

# *Overview of the Hawaii Water Plan*

**May 16, 2012  
CWRM Briefing**



# State Water Code



*There is a need for a program of **comprehensive water resources planning** to address the problems of supply and conservation of water. The **Hawaii water plan**, with such future amendments, supplements, and additions as may be necessary, is accepted as the guide for developing and implementing this policy. (§174C-2(b) HRS)*



# *Hawaii Water Plan Objectives*

- Set water resource policies
- Proper conservation and development of water
- Reasonable and beneficial use of water
- Ensure adequate water quality
- Control water for public purposes
- Provide for DHHL needs
- Recognize county home rule



# Hawaii Water Plan Components

Water Resource  
Protection Plan

Water Quality  
Plan

State Water  
Projects Plan

Agricultural  
Water Use and  
Development  
Plan

County  
Water Use and  
Development  
Plans



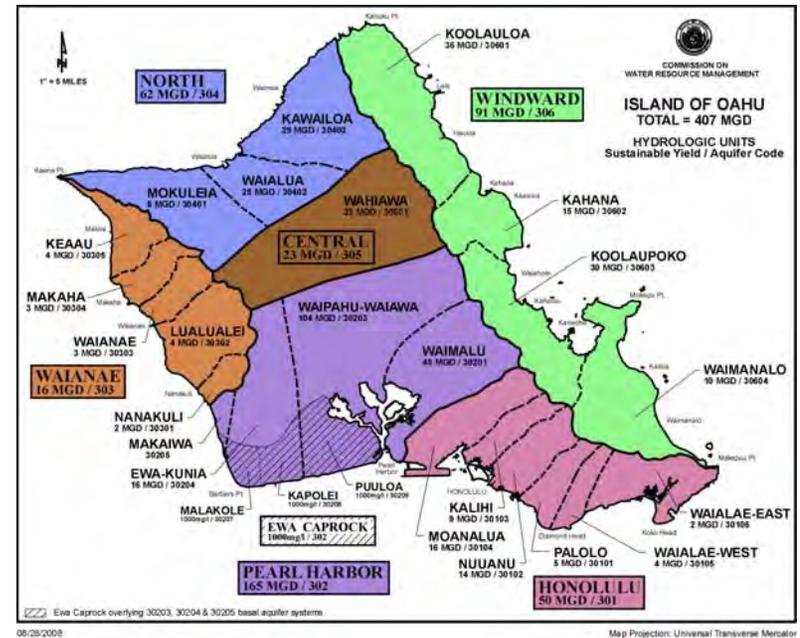
# ***Water Resource Protection Plan***

- Prepared by the Water Commission
- Protect and sustain statewide ground and surface water resources, watersheds, and natural stream environments through a comprehensive study of occurrence, sustainability, conservation, augmentation, and other resource management measures

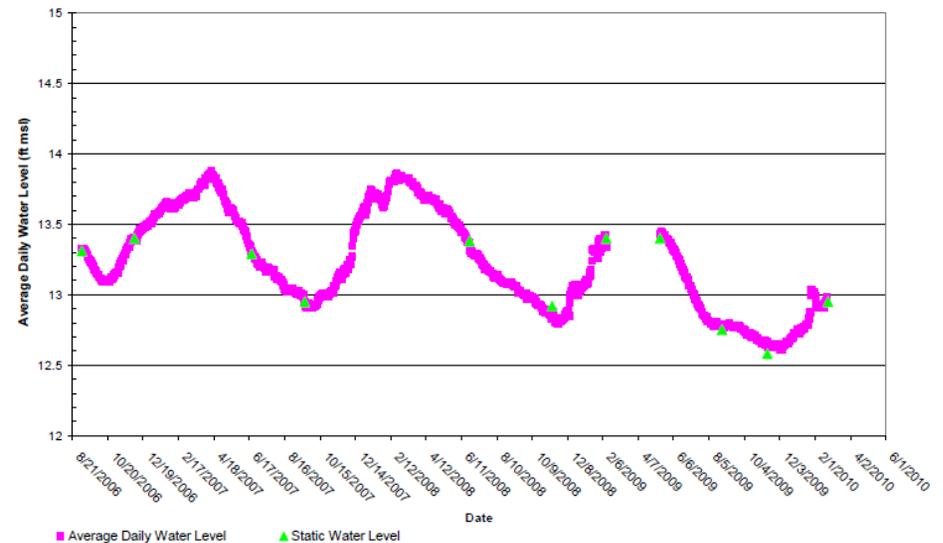


# Water Resource Protection

- Protection Policies
- Hydrologic Units and Water Availability
- Regulatory Programs
- Resource Monitoring
- Existing and Future Demands
- Water Conservation
- Resource Augmentation
- Drought



