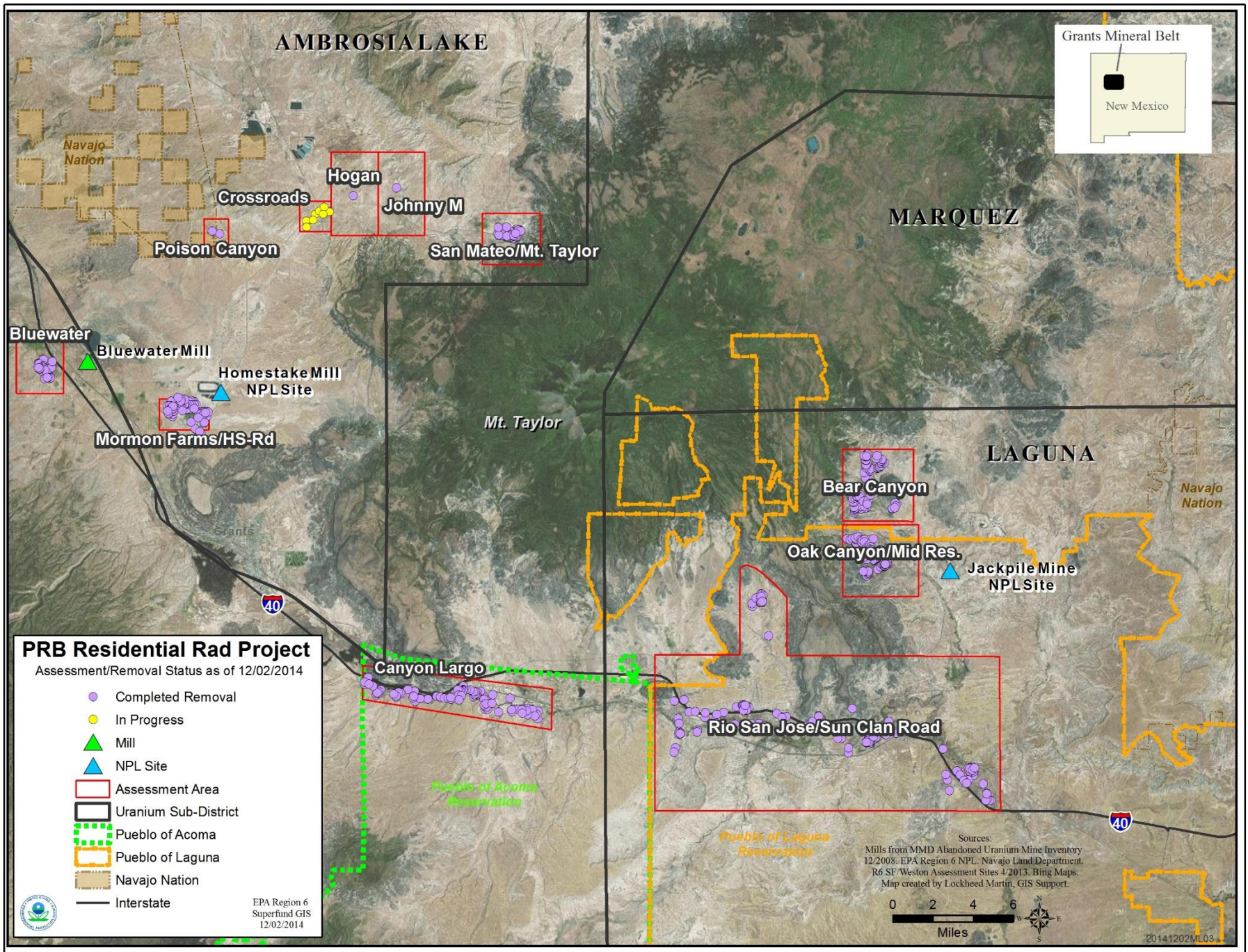


**EPA Region 6  
Grants Mining District  
2016 Program Updates**





**AMBROSIALAKE**

**MARQUEZ**

**LAGUNA**

**PRB Residential Rad Project**  
 Assessment/Removal Status as of 12/02/2014

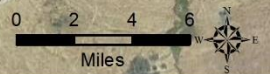
- Completed Removal
- In Progress
- ▲ Mill
- ▲ NPL Site
- Assessment Area
- Uranium Sub-District
- Pueblo of Acoma
- Pueblo of Laguna
- Navajo Nation
- Interstate

EPA Region 6  
 Superfund GIS  
 12/02/2014

Grants Mineral Belt

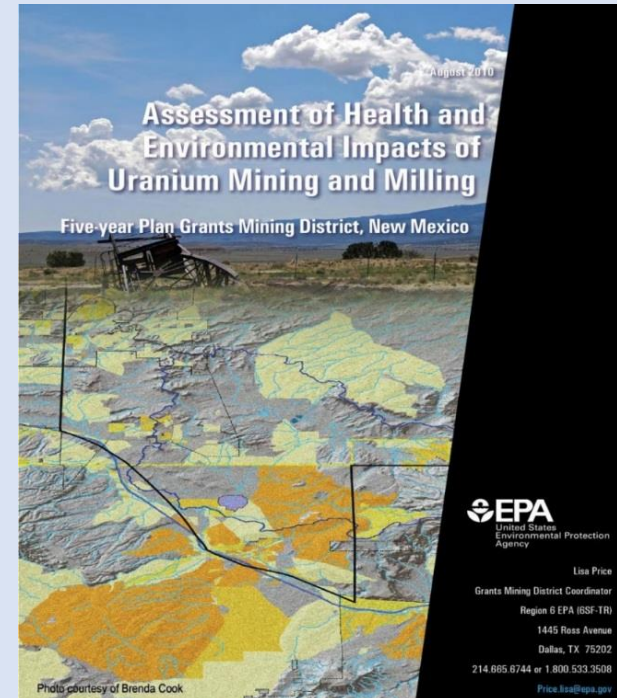
New Mexico

Sources:  
 Mills from MMD Abandoned Uranium Mine Inventory  
 12/2008. EPA Region 6 NPL. Navajo Land Department.  
 R6 SF/Weston Assessment Sites 4/2013. Bing Maps.  
 Map created by Lockheed Martin, GIS Support.



