



# Achieving Florida Water Star<sup>SM</sup> – Two Case Studies Green Trends 2011

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# The Panel

**Phillip Hisey** – On Top of the World Communities,  
Ocala

*An overview of how to achieve FWS and meet the needs of an aging community.*

**Judy Benson** – Clear Water PSI, Orlando  
*Achieving FWS Gold for and infill historic home.*

**Susan Douglas** – FWS Coordinator, Southwest  
Florida Water Management District  
*Summarize what we have learned in certifying  
FWS homes.*

# Florida's water resources

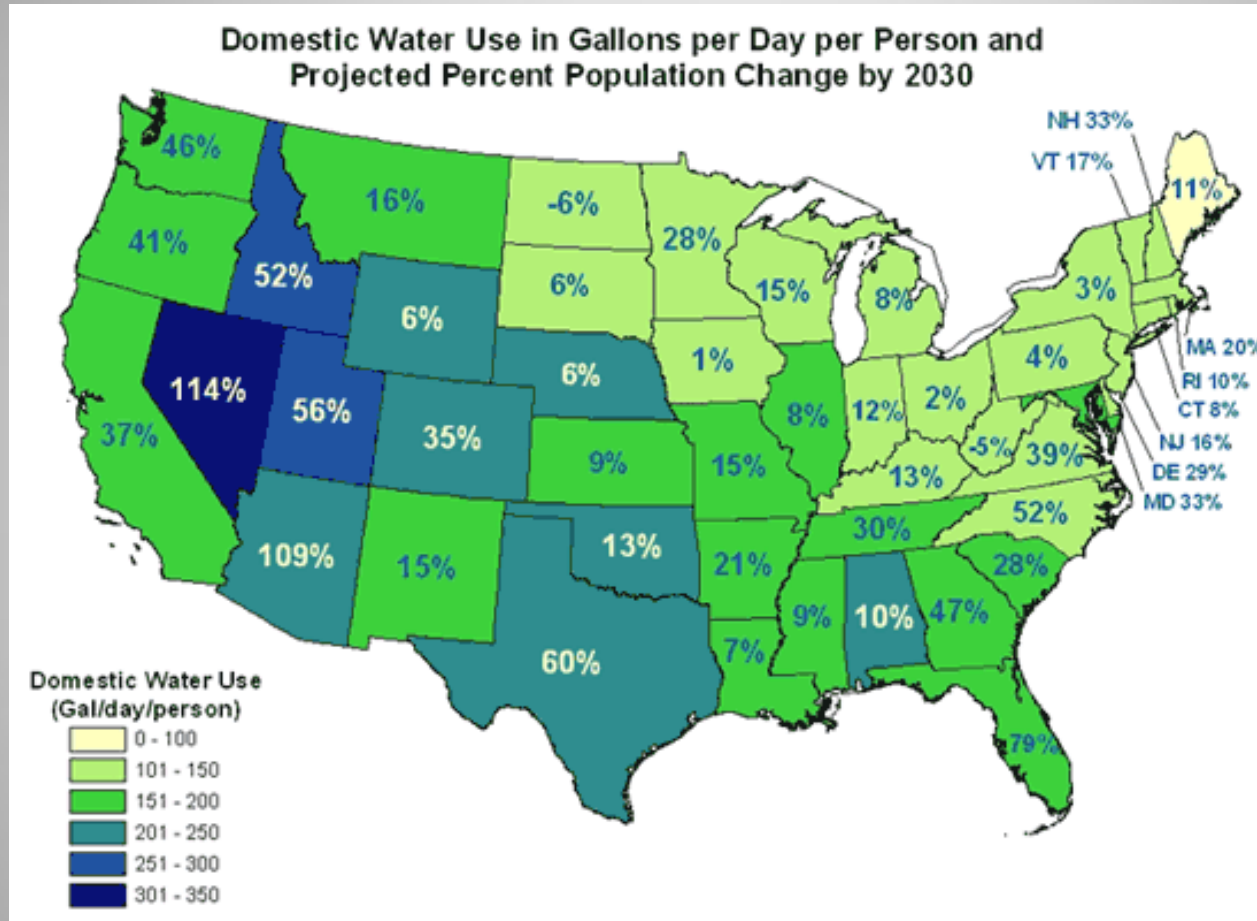
- About 54 inches of rain annually
- 7,700 lakes