Iao Deep Monitor Well, Maui (5230-02) - Average Daily Water Levels



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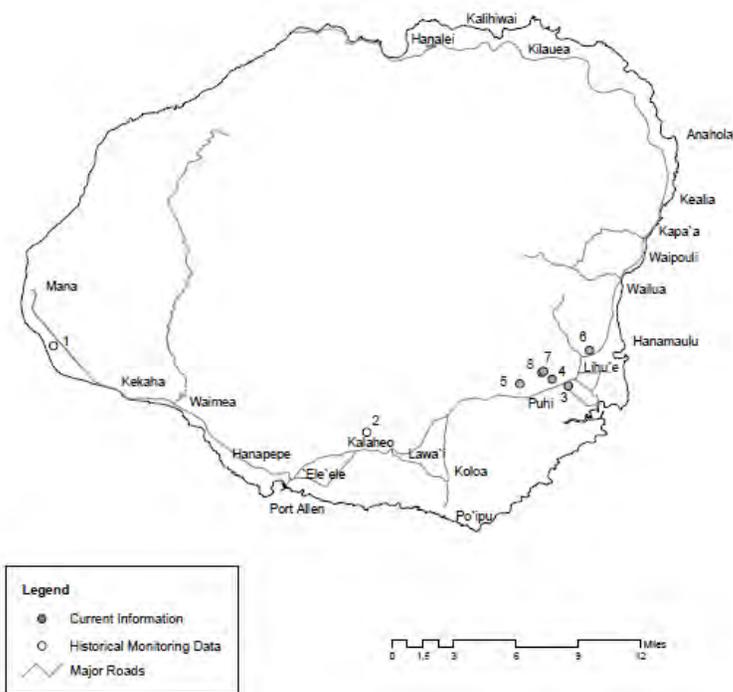
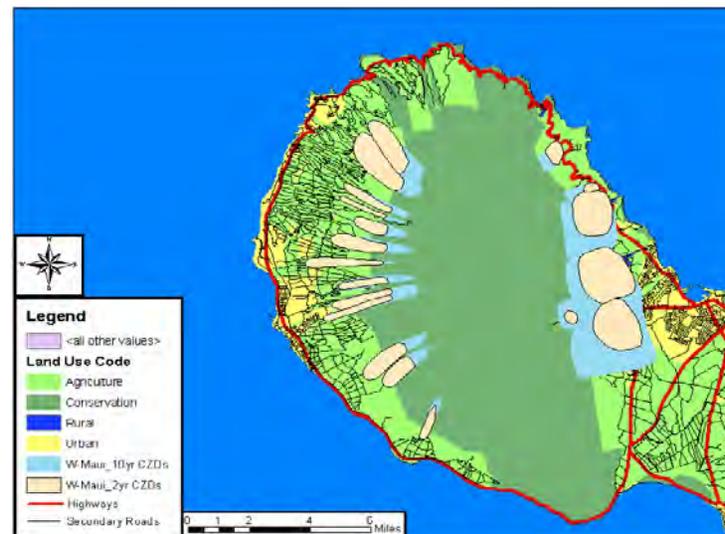
# *Water Quality Plan*

- Prepared by the Department of Health
- Protect the public health and sensitive ecological systems by preserving, protecting, restoring and enhancing the quality of ground and surface waters throughout the State
- Governed by the Safe Drinking Water Act & Clean Water Act



# Water Quality Protection

- Water Quality Standards
- Polluted Runoff Control
- Total Maximum Daily Loads
- Source Water Assessment
- Ground Water Contamination
- Underground Injection Control
- Underground Storage Tanks
- Wastewater Treatment & Recycling



