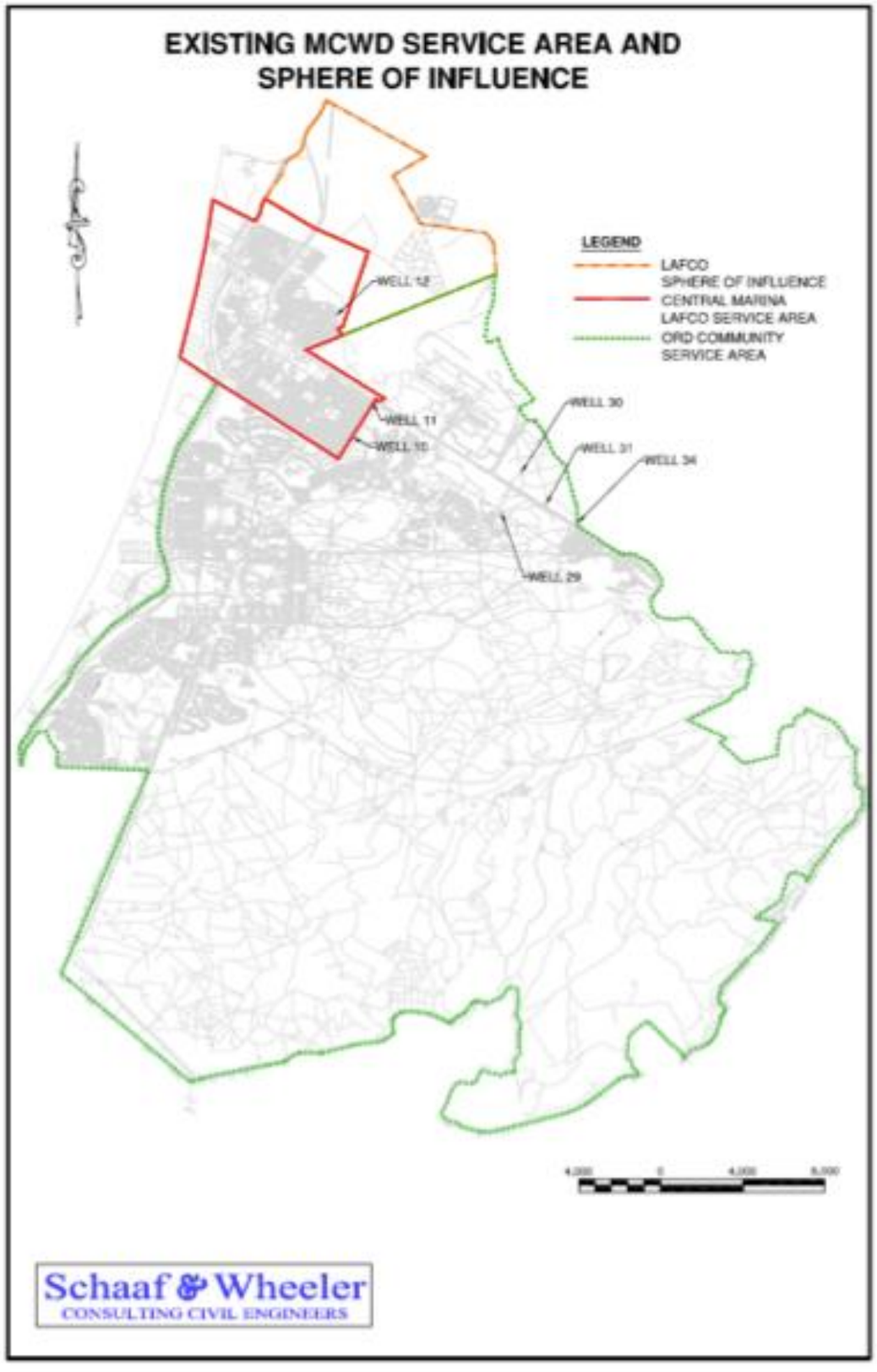
# Marina Coast Water District

Marina City Counsel and Planning Commission
Special Joint Meeting and Study Session
April 29, 2014

# MCWD Discussion Points

- Existing Wells
- Water Production and Consumption
- Future Development
- Augmentation



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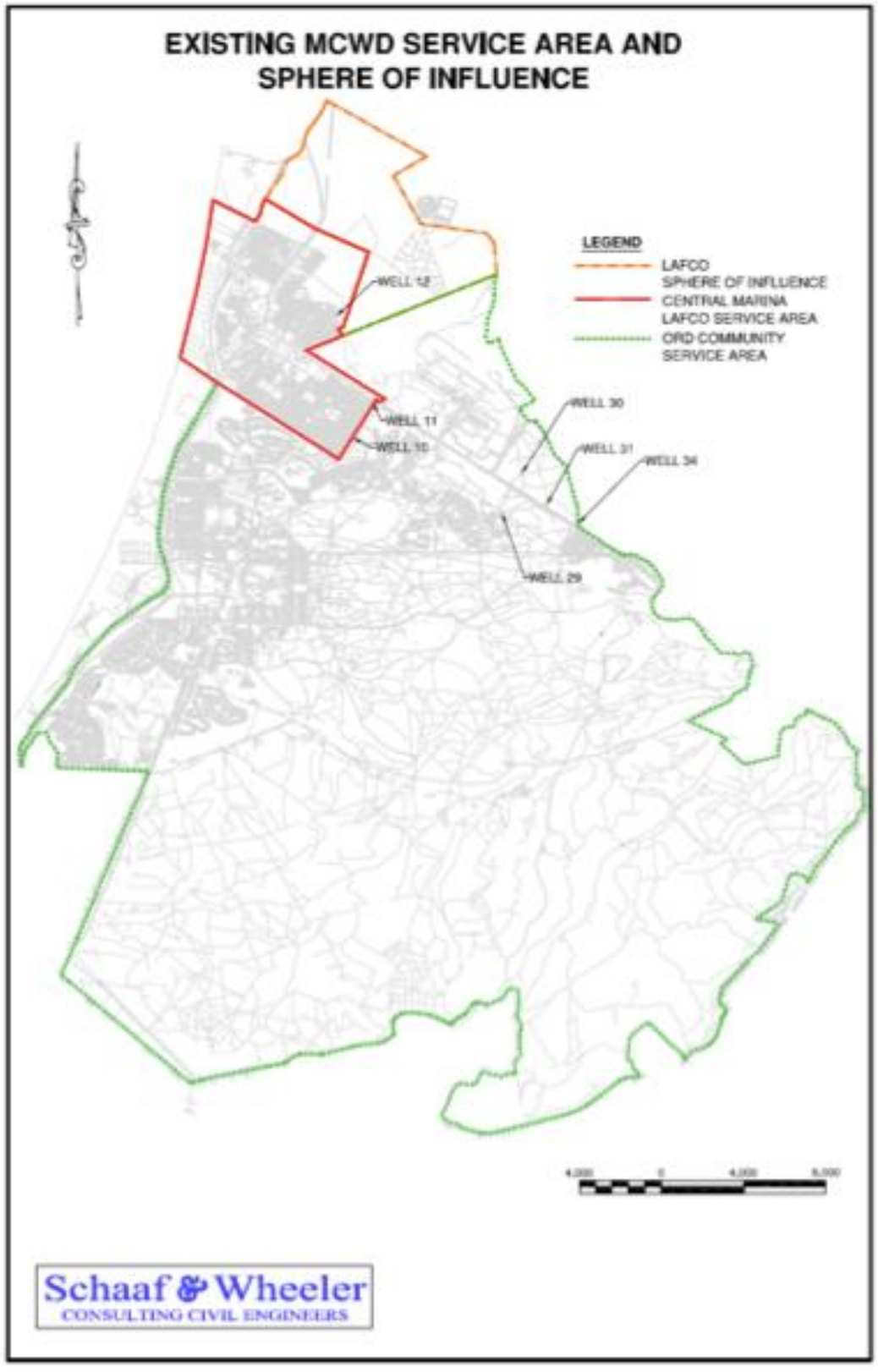

# Existing MCWD Wells

- 8 Wells
- Historical monitoring does not indicate significant increase in TDS.

| | 2009 | 2010 | 2011 | 2012 | 2013 |
|---|---|---|---|---|---|
| Well 10 | 310 | 300 | 300 | 300 | 310 |
| Well 11 | 370 | 370 | 389 | 390 | 410 |
| Well 12 | 360 | 430 | 320 | 340 | 320 |
| Well 29 | 410 | 420 | 400 | 410 | 410 |
| Well 30 | 500 | 550 | 540 | 600 | * |
| Well 31 | 460 | 380 | 420 | 410 | 420 |
| Well 34 | | | 355 | | 340 |
| Watkins Gate | | | 550 | | 580 |

