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**DEPARTMENT OF WATER SUPPLY**  
COUNTY OF MAUI  
200 SOUTH HIGH STREET  
WAILUKU, MAUI, HAWAII 96793  
<http://www.maui-county.gov/water>

October 31, 2023

Honorable Richard T. Bissen, Jr.  
Mayor, County of Maui  
200 South High Street  
Wailuku, Hawaii 96793

**APPROVED FOR TRANSMITTAL**

 11-1-23  
Mayor Date

For Transmittal to:

Honorable Tasha Kama, Chair  
Housing and Land Use Committee  
Maui County Council  
200 South High Street  
Wailuku, Hawaii 96793

Dear Chair Kama,

**SUBJECT: WELLHEAD PROTECTION OVERLAY DISTRICT (HLU-10)**

In response to your letter dated June 20, 2023, attached is the revised bill, A Bill for an Ordinance Amending Title 19, Maui County Code, to Establish a Wellhead Protection Overlay District, approved as to form and legality.

Thank you for the opportunity to provide the revised bill for consideration. If you have any questions, please free to contact me.

Sincerely,

  
JOHN STUFFLEBEAN, P.E.  
Director

JS:EB:ikk  
Attachment

*"By Water All Things Find Life"*

10350

ALFONSO EDI 1910-1911

ORDINANCE NO. \_\_\_\_\_

BILL NO. \_\_\_\_\_ (2023)

A BILL FOR AN ORDINANCE AMENDING TITLE 19, MAUI COUNTY CODE, TO  
ESTABLISH A WELLHEAD PROTECTION OVERLAY DISTRICT

BE IT ORDAINED BY THE PEOPLE OF THE COUNTY OF MAUI:

SECTION 1. Section 19.06.010, Maui County Code, is amended by  
amending subsection 2 to read as follows:

- “2. The County has the following overlay zone districts:
- A. Wetlands overlay district.
  - B. Planned development.
  - C. Wellhead protection overlay district.”

SECTION 2. Title 19, Maui County Code, is amended by adding a new  
chapter to be appropriately designated and to read as follows:

**“CHAPTER 19.61**

**WELLHEAD PROTECTION OVERLAY DISTRICT**

**Sections:**

- 19.61.010 Purpose and intent.**
- 19.61.020 Definitions.**
- 19.61.030 Applicability.**
- 19.61.040 Wellhead protection overlay district zones and maps.**
- 19.61.050 Regulations for zone A.**
- 19.61.060 Regulations for zone B.**
- 19.61.070 Regulations for zone C.**
- 19.61.080 Wellhead protection permits.**
- 19.61.090 Best management practices.**
- 19.61.100 Design guidelines.**
- 19.61.110 Liability.**

- 19.61.120 Interpretation of wellhead protection overlay district zone boundaries.**
- 19.61.130 Enforcement.**
- 19.61.140 Administrative rules.**
- 19.61.150 Severability.**

**19.61.010 Purpose and intent.** Maui County recognizes that many residents rely on groundwater for their safe drinking water supply, and that certain land uses may contaminate groundwater sources. To ensure the protection of these drinking water sources, this chapter establishes a zoning overlay district to be known as the wellhead protection overlay district. The purpose and intent of the wellhead protection overlay district is to:

- A. Protect the public's health, welfare, and safety by minimizing the risks of contamination of aquifers.
- B. Preserve and protect existing and potential drinking water sources.
- C. Implement land use policies consistent with the Maui County general plan and community plans.
- D. Restrict and prohibit land uses that are incompatible with groundwater protection.

**19.61.020 Definitions.** The following definitions apply to this chapter. Terms not defined below have the meanings set forth in section 19.04.040, unless the context clearly indicates a different meaning:

"Animal feeding operation" means a lot or facility (other than an aquatic animal production facility) where animals will be stabled or confined and fed or maintained for a total of forty-five days or more in any twelve month period, and where crops, vegetation forage growth, or post-harvest residues are not sustained in the normal growing season over any portion of the lot or facility. Pasture operations are not animal feeding operations.

