

Knox Pit M-2017-036



CONSIDERATION OF A 112C PERMIT APPLICATION WITH
OBJECTIONS

JARED EBERT, COLORADO DIVISION OF RECLAMATION,
MINING AND SAFETY

Introduction



General 112c Application Information

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- ▶ Applicant: Loveland Ready-Mix Concrete, Inc. (LRM)
- ▶ Proposed Affected Land: 127 acres
- ▶ Primary Commodity: Aggregate
- ▶ Anticipated Commodity Use: Production of Concrete
- ▶ Surface Owner of Affected Land: LRM
- ▶ Subsurface Owner of Affected Land: LRM

General 112c Application Information

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- ▶ Type of Mining Proposed: Surface – Open Pit
- ▶ Method of Mining Proposed: Conventional, frontend loader and conveyor
- ▶ Processing on site: Crushing, Screening and Concrete Batching
- ▶ Post-Mining Land Use: Pastureland

Location

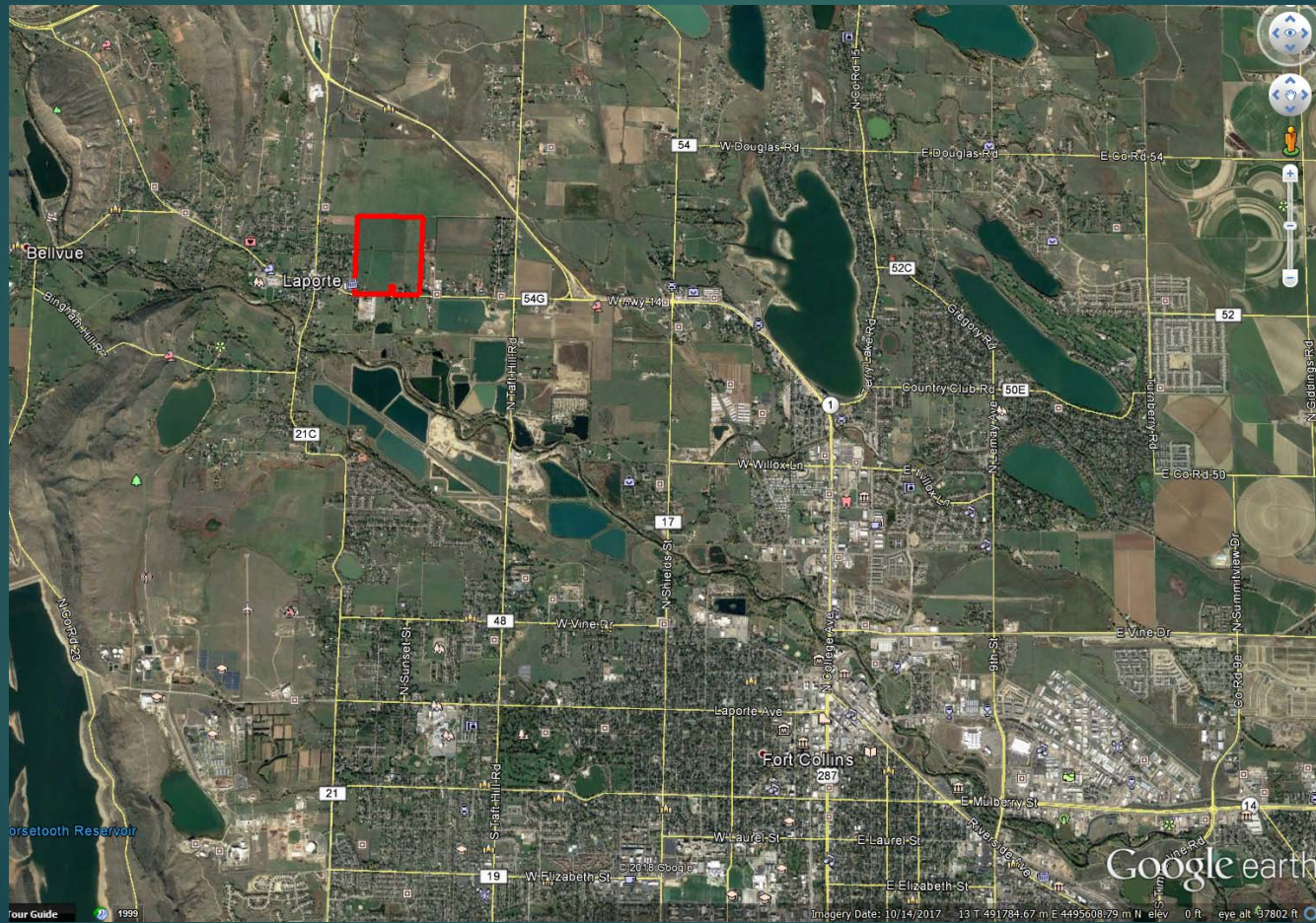
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- ▶ Larimer County
- ▶ Town of Laporte, Colorado
- ▶ 3.7 miles northwest of Fort Collins, Colorado

