

**2024 ANNUAL MINING AND RECLAMATION REPORT**

***TILDEN MINING COMPANY L.C.***

***METALLIC MINERAL MINING PERMIT # 2***



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**2024 ANNUAL MINING AND RECLAMATION REPORT – TILDEN MINE**

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## EXECUTIVE SUMMARY

In 2024, Tilden mined 21,610,000 LT of ore from the pit and mined 38,030,000 LT of rock stripping to stockpiles. Tilden's rock to stockpiles was primarily placed in the CD3 pit backfill, with some material stockpiled in the Tilden West rock stockpile and used in other project areas.

In 2024, Tilden mined a total of 66,000 LT of glacial till overburden. Most of this overburden was placed on the Tilden North Stockpile with the remainder stockpiled for future use on the faces and benches of finalized dump lifts.

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## MINE DEVELOPMENT

The Empire Pit footprint has not changed since 2016. For 2024, the Empire Mine remained in an indefinitely idled state, however, the Tilden Mine continued extraction from within the historic Empire Pit footprint. In 2024, the Empire pit footprint did not change from 2023. In 2024, Tilden mined 220,000 LT of ore and 65,000 LT of rock stripping from the Empire pit.

In 2024, the Tilden pit footprint did not change from 2023. In 2024, 21,390,000 LT of ore and 37,970,000 LT of rock stripping were mined from the Tilden pit.

In 2024, 36.4M LT of Tilden stripping was sent to the CD3 backfill, 1.3M LT was sent to the Tilden West Stockpile, with the remainder utilized for construction of permanent roads, access points, projects, or other uses.

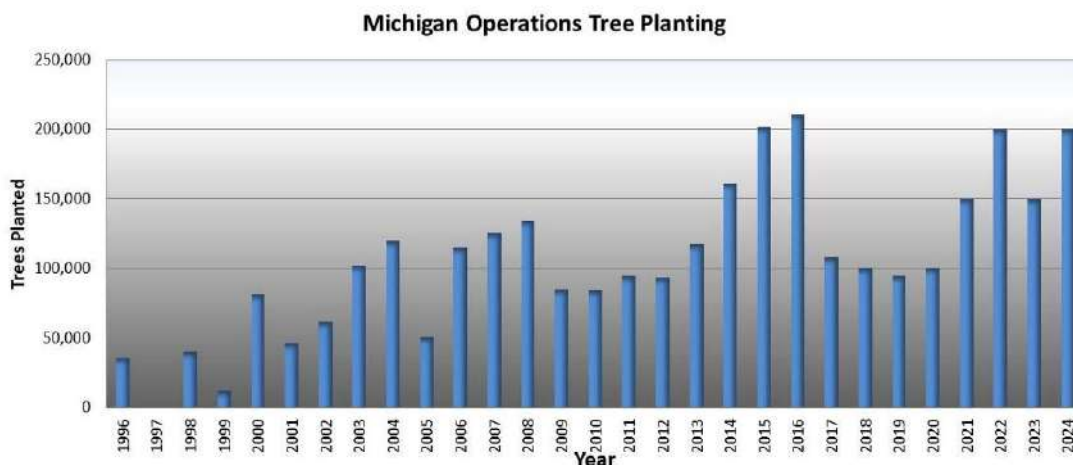
In 2025, mining is planned within the current Tilden and Empire footprints. The plan for 2025 is for Tilden to mine a total of 22.5M LT of ore from the pit and 34.3M LT of rock stripping to stockpiles. Rock stripping will primarily be sent to the CD3 backfill and stockpile.

## BACK-FILLING EXISTING PITS

In 2025, Tilden rock stripping will continue to be used to backfill the CD3 pit.

## ROCK STOCKPILE RECLAMATION

Concurrent reclamation activities in 2024 at the Tilden mine included covering the faces and the benches of stockpiles with overburden and the planting of trees, shrubs, and grasses on areas requiring coverage.



