), and maiapilo (*Capparis sandwichiana*); larvae feed upon non-native tree tobacco (*Nicotiana glauca*) and native aiea (*Nothocestrum latifolium*). Tree tobacco is a weed species that grows rapidly and inhabits disturbed places, roadsides, urban waste areas, gravel quarries, landscaped sites, and natural communities, including riparian areas, grassland, and woodland. Mature tree tobacco can grow between 2 and 7 meters tall and Blackburn's sphinx moths may occupy tree tobacco that is less than 1-meter tall. Blackburn's sphinx moth pupae may occupy the soil within 250 feet of larval host plants for up to a year.

Two tree tobacco plants were found during surveys of the proposed project area at the northern end of a series of sugar cane fields at the base of a stockpiled sand pile. These two plants were carefully examined for eggs, larvae and signs of feeding. One plant was found to have two mature eggs on separate leaves. The eggs had turned brown, indicating they were ready to hatch out young larvae. As the site becomes disturbed, tree tobacco will spread and it is likely Blackburn's sphinx moth will utilize these plants. Tree tobacco plants are not native to Hawaii, but fall under the protection of the ESA during the period of their association with the endangered Blackburn's sphinx moth. We therefore recommend that you include an invasive species policy to remove all tree tobacco before it reaches 1-meter tall. All tree tobacco plants

greater than 1-meter may have Blackburn's sphinx moth eggs and/or larvae and should not be cut or otherwise disturbed. In addition, pupae may be in the ground near these plants. Therefore, we recommend all ground disturbing activities be avoided within 250 feet of tree tobacco that is greater than 1-meter tall.

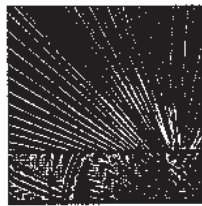
Because surveys were conducted in 2013 (two years ago), we recommend that a qualified biologist survey the project area for the presence of Blackburn's sphinx moth and its host plants prior to construction. We further recommend that these surveys be conducted during the wettest portion of the year (usually November-April) and approximately four to eight weeks following a significant rainfall event. Surveys should include looking for eggs, larvae, and signs of larval feeding (chewed stems, frass, or leaf damage). If present, we recommend you coordinate with the Service to develop appropriate avoidance and minimization measures dependent upon the site specific information.

Thank you for your efforts to conserve listed species and native habitats. Please contact Fish and Wildlife Biologist Jay Nelson (808-792-9441) if you have any questions or for further guidance.

Sincerely,

A handwritten signature in black ink, appearing to read "Michelle Bogardus", with a long, sweeping horizontal line extending to the right.

Michelle Bogardus
Island Team Leader
Maui Nui and Hawaii Island



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January 7, 2016

Ms. Michelle Bogardus
Island Team Leader
Maui Nui and Hawaii Island
United States Department of the Interior
Fish and Wildlife Service
Pacific Island Fish and Wildlife Office
300 Ala Moana Boulevard, Room 3-122
Honolulu, Hawaii 96850

Dear Ms. Bogardus:

Re: **Environmental Assessment / Environmental Impact Statement**
Preparation Notice for the Proposed Waikapu Country Town Project in
Waikapu, Maui, Hawaii; TMK Nos: (2) 3-6-002:001, (2) 3-6-002:003, (2) 3-6-
4:003, (2) 3-6-004:006, (2) 3-6-005:007 and (2) 3-6-006:036.

Thank you for your June 18, 2015 letter providing comments in response to the above-referenced project.

The Draft Environmental Impact Statement (DEIS) incorporates the additional guidance provided in your letter regarding the Hawaiian hoary bat (*Lasiurus cinereus semotus*), Hawaiian petrel (*Pterodroma phaeopygia sandwichensis*), Newell's shearwater (*Puffinus auricularis newelli*) and Blackburn's sphinx moth (*Manduca blackburni*). In response to your comments regarding the Blackburn's sphinx moth, we consulted with Recovery Biologist Rachel Rounds of your office and were provided with the additional guidance attached as Exhibit 1.

Thank you for your interest in the project, while we look forward to coordinating with your office as we proceed through the development review process. Should you have any questions, please contact me at (808) 269-6220 or by e-mail at msummers@planningconsultantshawaii.com.

