



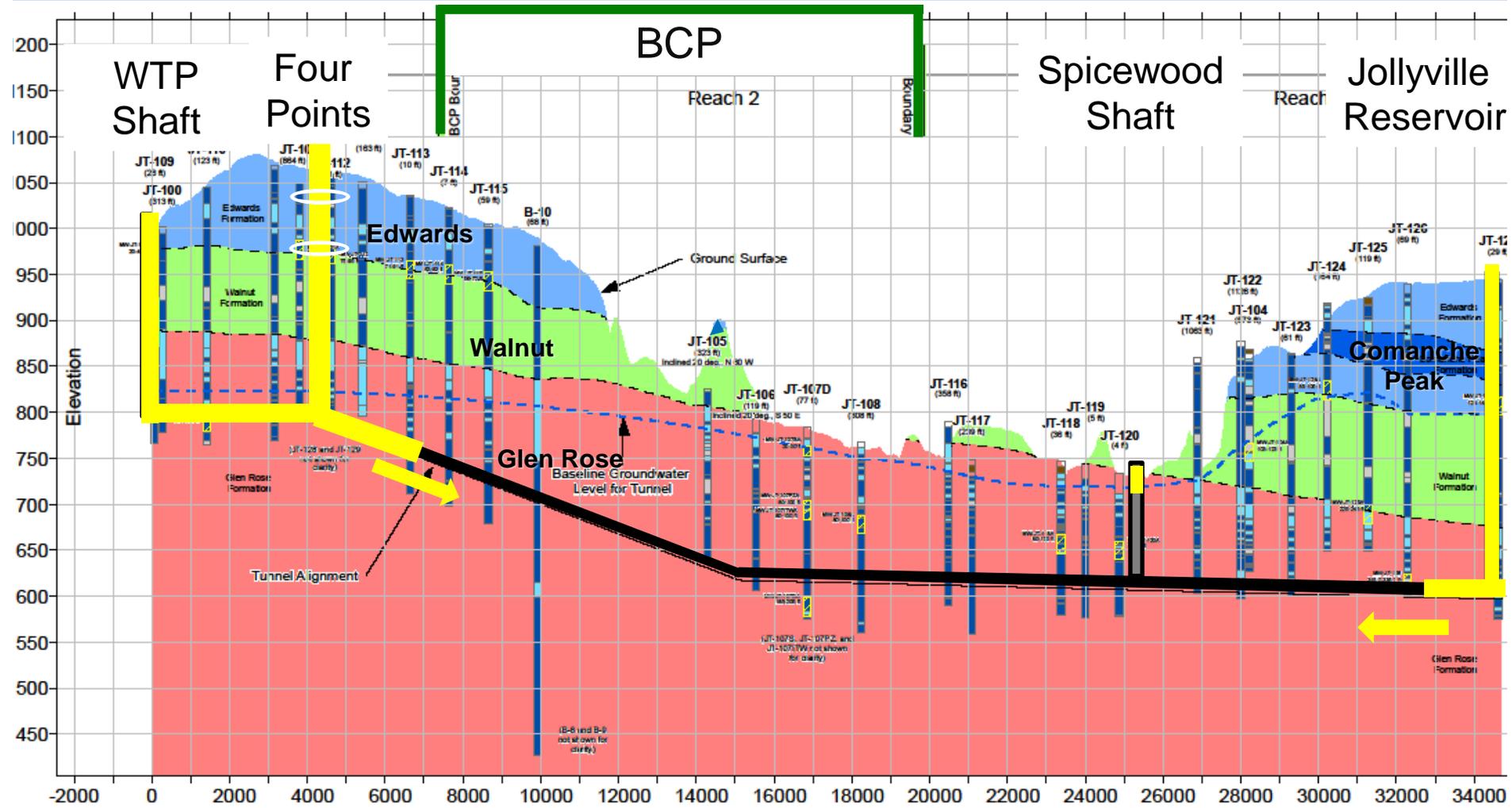
JOLLYVILLE TRANSMISSION MAIN: Environmental Commissioning Monthly Report

Presented to the Austin Environmental Board
October 17, 2012

Thais Perkins, Watershed Protection Department
David Johns, Watershed Protection Department

Jollyville Transmission Main Project

 = progress





Environmental Commissioning Activities - JVTM

- Monthly shaft site (surface) visits concurrent with plant site visits
- Biweekly shaft/tunnel visits to active shafts (4Points, Jollyville) and tunnel reaches (R2, R3)
- Biweekly meetings of the Environmental Commissioning Coordination Group (ECCG) to resolve possible issues
- Environmental Monitoring
 - *Increased monitoring schedule at adjacent sites as mining progresses in Reach 2, Reach 3 and Spicewood Shaft*
 - *Age Dating sampling 90-95% complete (still will take samples in tunnel once it progresses)*
 - *Dye Trace Results*



