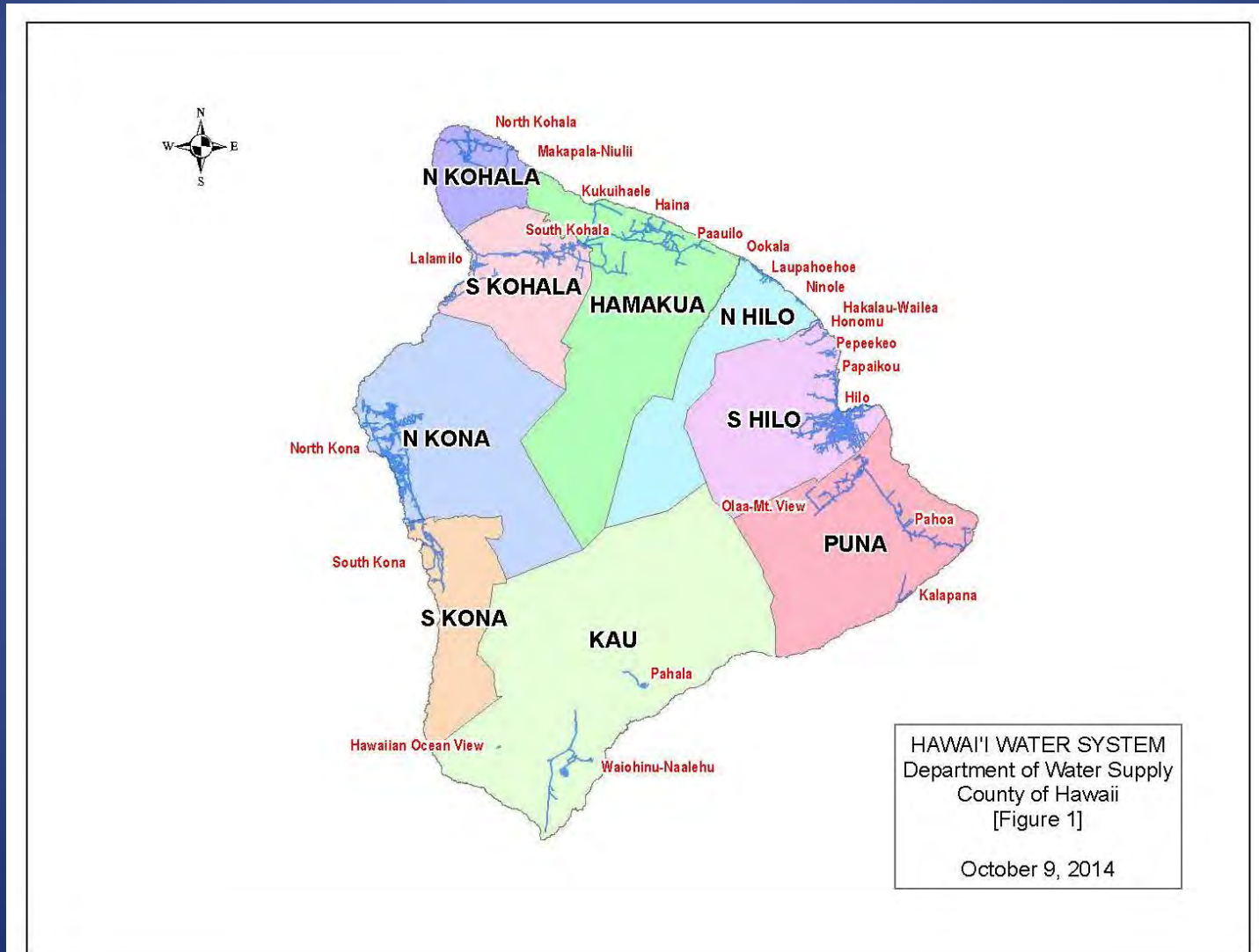


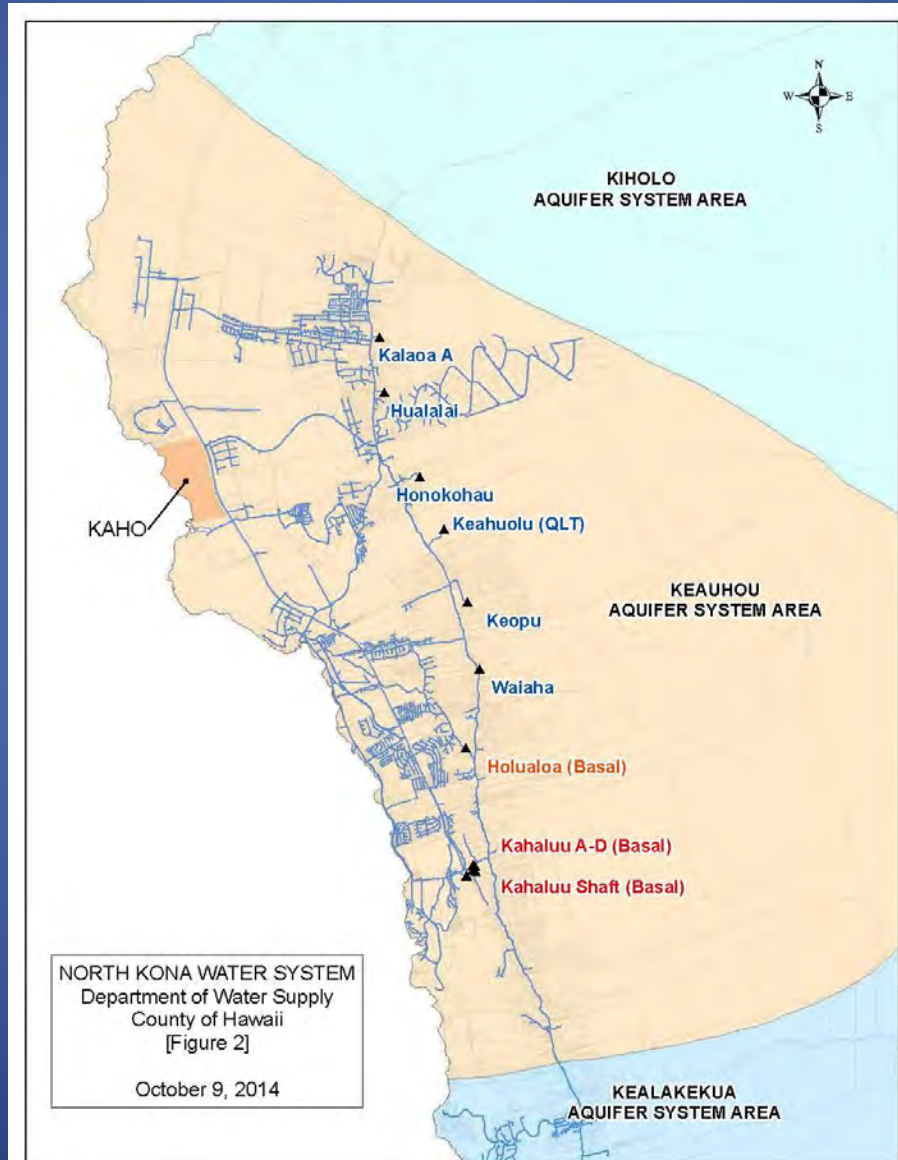
Department of Water Supply  
presentation to the Commission on  
Water Resource Management