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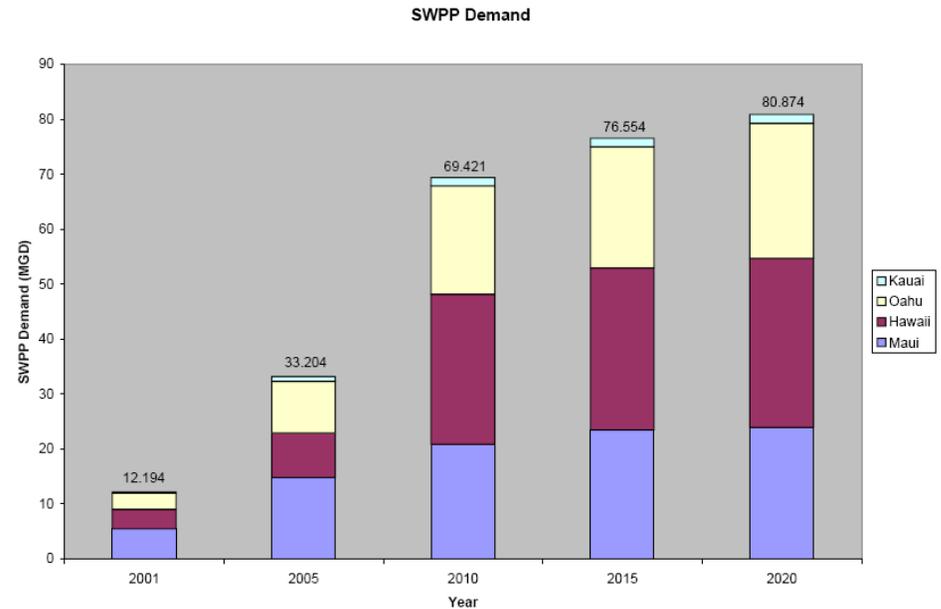
# *State Water Projects Plan*

- Prepared by the DLNR Engineering Division
- Provide a framework for planning and implementation of water development programs to meet projected water demands for state projects



# State Water Projects

- Existing State Water Resources (Wells, Stream Diversions, Water Systems)
- Proposed State Projects
- Future Demands
- Water Development Strategy



State Water Demand Status	Remaining Balance of SWPP Water Demands (mgd)							
	2001	2002	2003	2004	2005	2010	2015	2020
Total SWPP Project Demand Statewide	12.19	18.10	25.22	26.59	33.20	69.42	76.55	80.87
Demand Accounted for by Water Development Strategy	5.99	7.59	10.66	11.26	17.49	39.17	42.07	45.17
<b>Remaining Balance of Unmet Demand</b>								
Island of Hawaii	0.80	3.36	4.06	4.16	4.33	12.89	14.47	14.55
Island of Kauai	0.09	0.13	0.52	0.62	0.59	0.58	0.64	0.69
Island of Lanai	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Island of Maui	4.11	4.83	6.38	6.67	6.68	10.72	13.25	13.72
Island of Molokai	0.02	0.02	0.03	0.03	0.03	0.04	0.07	0.07
Island of Oahu	1.19	2.17	3.58	3.84	4.09	6.03	6.05	6.67
<b>Statewide Remaining Balance Total</b>	<b>6.20</b>	<b>10.51</b>	<b>14.56</b>	<b>15.33</b>	<b>15.72</b>	<b>30.25</b>	<b>34.48</b>	<b>35.71</b>



