

# **North Shore Watershed Management Plan**

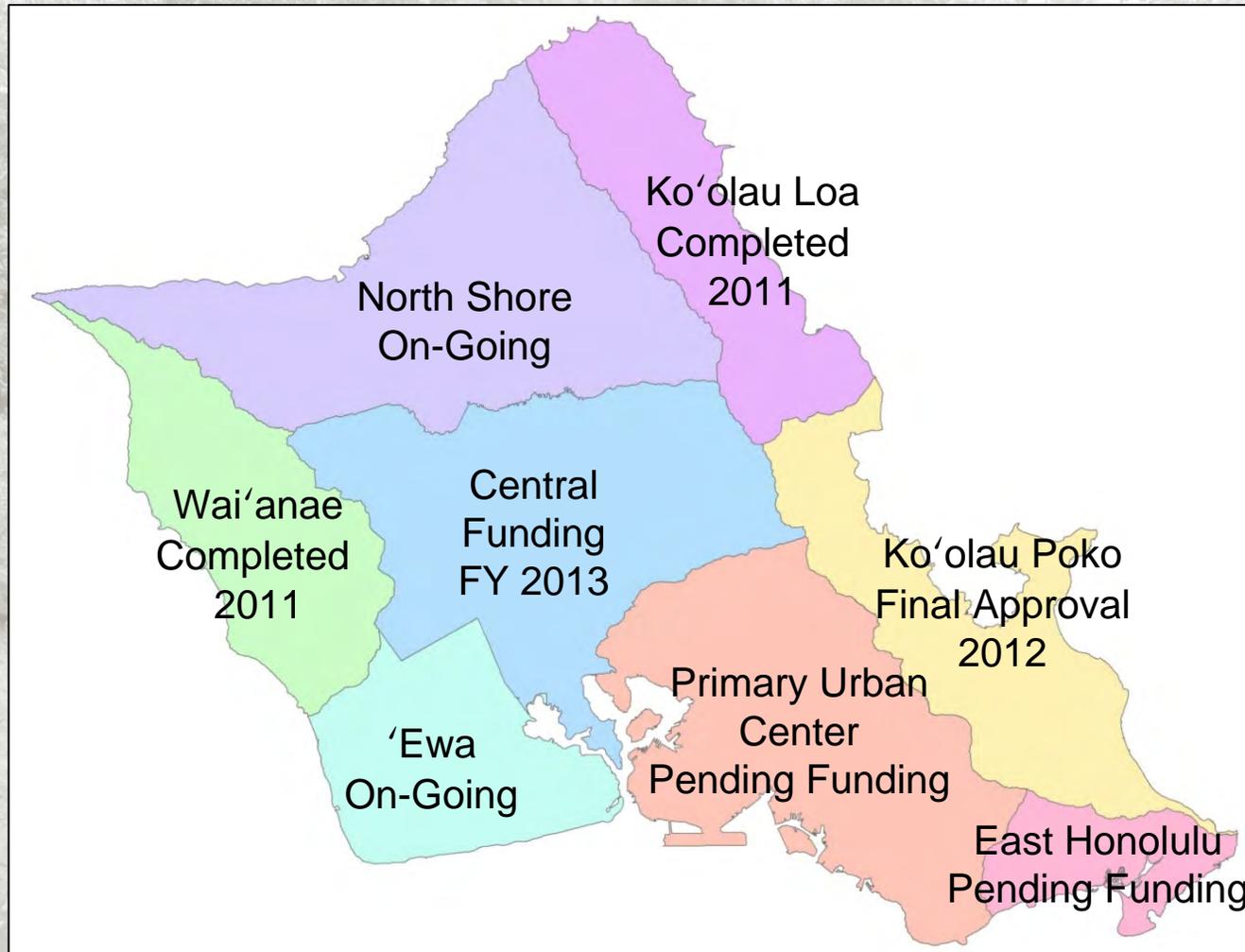
**CWRM Progress Update May 16, 2012**



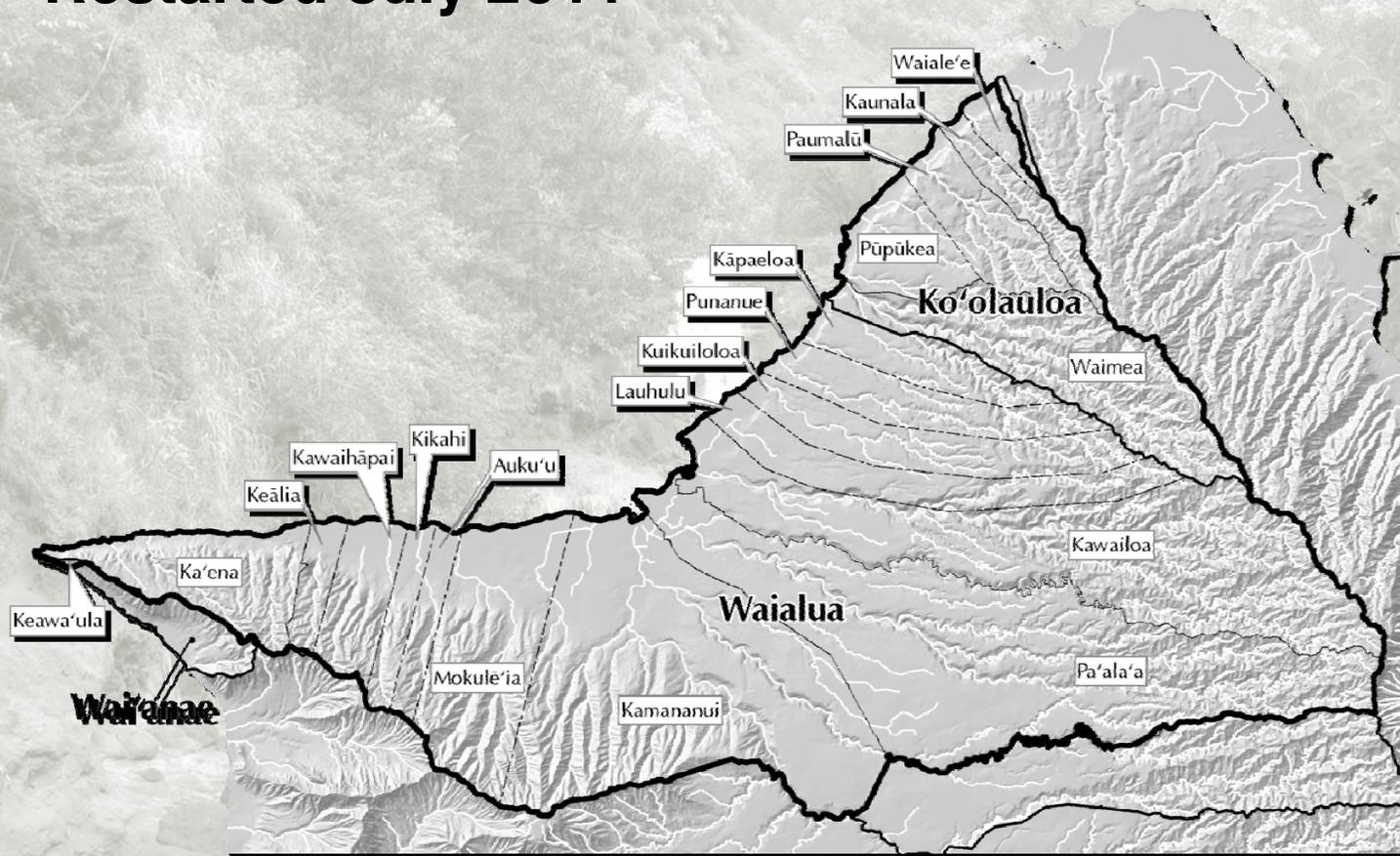
**Board of Water Supply**  
City and County of Honolulu

# O'ahu Water Management Plan

## Status of Regional Watershed Management Plans



- Project contracted July 2008, stopped 2009
- Restarted July 2011



North Shore Development Plan Area



# Scope

- Develop future urban and agriculture water demands for 2035 with ultimate scenario
- Identify watershed issues
- Integrate watershed protection and water use and development planning
- Consult with stakeholders
- Describe policies, projects, programs and strategies to address issues
- Plan Implementation
- Public Review Draft and Final WMP



# Progress to Date

- Preliminary watershed analysis using available 2010 data and reports
- Large Landowner meetings in October/November 2011
  - Dillingham Ranch 'Āina, LLC
  - Galbraith Trust
  - Dole Food Co., Inc.
  - Pioneer Hi-Bred International, Inc.
  - Kamehameha Schools



# Progress to Date

- Initial meeting with CWRM, DPP, DOA
- Neighborhood Board Meeting
  - March 27

**HONOLULU BOARD OF WATER SUPPLY**  
**NORTH SHORE WATERSHED MANAGEMENT PLAN**

The Honolulu Board of Water Supply (BWS) has initiated the preparation of the district-wide "North Shore Watershed Management Plan (NSWMP)." The NSWMP is one of eight WMPs that will comprise the O'ahu Water Management Plan and meet the requirements of preparing a County Water Use and Development Plan as required by the State of Hawaii's Water Code and City & County of Honolulu ordinance.

