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Pasadena Water and Power

**Sunset Reservoir Wells Perchlorate Investigation
Stable Isotope Analysis of Water**

Presented by
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Presented to
United States Environmental Protection Agency
Jet Propulsion Laboratories, Pasadena

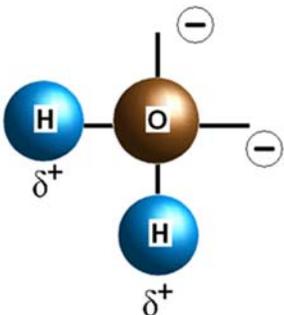
April 30, 2013



 **Stable Isotope Analysis H₂O**

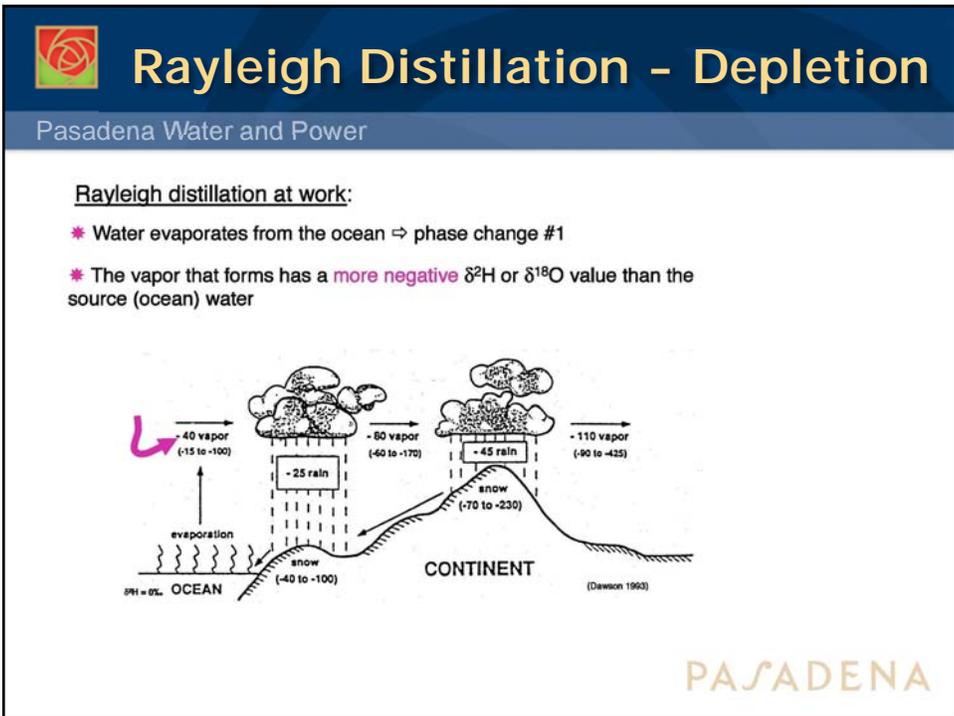
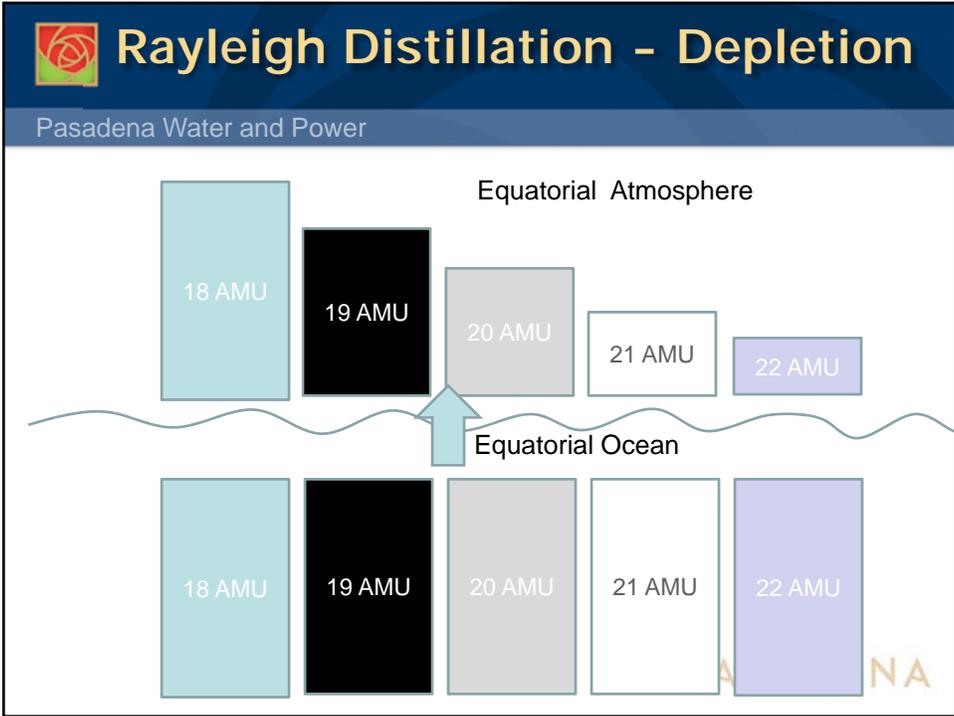
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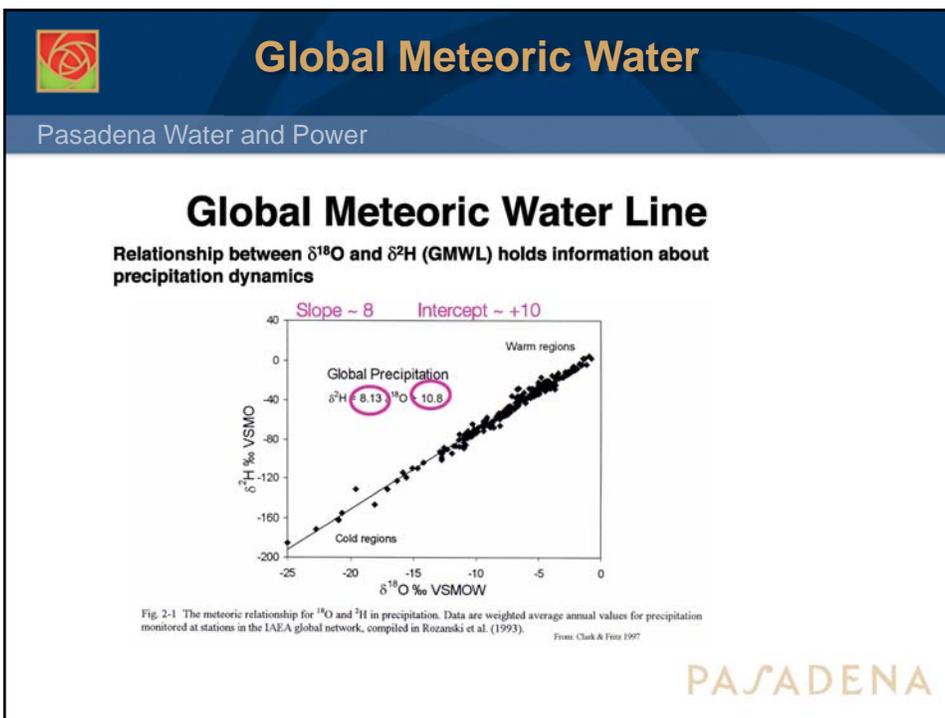