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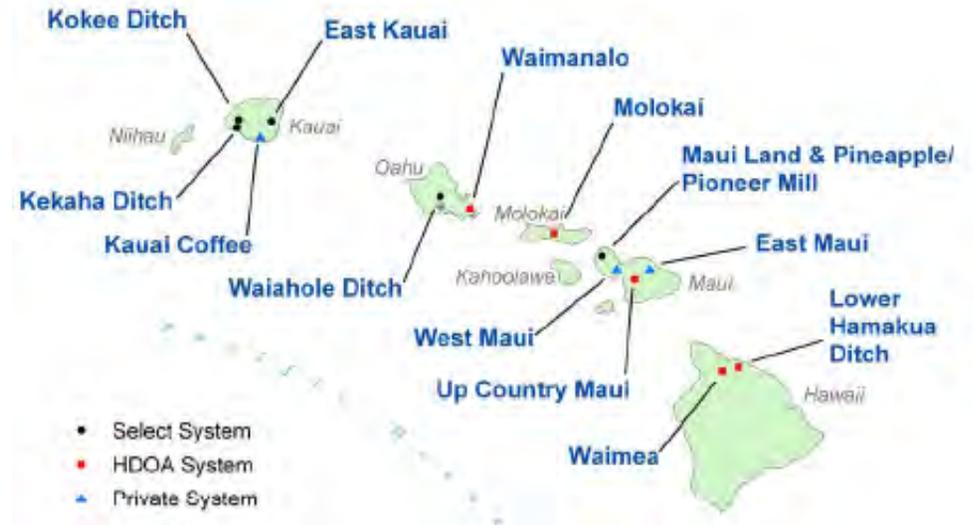
# ***Agricultural Water Use and Development Plan***

- Prepared by the Department of Agriculture
- Develop a long-range management plan that assesses state and private agricultural water use, supply, and irrigation water systems



# Agricultural Systems

- 13 Systems Studied
- Existing Condition
- Concerns/Needs
  - Capital Improvements
  - Maintenance Improvements
- Rehabilitation Costs
  - 10 Systems: ~ \$100.5 Million
- Water Duty for Diversified Ag
  - 3,400 gpd/ac



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# ***County Water Use and Development Plans***

- Prepared by each of the four counties
- Set forth the allocation of water to land use through the development of policies and strategies to guide the County in its planning, management, and development of water resources to meet projected demands



# *WUDP Requirements & Guidelines*

- Status of water and related land development & inventory of existing uses
- Future land uses and related water needs
- Regional water development plans
- Consistent with WRPP & WQP
- Incorporation of AWUDP and SWPP (including DHHL)
- Consistent with State and county land use plans & policies
- 20-year projection period



# *Chronology*

- 1987 Water Code – requires HWP to be adopted within 3 years and provides funding
- 1990 HWP and constituent parts adopted
- 1992 HWP revisions submitted but not adopted



# *Issues with the 1992 Draft Updates*

- Fragmented and too narrowly focused
- Inadequate consideration of uncertainties
- Single-point future water demand projection vs. a range of scenarios
- Static
- Tradeoffs not addressed



# STATEWIDE FRAMEWORK FOR UPDATING THE HAWAII WATER PLAN

February 2000



Water Resource Protection Plan  
Water Quality Plan  
State Water Projects Plan  
Agricultural Water Use and Development Plan  
County Water Use and Development Plan



Commission on Water Resource Management  
Department of Land and Natural Resources  
State of Hawaii



# ***Statewide Framework for Updating the Hawaii Water Plan***

- Established recommended plan elements
- 20-year planning horizon with 5 year updates
- Integrated resource planning approach
- Integration at the county level
- Living Document
- Submittal of WUDP project description