In 2024 tree, shrub, and pollinator plantings occurred on 12 acres on the benches of the stockpiles at Tilden. Species selection and planting methodologies continued to follow historical practices that have proven to be successful in the conditions at the Tilden Mine. Pollinator species plantings were added in 2024 to increase species diversity on the stockpiles. The majority of the species were mixed at the planting sites to mimic some of the regional forest types such as aspen-birch and northern dry mesic forests. Bench aspects were also considered during planting and species tolerant of dry conditions were planted in areas with southern exposure. Only containerized stock was used. The anticipated 2025 trees, shrub, and pollinator species will continue to utilize species that have proven successful.

Tree Seedling Plantings			
Common Name	Genus species	Planted in 2024	Anticipated for 2025
Balsam Fir	<i>Abies balsamea</i>	47,700	
Yellow Birch	<i>Betula lutea</i>	7,400	13,500
White Birch	<i>Betula papyrifera</i>	7,400	13,500
Tamarack	<i>Larix laricina</i>	-	-
Jack Pine	<i>Pinus banksiana</i>	-	-
White Spruce	<i>Pinus glauca</i>	19,200	59,000
Red Pine	<i>Pinus resinosa</i>	44,000	29,500
White Pine	<i>Pinus strobus</i>	43,600	29,500
Big Tooth Aspen	<i>Populus grandidentata</i>	-	-
Quaking Aspen	<i>Populus tremuloides</i>	-	-
Red Osier	<i>Cornus Sericea</i>		-
Red Oak	<i>Quercus rubra</i>	17,300	5,000
White Cedar	<i>Thuja occidentalis</i>	13,400	-
Total		200,000	150,000

Pollinator Species Plantings			
Common Name	Genus species	Planted in 2024	Anticipated for 2025
Coreopsis	<i>Coreopsis spp.</i>	475	1200
Butterflyweed	<i>Asclepias tuberosa</i>	300	750
Lupine	<i>Lupinus perennis L.</i>	375	950
Black eyed susans	<i>Rudbeckia hirta</i>	100	250
Milkweed	<i>Asclepias syriaca L.</i>	375	950
Purple cone	<i>Echinacea purpurea</i>	375	900
Total		2,000	5,000

A total of 49 acres of overburden on the Tilden North stockpile were seeded with MDOT TGM seed mix combined with a DOT flowering species seed mix was applied in 2024. The fertilizer generally used with this mix was 20-20-0 NPK at 130 lbs/acre. The 2025 seeding plans include the application of the MDOT seed mix combined with a DOT flowering species seed mix on 92 acres on the stockpiles at the Tilden Mine.

#### TILDEN MINE – GRIBBEN TAILINGS BASIN

2024 reclamation activities at the Gribben Tailings Basin included crimping hay mulch into the surface of the tailings beaches, aerial applications of hay mulch dropped onto the tailings beach surfaces via helicopter, applying biosolids to the exterior slopes of the water dam and upstream dikes, and seed/fertilizing/mulching the exterior slopes of our upstream dikes.

Hay mulch was applied to the surface of the tailings beaches at a rate of 1.5-2.0 tons per acre. Once applied, the hay was crimped into the tailings surface. Approximately 235 acres of total coverage via ground equipment was applied in 2024. Additionally, approximately 3,600 large round hay bales were mulched and aerial applied via helicopter to the Gribben South Tailings Basin in November and December of 2024 with an estimated coverage of 900 acres. Total hay bales used in 2024 at Gribben Basin for dust control and reclamation totaled 4,620, with a remaining inventory going into 2025 at 1,000 more. Ground and aerial mulch applications are planned for 2025.

There was one biosolids application at the Gribben Basin in 2024. Between September 13<sup>th</sup> and November 12<sup>th</sup>, 325,560 gallons were applied to the downstream slopes of the upstream dikes and water dam as a soil amendment with a solids concentration of 4.9%, totaling 13.5 acres of surface coverage. The biosolids were applied at a rate of 4.6 dry tons per acre. In 2025, a spring and fall application is planned.