# STATUS OF FIVE-YEAR PLAN

- Second 5-Year Plan for 2015-2020
- Keep Original Framework and Objectives of First Plan
  - Water Sources
  - Legacy Mines
  - Former Uranium Mills
  - Residential Properties and Structures
  - Communicate and coordinate with Communities
- Coordination with Region 9
- Discuss with Partners
- <http://www2.epa.gov/grants-mining-district>



# Tronox Settlement Agreement “Designated Navajo Area Mines”

- \$5.2 Billion
- \$985 million of settlement to fund response at 49 abandoned uranium mines in and near the Navajo Nation
- 22 of the 49 mines located in EPA Region 6

# Potential Region 6 Non-Tribal Tronox Removal Sites

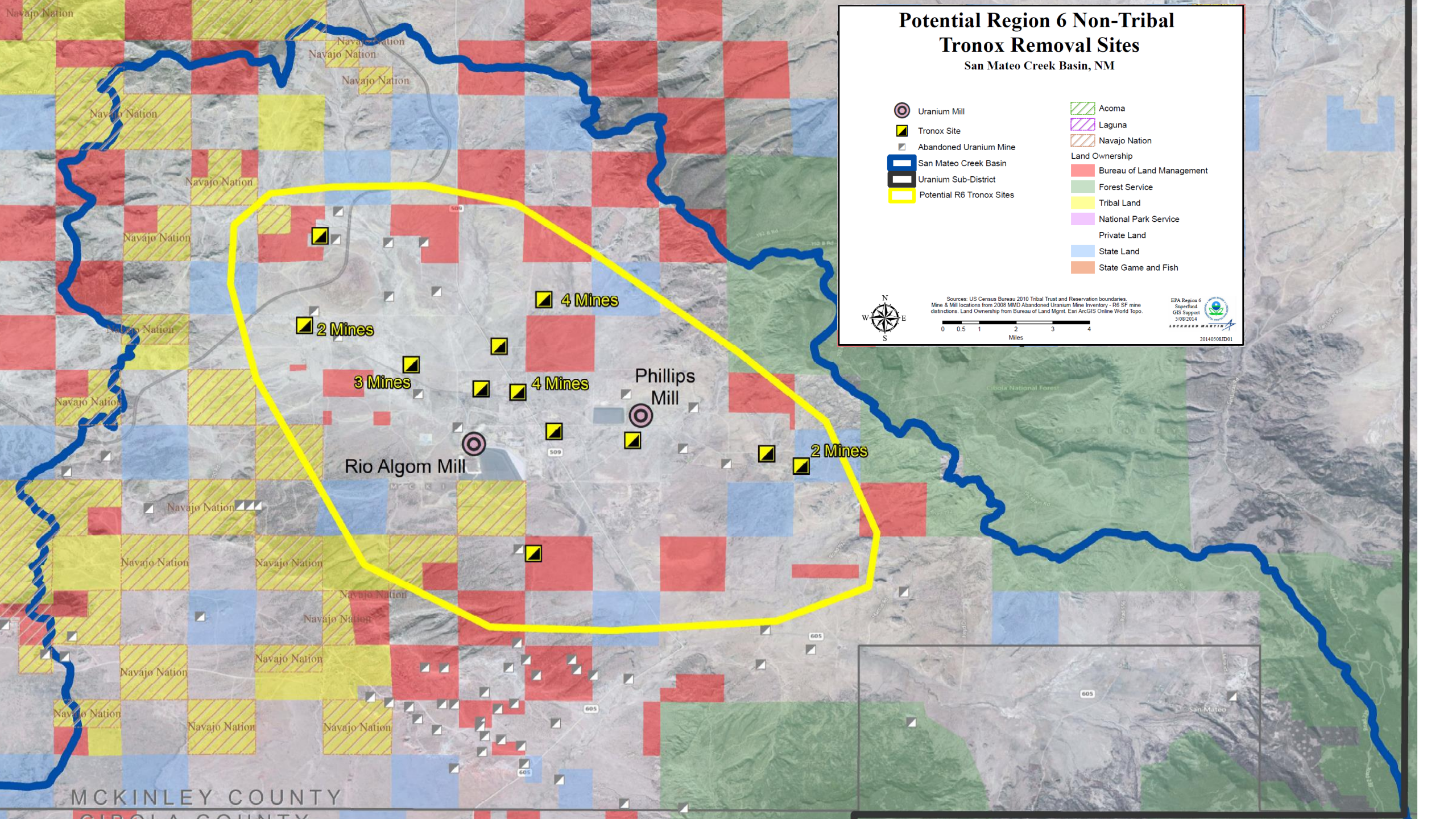
## San Mateo Creek Basin, NM

- Uranium Mill
- Tronox Site
- Abandoned Uranium Mine
- San Mateo Creek Basin
- Uranium Sub-District
- Potential R6 Tronox Sites
- Acoma
- Laguna
- Navajo Nation
- Land Ownership**
- Bureau of Land Management
- Forest Service
- Tribal Land
- National Park Service
- Private Land
- State Land
- State Game and Fish

Sources: US Census Bureau 2010 Tribal Trust and Reservation boundaries  
 Mine & Mill locations from 2008 MMD Abandoned Uranium Mine Inventory - R6 SF mine  
 distinctions. Land Ownership from Bureau of Land Mgmt. Esri ArcGIS Online World Topo.

