

UPDATE ON THE HERMOSA PROJECT

**Prepared for the Community Protections and
Benefits Agreement Signatories**

June 2026

BASELINE STUDIES AND PUBLIC ENGAGEMENT

BASELINE - WATER

Seeps and Springs Monitoring (85 sites)

Quarterly wet/dry mapping; field water quality parameters (e.g., flow rate, pH, temperature, conductivity); Bi-Annual water quality sampling/laboratory analysis

Groundwater Sampling and Monitoring (80 sites)

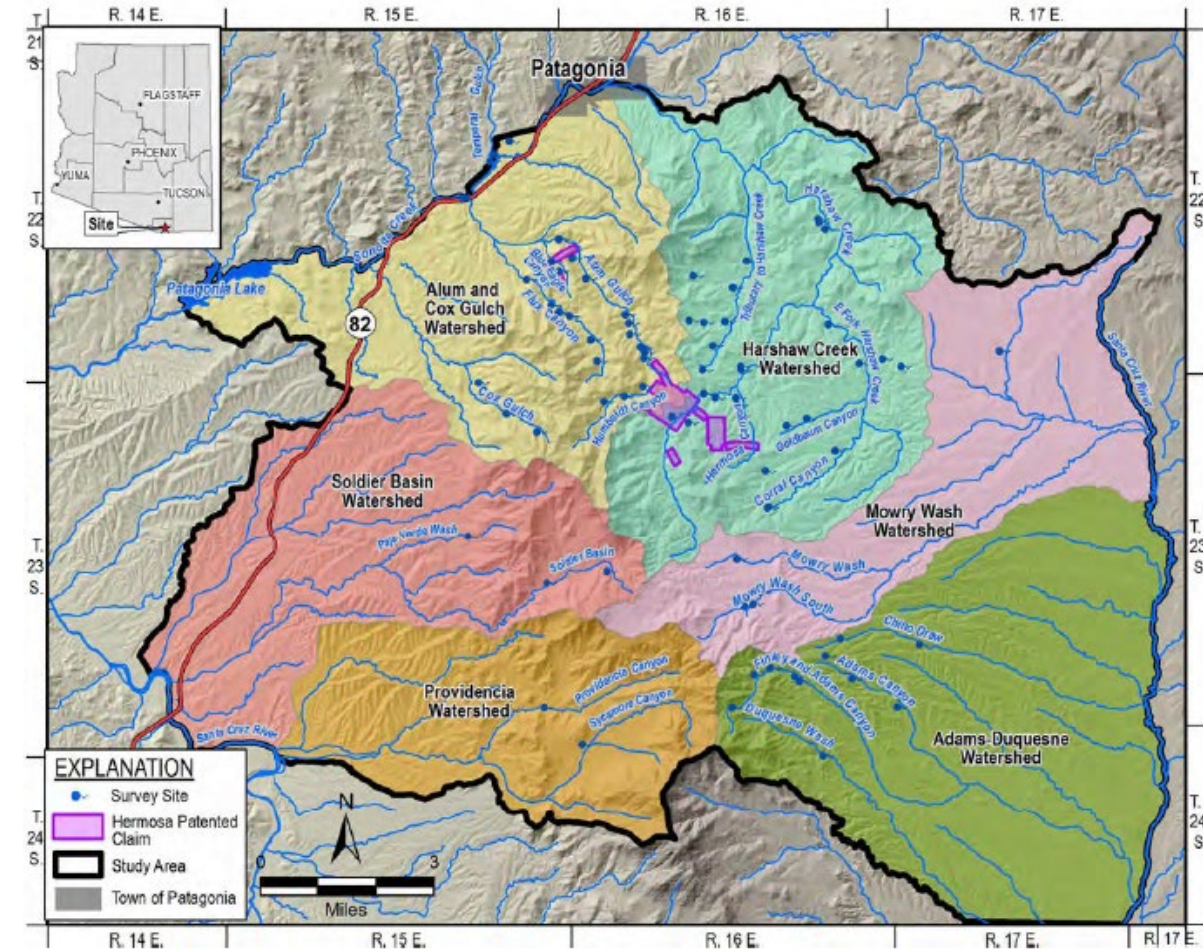
Quarterly water quality sampling and water level measurements; Continuous water level measurements; Sites include South32 wells and private community wells

