



Technical Customer Advisory Committee

AGENDA

Members

Melissa Armijo	Erwin Melis
Andrew Bernard	Amy Miller
Janie Chermak	Ron Schwarzwalder
Robert Fowlie	Scott Verhines
Dave Hill	

Thursday, August 8, 2019	4:00 PM	ABCGC – 7th Floor Conference Room 7096
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1. Call to Order	4:00-4:05
2. Approval of Agenda	4:00-4:05
3. Approval of June 6, 2019 Action Summary	4:00-4:05
4. Presentation on Project Summary: Kirtland Air Force Base, Bulk Fuels Facility	4:05-4:45
5. Presentation on Water Authority Environmental Monitoring: Rio Grande Silvery Minnow 2019	4:45-5:25
6. Public Comment	5:25-5:30
7. Adjournment	5:30

NOTICE TO PERSONS WITH DISABILITIES: If you have a disability and require special assistance to participate in this meeting, please contact the Water Utility Authority Office, Suite 5012, Albuquerque/Bernalillo County Government Center, phone 289-3100, as soon as possible prior to the meeting date.



Technical Customer Advisory Committee

ACTION SUMMARY

June 6, 2019

Members Present:

Melissa Armijo
Andrew Bernard
Mike Hightower
Dave Hill
Ege Richardson
Ron Schwarzwalder
Scott Verhines

Members Excused:

Janie Chermak
Amy Miller

Water Authority Staff Present:

Mark Holstad, Chief Engineer, Collection System Manager
Elizabeth Anderson, Water Quality Program Manager
Frank Roth, Senior Policy Manager
Andres Santiago, Risk Program Manager

Item 1 – Call to Order - Note presence of quorum

The meeting was called to order at 4:01 pm by Vice-Chair Andrew Bernard.

Item 2 – Approval of Agenda

Dave Hill made a motion to approve the agenda. Ege Richardson seconded the motion. The motion passed on a 7-0 vote.

For: 7 Armijo, Bernard, Hightower, Hill, Richardson, Schwarzwalder, Verhines
Against: 0
Excused: 2 Chermak, Miller

Item 3 – Approval of May 2, 2019 Action Summary

Dave Hill made a motion to approve the action summary. Ron Schwarzwalder seconded the motion. The motion passed on a 7-0 vote.

For: 7 Armijo, Bernard, Hightower, Hill, Richardson, Schwarzwalder, Verhines
Against: 0
Excused: 2 Chermak, Miller

Item 4 – Presentation on the Capacity Management Operation Maintenance Plan

Mark Holstad provided an overview of the Capacity Management Operation Maintenance (CMOM) program. He reviewed the components of the CMOM Plan and discussed the policies, activities and challenges from the most recent annual report. He also showed the beneficial impacts of the CMOM program on sanitary sewer overflows with almost a fifty percent decrease in the last five years.

Item 5 – Public Comment

None.

Item 6 – Adjournment

The meeting concluded at 5:17 pm.

Project Summary: Kirtland Air Force Base, Bulk Fuels Facility

Diane Agnew
Environmental Manager
Water Authority
8 August 2019



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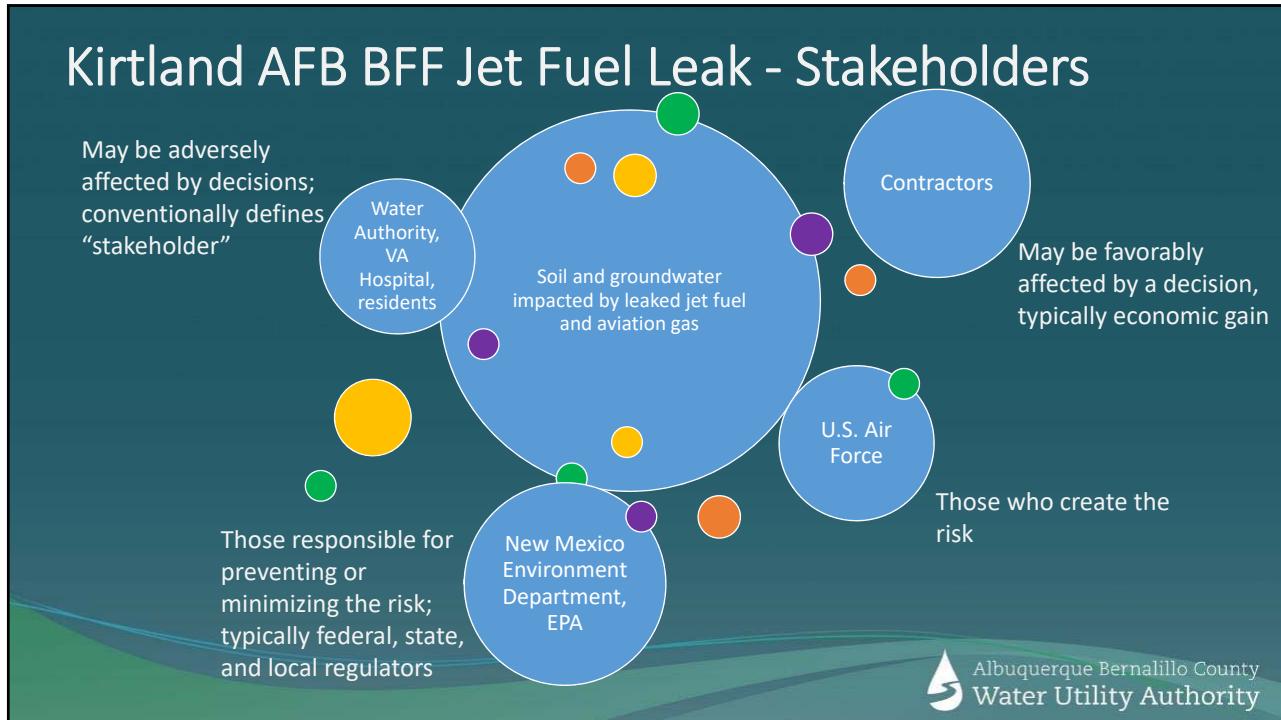
A Brief History

