

## **Frequently Asked Questions Maui Island Water Use and Development Plan**

### **ABOUT THE MAUI ISLAND WATER USE AND DEVELOPMENT PLAN (WUDP)**

#### **1. What is the Water Use and Development Plan?**

The WUDP provides a 20-year blueprint for all uses of water in the county. The Maui Island WUDP is limited to the island of Maui and does not encompass Lana'i or Moloka'i. The primary objective of the WUDP is to provide guidelines for the management and use of the island's water resources. This will help ensure the future water needs of all water users are met while preserving the integrity of the County's water resources. The WUDP coordinates water use with land use policies set by the Maui Island Plan and the State of Hawaii. The WUDP is a resource-focused plan, rather than an infrastructure plan. The WUDP inventories existing water resources, sources and uses; discusses existing and future land uses and related water needs over a 20-year timeframe, discusses resource impacts of adopted plans, existing and future land uses, and related water needs; considers multiple forecasts and scenarios; and sets forth a program with the objective to meet all water needs. It must be drafted with credible public involvement.

#### **2. Why is the County preparing the Water Use and Development Plan?**

State law and County code require a WUDP to be prepared and periodically updated. The WUDP becomes part of the State of Hawai'i Water Plan. The Maui County WUDP was adopted in 1990 and is being updated for each island. The WUDP for Lana'i has been updated, Maui is in progress, and the Moloka'i update will follow.

#### **3. How does the Water Use and Development Plan relate to other plans adopted by the County?**

The WUDP is most closely related to the land use plan for each island. The Maui Island WUDP is a companion document to and carries out the Maui Island Plan by setting forth a program by which water needs will be met while protecting water resources. It considers water resources and services planning by other county departments, such as planning for recycled water. It must be consistent with the other elements of the State of Hawai'i Water Plan and addresses needs set forth in the Department of Hawaiian Homelands plans.

#### **4. How will the Water Use and Development Plan affect me?**

The WUDP provides a comprehensive plan for meeting the water needs of all users consistent with the Maui Island Plan and other plans as indicated above. As a policy document, the document has no direct effect on consumers of water provided by the County Department of Water Supply, by any other water provider, or on those using private wells or surface water. However, the WUDP is important in these ways, among others:

- The WUDP outlines a plan to meet the water needs of all users and land uses over the next 20 years.
- A plan to meet current and long-term water needs protects your investment in property and in the community.
- The WUDP is a companion document to the Maui Island Plan and helps carry out the direction of that island-wide plan.
- The WUDP considers the effects of water use on ground and surface water resources, and how water can be allocated in a way that protects the sustainability of these resources so they are available for the future.
- Involvement of the general public, stakeholders and diverse interests in the WUDP process helps ensure that a wide range of viewpoints, possible scenarios and options are considered.
- Through the WUDP process, we can seek solutions to conflicts over water use.
- A comprehensive plan can align all water users and interests in the same direction, which can increase efficiency, effectiveness, certainty and sustainability.
- A plan vetted by the community and adopted by the county and state provides a foundation for decision making and action.

## **5. How will the Water Use and Development Plan affect my water bill?**

Adoption of the WUDP will not directly affect the rates, fees or bills of any water user. It is possible that proposed solutions to meet water needs will require more funding that is available through current rates, fees and other sources. Various policies or actions in the WUDP may also suggest future consideration of rate or fee adjustments in order to meet water needs as proposed in the Plan. However, public hearings will be conducted before any rates or fees are modified.

## **6. How Can I Be Involved?**

### **A. What are the steps in the process?**

- The County Department of Water Supply prepares the draft WUDP.
- During the process, community input concerning issues and solutions is received through public meetings, stakeholder or interest group meetings, and individual communication.
- A draft WUDP is distributed to the public for review and comment. Community meetings are held to receive input.
- The County Board of Water Supply and Council's Water Resources Committee review the WUDP at publicly noticed meetings. The State Commission on Water Resource Management is provided briefings throughout the process.
- The County Council and subsequently the State Commission on Water Resource Management adopt the WUDP.