* - Well 30 did not operate in 2013

# Existing MCWD Wells

- Watching & Managing
- MCWD draws less than 1% of the total extracted from the Salinas Aquifer

We are not the Master of our own Groundwater Destiny:

- In its 2012 update WRA reports total aquifer pumping withdrawal of 489,214 AF
- In 2012 MCWD's total aquifer pumping was 4,124 AF

**Working with Monterey County Water Resource Agency (MCWRA)**

# Working with MCWRA

AGREEMENT NO. A-06404
AGREEMENT BETWEEN THE UNITED STATES OF AMERICA
AND THE
MONTEREY COUNTY WATER RESOURCES AGENCY
CONCERNING
ANNEXATION OF FORT ORD INTO ZONES 2 AND 2A
OF THE
MONTEREY COUNTY WATER RESOURCES AGENCY

j. Project: A future, long term, reliable, potable water system for the POM Annex/RC and other areas; the Project will provide at least 6,600 acre-feet per year which will permit all Salinas Basin wells on Fort Ord Lands to be shut down except during

emergencies; stopping all pumping from the Salinas Basin on Fort Ord Lands is necessary to mitigate seawater intrusion; the MCWRA is currently developing such a Project to supply water to the Fort Ord Lands, Marina, Salinas, Toro Park, and perhaps other areas in north Monterey County; it is also possible that another water agency, district, utility, or purveyor could develop a smaller scale Project to supply water for just the Fort Ord Lands;

c. After execution of this agreement and until Project Implementation, Fort Ord/POM Annex/RC may withdraw a maximum of 6,600 acre-feet of water per year from the Salinas Basin, provided no more than 5,200 acre-feet per year are withdrawn from the 180-foot aquifer and 400-foot aquifer. The 6,600 and 5,200 acre-feet

# FORA/MCWD WATER/WASTEWATER FACILITEIS AGREEMENT

- 1.6 **WATER SUPPLY CAPACITY RIGHTS.** The FORA Board has previously adopted a comprehensive plan for the administration of groundwater extraction rights consistent with the Agreement between the USA and the Monterey County Water Resources Agency dated September 1993. It is anticipated this plan may be amended from time to time at the sole discretion of the FORA Board. The total volume of groundwater available for this plan is 6,600 acre feet per year.

- 3.4.1 **MCWD Responsibilities.** MCWD shall have no responsibility for establishment and administration of water extraction capacity rights and wastewater discharge and treatment capacity rights, except to compensate FORA for such administration.

- 3.4.2 **FORA Responsibilities.** The FORA Board will administer all extraction and discharge rights which may be obtained from the USA, pursuant to the comprehensive plan previously adopted by FORA and such changes as may be made to the plan from time to time by the FORA Board.

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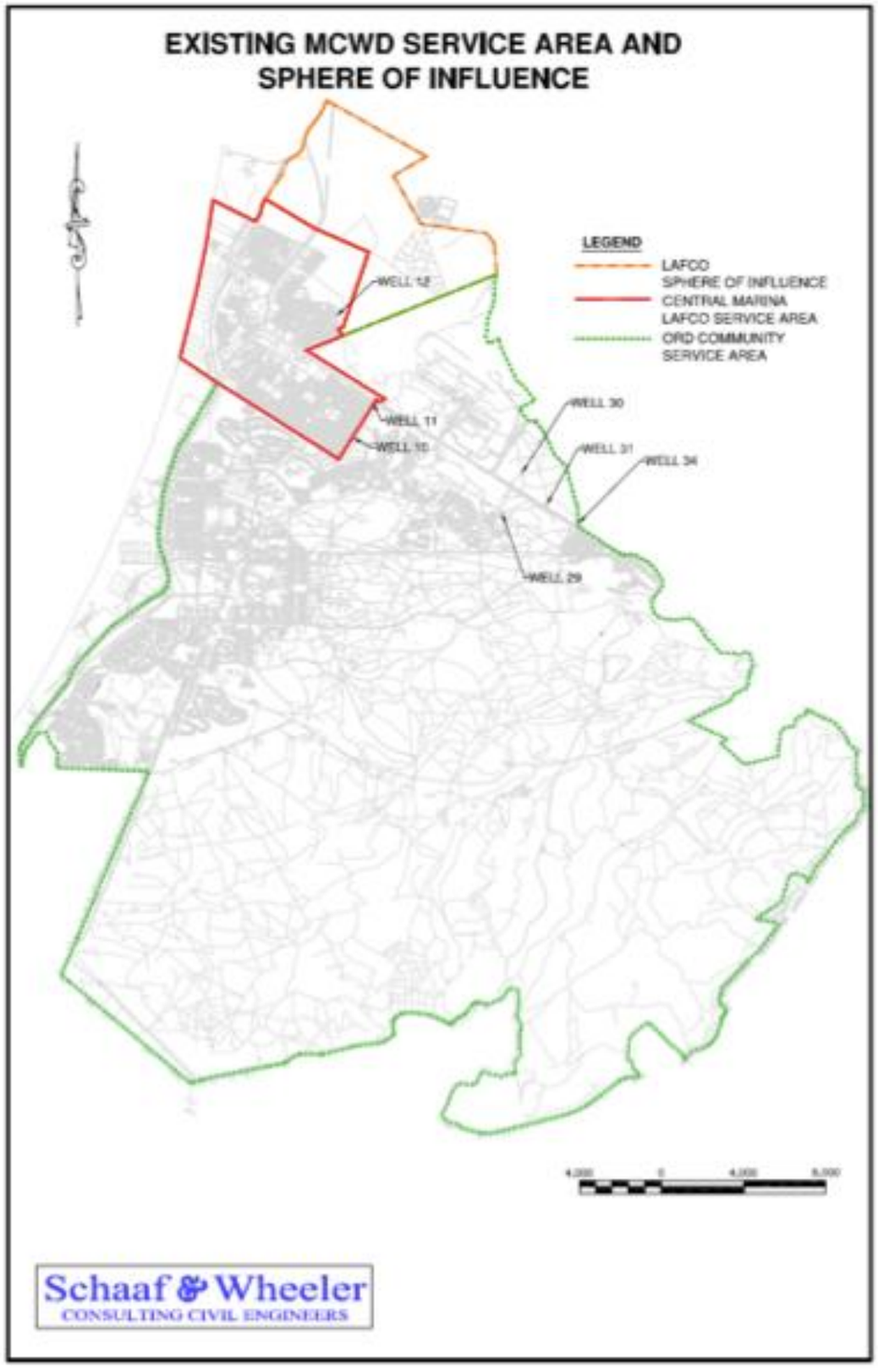
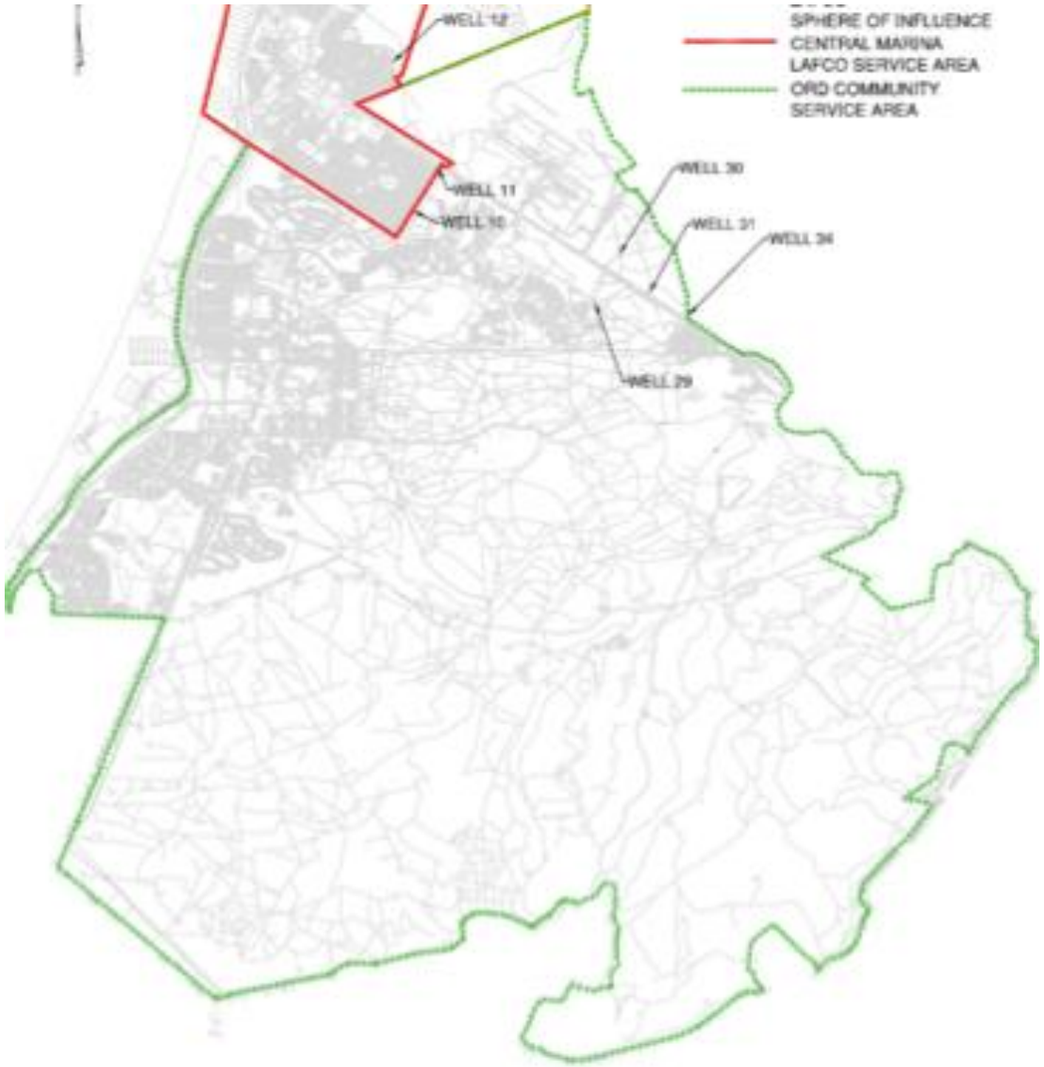