Isotope Studies – precipitation, spring, and well sampling (selected sites)

Evaluation of age and distribution of groundwater recharge in the region

Comprehensive Hydrologic Studies

Data collection supports hydrologic models of the system, including groundwater and surface water; evaluated by multiple third-party reviewers, including federal agencies, consultants, and academic experts



BASELINE – AIR QUALITY

Establish baseline concentrations of metals (Mn, Pb, Zn, Ag, Cu) in air particulates with air quality monitors around local communities and along primary traffic routes from Hermosa

Publicly available information via air quality dashboard
([South32 Air Quality Dashboard - ADVM2 Dashboard](#))



Additional dust monitors to be installed prior to operations



BASELINE - BIODIVERSITY

Baseline Biological Surveys starting in 2012:

- Mexican spotted owl
- Yellow-billed cuckoo
- Northern goshawk
- Sonoran tiger salamander
- Bats
- Threatened, Endangered, Sensitive plants
- Aquatics
 - Leopard frogs
 - Gila topminnow
 - Huachuca springsnail
 - Huachuca water umbel
- Vegetation surveys (noxious/invasive plants & riparian plants)
- Small mammals
- Butterflies and moths



BASELINE – CULTURAL RESOURCES

Over 30,000 acres surveyed for cultural resources – included voluntary surveys of private lands

Tribal engagement since 2019 with 12 tribes

Data & feedback used in project designs to avoid cultural sites and respect tribal values

Large survey coverage allowed for project adaptations



PUBLIC ENGAGEMENT

South32 open houses starting in 2019 and site tours

Community Advisory Panel created in 2021 for on-going community feedback

Public feedback considered prior to submittal of the Mine Plan of Operations to the USFS:

- Primary access (avoid long term use of Harshaw Road) – hence design of the Primary Access Road (PAR) along Flux Canyon Rd
- Avoiding town of Patagonia for heavy trucks – hence creation of the Cross Creek Connector bypass road
- Alternative for discharge down Harshaw Creek – preference for mechanism to retain as much water in the mountains, hence proposal of Rapid Infiltration Basins (RIBs)
- Lighting Plan development with consultation from the Whipple Observatory

Publication of proposed Mine Plan of Operations ahead of release from USFS for NEPA

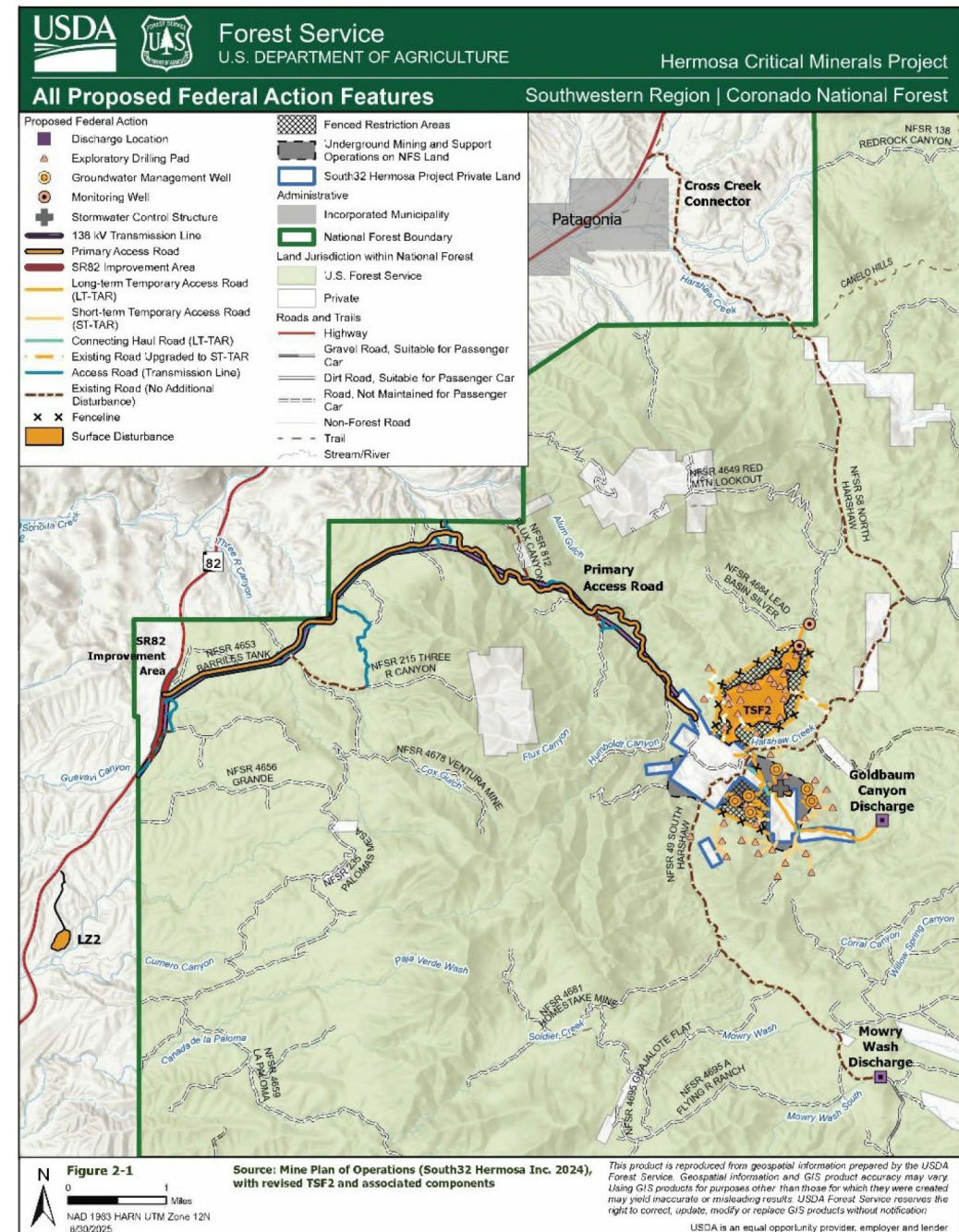
USFS engagement – 120 days for public input into the NEPA review scope and content; in-person and virtual open houses:

