

# AGRICULTURAL WATER DEMANDS IN CENTRAL FLORIDA

December 2, 2011

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# Presentation Summary

- **Impact of Agriculture Industry on the State's Economy**
- **Factors influencing Ag Water Demand:**
  - **Climate Variability**
  - **Seasonal vs. Annual Demand Variability**
  - **Market Pricing Annual Variability**
  - **Irrigation Techniques**
- **Trends in Total Ag Acreages vs. Total Irrigated Acreages**
- **Estimates of Ranges of Annual Water Demand – Case History**
- **Conclusions**

# Statewide Cash Receipts - 2009

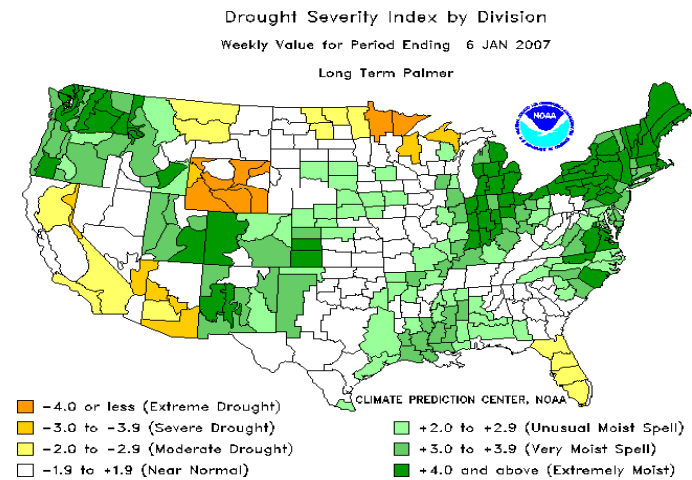
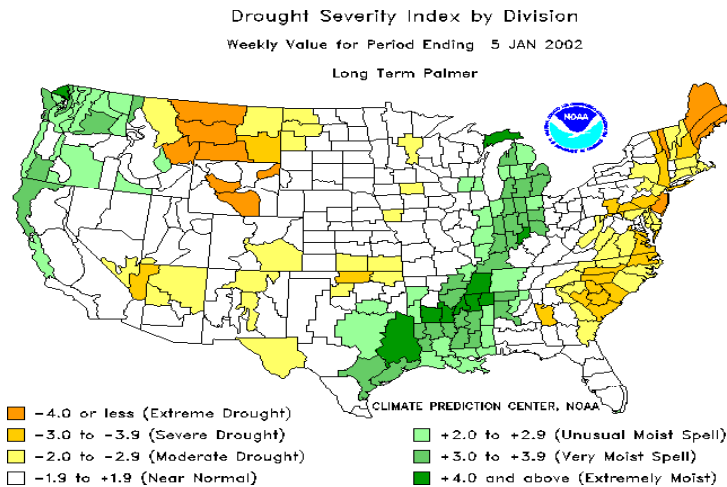
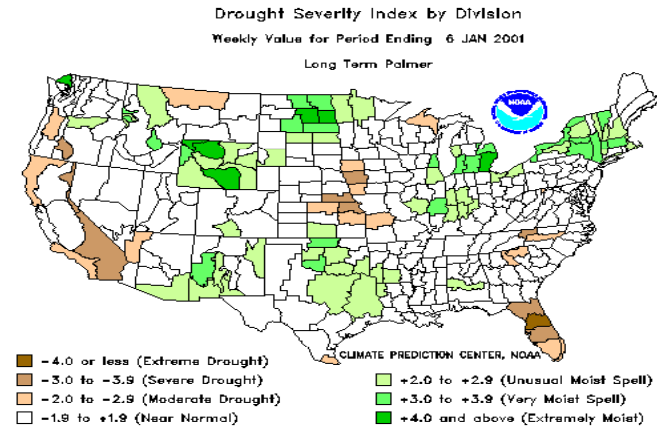
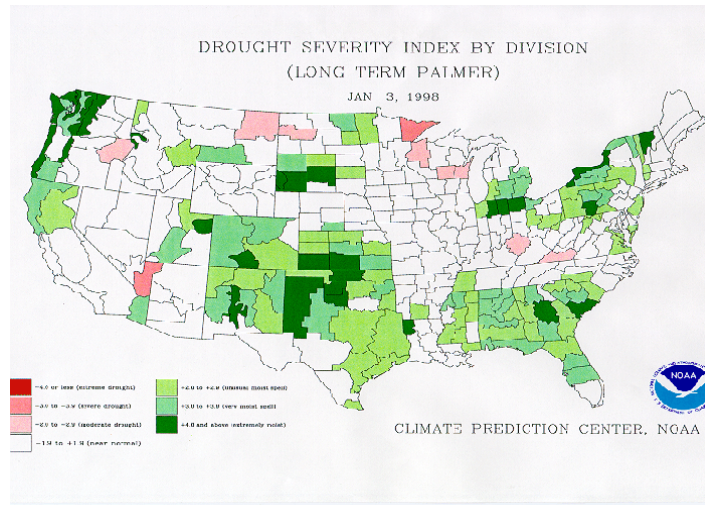
**\$ 7.1 Billion**

