

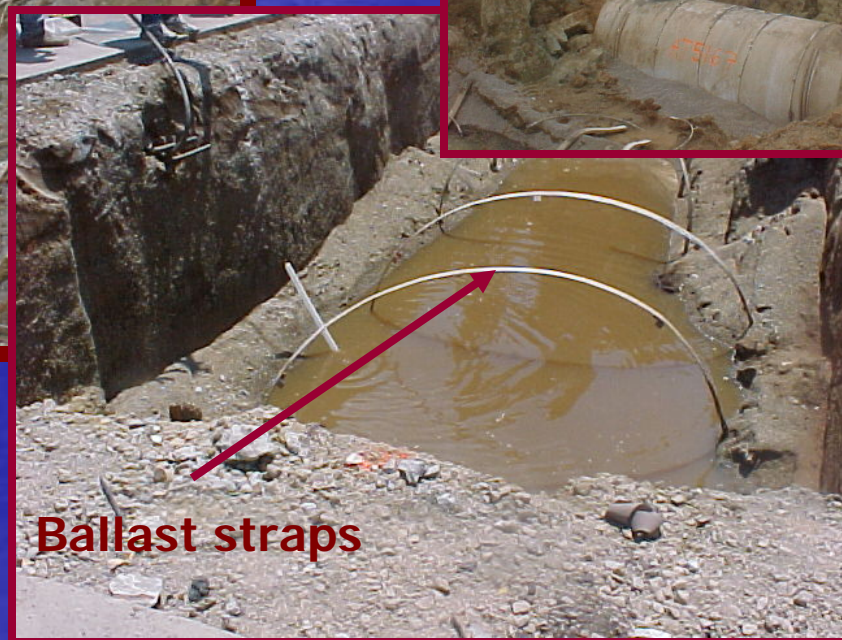
Land And Water Quality Division's  
Performance Measure  
"Monitoring Well Destruction Project 2005"

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# Underground Storage Tanks can leak and pollute the groundwater and soil



**Groundwater**



**Ballast straps**

# Example of how UST's can release contaminants



Perforation

# Monitoring Well Definition

The State of California defines the term **'monitoring well'** in the Water Quality Control Act, Division 7, Chapter 10, Article 2, Section 13712 as:

**“Any artificial excavation by any method for the purpose of monitoring fluctuations in groundwater levels, quality of underground waters, or the concentration of contaminants in underground waters.**

# Monitoring Wells, the Good the Bad, and the Ugly

## Good

- Determine the horizontal and vertical extent of contaminants from leaking UST's or other hazardous substance releases.
- Determine direction of groundwater flow and thus contaminant movement.