EPA Region 6  
 Superfund  
 GIS Support  
 5/08/2014  
 LOGAN MARTIN

20140508JD01



# GROUNDWATER INVESTIGATION






San Mateo Creek Basin

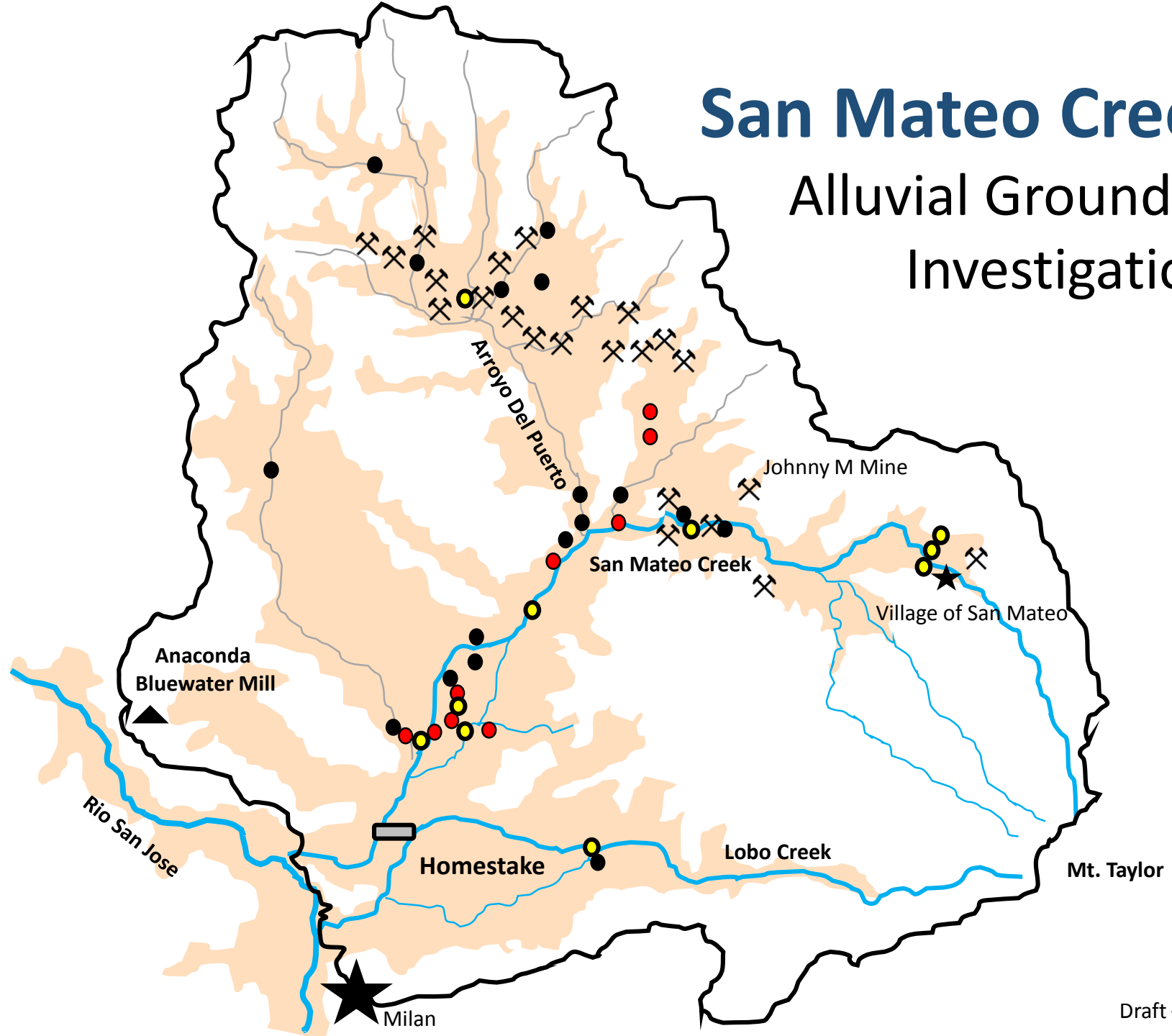
Tronox NAUM Ambrosia Lake Impact Area



# San Mateo Creek Basin

## Alluvial Ground Water Investigation

-  New Monitoring Well
-  Existing Monitoring Well
-  Dry Borehole
-  Wet Mine
-  Alluvium (from USGS)