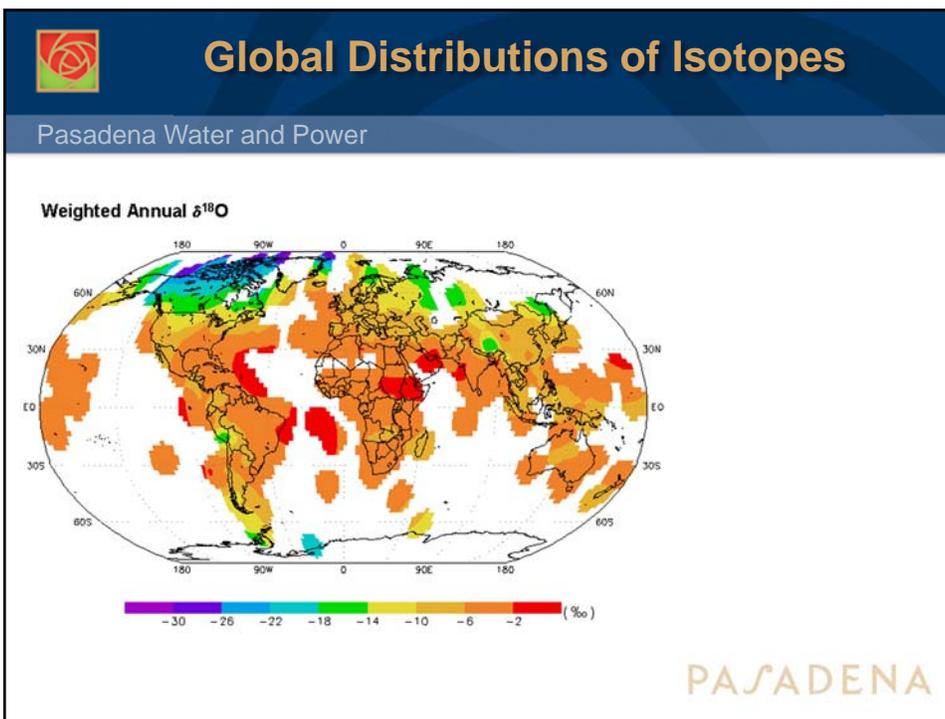
$^1\text{H} = 1$
 $\text{D} = ^2\text{H} = 2$
 $^{16}\text{O} = 16$
 $^{17}\text{O} = 17$
 $^{18}\text{O} = 18$
 $^1\text{H}_2^{16}\text{O} = 18$
 $^1\text{H}_1^2\text{H}_1^{16}\text{O} = 19$
 $^2\text{H}_2^{16}\text{O} = 20$