### **B. How can I get on the mailing list for public meetings, hearings and availability of documents? Where can I get more information?**

Contact Pam Townsend  
Water Resources & Planning  
Maui County Department of Water Supply  
(808) 463-3110  
Email: [pam.townsend@co.maui.hi.us](mailto:pam.townsend@co.maui.hi.us)  
2200 Main St, Suite 102 (One Main Plaza), Wailuku, HI 96793  
Office Hours: Monday-Friday 8:00 a.m. - 4:30 p.m. excluding County holidays

Updated information is also available on the County's website at: <http://www.mauiwater.org>  
Information will also be disseminated through media sources.

## **WATER USE AND RESOURCES TOPICS**

### **1. Where does the water on Maui come from?**

Water for most uses comes from groundwater wells, with a smaller portion coming from streams (surface water). Most water for agriculture is supplied by streams with a small portion supplied by wells. A portion of the island's water is transported by public water systems and irrigation systems from the area (hydrological unit) in which it originates to other areas of the island. Alternative water sources also supply a small portion of our water needs. The proportion supplied by groundwater, streams and alternative sources varies by location, type of use, water purveyor, seasonally, and other factors. The Water Use and Development Plan will provide detail on the various sources of water in each groundwater basin.

### **2. How much water is there on Maui?**

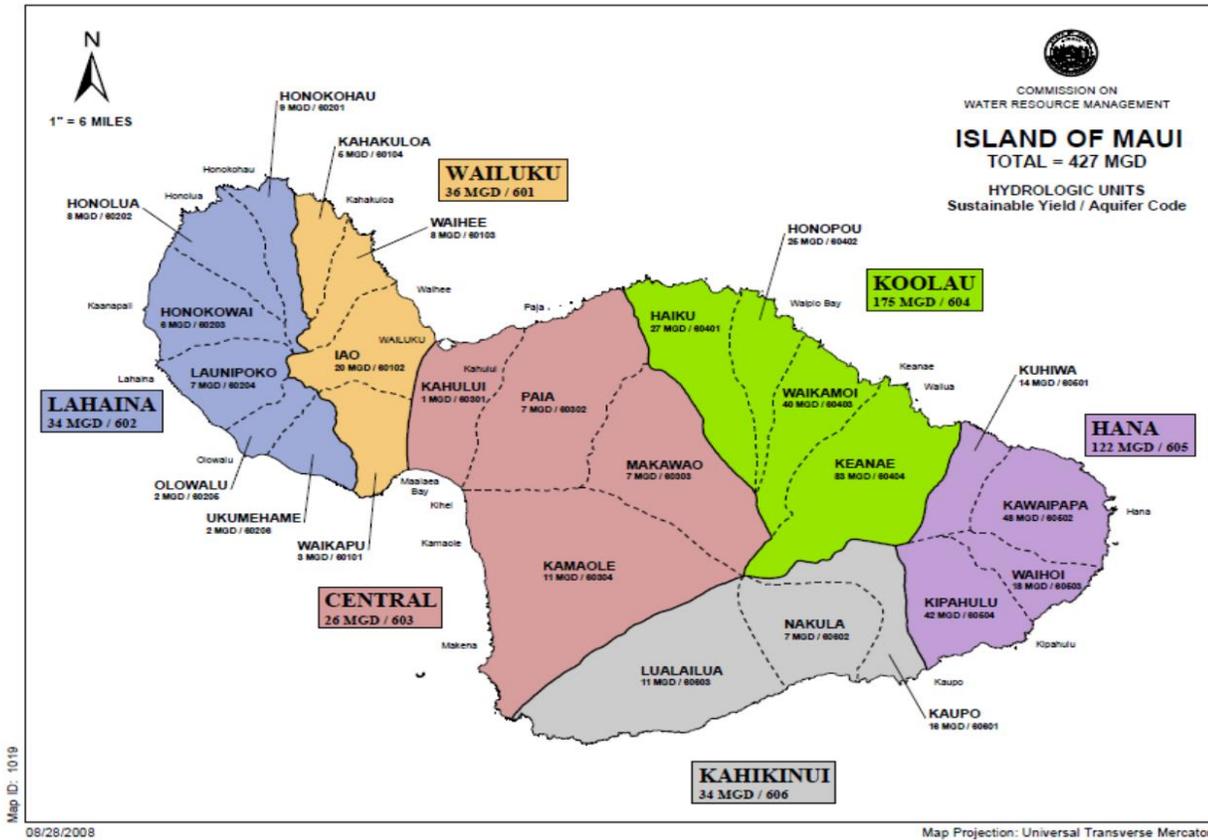
The Water Use and Development Plan (WUDP) focuses on the amount of water available for use on a sustainable long-term basis while maintaining the vitality of the resource. This amount of water varies seasonally and over time. Island-wide, Maui is endowed with adequate water resources to supply all water uses currently and planned growth according to the Maui Island Plan over the 20-year planning period. However, these resources are not always located in the area where they are needed; the water requirements for a wide variety of uses, community desirability and cost of transporting water, and other factors can be at issue.