# GROUND WATER INVESTIGATION UPDATE

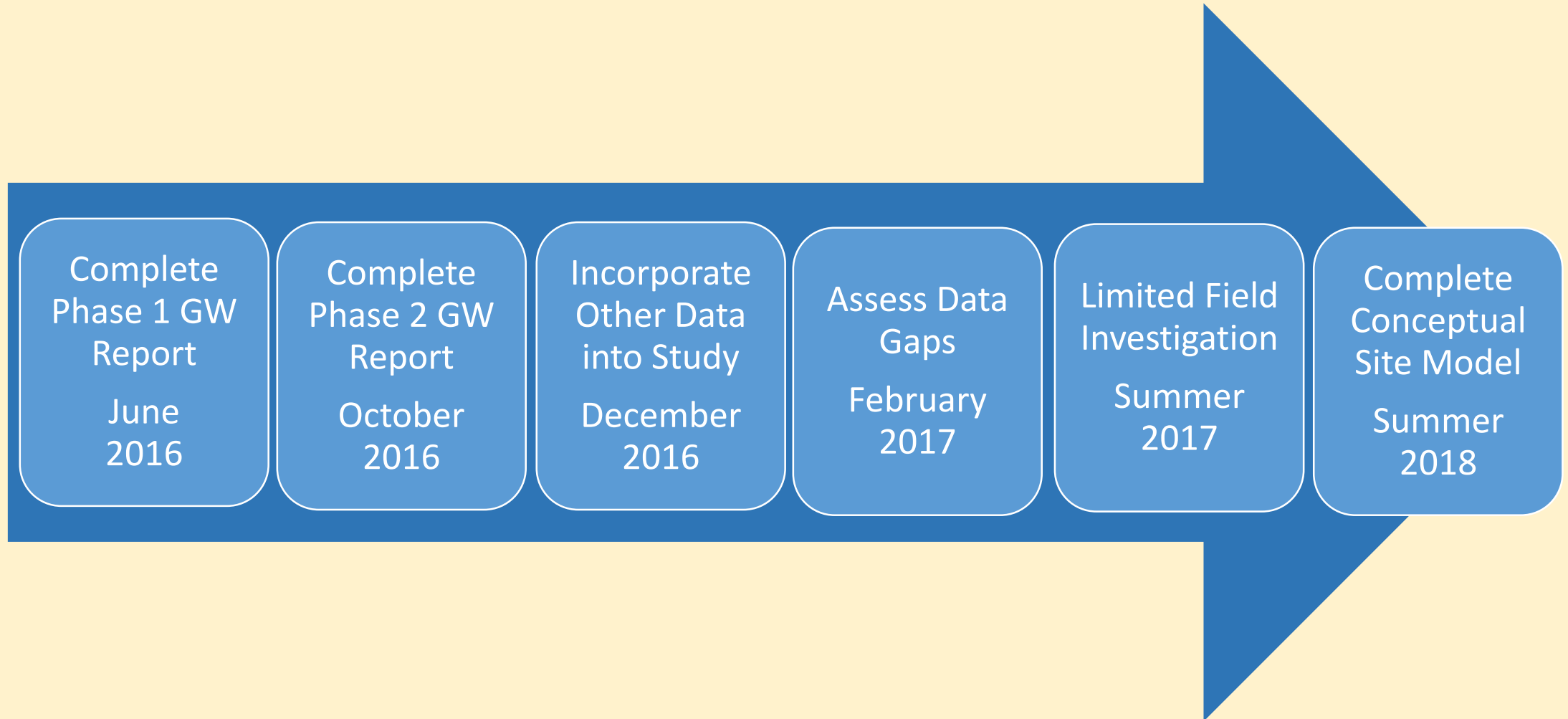
- Phase 1 Data Collection – 2014
- Phase 2 Data Collection – 2015
- Analysis and Interpretation of Data Ongoing
  - Chemical and Radiological Data
  - Ground Water Maps
  - Geological Cross-Sections



# WHAT WE ARE TRYING TO UNDERSTAND?

- How did mining operations impact ground water?
- Where did the contaminated ground water go?
- Where is it today?
- Where is it going and who will it threaten?