Environmental Commissioning Cost Summary

Initial INTERA Contract Amount	\$ 1,713,814
Total Amount Billed to Date (work from July 2012)	\$ 1,310,589
Total Remaining	\$ 403,225

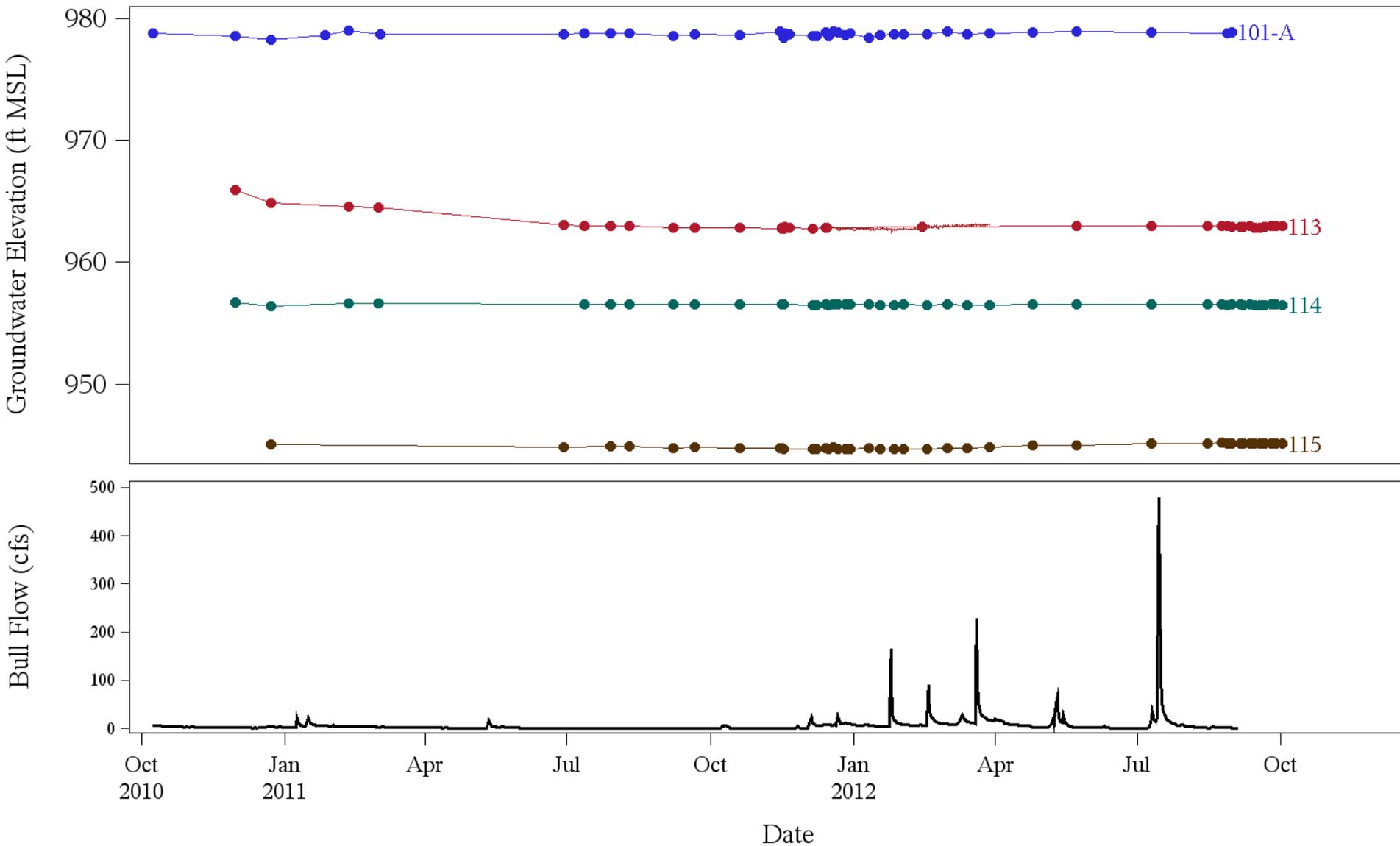


Groundwater Monitoring Well Summary

- West side wells (along tunnel route, Ed/Walnut contact): steady
- Piezometer wells in the BCP along tunnel route: steady
- Spicewood shaft wells reflect rainfall; no shaft influence evident
- East side wells in the Glen Rose continue to decline; shallower Ed/Walnut wells steady.