# Central Marina Production and Consumption

- Rights to 3,020 acre-feet of groundwater per year
- In 2013 Central Marina consumed 1,727 acre-feet
- At 0.33 AFY/EDU, Marina could grow by ~240 units per year through 2030 (3,900 units total).
- Water Supply Assessments (WSA) will show a higher current demand due to historical averages

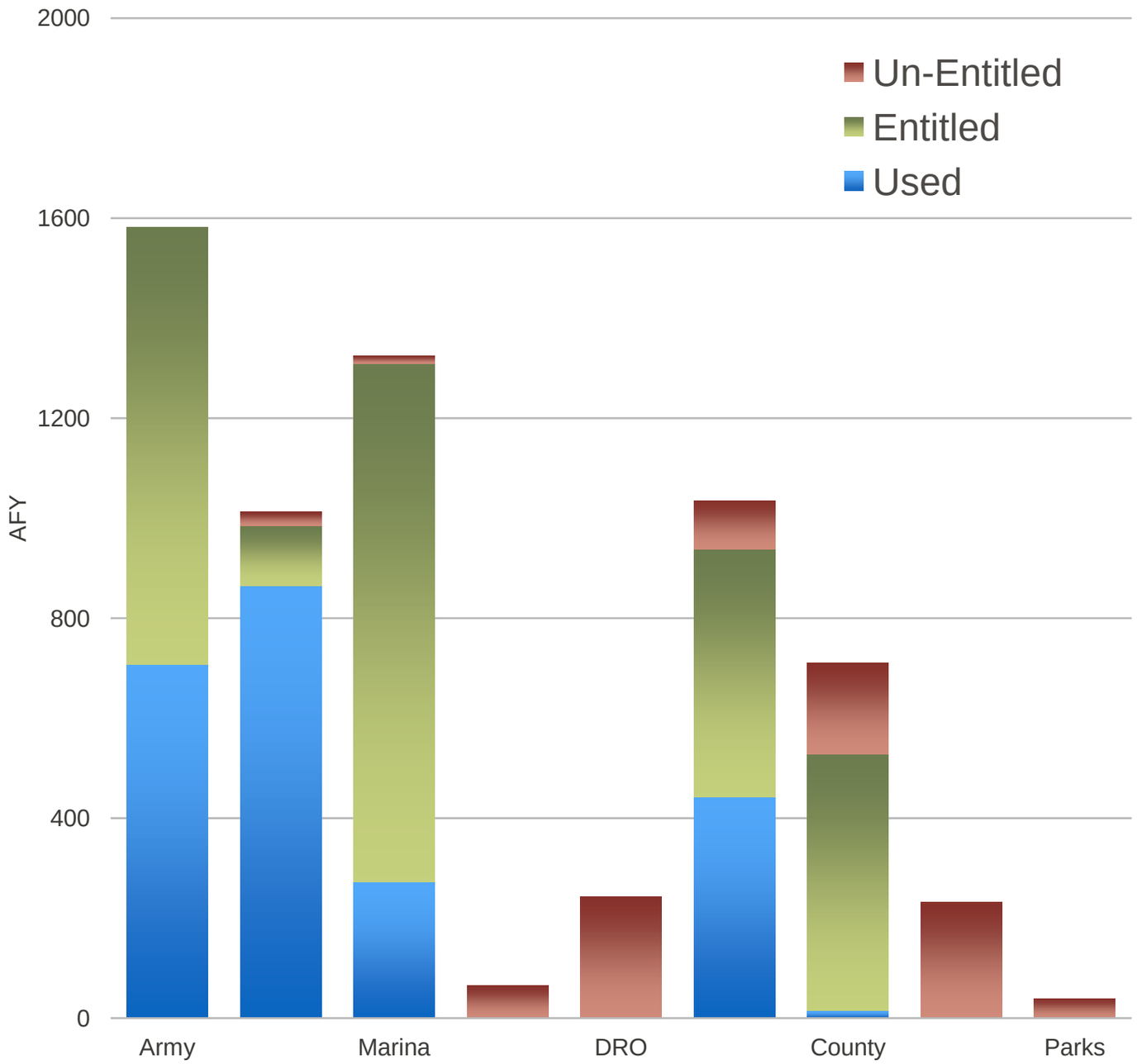
# Ord Community Production and Consumption

- Rights to 6,600 acre-feet of groundwater per year
- In 2013 the Ord Community consumed 2,304 acre-feet



# Current Ord Allocation and Demand

| AFY | 2013 Use | Allocation | Un-entitled |
|---|---|---|---|
| Army | 706.74 | 1,582.00 | 0.00 |
| Seaside | 865.44* | 1,012.50 | 28.00 |
| Marina | 272.63 | 1,325.00 | 16.80 |
| Monterey | 0.00 | 65.00 | 65.00 |
| Del Rey Oaks | 0.00 | 242.50 | 242.50 |
| CSUMB | 441.85 | 1,035.00 | 97.00 |
| County | 15.32 | 720.00 | 182.50 |
| UCMBEST | 1.29 | 230.00 | 229.00 |
| State Parks | 0.00 | 39.50 | 39.50 |
| TOTAL | 2,303.27 | 6,251.50 | 900.30 |