 $^1\text{H}_1^2\text{H}_1^{18}\text{O} = 21$
 $^2\text{H}_2^{18}\text{O} = 22$

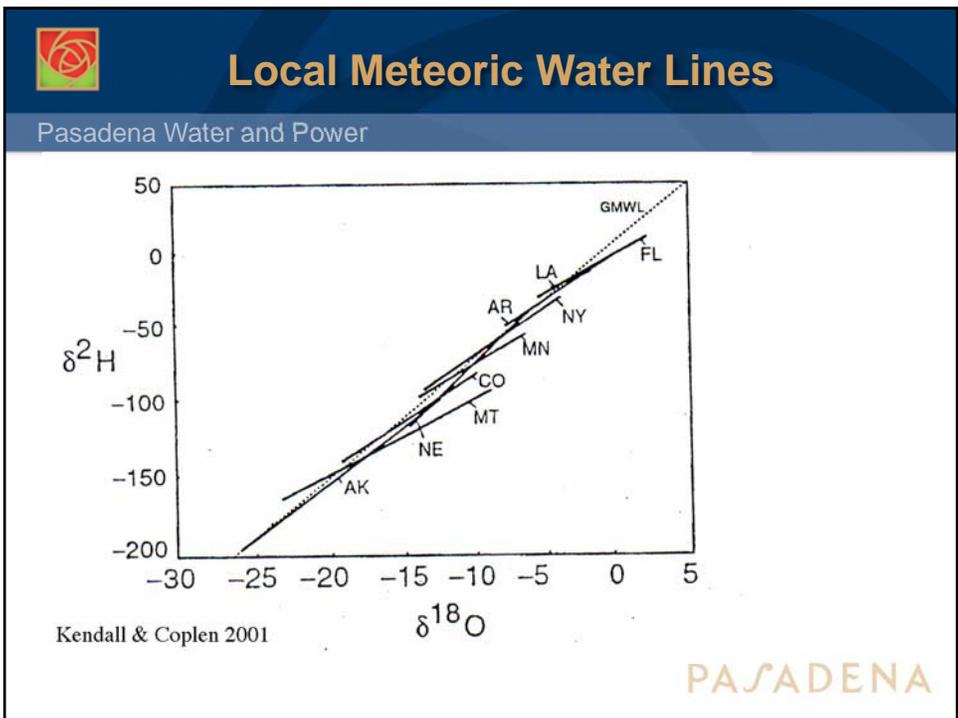
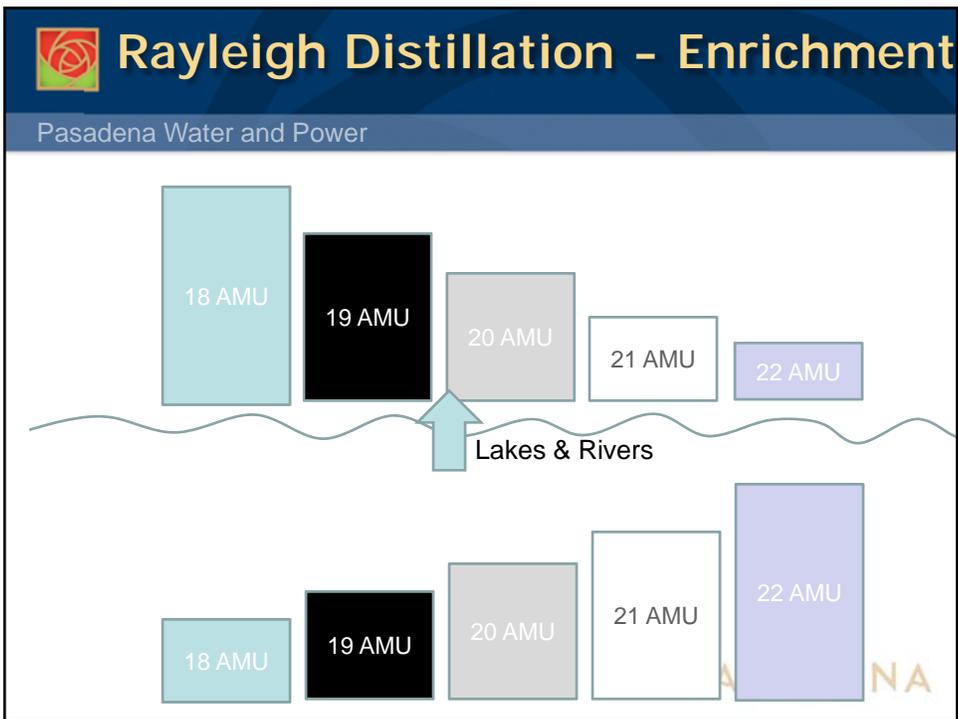


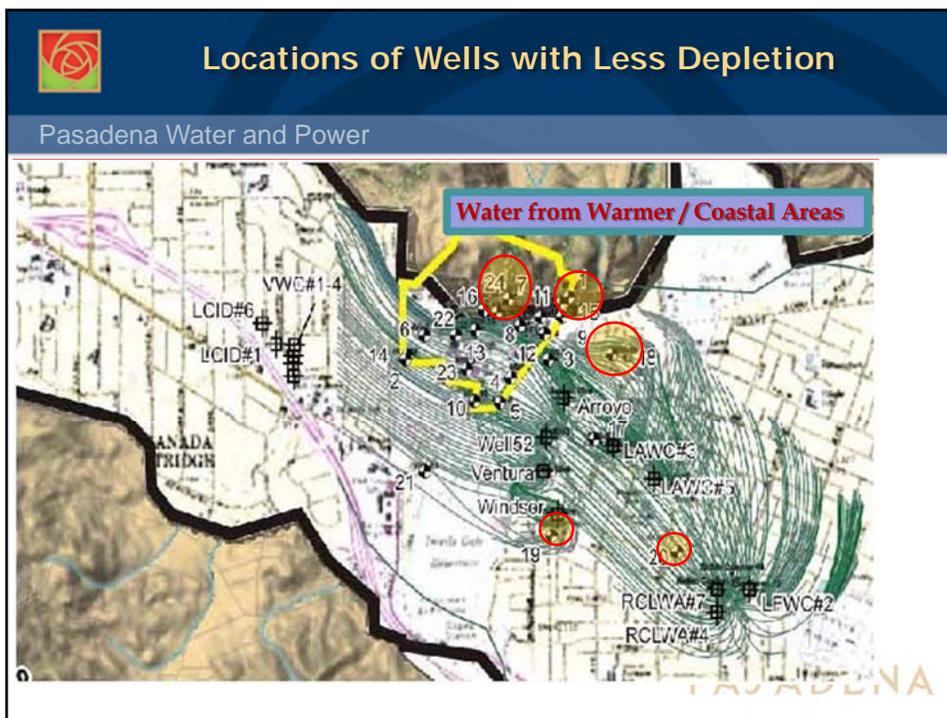
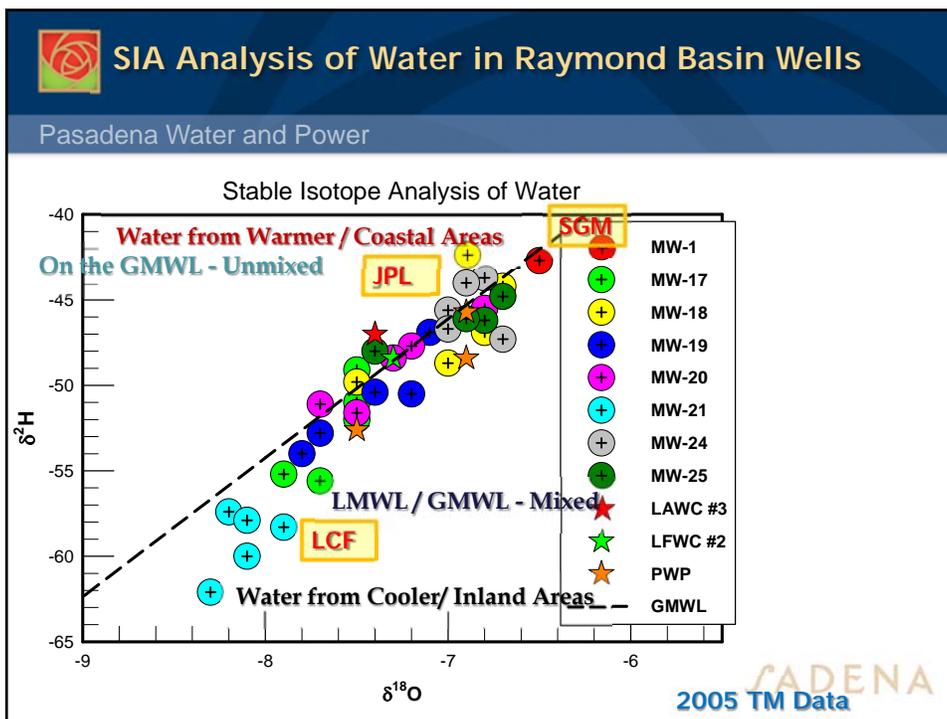