- Alternative to RIBs for discharge into other drainages (Goldbaum and Mowry)
- Equestrian riding / hiking underpasses along PAR
- Wheel washes

SELECTED ALTERNATIVE

SELECTED NEPA ALTERNATIVE

- **Mining and Exploration:**
Underground mining and exploration from beneath USFS land (expansion)
- **Access:** New Primary Access Road (Flux to SR82) that avoids Patagonia
- **Power:** new 138kV transmission line
- **Tailings Storage:** new TSF2 northeast of S32 private lands with 2 monitoring wells
- **Surface Exploration** on USFS land
- **Water Management:** Discharge split 3 ways (Harshaw and two outfall locations). Distributed recharge reduces discharge amount going into Harshaw Creek



PROJECT MITIGATION & PROTECTIVE MEASURES

Consideration of project mitigation is a continuous process that occurs from project conception through the NEPA process:

- Roughly 135 mitigation & protective measures will be implemented
 - Design Features/Environmental Protection Measures – committed to in the Mine Plan of Operations
 - Conservation Measures for threatened and endangered plants and animals
 - Avoidance project design features and mitigation measures produced in support of National Historic Preservation Act (NHPA) Consultation
 - Additional mitigation measures as directed by the USFS
- Standard permit conditions and best management practices

These project-specific avoidance, minimization, and mitigation strategies have been formulated based on scoping, comment period, interdisciplinary, and interagency inputs.



ENVIRONMENTAL PROTECTION AND MITIGATION MEASURES

PROJECT PROTECTIVE MEASURES – WATER QUANTITY

Water Monitoring and Mitigation Plan. Develop and implement a plan for water monitoring and mitigation in the Action Area for seeps/springs and wells.

- Establishes adaptive management approach with an emphasis on use of Nature-Based Solutions (NBS)

Well protection Program. Ensure continued access to water by private and public well users.

Passive closure design. The Project is designed to eliminate the need for perpetual water treatment beyond the life of the mine

Recycling and filtration. Designed so that water consumption is reduced, by incorporating multiple recycling loops and filtering for both tailings and concentrates.

