

DRAFT – FOR REVIEW AND IMPROVEMENT ONLY – Versin 2.0

AGENDA

Unit Well 15 CAP Meeting  
Monday, August 15, 2011  
Streets East Facility – 4602 Sycamore Ave  
6:30 pm to 8:30 pm

Please review the proposed agenda and provide any comments, concerns or topics you may have for the meeting.

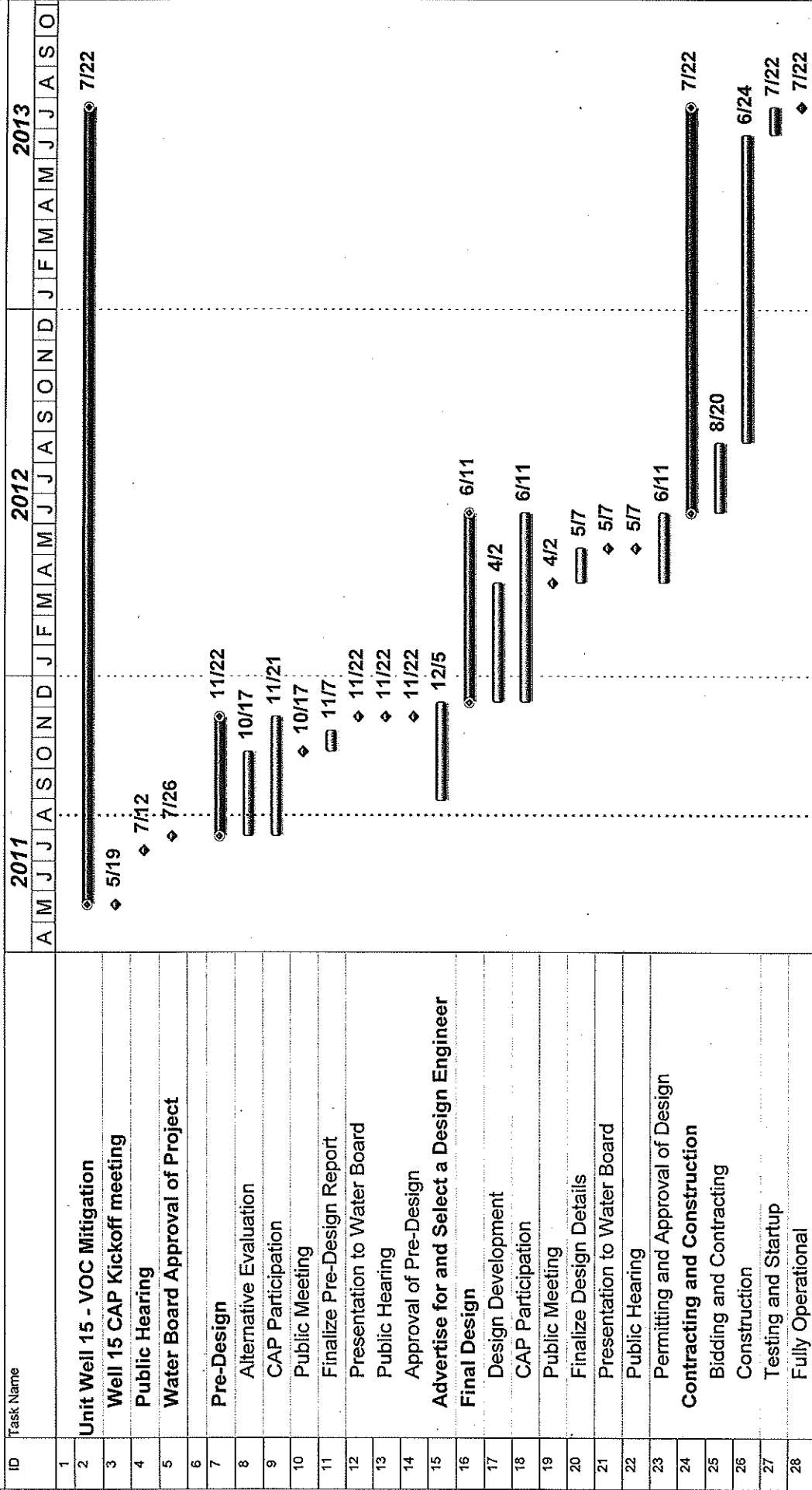
- Welcome and Check In
- Current project status
  - Board Approval of CAP Recommendations
  - Schedule
  - Water Quality concerns: VOC, Radium, Iron, Manganese, Chloride, other contaminants (?)
  - Wellhead Protection Plan and Zoning Requirements
  - Review of Dan Moser memo
- Black and Veatch Scope of Services
  - Alternative Evaluation
    - Costs for GAC treatment
    - Energy costs for all treatment technology
    - Pros and Cons of extending the casing
    - Treating for multiple contaminants
  - Pilot testing
  - Preliminary layout and cost estimating
  - Possible field trip to see a VOC treatment system
- Other goals and objectives
  - Investigating and mitigating the source of the VOC contamination
    - Obstacles
    - Benefits
    - Costs
  - Advertising and hiring a design consultant
  - What would you like to see addressed in this project
- Check Out
  - What worked well in this meeting?
  - What did not work well?
  - What can we do to improve our meetings in the future?
- Adjourn