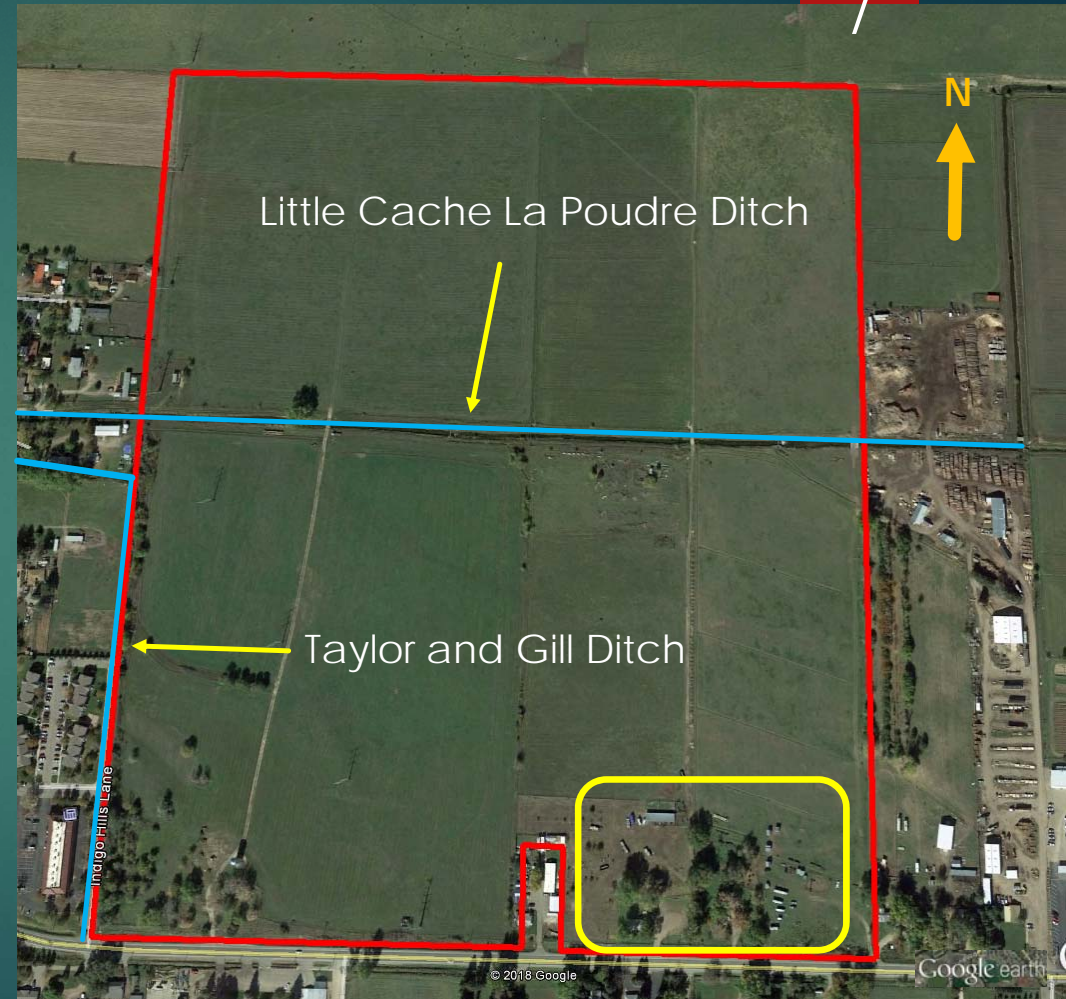
Location

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Pre-Mining Site Description

7

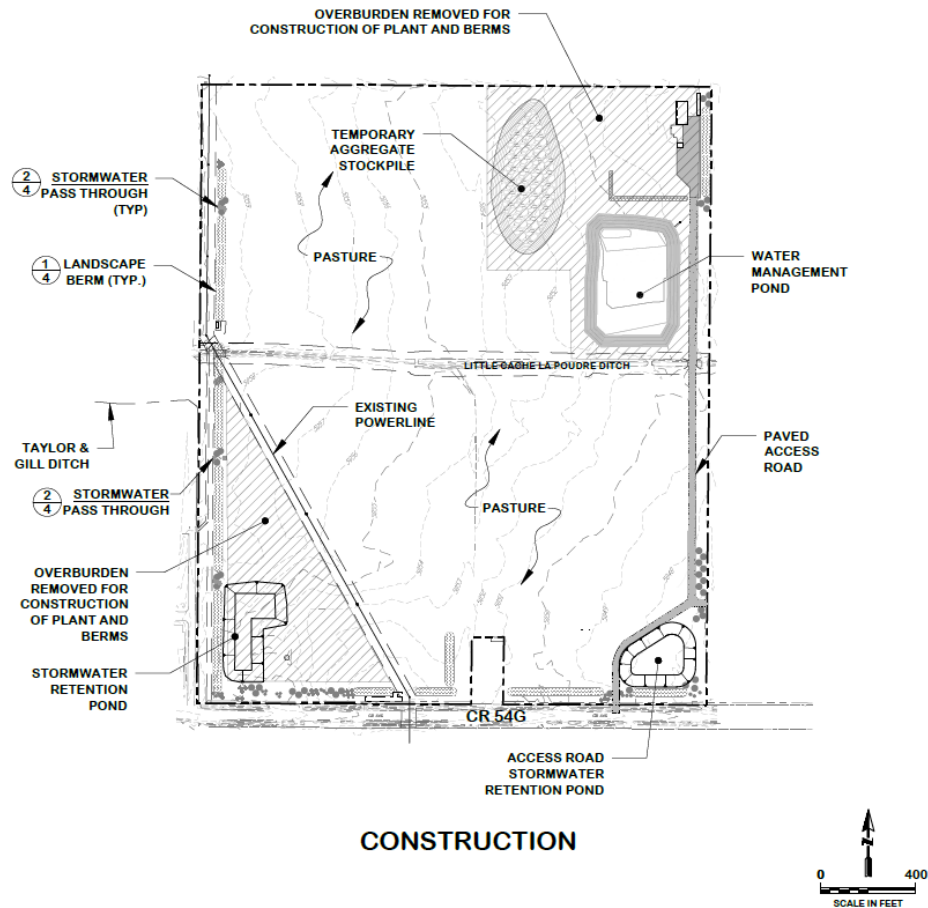






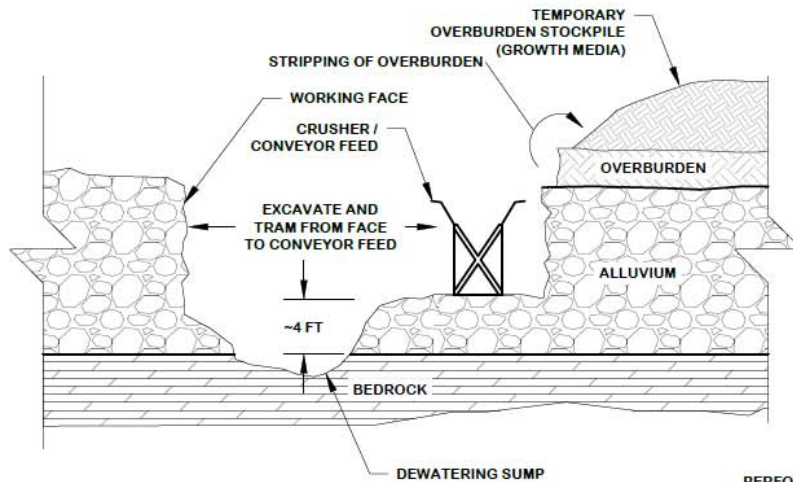
Proposed Mining Plan

10

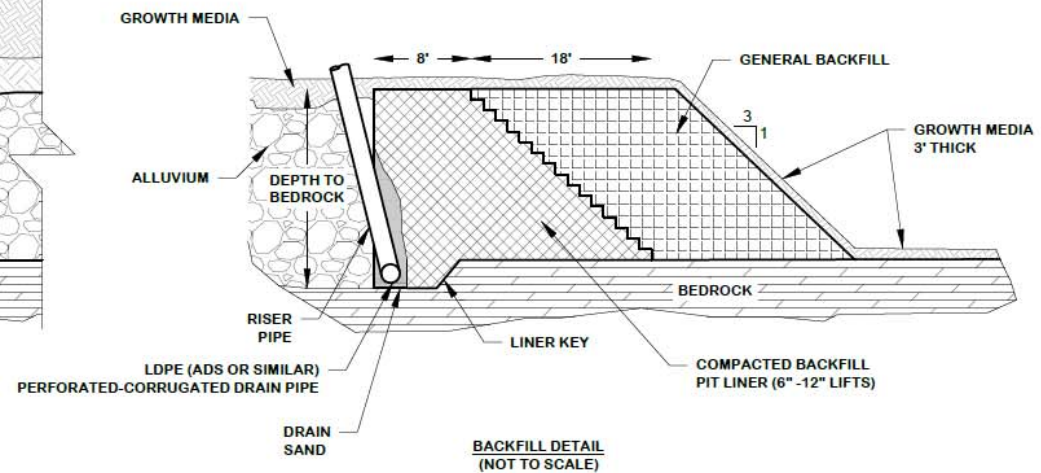


General Excavation and Concurrent Reclamation

11



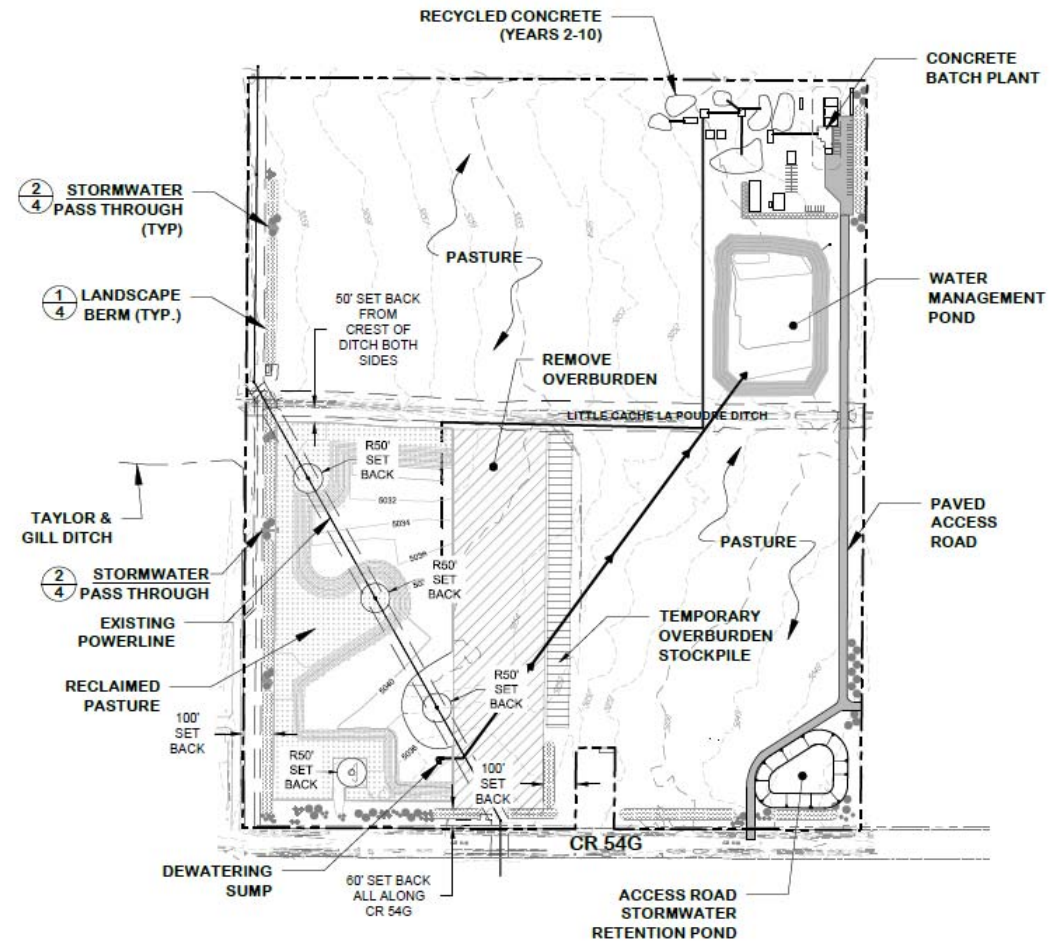
GENERAL EXCAVATION PLAN
(NOT TO SCALE)



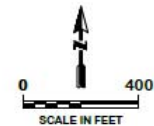
BACKFILL DETAIL
(NOT TO SCALE)

Phase 1

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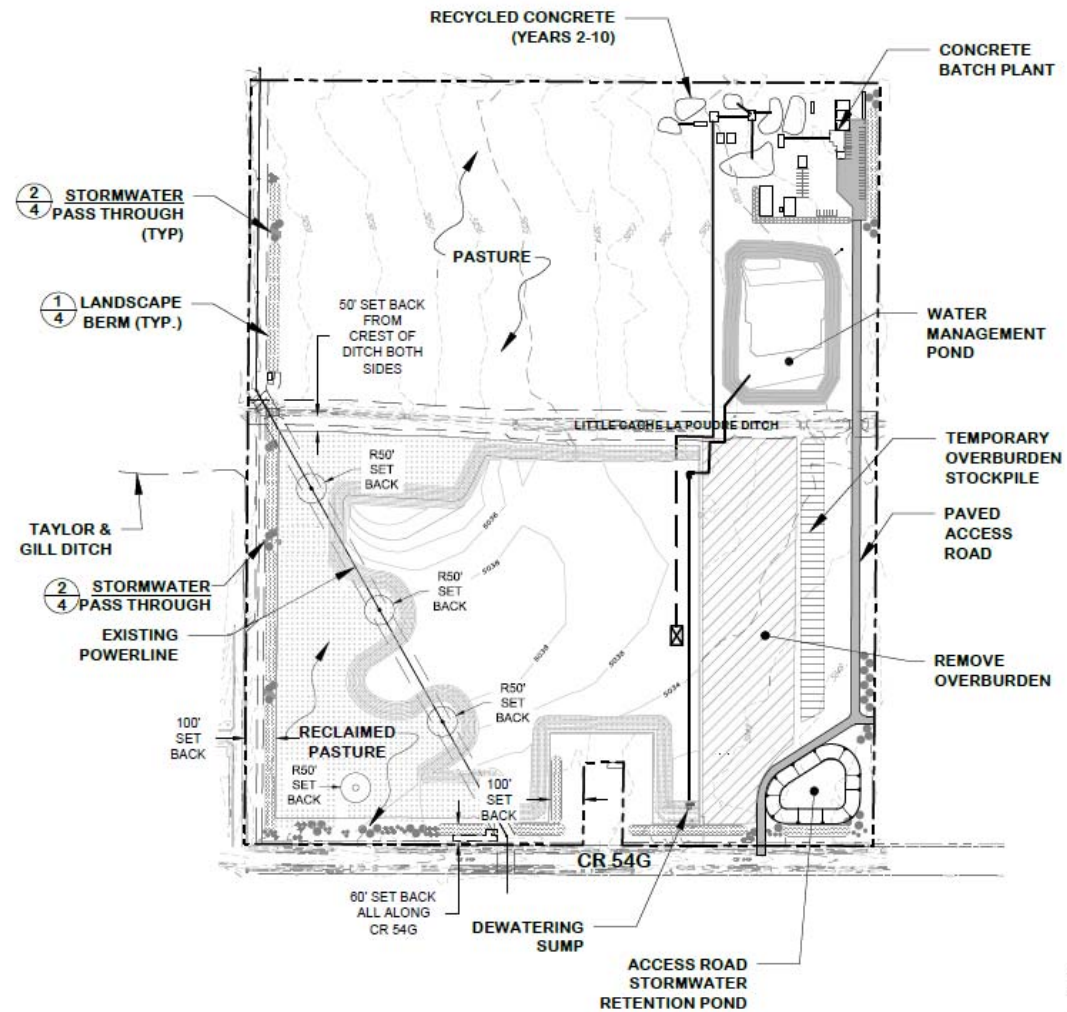


PHASE 1

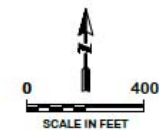


Phase 2

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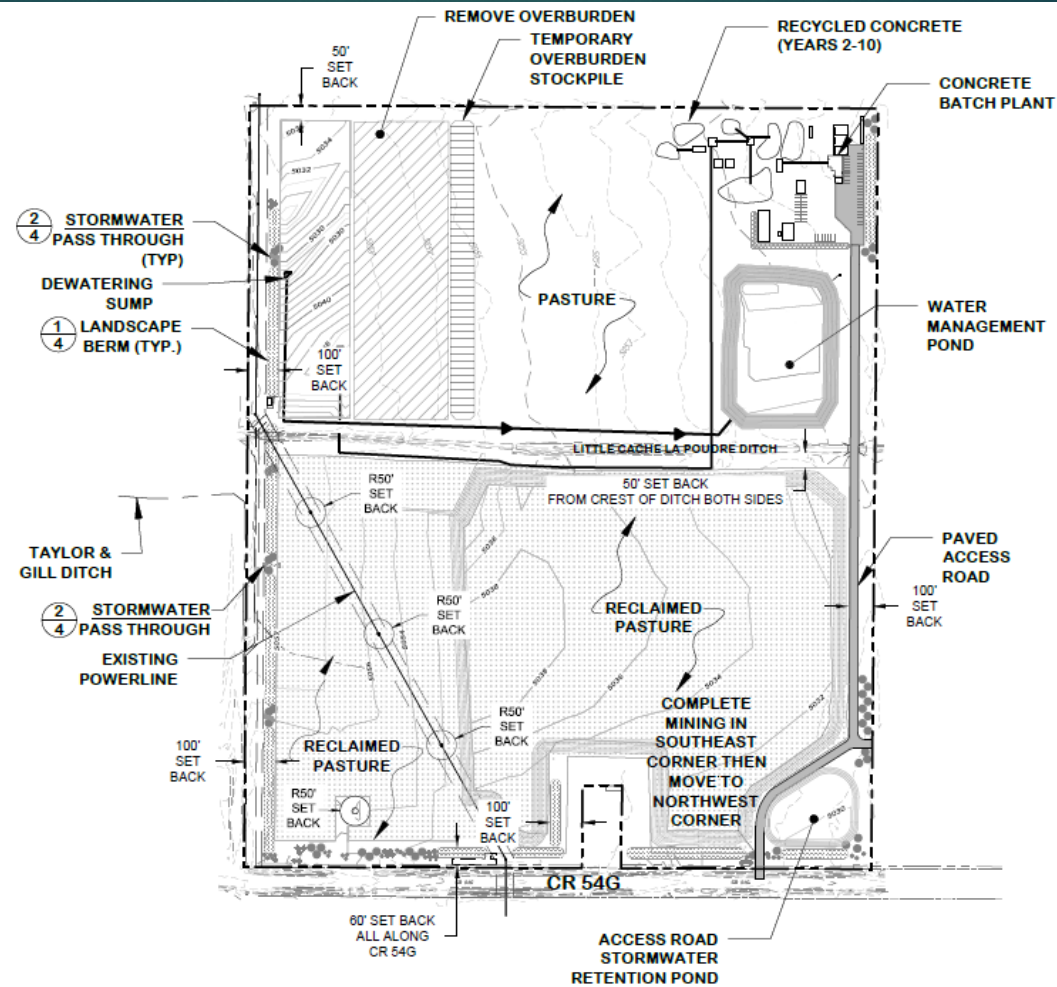


PHASE 2

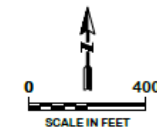


Phase 3

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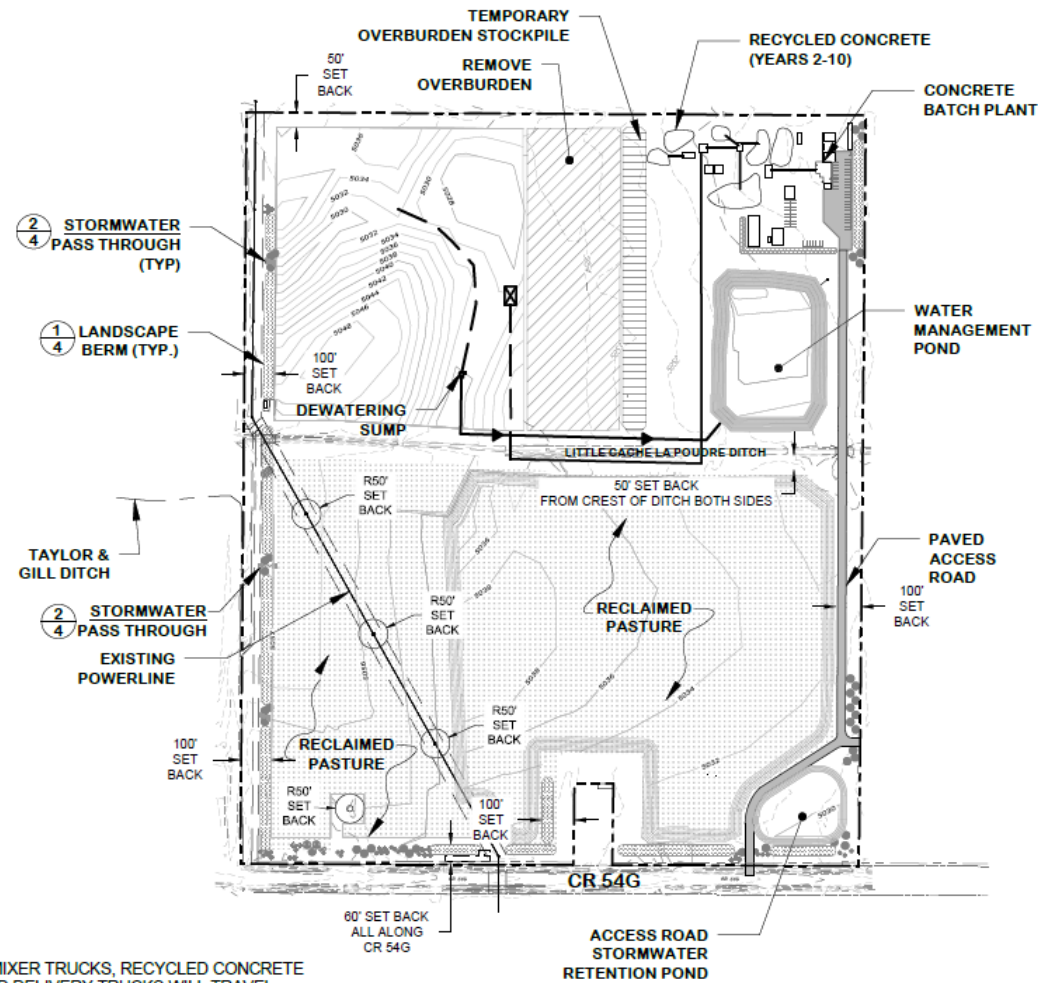


PHASE 3



Phase 4

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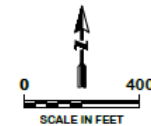


NOTES:

CONCRETE MIXER TRUCKS, RECYCLED CONCRETE HAULERS AND DELIVERY TRUCKS WILL TRAVEL ALONG THE PAVED ACCESS ROAD.

