



Quarterly Project Status

July 26, 2006

Vashon-Maury Island
Water Resources Evaluation

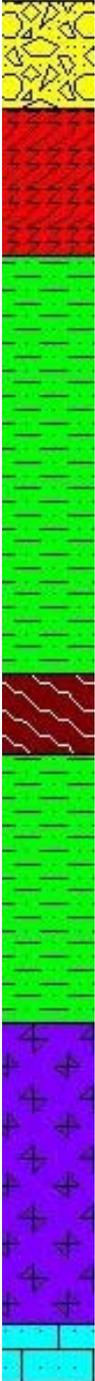
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Quarterly Review

- Ongoing monitoring overview
- WRE reports update
- Modeling update
- Budget

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Island Monitoring

- WQ sampling done in June
 - Environmental indicators (As, Cl, NO₂₃)
- Arsenic Speciation
 - 6 sites / 8 samples (map on next page)
 - 5 of 6 sites have majority of As(III)
 - As(III) – Arsenite – H₃AsO₃
 - As(V) – Arsenate – H₂AsO₄⁻

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Arsenic...

- Naturally occurring (not related to Asarco)
- New MCL is 10 $\mu\text{g}/\text{L}$ (total)
- Arsenic(III) is more toxic and complicated to treat.
- As(III) typically requires conversion to As(V) before removal.
- Treatment systems require increased oversight and cost to use water.

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Arsenic Sampling Sites



W-21
As = 3.3 $\mu\text{g/L}$
As(III) – 55%
As(V) – 45%

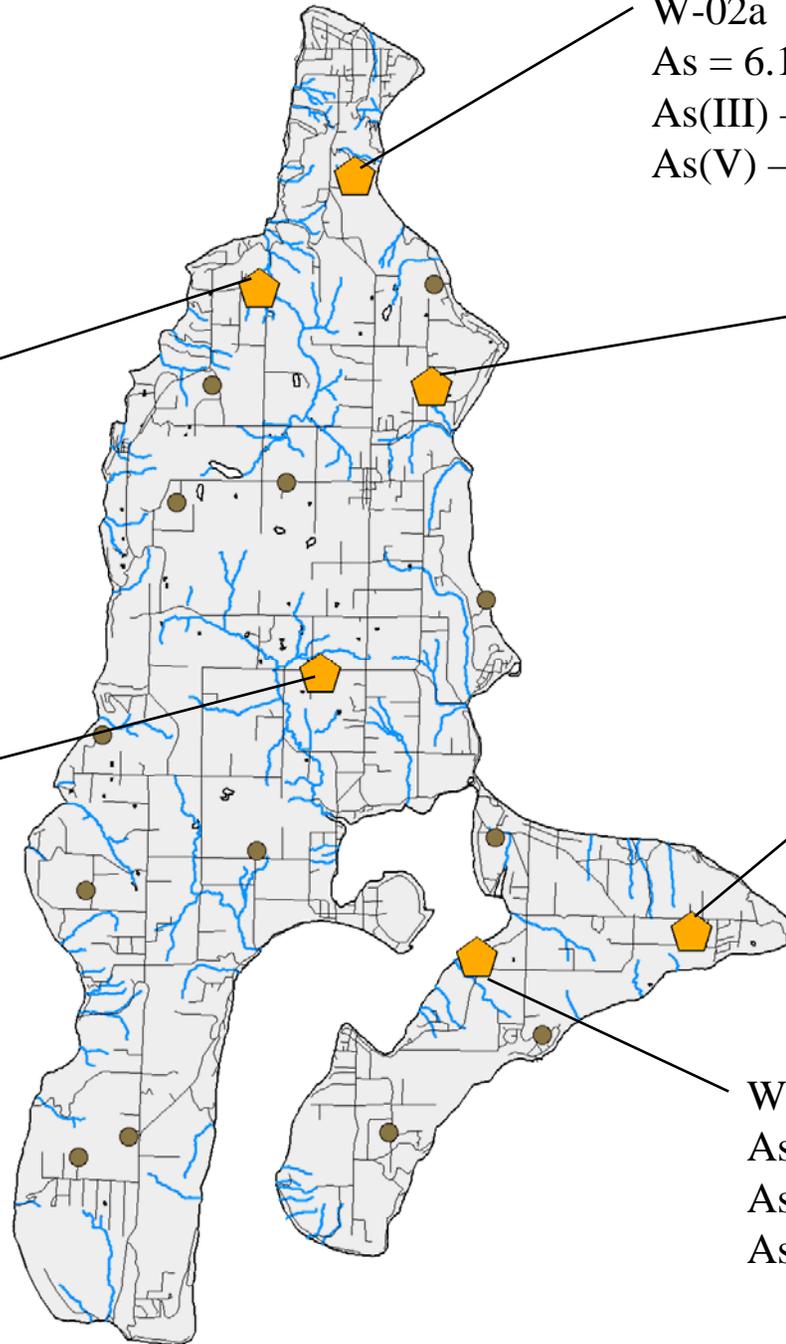
W-07
As = 13.0 $\mu\text{g/L}$
As(III) – 99%
As(V) – 1%