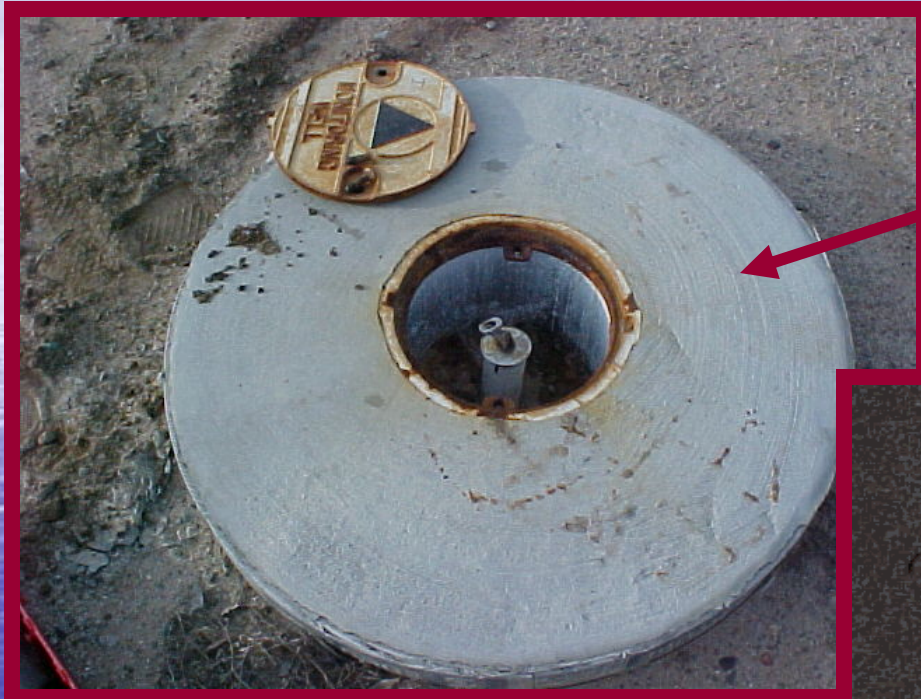
## Bad

- Poorly contracted or abandoned MW's can serve as a conduit for surface contaminants, further degrading the groundwater.

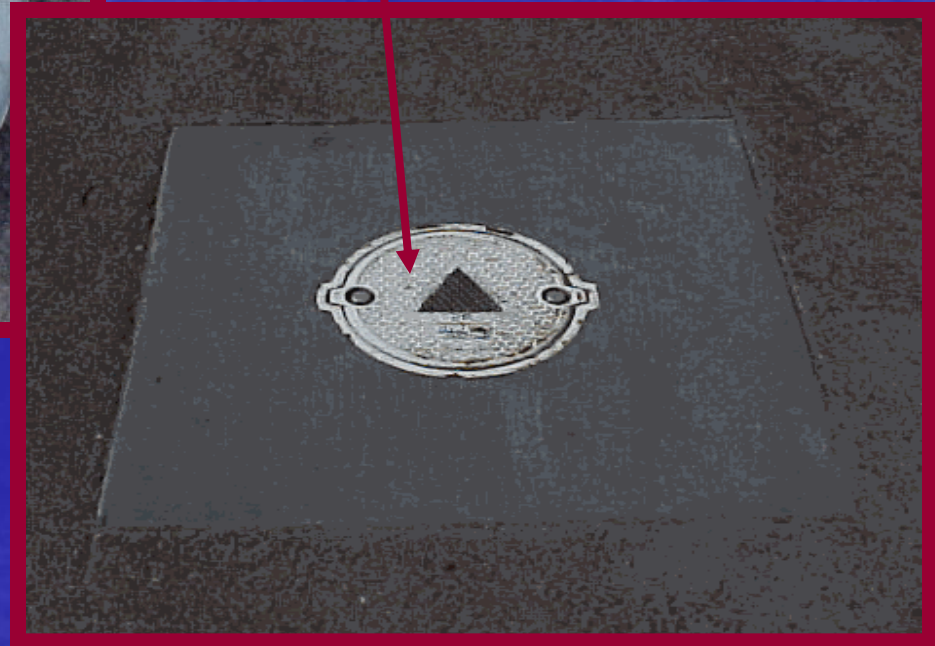
## Ugly

- Abandoned MW's can pose safety hazards for humans and animals.
- Contaminants can enter receptors via MW's and cause explosive conditions

# Properly maintained Monitoring Wells



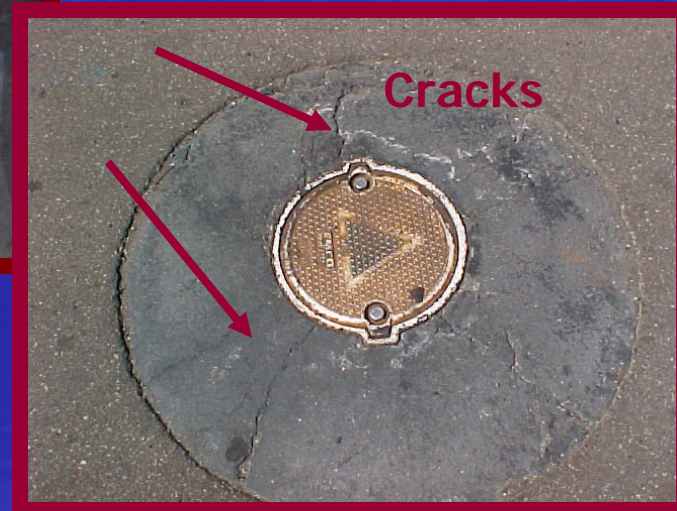
Notice the perimeter seals and secure covers



