

**City of Flagstaff**  
**Designation of Adequate Water Supply**

Coconino Plateau Water Advisory Council  
 Presented by: Erin Young, R.G.  
 May 31, 2013

*CPWAC – Water Adequacy*







JANICE K. BREWER SANDRA A. FABRITZ-WHITNEY  
 Governor Director

  
**ARIZONA DEPARTMENT OF WATER RESOURCES**  
3550 North Central Avenue, Second Floor  
 PHOENIX, ARIZONA 85012-2108  
 (602) 771-8500

April 1, 2013  
 Bradley Hill, R.G.  
 City of Flagstaff  
 211 W. Aspen Ave.  
 Flagstaff, AZ 86001

APRIL FOOLS?

Re: Designation of Adequate Water Supply (DWR No. 41-900002.0002) City of Flagstaff

Dear Mr. Hill:

I am pleased to inform you that the Department of Water Resources has approved the application for a Designation of Adequate Water Supply for the City of Flagstaff (Flagstaff). We have enclosed the formal Decision and Order. The Decision and Order includes an itemization of Flagstaff's responsibilities in maintaining the Designation.

Flagstaff's status as a designated water provider demonstrates that Flagstaff is taking a long-term perspective in managing water resources. Flagstaff's commitment to long term planning represents a major contribution to the State's water management goal.

If you have any questions regarding these documents, please contact me at (602) 771-8615.

Sincerely,

  
 Andrew J. Craddock, Manager  
 Recharge, Assured & Adequate Water Supply Programs

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# Agenda



- Assured and Adequate Water Management Programs
- Flagstaff's Designations
- Application Demands & Flagstaff Model
- Final Designation Decision & Order
- Reporting Requirements
- Planning Tool

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## Adequate Water Supply

### "Permissive"

### Adequate Water Supply

#### "Mandatory"

### Assured Water Supply



#### Active Management Areas

Clarkdale  
Patagonia  
Cottonwood  
Flagstaff




Benson  
Bisbee  
Douglas  
Huachuca  
Sierra Vista  
Tombstone  
Wilcox

Yuma  
Wellton  
Somerton  
San Luis

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## ADWR Water Adequacy Program

- **Purpose:**  
Maintain the City's Designation to ensure all existing citizens, new committed plats and future projected growth has a minimum 100-year water supply.
- **Benefits:**  
Maintain public's trust in the City's water supplies and provide for long-term economic vitality and community sustainability

Requirement to access any state-wide funding

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## Criteria for Demonstrating Adequacy






- **Physical Availability** (*Hydrology or Wet Water*)  
*Groundwater Flow Model (Flagstaff Model)*
- **Continuous Availability** (*infrastructure*)
- **Legal Availability** (*water rights & contracts*)
- **Financial Capability** (*water rates, taxes, revenue bonds*)
- **Water Quality (ADEQ)**

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## Flagstaff Designations

- City of Flagstaff Incorporated Limits
  - “deemed” Adequate in May 17, 1973
  - Never required to prove Physical Availability
- City of Flagstaff Red Gap Ranch
  - January 7, 2011
  - Hydrology study proved up to 16,500 AF/year
  - Required City to submit application for local water supplies



ARIZONA DEPARTMENT  
OF WATER RESOURCES  
SECURING ARIZONA'S WATER FUTURE

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## Flagstaff's Final Designation

Current, Committed & Projected Demands

- Current (delivered) in 2011 = 10,461 AF  
(note, 2,212 AF of this is direct delivered reclaimed)
- Committed (platted but unbuilt) = 859 AF
- Projected = 3,520 AF (160 AF/yr historical trend)

**2033 ANNUAL ESTIMATED WATER DEMAND  
(20 YEARS) = 14,840 AF/yr**

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## Flagstaff's Designation Water Supplies

- Groundwater Red Gap Ranch = 16,500 AF/yr  
(Navajo Stipulation = 8,000 AF/yr)
- Local Groundwater = 9,913 AF/yr
- Surface Water = 3,585 AF/yr
- Reclaimed Water = 2,212 AF/yr