The State Commission on Water Resource Management (CWRM) determines the 'sustainable yield' of the six groundwater basins (aquifer sectors) and their subsystems on Maui as a basis for calculating the amount of water that could be withdrawn annually by all sources without overburdening the systems. The total sustainable yield of all aquifers is currently calculated at 427 million gallons per day. The sustainable yield is reviewed periodically taking into account new information and other factors.

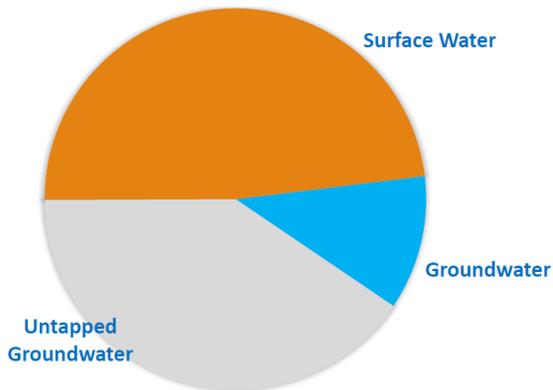
Maui has been divided into 36 surface drainage areas by CWRM for the purpose of establishing instream flow standards. Streamflow is variable and not easily defined and evaluation is ongoing. It is assumed that streamflow available for future use will not exceed the current use. The streamflow

used and available for off-stream uses will likely be reduced in the future based on legal decisions, reduction in agricultural use, potential County policy, and other factors. In addition to the existing surface water use, the sustainable yield of groundwater aquifers (existing groundwater use and balance of untapped groundwater), alternative sources of water can reduce reliance on wells and groundwater. However, most alternative water sources originates as or would otherwise contribute to groundwater or surface water (for example, reclaimed wastewater).