28 acres of downstream slope and bench reclamation on Gribben Tailings Basin was seeded/fertilized/mulched in 2024. 19-19-19 fertilizer was utilized at a rate of 300 lbs per acre. Mulch was applied at a rate of 2 tons per acre over top for protection. The seed mix and application rate consist of the following:

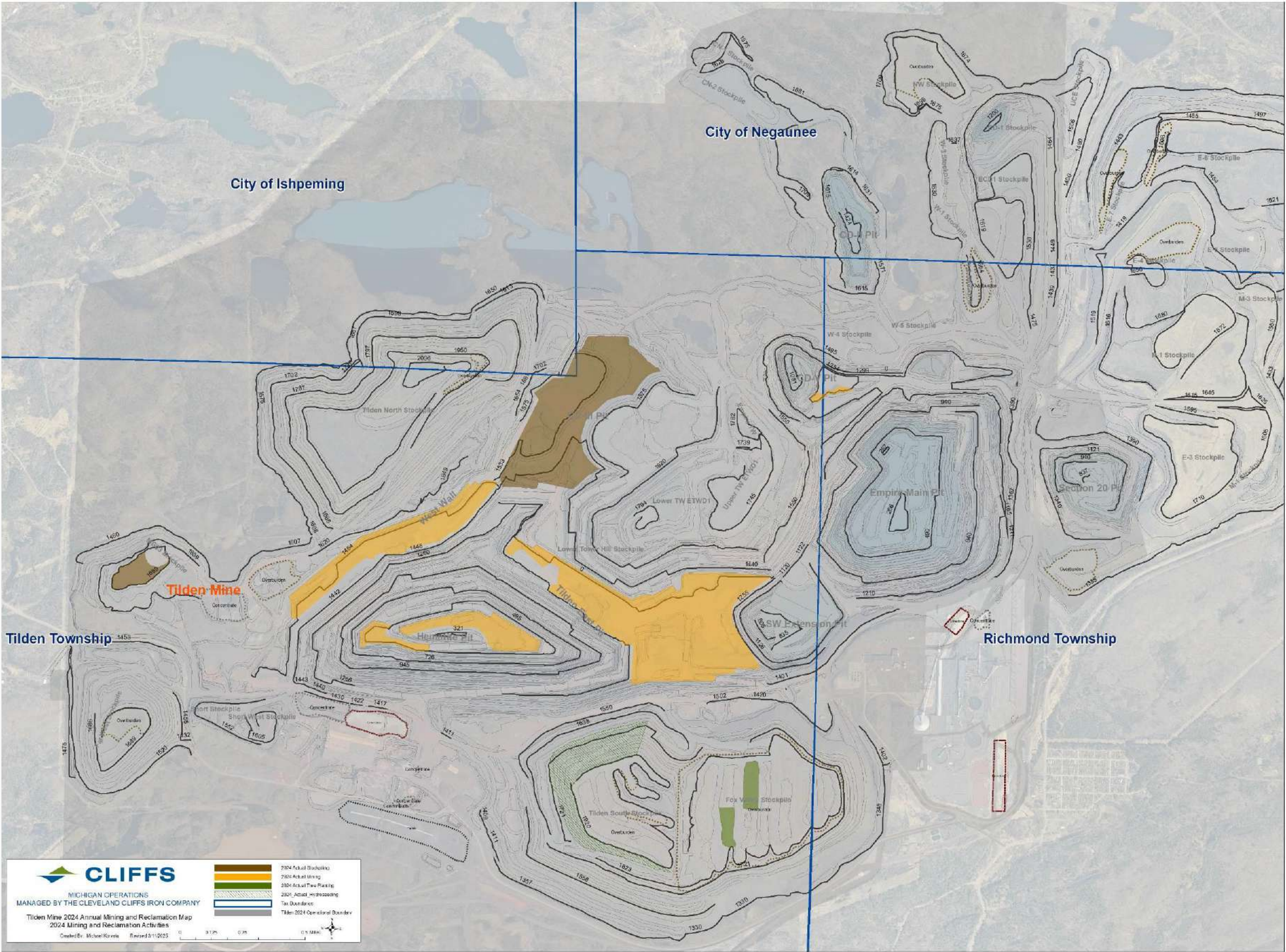
- 9 lbs/acre - Kentucky Bluegrass
- 18 lbs/acre - Perennial Ryegrass
- 27 lbs/acre - Hard Fescue
- 36 lbs/acre - Creeping Red Fescue
- 60 lbs/acre – Oats

Pre and post dike construction slopes are being planned for seed/fertilize/mulch in 2025.