**TOTAL 100-YEAR DESIGNATION = 23,710 AF/yr  
(ADWR = 32,210 AF/yr)**

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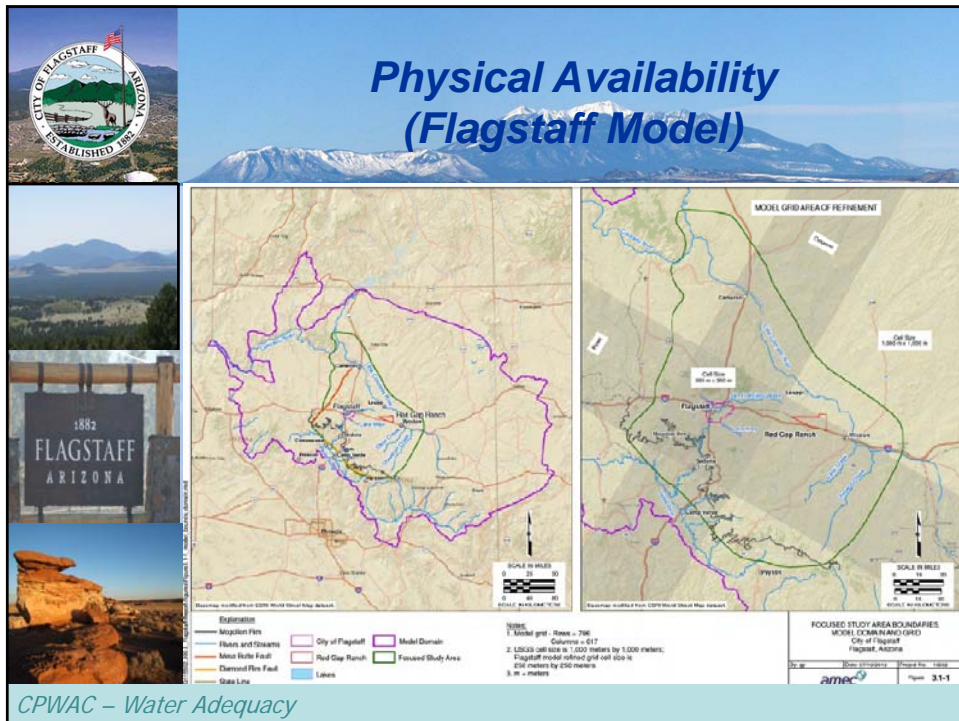
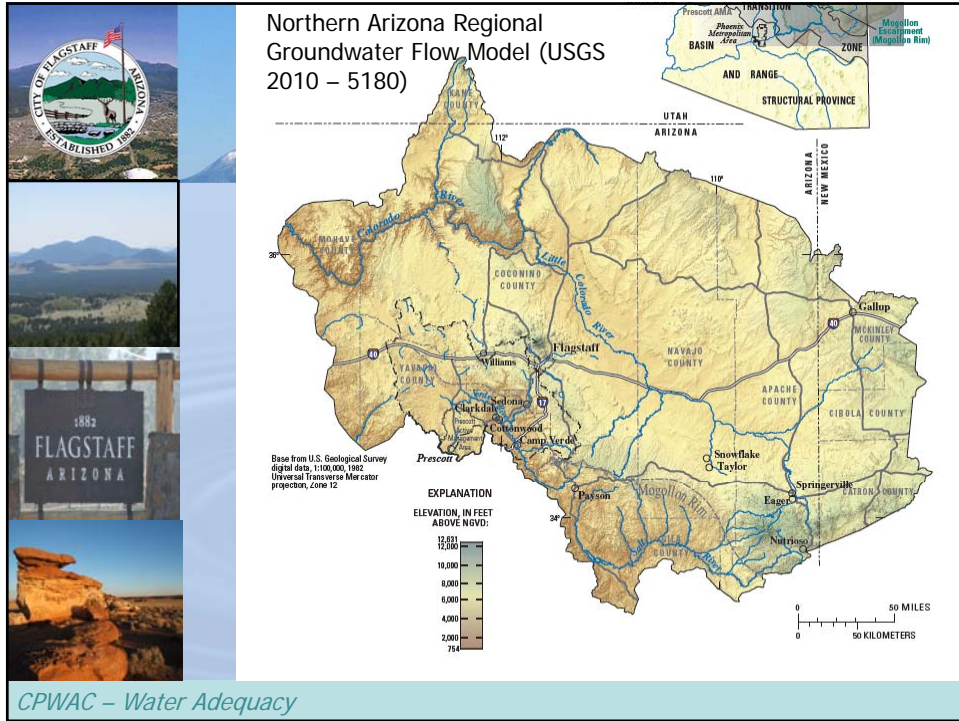


