



**Irvine City Council Presentation**  
**Irvine Desalter Project Non-Potable Component**

**September 14, 2010**



# IRWD's Irvine Desalter Project

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**The Irvine Desalter Project has two components:**

## **1) The Potable (Drinking) Water Supply Component**

- Groundwater extracted from the Irvine sub-basin and treated for the removal nitrates
- This water is not contaminated by pollutants from the former marine base

## **2) The Non-Potable Water Supply Component**

- This water not used for drinking water system
- Part of the effort to clean up the TCE plume from the former marine base
- A joint cleanup project between IRWD, OCWD and the US Navy





# Irvine Desalter Project – Non-Potable System

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## *Project Highlights:*

- Began full operation in January 2007.
- Pumps water from the plume that is treated to remove the TCE.
- Cleaned water is used only for *non-drinking* water purposes in IRWD's extensive recycled water system.
- Provides 1.3 billion gallons of water annually to supplement the non-drinking water system.
- Enough water to irrigate 1,300 acres of landscaping.
- Visit [www.irwd.com](http://www.irwd.com) for project updates.



# Irvine Desalter Project – Non-Potable System

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## Principal Aquifer Components:

- Well 78
- Well ET-1 and the Principal Aquifer Treatment Plant (PAP)
- Well ET-2



## IDP Non-Potable System: Well 78

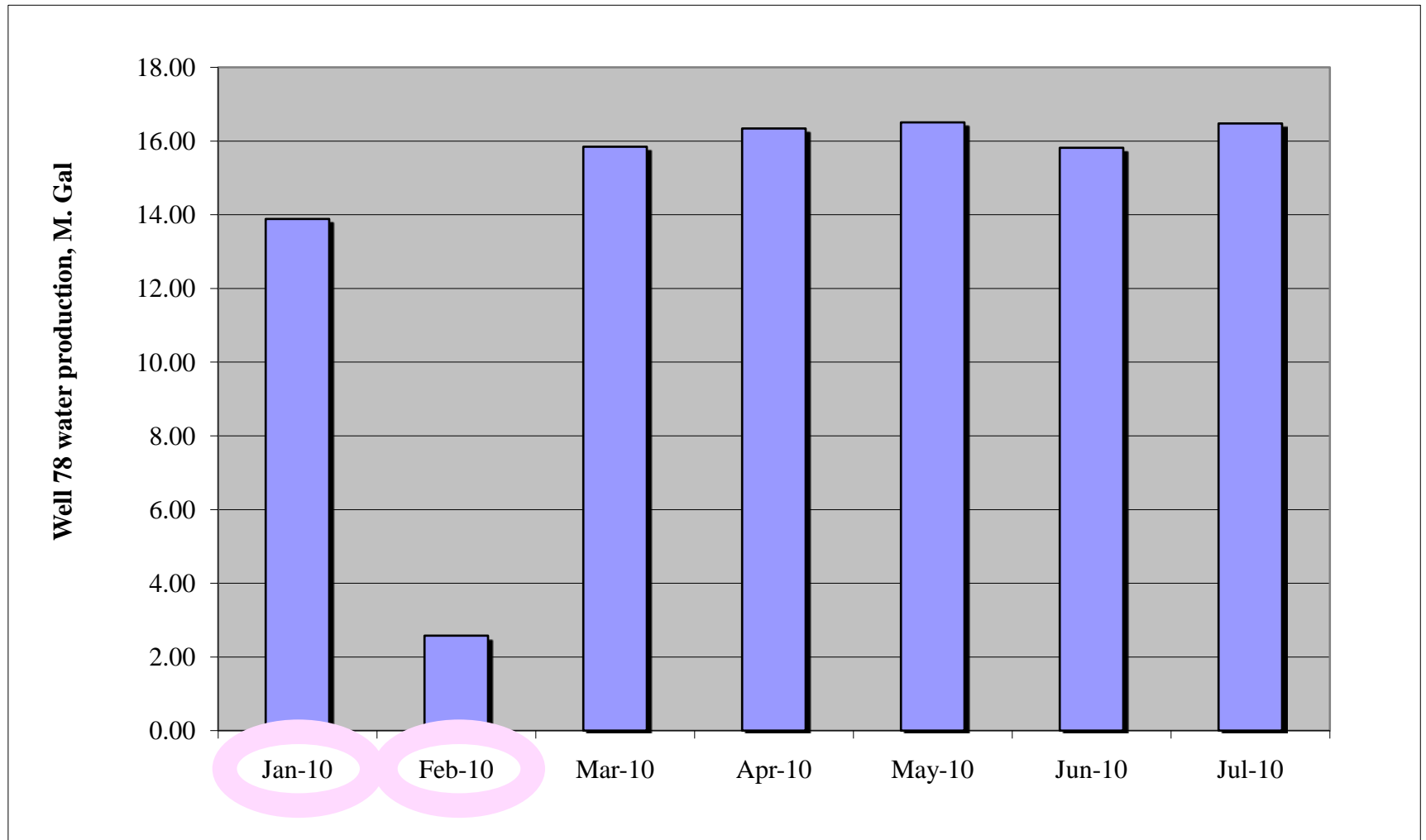
- Located at Culver and Warner in Irvine.
- From January 2010 through June 2010, approximately 81 million gallons of groundwater were extracted and pumped into the IRWD non-potable water system.
- Current average flow rate of 370 gallons per minute.
- Influent TCE level: ~ 1.5 ppb\*