# Poorly maintained Monitoring Wells



Surface water accumulation



Cracks

# Poorly maintained Monitoring Wells



Trash and other debris



Cracks in perimeter seal



Performance Measure  
"Monitoring Well Destruction Project (MWD) 2005  
Statistics

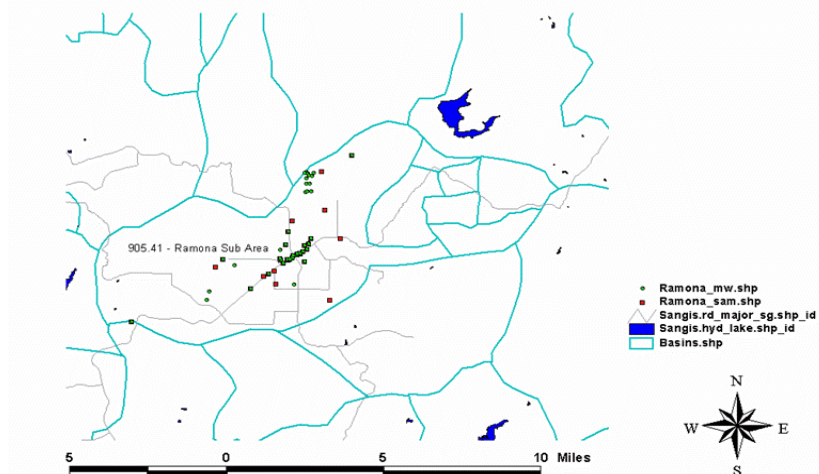
- Total Monitoring Wells installed in San Diego County 23,000 since 1986
- Total Monitoring Wells destroyed 6,000
- Total Monitoring Wells that remain 17,000

## Performance Measure

### "Monitoring Well Destruction Project (MWDP) 2005

- Choose three beneficial use basins in selected population centers
- Tally the number of MW's in those basins
- Select three baselines and reduce those wells by 25% each Fiscal Year