## APPENDIX: RECLAMATION MAPS

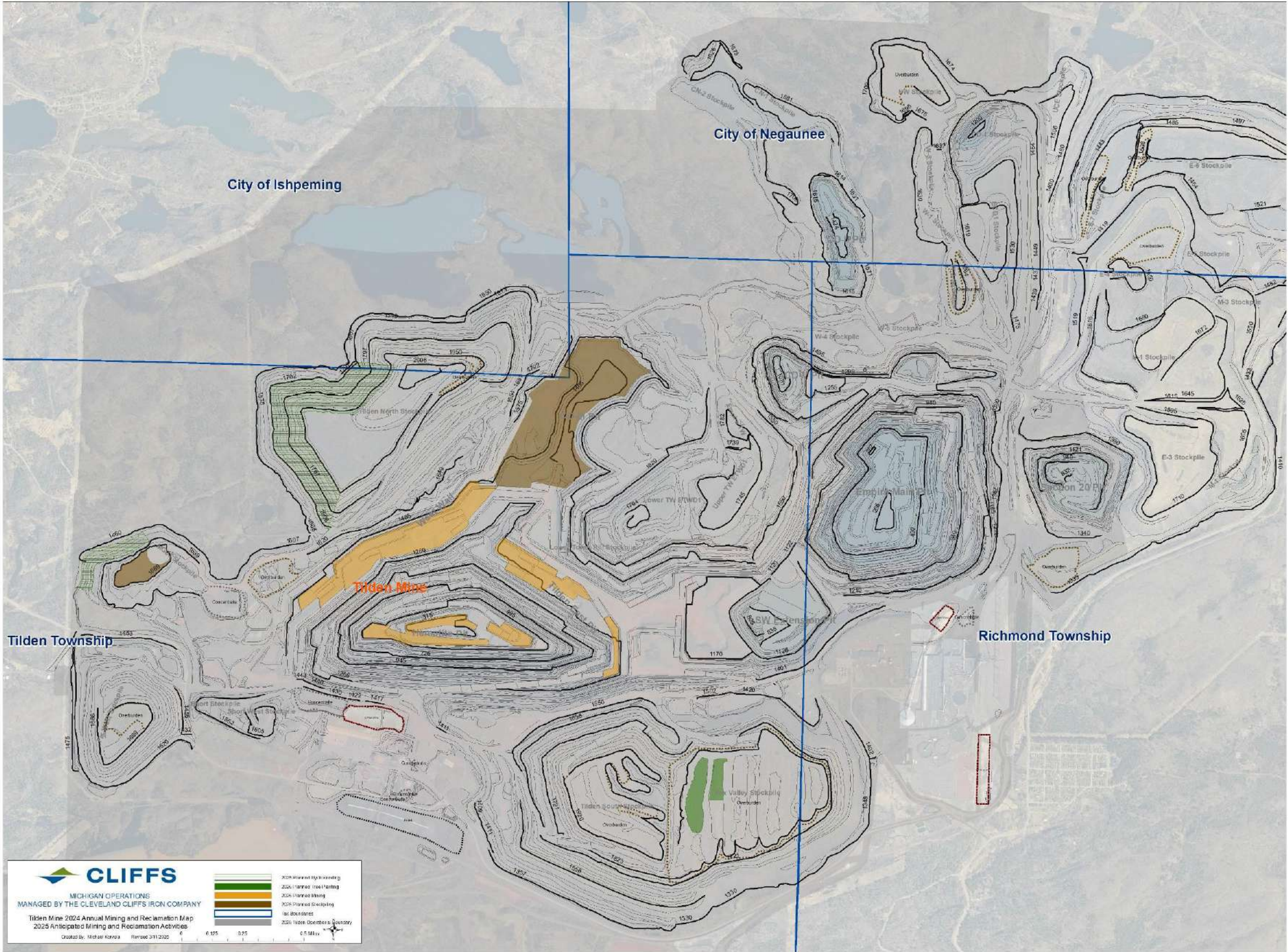


Appendix 1: Tilden Mine 2024 Mining and Reclamation Map



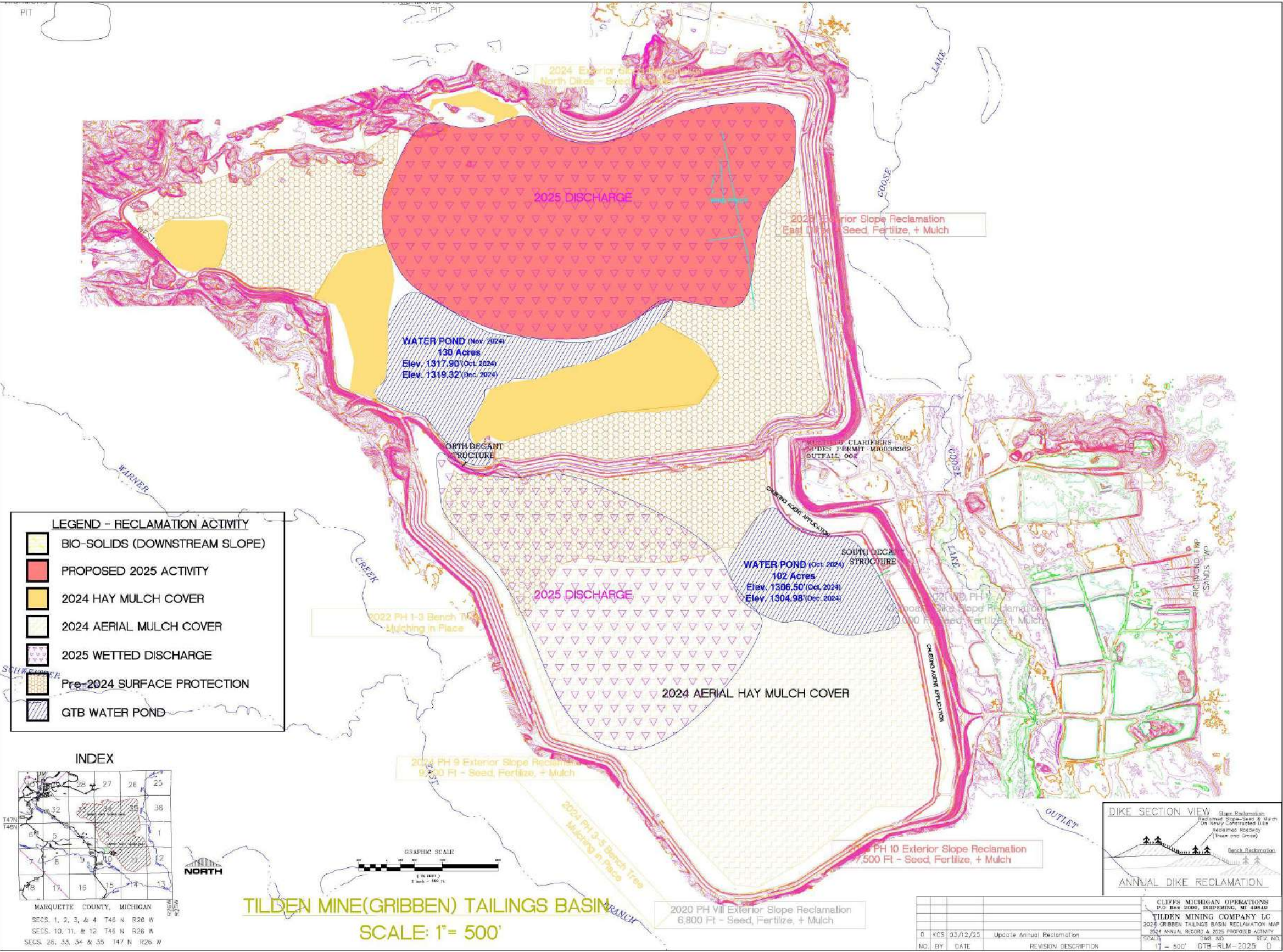