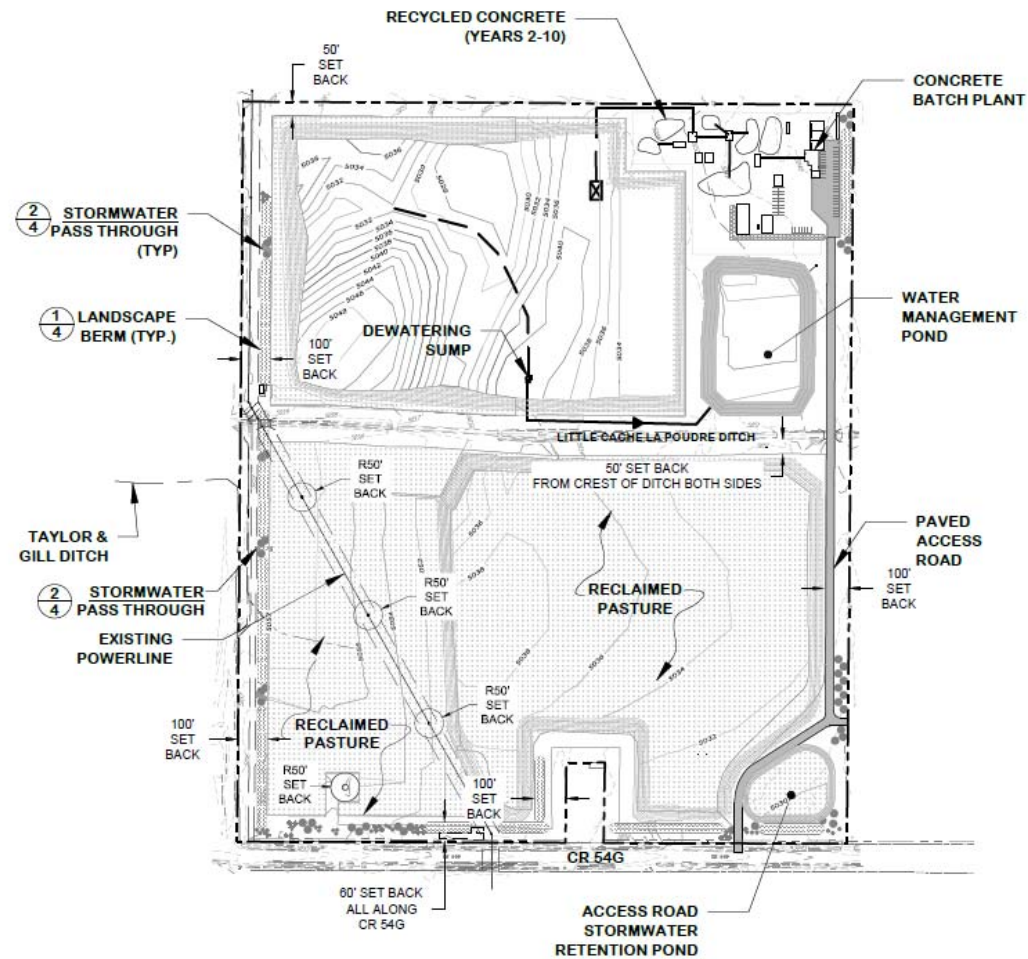
WHEEL LOADERS AND ARTICULATED HAULERS (WHEN CONVEYORS IN MAINTENANCE) WILL BE USED ON THE SITE AT THE KNOX PIT ACTIVE MINING AREAS AND IN THE BATCH PLANT YARD.

PHASE 4



Phase 5

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PHASE 5

Chronology

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- ▶ September 7, 2017- Application received
- ▶ September 18, 2017- Application filed for review
- ▶ November 8, 2017- Close of public comment period
- ▶ November 14, 2017 - Preliminary adequacy review sent to LRM
- ▶ November 29, 2017- 2nd adequacy review sent to applicant

Chronology

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- ▶ January 3, 2018 – LRM responded to 1st and 2nd adequacy review
- ▶ January 16, 2018 – LRM requested an extension of the decision date and requested the MLRB hearing for consideration be rescheduled to a later date
- ▶ January 18, 2018 - Informal public meeting
- ▶ January 23, 2018 – 3rd adequacy review letter sent to applicant
- ▶ February 15, 2018 – LRM responded to 3rd adequacy review letter

Chronology

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- ▶ February 23, 2018 – 4th adequacy review letter sent to applicant
- ▶ February 28, 2018 – LRM responded to 4th adequacy review letter
- ▶ March 2, 2018- DRMS staff recommendation for approval with conditions sent to LRM and objectors/interested parties
 - ▶ Baseline Water Quality
 - ▶ Certification of the clay liner and perimeter drain
- ▶ March 8, 2018 - Pre-hearing Conference
- ▶ March 21-22, 2018 - MLRB Hearing

Objections/Comments Received

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- ▶ Public comment period ended on November 8, 2017
 - ▶ 25 timely objections
 - ▶ 8 un-timely objections
- ▶ Rule 1.7.1(2):
 - ▶ Written comments, protests and petitions for a hearing must be received by the Office not more than twenty (20) calendar days after the last date for the newspaper publication.

Objections/Comments Received

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- ▶ 4 agency comment letters received:
 - ▶ Colorado Division of Water Resources – September 26, 2017
 - ▶ Office of Archaeology and Historic Preservation – October 17, 2017
 - ▶ Army Corps of Engineers – October 20, 2017
 - ▶ Colorado Parks and Wildlife – February 27, 2018

Objective for Formal Hearing

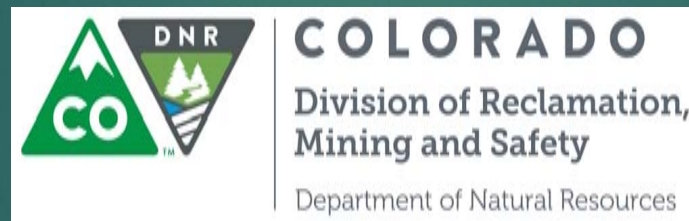
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▶ Rule 1.4.9:

- ▶ (1)(2) If timely and sufficient objection or petition for a hearing is received, the Office sets the application for consideration at a hearing before the Board.
- ▶ (3) The Board shall make a final decision on the application.

Introduction Questions?

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Knox Pit M-2017-036



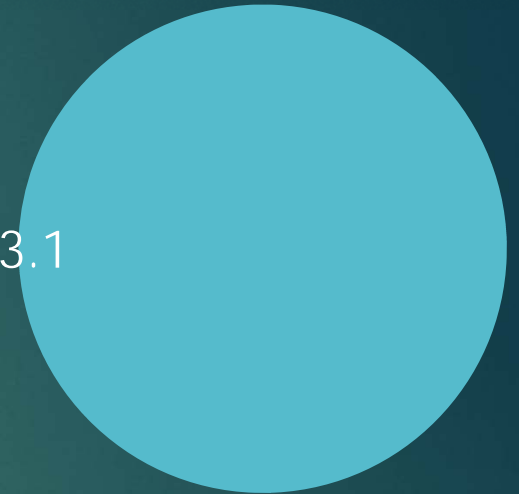
DRMS PRESENTATION – RECOMMENDATION FOR
APPROVAL WITH CONDITIONS

JARED EBERT, COLORADO DIVISION OF RECLAMATION,
MINING AND SAFETY

Summary of DRMS Review Process

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- ▶ Completeness Review
- ▶ Adequacy Review
 - ▶ Exhibits comply with Rule 6.4
 - ▶ Compliance with Performance Standards, Rule 3.1
 - ▶ Cost Estimate
 - ▶ Notification and Publication
 - ▶ Review of Objections and Comments received
- ▶ Decision or Recommendation



Issues – Identified in the Pre-hearing Order

28

1. Enforcement
2. Hydrologic Balance
3. Permitting Issues
4. Reclamation Plan
5. Wildlife



Enforcement Issues

29

- ▶ Whether future inspecting and enforcement concerns were adequately addressed?



Enforcement Issues

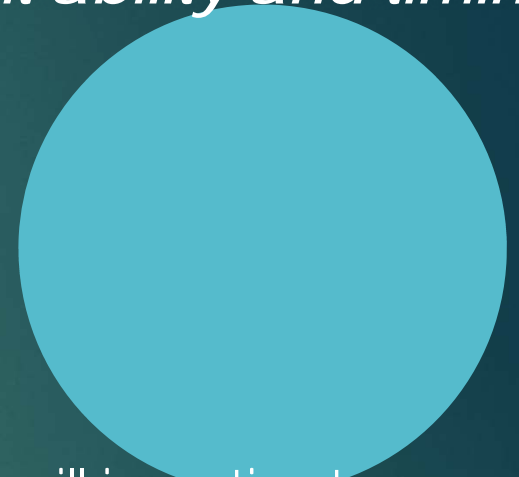
30

- ▶ *Concerns regarding the lack of enforcement ability and timing for enforcement.*
 - ▶ Rule 3.2 and 3.3
 - ▶ DRMS staff has authority to conduct inspections
 - ▶ Requires DRMS to report to the Board any possible violations of the permit, law or the Rules
 - ▶ Clear process for enforcement

Enforcement Issues

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- ▶ *Concerns regarding the lack of enforcement ability and timing for enforcement.*
 - ▶ DRMS conducts routine inspections of mine sites
 - ▶ Respond to citizens complaints
 - ▶ Board directive for citizens complaints:
 - ▶ Respond within 30 days
 - ▶ Serious environmental problems alleged, staff will investigate as soon as possible.



Enforcement Issues

32

- ▶ Not a reason for permit denial per C.R.S. 34-32.5-115(4)

Hydrologic Balance

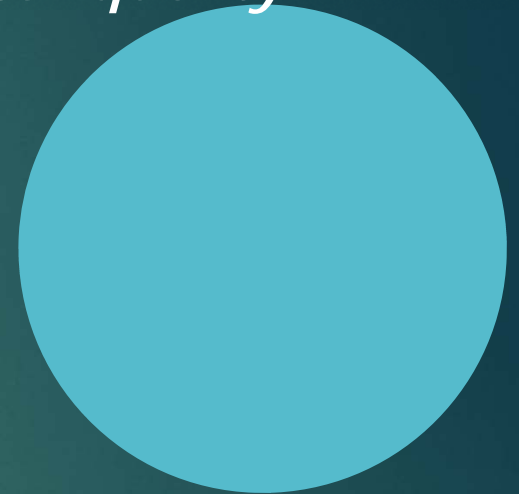
33

- ▶ Whether the application adequately demonstrates that disturbances to the prevailing hydrologic balance of the proposed affected land and surrounding area will be minimized?

Hydrologic Balance

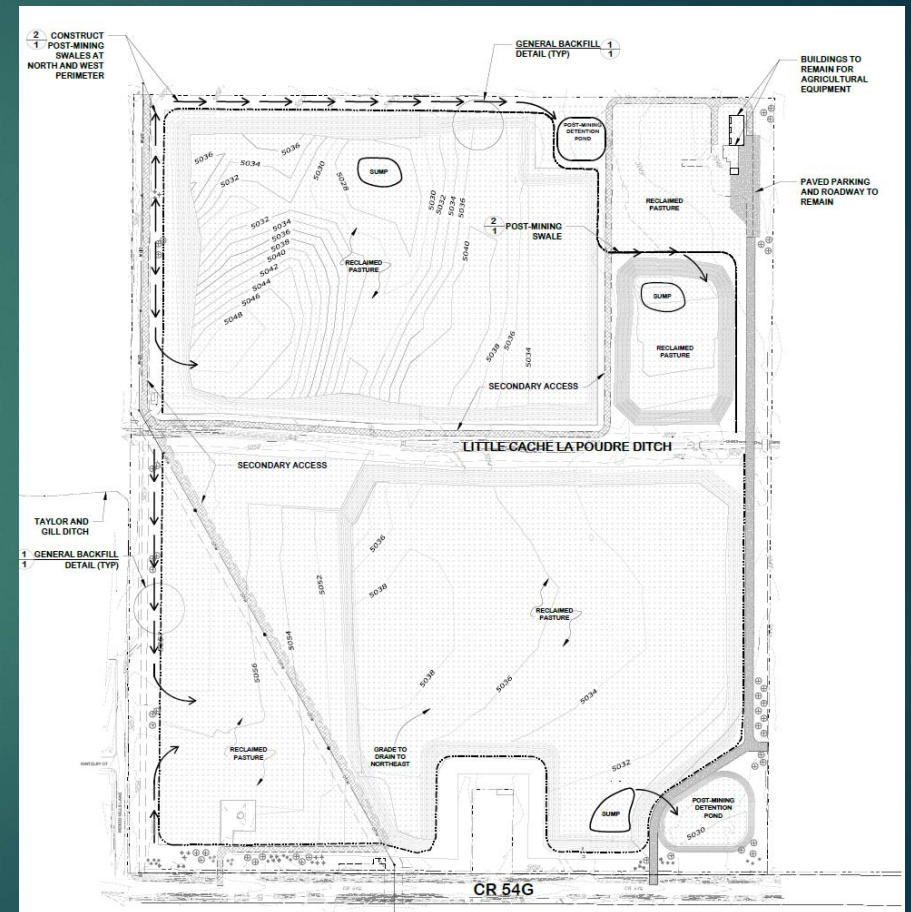
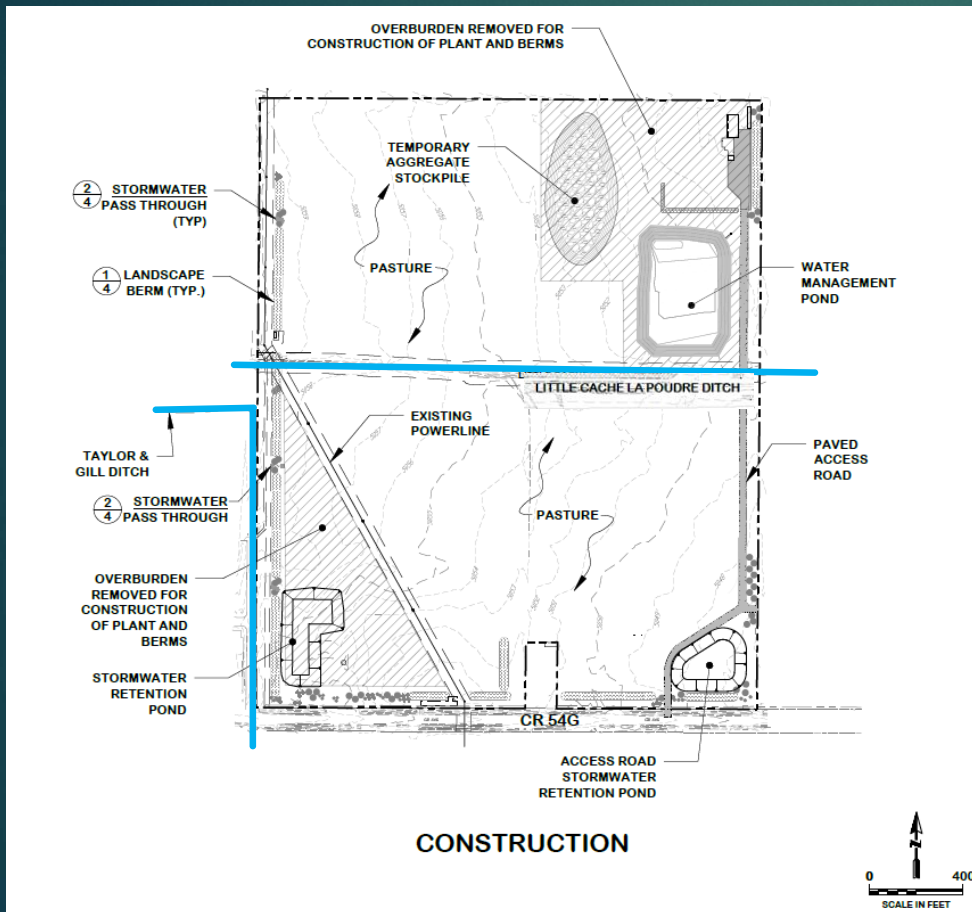
34