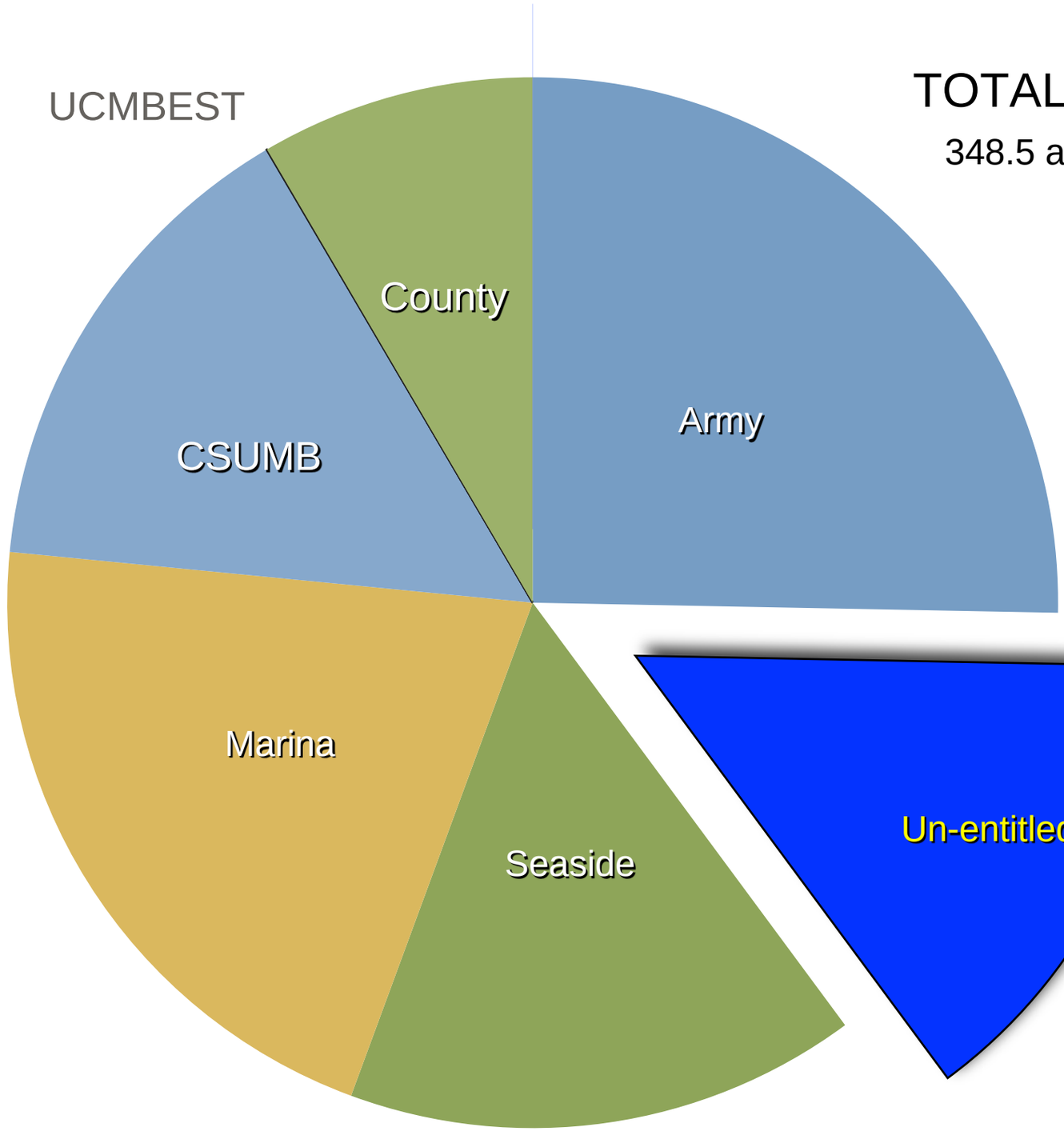

* Seaside's usage will decrease when Bayonet/Blackhorse Agreement is completed

# City of Marina

| AFY | 2013 Use | Allocation | Entitled | Un-entitled |
|---|---|---|---|---|
| Marina | 272.63 | 1,325.00 | **1,308.20** | **16.80** |
| Marina Heights | | | **292.40** | |
| Dunes | | | **593.00** | |
| MPC-12th Street Campus | | | **7.00** | |
| Rockrose Gardens | | | **4.90** | |
| Promontory | | | **33.30** | |
| Cypress Knolls | | | **156.10** | |
| Pre Existing | | | **221.50** | |
| Preston Park | | | | |
| Abrams Park | | | | |
| Marina - Ord | | | | |
| Airport | | | | |
| Schools | | | | |
| CSUMB | | | | |
| Construction Water | | | | |

# Entitled (AFY)

| AFY | Entitled |
|---|---|
| Army | 1,582.00 |
| Seaside | 984.50 |
| Marina | 1,308.20 |
| Del Rey Oaks | 0.00 |
| Monterey | 0.00 |
| CSUMB | 938.00 |
| County | 527.50 |
| UCMBEST | 1.00 |
| State Parks | 0.00 |
| TOTAL | 5,341.20 |



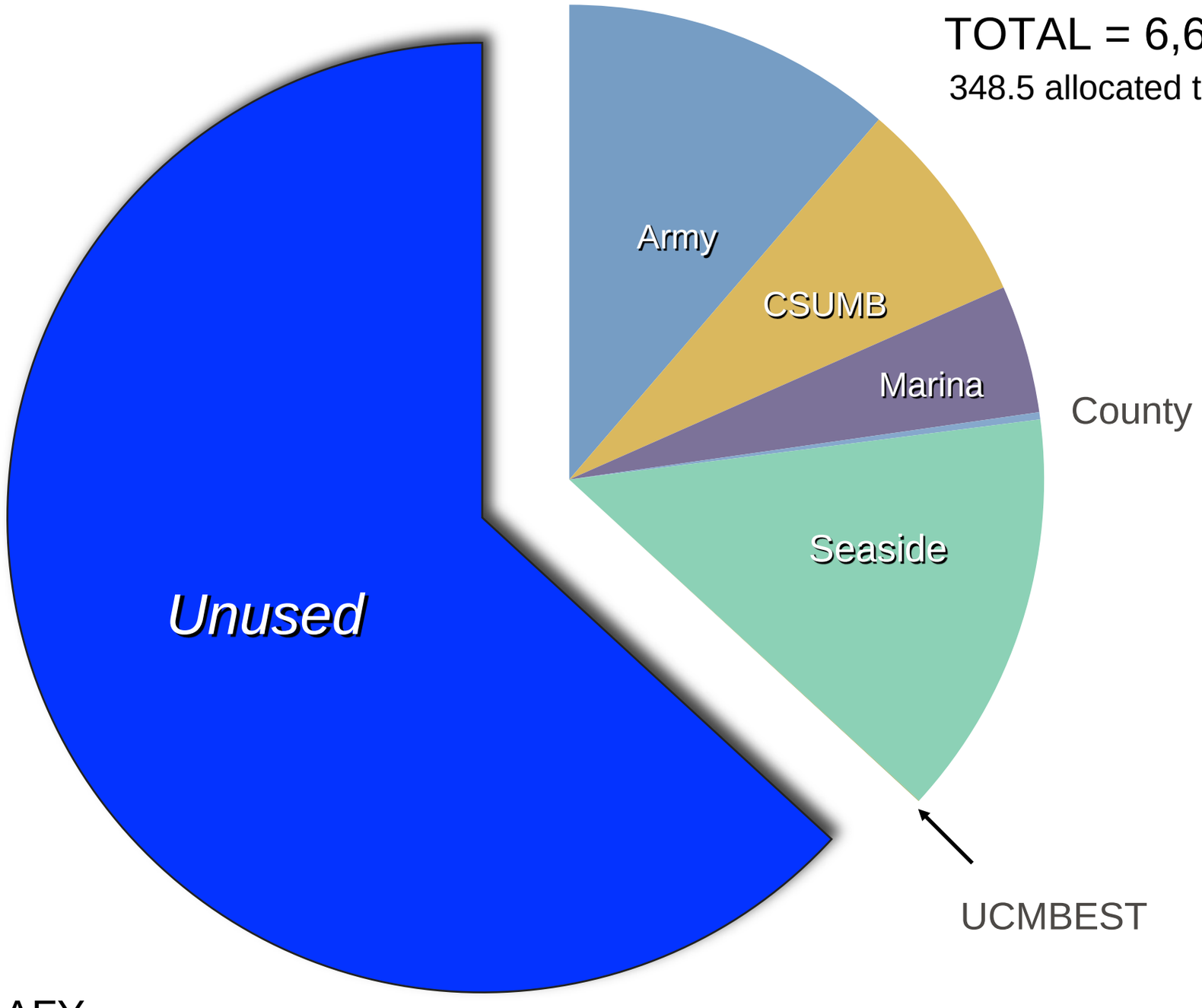

TOTAL = 6,600 AFY

348.5 allocated to line loss

= 910.30 AFY

# 2013 Use (AFY)

| AFY | 2013 Use |
|---|---|
| Army | 706.74 |
| Seaside | 865.44 |
| Marina | 272.63 |
| Monterey | 0.00 |
| Del Rey Oaks | 0.00 |
| CSUMB | 441.85 |
| County | 15.32 |
| UCMBEST | 1.29 |
| State Parks | 0.00 |
| TOTAL | 2,303.27 |




