# **ROCKY MOUNTAIN ARSENAL GROUNDWATER CLEANUP UPDATE**



Prepared for: Commerce City Council October 15, 2018

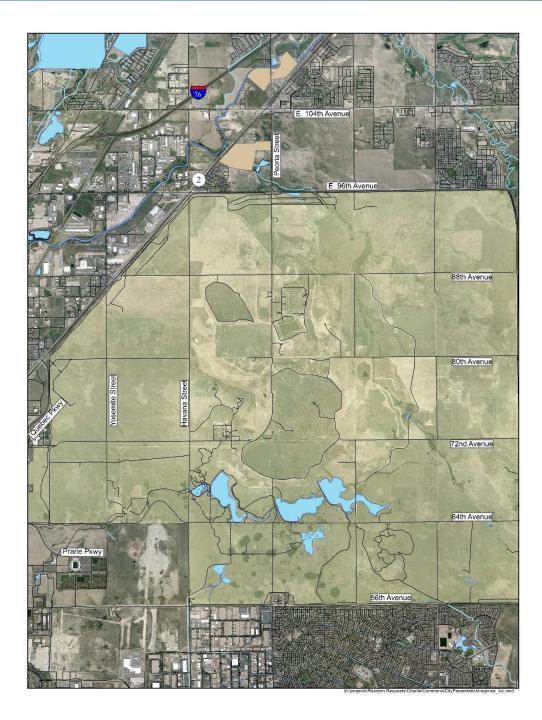


# AGENDA

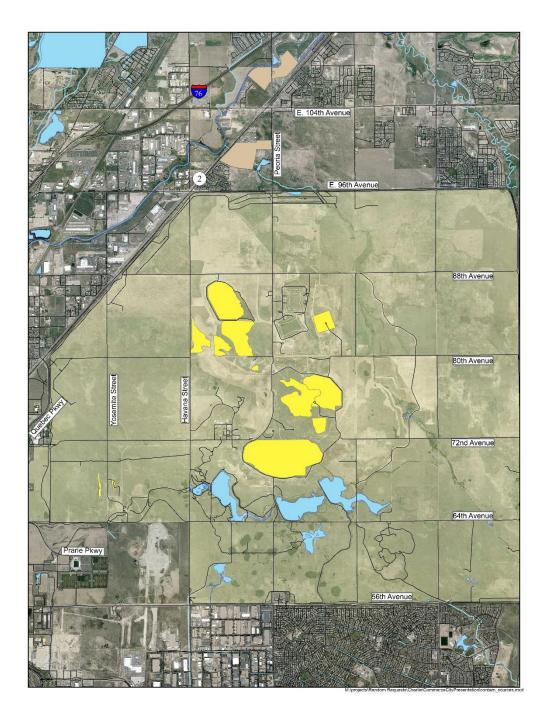
- Site Overview/ Contamination Sources
- Groundwater Plumes
- Groundwater Treatment and its Impact on Plumes
- Considerations Related to Oil and Gas Development
- Questions



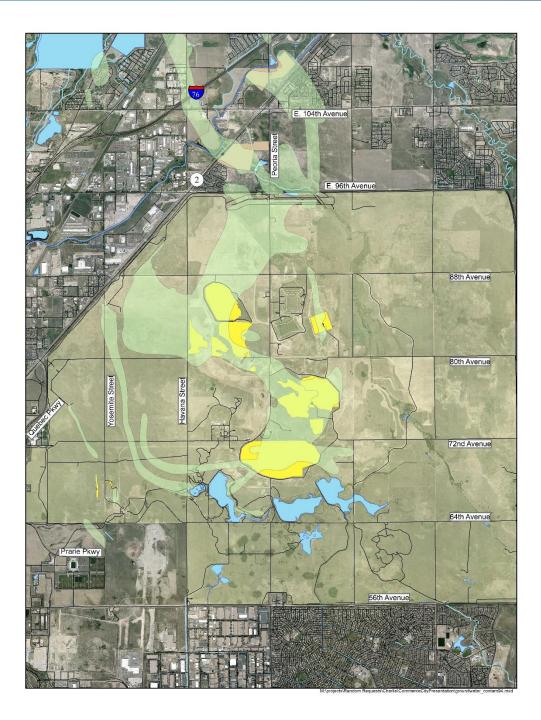
#### Rocky Mountain Arsenal National Wildlife Refuge and Vicinity