- ▶ *Concerns regarding surface and groundwater quality.*
 - ▶ Surface water quality
 - ▶ LRM proposes a closed surface water system



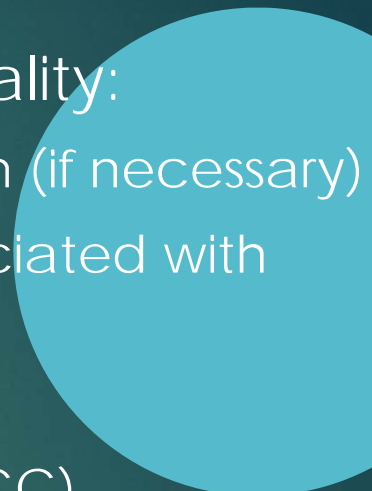
Surface Water System

35



Hydrologic Balance

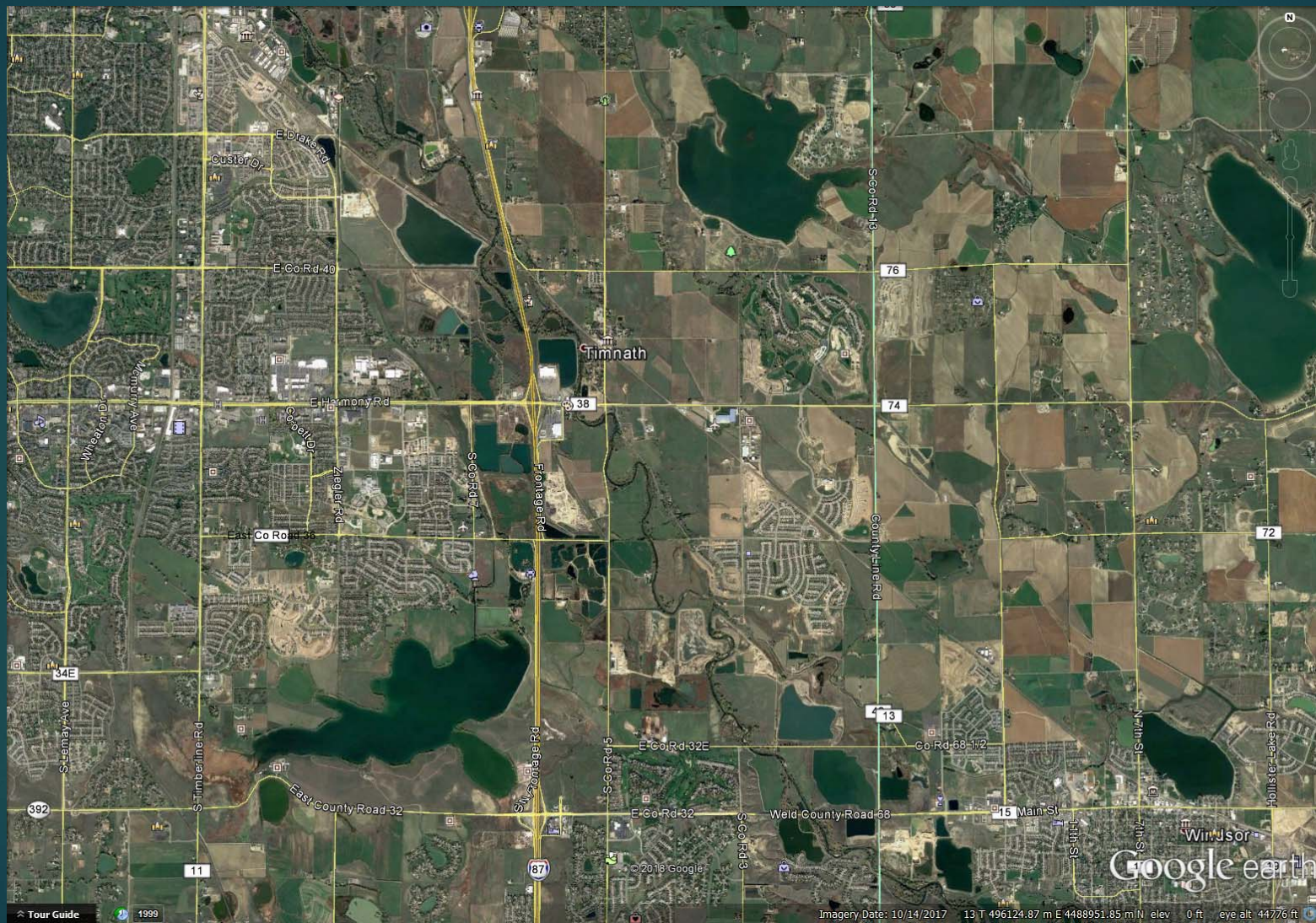
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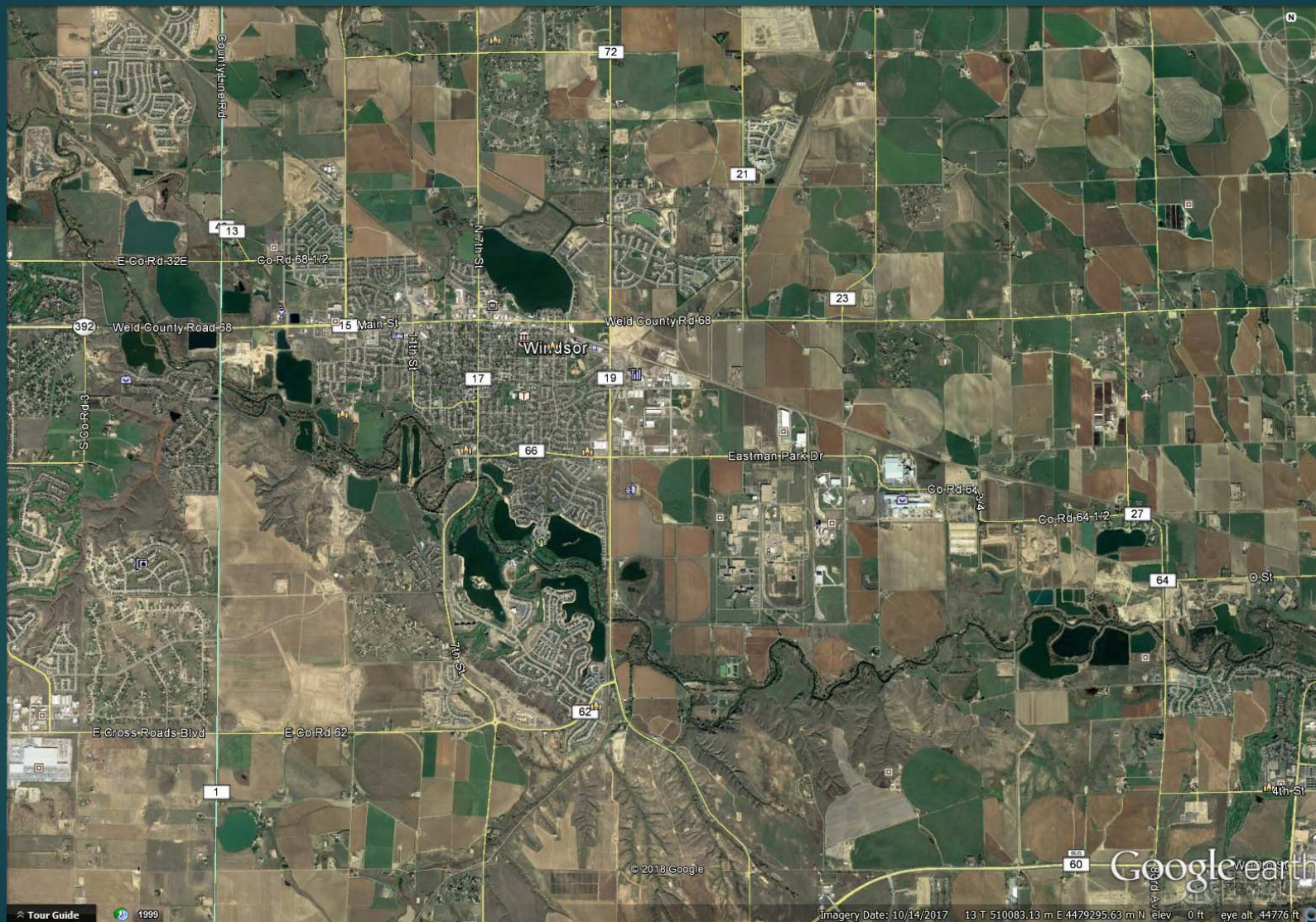
- ▶ Surface water quality
 - ▶ Other permits to protect surface water quality:
 - ▶ National Pollutant Discharge Elimination System (if necessary)
 - ▶ General Permit for Stormwater Discharge associated with Construction Activities from WQCD
 - ▶ Stormwater Management Plan (SWMP)
 - ▶ Spill Prevention and Countermeasure Plan (SPCC)
- 

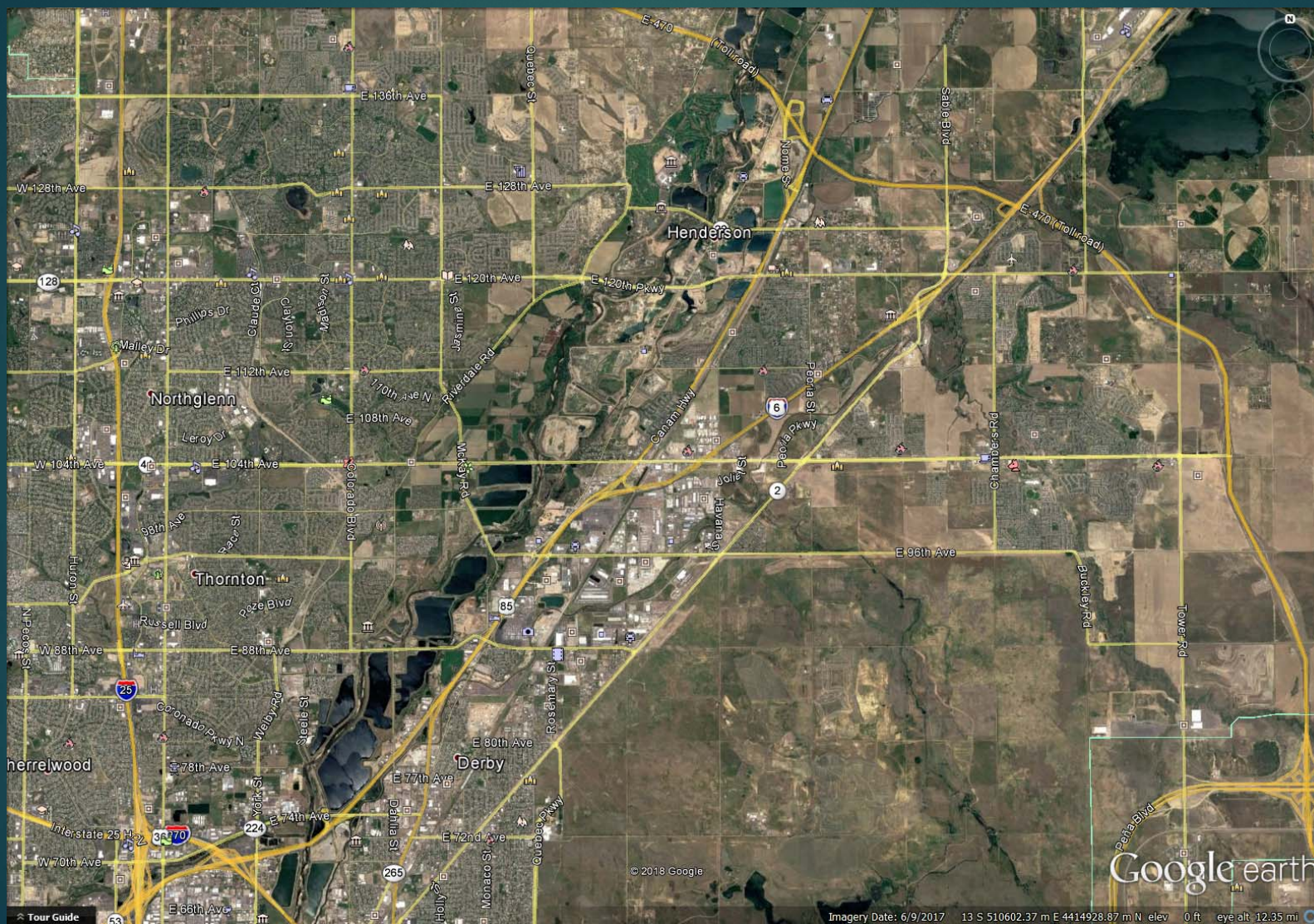
Hydrologic Balance

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- ▶ Groundwater quality
 - ▶ DRMS evaluation of probable hydrologic consequences
 - ▶ Similar mine sites:
 - ▶ 49 active permits in Larimer, Weld, Adams, Morgan and Logan counties with post mining land use of developed water resources
 - ▶ 37 terminated sites







Groundwater Quality

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► What is required?