TOTAL = 6,600 AFY

348.5 allocated to line loss

UNUSED = 3,939.73 AFY

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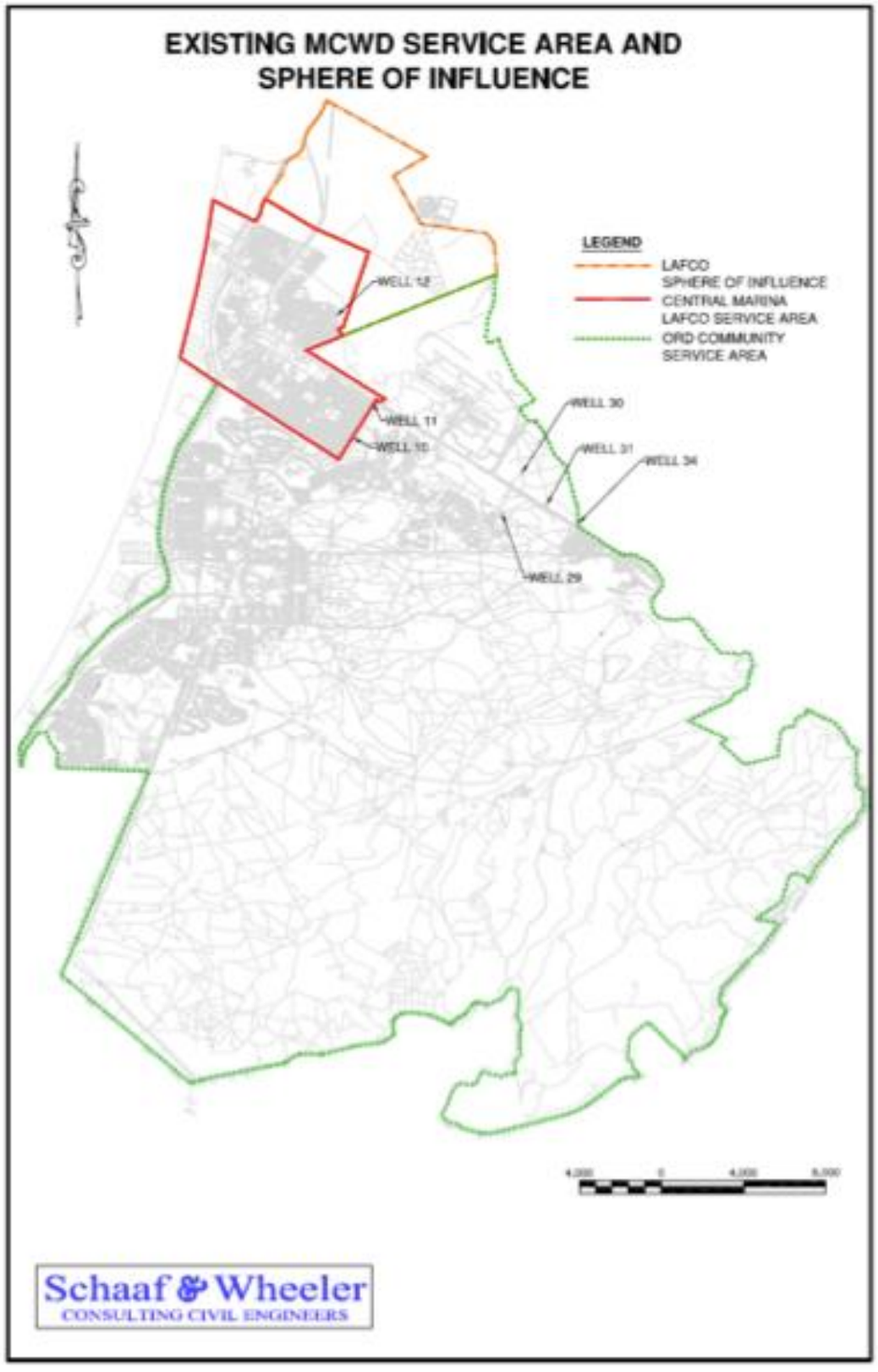


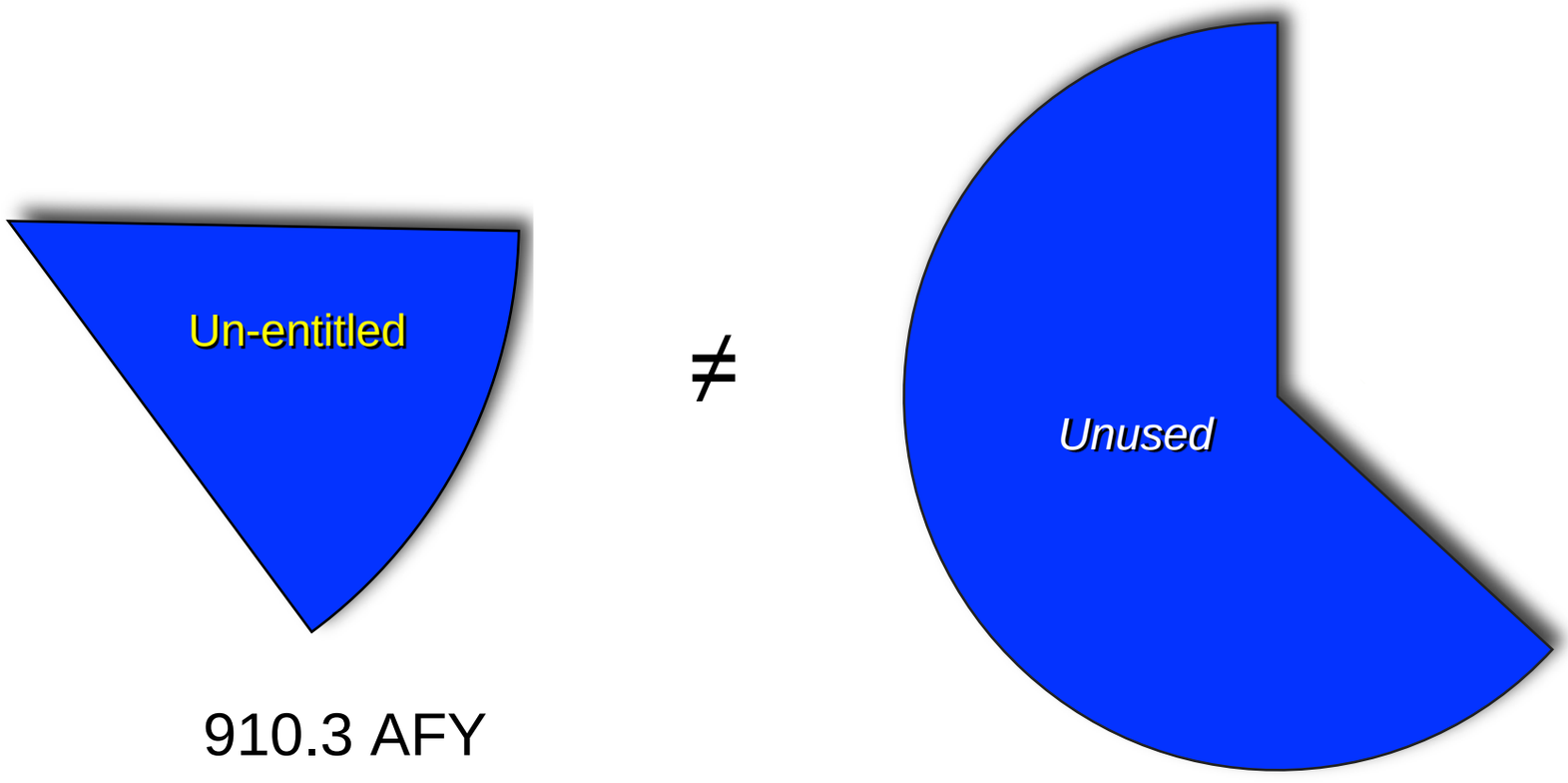
# Ord Community 2030*

- Base reuse plan indicates 2030 water need : **9,000 AFY**
- Current GW Available is : **6,600 AFY**
- The Ord Community is **2,400 AFY** Short of year 2030 Need

| AFY | 2030 Shortfall* |
|---|---|
| Army | 0.00 |
| Seaside | 1,084.00 |
| Marina | 414.00 |
| Monterey | 27.00 |
| Del Rey Oaks | 284.00 |
| CSUMB | 0.00 |
| County | 377.00 |
| UCMBEST | 244.00 |
| State Parks | 0.00 |
| TOTAL | 2,430.00 |