The overall goal of the NSWMP is to formulate an environmentally holistic, community-based, and economically viable watershed management plan that will provide a balance between: (1) the preservation and management of O'ahu's watersheds and (2) sustainable ground water and surface water use and development of agricultural and urban users. The plan has five objectives: (1) Promote sustainable watersheds; (2) Protect and enhance water quality and quantity; (3) Protect Native Hawaiian rights and traditional customary practices; (4) Facilitate public participation, education, and project implementation; and (5) Meet future water demands at reasonable costs.

BWS will develop Watershed Management Plans for each of O'ahu's eight planning districts through a planning process that will emphasize:

- Community participation and consultation
- Holistic management of watershed resources
- Alignment with important State and City policies and programs
- Action orientation: Implementation of important watershed management programs
- Ahupua'a management principles
- Sustainability of water resources

**ISLAND OF O'AHU DEVELOPMENT PLAN AREAS**  
Estimated Population Distribution and BWS Pumpage and Water Demand CY2000

Area	Population (%)	Water Demand (MGD)
North Shore	2%	2.5 MGD (0.4 MGPD)
Waianae	3%	4.8 MGD (0.8 MGPD)
Ewa	6%	6.6 MGD (1.1 MGPD)
Central	13%	32.5 MGD (5.4 MGPD)
Primary Urban Center	48%	81.5 MGD (13.6 MGPD)
Koolaha	1%	12.2 MGD (2.0 MGPD)
East Honolulu	2%	3.0 MGD (0.5 MGPD)
Ko'alaeha	2%	10 MGD (1.7 MGPD)

**LEGEND**  
Planning District  
Percent of Island Resident Population  
BWS Pumpage in Development Plan Area  
Water Demand for Development Plan Area

**HONOLULU BOARD OF WATER SUPPLY**  
**NORTH SHORE WATERSHED MANAGEMENT PLAN**

**Context:** One of the eight district Watershed Management Plans that together will constitute the "O'ahu Water Management Plan."

**Plan Area:** North Shore District, from Waialeale to Kalaheo Point

**District Size:** 77,000 acres; approximately 17,200 people

**PLANNING PROCESS**

NORTH SHORE WATER USE AND DEVELOPMENT PLAN

↓

WATERSHED ANALYSIS & STAKEHOLDER CONSULTATION

↓

WATERSHED MANAGEMENT PROJECTS & STRATEGIES

**NORTH SHORE Ahupua'a**

**FOR MORE INFORMATION, PLEASE CONTACT:**

Honolulu Board of Water Supply  
Contact: Barry Sugiura  
Phone: 743-5000, Email: bsugiura@hawaii.gov

Group TD International, Inc.  
Contact: Barbara Kakaie  
Phone: 573-5366, E-mail: nswwmp@group70inc.com



# Preliminary Issues

- Adequate water for future agricultural needs?
- State of water infrastructure
  - Wahiaiwā Irrigation System
  - Private water systems
- Effects of agricultural practices on water quality
- Potential for improved water quality of Wahiaiwā Reservoir (R-2 to R-1)
- Flooding in Waialua and Hale'iwa
- Potential climate change impacts



# 2035 Water Demand Projections

- Significant increase in diversified agriculture
- Very low population growth
- Low, Mid, High and Ultimate scenarios
- Scenarios development with CWRM, DPP and DOA



# Potential 2035 Demand Scenarios

- **Agricultural / Non-Potable Irrigated Acreage**
  - **Low Scenario:** No change in diversified ag acreage (6,000 acres)
  - **Mid Scenario:** Diversified ag acreage increases by 1,500 acres (7,500 acres)
  - **High Scenario:** Sixty percent of ALISH Prime and Unique lands outside of the Community Growth Boundary (12,000 acres)
  - **Ultimate Scenario** (beyond 2035): All ALISH Prime and Unique lands outside of the Community Growth Boundary (20,000 acres)