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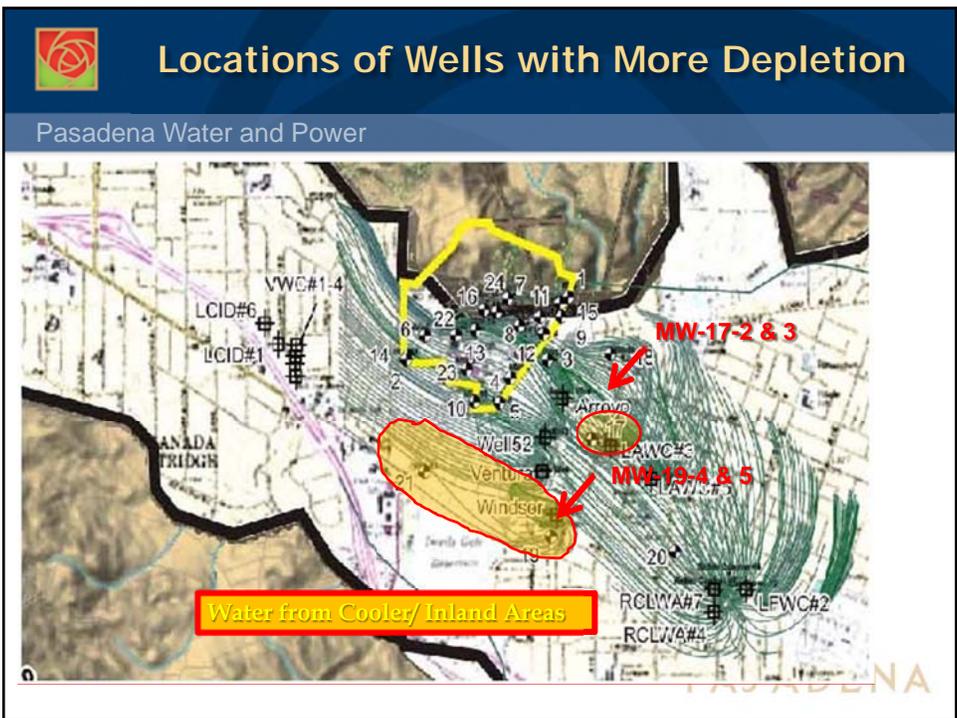
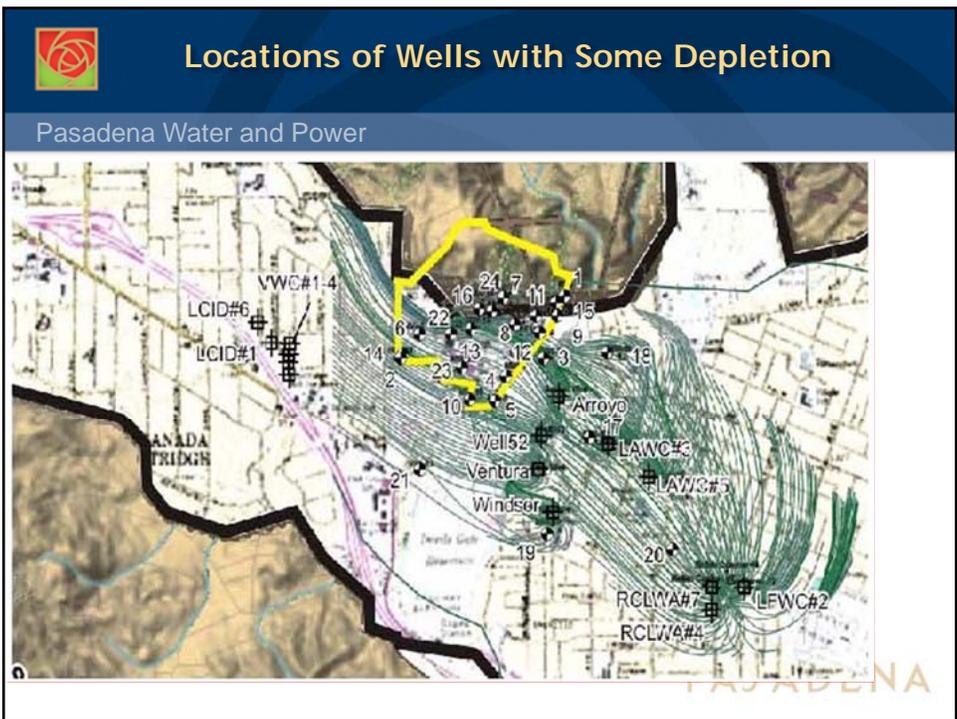
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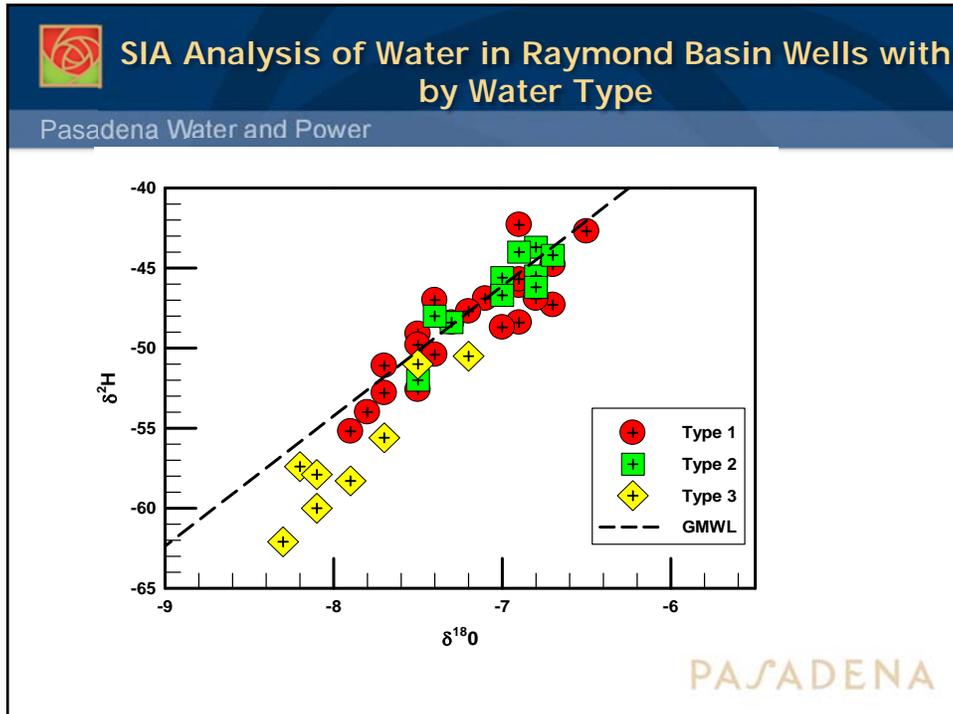












Conclusions

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- The Sunset Reservoir Wells have water that is less depleted and close to the Global Meteoric Line
- This indicates that this water is from warmer, coastal areas
- The Vast Majority of the Water Found in the Sunset Reservoir Wells Comes from JPL

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