October 9, 2014

# Department of Water Supply, County of Hawaii

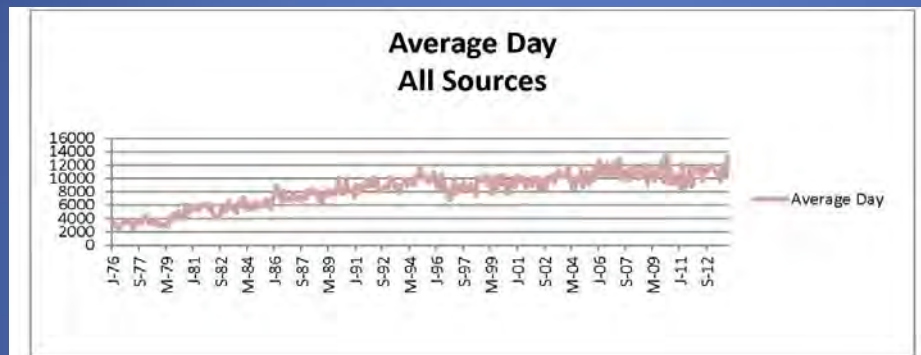


# DWS N. Kona Water System

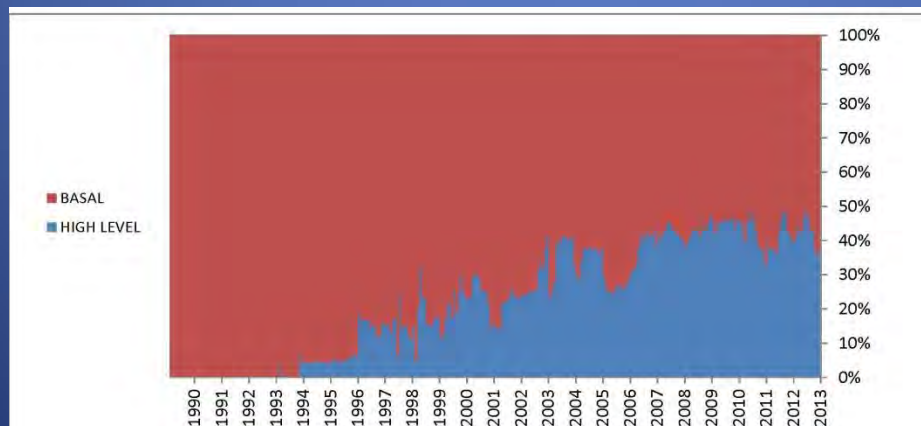


# DWS N. Kona Water System

- Existing use (11.02 mgd, 12 mo. avg. as of 7/14)