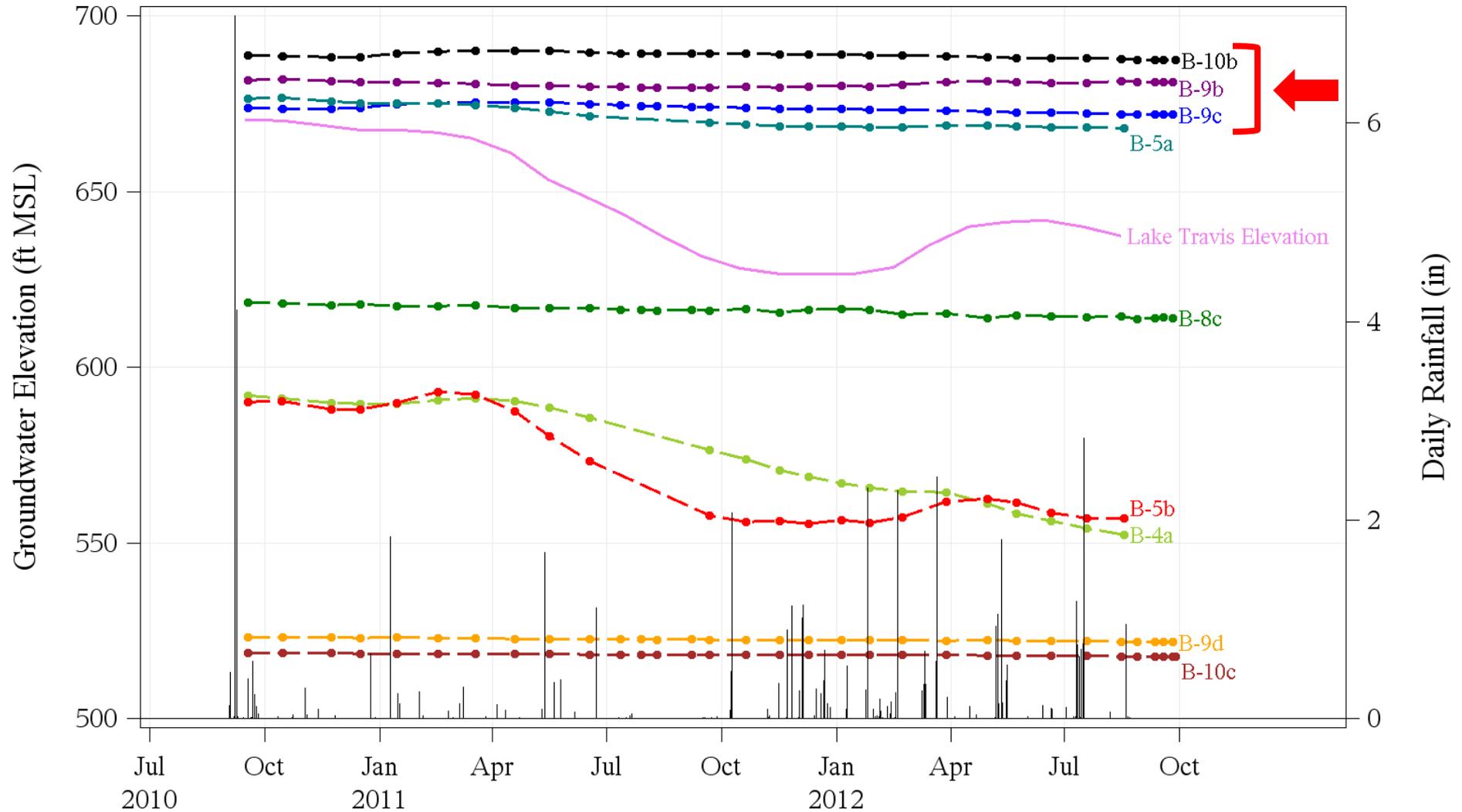
West Edwards Wells

● 101-A ● 113 ● 114 ● 115 ●