- C.R.S. 34-32.5-116(4)(h) – Disturbances to the prevailing hydrologic balance of the affected land and the surrounding area and to the quality and quantity of water in the surface and groundwater system, both during and after the mining operation and during reclamation, shall be minimized.

Groundwater Quality

42

- ▶ Rule 3.1.6
 - ▶ (1) Disturbances to prevailing hydrologic balance shall be minimized by:
 - ▶ (b) Compliance with applicable federal and Colorado water quality laws and regulations including statewide water quality standards and site specific classifications and standards adopted by the Water Quality Control Commission (WQCC).
 - ▶ To minimize the disturbance to groundwater quality, LRM must monitor the groundwater and comply with the applicable standards.

Groundwater Quality

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▶ Rule 3.1.7

- ▶ (1) applicable standards for classified and unclassified areas (site not within a classified area)
 - ▶ (a) State-wide groundwater quality standards: Operations that may affect groundwater shall comply with all state-wide groundwater quality standards established by the WQCC
 - ▶ (c) Unclassified areas: Operations that may affect the quality of groundwater which has not been classified by the WQCC shall protect the existing and reasonably potential future uses of such groundwater.

WQCC Standards

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- ▶ DRMS is an implementing agency
- ▶ Water quality standard defined in:
 - ▶ WQCC's Regulation 41, Basic Standards for Groundwater
 - ▶ Interim narrative standards (table values)



Hydrologic Balance

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▶ Groundwater quality

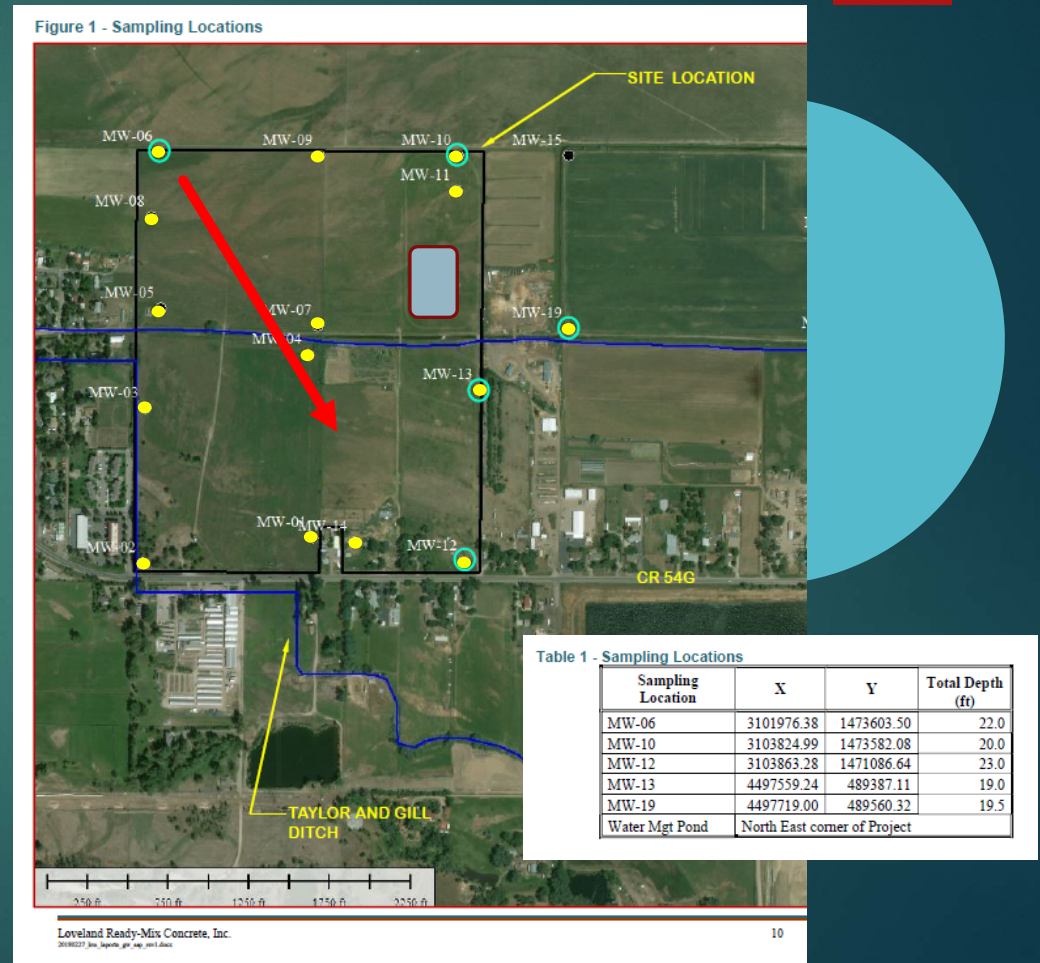
- ▶ DRMS procedure if groundwater quality may be impacted (Rule 3.1.6 and 3.1.7):
 - ▶ Establish baseline water quality
 - ▶ Require water quality monitoring, during life of the mine
 - ▶ Water quality standards based on applicable WQCC Regulation 41 Standards

Groundwater Quality Sampling Plan

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► Monitoring Locations

- 14 monitoring wells onsite (MW-01 to MW-14)
 - 4 used for quality sampling
 - 1 off-site monitoring well (MW-19)
- Water management pond



Groundwater Quality Sampling Plan

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- ▶ Baseline water sampling
 - ▶ Sample frequency:
 - ▶ 5 quarters
 - ▶ Analyte list
 - ▶ WQCC Basic Standards for Groundwater Regulation 41 table values
 - ▶ Purpose:
 - ▶ To assess and characterize pre-mining conditions
 - ▶ Must submit results to DRMS prior to initiating dewatering operations and/or exposing groundwater.
- 

Table 2 - Analyte List

Monitor Wells and Water Management Pond	
Analyte	Abbreviation
Alkalinity	
Aluminum	Al
Antimony	Sb
Arsenic	AS
Barium	Ba
Beryllium	Be
Bicarbonate	HCO ₃
Boron	B
Cadmium	Cd
Calcium	Ca
Carbonate	CO ₃
Chloride	Cl
Chromium	Cr
Cobalt	Co
Copper	Cu
Cyanide [Free]	CN
Fluoride	F
Iron	Fe
Lead	Pb
Lithium	Li
Magnesium	Mg
Manganese	Mn
Mercury (inorganic)	Hg
Molybdenum	Mo
Nickel	Ni
Nitrate	NO ₃
Nitrite	NO ₂
Total Nitrate + Nitrite	(NO ₂ +NO ₃ -N)
pH*	
Potassium	K
Selenium	Se
Silver	Ag
Sodium	Na
Sulfate	SO ₄
Thallium	Ti
Total Dissolved Solids	TDS
Uranium	U
Vanadium	V
Zinc	Zn
Conductivity (Field Measurement)	SC
Temperature (Field Measurement)	

*field measurement and lab analysis

Groundwater Quality Sampling Plan

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- ▶ Operational monitoring
 - ▶ Sample frequency: quarterly
 - ▶ Reporting: results submitted with annual report
 - ▶ Analyte List: WQCC Basic Standards for Groundwater Regulation 41 table values
 - ▶ Purpose: detect any groundwater contamination or pollution

Hydrologic Balance

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- ▶ Groundwater Quality summary:
 - ▶ DRMS' recommendation is based on the procedures outlined by Rule 3.1.6 and 3.1.7
 - ▶ LRM shall collect baseline water quality data
 - ▶ LRM shall sample the groundwater at approved locations through the life of the mine.
 - ▶ LRM shall be required to comply with the applicable WQCC standards


Hydrologic Balance

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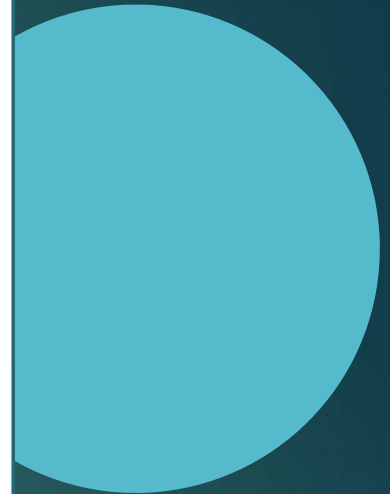
- ▶ *Concerns regarding the impact of the mining operation on the surrounding groundwater levels. Concerns regarding the effectiveness of the proposed perimeter drain.*
- 

Dewatering and drawdown

52

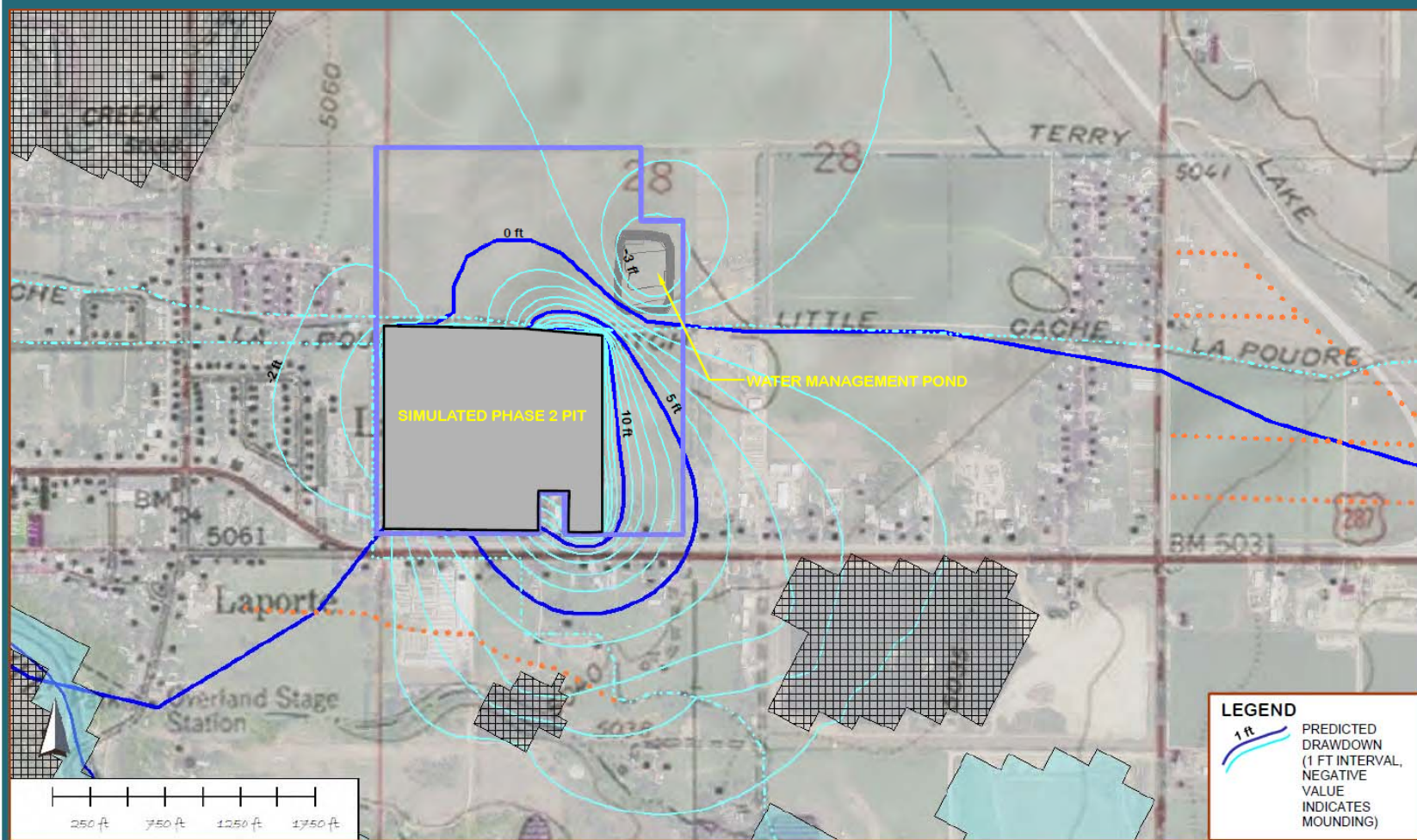
- ▶ LRM predicted effects of dewatering and drawdown of alluvial aquifer:
 - ▶ Largest off-site drawdowns
 - ▶ While mining north of Little Cache La Poudre Ditch
 - ▶ No wells known to exist in this area
 - ▶ Five wells predicted to be impacted by drawdown south of the mine.
 - ▶ Cherry, West, Morgan Timber(2) and Plantorium
- 