# PLANNED ACTIVITIES FOR GROUND WATER INVESTIGATION



Complete  
Phase 1 GW  
Report

June  
2016

Complete  
Phase 2 GW  
Report

October  
2016

Incorporate  
Other Data  
into Study

December  
2016

Assess Data  
Gaps

February  
2017

Limited Field  
Investigation

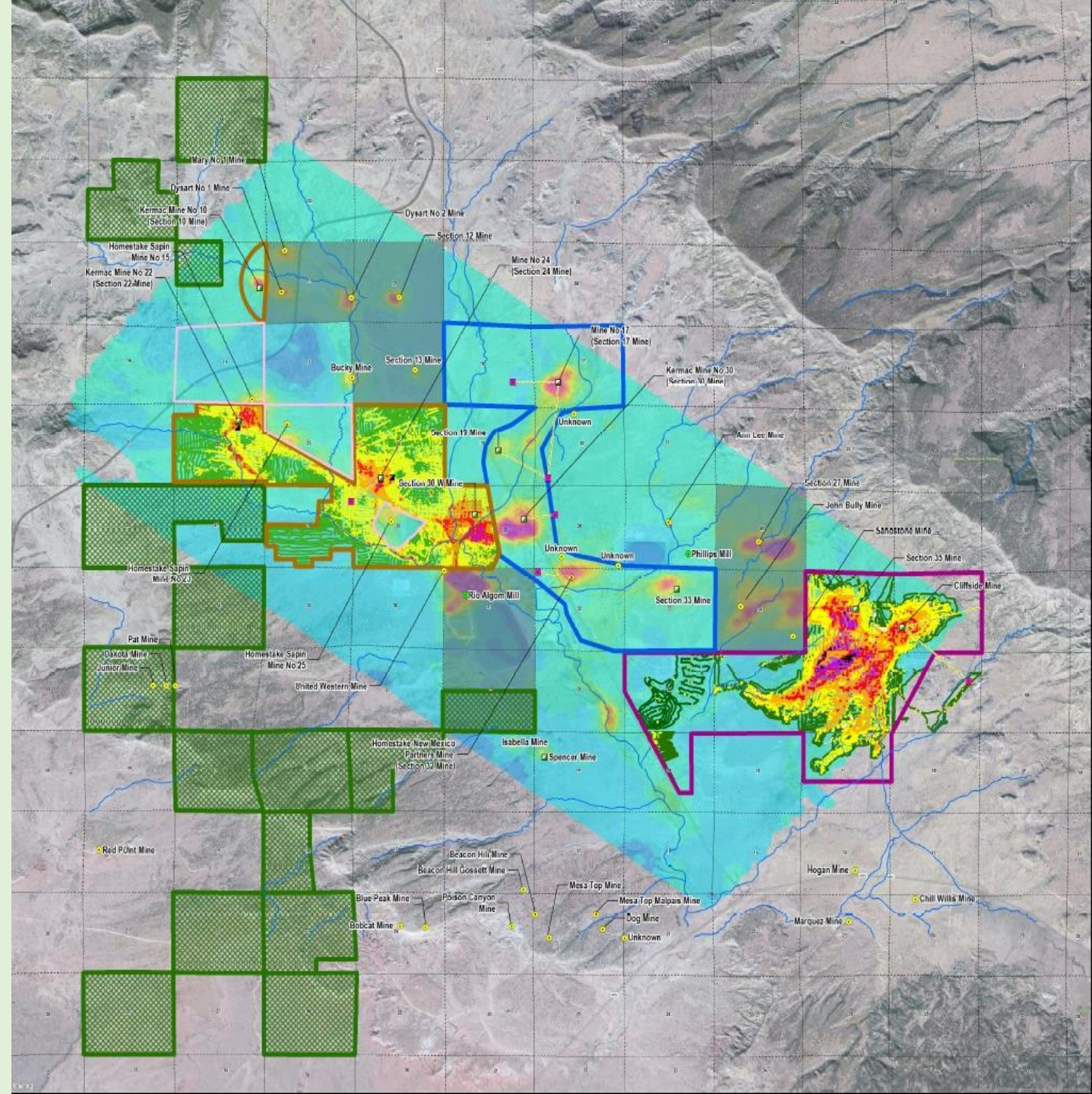
Summer  
2017

Complete  
Conceptual  
Site Model

Summer  
2018

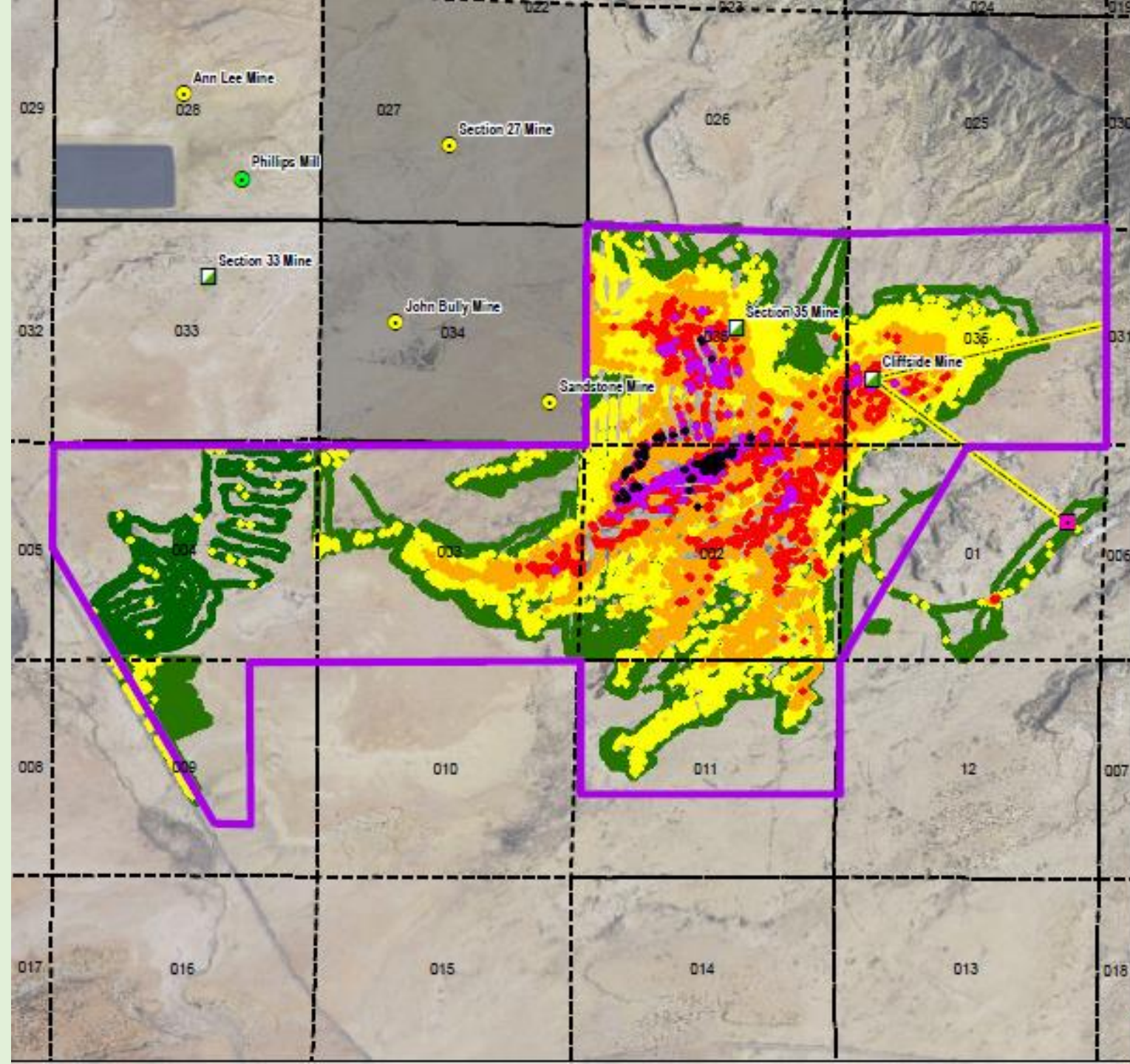
# Background / Status

- **12 U mine surface expressions in the Ambrosia Lake SD of the Tronox settlement area**
  - 8 EPA 6 lead
  - 3 EPA 6 and 9 co-lead (**Section 10, Section 22 and Section 32/33**)
  - 1 BLM lead (no funding request anticipated)
- **Ambrosia Lake SD Mine Removal Assessment Areas**
  - Section 32/33
  - 3 Geographic Sub-Areas