W-02a
As = 6.1 $\mu\text{g/L}$
As(III) – 1%
As(V) – 99%

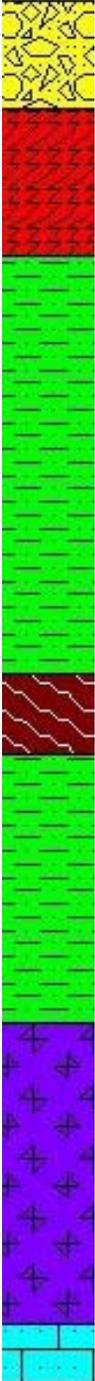
W-04
As = 18.3 $\mu\text{g/L}$
As(III) – 87%
As(V) – 13%

W-09a
As = 4.8 $\mu\text{g/L}$
As(III) – 89%
As(V) – 11%

W-12
As = 5.3 $\mu\text{g/L}$
As(III) – 113%
As(V) – >1%



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Island Monitoring con't

- WL survey continuing in 2006
 - 1 new self-monitoring volunteer (7)
- Stream and Precipitation gaging continuing.
- Dedicated monitoring wells to be sampled for water quality starting in 2007

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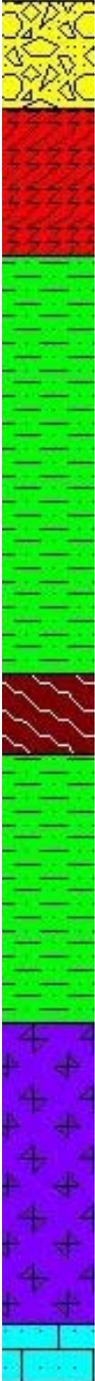
Island Monitoring con't

■ Judd Creek Monitoring

– When to start 2006/07

- basic parameters, Nutrients: \$200
 - ~\$1000 cost for remaining 2006
- Wet weather: \$240
- Organics only (not EDC's): \$400
- Low level metals: \$85
 - Organics and metals, perhaps 1-2, quarterly at most.