- Enables use of dry stack tailings technologies

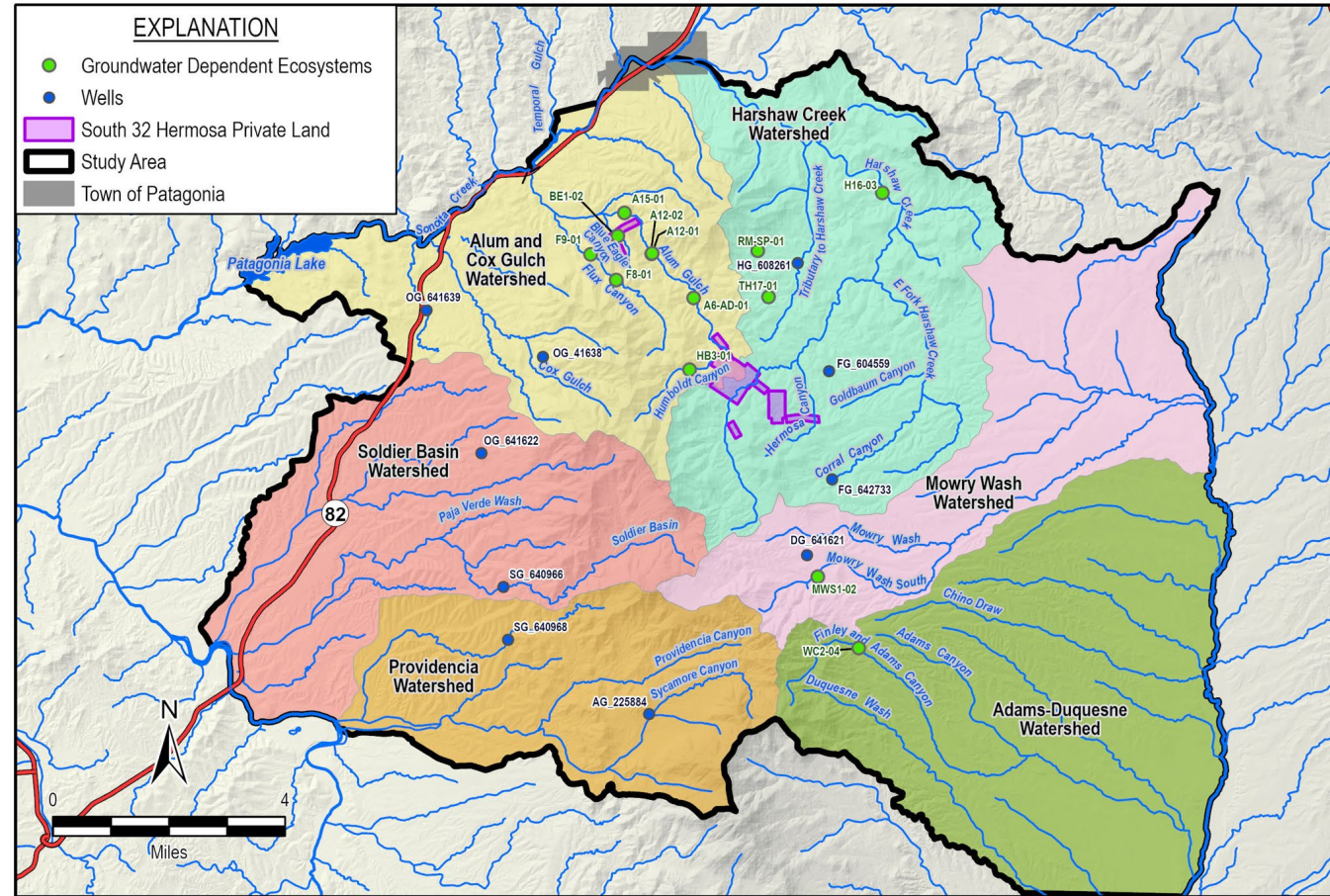


Figure 1. Map Showing all GDEs and Wells on NFS Land for Long-term Monitoring

PROJECT PROTECTIVE MEASURES – WATER QUALITY

Water Quality Monitoring Plan. Monitoring of surface water and groundwater downstream of treated water discharge into Harshaw Creek

- Goes beyond state permit requirements
- Includes public data reporting in EPA water quality database