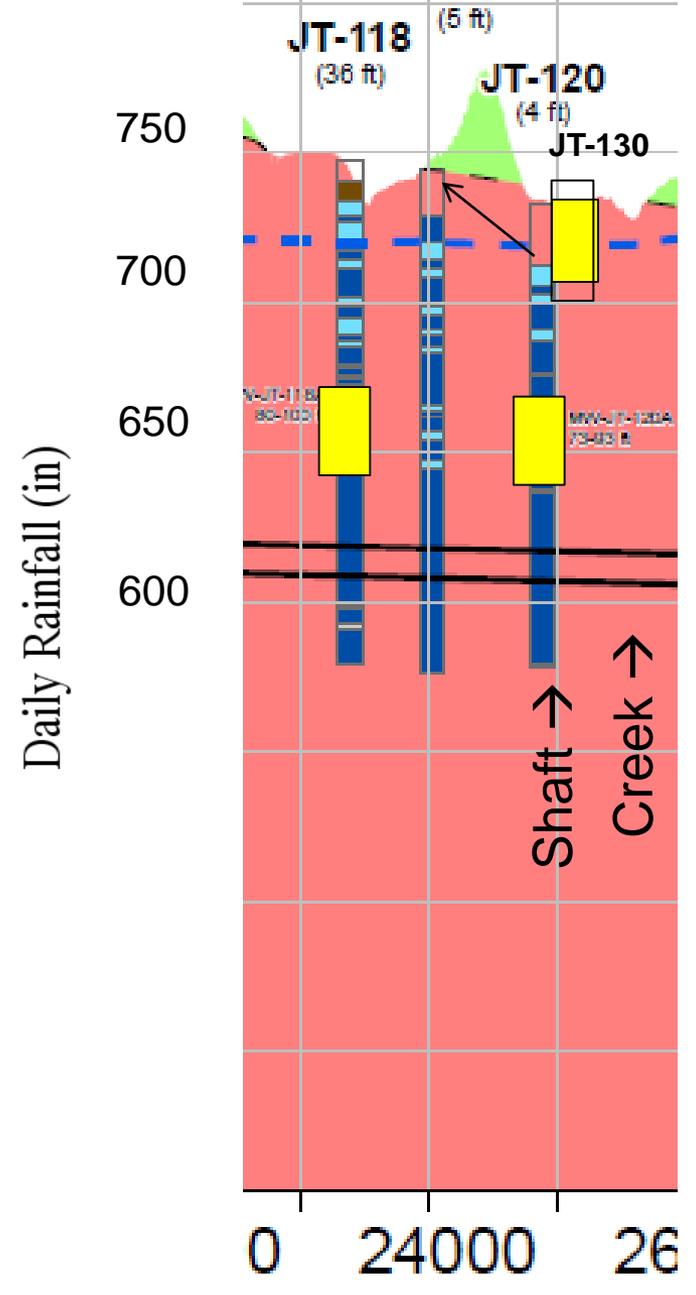
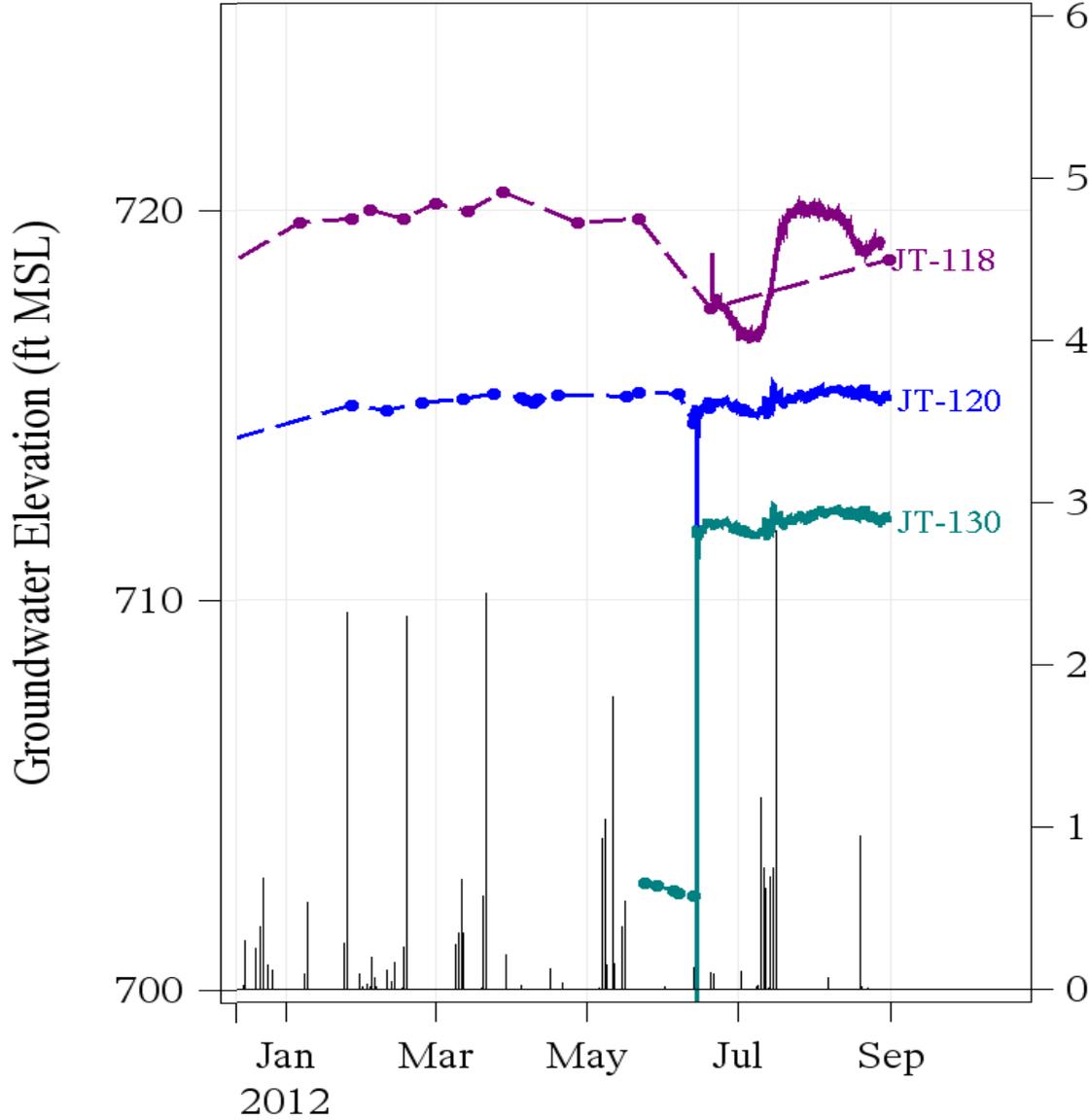
City of Austin DRAFT: QA/QC review pending