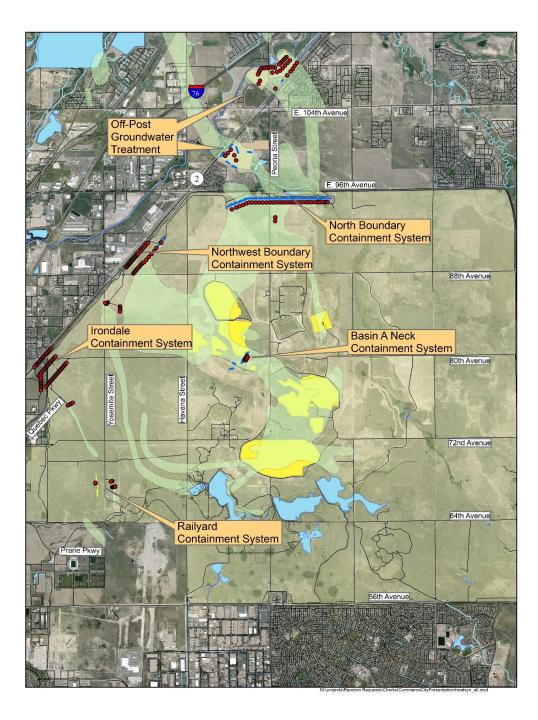
#### Historical Sources of Groundwater Contamination



#### Groundwater Plumes (1994)



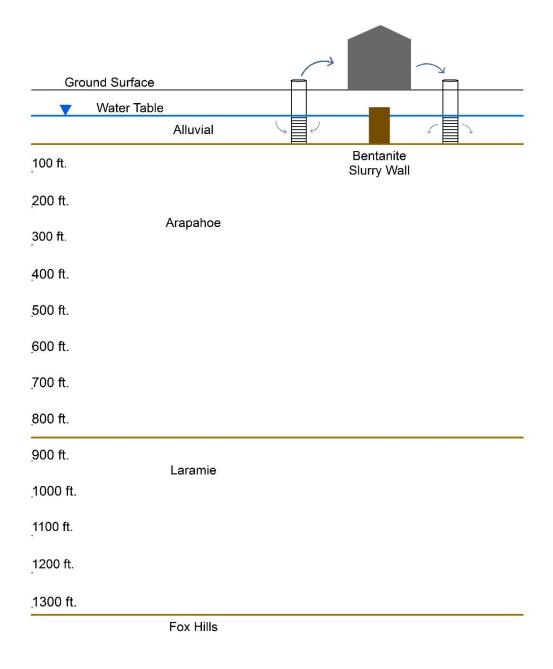
#### Groundwater Treatment Systems (1994)

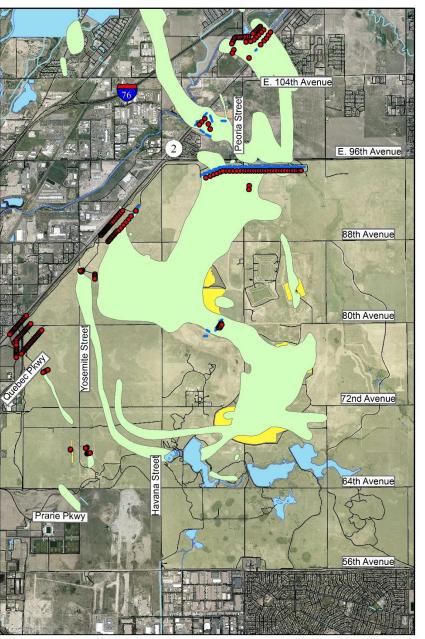


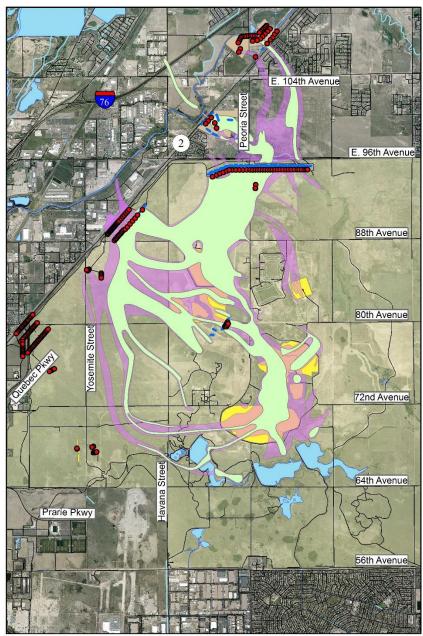
## RMA Groundwater Treatment Facilities



### Groundwater Treatment System Cross Section







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#### Deep Well Cross Section

Rocky Mo De	ountai ep W	n Arsenal ell
		Ground Surface
100 feet		Alluvial
100 1001		Arapahoe
1000 feet		Laramie
		Fox Hills
2000 feet		
3000 feet		Pierre
4000 feet		
5000 feet		
6000 feet		
7000 feet		
8000 feet		Niobrara
9000 feet		•
10000 feet		Ę
11000 feet		*Approximate Location of Deep Injection Well
12000 feet		Precambrian

# **SUMMARY**

- Groundwater treatment systems are proving to be effective in the cleanup of RMA groundwater contamination.
- Army is committed to continuing to treat groundwater to meet drinking water standards.
- Oil and gas development can occur in a manner that avoids disruption to RMA's groundwater treatment systems and plumes.