- Distribution of high-level vs. basal

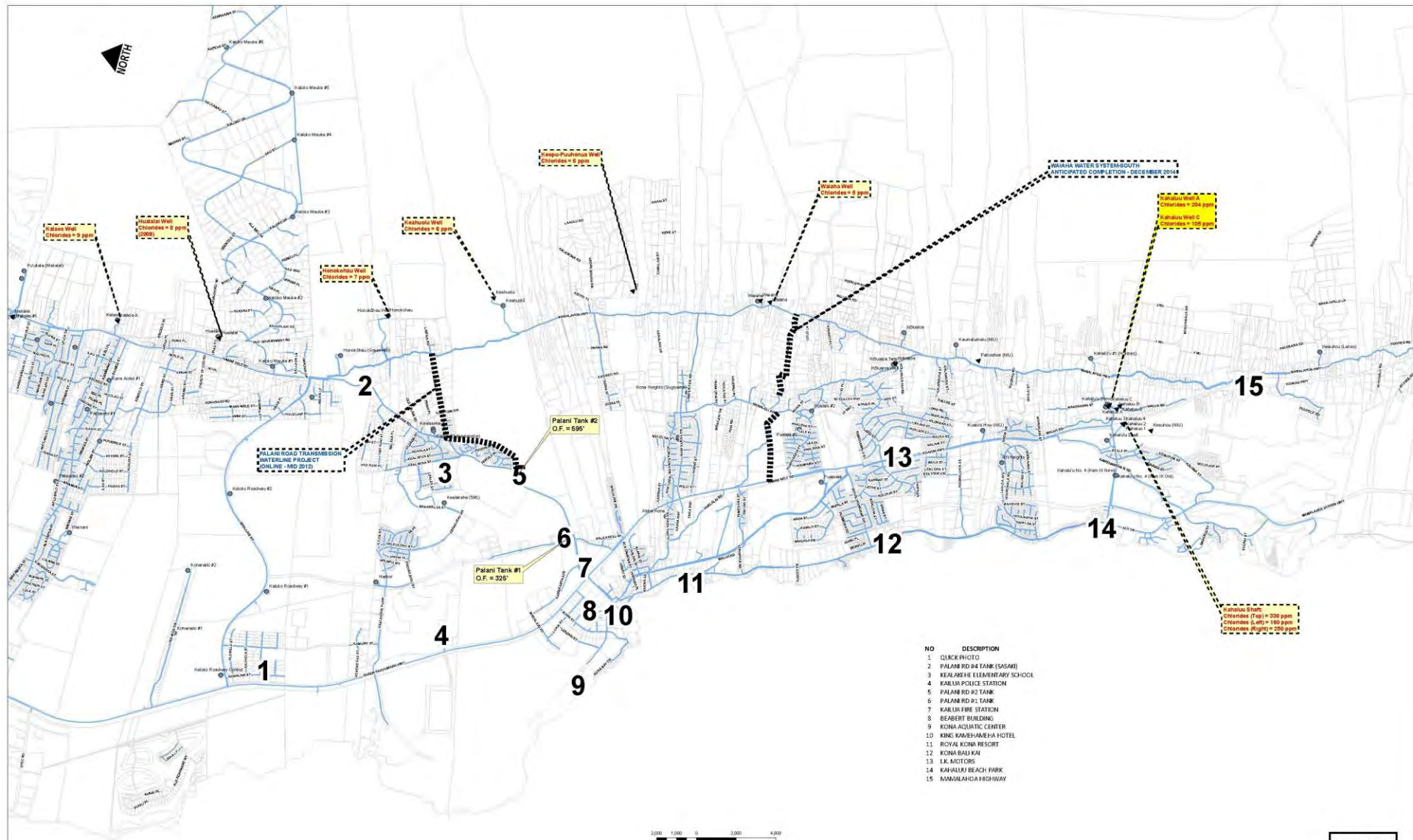


# DWS N. Kona Water System

- CIP Projects
  - Improved Water Quality
  - Improved Reliability

Date(s)	Project	Cost
1997	Halekii Production Well and Supporting Facilities	\$1,088,000
1997	Waiaha Exploratory Well	\$1,200,000
1998	Honokohau Production Well and Supporting Facilities - Phase 3 (trans. well to hwy)	\$342,000
1998	Holualoa 0.5 MG Reservoir	\$1,145,000
1999	Honokohau Production Well and Supporting Facilities - Phase 1 (well and res)	\$1,994,000
1999	Honokohau Production Well and Supporting Facilities - Phase 2 (mamalahoa hwy)	\$747,000
2003	Puapuaa 2.0 MG Reservoir	\$4,049,000
2005	Mamalahoa Highway Improvements - Phase 1	\$1,923,000
2006	Waiaha Production Well and 2.0 MG Concrete Reservoir	\$4,615,000
2010	Mamalahoa Highway Improvements - Phase 2	\$1,359,000
2010	Kuakini 16" Transmission Line	\$2,751,000
2012	Keopu Production Well and Supporting Facilities	\$5,084,000
2012	Palani Road Transmission Waterline	\$12,000,000
		\$38,297,000
2014	Palani Ranch Well and Reservoir (par for oversizing reservoir)	\$1,000,000
2015	Queen K Hwy Widening, Phase 2	\$3,300,000
2015	Waiaha Corridor Transmission Line and Reservoirs (Private w/DWS participation)	\$3,000,000
2006	Queen Liliuokalani Trust - Keahuolu Well, Reservoir, Trans. w/L To Hwy.	private





North Kona Water System  
August 20, 2014

- | NO | DESCRIPTION                |
|----|----------------------------|
| 1  | CLURE PHOTO                |
| 2  | PALANI RD #4 TANK (SASAKI) |
| 3  | KEALEHE ELEMENTARY SCHOOL  |
| 4  | KAILUA POLICE STATION      |
| 5  | PALANI RD #2 TANK          |
| 6  | PALANI RD #1 TANK          |
| 7  | KAILUA FIRE STATION        |
| 8  | BEABERT BUILDING           |
| 9  | KONA AQUATIC CENTER        |
| 10 | KING KANEHAKAHEA HOTEL     |
| 11 | ROYAL KONA RESORT          |
| 12 | KONA BALI KAI              |
| 13 | H.K. KITCHENS              |
| 14 | KAHALU BEACH PARK          |
| 15 | MAHALAUA HIGHWAY           |