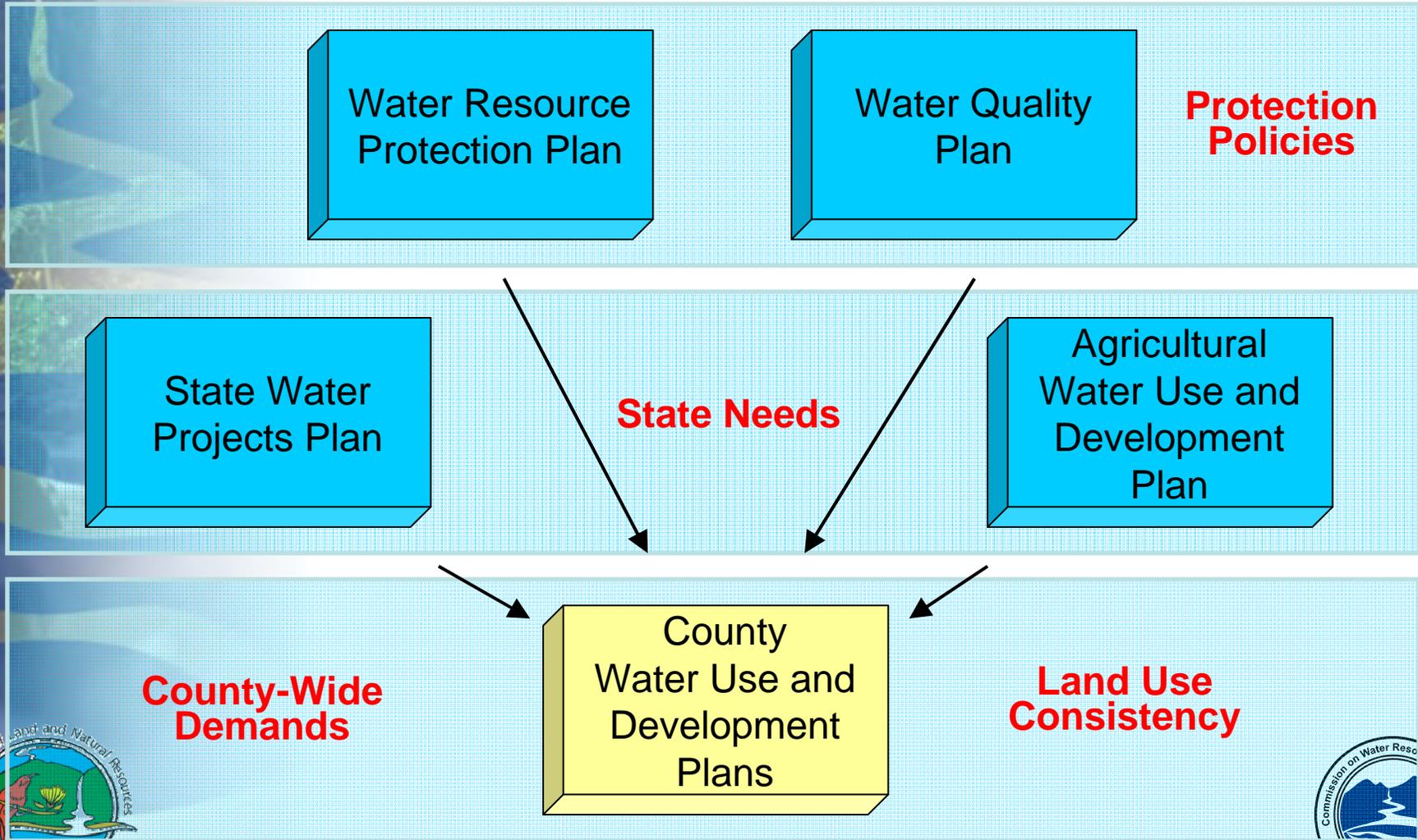


# *Need for Flexibility*

- Institutional constraints
- Funding constraints
- Encourage innovation
- Accommodate unique county-specific concerns