Appendix 2: Tilden Mine Anticipated 2025 Mining and Reclamation Map



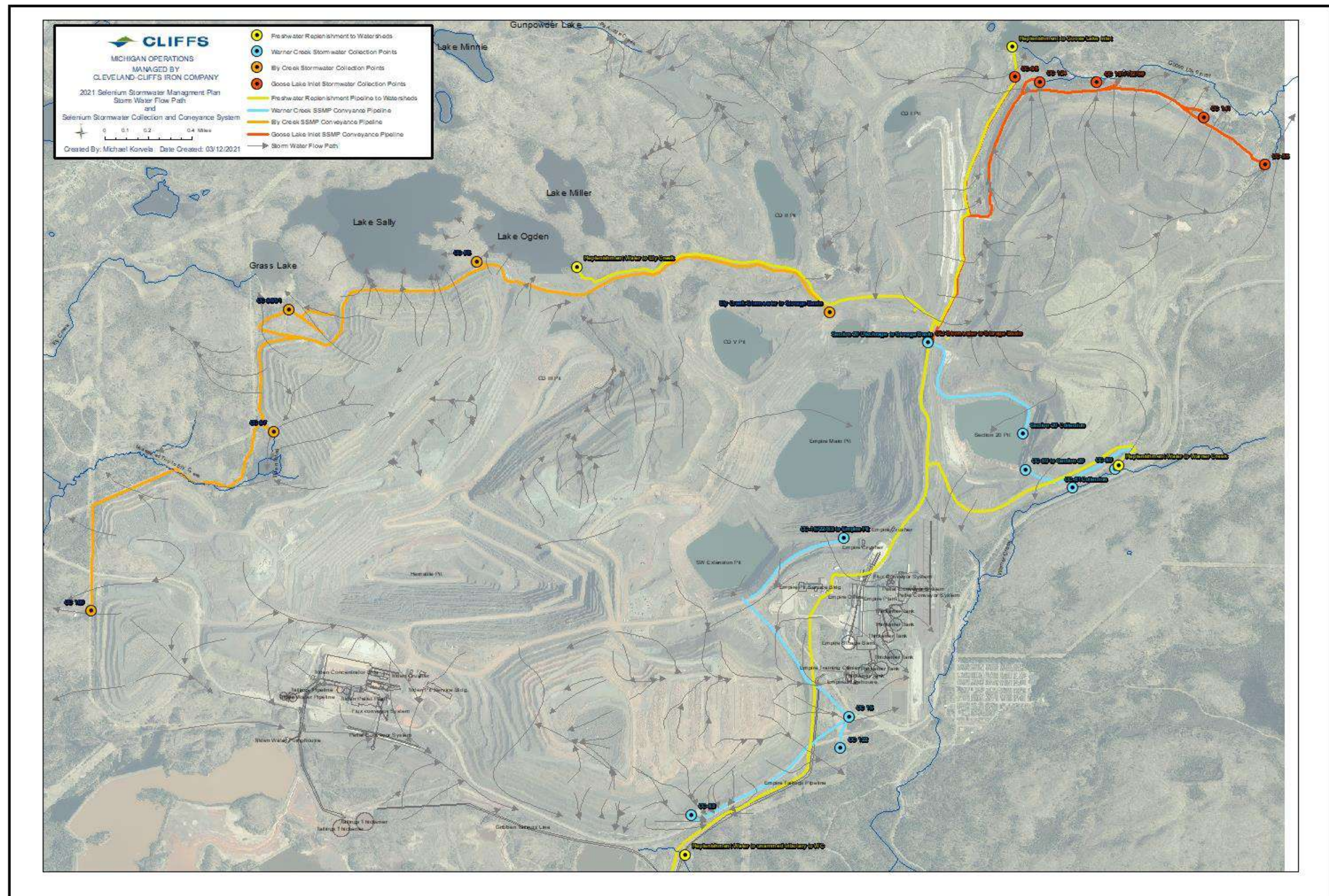


Appendix 3: Gribben Tailings Basin 2024 Actual and 2025 Proposed Reclamation Map





#### Appendix 4: Site Wide Storm Water Flow Path and Selenium Storm Water Collection





Appendix 5: Tilden Mine 2025 Boundaries