Well Destruction Project 2005  
**905.41 - Ramona Sub Area**



## Ramona Sub Basin

**AIR-SPARGING**

**BORING**

**DESTRUCTION**

**DUAL-PHASE EXTRACTION**

**HYDROPUNCH**

**MONITORING WELL**

**TEMPORARY WELL POINT**

**VAPOR WELL**

**TOTAL:**

**#Permits**

**#Wells**

1

1

24

127

11

26

2

12

2

6

**55**

**174**

2

6

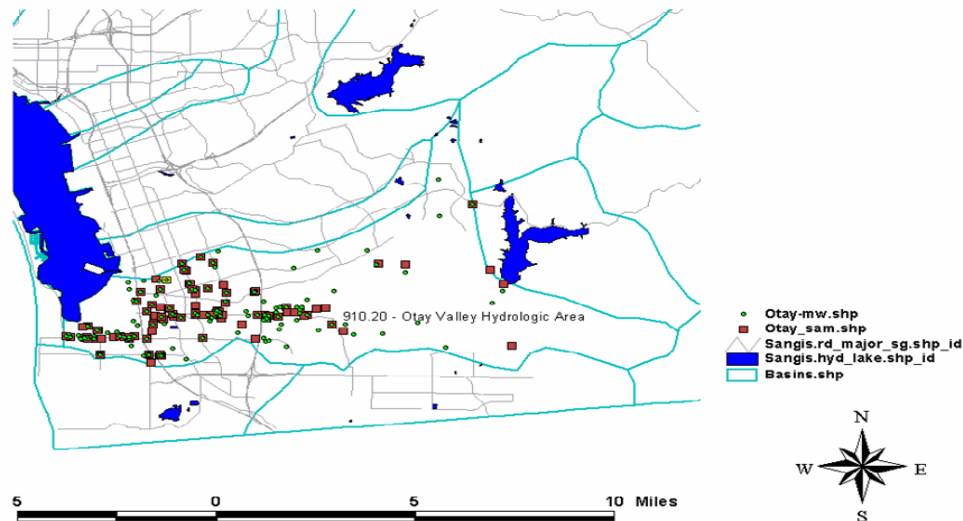
1

1

**98**

**353**

## Basin 910.20 - Otay Valley Hydrologic Area



## Otay Valley Sub Basin

AIR-SPARGING  
BORING  
CONE PENETROMETER  
DESTRUCTION  
GROUNDWATER EXTRACTION  
HYDROPUNCH  
**MONITORING WELL**  
OTHER  
PIEZOMETER  
VAPOR WELL  

---

TOTAL:

# Permits

# Wells

1

1

64

267

1

6

30

100

1

3

1

3

**94**

**248**

4

10

1

3

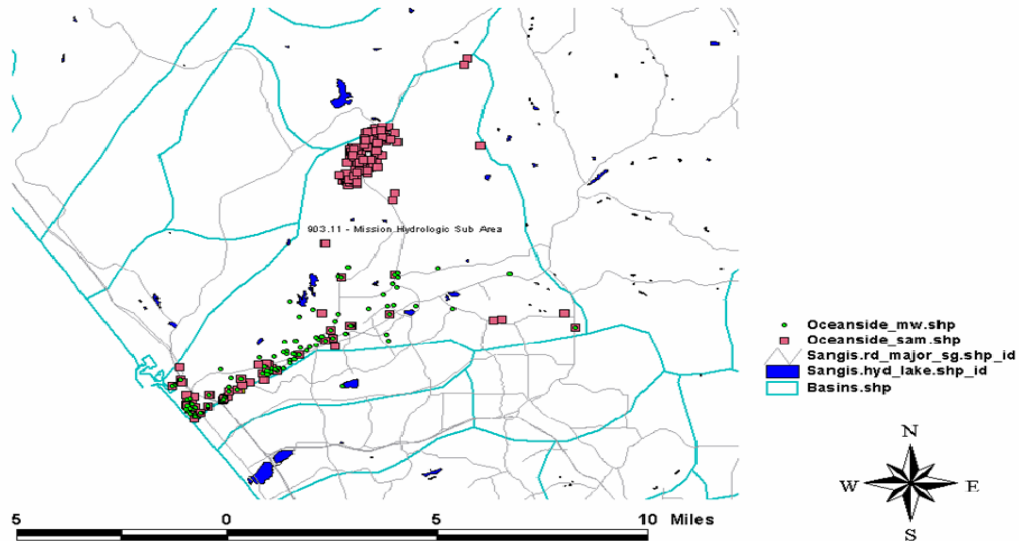
12

44

209

685

## 903.11 - Mission Hydrologic Sub Area



## Mission Sub Basin

BORING  
 DESTRUCTION  
**MONITORING WELL**  
 OTHER  
 TEMPORARY WELL POINT  
 UNKOWN  
 VAPOR WELL  


---

**TOTAL:**

# Permits	# Wells
44	184
27	94
<b>72</b>	<b>205</b>
1	4
1	1
2	0
1	1
<b>148</b>	<b>489</b>

## Performance Measure

### "Monitoring Well Destruction Project (MWDP) 2005 Effective July 1st, 2005

- Covers three beneficial use basins
- Basins selected are sensitive aquifers
- Basins supply present and future drinking water supplies
- MWDP will consist of two phases