"Contamination" means an impairment of water quality by one or more of the substances regulated under the United States Environmental Protection Agency National Primary Drinking Water Regulations, as set forth in 40 Code of Federal Regulations Part 141, or under the rules relating to public water systems in accordance with Hawaii administrative rules title 11, chapter 20.

"Dump" means a lawfully operated and privately-owned refuse disposal site.

"Hazardous material" means substances that are identified as hazardous waste by the United States Environmental Protection Agency, as set forth in 40 Code of Federal Regulations Part 261

Subpart D, or designated a hazardous substance by the United States Environmental Protection Agency pursuant to 40 Code of Federal Regulations Part 302.

“Integrated pest management” or “IPM” means a decision-making process that considers cultural, mechanical, biological, and chemical controls of pests such as insects or rodents. Control mechanisms are selected as each situation warrants. Where chemical control is indicated, specific pest populations are targeted for treatment when they are most vulnerable rather than by general pesticide application.

“Landfill” means any sanitary landfill maintained and operated by the County.

“Pest management conservation system” means a system that combines an integrated pest management decision-making process with natural resource conservation to address pest and environmental impacts.

“Primary containment facility” means a tank, pit, container, pipe, vessel, or area containing a liquid or chemical that is not a secondary containment facility.

“Public water system” means a water system which provides water for human consumption through pipes or other constructed conveyances if the system has at least fifteen service connections or regularly serves an average of at least twenty-five individuals daily at least sixty days out of any twelve-month period, as defined in section 11-20-2 of the Hawaii Administrative Rules. Such term includes any collection, treatment, storage, and distribution facility under control of the operator of such system; and any collection or pretreatment storage facility not under such control which is used primarily in connection with such system.

“Regulated substance” means a substance regulated under the United States Environmental Protection Agency National Primary Drinking Water Regulations, as set forth in 40 Code of Federal Regulations Part 141, or under the Rules Relating to Public Water Systems pursuant to Hawaii Administrative Rules Title 11, Chapter 20.

“Release” means any unplanned or unpermitted discharge, leak, or spill of a potential contaminant including a hazardous material.

“Secondary containment facility” means a second tank, catchment pit, pipe, or vessel that limits and contains liquid or chemicals leaking or leaching from a primary containment facility.

“Sewage sludge” means any solid, semi-solid, or liquid waste generated from a municipal, commercial, or industrial wastewater treatment plant, water supply treatment plant, industrial process,

or air pollution control facility exclusive of the treated effluent from a wastewater treatment plant.

“Subdivision” means a subdivision as defined in title 14, article 1.

“Time-of-travel distance” means the distance that groundwater will travel in a specified time. This distance is generally a function of the permeability and slope of the aquifer.

“Wellhead protection overlay district” means the zoning district consisting of the surface and subsurface areas surrounding a water well or well field that are regulated to prevent contaminants from reaching the water well or well field, as identified on the digital zoning maps, incorporated herein by reference, and located online at the department of planning, implementation division’s website at <https://www.mauicounty.gov/2159/Digital-Zoning-Map-Update-Project>. The maps must be updated from time to time upon new wells coming online.

**19.61.030 Applicability.** This chapter applies to wellhead protection overlay district zones for department of water supply wells, and not to private wells. Nonconforming uses as defined in section 19.04.040 are subject to the provisions of section 19.500.110.

**19.61.040 Wellhead protection overlay district zones and maps.** A. Wellhead protection overlay district zones are delineated utilizing a fixed distance for zone A nearest to the well, and time-of-travel distance criteria for zones B and C using the United States geological survey three-dimensional numerical groundwater model MODFLOW followed by a particle tracking program MODPATH. Zone B is intended to designate a conservative estimate of the area that may contribute bacteria and viruses to the wellhead. A two-year time-of-travel distance criterion is based on survival times for bacteria and viruses in soil and groundwater. Zone C is based on a ten-year time-of-travel distance to allow sufficient time to implement management and remedial measures to mitigate contamination from accidental contaminant spills and other causes.