### Sustainable Yield



### Total Water Available (833 mgd)

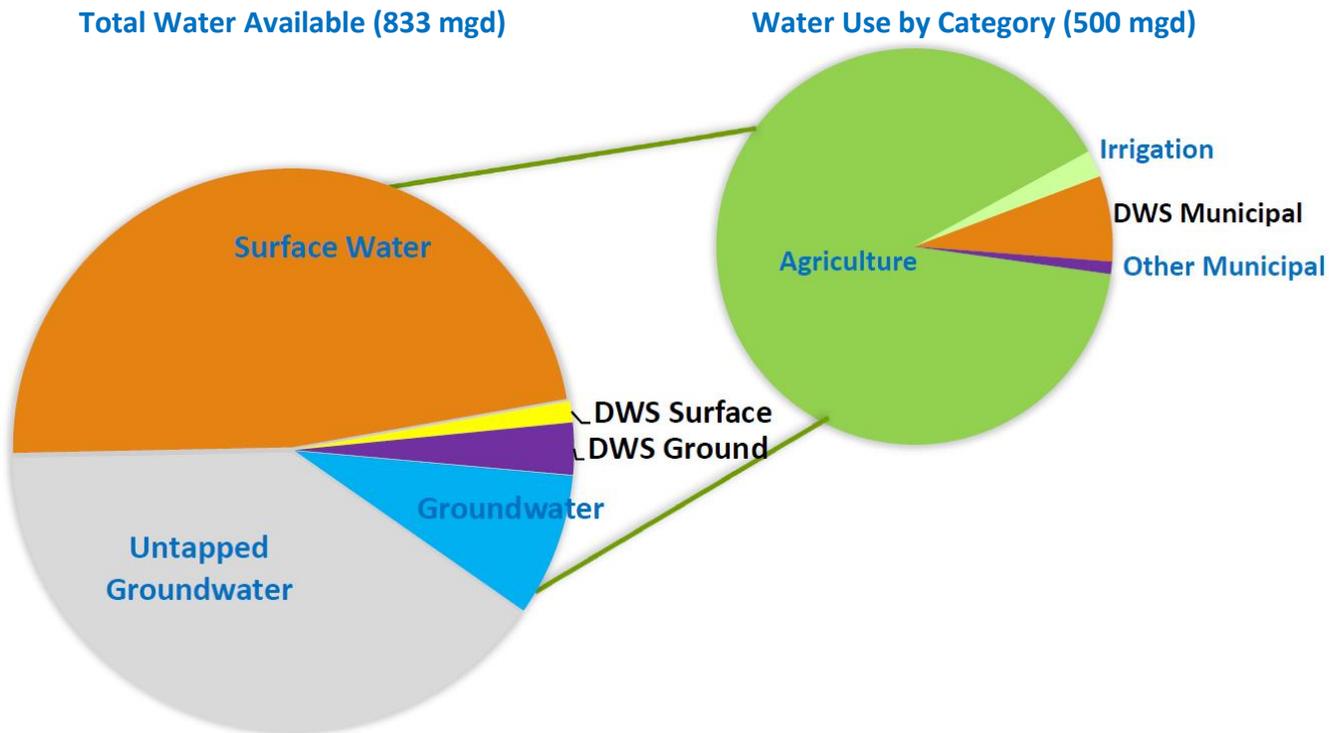


### 3. Who uses the water on Maui?

Water is used by people for a wide variety of purposes. The ‘municipal’ water use category includes water supplied by ‘public water systems’ as defined by the State, regardless of how the water is used. The ‘domestic’ category includes water generally used for household purposes by people not on municipal systems. ‘Irrigation’ includes non-agricultural irrigation.