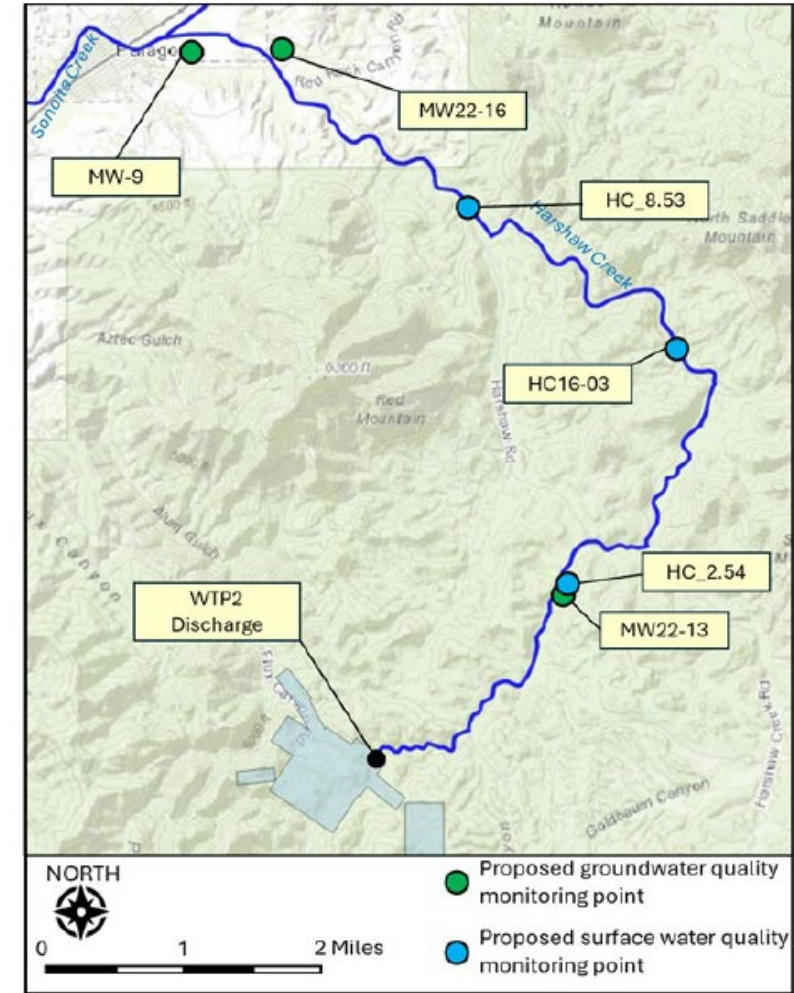
Design for Climate Change. Incorporated into the operational designs for new tailings storage facility and associated stormwater conveyance structures

Wheel wash. Vehicles exiting the mine site will pass through wheel wash station to reduce track out risk

Water Monitoring and Mitigation Plan. Monitoring discharge locations with adaptive management to address potential erosion/water quality issues.

WTP1/WTP2 Operations. Discharges from WTPs controlled to meet strict surface and groundwater quality standards

Figure 1. Proposed water quality monitoring locations



Engineered controls. Engineered control equipment (e.g., dust collectors) at crushing and process areas; selective catalytic reduction and oxidation catalysts for the natural gas generators; fully enclosed loading areas for concentrate; use of sealed containers for concentrate & oxide ore.



PROJECT MITIGATION – BIODIVERSITY

Wildlife Friendly Crossings. Incorporated five oversized wildlife- and equestrian-friendly crossings (concrete box culverts at 14' high) along the PAR crossing to reduce potential conflict with vehicles and increase habitat permeability.

- Includes camera monitoring to detect wildlife use

Reduced speed limits and remote monitoring of South32 vehicles

Biodiversity monitoring and management plans:

- Noxious and Invasive Plant Monitoring and Management Plan
- Aquatic Invasive Wildlife Monitoring and Management Plan
- ESA Wildlife Monitoring Plan
- Spotted Cats Monitoring Plan