- 50,000 miles of rivers and streams
- 700 springs (largest concentration in the world)



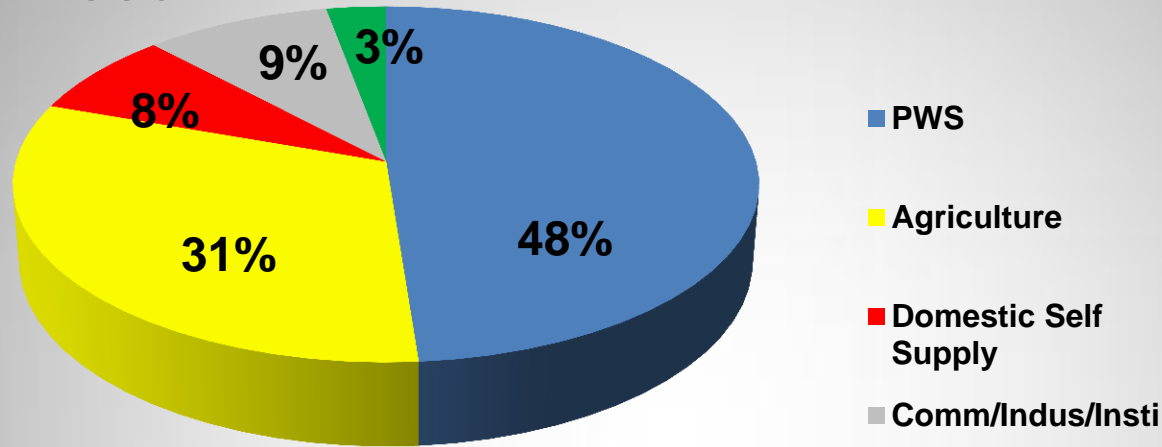
# Water Use and Growth



Water data from USGS, Estimated Use of Water in the United States in 2000, County-level data for 2000; population data from U.S. Census Bureau, State Interim Population Projections by Age and Sex: 2004–2030