* - information taken from MCWD 2010 UWMP

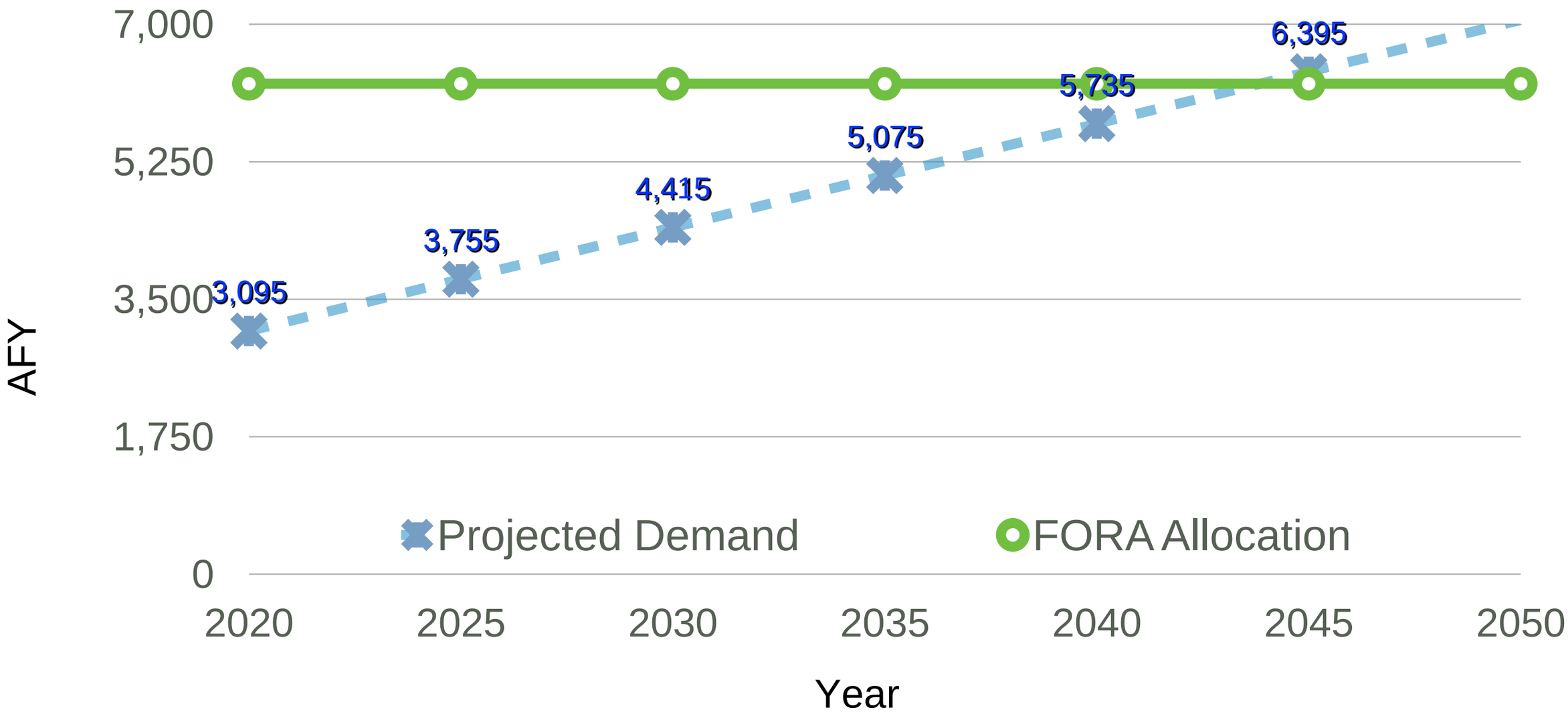
# 2030? Really?




910.3 AFY

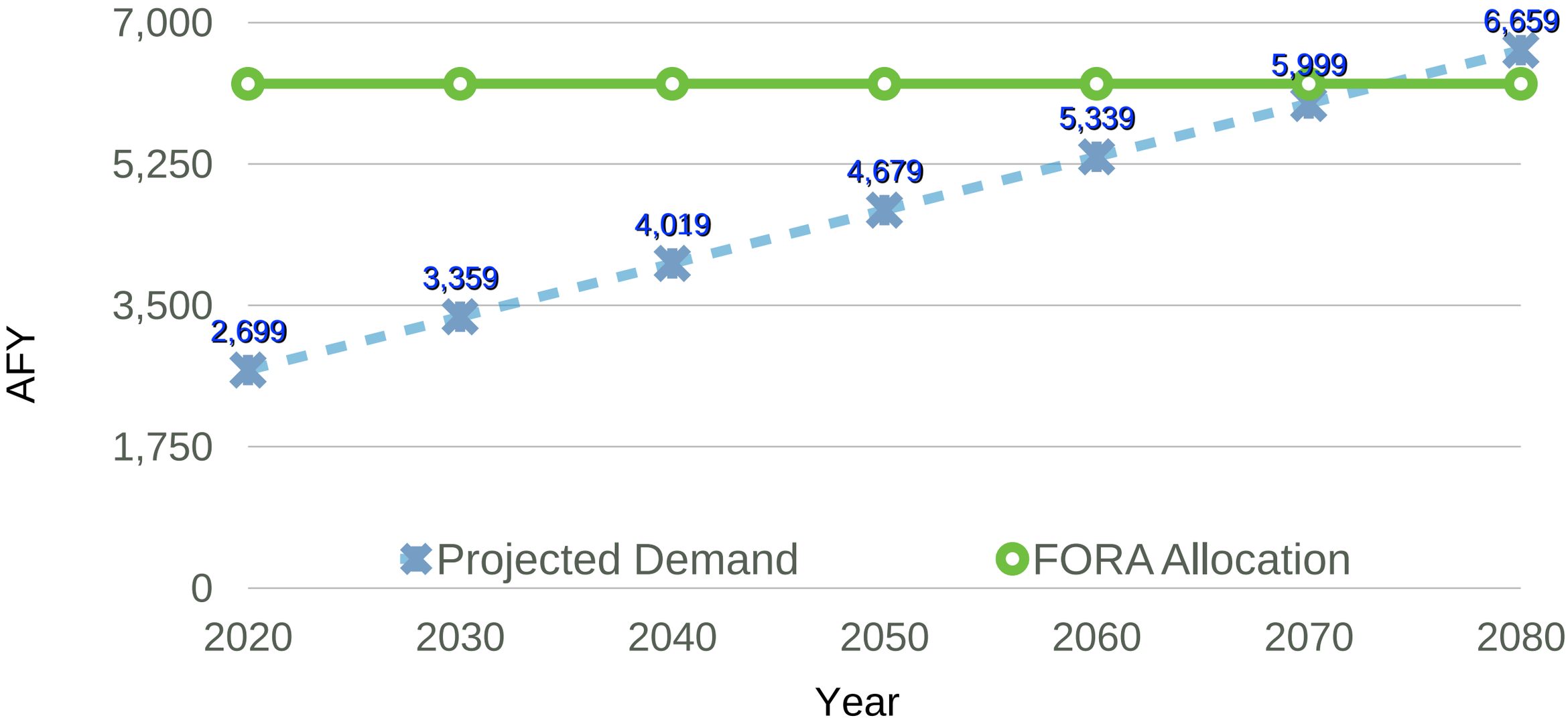
3,939.73 AFY

The difference between the two numbers helps defines
The pace of development




Projected Growth Rate of **400 EDUs Per Year**
Augmentation Water Source Needed in
**30 Years**

1 EDU = 0.33 AF




Projected Growth Rate of **200 EDUs Per Year**
Augmentation Water Source Needed in
**58 Years**

1 EDU = 0.33 AF

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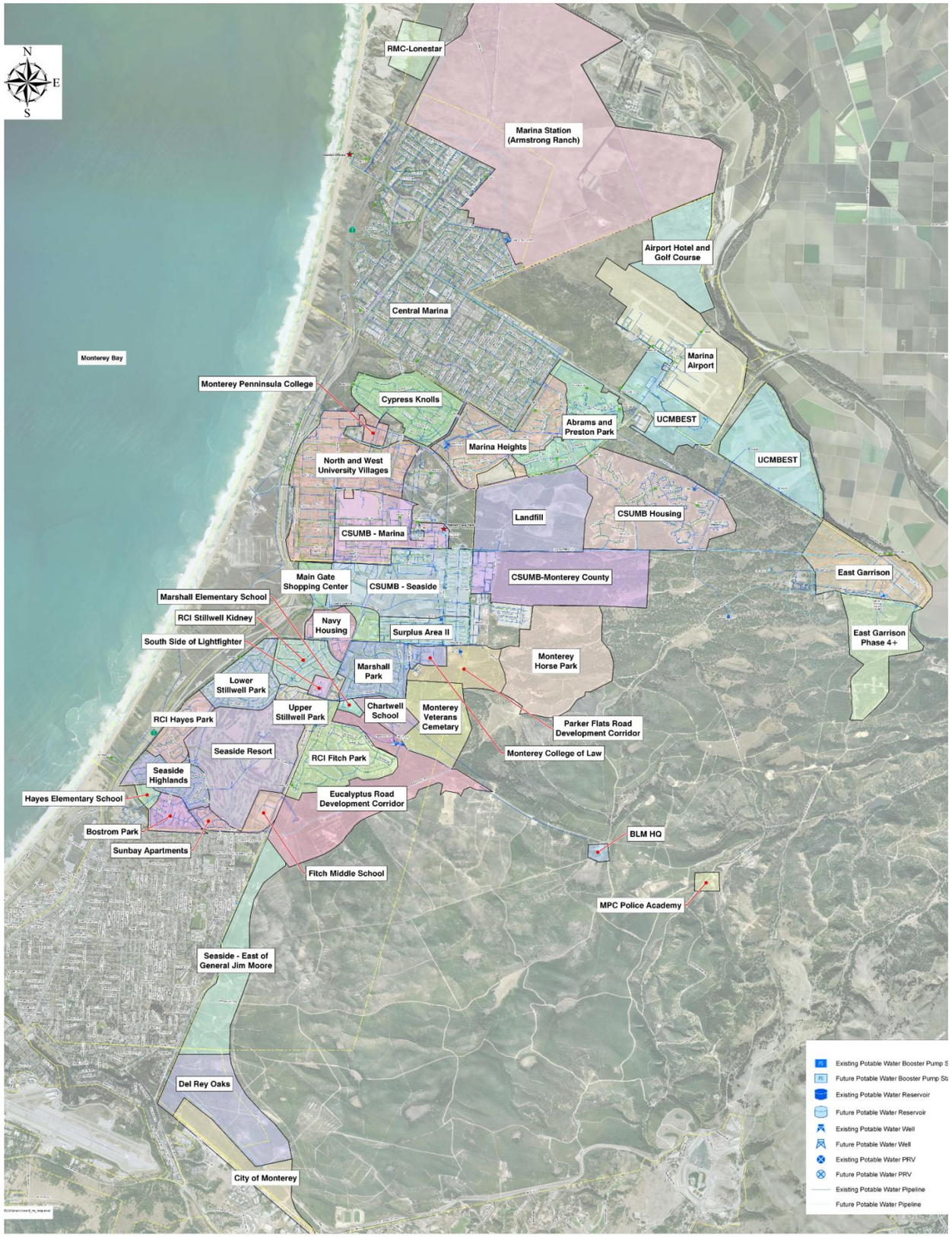

Why is pace of development important to water augmentation?