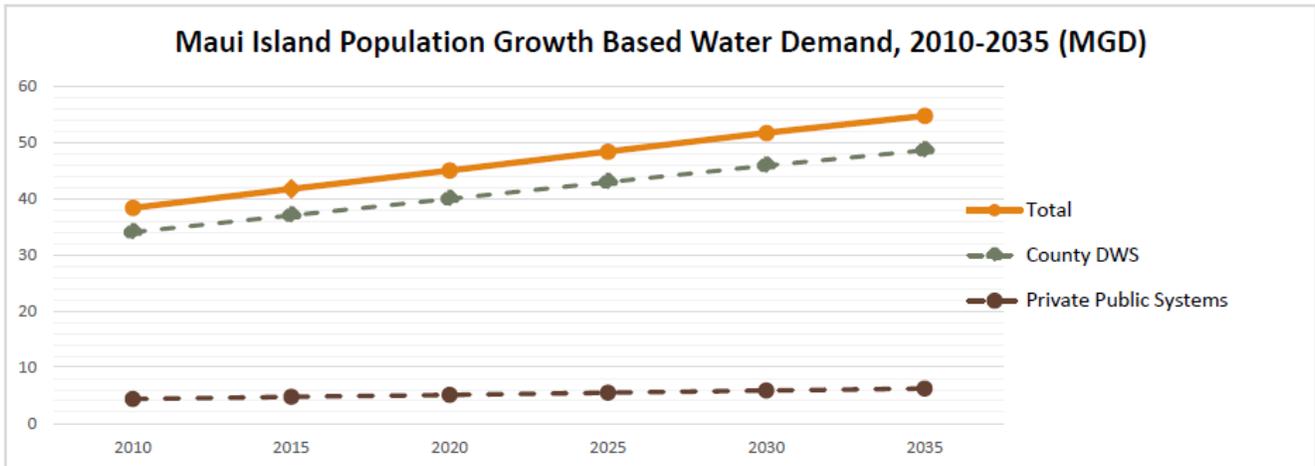
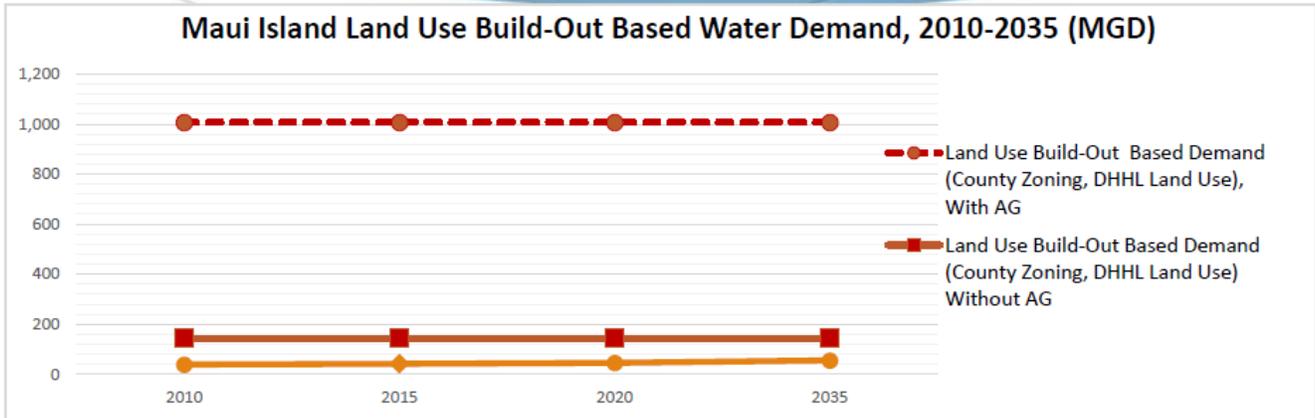
State Commission on Water Resource Management Water Use Categories
<b>Domestic</b> – Single & Multi-Family, Non-Commercial Gardening, Commercial, Office, Hospitals, Religious, Hotel, Schools
<b>Industrial</b> – Fire Protection, Mining, Dust Control, Thermoelectric Cooling, Geothermal, Other Industrial
<b>Irrigation</b> – Golf Course, Hotel, Landscape, Parks, Schools, Habitat Maintenance
<b>Agriculture</b> – Aquatic Plants & Animals, Crops/Processing, Livestock & Pasture, Ornamental/Nursery, Taro, Other
<b>Military</b> – All Military
<b>Municipal</b> – State and County Systems, Private Public Water Systems as defined by Department of Health

The graphic below shows there is approximately 500 million gallons per day of water used on average, and the dominate use is agriculture. Other uses (domestic, industrial, military) constitute a small fraction of the total use. The County Department of Water Supply (DWS) uses a comparatively small portion of the water used.



#### 4. How much water will we need in the future?

The WUDP projects the amount of water needed for various uses from 2015 to 2035. It projects water future needs based on projected population, and also for full build-out of all lands under current zoning. The population based water use projections are more realistic than the full-build projections because complete build-out of all land is unlikely, especially within 20 years. However, the population based water demand below does not include most of the current or future agricultural water demand or the small portion of demand that is not served by public or private systems.