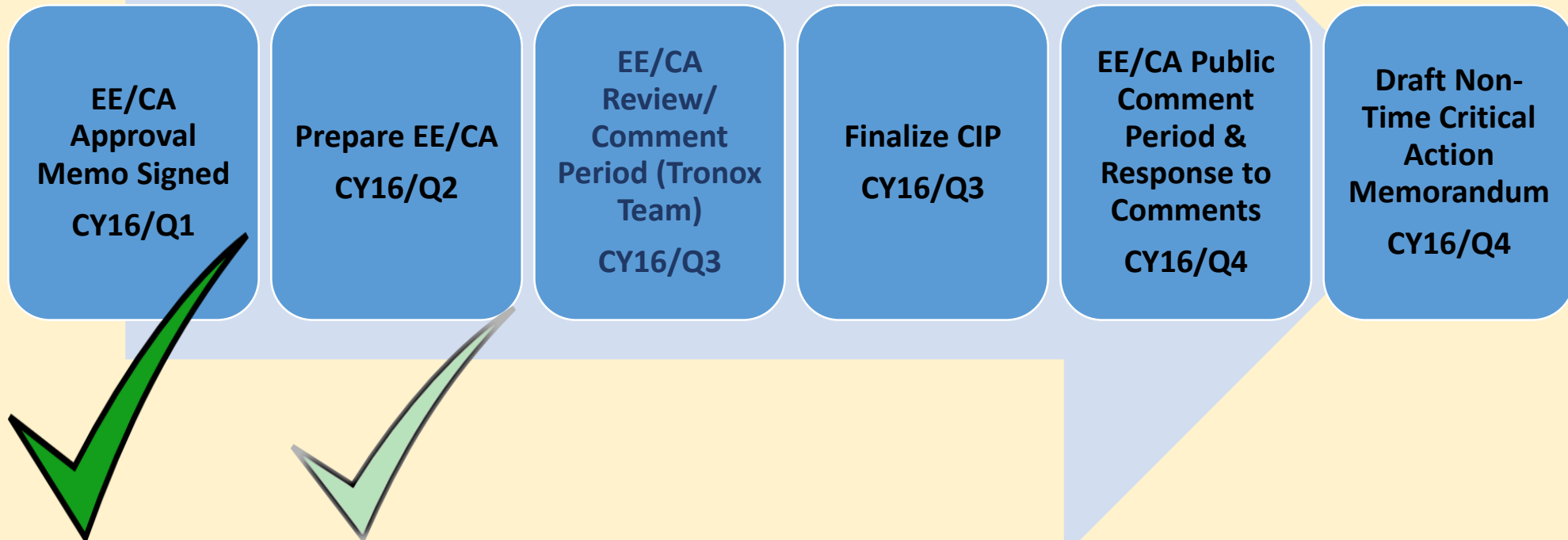
# EAST GSA STATUS

- Extent of contamination assessment or RSA completed 03/16.
- EE/CA Approval Memo signed 04/16.
  - Documents threats posed by Site from RSA
  - Authorizes preparation of EE/CA
- EE/CA document in preparation, initial draft due 08/16:
  - Evaluates feasible remediation options to protect human health and environment.
  - Cost analysis of remediation options including costs for removal, waste management, cultural resource impacts, revegetation and long-term management
- Continuing Community Involvement Plan (CIP) development in conjunction with R9.