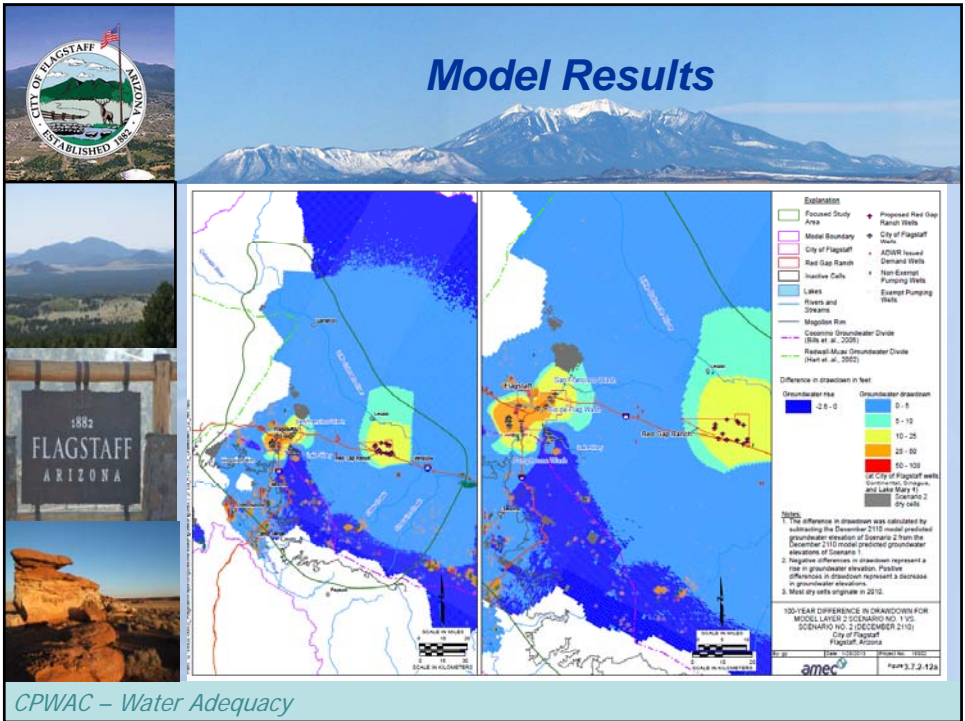
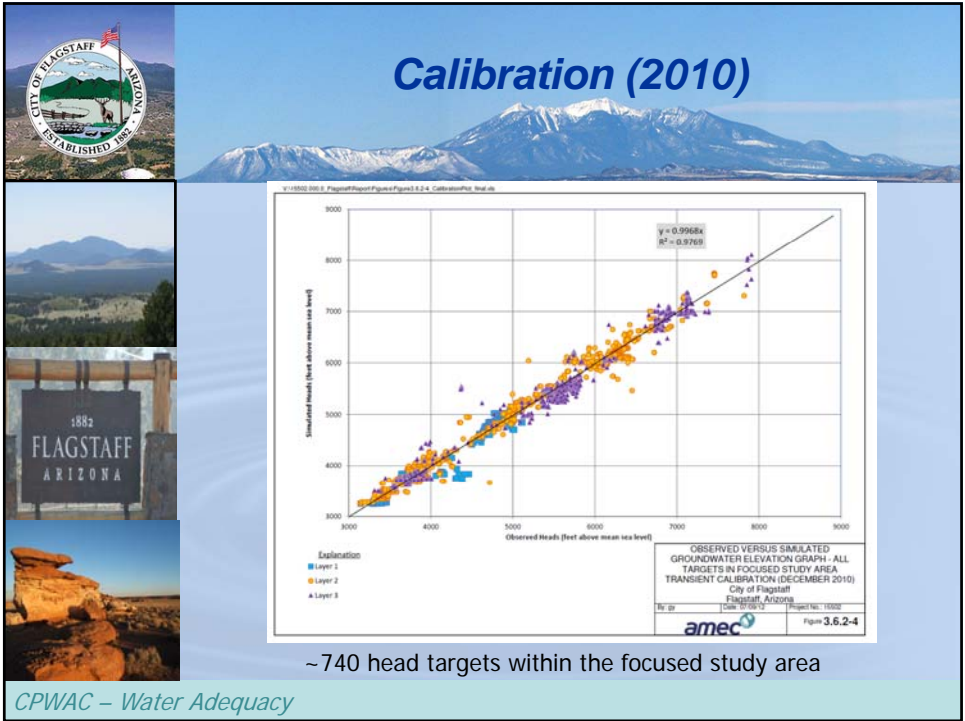