Hydrographs for Western Area, Deep

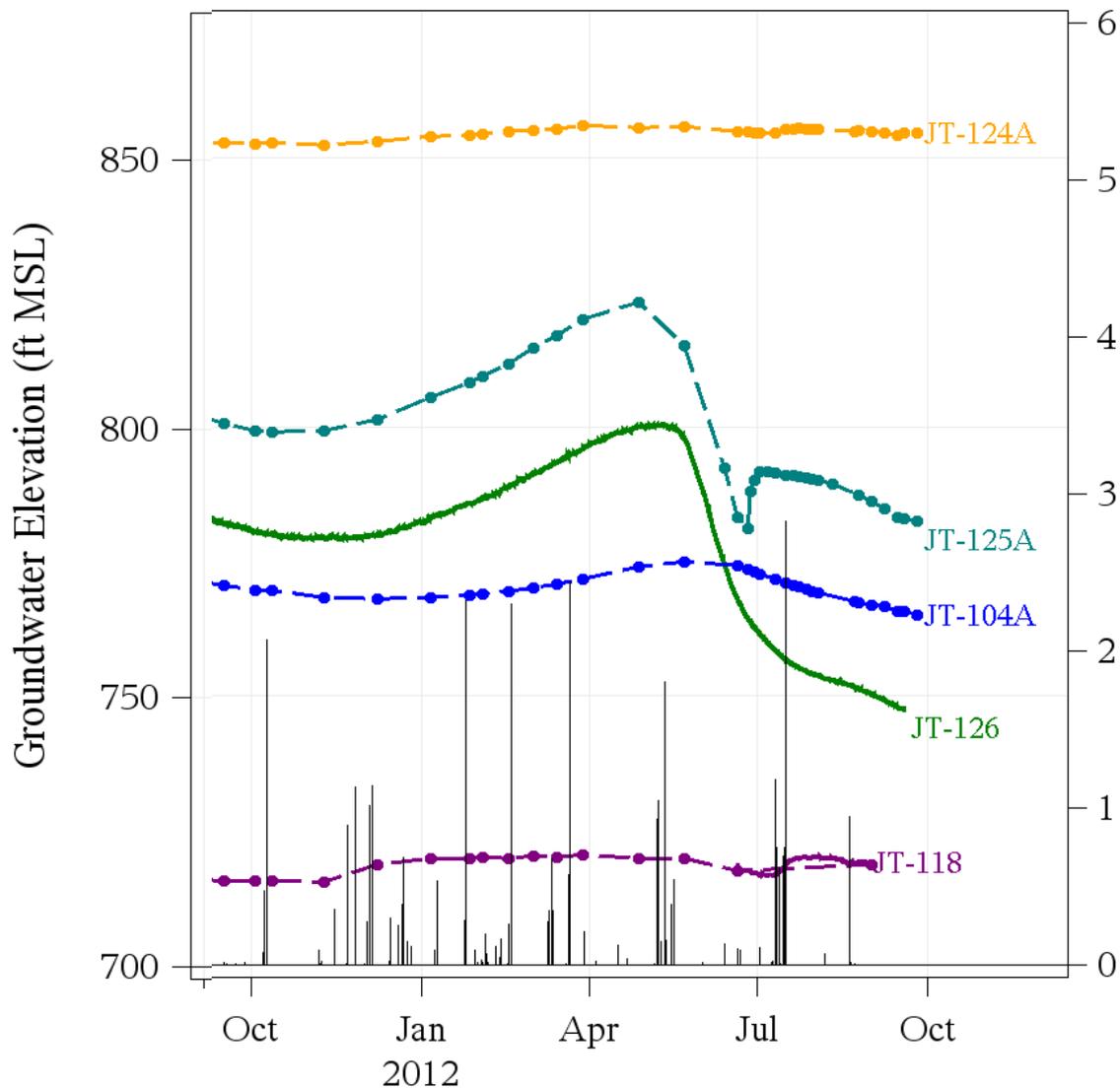


Rainfall
 B-10b
 B-9b
 B-9c
 B-5a
 B-8c
 B-4a
 B-5b
 B-9d
 B-10c

Spicewood Shaft Wells

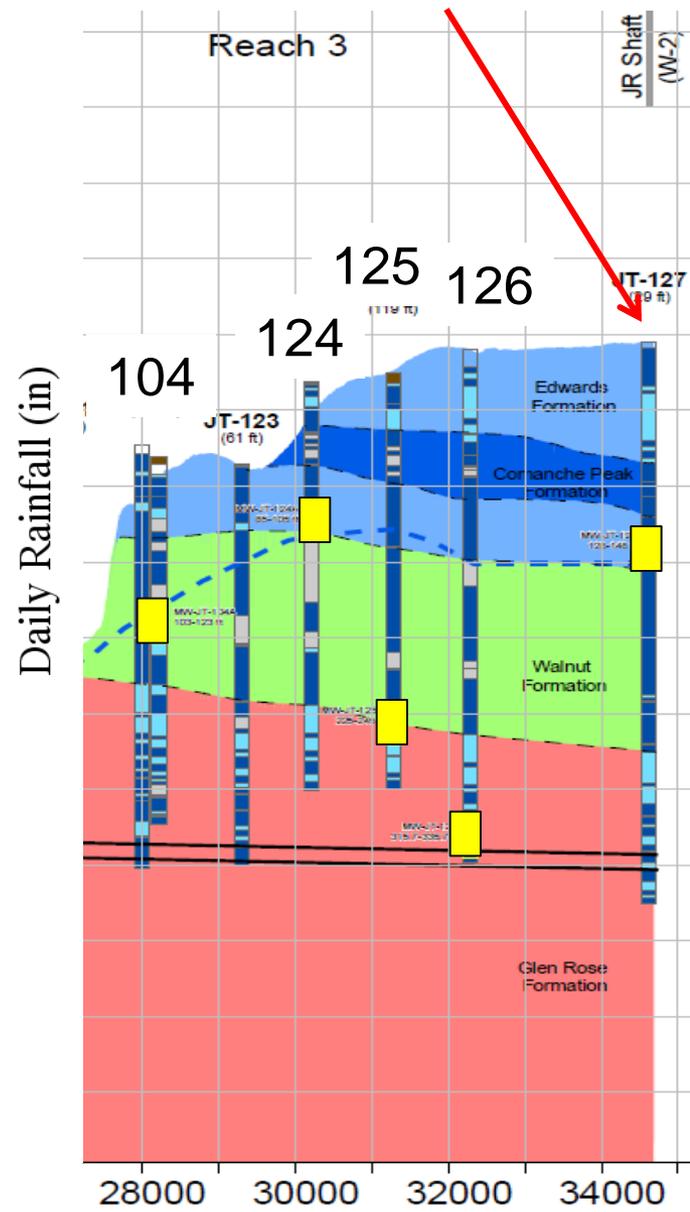


East Side Wells



- JT-126 and JT-125 continue to decline. JT-104 shows similar recent trend.

Jollyville Reservoir Shaft



Environmental Monitoring Update – Surface flow



- All springs and stream reaches flowing
- Water quality parameters within expected ranges
- Nondetects for indicators of mining, vehicular operation, and drilling (TPH, Cu, Cr, Zn)
- Nondetects for di-n-butyl grout compounds in JT-112, Gaas spring

Trib 4 by Spicewood Shaft 7/25/12

Jollyville Plateau Salamander Monitoring



Site	Date of Last Count	Count #	Historical Average (& last four counts)
Lanier	Sept 7, 2012	100	65 (100,56,48,59)
Franklin/Pit	May 18, 2012	100	78 (73,87,39,100)
Tanglewood	May 16, 2012	3	8 (0,0,0,3)
Lower Ribelin	September 2012	94	94 (176,43,42,94)
Upper Ribelin	May 23, 2011	75	64 (123,74,67, 75)
Trib 4 @ Spicewood	August 1, 2012	0	10 (20, 9, 2,0)

-- provided by Nathan Bendik, Salamander Biologist for WPD

JVTM Environmental Monitoring Summary (cont.)