# Cost!

# Projected Ord Augmentation 2,400 AFY

Regional Urban Water Augmentation Program (RUWAP)

- Nonpotable = 1,200 AFY
  - Recycled Water
  - GWR Water
- Potable = 1,200 AFY
  - Desalination
  - River Water
  - Conservation
  - Other???

# The Cost of Water (rounded to the nearest $1,000)

| | $/AF 2014 | $/AF 2026 | |
|---|---|---|---|
| **Well Water** | $1,000 | | |
| **Desalinated / River Water** | $3,000 | | |
| **Recycled Water** | $4,000 | $ | 3,000 |

- Well Water and Desalinated Water costs based on October 2008 RMC Report, “Marina Coast Water District Water Supply Evaluation Cost Estimate Summary for Alternatives”
- Recycled Water cost based on September 2006 RMC “RUWAP Draft Basis of Design Report.”

# Water Augmentation


We could begin the process of building an augmentation source immediately

**BUT**…

We need guaranteed revenue to obtain the construction loans

**AND**…

Our only revenue comes from existing customers

**SO**…

Existing customers would be required to pay ~ 2-3X the current amount for water, even though WE have almost 4,000 AFY of groundwater available (enough for 30+ years).

# Ord Customer Impacts

- Adopted 2013-14 Ord Community Consumption Estimate: 2,570 AFY

- Assume:
  Desalination Plant Producing 600 AFY
  Desalinated water is ~ 20% of total bill (600/2570)
  Groundwater cost is $1,000 AF and Desalinated water is $3,000 AF

- 20% of customer cost would increase 3X

- Assume $70/month bill without desalinated water
- Same usage with ~20 % desalinated water would be ~$100/month

- Current Ord customers could potentially see an increase of ~ 30% on their monthly bill

# Conservation

## A Gallon Saved is a Gallon Earned!

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  - GWR Water
- Potable = 1,200 AFY
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  - River Water
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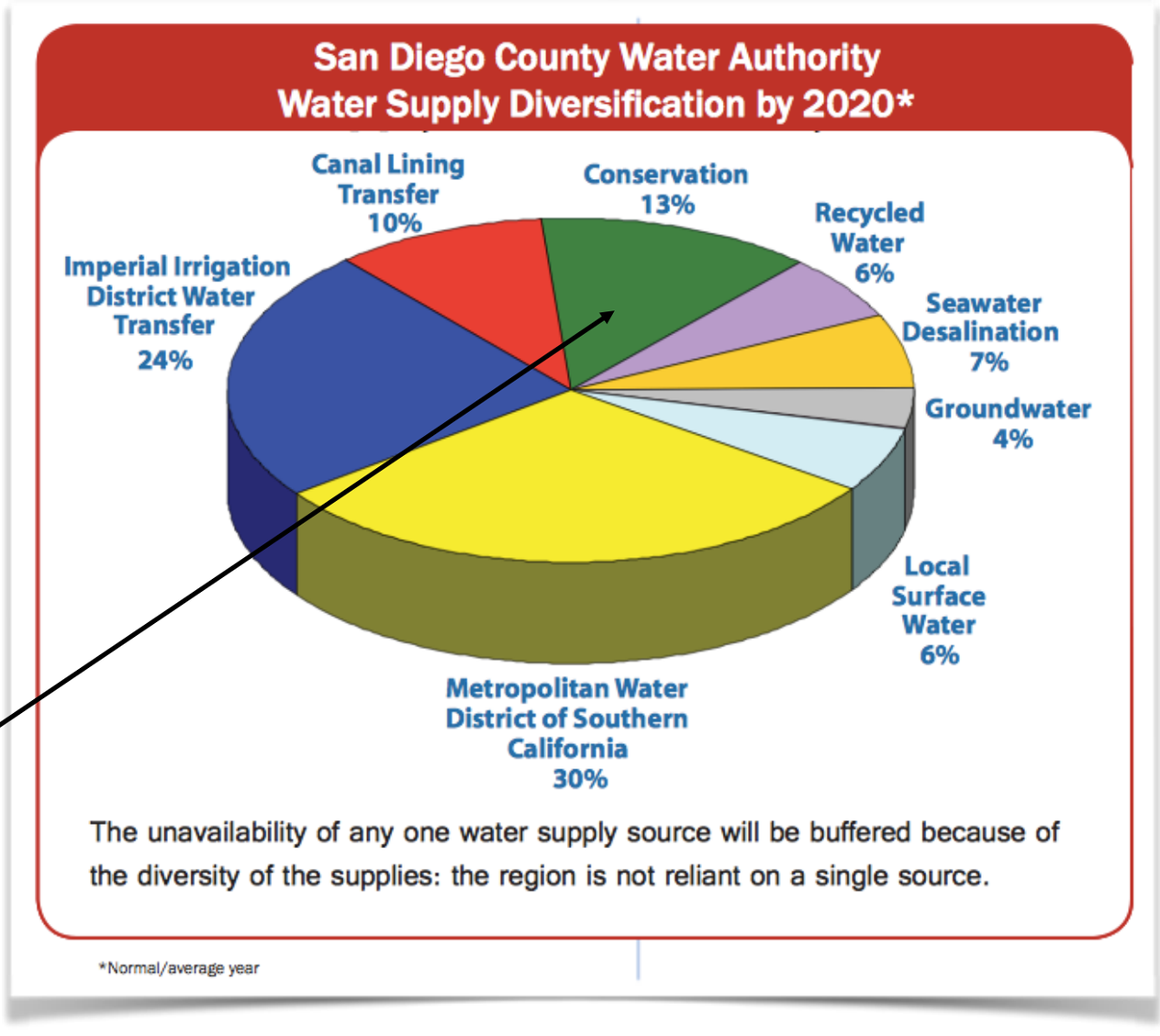
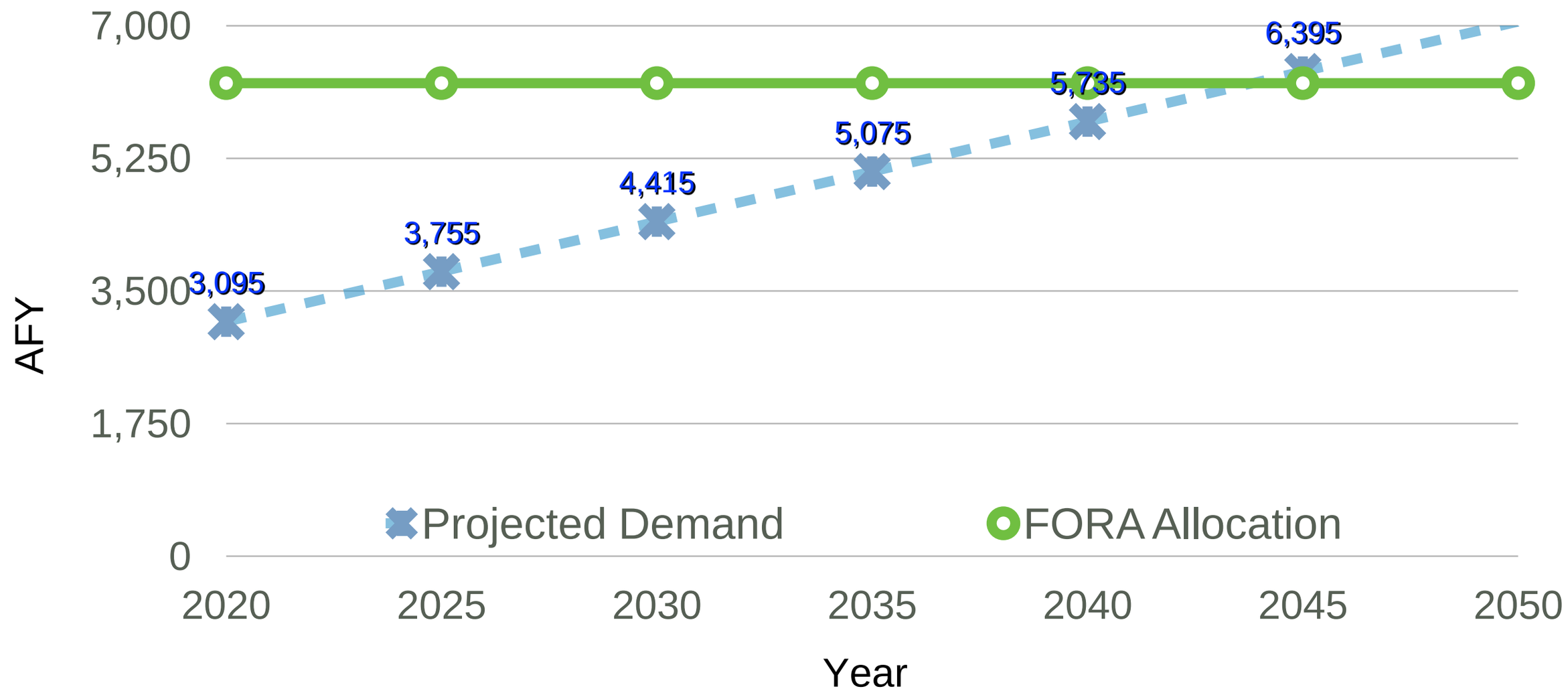
  - Other???