**LEGEND**

- Reservoir
- ▲ Well

Kalapa Well  
Chlorides = 8 ppm

Hakohua Well  
Chlorides = 8 ppm

Honokohau Well  
Chlorides = 7 ppm

Kahohua Well  
Chlorides = 6 ppm

Keapu-Puuhoua Well  
Chlorides = 6 ppm

Waiama Well  
Chlorides = 8 ppm

WAIAMA WATER SYSTEM SOUTH  
ANTICIPATED COMPLETION - DECEMBER 2014

Tararua Well A  
Chlorides = 204 ppm

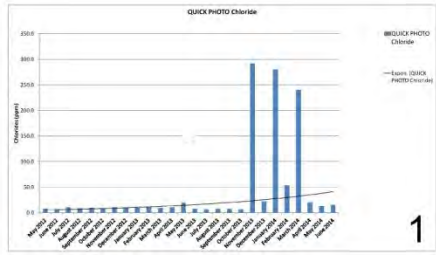
Tararua Well C  
Chlorides = 102 ppm

WATERLINE PROJECT  
WALL-TO-WALL TRANSDUCTION  
(ONLINE - MID 2015)

Palani Tank #2  
O.F. = 595'

Palani Tank #1  
O.F. = 325'

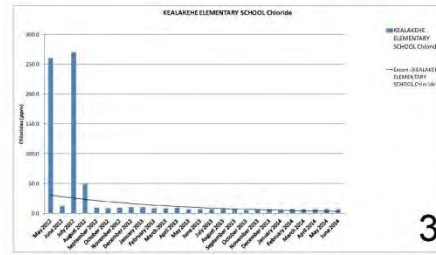
Kahaluu Stream  
Chlorides (Top) = 330 ppm  
Chlorides (Left) = 160 ppm  
Chlorides (Right) = 250 ppm



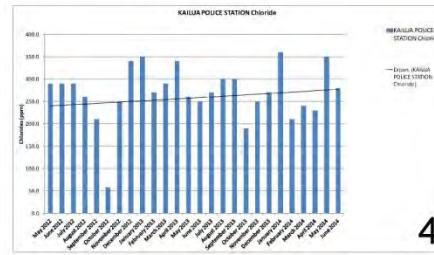
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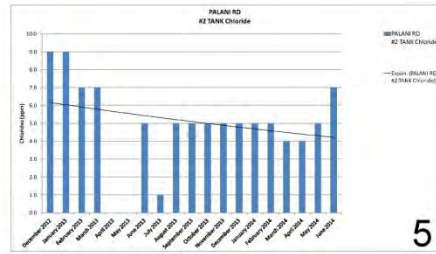
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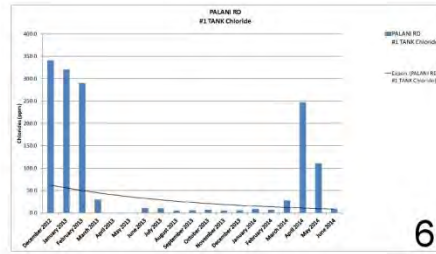
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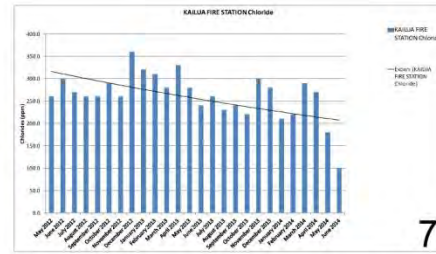
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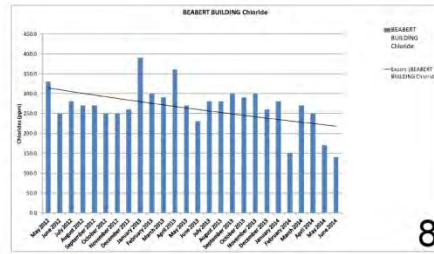
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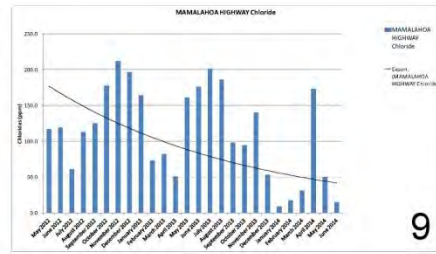
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7