- Kirtland Air Force Base (KAFB) Bulk Fuels Facility (BFF) went into operation in 1953
- Stored and distributed aviation gasoline (AvGas), JP 4, and JP 8
- BFF workers discovered fuel on the ground surface in 1999
- Fuel release reported to New Mexico Environment Department (NMED)
- KAFB replaced the entire fueling infrastructure in 2010

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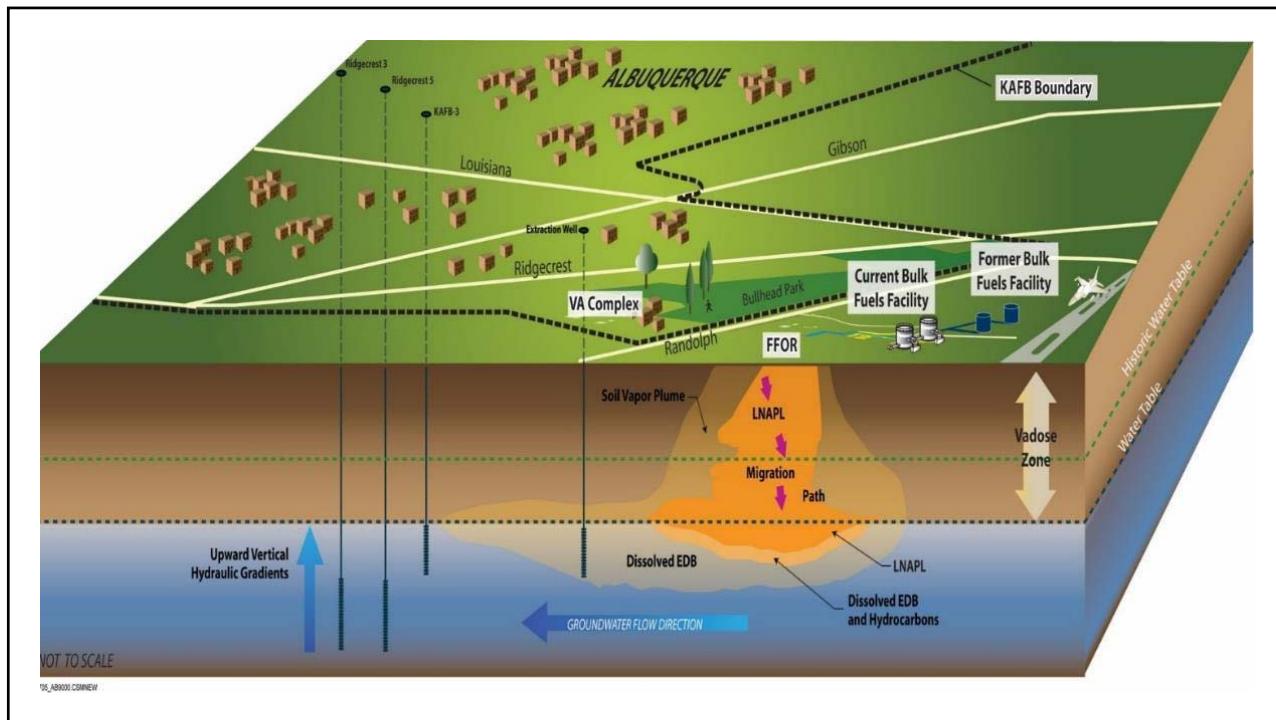
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A Complex Problem

- Fuel released from three holes in fuel pipe
- Exact timing of release unknown
- Decreasing groundwater levels until 2009 when aquifer began to rebound
- Heterogeneous geology
- Impacted soil and groundwater on and off KAFB

A diagram illustrating a geological cross-section. On the left, a vertical orange arrow points upwards, with the text "Vadose Zone ~450-500 ft thick" written next to it. On the right, a blue triangle points downwards, labeled "Water Table". The diagram shows several layers of soil and rock. Green arrows indicate the flow of groundwater through the vadose zone towards the water table. A red circle highlights a specific area in the upper layer.

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Contaminants of Concern

Contaminant	NM WQCC Standard ¹	EPA MCL ²
Ethylene dibromide (EDB)	0.05 µg/L	0.05 µg/L
Benzene	5 µg/L	5 µg/L
Toluene	1,000 µg/L	1,000 µg/L
Ethylbenzene	700 µg/L	700 µg/L
Xylenes, Total	620 µg/L	10,000 µg/L
Naphthalene	30 µg/L	NS
Any other contaminant detected above NM WQCC standard or MCL		

¹ NM WQCC numeric standards per the NMAC title 20.6.2.3103, Standards for Ground Water of 10,000 mg/L Total Dissolved Solids or Less (NMAC 2004)

² EPA National Primary Drinking Water Regulations, MCLs, and Secondary MCLs, Title 40CFR Part 141