**Legend**

 Community Growth Boundary

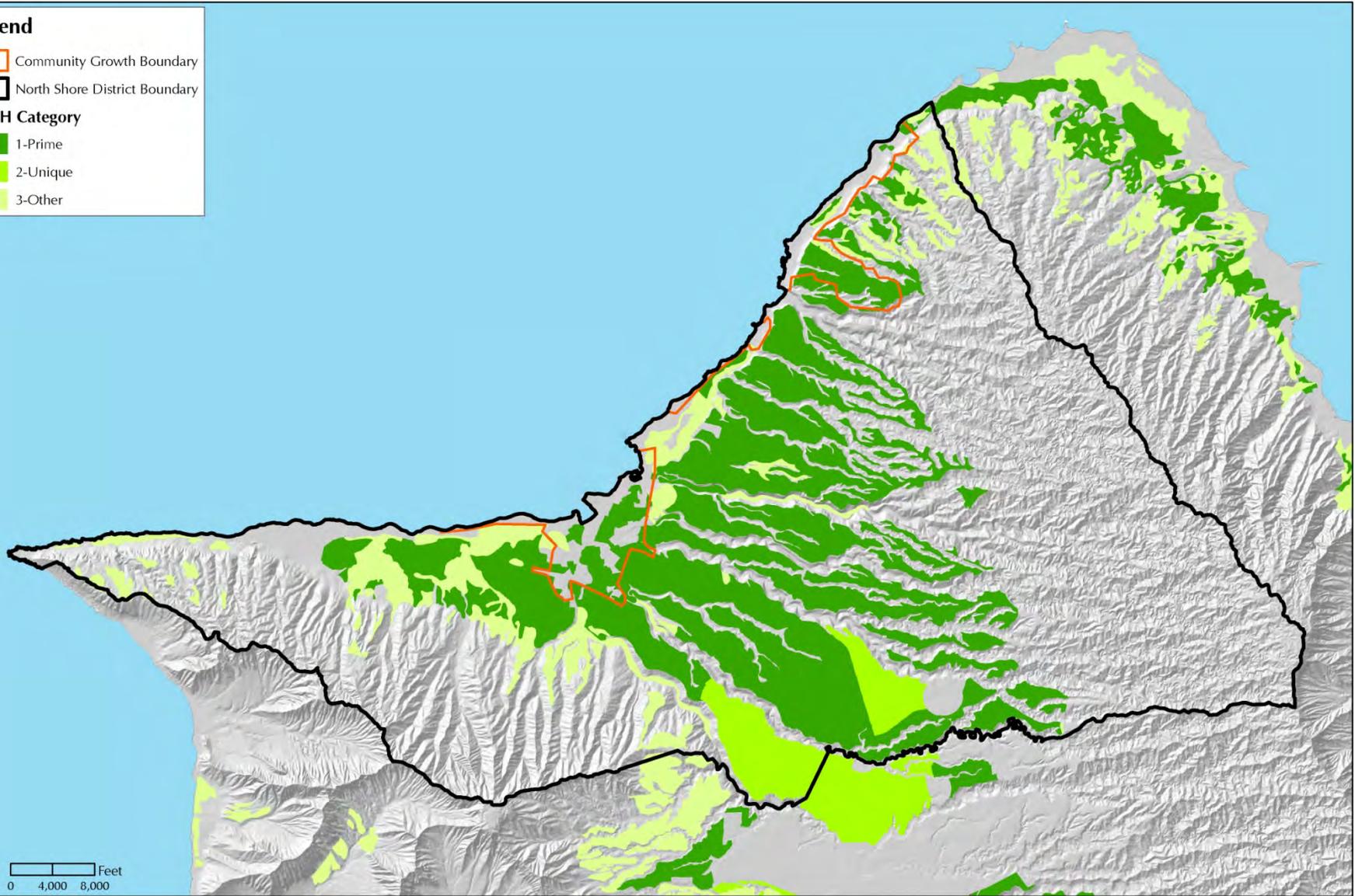
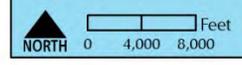
 North Shore District Boundary

**ALISH Category**

 1-Prime

 2-Unique

 3-Other



# Potential 2035 Demand Scenarios

- **Urban**
  - **Low Scenario:** Population growth less than DPP Growth Policy scenario
  - **Mid Scenario:** DPP Growth Policy
  - **High Scenario:** Historic Population Trend
  - **Ultimate Scenario (beyond 2035):** All acreage within the Community Growth Boundary is developed (excluding preservation lands)



# Next Steps

- Neighborhood Board Meeting and Formation of Working Group (May)
- Public Information and Working Group Meetings (June - September)
- Public Review Draft & CWRM Briefing (January 2013)



# MAHALO