Ken-

Dan - Ronby Lynn Jim-

Joe G.  
- Sue -  
Carl  
Mark W.

# Well 15 - VOC Mitigation Project



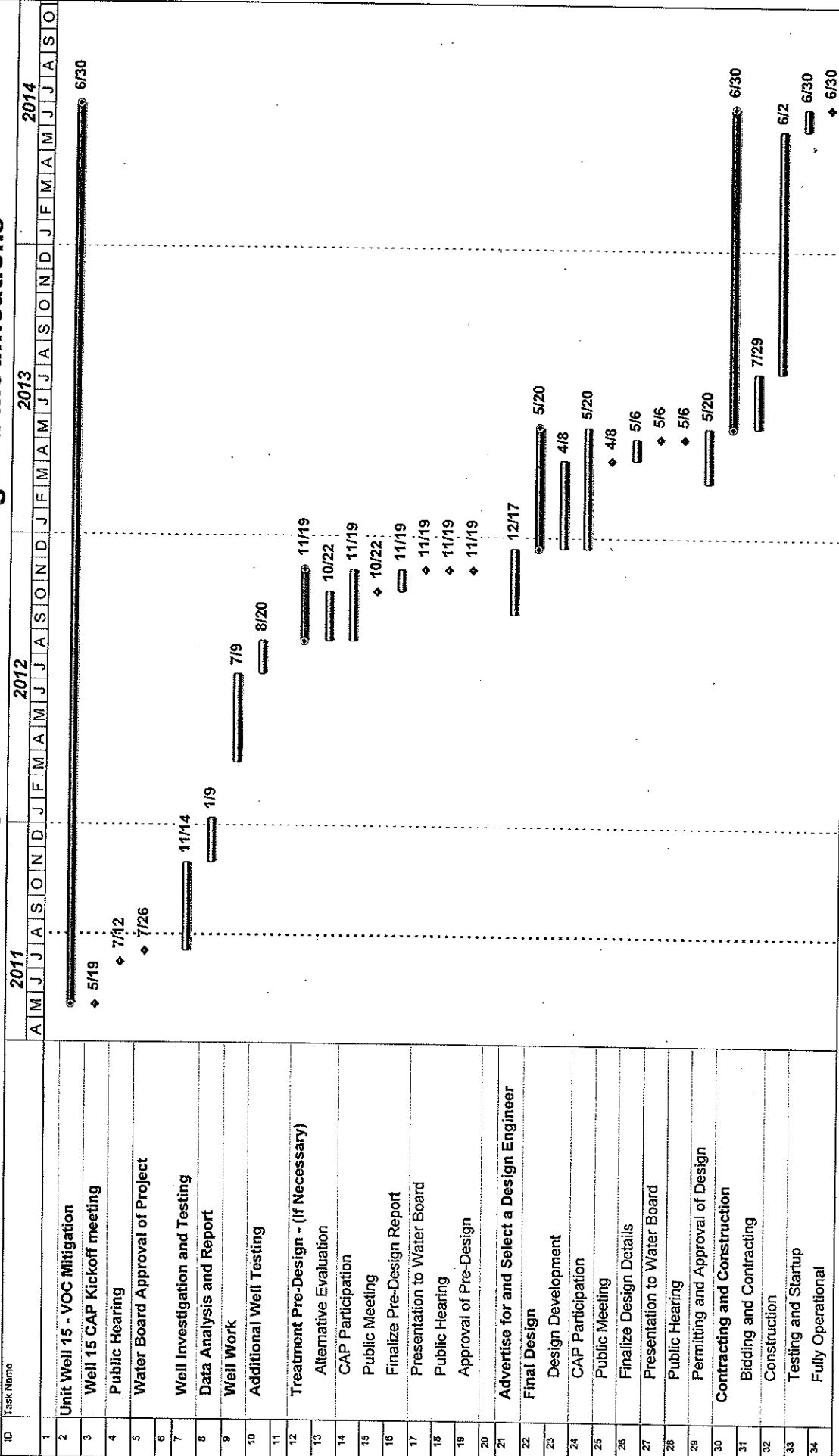
Project: Preliminary Schedule Rev 1  
 Date: Mon 8/15/11