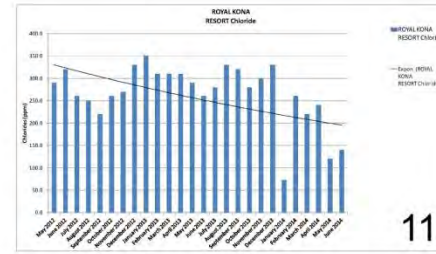
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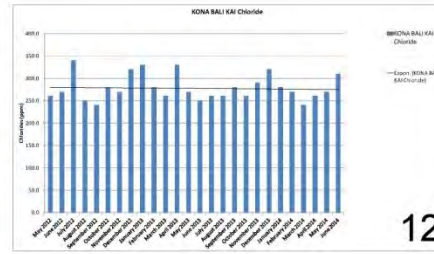
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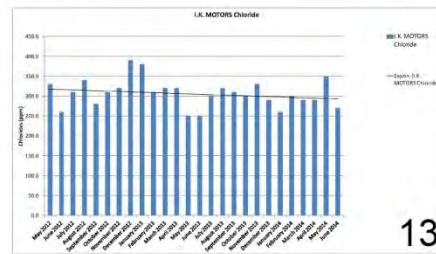
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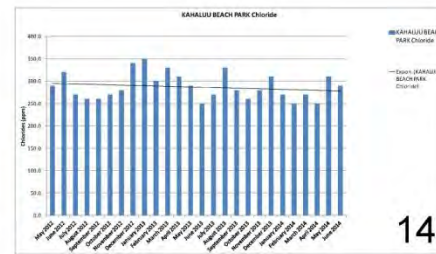
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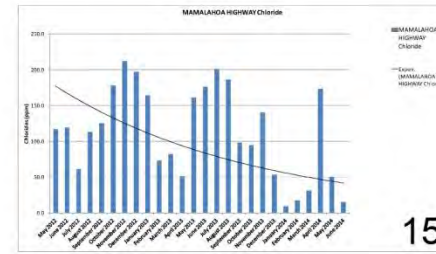
12



13



14



15

NO	DESCRIPTION
1	QUICK PHOTO
2	PALANI RD #1 TANK (SASAKI)
3	KEALAKEHE ELEMENTARY SCHOOL
4	KAILUA POLICE STATION
5	PALANI RD #2 TANK
6	PALANI RD #1 TANK
7	KAILUA FIRE STATION
8	BEABERT BUILDING
9	KONA AQUATIC CENTER
10	KING KAMEHAMEHA HOTEL
11	ROYAL KONA RESORT
12	KONA BALI KAI
13	L.K. MOTORS
14	KAHALUU BEACH PARK
15	MAMALAHOA HIGHWAY

CHLORIDE READINGS WITH EXPONENTIAL TRENDS

# Authorized Planned Water Use

• Water commitments	1.14 mgd
• Developer agreements	1.21 mgd
• Vacant service laterals	1.10 mgd
• Building permits	0.09 mgd
• Other private wells	1.99 mgd
Total:	5.53 mgd