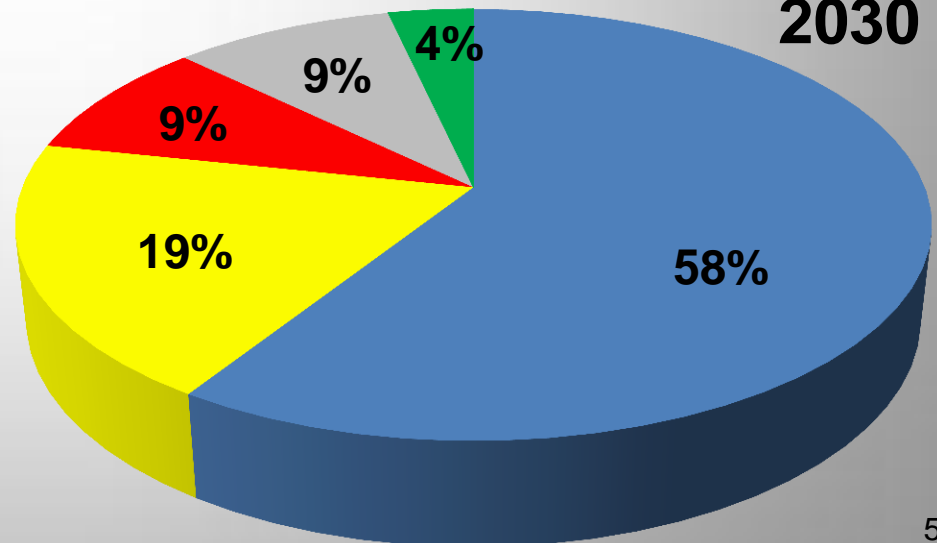
# Current and Projected Water Use

**2005**



**1,217 mgd Total Use**

**2030**



**1,742 mgd  
Total Use**

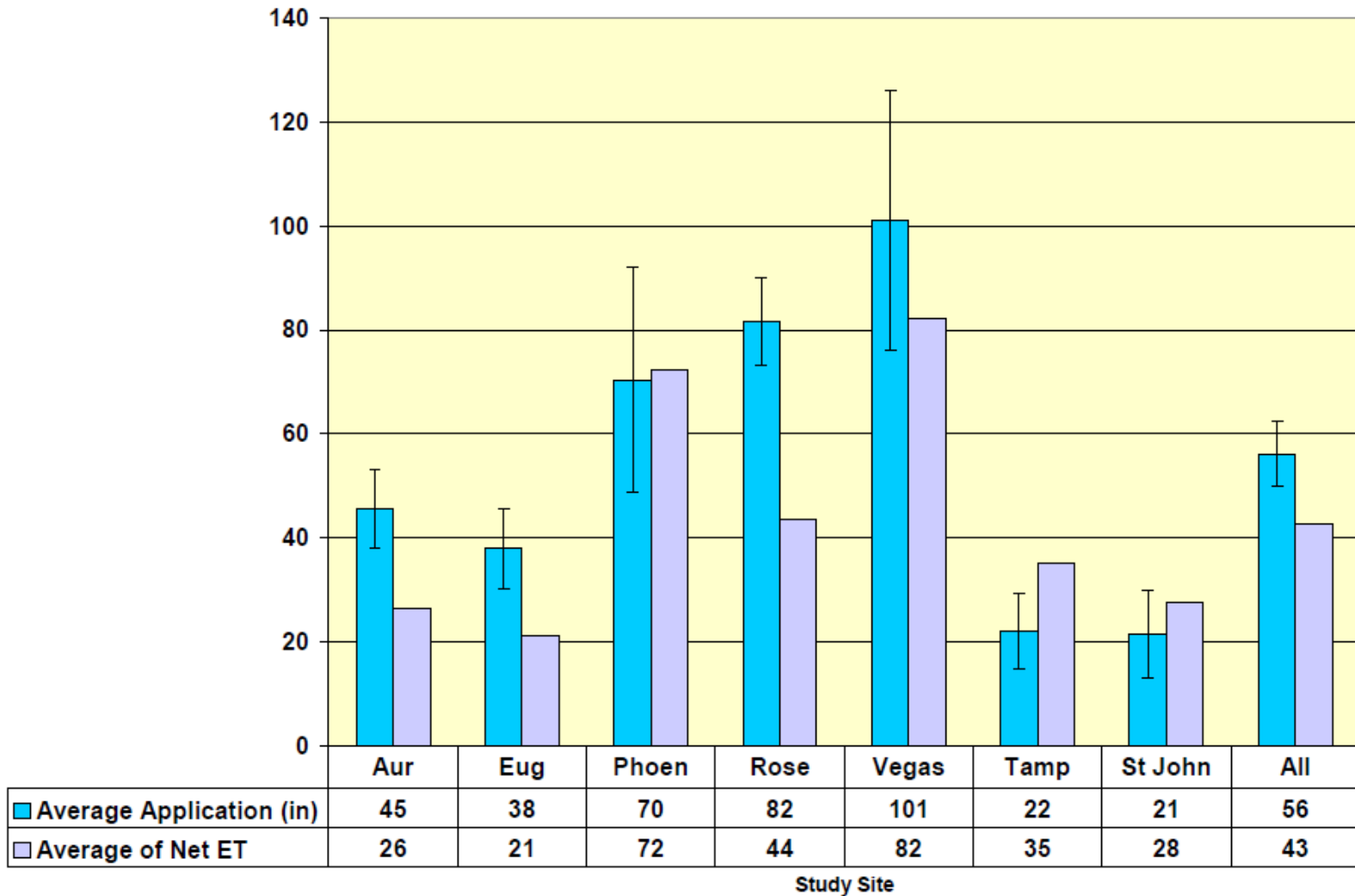
Note: power production not shown in this figure – net consumptive use is 1% or less of total SJRWMD water use

# EPA Residential Water Use Study 2011

## General Outdoor Conclusions

235 residences in seven US cities, built since 2000, focused on the amount of water used compared with theoretical irrigation requirement.