B. The wellhead protection overlay district zones are superimposed on all current zoning districts and identified on the maps entitled “Wellhead Protection Overlay District.” All regulations of the underlying zoning district remain in effect, in addition to any regulations of the wellhead protection overlay district as set forth in this chapter. Establishment of a wellhead overlay district does not change the underlying zoning designation.

C. The wellhead protection overlay district zones are designated as follows, with zone A being the most restrictive and zone C being the least restrictive:

1. Zone A – fifty-foot direct chemical contamination zone. Zone A is defined as the fixed fifty-foot radius around each well. The purpose of this zone is to provide protection from vandalism, tampering, or other threats at a well site.

2. Zone B - Indirect microbial contamination zone. Zone B consists of the surface and subsurface area overlying the portion of an aquifer that contributes water to the well within two years.

3. Zone C - Indirect chemical contamination zone. Zone C consists of the surface and subsurface area overlying the portion of an aquifer that contributes water to the well within ten years.

**19.61.050 Regulations for zone A.** Within zone A, necessary public utilities and facilities are permitted uses, including the construction, operations, maintenance, repair, and enlargement of drinking water supply-related facilities such as wells, pipelines, aqueducts, and tunnels. All other uses are prohibited. No wellhead protection permits may be issued for parcels within zone A.

**19.61.060 Regulations for zone B.** A. Within zone B, all uses permitted in the underlying zoning districts must be permitted, unless a wellhead protection permit is required in accordance with subsection B, or a use is prohibited by subsection C.

B. Permit required. The following uses in zone B require a wellhead protection permit issued by the director of water supply in accordance with section 19.61.080:

1. Commercial automobile body or commercial automobile repair shops.

2. Car washes.

3. Cement or concrete plants.

4. Petroleum or mixed-biofuel fueling stations.

5. Fleet, trucking, or bus terminals.

6. Dry cleaners.

7. The use of pesticides determined to be pesticides of groundwater concerns by the State department of agriculture and the State department of health groundwater protection program, as identified on the document entitled "State of Hawaii Department of Agriculture and Department of Health Groundwater Protection Program List of Pesticides in Groundwater Monitoring Program," with current copies on

file with the department of water supply. This document may be amended from time to time based upon updated requirements determined by the State department of agriculture and the State department of health.

8. Commercial machine shops.
9. Commercial wood preserving or treatment facilities.
10. Animal feeding operations.
11. Commercial equipment maintenance or fueling areas.
12. Hospitals.
13. Paved and unpaved parking lots with more than twenty parking spaces.
14. Waste transfer or recycling stations.
15. Any collection, handling, manufacture, use, storage, transfer, or disposal of more than fifty-five gallons of petroleum products or more than ten gallons of any other regulated substance.
16. Subdivisions that create four or more developable lots.

C. Prohibited uses. The following uses are prohibited within zone B:

1. Commercial electrical or electronic manufacturing facilities that utilize a regulated substance.
2. Mortuaries or graveyards.
3. Golf courses.
4. Commercial metal plating, finishing, or fabricating facilities that utilize a regulated substance.
5. Commercial chemical processing or storage facilities.
6. Commercial plastics or synthetic production facilities that utilize a regulated substance.
7. Commercial junk, scrap, or salvage yards.
8. Mines.
9. Landfills or dumps.
10. Injection wells, dry wells, or sumps on non-residential properties.
11. Irrigation with reclaimed wastewater classes R-2 and R-3.
12. Sewage sludge land applications.
13. Commercial slaughterhouses.
14. Wastewater percolation ponds.



**19.61.070 Regulations for zone C.** A. Within zone C, all uses permitted in the underlying zoning districts are permitted, unless a wellhead protection permit is required in accordance with subsection B, or a use is prohibited by subsection C.

B. Permit required. The following uses in zone C must require a wellhead protection permit issued by the director of water supply in accordance with section 19.61.080:

1. Commercial automobile body or repair shops.
2. Petroleum or mixed-biofuel fueling stations.
3. Fleet, trucking, or bus terminals.
4. Dry cleaners.
5. Golf courses.
6. Commercial machine shops.
7. Commercial wood preserving or treatment facilities.
8. Animal feeding operations.
9. Commercial equipment maintenance or fueling areas.
10. Any collection, handling, manufacture, use, storage, transfer, or disposal of more than fifty-five gallons of petroleum products or more than ten gallons of any other regulated substance.
11. Subdivisions that create four or more developable lots.