- **Vegetables and Melons (25%)**
- **Citrus (21%)**
- **Livestock and Products (16%)**
- **Foliage (10%)**
- **Strawberries and Blueberries (5%)**

Ref: Florida Agriculture Statistical Directory, FDACS

# Central Florida Water Initiative

## Climate Variability – Drought Severity Index 1998, 2001, 2002, and 2007



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## Seasonal vs. Annual Use Variability (inches)

DRY YEAR (2 in 10 Probability)				
Month	Citrus	Seasonal Vegetables/Row Crops	Improved Past/Sod	Berries
January	6.33	0.00	0.00	8.63
February	0.35	0.00	0.16	0.51
March	1.25	7.56	1.42	1.43
April	2.64	5.12	4.96	3.17
May	3.01	4.68	6.52	3.56
June	3.01	0.24	5.58	2.92
July	2.28		5.94	3.29
August	1.90	7.22	5.12	2.76
September	1.74	9.12	4.24	2.03
October	2.40	6.40	4.26	2.49
November	1.35	0.90	1.68	1.49
December	0.66	0.00	0.18	0.79
<b>TOTALS</b>	<b>26.92</b>	<b>41.24</b>	<b>40.06</b>	<b>33.07</b>

**Refs:** USDA NRCS Florida Irrigation Guide and Florida Mobile Irrigation Lab (MIL) Program

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## Market Pricing Variability – Year to Year Price per Hundred Weight

	2005-06 Yr	2006-07 Yr	% Diff
Cabbage	15	19.3	25
Tomatoes	40.9	31.9	-25
Peppers	46.3	42.2	-9
Water Melons	13.3	18.8	34
Strawberries	117	124	6
Blueberries	470	500	6

**Ref:** 2008 Florida Agriculture Statistical Directory, FDACS

# Irrigation System Efficiency Variability

Irrigation System Type	Range of Application Efficiencies
Sprinkler	70 - 80
Drip	70-90
Microspray	70-85
Semiclosed Seepage	30-70
Ref: UF IFAS Bul 247	

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## Average vs. Dry Year Estimated Water Use (inches) Selected Ag Commodities in Central Florida