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PROJECT:	TASK:
350100	08
PREPARED BY:	
	

PREPARED FOR:  **LOVELAND
READY-MIX
CONCRETE**



PROJECT: 360100 TASK: 08
PREPARED BY: **TELESTO**
ENVIRONMENTAL CORPORATION

PREPARED FOR: **LOVELAND READY-MIX CONCRETE**

FIGURE 17
PREDICTED DRAWDOWN AT THE END OF
PHASE 2

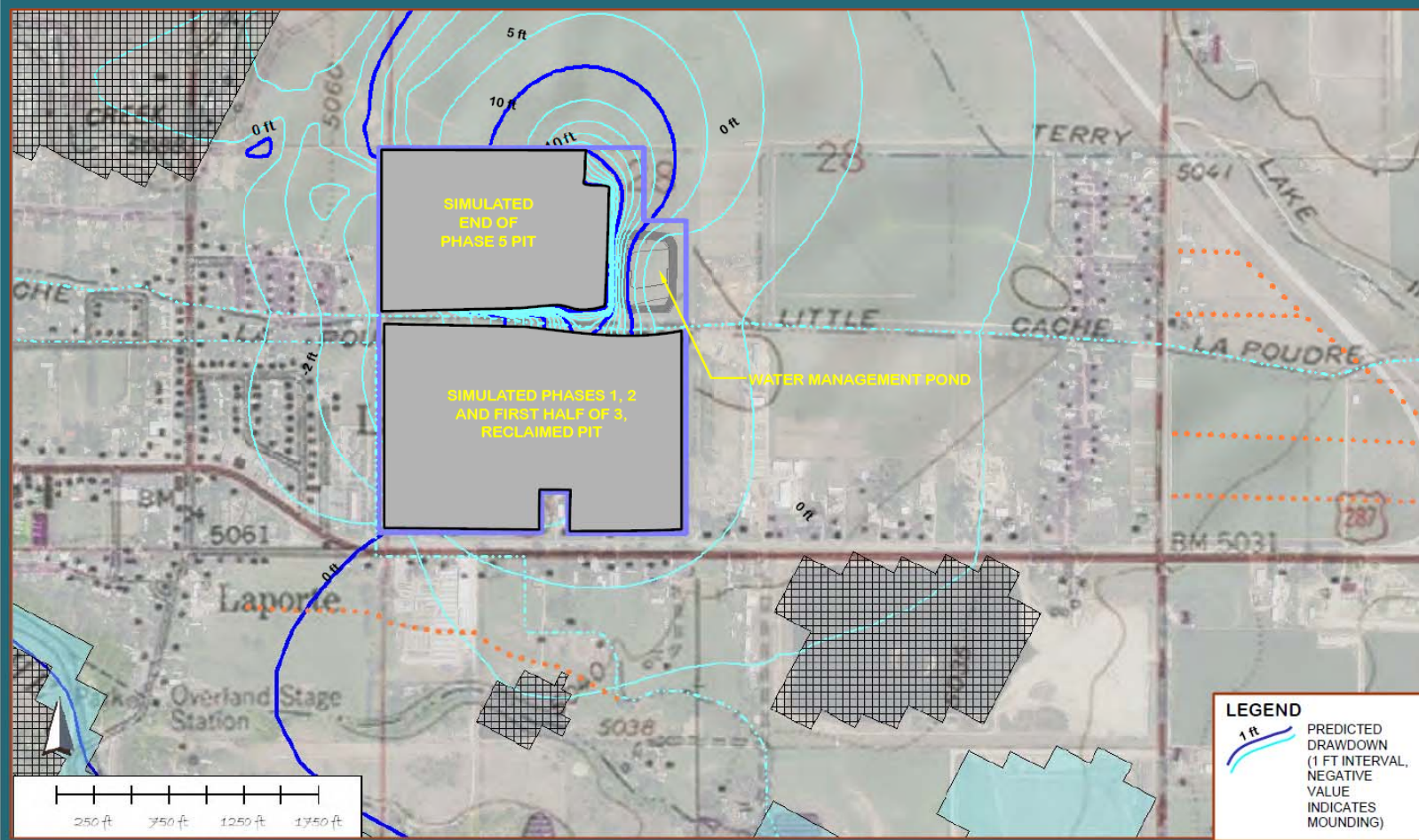


FIGURE 20
PREDICTED DRAWDOWN AT THE END OF
PHASE 5

Water Level Monitoring

56

► Monitoring Locations

- 14 monitoring wells onsite (MW-01 to MW-14)
- Neighbors wells (with permission)

► Frequency

- Monthly (onsite wells)
- Quarterly (neighbors wells)



Drawdown Mitigation Measures

57

- ▶ 5 foot drawdown trigger for possible mitigation if necessary
- ▶ Mitigation Measures
 - ▶ Provide a water tap from West Fort Collins Water District
 - ▶ Deepening wells
 - ▶ Re-introducing pumped groundwater through leach field or injection well back into the aquifer near the impacted well.

Mounding of Groundwater

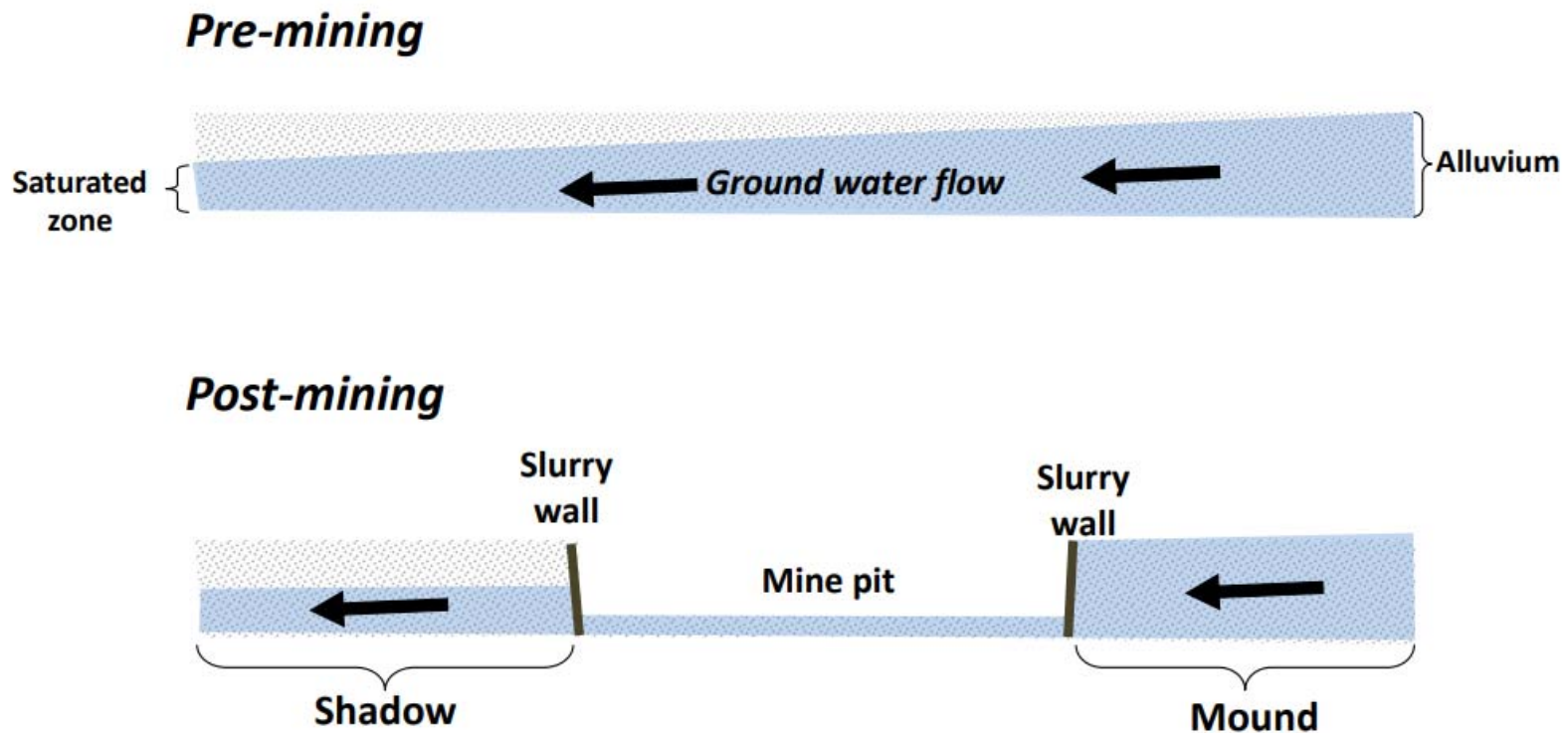
58

- ▶ Groundwater model predicts mounding may occur:
 - ▶ Up gradient of the pits west boundary
 - ▶ Adjacent to Water Management Pond