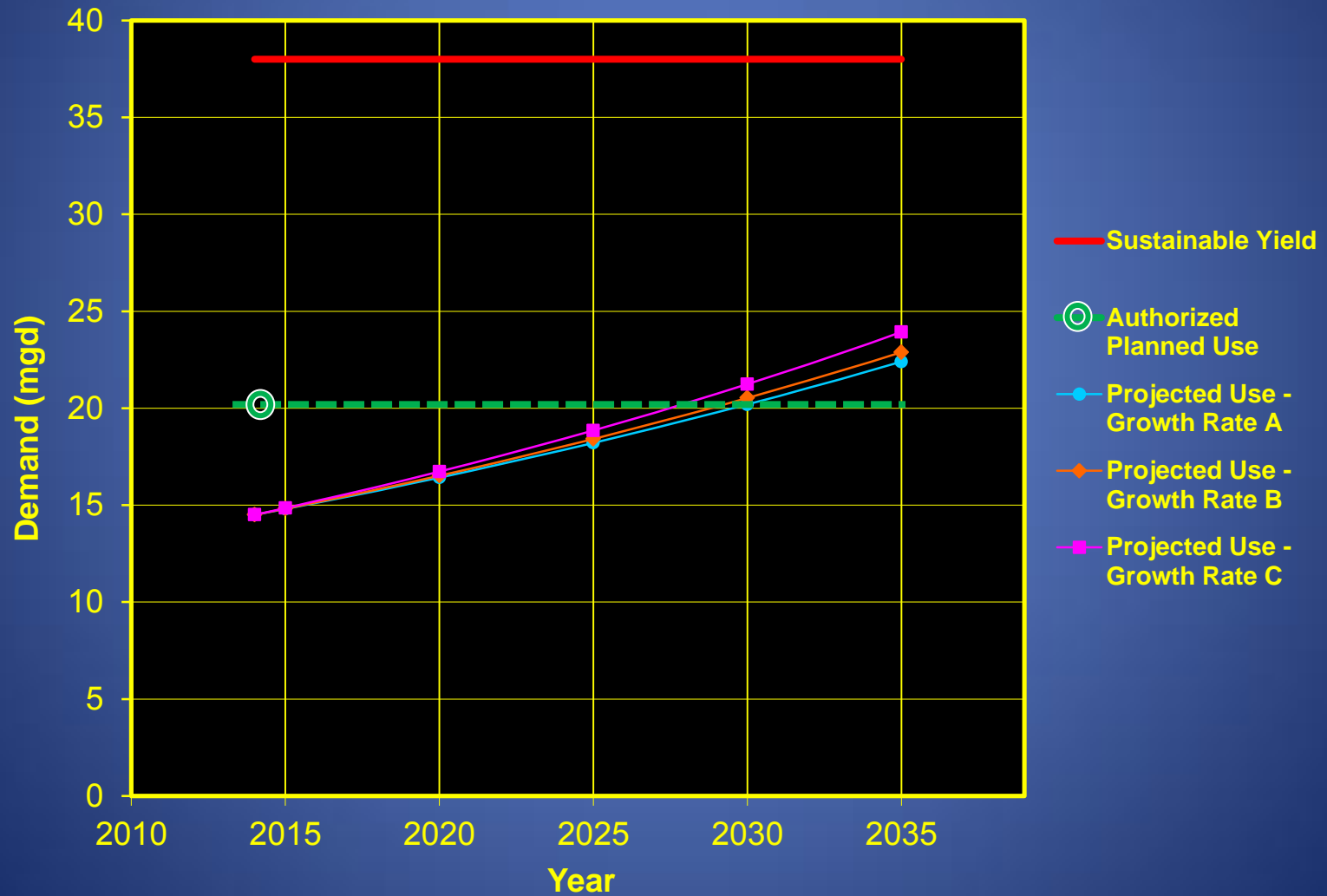


# Hawaii County Water Use & Development Plan

## Background

- Updated original WUDP prepared in 1990
- Initiated in 2004
- Final Draft Plan 2010
- Adopted by County Ordinance – February 2011
- Accepted by CWRM – November 2011

# Keauhou Aquifer System Area Projections



# DWS Responsibilities

- DWS Rules and Regulations & Standards
- County Charter and Code
- State of Hawaii
- Federal

# Looking Ahead

- WUDP Update
- High Level Source Study
- Recognize that this is a sensitive area
- Continued participation with community/professional groups and conferences
- Conservation Program Enhancements

# In Summary

- Designation not required at this time
  - Existing & future water needs & sustainable yield
  - Protective mechanisms currently in place
  - Ongoing efforts and future plans by the DWS
  - The County, State and community are working together to be good stewards of our public trust resources.



**“For the benefit of  
present and future generations,**

the county shall conserve and protect Hawai‘i’s natural beauty and all natural and cultural resources, including but not limited to land, water, air, minerals, energy sources, wahi pana, surf spots, historic sites, and historic structures, and shall promote the development and utilization of these resources in a manner consistent with their conservation and in furtherance of the self-sufficiency of the county. **All public natural and cultural resources are held in trust by the county for the benefit of the people.”**

# Water, Our Most Precious Resource

## Ka Wai A Kāne