Legend:

- Task: [Bar]
- Progress: [Bar with fill]
- Milestone: [Diamond]
- Summary: [Bar with diamond]
- Rolled Up Task: [Bar with diamond]
- Rolled Up Milestone: [Diamond]
- Roll Up Progress: [Bar with diamond]
- Split: [Dotted bar]
- External Tasks: [Bar with diamond]
- Project Summary: [Bar with diamond]
- Group By Summary: [Bar with diamond]
- Deadline: [Bar with diamond]

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# Well 15 - VOC Mitigation Project - with Well Testing and Modifications



Project: Preliminary Schedule Rev 2  
Date: Mon 8/15/11

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Task Progress

Milestone Summary

Roll Up Milestone

Roll Up Task

Roll Up Progress

External Tasks

Group By Summary

**Draft - Summary of Options for VOC Reduction at Well 15  
August 15, 2011**

Option	Time to Complete	Cost	Advantages	Disadvantages
Implement Air Stripper to Remove VOCs from Groundwater per VOC Treatment Memo for Well 15	12 months	\$2 million (Capital) \$20,000 per year (O&M)	Is an effective and proven technology to remove low level VOCs in the groundwater. Provides high certainty of nearly non-detectable levels of PCE after implementation Could be implemented in relatively short time frame	Does not address the source of contamination If the VOC concentrations start to decrease, investment would not have been needed. MWU is committing to the long term operation costs of a treatment facility. No incremental costs
Investigate and Remediate the Source of PCE Contamination. Would likely be done through a series of soil and groundwater investigations and then implementation of a groundwater cleanup.	24 months to change water quality at the well head. Would be much longer for total cleanup.	\$250,000 to \$1 million (note this is very hard to estimate without further site information) Cost could be incurred incrementally	Addresses the source of the problem Potential to find an entity other the MWU to pay the costs	Long time to investigate and remediate the source May never find source May never find responsible party with ability to pay for cleanup
Extend the existing well casing to deeper in the aquifer, past the more shallow contamination. Would do more sampling of the well and depth of contamination before this was done. Would not implement this until more sampling was complete.	6 to 12 months	\$250,000 to \$500,000 Cost could be incurred incrementally	Would potentially isolate the source of contamination from the well Would be cheaper than building a treatment facility No O&M cost.	Would not remove the source of contamination There is a small chance that even with an extended well casing, PCE would still enter the well An extended well casing could increase the concentration of radium or iron/manganese in the well. Could be predicted after sampling. Reduced flow from well.

Note – these are not mutually exclusive options

# Well 15 CAP - Streets East.

~~8~~ August 15, 2011 - 6:30

Name

email

Phone

Al LARSON	al Larson@madisonwater.org	266-4653
Marc Williamson	mwilliamson 4602 @sbcglobal.net	241-0760
Karl Patzer	Karl@patzers.net	244-7325
Jim Wickert	jwick16060@tds.net	241-2438
Lynn Williamson	lw.waded@gmail.com	231-1580
Randy Deering	rdeering77@gmatt.com	576-7865
Dan Moser	dmoser1@yahoo.com	220.6600
Ken Quinn	kquinn@trcsolutions.com	662-5216
Pat Boersma	Boersma PM e BV.com	
JOE CHAUSSEUS	JCHAUSSEUS@CHASSER.NET	244-5066
Oye Pastor	Slpastor@sbcglobal.net	240-2203
Mike Shivers	jsms098@att.net	249-8091
Joe Grande		