## Physical Availability (Flagstaff Model)

- Northern Arizona Regional Groundwater Flow Model – (USGS 2010-5180)
- Develop “focused study area”
- Refine mesh in area of interest
- Update through 2010
- Add additional “issued” water demands

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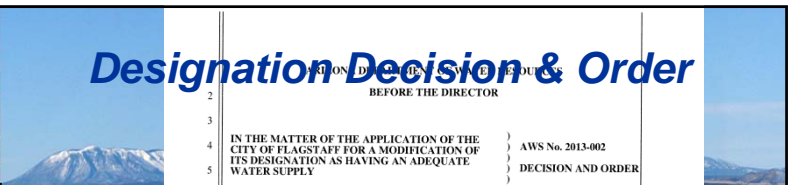



# Designation Decision & Order

- **Physical Availability**  
*Groundwater Flow Model 32,210 AF/yr  
(limited to 23,710 AF/yr by Stipulation with Navajo)*
- **Continuous Availability**  
*City Infrastructure, Approval of Construction by ADEQ for Red Gap*
- **Legal Availability**  
*Statement of Claims, Stipulation with NPS & USFS*
- **Financial Capability**  
*water rates, sales tax, property tax, water resource fees, revenue bonds*
- **Water Quality (ADEQ)**




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# Designation Decision & Order

DESIGNATION DECISION AND ORDER  
BEFORE THE DIRECTOR

IN THE MATTER OF THE APPLICATION OF THE CITY OF FLAGSTAFF FOR A MODIFICATION OF ITS DESIGNATION AS HAVING AN ADEQUATE WATER SUPPLY

) AWS No. 2013-002  
) DECISION AND ORDER  
) No. 41-900002.0002

**I. INTRODUCTION**

On January 6, 2012 the Arizona Department of Water Resources ("Department") received an application from the City of Flagstaff ("Flagstaff") requesting that the Department modify Flagstaff's designation as having an adequate water supply, pursuant to A.R.S. § 45-108 *et seq.* and A.A.C. R12-15-701 *et seq.*



After receiving Flagstaff's application for a modification of its designation of adequate water supply, the Department reviewed relevant information regarding the modification request, including: 1) the hydrologic information on file with the Department, the hydrologic study submitted with the application, and other information submitted with the application for the proposed sources of supply; and 2) information regarding Flagstaff's financial capability to construct all the necessary delivery system, treatment works and storage facilities. Based on that information, the Department makes the following Findings of Fact, Conclusions of Law and Order of Modification and Conditions of Designation:

**II. FINDINGS OF FACT**

**A. General**

1. The Department previously designated Flagstaff as having an adequate water supply in Decision and Order No. 41-900002.0001, on January 7, 2011.

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## “Checks and Balances”

- “Trust but Verify”
  - Annual Reporting
  - 5-year System Water Plan Update
  - 20-year Application to Modify





14,840 AF/yr “full bucket”

Projected demand

Committed demand

Current demand

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## Planning Tool


**City of Flagstaff 100-Year Designation of Adequate Water Supply**  
 (as determined by Arizona Department of Water Resources, supplies are in acre-feet annually [AFA])

Category	Value (AFA)
Surface Water (Upper Lake Mary)	3,585
Direct Delivered Reclaimed (Irrigation Use)	2,212
Natural Recharge	3,000
Recovered Reclaimed	1,150
Local Groundwater	9,913
Red Gap Ranch Groundwater	16,500
Stipulation with Navajo Nation	8,000
<b>Total Available Supply</b>	<b>34,350</b>
Projected Demand (2066)	~150,000


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# Questions?



Thank you!  
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