# Performance Measure

## "Monitoring Well Destruction Project (MWDP) 2005

### Objective and Goal

- Phase I
  1. MW's installed in the 1980's
  2. Not associated with a SAM site
  3. Most likely in disrepair and abandoned
  4. Greatest threat to groundwater
  5. Analyze Quarterly
  6. 25 % reduction each Fiscal Year
- Phase II
  1. Monitoring wells associated with SAM sites
  2. Focus on MW's with existing closed SAM sites
  3. MW's with open SAM sites are closed when cleanup is completed
  4. Commence after completion of Phase I

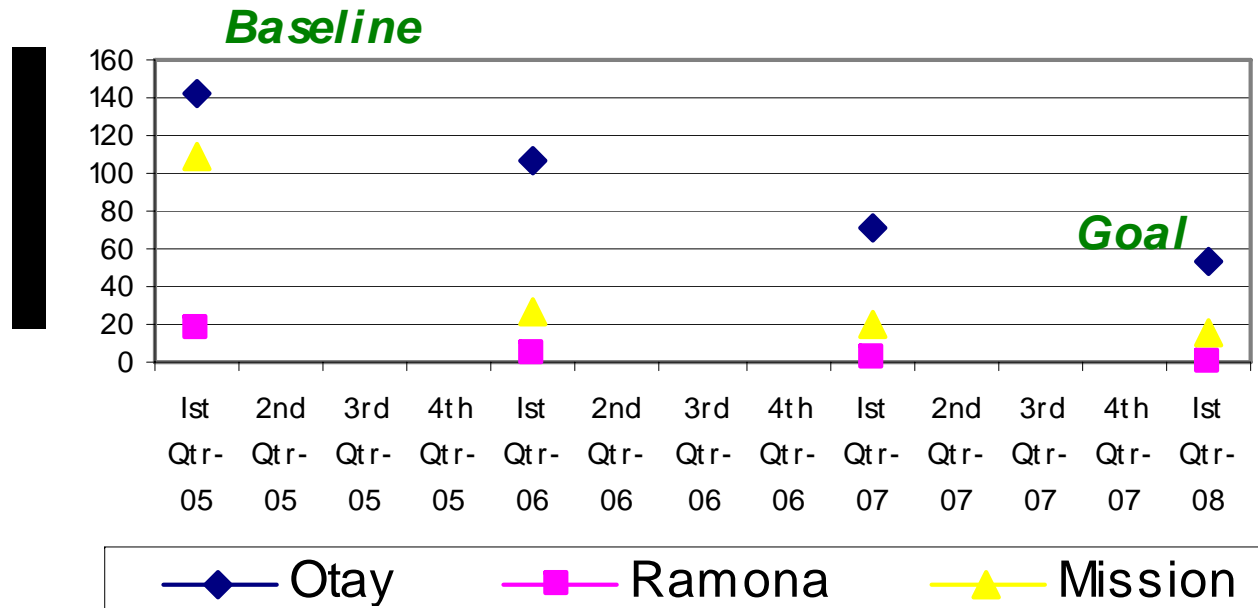
# Performance Measure

## "Monitoring Well Destruction Project (MWD) 2005

### Baselines Phase I

### DASHBOARD

Reduce MW's at non-SAM sites by 25% each FY





# Performance Measure

## "Monitoring Well Destruction Project (MWD) 2005 Deliverables

Access database created to measure progress for the three sub basins

The screenshot shows a Microsoft Access window titled "Microsoft Access - [frmMaster : Form]". The menu bar includes File, Edit, View, Insert, Format, Records, Tools, Window, and Help. The toolbar contains various icons for file operations and data management. The main form area is titled "MONITORING WELL PROGRAM" and "Abandoned Well Project". It features three study areas, each with a selection button and three action buttons:

Study Area	Action Buttons
Oceanside Study Area	Complete List, No SAM, SAM
Otay Valley Study Area	Complete List, No SAM, SAM
Ramona Study Area	Complete List, No SAM, SAM

The status bar at the bottom shows "Form View" and "NUM". The Windows taskbar at the very bottom includes the Start button, several application icons, the system tray, and the time "9:41 AM".