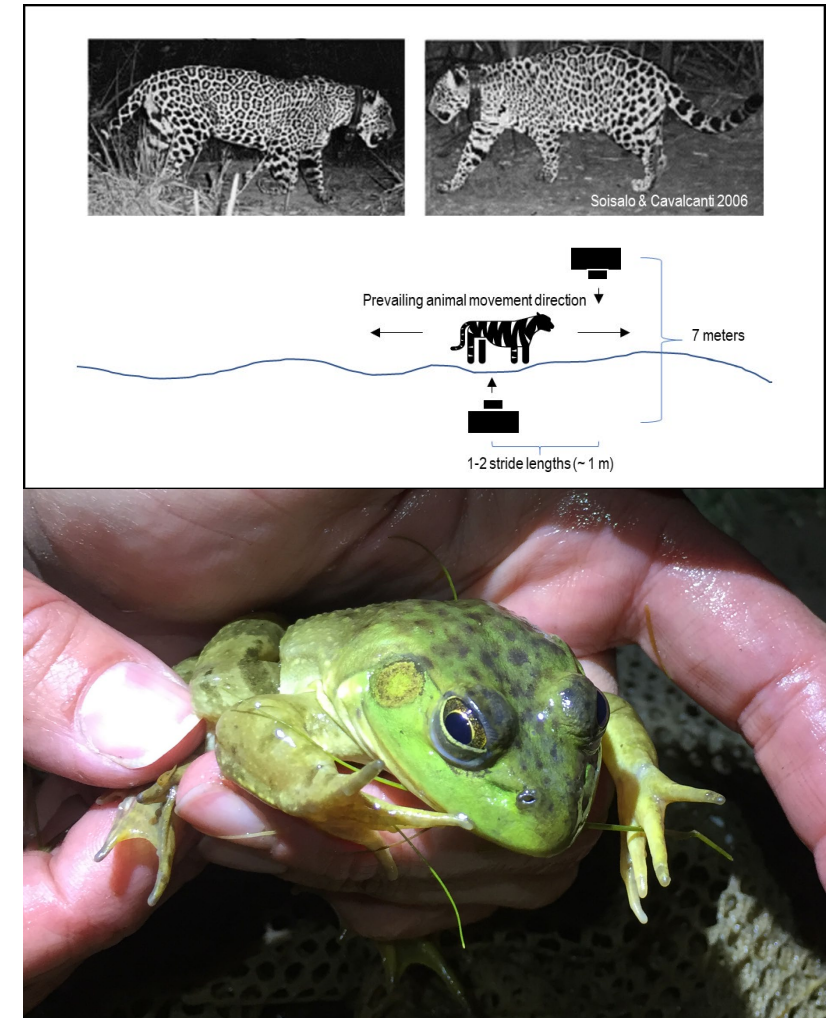
Noise and light minimization during bird breeding season.

Wildlife Deterrents. bird deterrents in the UDCP; caps on fence posts; diverters on power lines and fences

Reduced charge weights for blasting near threatened and endangered plants/animals.

Bat monitoring.

Pre-Construction Sensitive Plant Survey and Seed Collection/Preservation.