\* OCWD monitoring data from June 2010





# Well 78 Production from Jan 2010 to June 2010



***Well was turned off in part of January 2010 and most of February 2010 due to low non-potable distribution system demand***



## Well ET-1 and the Principal Aquifer Plant (PAP)

- Located at Jeffrey and Irvine Center Drive in Irvine.
- From January 2010 through June 2010, approximately 210 million gallons of groundwater were extracted and treated through this component of the IDP; treated water pumping into IRWD non-potable water system.
- Current average flow rate of 950 gallons per minute
- Influent TCE level: ~ 7-8 ppb
- Effluent TCE level: non-detectable

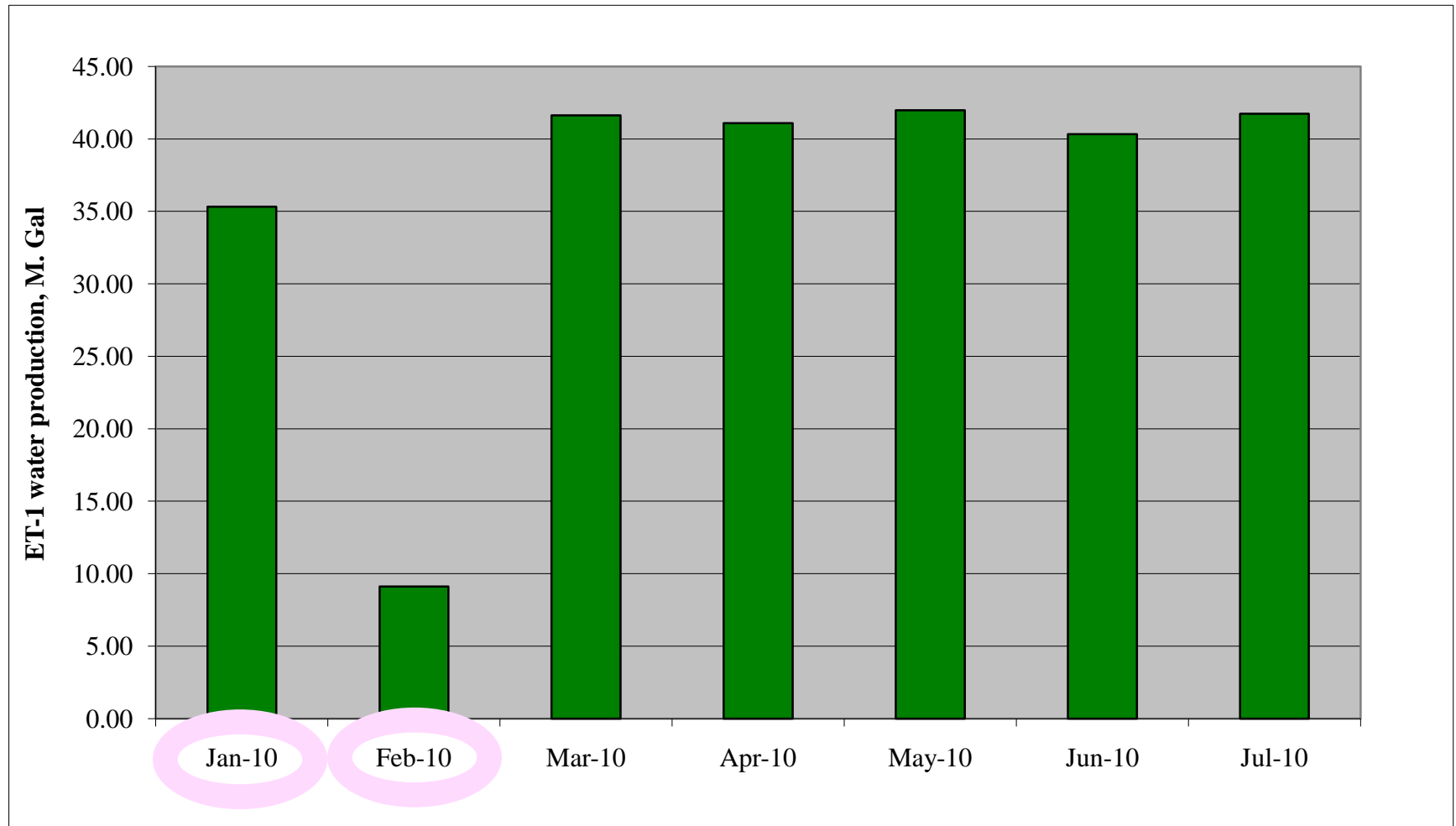
\* TCE is not detectable at levels less than 0.5 ppb