EPA = Environmental Protection Agency

MCL = Maximum contaminant level

NM = New Mexico

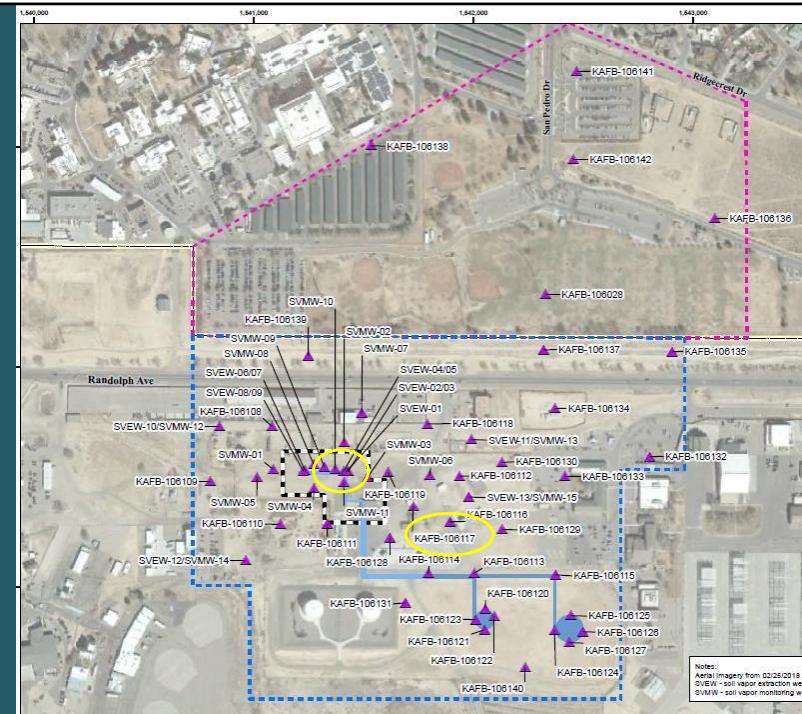
NS = Not specified

µg/L = micrograms per liter

WQCC = Water Quality Control Commission

BFF Snapshot: Vadose Zone

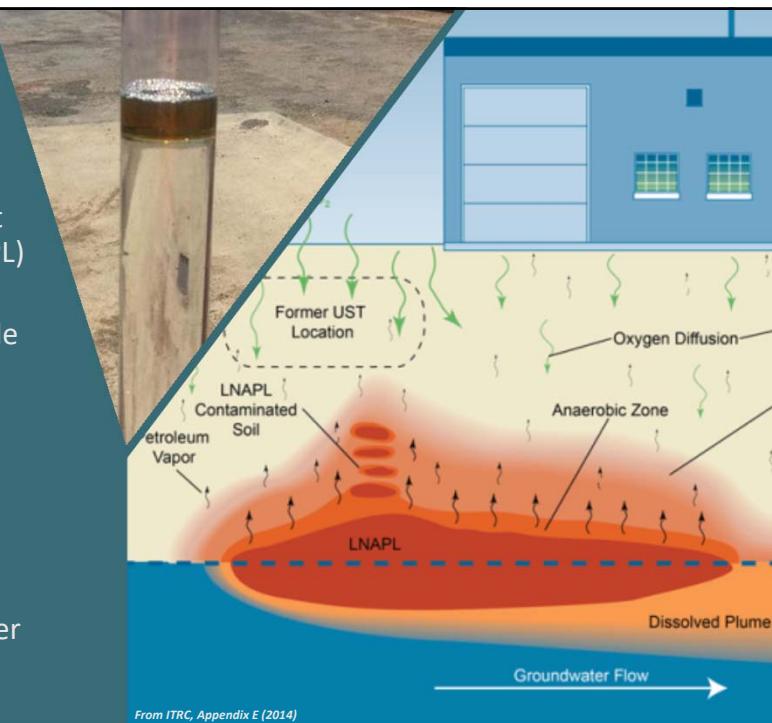
- Quarterly soil vapor monitoring of select wells
- 2014-2015 rebound testing found two “hot spots”
 - Near former fuel loading rack at 150 to 250 feet bgs
 - Northwest of former tanks at 350 to 450 feet bgs
- Continuous soil vapor detections from 450 feet bgs to 25 feet bgs
- Soil vapor detections on-base and off-base



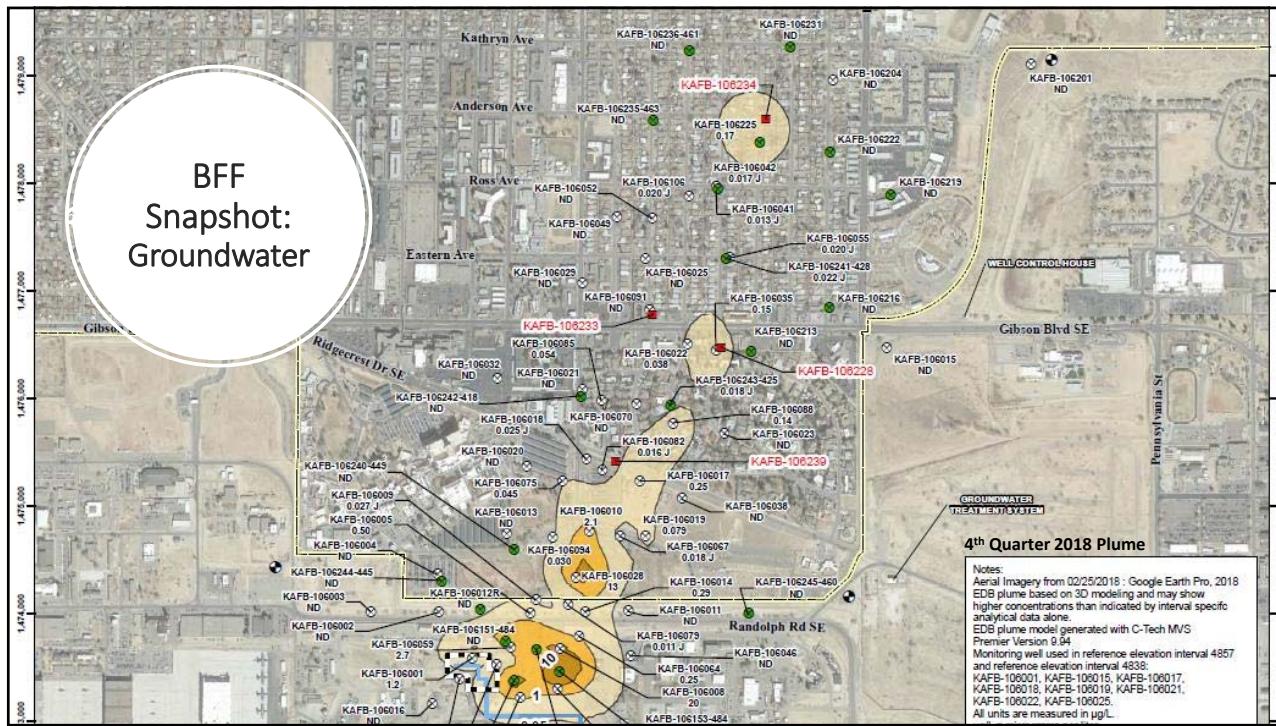
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BFF Snapshot: LNAPL