- Average water use was 90.3 kgal per year
- Lot size varied
- Florida homes irrigated less than required between 21 and 22 inches annually.



**Figure 4-39: Irrigation applications (inches) versus net ET<sub>o</sub><sup>62</sup>**

# Comparison of average gallons per household per day

Water Efficiency Benchmarks  
for New Single-Family Homes

Fi

<b>End Use</b>	<b>REUWS (Homes built before 1995) (gphd)</b>	<b>Standard New Homes (Homes built after 2001) (gphd)</b>	<b>High Efficiency New Homes (gphd)</b>
Toilet	45.2	27.52	<b>16.2</b>
Clothes washer	39.2	28.91	<b>11.9</b>
Shower	30.8	29.88	<b>34.3</b>
Faucet	26.7	25.23	<b>18.1</b>
Leak	21.9	19.66	<b>19.2</b>
Other	7.4	3.02	<b>0.9</b>
Bathtub	3.2	3.45	<b>7.1</b>
Dishwasher	2.5	1.94	<b>1.9</b>
<b>Total Daily Indoor Use</b>	<b>177</b>	<b>140</b>	<b>110</b>



# Frequency of Residential Irrigation Problems (Thomas R. Olmstead and Michael D. Dukes)

This recent study looked at 3,416 residential systems using the UMIL methodology to classify problems and found:

- All homes had at least one problem.
- Five problems represented half of all problems.
- 70% of systems irrigated turf and non-turf in the same zone.
- Mixed emitter types next most common problem.
- Operating time too frequent and/or too long.

# Florida Water Star<sup>SM</sup> Versions

Version	Status	Projects to Date
Residential	Launched in 2006	213
Commercial and Institutional (CI)	Will launch in 2011	7
Community	Pilot testing	4