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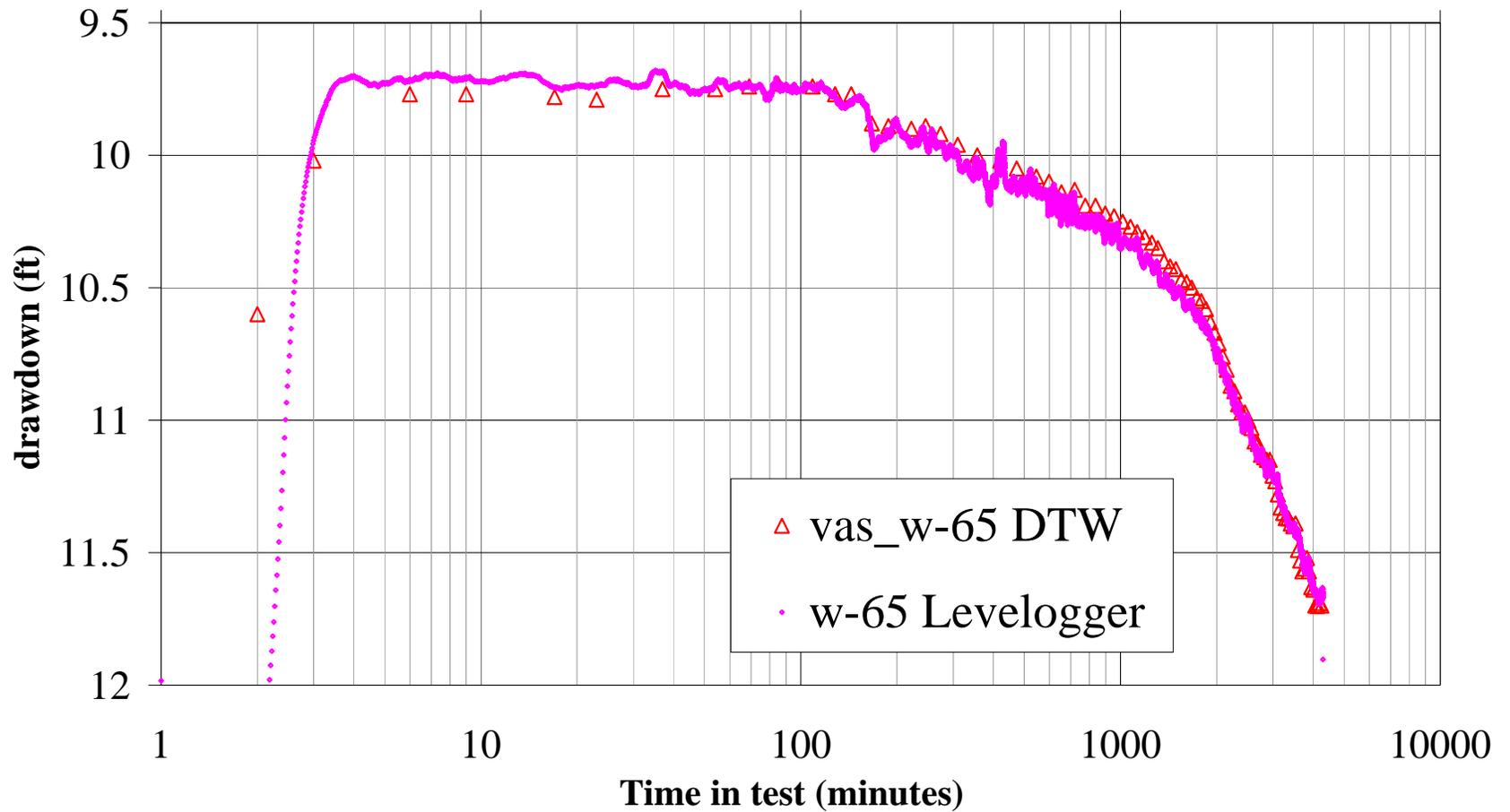


WRE Reports Update

- 2005 Water Resources Data Report
DONE...completed & mailed to GWPC members.
 - Available via the web
- 2005 Well Data Report to be completed in the next quarter.
 - Boring Logs and well completion information
 - Pump Test data & results

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Pump Test Data: Pumping Well: W-65