Original Chart located in SDCWA 2010 UWMP

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| Schools | | | | |
| CSUMB | | | | |
| Construction Water | | | | |

# Implementation Agreement

IMPLEMENTATION AGREEMENT

THIS IMPLEMENTATION AGREEMENT (this "Agreement") is made as of May 1, 2001, between the Fort Ord Reuse Authority ("FORA") and the City of Marina (the "Jurisdiction") with reference to the following facts:

Section 3. Compliance with Water/Waste Water Allocations.

a. In using, developing, or approving development on the Jurisdiction Property, the Jurisdiction shall not commit (or cause the commitment of) water resources that are unavailable to the Jurisdiction (whether through FORA allocations or otherwise).

**Land Use Jurisdiction Responsibility.** Development projects approved by each land use jurisdiction will require a finding by that land use jurisdiction that the project can be served with their jurisdictional water allocation or by water imported to the former Fort Ord from another available water source.

# Base Reuse Plan



Program B-1.2: The City/County shall work with FORA and the MCWRA to determine the feasibility of developing additional water supply sources for the former Fort Ord, such as water importation and desalination, and actively participate in implementing the most viable option(s).

Program B-1.6: The City/County shall work with FORA to assure the long-range water supply for the needs and plans for the reuse of the former Fort Ord.



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Hydrology and Water Quality Policy B-1: The City~~/County~~ shall ensure additional water supply.

# FORA/MCWD WATER/WASTEWATER FACILITEIS AGREEMENT

- 1.3 **PURPOSE.** The parties intend by this Agreement to establish the terms and conditions for FORA to plan and arrange for the provision of the facilities, and for MCWD to acquire, construct, operate, and furnish the facilities, to benefit mutually the service area of the area within MCWD's jurisdictional boundaries. This Agreement will govern MCWD's ownership and operation of the facilities.

- 3.2.1 **MCWD Responsibilities.** MCWD will cause to be planned, designed and constructed such additional water and sewer facilities as FORA, in consultation with MCWD, reasonable determines are necessary for the service area. MCWD may cause to be planned, designed and constructed any other facilities as MCWD reasonably determines will carry out the purpose of this agreement as expressed in section 1.3 of this Agreement.

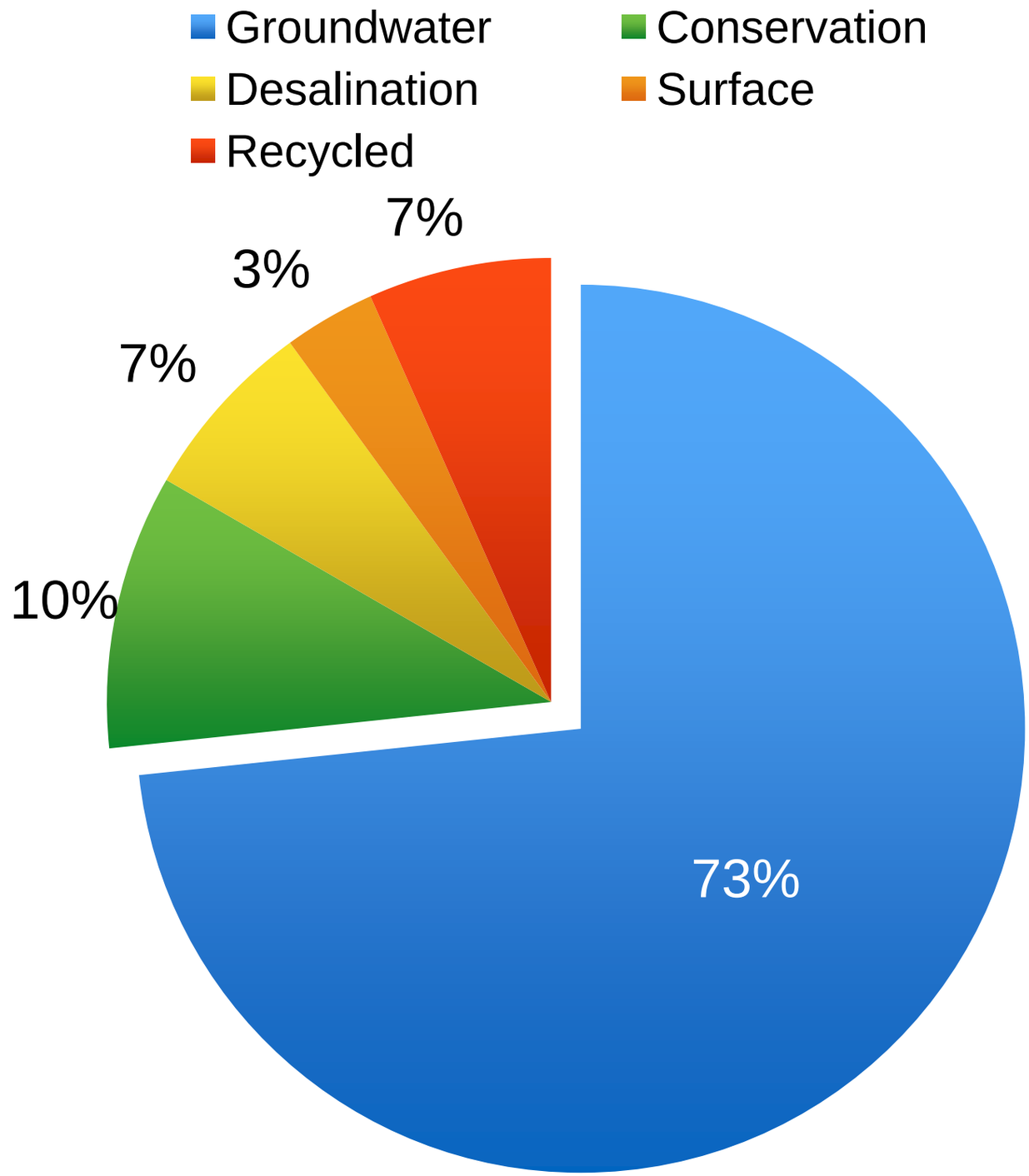
- 3.2.2 **FORA Responsibilities.** FORA will determine in consultation with MCWD, based on recommendation from the Committee, what additional facilities are necessary for the service area.

# WATER/WASTEWATER FACILITEIS AGREEMENT

- 7.1.2 - **MCWD Will Recover Costs.** MCWD will recover all of its direct and indirect, short term and long term costs of furnishing the facilities to the service area. MCWD shall not be required to take any action in connection with furnishing the facilities to the service area unless and until a source of funds is secured from the service area to pay in full in a reasonable manner consistent with normal accounting practices all of MCWD's direct and indirect, short term and long term costs of the action to be taken by MCWD, including costs of administration, operation, maintenance and capital improvements to provide adequate system capacity to meet existing and anticipated service demands.

# Possible 2030 Water Budget

| | |
|---|---|
| **9,000 AFY** | |
| **Groundwater** | 6,600 |
| **Conservation** | 900 |
| **Desalination** | 600 |
| **Surface** | 300 |
| **Recycled** | 600 |



# Possible Solutions ???

There must be a way WE can find a SOLUTION so that water rates won't increase 30% for our existing customers/residents.

…The Community is relying on us.

## Water Allocation Sharing?

FORA and Jurisdictions need to take lead

Does not provide ultimate solution

## Phased Augmentation?

'immediate' but expensive

will burden existing customers