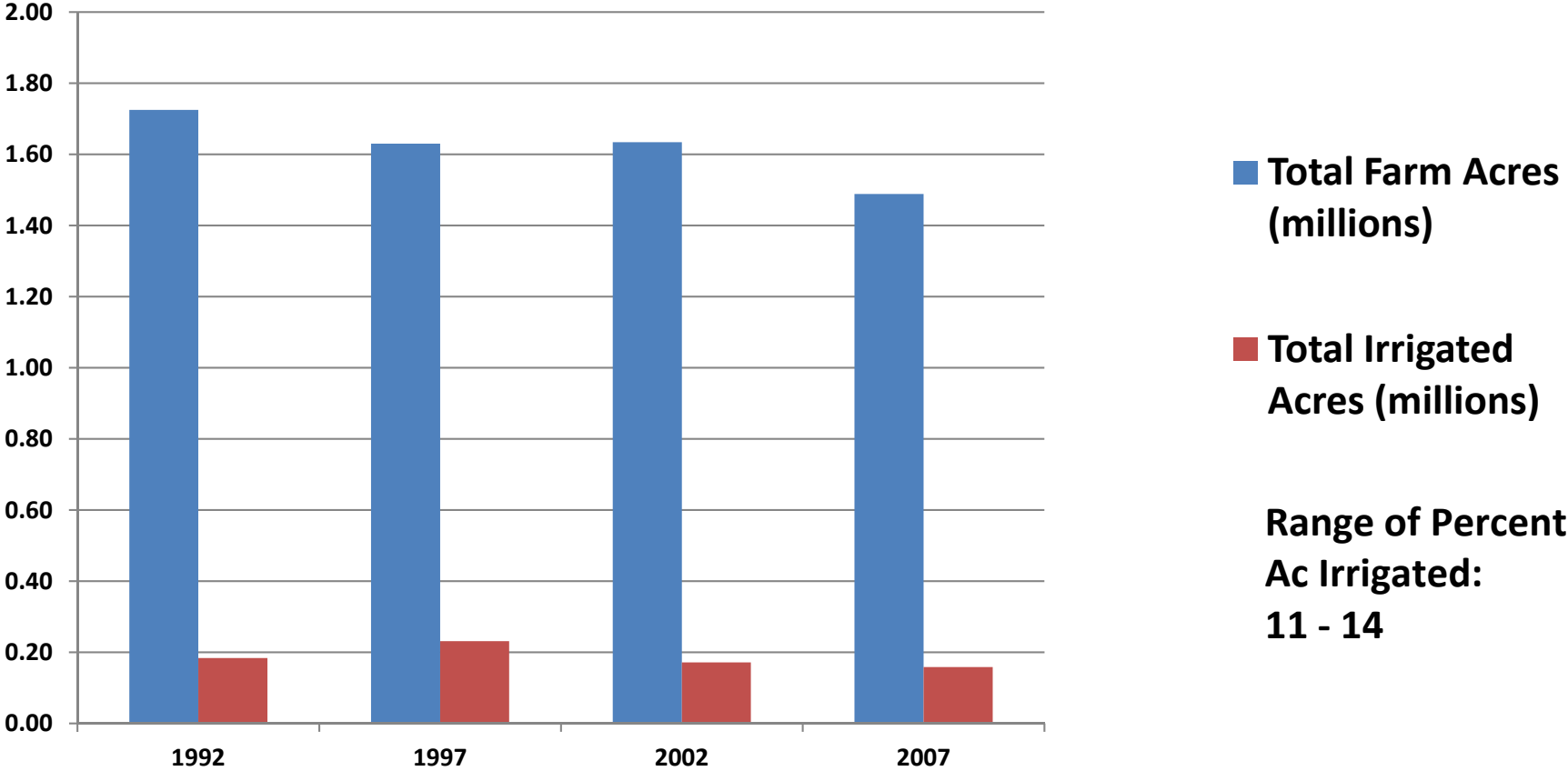
AVG YEAR (5 in 10 Prob)					DRY YEAR (2 in 10 Prob)				
Month	Citrus	Veg/Row Crops	I Past/Sod	Berries	Month	Citrus	Veg/Row Crops	I Past/Sod	Berries
January	6.20	0.00	0.00	8.52	January	6.33	0.00	0.00	8.63
February	0.08	0.00	0.00	0.25	February	0.35	0.00	0.16	0.51
March	0.95	7.12	0.96	1.15	March	1.25	7.56	1.42	1.43
April	2.44	4.80	4.66	3.01	April	2.64	5.12	4.96	3.17
May	2.68	4.16	5.94	3.19	May	3.01	4.68	6.52	3.56
June	1.58	1.00	4.58	2.25	June	3.01	0.24	5.58	2.92
July	1.66		4.86	2.59	July	2.28		5.94	3.29
August	1.28	0.48	4.02	2.04	August	1.90	7.22	5.12	2.76
September	1.21	2.96	3.36	1.44	September	1.74	9.12	4.24	2.03
October	2.16	3.72	3.88	2.21	October	2.40	6.40	4.26	2.49
November	1.14	1.00	1.36	1.29	November	1.35	0.90	1.68	1.49
December	1.06	0.00	1.00	1.27	December	0.66	0.00	0.18	0.79
<b>TOTALS</b>	<b>22.43</b>	<b>25.24</b>	<b>34.62</b>	<b>29.21</b>	<b>TOTALS</b>	<b>26.92</b>	<b>41.24</b>	<b>40.06</b>	<b>33.07</b>