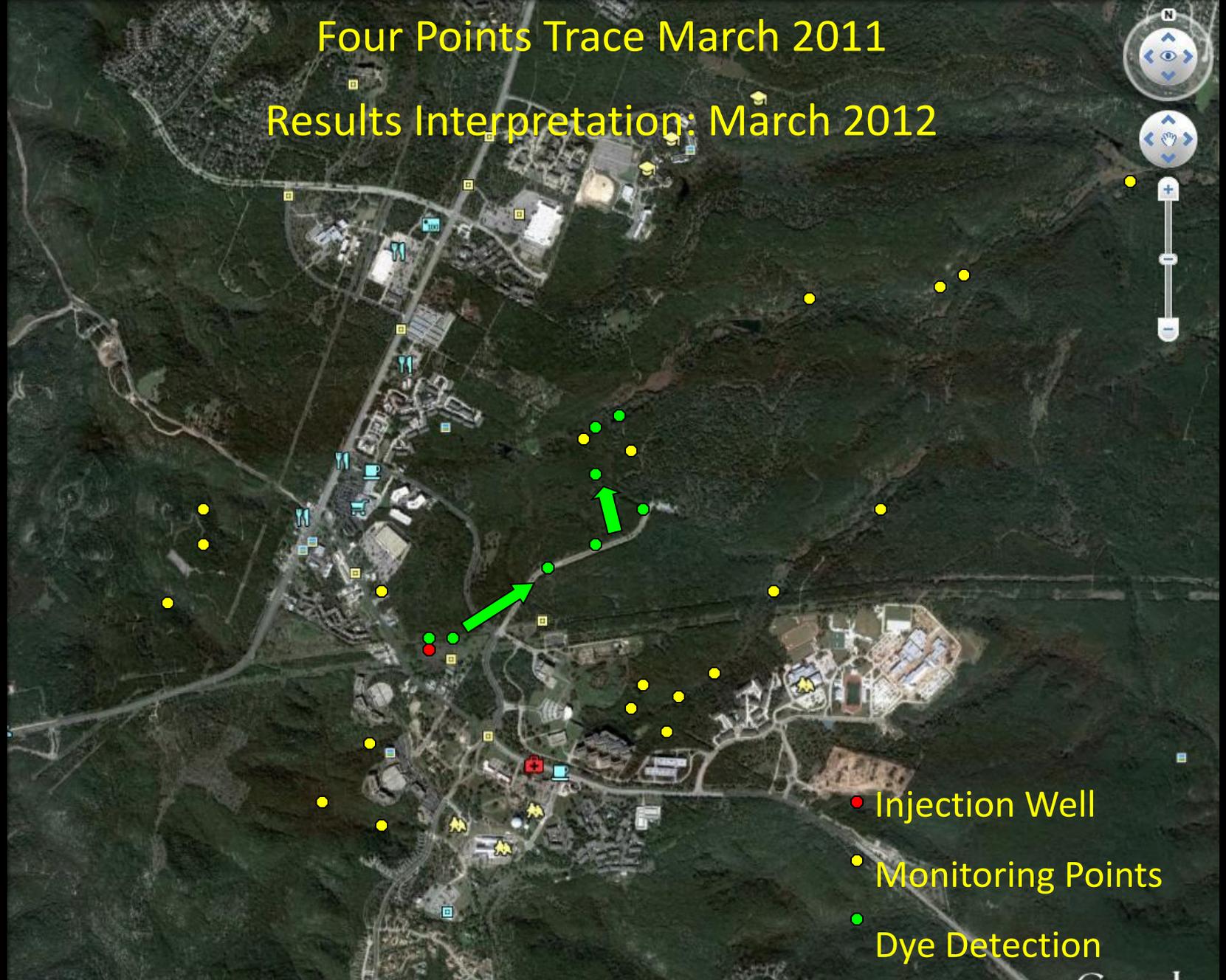
Trigger	Range	Recent Occurrences
TROLL Alarms	Outside of range of historical Variability	None
Tunnel Inflow Triggers	<p>Baseline water inflow triggers: 50 gpm over 10 feet of tunnel length 200 gpm over 500 feet of tunnel length 400 gpm over a single tunnel reach (1, 2, or 3)</p> <p>Sensitive area triggers: 25 gpm over 10 ft of tunnel length 100 gpm over 500 ft of tunnel length</p>	<p>No measurable water inflows</p> <p>No tunneling in sensitive areas</p>
Spring/Streamflow Triggers	Relative to one another; paired comparison analysis	All surface sites responding consistently with rainfall and general trends