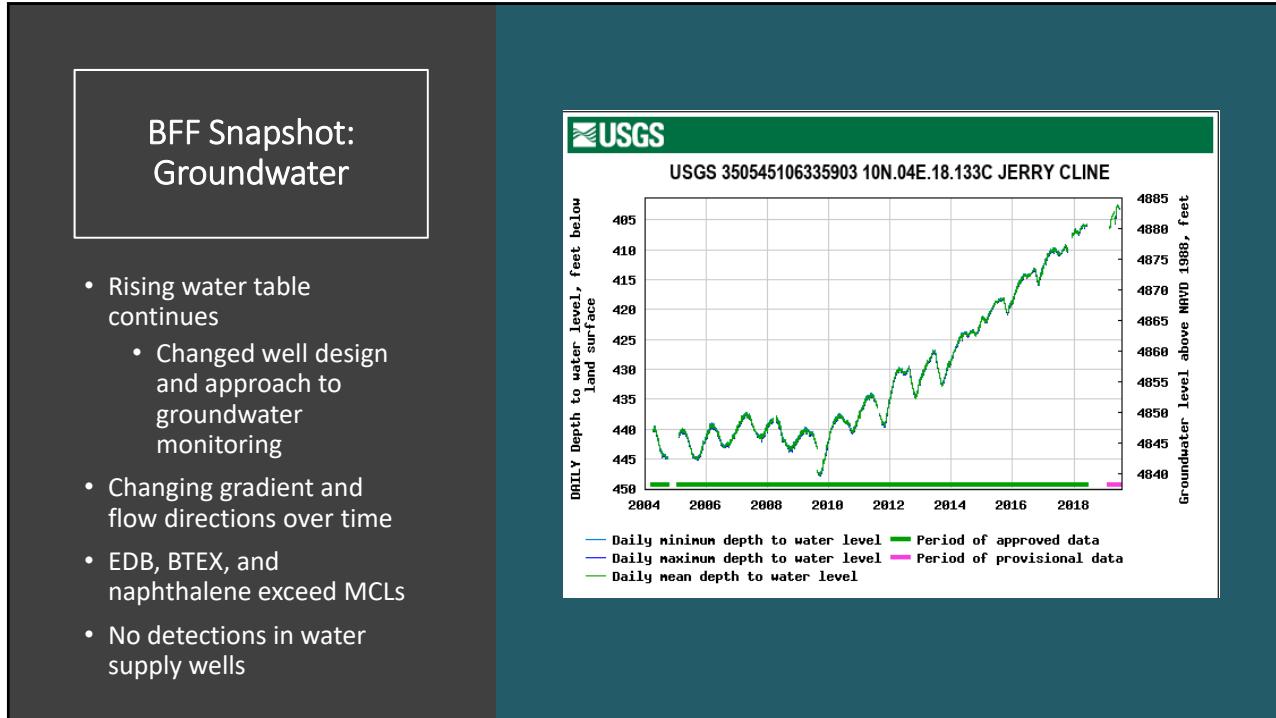
- Quarterly measurements of light non-aqueous phase liquid (LNAPL) on groundwater
- Q1 2019: 5 wells with measurable LNAPL
- Due to rising water table, some LNAPL is submerged
- Mix of AvGas, JP-4, and JP-8
- Unknown volume, unknown extent
- Persistent source for groundwater and soil vapor contamination



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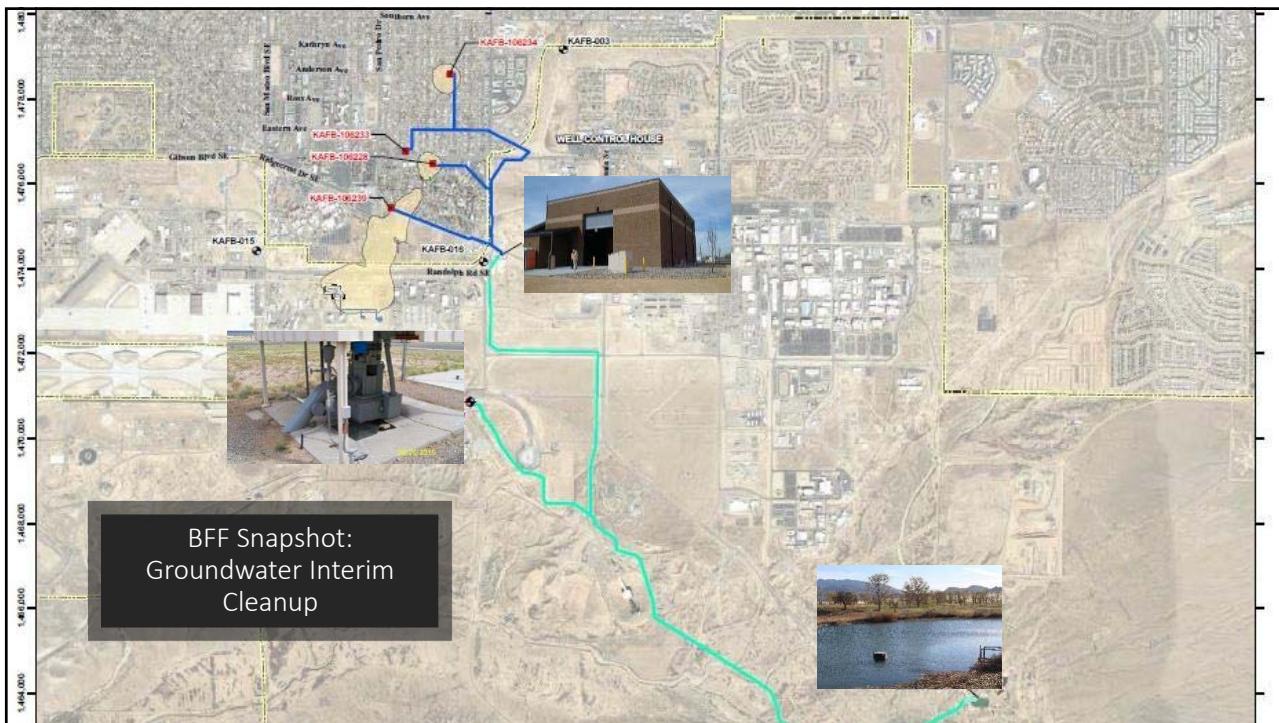