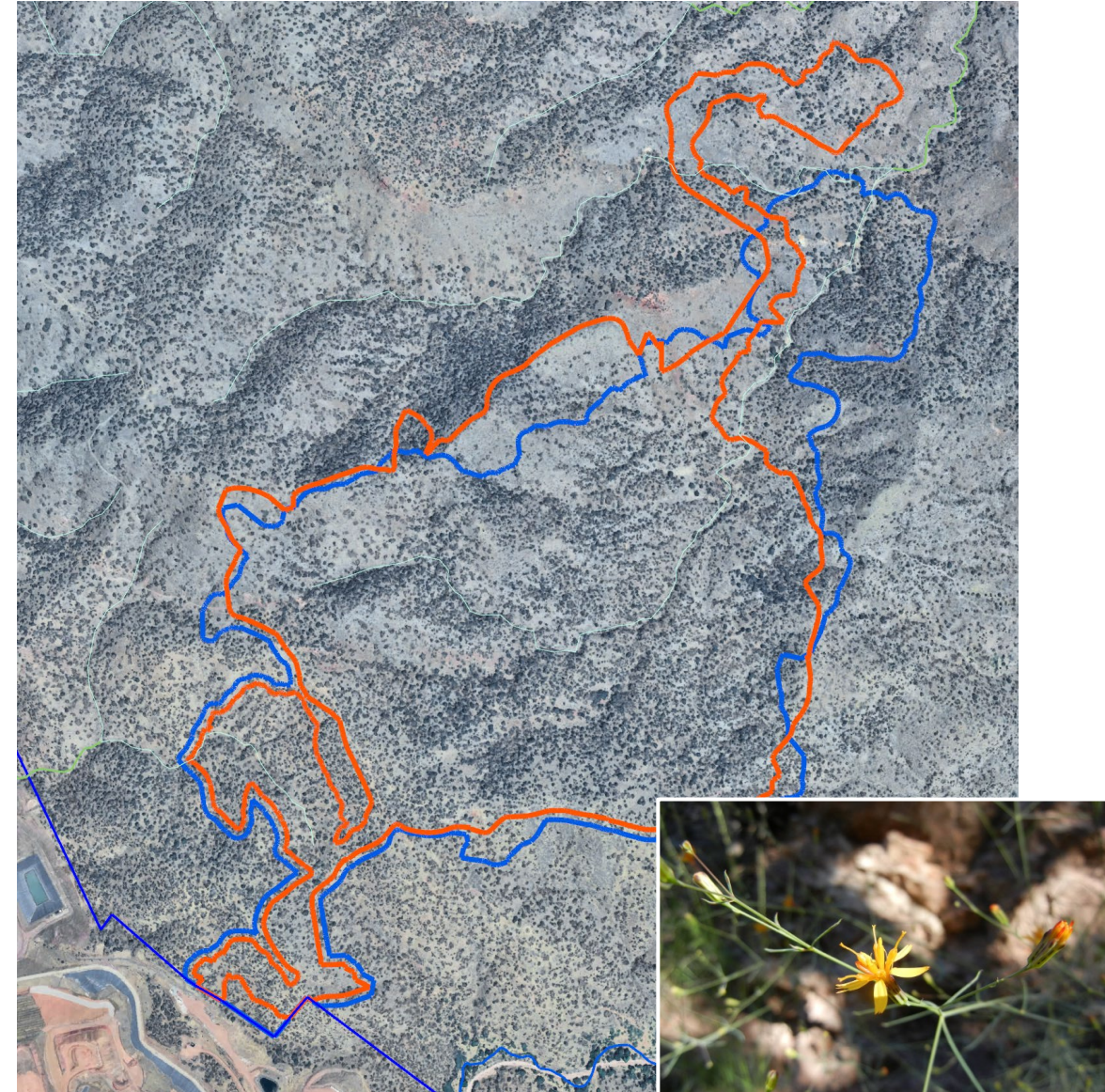
PROJECT MITIGATION – BIODIVERSITY

Proactively surveyed for beardless chinchweed, an endangered plant, ahead of regulatory requirement

- Found 41 plants within original tailings storage footprint
- Early detection allowed for opportunity to redesign the footprint to avoid directly impacting the plants

Additional Measures for chinchweed protection:

- Proactive seed collection & preservation
- Additional preconstruction surveys
- Development of plan to monitor known populations through life of project with adaptive management if impacts occur
- Reductions in blasting charge weights near known populations
- Construction monitoring of plants (watch for possible impacts from vibration, erosion, dust, etc.)



PROJECT MITIGATION – CULTURAL RESOURCES

South32 and UNSE are required to implement Plans to ensure adverse effects on historic properties are avoided or mitigated.