## ET-1 Production from Jan 2010 to June 2010



***Well was turned off in part of January 2010 and most of February 2010 due to low non-potable distribution system demand***



## IDP Non-Potable System: Well ET-2

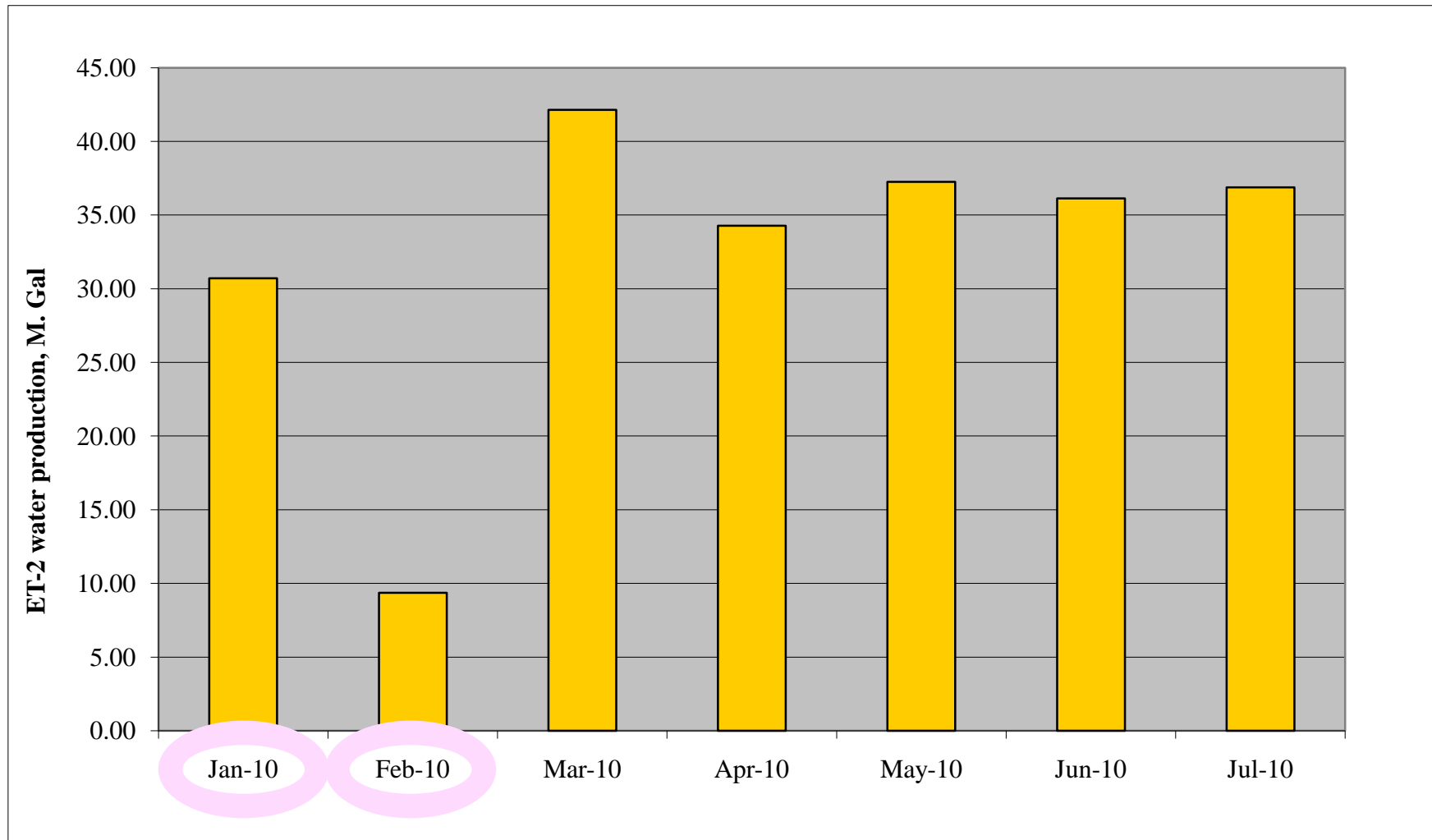
- Located at Culver and Irvine Center Drive in Irvine.
- From January 2010 through June 2010, approximately 190 million gallons of groundwater were pumped into the non-potable water system.
- Current average flow rate of 860 gallons per minute.
- Influent TCE level: ~ 1.5 ppb\*