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BFF Snapshot: Vadose Zone Interim Cleanup

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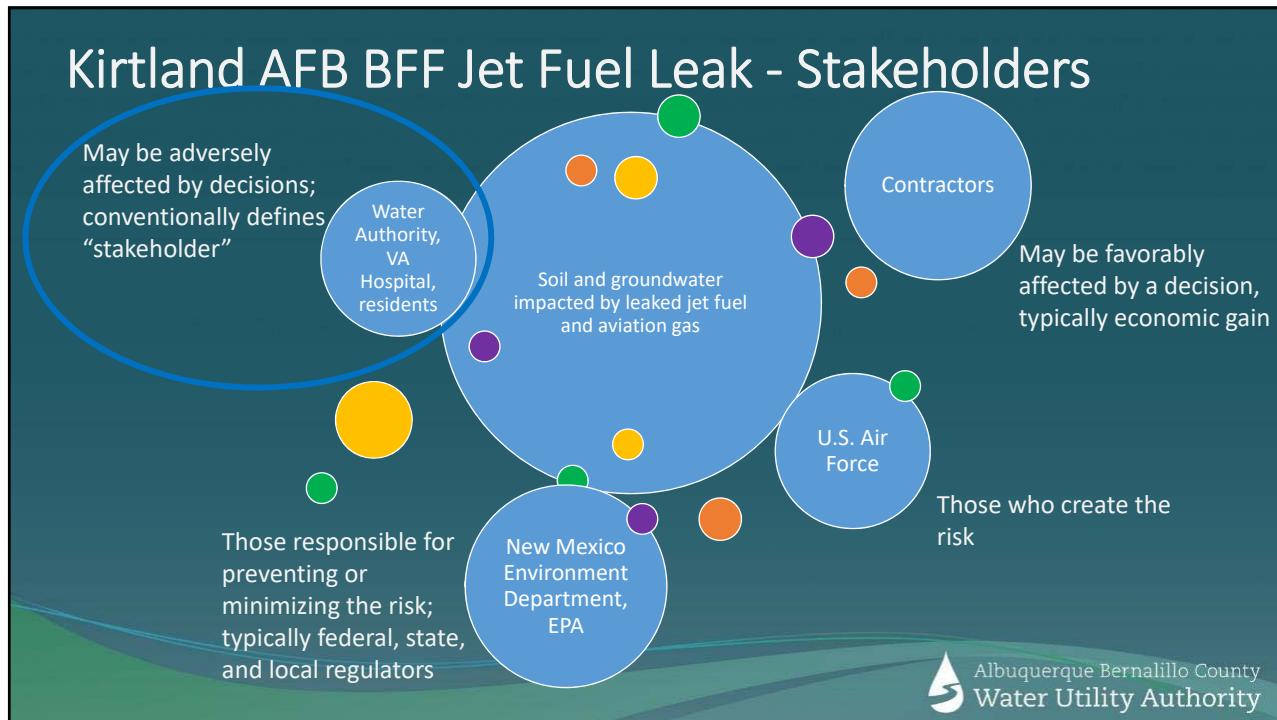


BFF Snapshot: Groundwater Interim Cleanup

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What is the Water Authority's Role?