C. Prohibited uses. The following uses are prohibited within zone C:

1. Commercial electrical or electronic manufacturing facilities that utilize a regulated substance.
2. Commercial chemical processing or storage facilities.
3. Commercial plastics or synthetic production facilities that utilize a regulated substance.
4. Commercial junk, scrap, or salvage yards.
5. Commercial metal plating, finishing, or fabricating facilities that utilize a regulated substance.
6. Mines.
7. Landfills or dumps.
8. Injection wells, dry wells, or sumps on non-residential properties.
9. Wastewater percolation ponds.

**19.61.080 Wellhead protection permits.** A. Wellhead protection permit applications must be submitted to the director of water supply and must include:

1. The name, address, and phone number of the applicant who will be responsible for implementation of best management practices.

2. Verification of property ownership and authorization by all property owners if the applicant is not the sole owner of the subject property.

3. The tax map key of the project site.

4. A plot plan showing the project location on the parcel.

5. A description of the proposed use, including names and quantities of any regulated substances collected, handled, manufactured, used, stored, transferred, or disposed of at the project site.

6. A best management practices plan addressing all activities subject to the wellhead protection permit.

7. Additional information as may be requested by the director of water supply.

B. Permit processing.

1. Upon receipt of a complete application, the director of water supply must approve or deny the application according to the requirements of this chapter, and may impose conditions upon the proposed use to ensure that the purpose and intent of this chapter are met. If a complete application does not meet the requirements of this chapter, it must be denied.

2. An initial permit must be valid for a period of up to five years. Subsequent permit renewals and permit amendments may be granted by the director of water supply for longer duration. In reviewing applications for renewals, the director of water supply must require evidence of compliance with applicable best management practices and any other permit conditions.

3. All permits and renewals must contain a provision for inspection at reasonable times and upon presentation of appropriate credentials.

C. Revocation and appeal. A wellhead protection permit may be revoked at any time and an application for permit renewal may be denied by the director of water supply if the permit terms and conditions have been violated or if the requirements of this chapter have not been met. Appeals of permit denials, revocations, or non-renewals, or alleging errors, must be heard and determined by the board of variances and appeals in accordance with chapter 19.520.

**19.61.090 Best management practices.** The following standards apply to uses in zones B and C of any wellhead protection overlay district:

A. Any collection, handling, manufacture, use, storage, transfer, or disposal of more than fifty-five gallons of petroleum products or more than ten gallons of any regulated substance, must have a secondary containment facility which must be easily inspected and whose purpose is to intercept any leak or release from the primary containment facility.

B. An animal feeding operation must meet the minimum requirements for operation set forth in the "Guidelines for Livestock Waste Management" prepared by the University of Hawaii at Manoa Cooperative Extension Service, College of Tropical Agriculture and Human Resources, dated January 19, 2010, as may be amended.

C. The irrigation of crops applying pesticides identified in section 19.061.060(B)(7) must follow a conservation practice standard in accordance with the pest management conservation system as published in the United States Department of Agriculture, Natural Resources Conservation Service's Conservation Practice Standard Pest Management Conservation System, Code 595 (595-CPS-1).

D. Subdivisions that create four or more developable lots in unsewered areas that serve more than one residential unit per acre must install aerobic treatment units or alternative treatment units achieving equal or higher level of wastewater treatment than aerobic treatment units.

E. Parking lots must be maintained on a yearly basis, including cleaning catch basins, and sweeping and sealing cracks. Runoff from parking lots must be diverted to storm water drains.

F. Waste transfer or recycling stations must have an operating manual to ensure that only clean, marketable recyclables are collected. Storage of residuals must be accomplished to prevent spillage and leaking.

G. Golf course development must meet best management practices for use of nutrients and pesticides as set forth in Golf Course Management Measure, Hawaii's Management Measures for the Coastal Nonpoint Pollution Control Program, dated October 2010, as may be amended.