# Performance Measure

## "Monitoring Well Destruction Project (MWDP) 2005 Deliverables...cont

Each individual MW in the sub basin will be tracked.  
The database is shared so there is no duplication

The screenshot shows a web browser window displaying a form titled "ABANDONED MONITORING WELL PROJECT - RAMONA AREA". The form is for Well Permit # LMON-101558 and includes a table for well types, a tracking status section, and a list of 18 steps for the destruction process.

**Well Permit #:** LMON-101558

**Related Case:** H05211

**ARC0 1783**  
1015 MAIN ST  
RAMONA 920652120

	Permitted	Installed	Field
Monitoring Well	3	<input type="checkbox"/>	<input type="checkbox"/>
Boring	1	<input type="checkbox"/>	<input type="checkbox"/>
Vapor Well	0	<input type="checkbox"/>	<input type="checkbox"/>
Extraction Well	0	<input type="checkbox"/>	<input type="checkbox"/>
Destruction	0	<input type="checkbox"/>	<input type="checkbox"/>
Air Sparge Well	0	<input type="checkbox"/>	<input type="checkbox"/>
Inclinometer/Extensometer	0	<input type="checkbox"/>	<input type="checkbox"/>
Reconstruction	0	<input type="checkbox"/>	<input type="checkbox"/>
Cone Potentiometer	0	<input type="checkbox"/>	<input type="checkbox"/>
Total # of Wells	3	<input type="checkbox"/>	<input type="checkbox"/>
Well Destruction	0	<input type="checkbox"/>	<input type="checkbox"/>

**TRACKING STATUS**

Last Update:

Number of Existing Wells:

Number of Destroyed Wells:

**Steps:**

- Step 1 - Were the number of wells installed for the SAM case equal to those destroyed?
- Step 2 - Verify permit and well logs and update "Installed" field in table to the left.
- Step 3 - Based on the well permit records, are wells associated with this permit still existing on-site?  
List related well destruction permits:
- Step 4 - Review of permit information - completed date.
- Step 5 - Site inspection date. Update the "Field" field in the table to the left.
- Step 6 - Inspection report date.
- Step 7 - Deadline for response to inspection report.
- Step 8 - Past due letter sent
- Step 9 - Date we received written response
- Step 10 - Was initial response complete? If "yes" go to Step 15 below.
- Step 11 - Date of follow-up letter
- Step 12 - Deadline for follow-up response.
- Step 13 - Past due letter sent
- Step 14 - Date we received written response.
- Step 15 - Owner has indicated they intend to use the well(s). If "yes" go to Step 15A, if "no" go to Step 15B
- Step 15A - Date of a complete maintenance permit application submitted. (End of Process)
- Step 15B - Date of a complete destruction permit application submitted. (End of Process)
- Step 16 - Well destruction report submitted.
- Step 17 - Date of office conference.
- Step 18 - Date of enforcement action initiated.

Record: 1 of 114  
Form View

## Performance Measure

### "Monitoring Well Destruction Project (MWDP) 2005 Deliverables...cont

- New fee adjustment effective July 2003 requires new MW installation permit holders to pay an annual maintenance fee. This encourages the destruction of the well when the site is cleaned up
- MW's installed before 2004 were permitted once for construction - no annual maintenance fee was required
- SAM Project Manager will not issue "No Further Action" letters for SAM sites unless MW destruction permit application is received
- Quarterly review of reduction goal will be conducted
- SAM staff to spend approximately 4 hours each week

# Protecting San Diego's Precious Water Resources