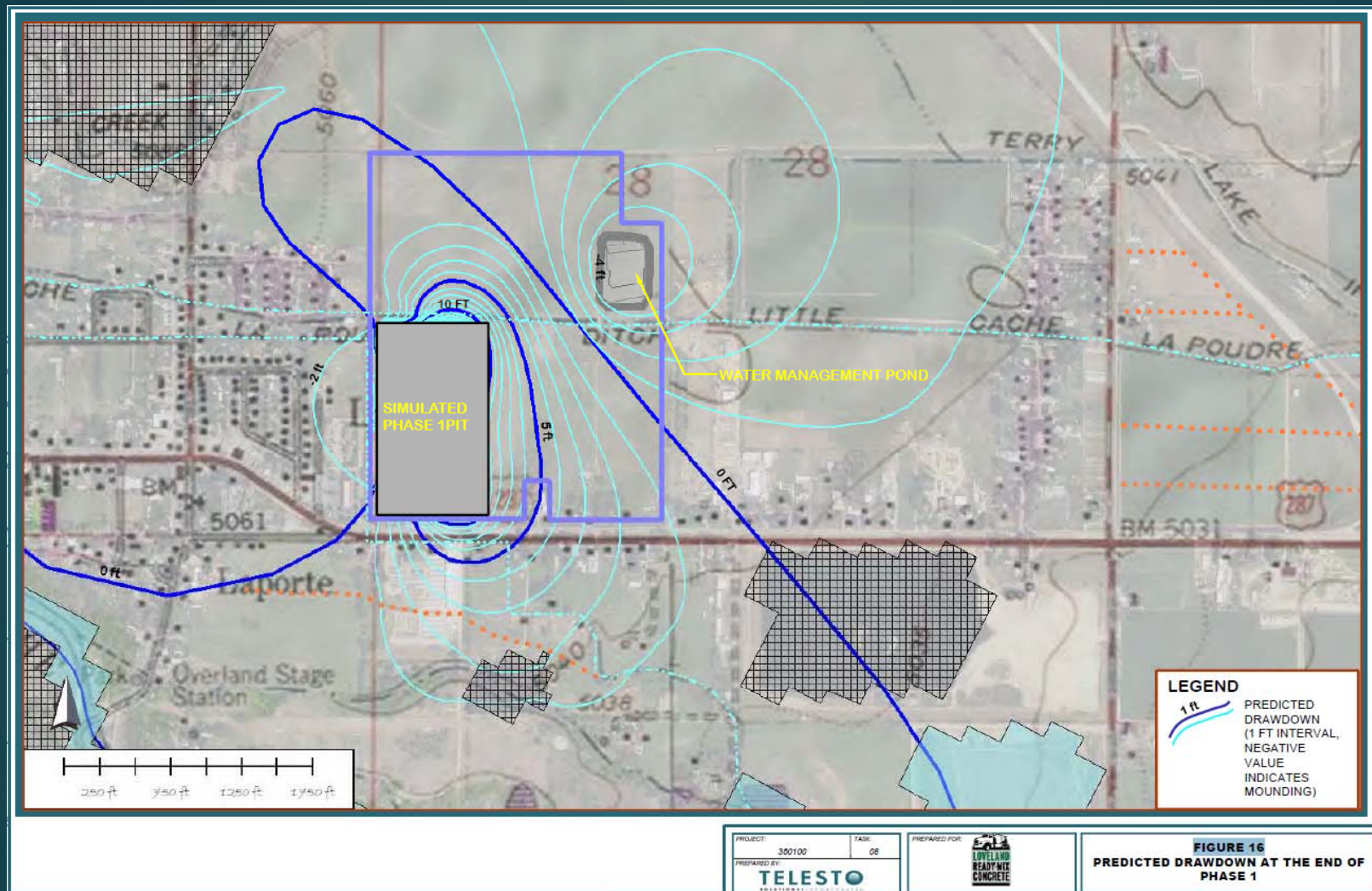


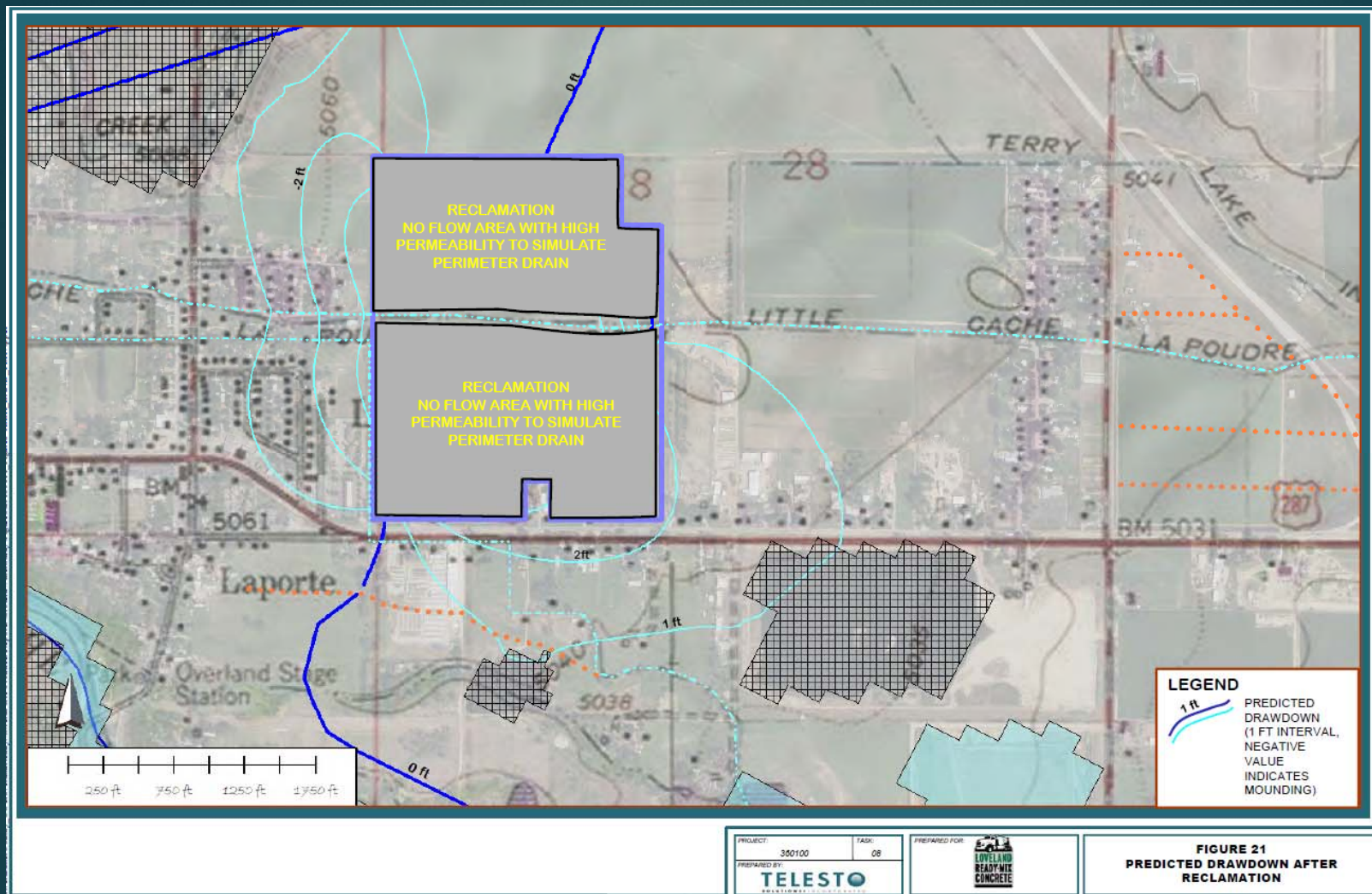
What is groundwater mounding?

59



No scale intended

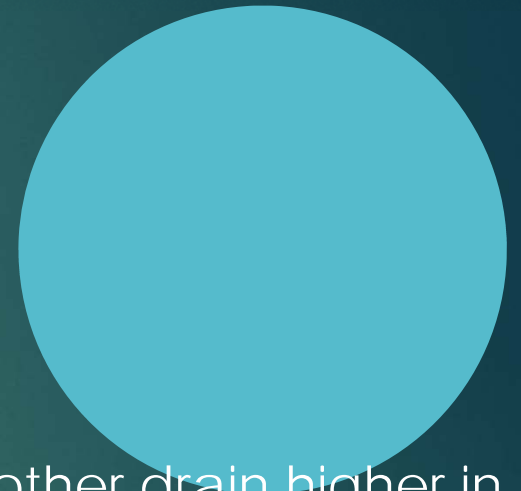




Mounding Monitoring and Mitigation

62

- ▶ Monthly water level monitoring
- ▶ 2 foot water level rise will trigger mitigation
- ▶ Mitigation measures:
 - ▶ Perimeter drain
 - ▶ Pump from the perimeter drain
 - ▶ Increase perimeter drain capacity by adding another drain higher in the profile
 - ▶ Implementing siphons from the perimeter drain



Perimeter Drain

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- ▶ LRM provided DRMS with calculations demonstrating the perimeter drain sizing should be sufficient to carry the required amount of groundwater flow around the sealed pits.
- ▶ Use of the model:
 - ▶ Predict where mounding may occur
 - ▶ Indicates LRM needs to conduct monitoring

Perimeter Drain

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- ▶ Perimeter drain should be effective in preventing mounding
- ▶ LRM shall conduct water level monitoring to verify effectiveness of the drain
 - ▶ Must notify the DRMS within 24 hours of hitting a trigger level

Hydrologic Balance

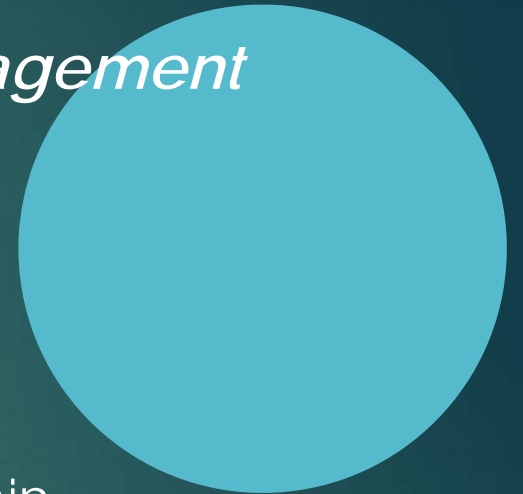
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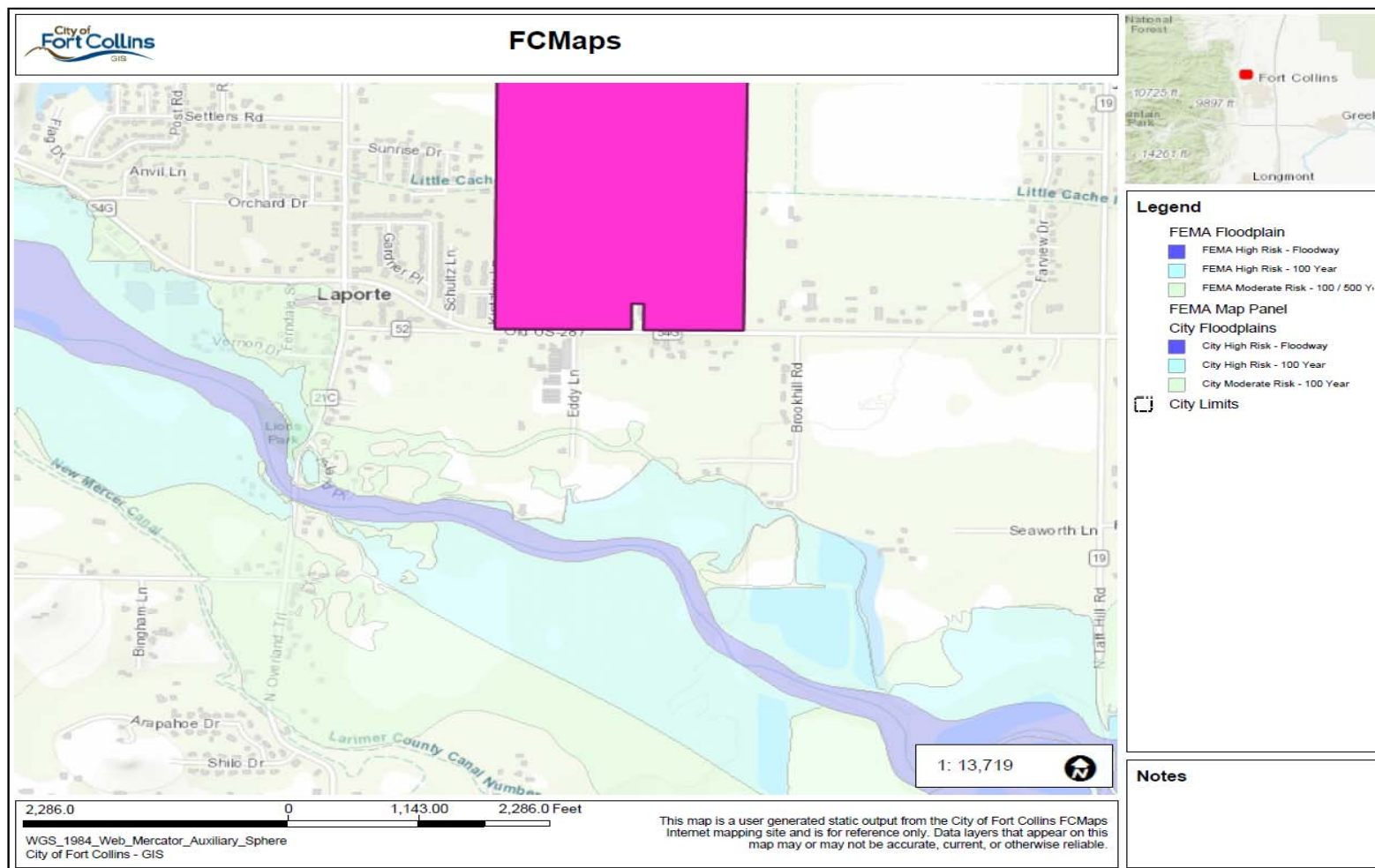
- ▶ *Concerns regarding the impact of groundwater drawdown on adjacent trees.*
 - ▶ Site not located within a riparian area
 - ▶ Adjacent ornamental vegetation likely more reliant on surface water irrigation
 - ▶ LRM's proposed plan to mitigate the impacts to adjacent well owners to insure use of their wells for irrigation continues, the Division finds the operation will not adversely affect the surrounding vegetation.

Hydrologic Balance

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- ▶ *Concerns regarding flooding, flood management and mapping.*
 - ▶ Permit boundary located outside of:
 - ▶ FEMA High Risk Floodway
 - ▶ FEMA High Risk 100 year Floodplain
 - ▶ FEMA Moderate Risk 100/500 year Floodplain





Mounding and Structure Stability

69

- ▶ March 8, 2018 – DRMS received a comment letter from No Laporte Gravel Corp.
 - ▶ Concern regarding mounded groundwater affecting the stability of structures within 200 feet of the affected area.
 - ▶ Mounding may reduce stability of footers
- ▶ Water level monitoring required
- ▶ Effectiveness of perimeter drain and mounding mitigation

Hydrologic Balance

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- ▶ The applicant has:
 - ▶ Submitted the information required by Rule 6.4.7 regarding Water Information
 - ▶ Submitted a plan that meets the requirements for minimization of disturbance of the hydrologic balance in accordance with Rule 3.1.6 and 3.1.7
 - ▶ Complied with the applicable requirements of the Act
- ▶ Pursuant to C.R.S. 34-32.5-115(4) staff and MLRB are mandated to approve

Permitting Issues

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- ▶ Whether the Applicant adequately addressed concerns related to complete Exhibits in the permit application.

Permitting Issues

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- ▶ *Concerns regarding missing application Exhibits (Exhibits C and G).*
 - ▶ These exhibits were submitted
 - ▶ Laserfiche was corrected
- ▶ *Concerns regarding the description of the site location.*
 - ▶ The Exhibit B index map meets the requirements of Rule 6.4.2
- ▶ *Concerns regarding the climate information.*
 - ▶ LRM provided climate data for Fort Collins, (Less than 4 miles away)
 - ▶ Information meets the requirement of Rule 6.4.11

Permitting Issues

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- ▶ *Concerns regarding the public notice.*
 - ▶ Public notice required by Rule 1.6.2(1)(d)(vi)
 - ▶ Location and final date for submitting comments
 - ▶ LRM's notice indicated:
 - ▶ Comments must be received by the Division not more than 20 days after the last date of publication
 - ▶ Last date of publication listed on notice.

Permitting Issues

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- ▶ *Request for Extension of Time for Prehearing Conference and Hearing from No Laporte Gravel Corp.*
 - ▶ Received February 27, 2018
 - ▶ Reason:
 - ▶ Adequacy response letter (received Feb. 15, 2018) should be considered an Amendment in accordance with Rule 1.1(6) and constitutes a new filing.

Permitting Issues

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- ▶ DRMS response to No Laporte Gravel Corp.:
 - ▶ Adequacy review response not an amendment
 - ▶ Does not propose an increase in affected land
 - ▶ Does not significantly affect the Reclamation Plan
 - ▶ Rule 1.8.1(4) – Adequacy review response details, clarifies and explains parts of the application the Division identified as adequacy issues.

Permitting Issues

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- ▶ The application is complete in accordance with C.R.S. 34-32.5-115(4)(a)
- ▶ The application was sought for a permit in accordance C.R.S. 34-32.5-109(1) for a permit pursuant to section 112 of the article
- ▶ The application satisfies the requirements of C.R.S. 34-32.5-112
- ▶ The applicant conducted and satisfied the publication and public notice requirements of C.R.S. 34-32.5-112(9)(b) and Rule 1.6.2
- ▶ Pursuant to C.R.S. 34-32.5-115(4) Staff and MLRB are mandated to approve

Reclamation Plan

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- ▶ Whether the Applicant adequately addressed concerns regarding the reclamation plan.

Reclamation Plan

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- ▶ *Concerns regarding discrepancies of the proposed post mining land use.*
 - ▶ Initial application submittal did include a discrepancy
 - ▶ Pastureland and “shelter and cover for wildlife”
 - ▶ LRM clarified the post mining land use will be pastureland
 - ▶ The reclamation plan proposed complies with Rule 6.4.5 and will allow for the creation of pastureland.
 - ▶ Rule 3.1.1 – Post mining land use should be chosen in consultation with the Landowner.
 - ▶ LRM is the Landowner

Reclamation Plan

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- ▶ *Concerns that the reclamation plan provides for an unacceptable change to the land and is inadequate.*
 - ▶ DRMS finds the post mining land use and reclamation plan to be compliant with Rule 6.4.5(2) and 3.1.1.