Reach 3 tunnel – no measurable inflows



Four Points Trace March 2011

Results Interpretation: March 2012



- Injection Well
- Monitoring Points
- Dye Detection

Preliminary

Imagery Date: Nov 25, 2009

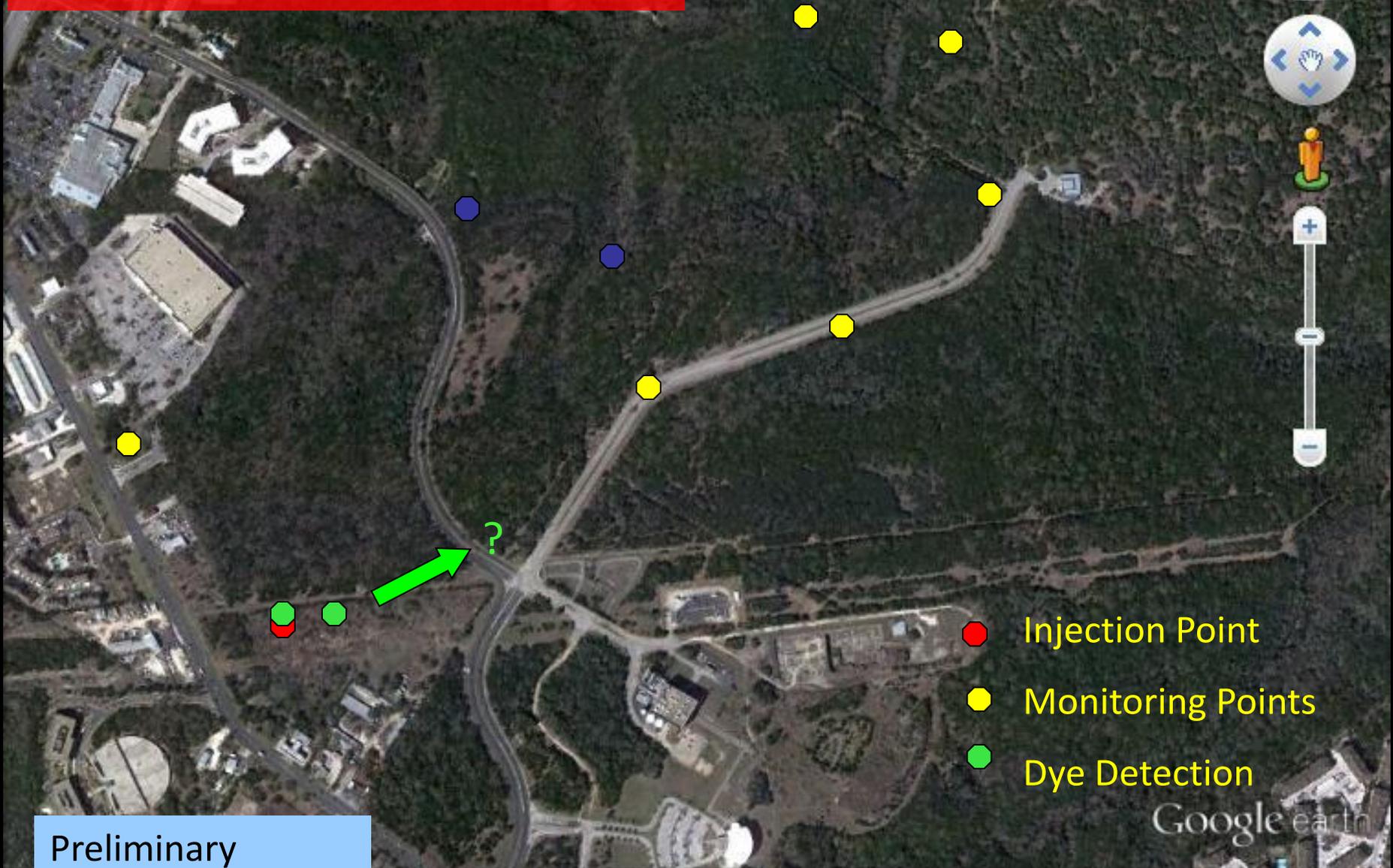
© 2011 Google

30°24'12.27" N 97°50'21.94" W elev 1005 ft

Eye alt 17196 ft

©2010 Google

K-Ring Trace July 2012
Results Interpretation Oct 2012



- Injection Point
- Monitoring Points
- Dye Detection

Preliminary



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