# EAST GSA PLANNED 2016 ACTIVITIES

ALL PLANNED  
2016 ACTIVITIES  
IN GSA WILL  
UTILIZE **EXISTING**  
**2015 FUNDING**



# WEST GSA STATUS

❖ Initiated RSA on 03/14/2016, **On-going and on-schedule**

## ❖ Issues

### ❑ Have 3 non-Tronox mines impacting Tronox NAUM area

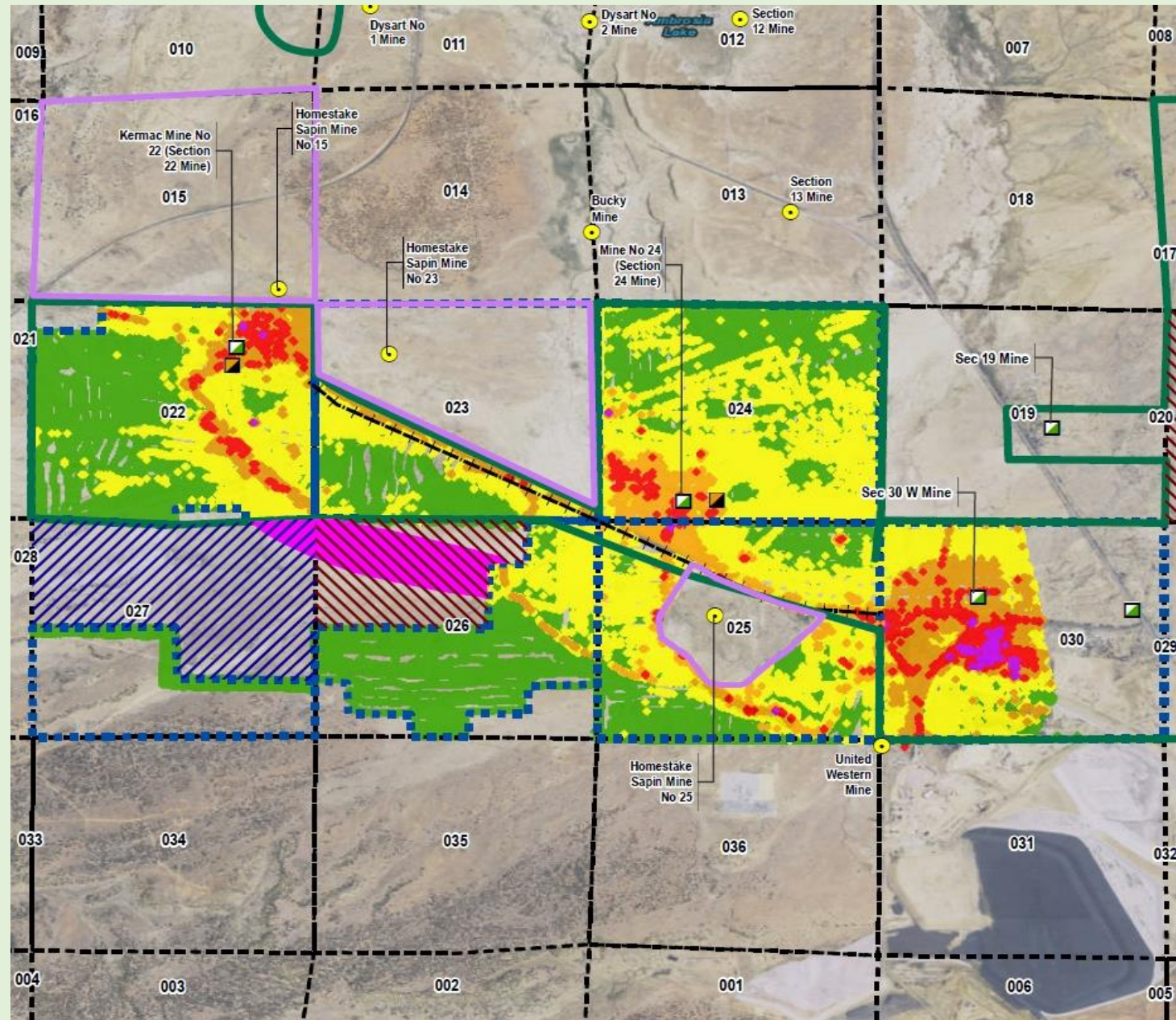
- Mines were assessed using R6 AOA funds
- R6 will seek enforcement action against mine operators under CERCLA for “non-interference”

### ❑ BLM property potentially impacted from Tronox Section 22 off-site migration

- R6 seeking access from BLM to assess and determine if waste originated from Tronox Section 22

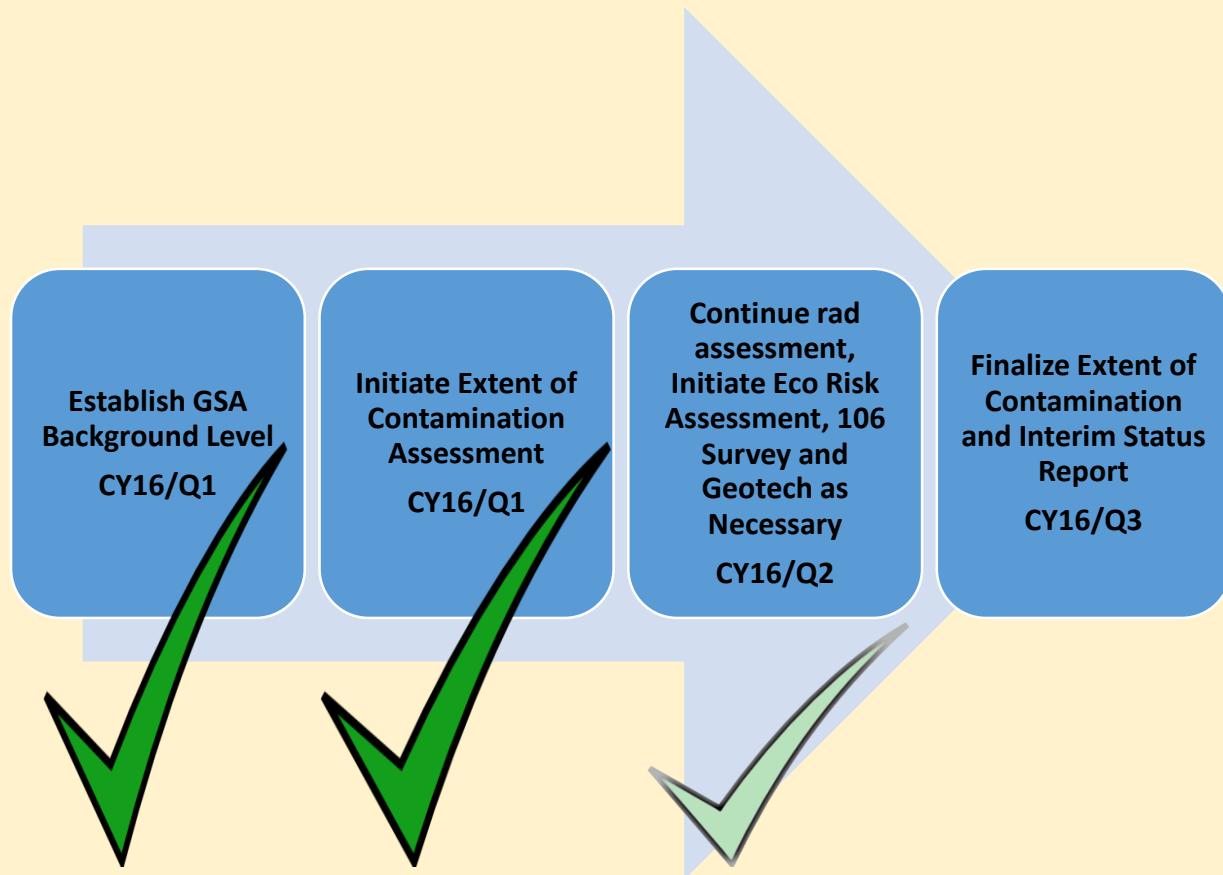
### ❑ Navajo allotment land potentially impacted from Section 22 off-site migration