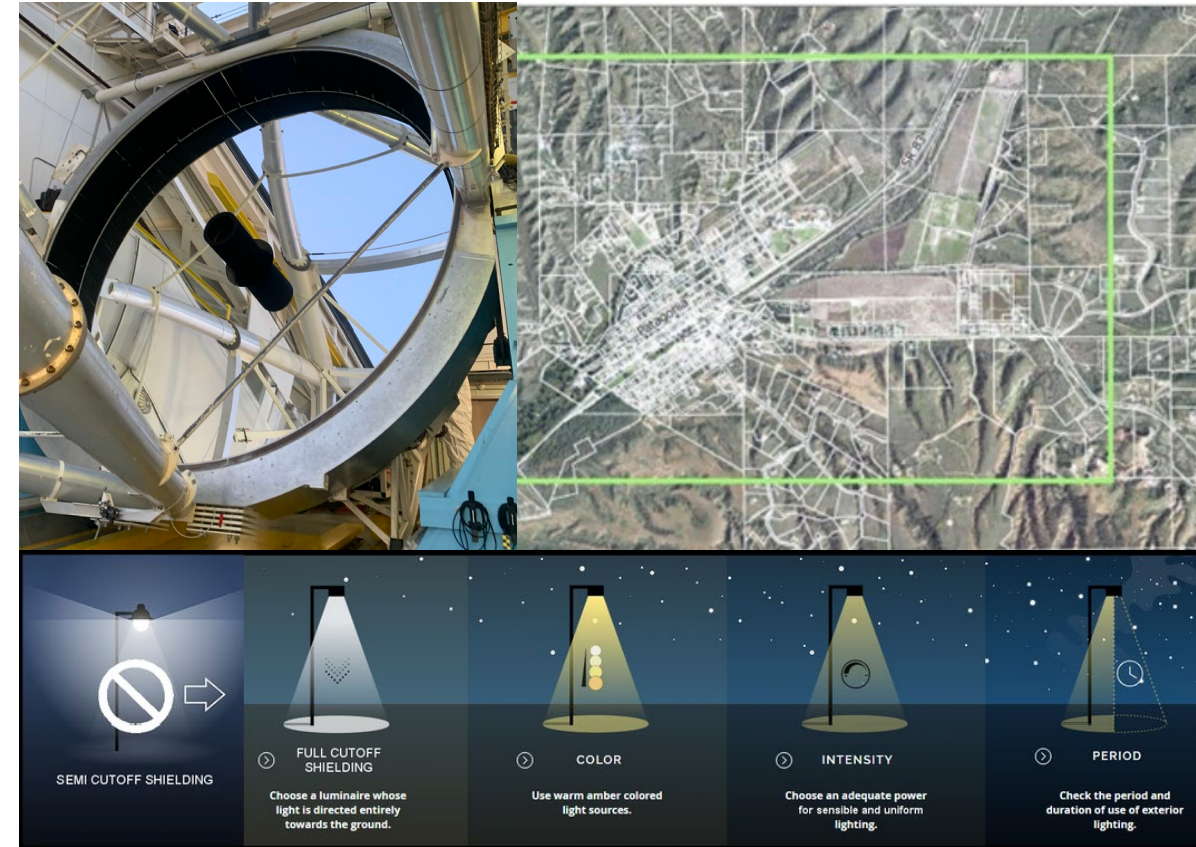
- **Avoidance** – Project infrastructure was designed to avoid impacts to prehistoric sites (e.g., discharge location, road placement and widths, etc.)
- **Project Level Mitigation** – GIS StoryMap made available to the public that will provide general information about the region while specifically highlighting the history and mining landscape. The following topics will be included in the StoryMap:
 - Overview of the culture history of the Patagonia Mountains including Prehistoric and Historic periods
 - Overview of the geologic history of the Patagonia Mountains and the landscape of the upper Santa Cruz River and Sonoita Creek
 - History of the Patagonia Mining District

- **Site-specific Mitigations** – Each site that could be impacted has a treatment plan developed to avoid or mitigate impacts. Exs:
 - Archaeological monitoring requirements
 - Data recovery Studies
 - Flagging to ensure sites/features not disturbed



OTHER PROJECT MITIGATIONS/COMMITMENTS

- No industrial facilities inside the Community Preservation Zone
- No ore or concentrate transportation through Town of Patagonia
- Mandatory bussing of workers and contractors
- Outdoor lighting plan developed in consultation with Whipple Observatory
- Daytime construction along PAR nearest Flux residents
- Workforce Development and Local Procurement Program
- Track out reduction – wheel and vehicle washes; sealed containers to transport ore and concentrate; implementation and maintenance of stormwater controls; dust management



Adapted from Mont-Megantic Dark Sky Reserve

OTHER PROJECT MITIGATION AND PROTECTIVE MEASURES

- **Lighting.** Verification using a luminance meter to ensure lighting complies with Site Lighting Plan.
- **Recreation.** Provide limited public access to historic Harshaw Townsite & Finley House on parcel 105-49-004. Eg. annual guided public tour.
- **Recreation and Public Safety.** Support the development of a multiple-use trail system to accommodate cyclists, pedestrians, and equestrians displaced by project operations, including mine-related traffic.
- **Range.** Where treated-water discharge attracts permitted livestock, additional mitigation may be implemented to reduce localized impacts to channel condition or groundwater-dependent ecosystem function.
- **Fire Safety and Response Plan.** Plan to address fire safety and response procedures.