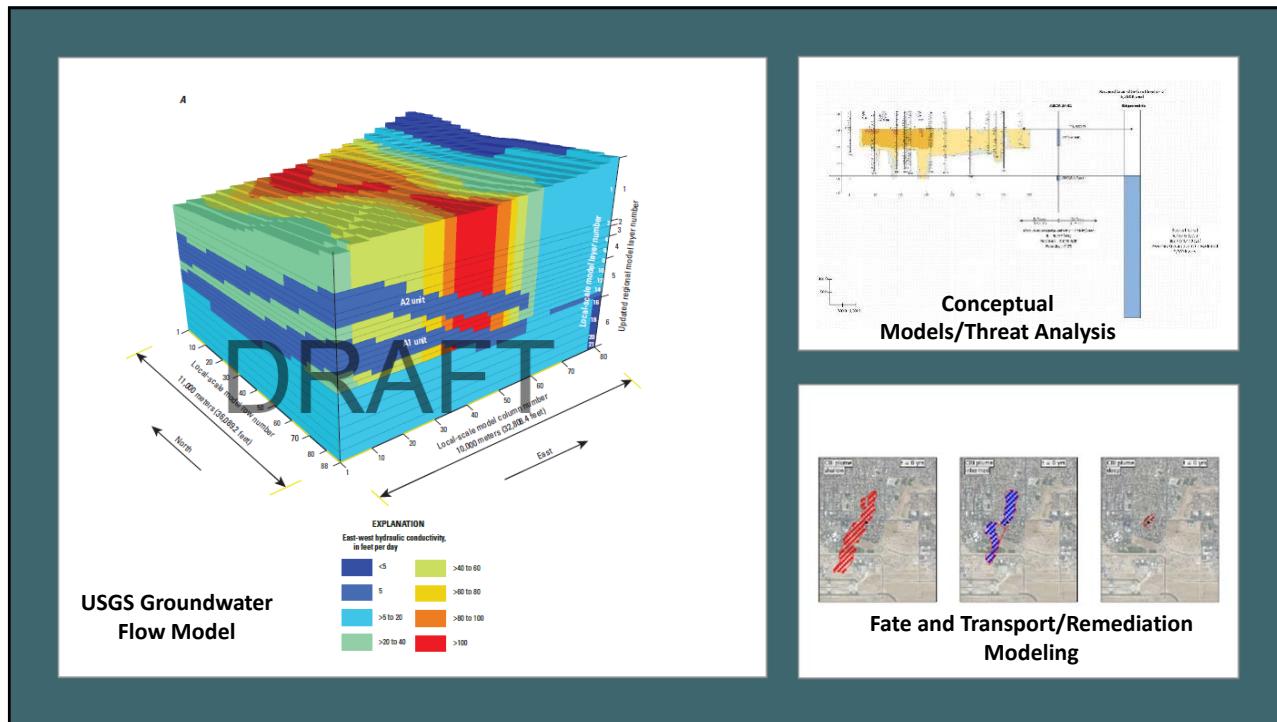
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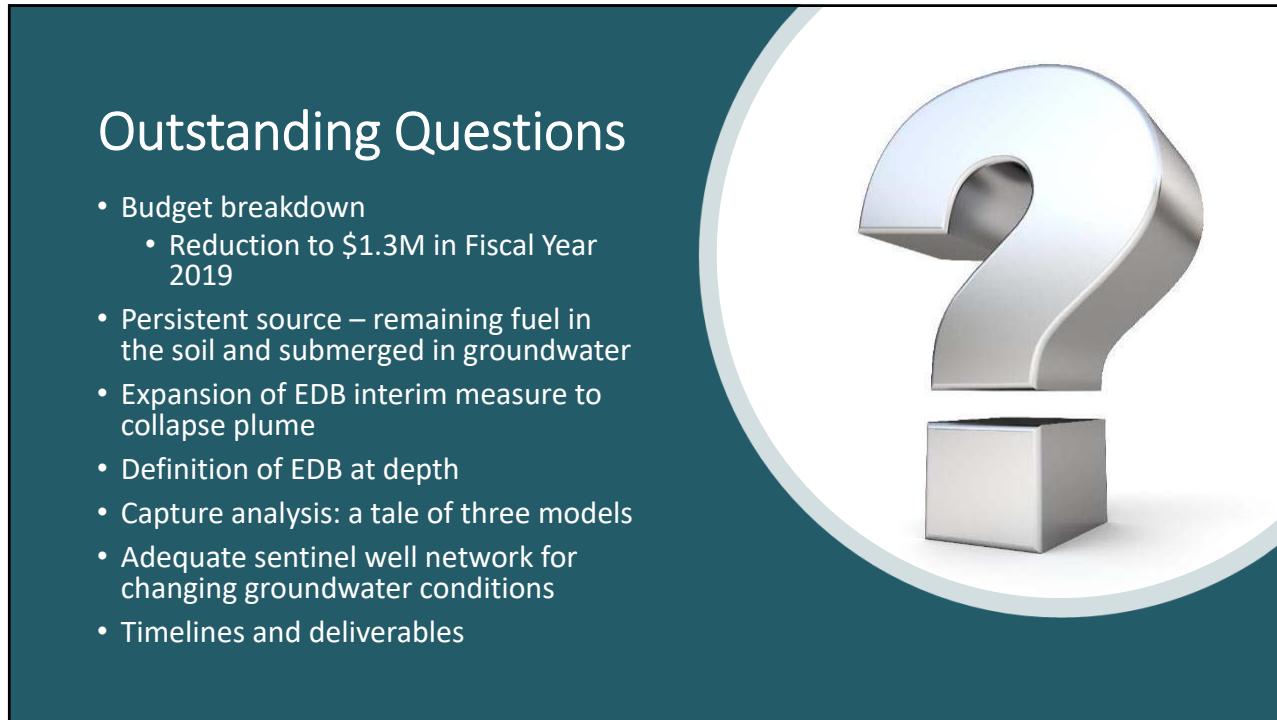
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What is next?

- Continued discussions of source area cleanup
- Air Force has submitted a Phase I RFI Report
- Series of enforcement deadlines set by the NMED
- Vadose zone coring results – November 2019
- Shallow soil vapor sampling – September/October 2019



Albuquerque Bernalillo County
Water Utility Authority

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Questions?

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San Juan-Chama Drinking Water Project

- 2004 Biological Opinion for construction and operation of the SJCDWP
- Issued by U.S. Fish and Wildlife Service according to the Endangered Species Act

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Species Protection



Rio Grande Silvery Minnow,
Hybognathus amarus



Southwestern Willow Flycatcher,
Empidonax trailii extimus

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Habitat Restoration

Two sites near Paseo del Norte Blvd.



La Orilla near Montaño Rd.