In addition to water needed for humans, irrigation, agriculture, etc. is water needed to maintain healthy and functioning ecosystems, to satisfy Hawaiian rights, meet objectives in adopted plans, etc. The WUDP will provide a more complete picture of water demand.

#### 5. Will the Water Use and Development Plan affect the location, type or rate of development on Maui?

The WUDP is a companion document to the Maui Island Plan. It evaluates scenarios for allocating water to population and land uses set forth in the Maui Island Plan, focusing on those consistent with

the Maui Island Plan, State and DHHL plans, and planning objectives, among other factors. The community will provide input on the draft WUDP. It is possible that various scenarios adopted by the county in the WUDP would be inconsistent with the location, type or rate of development envisioned by the Maui Island Plan.

**6. How does use of alternative sources of water relate to the Water Use and Development Plan?**

The WUDP inventories existing water use, projects future water needs, and identifies sources of water to meet those needs. In addition to water from wells and streams, alternative sources include reclaimed wastewater, reuse of some water usually on the same property ('graywater'), catchment of rainwater, stormwater capture, and desalination of brackish well water or ocean water. Alternative sources are largely used for non-potable (not of drinking water quality) water needs such as landscape irrigation.

**7. Will the Water Use and Development Plan solve the upcountry water problems?**

The WUDP will not directly solve the Upcountry water problems or eliminate the waiting list. However, the WUDP can evaluate various scenarios, identify a preferred solution, and set forth implementing actions to resolve problems. The county is concurrently working on some solutions.

**8. How will the termination of sugar cane production on Maui relate to the Water Use and Development Plan?**

The termination of sugar cane production will greatly reduce agricultural demand on surface water and to a much lesser extent on ground water. The WUDP allocates water to land uses and growth in the Maui Island Plan; the subject lands are designated for agricultural use in the Maui Island Plan and this will not change unless that plan is amended. Despite the potential to convert some portion of sugar cane lands to other agricultural pursuits, it is anticipated that agricultural water demand will remain significantly reduced in the future. It is anticipated that the WUDP will suggest several future agricultural scenarios on Maui and evaluate the water needs of those scenarios.

**9. Fresh water ("wai") is integral to Native Hawaiian culture. How will the Water Use and Development Plan address or affect this issue?**

The WUDP will integrate information on water rights and priorities including cultural aspects, as well as ahupua'a systems. This will provide a foundation for evaluating the effects of various scenarios and options on Hawaiian rights. The discussion of existing uses and future needs should address traditional and customary rights, taro cultivation, other legal rights, self-sustaining ahupua'a, ecosystem maintenance, and other considerations. The WUDP will summarize the Na Wai 'Eha and East Maui conflicts and pose options for consideration by the community and decision makers.

**10. How does the Water Use and Development Plan relate to conflicts over diversion of water from streams?**

The WUDP will not resolve any legal issues or matters under the jurisdiction of the State Commission on Water Resource Management. However, as a legally required, comprehensive and long-term plan formulated through an integrated planning, it can present opportunities such as follows:

- Through the WUDP process, we can seek solutions to conflicts over water use.
- The WUDP process can build cooperation, trust and participation in the resolution of native Hawaiian water issues.
- The WUDP considers the effects of water use on ground and surface water resources, and how water can be used in a way that protects the sustainability of these resources.
- The WUDP will integrate information on water priorities and rights and ahupua'a systems which can provide a foundation for evaluating the effects of various scenarios and options on streams and Hawaiian rights.
- The WUDP will address the Na Wai Eha and East Maui conflicts and pose scenarios and options for consideration by the community and decision makers.
- Involvement of diverse interests in the WUDP process best facilitates a wide range of viewpoints, possible scenarios and solutions.
- The WUDP will provide an informational and policy foundation to support decision making by the County and CWRM.