\* OCWD monitoring data from June 2010





## ET-2 Production from Jan 2010 to June 2010



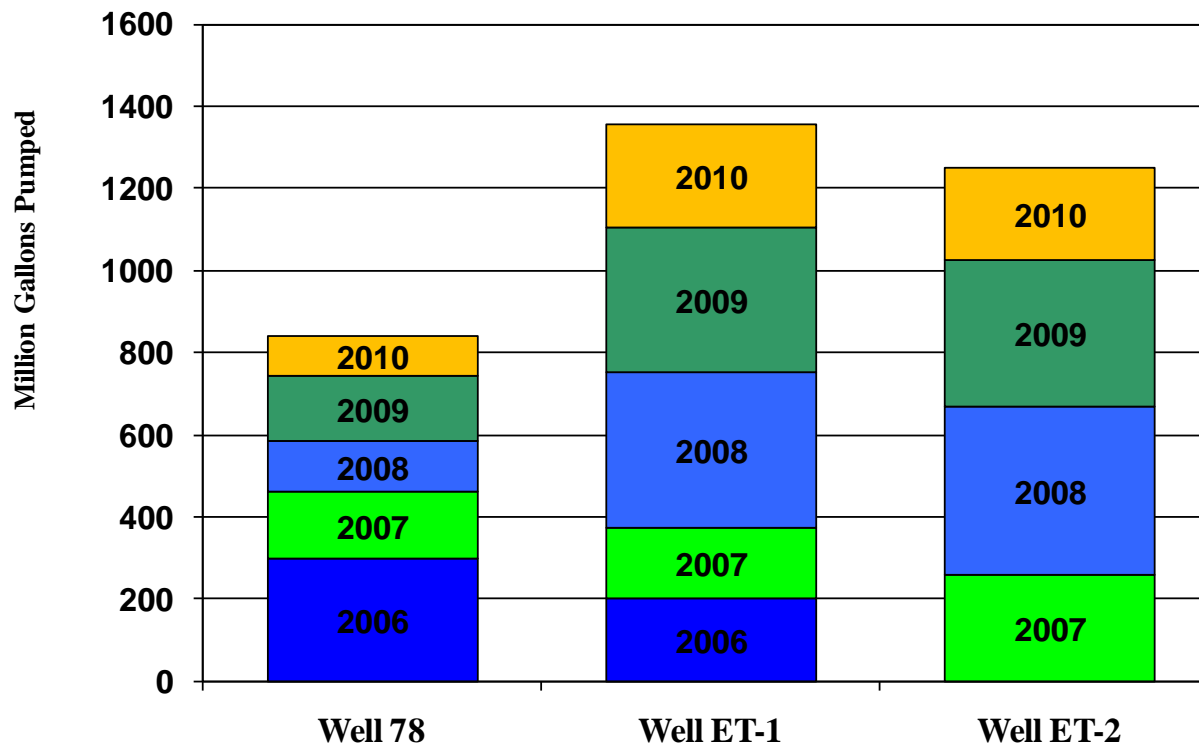
***Well was turned off in part of January 2010 and most of February 2010 due to low non-potable distribution system demand***



# IDP Groundwater Pumping and TCE Removal

Since system start-up, nearly 3.5 billion gallons of water have been extracted and approximately 97.1 pounds of TCE have been removed from the plume.

## PRINCIPAL AQUIFER PUMPING





# **IDP – Participating Agencies**

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## ***Agencies Responsible for the Plume Clean-Up:***

- **United States Department of the Navy**
- **United States Department of Justice**
- **Irvine Ranch Water District**
- **Orange County Water District**

## ***Regulatory Oversight Agencies:***

- **United States Environmental Protection Agency**
- **California State Department of Public Health**
- **Santa Ana Regional Water Quality Control Board**
- **California Department of Toxic Substances Control**
- **Orange County Health Care Agency – Environmental Health**