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Ongoing Commitments

\$165,000 annually to
City of Albuquerque
Silvery Minnow
Refugium at BioPark



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Ongoing Commitments

Active signatory to the
Middle Rio Grande
Endangered Species
Collaborative Program



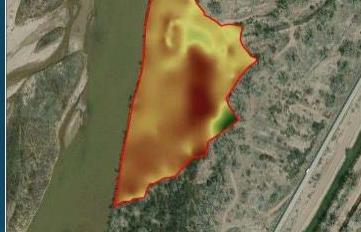
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Ongoing Commitments



Fish Monitoring

- Eggs
- Larvae and adults



Habitat Monitoring

- Geomorphology
- Vegetation
- Fish Utilization



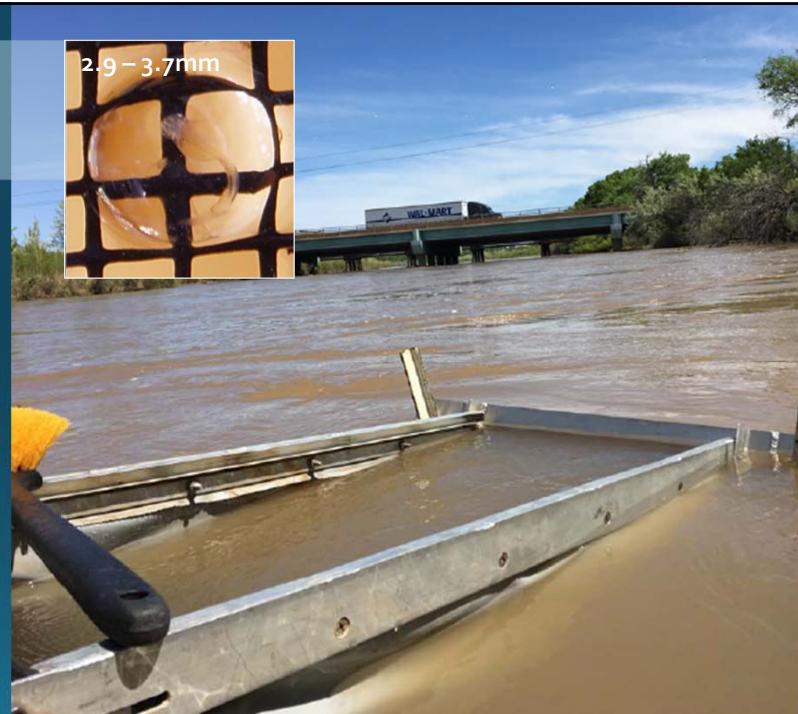
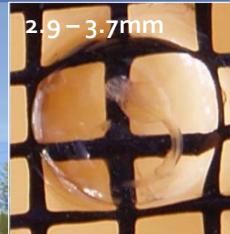
Research

- Otolith Validation Study
- Otolith Aging Study

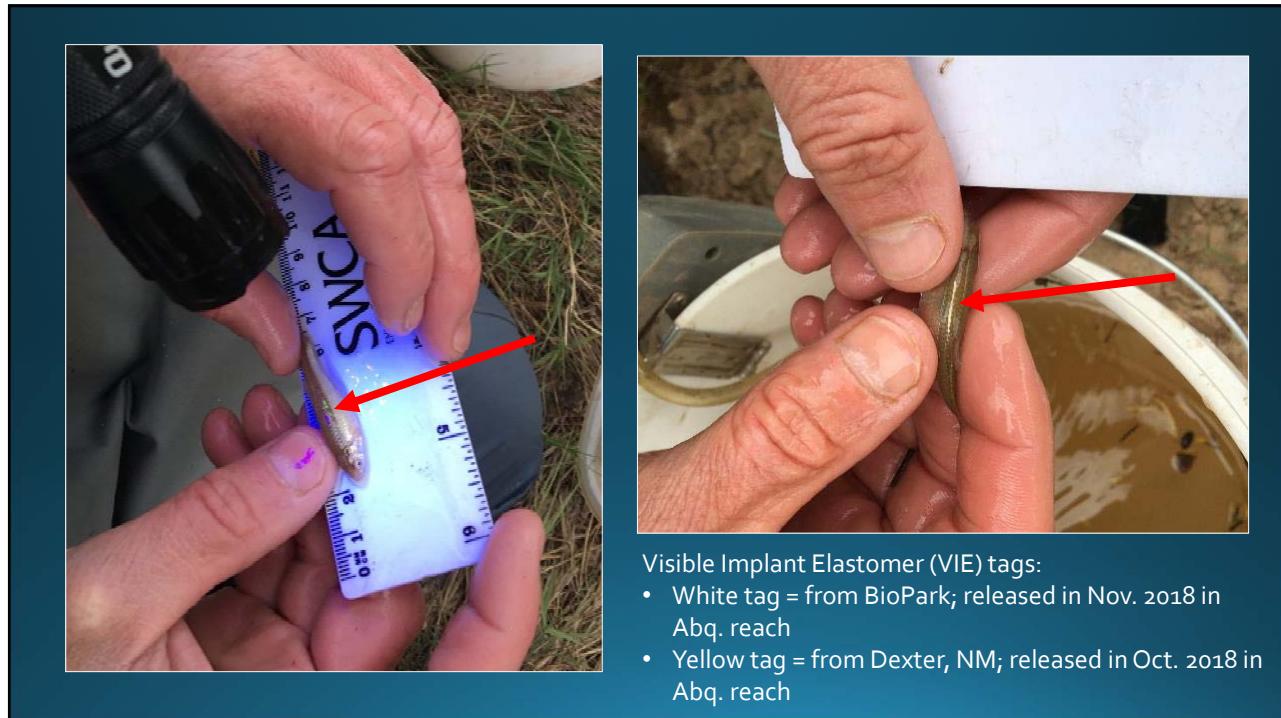
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Fish Monitoring: Eggs

- Moore Egg Collectors
- Upstream of Water Authority diversion dam every May during spawning season
- Eggs collected go to Albuquerque BioPark
- 2019 – no eggs collected



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Fish Monitoring: Larvae and Adults