# Kyro Infotec, Lakeland

High-efficiency indoor fixtures

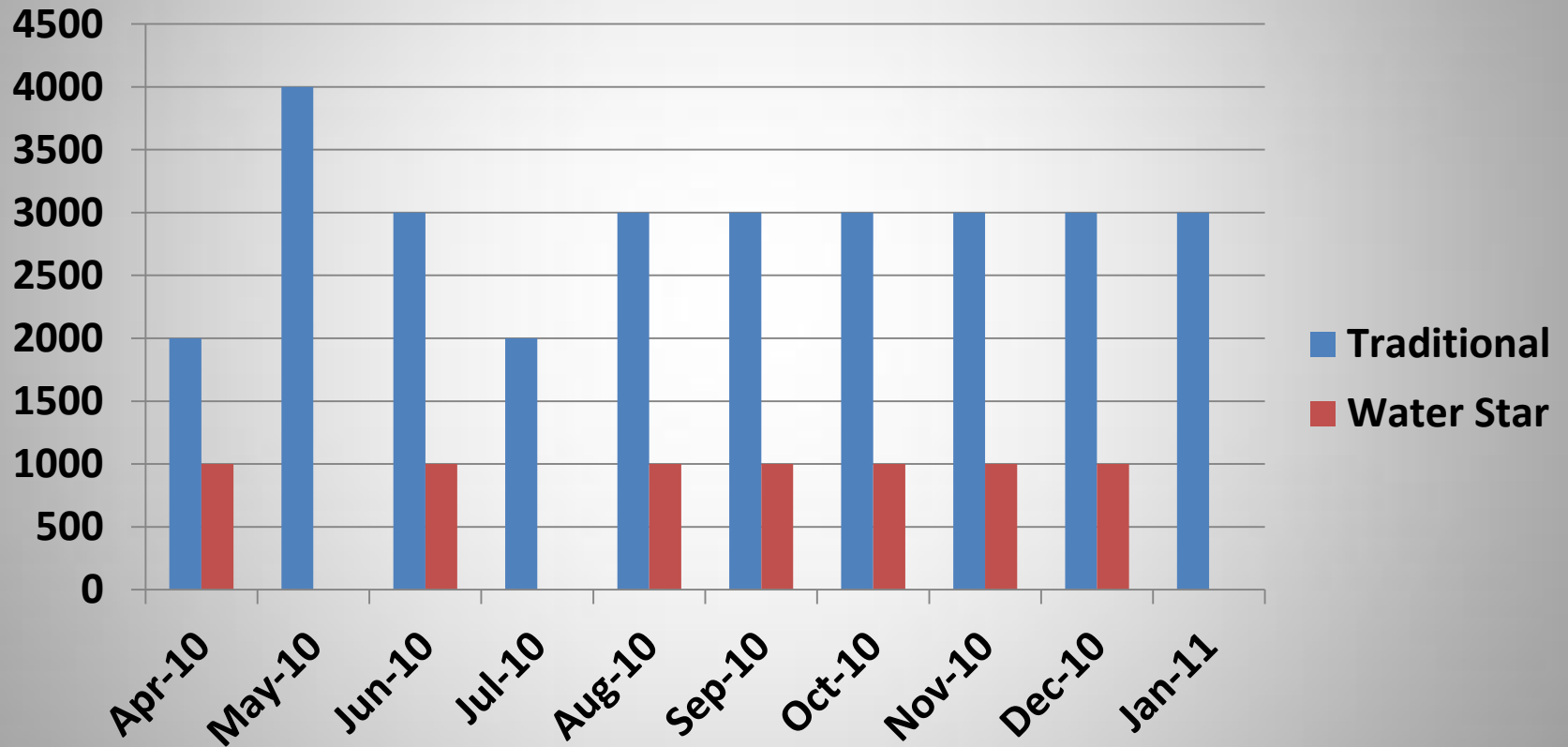
Treated black water used for irrigation

Site-appropriate drought-tolerant landscaping

80% less water used



# Kyro Infotec - Monthly Water Use



# Hendricks Avenue Gate Station



# Gate Station Performance

Compared with similar Gate station this station used 61% less water over 1 year





## Waterwise landscaping helps save water resources

Florida is known as a lush, green state surrounded by water on three sides, and for the many lakes, rivers and streams that dot the peninsula's interior.

When Spanish explorer Juan Ponce de Leon first sailed along Florida's east coast in 1513, he named this area of the New World for its abundance of flowers and greenery, calling the area La Florida in honor of Pascua Florida (the feast of the flowers).

Centuries later, Florida still attracts new residents and visitors — at least in part — because of its floral beauty. Florida's weather also attracts many, but the natural cycle of weather that brings rain to replenish our water sources is constantly changing. The long periods of wet weather followed by long periods of dry weather means that the water to sustain the state's plants and animals —

### Waterwise plant list

Visit our updated and expanded [searchable plant database](#) to find the right plants for your landscape. The database features more than 800 plant species and provides information on growing conditions, such as sunlight and moisture needs.

### In this section

[Waterwise landscaping home](#)

[Planting for efficient water use](#)

Learn about plant groupings.

[A landscape example](#)

See waterwise landscaping in action.

[Search for plants and photos](#)

Find the right plants for your landscape.

[Frequently asked questions](#)

View commonly asked questions and answers on use of the plant database.

[Glossary](#)

View of list of landscaping terms.

[Florida Water Star<sup>SM</sup> landscaping resources](#)

See the list of resources associated with this conservation program.

[Florida-Friendly Landscaping<sup>TM</sup>](#)

Visit the official Florida Yards and Neighborhoods'



[Waterwise home](#) | [Search plants](#) | [FAQs](#)

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#### DETAILS

Common name :	Purple coneflower
Scientific name:	<i>Echinacea purpurea</i>
Plant category:	Flowers
Hardiness range:	4 – 10b
Mature height (ft.):	1 – 3
Mature width (ft.):	2 – 3
Flower color:	Purple
Soil moisture range:	Moist – wet
pH:	Any
Light range:	Full sun – partial sun
Salt tolerance:	Low
Growth rate:	Moderate
Native:	Yes
Comments:	Perennial. Warm season flowers. Purple, pink, or lavender flowers. Attracts butterflies and hummingbirds.



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# Professional Development

SJRWMD has partnered with FNGLA to offer a FWS professional development program.

FNGLA will host irrigation and landscape exams, and offer irrigation and landscape training to prepare for exams.

FNGLA will track status of all FWS AP's and market the AP exams to their members



**Thank you**

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