2331 West Main Street, Wailuku, HI 96793 • Ph. 808-244-6231
msummers@planningconsultantshawaii.com

Ms. Michelle Bogardus
Island Team Leader
Maui Nui and Hawaii Island
United States Department of the Interior
Fish and Wildlife Service
RE: Waikapu Country Town EA/EISPN
January 7, 2015
Page 2

Sincerely yours,

A handwritten signature in black ink that reads "Michael J. Summers". The signature is written in a cursive style with a large, stylized "M" and a long, sweeping underline.

Michael J. Summers
President

Attachments

c: Mr. Michael Atherton
Mr. Albert Boyce

From: Rachel Rounds <rachel_rounds@fws.gov>
Sent: Friday, December 18, 2015 10:19 AM
To: msummers@planningconsultantshawaii.com
Subject: Blackburn's sphinx moth guidance

Below find our latest Blackburn's sphinx moth guidance. Please let me know if you have any questions.

Rachel

Blackburn's sphinx moth – Adult Blackburn's sphinx moths feed on nectar from native plants, including pohuehue (*Ipomoea pescaprae*), iliee (*Plumbago zeylanica*), and maiapilo (*Capparis sandwichiana*). Blackburn's sphinx moth larvae feed upon the native aiea (*Nothocestrum sp.*), which is found in dry to moist forests at elevations ranging from 1,500 to 5,000 ft, and also the non-native tree tobacco (*Nicotiana glauca*), which occupies disturbed areas such as open fields and roadway margins.

1. Survey protocol:

Surveys for Blackburn's sphinx moth and its potential host plants will be conducted by a qualified individual during the wettest portion of the year (Hawaii Island: January to April; Maui North shore: November to April; rest of Maui: October to April – early surveys can be done if there have been Kona storms), approximately four to eight weeks following a significant rainfall event. In some cases, multiple surveys may be recommended.

If *Nothocestrum sp.* or *N. glauca* are detected during surveys, the plants will be visibly marked with flagging and the following documented: 1) general larval plant density; 2) proximity of larval plants to project sites; 3) average height of the larval plants; 4) signs of larval feeding damage on leaves; and 5) presence of Blackburn's sphinx moth larvae on leaves.

2. Avoidance and minimization: *N. glauca* frequently occurs in disturbed areas. Blackburn's sphinx moth adults lay eggs on *N. glauca* and moth larvae feed on the leaves of the plant before they crawl from the plant and burrow into the soil or crevices in rock where they pupate for up to a year or longer. They are most likely to pupate within 33 ft (10 m) of the larval host plant, although they may transit farther over paved and hardened surfaces to find a suitable site to enter the ground. The minimization measures below are conservative because our understanding of the species' resource limitations and behavior is limited. Clearing of the *N. glauca* would be completed using the following safeguards to ensure the potential for direct effects to Blackburn's sphinx moth eggs, larvae, and pupae are minimized:

- If *N. glauca* is less than three feet in height and no Blackburn's sphinx moth eggs, larvae, or signs indicating the possibility of pupating larvae (such as frass, chewed stems or other browsing characteristics) are detected, the entire plant(s) may be removed and the soil within 33 ft (10 m) may be disturbed.
- If *N. glauca* is more than three feet in height, it is possible that the signs of Blackburn's sphinx moth foraging have been shed and pupating larvae may be in the ground in the area beneath the plant(s). Therefore, if there are no signs of Blackburn's sphinx moth on *N. glauca* more than three feet in height, the above-ground portion of the plant(s) may be cut off and removed and the following measures implemented to minimize the potential for future use of the plant by Blackburn's sphinx moth and potential impact to a pupae that may already be in the soil near the plant:
 - Stems will be treated with herbicide or re-trimmed to prevent leaf growth and potential use by the Blackburn's sphinx moth.
 - A 33-ft (10-m) disturbance-free buffer will be established around the plant's location for one year. After one year, the plant roots may be removed and the soil disturbed if necessary. The one-year waiting period will ensure any larvae pupating in the soil will have pupated and emerged from the soil prior to disturbance of the plant(s) or soil.

Rachel Rounds
Recovery Biologist
Maui Nui/Hawaii Island Team

Exhibit 1, "E-mail from Rachel Rounds"