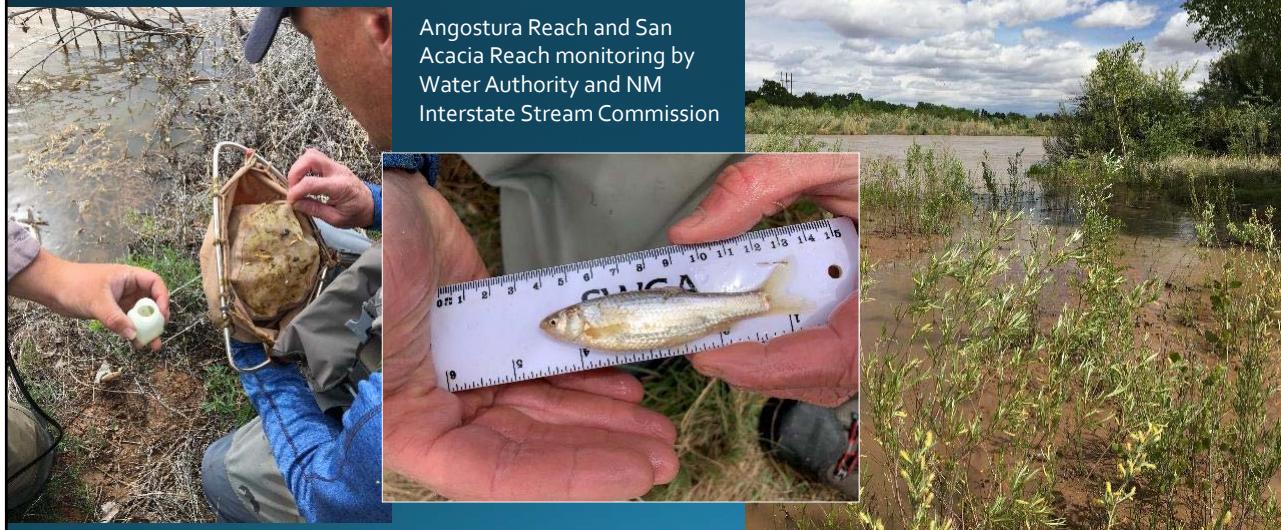
2019 Preliminary Monitoring Data

Rio Grande Silvery Minnow	Number Found	Number of Tagged Fish
Fyke Net (adults)	32	14 (43%)
Dip Net (larvae)	508	N/A



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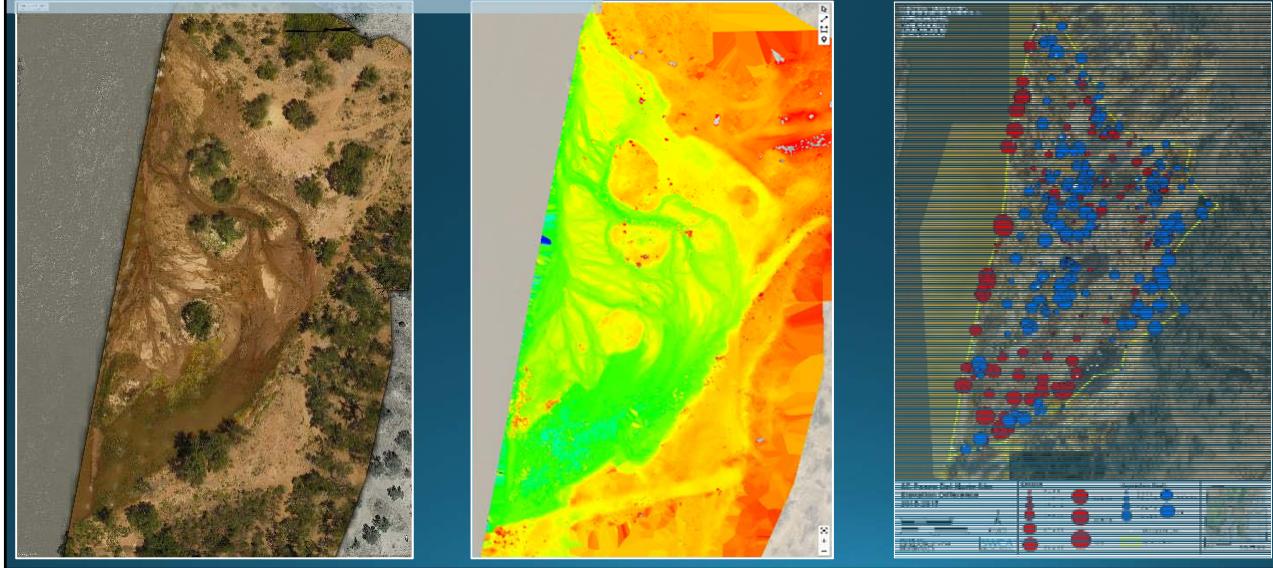
Habitat Monitoring: Fish Utilization



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Habitat Monitoring: Geomorphology

Paseo del Norte Southeast Restoration Site



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Habitat Monitoring: Fish Utilization

Paseo del Norte - Northwest



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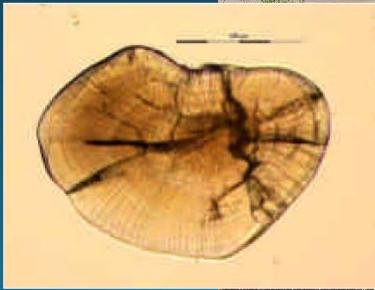
Research: Otolith Validation Study

- Otolith /'ōdl, iTH/ – each of the three, oval calcified structures located in the inner ear of vertebrates, including fish
- Validation study to determine deposition rate of “rings” on otoliths of Rio Grande Silvery Minnow
- Results provide a method to accurately estimate the hatch date of a minnow

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Research: Otolith Aging Study

- Aging study to better understand the early life history of the Rio Grande Silvery Minnow
- Hatch dates determined by otolith and larvae capture location to inform habitat utilization (floodplain, channel, etc.)
- Will help to inform management strategies for habitat restoration to benefit the minnow



Otolith from Horwitz et al. 2011



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Questions?



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