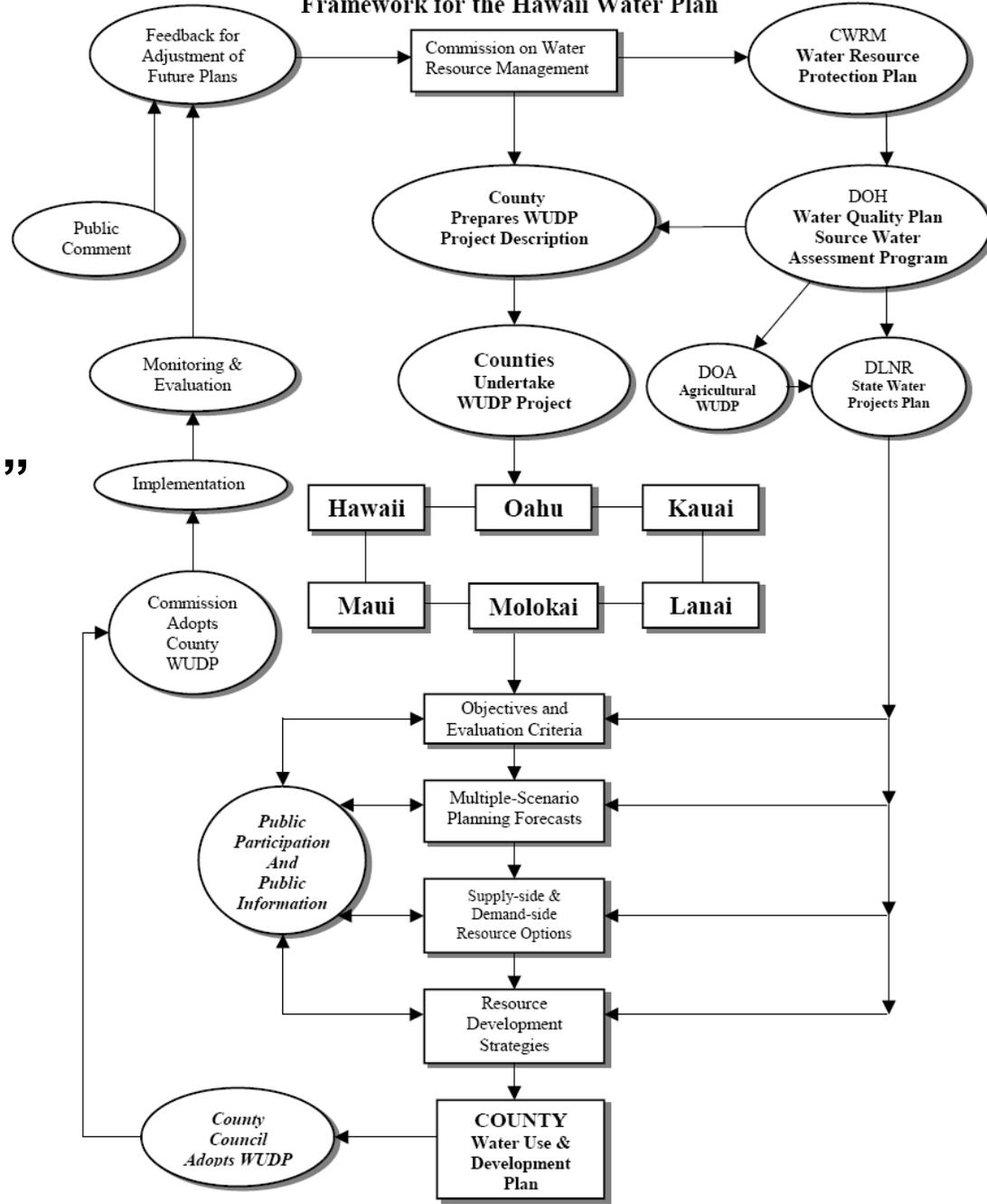


# Integration at the County Level





**Figure 2-1  
Framework for the Hawaii Water Plan**





## Status of Hawaii Water Plan Component Updates

HWP Component Plan	Status
WRPP	1 <sup>st</sup> Update in 2008
WQP	1 <sup>st</sup> Update for Ground Water in Progress
SWPP	1 <sup>st</sup> Update in 2003, 2 <sup>nd</sup> Update in Progress
AWUDP	1 <sup>st</sup> Update in 2003, 2 <sup>nd</sup> Update in 2004, 3 <sup>rd</sup> Update in 2008 (pending verification)
WUDP	1 <sup>st</sup> Update in Progress for Oahu, Kauai, Maui 1 <sup>st</sup> Update for Hawaii County WUDP in 2011

Note: 1990 - Initial Adoption of all HWP Components.

1992 – Revisions were not adopted.



# Mahalo!

**Commission on Water Resource Management**  
**<http://hawaii.gov/dlnr/cwrp/>**

The screenshot shows a Windows Internet Explorer browser window displaying the website for the Commission on Water Resource Management. The browser's address bar shows the URL <http://hawaii.gov/dlnr/cwrp/>. The website features a large banner with the text "COMMISSION ON WATER RESOURCE MANAGEMENT" and the Hawaiian name "Ke Kahuwai Pono" with the tagline "The trustee who oversees the rightful sharing of water." Below the banner is a navigation menu with links for "ABOUT US", "NEWS & EVENTS", "RESOURCES", "PLANNING", "SURFACE WATER", and "GROUND WATER". The main content area includes a "Water News" section with a headline "MEET THE DLNR CHAIRPERSON:" and a "QUICK LINKS" section with a search box and links for "Applications & Forms" and "Permit Application Process". The browser's taskbar at the bottom shows the Start button, several application icons, and the system clock displaying 3:28 PM on 11/29/2010.