H. Construction activities must be in accordance with chapter 20.08 and the following standards:

1. There must be a designated person on site during construction activities who must be responsible for supervising the use, storage, and handling of hazardous

material and who must take appropriate mitigating actions necessary in the event of fire or spill.

2. Hazardous materials left on site when the site is unsupervised must be inaccessible to the public. Locked storage sheds, locked fencing, locked fuel tanks on construction vehicles, or other techniques may be used if they will prevent access.

3. Construction vehicles and stationary equipment that are found to be leaking fuel, hydraulic fluid, or other hazardous materials must be removed from the site and from any wellhead protection overlay district zone. The vehicle or equipment may be repaired in place, provided the leakage is completely contained.

4. Hazardous materials must not be allowed to enter stormwater systems.

**19.61.100 Design guidelines.** Upon issuance of the appropriate wellhead protection permit for parcels in zones B or C, the following design guidelines must apply to subdivisions that create four or more developable lots:

A. Proposed development and uses must be located as far from the wellhead as feasible.

B. Storm-water infiltration basins must be located outside the wellhead protection overlay district where feasible, provided that if this is not feasible, then the basins must be located as far from the wellhead as feasible.

C. Active parks and schools must implement a conservation practice standard in accordance with section 19.61.090(C).

D. If a development or use is proposed on property which is partially within a wellhead protection overlay district, the proposed development or use must be located to the maximum extent feasible on the portion of the property that is outside the wellhead protection overlay district.

**19.61.110 Liability.** Nothing in this chapter may be construed to imply that the County has accepted any of an owner's or developer's liability if a permitted facility or use contaminates groundwater in any aquifer.

**19.61.120 Interpretation of wellhead protection overlay district zone boundaries.** A. If parts of a parcel lie within one or more of the delineated zones of the wellhead protection overlay

district, each part must be governed by the restrictions applicable to the zone in which the part is located.

B. Where the boundary between two wellhead protection overlay district zones passes through a facility, the entire facility must be considered in the more restrictive zone.

C. Where a facility, or portion thereof, is overlapped by delineated wellhead protection overlay district zones of different wells or well fields, the more restrictive zone applies.

**19.61.130 Enforcement.** Any violation of this chapter must be enforced in accordance with chapter 19.530, and through revocation or non-renewal of wellhead protection permits as prescribed herein.

**19.61.140 Administrative rules.** The planning director and the director of water supply may adopt administrative rules regarding the administration of this chapter, in accordance with chapter 91, Hawaii Revised Statutes.

**19.61.150 Severability.** Should any section or provision of this chapter be declared invalid, such decision may not affect the validity of the chapter as a whole or any other part thereof. A determination that any portion or provision of this wellhead protection overlay district is invalid does not invalidate any permit previously issued hereunder.”

SECTION 3. Material to be repealed is bracketed. New material is underscored. In printing this bill, the County Clerk need not include the brackets, the bracketed material, or the underscoring.

SECTION 4. This ordinance takes effect upon approval.

APPROVED AS TO FORM AND LEGALITY:



CALEB P. ROWE  
Deputy Corporation Counsel  
LF2023-1623  
2023-10-27 Ord Est Ch 19.61

## HLU Committee

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**From:** Michelle Santos <Michelle.Santos@co.maui.hi.us>  
**Sent:** Thursday, November 2, 2023 9:56 AM  
**To:** HLU Committee  
**Cc:** Cynthia Sasada; Josiah Nishita; Kekuhaupio Akana; Leo Caires; Louise Batoon; Pili Nahooikaika  
**Subject:** MT#10350 Wellhead Protection Overlay District  
**Attachments:** MT#10350-HLU Committee.pdf

**NOTE: PLEASE DO NOT FORWARD MY EMAIL TO ANYONE OUTSIDE OF THE COUNTY OF MAUI. YOU MAY CLICK ON THE ATTACHMENT ITSELF AND CREATE YOUR OWN EMAIL TO FORWARD THE DOCUMENT TO ANOTHER PERSON OUTSIDE OF THE COUNTY.**

*Michelle L. Santos*

## Office Operations Assistant

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