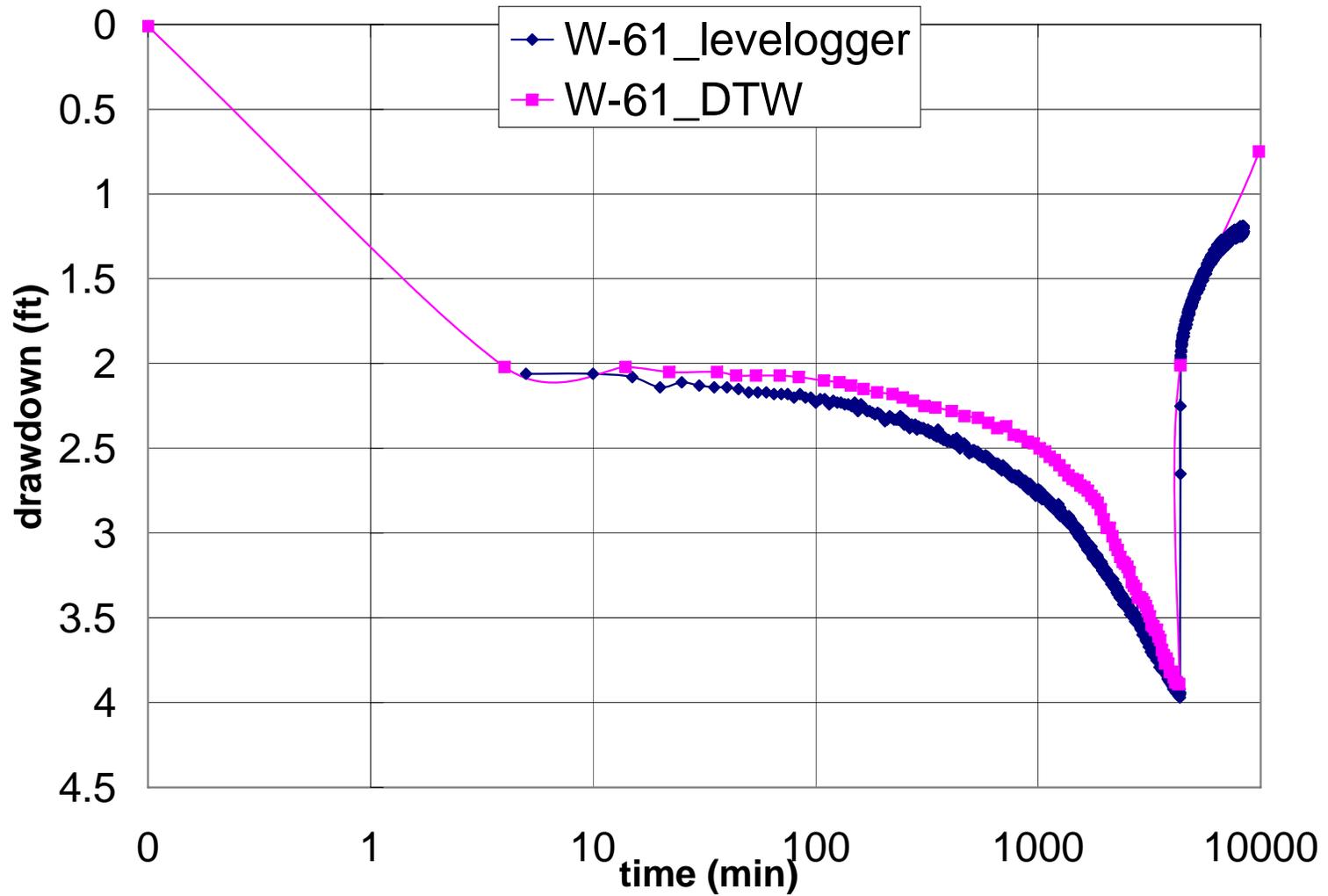


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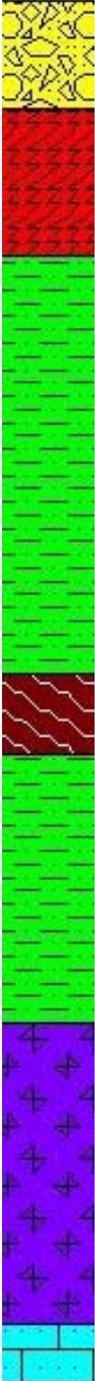
Pump Test Data:

Observation Well: W-61



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Grant support

- DOE grant support
 - WRE staff time to help implement
- PIE grant support
 - Helping with data and graphics

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WRE Modeling

■ 2006 Goals

- Initial surface water model developed (Mike-11)
 - Timeline to be done: late Summer
- Phase I GW model converted into Mike-SHE
 - Timeline to be done: late Fall

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2006 Budget

- **Project budget for 2006 is \$155,630**
 - Previously reported ~177K.
 - Had included 21K in savings from 2004 which didn't carryover to the 2006 budget
 - Not sampling new monitoring wells
 - Not purchasing new sampling equipment
- **Expenses (to date) for 2006: \$118,372**
 - 76% of our budget
 - 30K Holocene drilling charge in January
 - “Burn rate” is as expected

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Next Quarter

- Continue gauging
- Island WL survey
- Well Data report
- Island-wide surface water model
- Grant support

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GWPP website

■ Groundwater link

- <http://dnr.metrokc.gov/groundwater>

Vashon-Maury Island (VMI)

Maps of Vashon-Maury Island can also be found at the [VMI Water Resources Evaluation Project Documents](#) web page.



The figure contains three maps of Vashon-Maury Island. The first map, titled '2005 Gauging Sites on VMI', shows the island with various gauging sites marked by orange dots and lines. The second map, titled '2005 Groundwater Monitoring Sites on VMI', shows the island with groundwater monitoring sites marked by blue dots and lines. The third map, titled 'VMI GWMA 1998 Land-use Map', shows the island with different land-use zones represented by various colors (green, yellow, orange, red, purple, blue).

[2005 Gauging Sites on VMI](#) [2005 Groundwater Monitoring Sites on VMI](#) [VMI GWMA 1998 Land-use Map](#)

■ VMI WRE page:

- <http://dnr.metrokc.gov/wlr/WQ/vashon-island/index.htm>

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