Reclamation Plan

80

- ▶ *Concerns that the reclamation plan does not restore the land to the pre-mining condition and the post mining topography does not restore the land to the approximate original contour.*
 - ▶ C.R.S. 34-32.5-103(19) – Reclamation definition
 - ▶ Reclamation not restoration is required
 - ▶ Not required to restore the land to approximate original contour
 - ▶ Backfilling and grading plan complies with Rule 3.1.5

Reclamation Plan

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- ▶ *Concerns that the sloping plan will not reclaim the site in a condition conducive to grazing.*
 - ▶ Reclaimed slopes will be no steeper than 3H:1V
 - ▶ 3H:1V slopes are widely used in reclamation of mining operations
 - ▶ Pit slopes only a small portion of the affected area

Reclamation Plan

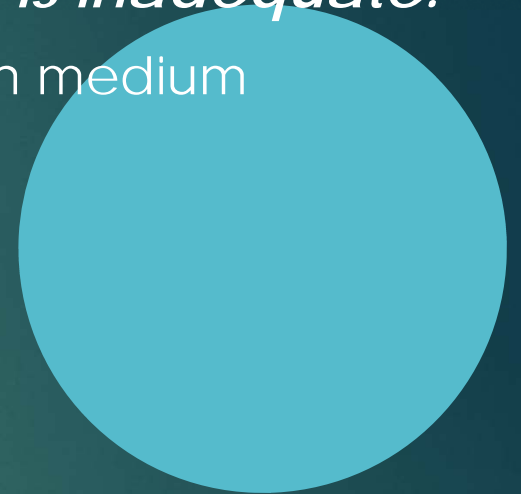
82

- ▶ *Concerns regarding the possibility of standing water remaining in the pit.*
 - ▶ Stormwater is required to infiltrate within 72 hours
 - ▶ LRM commits to obtaining the water rights to authorize the retention of stormwater if required by the Colorado Division of Water Resources.

Reclamation Plan

83

- ▶ *Concerns that the topsoil management plan is inadequate.*
 - ▶ LRM will salvage and replace three feet of growth medium
 - ▶ A & B horizon material
 - ▶ Replaced on top of overburden
 - ▶ Plan complies with Rule 6.4.5 and Rule 3.1.9



Reclamation Plan

84

- ▶ *Concerns regarding the adequacy of the seed mixture for establishing wildlife habitat.*
 - ▶ Post mining land use is Pastureland
 - ▶ Seed mixture is adequate for the proposed post mine land use

Species	Mixture Percent
Intermediate Wheatgrass	30%
Slender Wheatgrass	25%
Pubescent Wheatgrass	25%
Russian Wildrye	10%
Western Wheatgrass	10%

*Four species, seed mixes will be designed to accomplish an application rate of 65 seeds per square foot.

Reclamation Plan

85

- ▶ The reclamation plan complies with the applicable requirements of C.R.S. 34-32.5-112
- ▶ LRM must comply with the duties of an operator pursuant to C.R.S. 34-32.5-116
- ▶ The reclamation plan is complete and satisfies the requirements of Rule 6.4.5
- ▶ The application material satisfies the requirement to provide a description of how LRM will comply with the performance standards required by Rule 3.1
- ▶ Pursuant to C.R.S. 34-32.5-115(4) staff and MLRB are mandated to approve

Wildlife

86

- ▶ Whether potential impacts of operations on wildlife and wildlife habitat have been adequately addressed in the permit application.

Wildlife

87

- ▶ Exhibit H; Wildlife Information required by Rule 6.4.8:
 - ▶ Significant wildlife resources
 - ▶ Seasonal use of the area
 - ▶ Presence and population of Threatened or Endangered species
 - ▶ Description of the impact of the operation on wildlife

Wildlife

88

- ▶ Rule 3.1.8; Performance standards for wildlife protection:
 - ▶ Mining and reclamation operation shall take into account the safety of wildlife on the mine site, processing area and along access roads to the mine.
 - ▶ Must consider critical life periods (calving, migration, nesting, etc.)
- ▶ DRMS defers to Colorado Parks and Wildlife (CPW) regarding wildlife issues
 - ▶ Knox Pit is not a migration route for wildlife
 - ▶ No known raptor nests
 - ▶ Will not have an impact on the wildlife

Wildlife

89

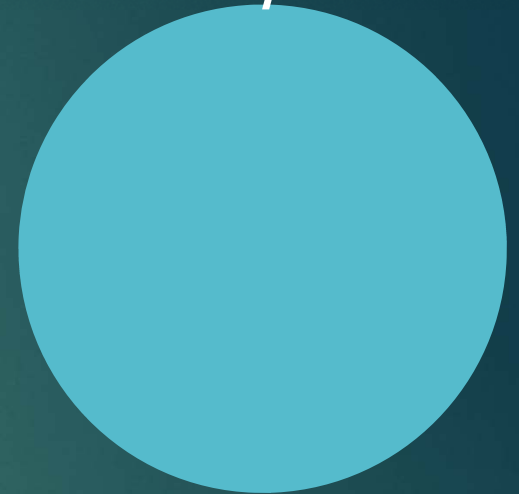
▶ *Concerns that wildlife protection measures are inadequate.*

▶ LRM's wildlife protection plan:

- ▶ phased mining plan with concurrent reclamation
- ▶ buffer zone around the Little Cache La Poudre Ditch
- ▶ safety berms around the pit excavations
- ▶ provide locations for egress from the pit area
- ▶ ten mile per hour speed limit for mine traffic
- ▶ raptor nest monitoring and mitigation plan

▶ Colorado Parks and Wildlife (CPW)

- ▶ Does not anticipate any negative impact to wildlife at this time from the proposed project



Wildlife

90

- ▶ *Concerns regarding the potential for wildlife poisoning by the consumption of reclaimed vegetation that has increased Selenium (Se) levels.*
 - ▶ Study supplied by the objectors found that elevated Se levels in the experiments conducted did not result in Se toxicosis
 - ▶ LRM sampled Pierre Shale at the contact with the alluvium
 - ▶ 1 of 5 samples yielded detectable selenium
 - ▶ LRM will cover exposed shale with a minimum of three feet of growth medium
 - ▶ LRM has committed to sampling reclaimed vegetation for Se.

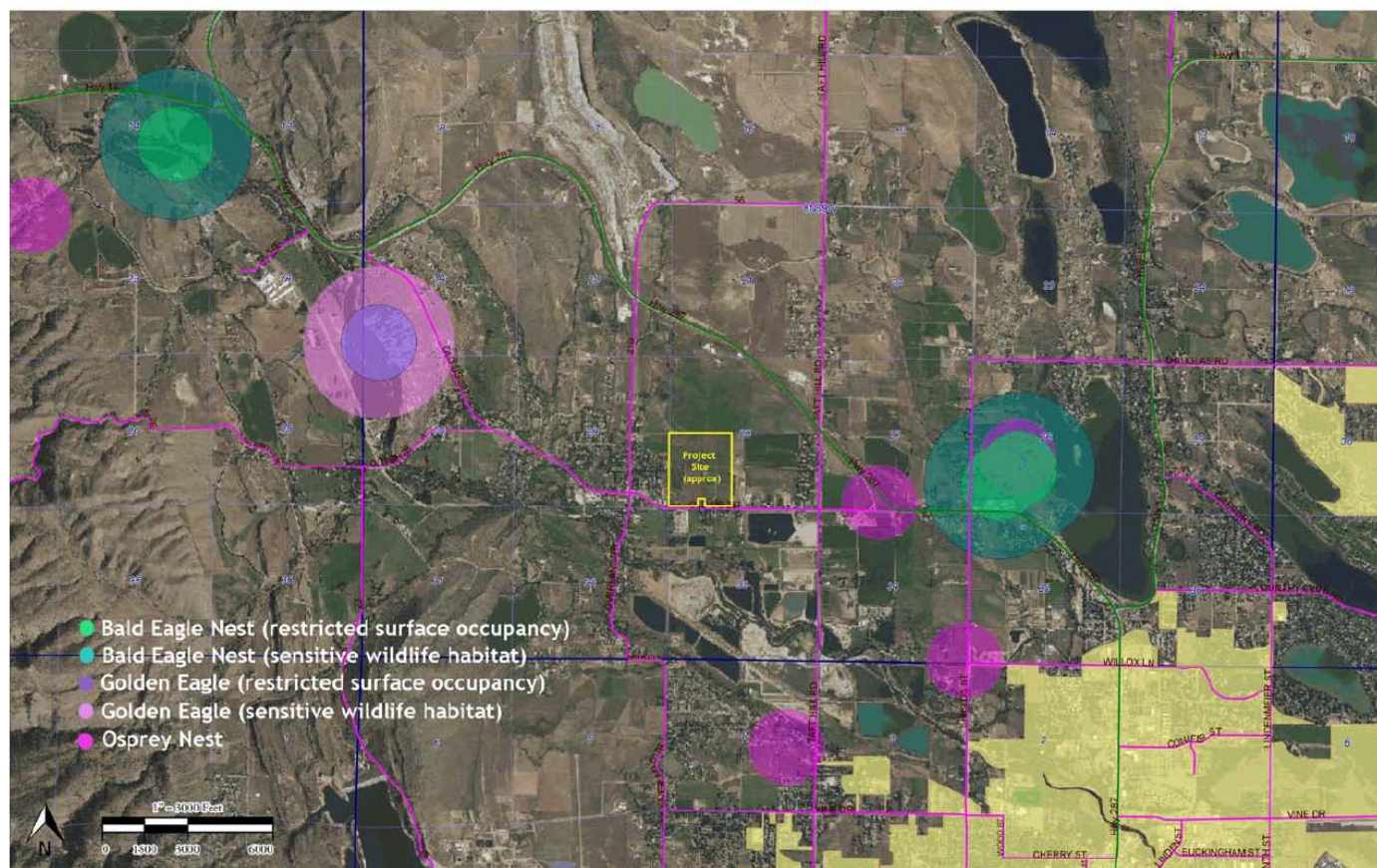
- ▶ *Request of a survey for Preble's Jumping Mouse.*
 - ▶ No critical habitats exist within the site for threatened and endangered species.
 - ▶ Critical habitat for this species has been designated by the USFWS.
 - ▶ Knox pit not within this area
 - ▶ CPW
 - ▶ Does not anticipate any negative impact to wildlife at this time from the proposed project

▶ *Concerns that the bird list contained in the application is incomplete.*

- ▶ DRMS recognizes that many species of wildlife may utilize the area and mining may temporarily displace them.
- ▶ DRMS has found a substantial amount of wildlife utilize active mine areas and reclaimed areas.
- ▶ Applicant has supplied all the information required by Rule 6.4.8
- ▶ CPW
 - ▶ Does not anticipate any negative impact to wildlife at this time from the proposed project

- ▶ *Concerns regarding the impact the mining operations will have on raptors.*
 - ▶ January 30, 2018 Avian Survey – No raptor nests found within the site or adjacent to the site.
 - ▶ Raptor nests found 1 to 4.6 miles from the site.
 - ▶ LRM commits to a raptor nest monitoring plan.
 - ▶ CPW data show no active raptor nests in the immediate area of the proposed application

Figure 5. Loveland Ready Mix Knox Project Adjacent Raptor Locations



- ▶ *Concerns regarding the impact on the migration route of deer.*
 - ▶ Proposed site is not within migration route for deer, elk and antelope.
 - ▶ Buffer zone (50 feet) on each side of the Little Cache La Poudre Ditch.
 - ▶ CPW
 - ▶ Does not anticipate any negative impact to wildlife at this time from the proposed project

- ▶ *Concerns that wildlife will not utilize the reclaimed area.*
 - ▶ Post mining land use is Pastureland not Wildlife Habitat
 - ▶ Grass species proposed can be used for wildlife cover and forage
 - ▶ Trees and shrubs will also be planted around the perimeter of the site.

- ▶ *Concerns regarding the possible increase in automobile and wildlife accidents resulting in the change in animal movement because of the mining operation.*
 - ▶ Proposed site is not within migration route for deer, elk and antelope
 - ▶ Buffer zone (50 feet) on each side of the Little Cache La Poudre Ditch
 - ▶ Phased mining and concurrent reclamation plan
 - ▶ 10 mph speed limit onsite
 - ▶ CPW
 - ▶ Does not anticipate any negative impact to wildlife at this time from the proposed project

Wildlife

98

- ▶ The applicant provided all the information required by Rule 6.4.8 for wildlife information
- ▶ The wildlife protection measures satisfies the requirement of Rule 3.1.8
- ▶ Pursuant to C.R.S. 34-32.5-115(4) staff and MLRB are mandated to approve

Closing

99

- ▶ Jurisdictional issues raised by the objectors have been addressed
- ▶ All adequacy issues are addressed
- ▶ The application has satisfied the requirements of Act and Rules
- ▶ Pursuant to C.R.S. 34-32.5-115(4) staff and MLRB are mandated to approve
- ▶ DRMS recommends approval of the application with conditions.

Conditions for Approval

100

1. No less than 60 days prior to exposing groundwater and/or initiating dewatering operations, LRM shall submit to the Division the results of the baseline water quality monitoring. The results shall include an analysis of the water quality and a discussion of any exceedances of the table value standards for the analytes evaluated within the approved water monitoring plan.

Conditions for Approval

101

2. When the Operator has completed mining in each mine phase, they shall submit to the Division an as-built or record of drawing(s) certified by a professional engineer registered in the State of Colorado of the clay liner and perimeter drain for each phase of the operation (Phases 1 through 5). The registered professional engineer certification must demonstrate the liner and drain were installed to the required specifications. The registered professional engineer certified as-built or record drawing(s) shall be submitted to the Division not less than 60 days prior to initiating mining in the next or subsequent phase.

DRMS Presentation Questions?

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