- R6/R9 contacted BIA (Eastern Agency) to identify allottees
- R6 working with Priscilla Tom to establish “active” status of homesite or grazing permits on allotments
- R6 will coordinate any assessment activities on allotments with Navajo EPA

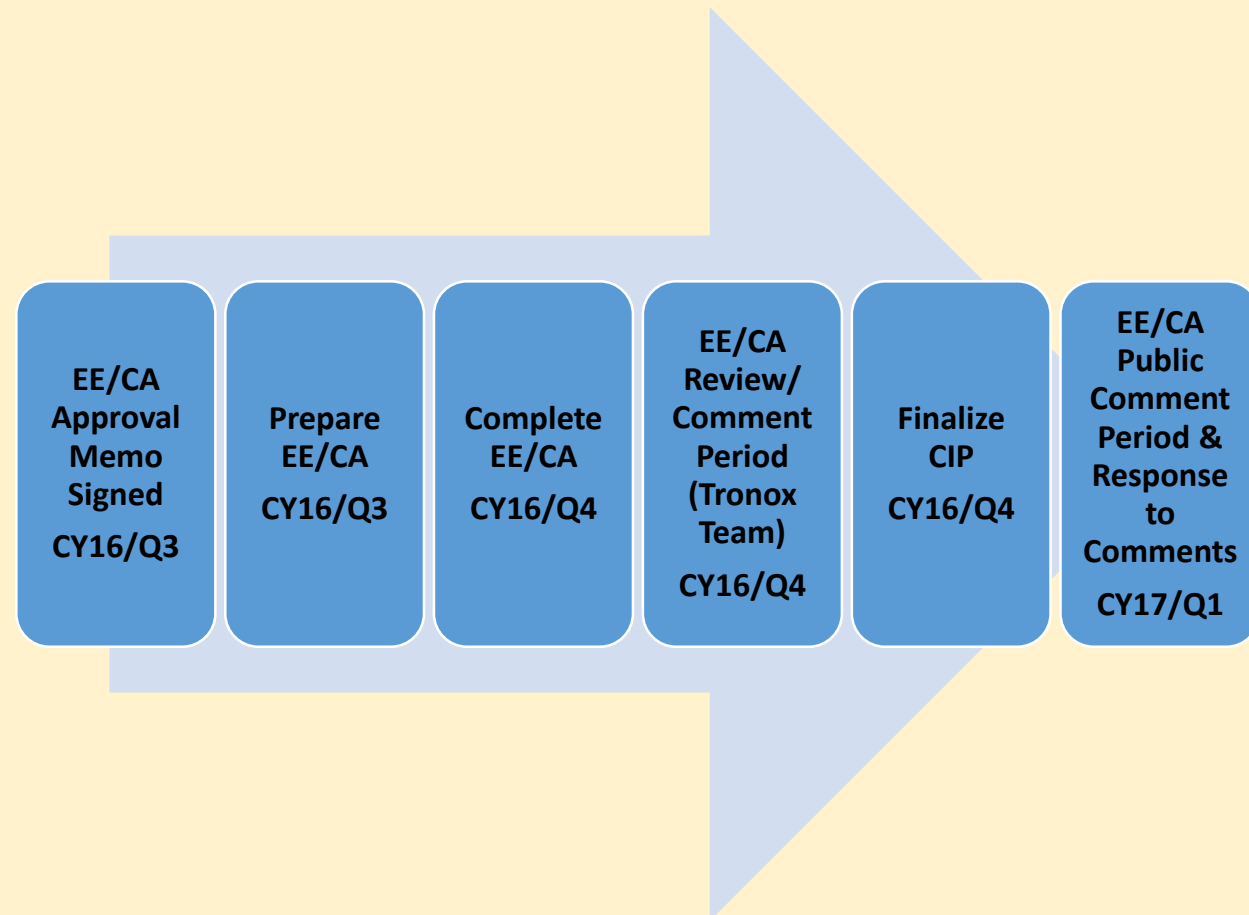


# WEST GSA 2016 PLANNED ACTIVITIES

## EXTENT OF CONTAMINATION SURVEY



## EE/CA PROCESS




# Region 6 Ambrosia Lake Sub District Activities and Navajo Fundamental Law

**Where possible and to the extent practicable, the principles of Navajo Fundamental Law are integrated into all R6 CERCLA activities in Ambrosia Lake**

- Cultural resources surveys conducted or planned, consistent with Traditional Law and CERCLA requirements
- Biological resource surveys conducted or planned, consistent with Natural Law and CERCLA requirements
- Community/Chapter meetings and Outreach Activities consistent with Traditional, Customary and Common Laws and CERCLA requirements
  - Presented overview of R6 ALSD activities at Baca-Prewitt Chapter meeting
  - Began residential outreach along Black Wood Road area in Baca-Prewitt Chapter
  - Working on joint outreach opportunities with Priscilla Tom at the Eastern Agency Fair
- Working through established process to obtain access from and provide information to the allottees with interest in allotments impacted by mine discharge (Section 27) consistent with Customary and Common Law and CERCLA requirements.



A scenic view of a desert canyon with layered rock formations and a valley in the background. The rock faces are characterized by distinct horizontal strata in shades of tan, beige, and reddish-brown. The valley floor is visible in the distance, showing sparse desert vegetation and a winding path. The lighting suggests a bright, sunny day, casting shadows that emphasize the textures of the rock.

**LaDonna Turner**  
**Site Assessment Manager**  
**214-665-6666**  
**[turner.ladonna@epa.gov](mailto:turner.ladonna@epa.gov)**