**Refs:** USDA NRCS Florida Irrigation Guide and Florida Mobile Irrigation Lab (MIL) Program



# Central Florida Water Initiative

## Trends in Farmed vs. Irrigated Acres – Central Florida

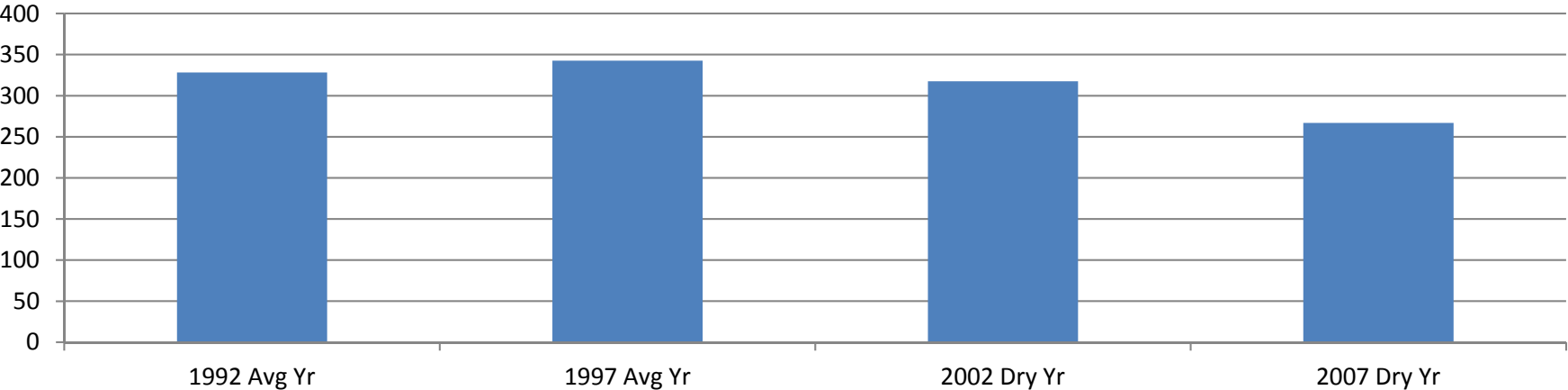


Refs: National Ag Statistics Service (NASS) and FDACS

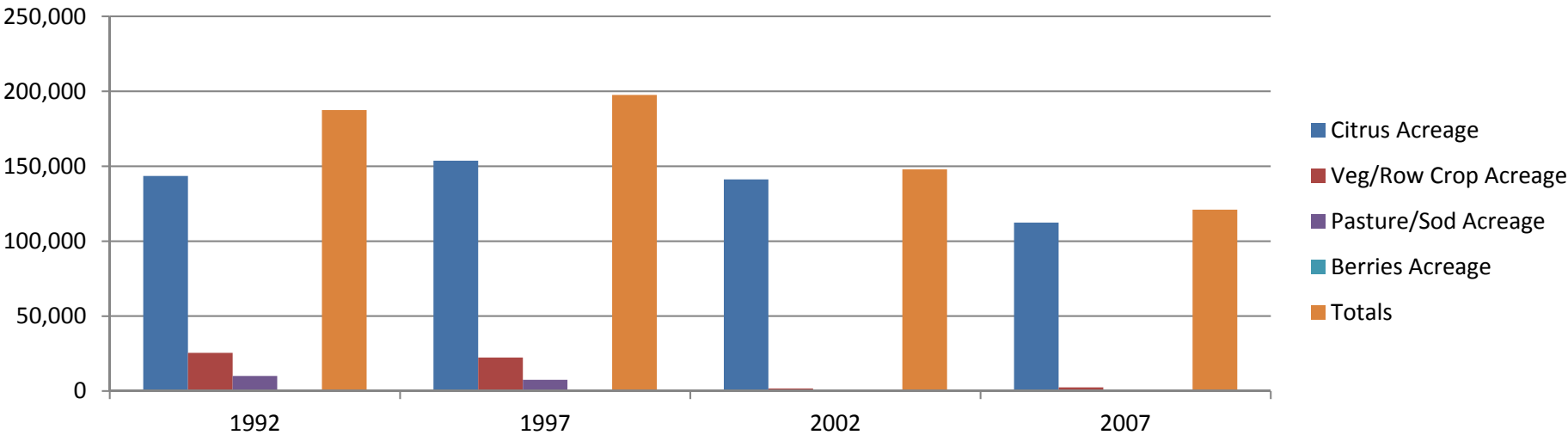
# Central Florida Water Initiative

## Estimated Ranges of Ag Water Demand in Central Florida – Case History

### Irrigated Crop Water Demand (MGD)



### Irrigated Acreage



## CONCLUSIONS

- Difficult to have any long term plan
  - Unlike other user groups, too many uncontrolled variables
- Demands could vary significantly from year to year
- Industry needs to have flexibility from year to year, regarding water use

# Questions