

concurrently reclaimed. The exact location of topsoil and overburden piles are unknown at this time, so we have shown the approximate location on **EXHIBIT C-1 - MINE PLAN MAPS**.

Mining within each phase will begin once topsoil and overburden has been removed from that phase area. Excavated materials (pit run) will be removed via front-end loaders, or excavators and may be loaded onto a field conveyor and transported back to the processing plant, or loaded into off-road haul trucks for transport to the plant site. Mined slopes will range from near vertical to 0.5:1, or as required by the Slope Stability Analysis and Setback Agreements (see **EXHIBIT S - STRUCTURES** from the 2004 submittal (included in this packet)).

As soon as mining limits have been reached in one phase area, reclamation of the pit edges within that phase area will begin. This will allow for concurrent backfilling of the pit perimeter with previously stripped overburden and/or material stripped from the next phase area to be mined. Access roads built during slurry wall construction and mining will be left as access roads around the reservoirs or for access to oil and gas wells on the site.

Slurry walls have been installed around Swingle North, Swingle South, Ft. Lupton West, Parker-Panowicz and the Blue Ribbon Phases. Testing is complete and certified for all but Blue Ribbon and Swingle South. A slurry wall is planned for the small lake on the north end of Sandstead. We anticipate slurry wall construction will begin soon after permit approval on the Northeast Phases.

River setback and Bank armoring

The only place the South Platte River is within 400 feet of the mining area is along the east sides of Northeast Phases #1 & #3 in the amendment area and along the east side for the Parker #4 Phase in the south area. Along these stretches the slurry wall will be installed at least 200 feet from the edge of the river bank. Along the South Platte River in Northeast Phases 1 and 3, mining will take place within 250 feet of the river bank and the bank will be rebuilt so the top of the slope into the reservoir area will be 300 feet from the top of the river bank. In the Parker #4 Phase the mining limit will be 70 feet west of the Lupton Bottoms Ditch and the bank will be rebuilt so the top of the slope into the reservoir area will be 250 feet from the top of the river bank. This will be done by backfilling from the ½h:1v mining face to the top-of-slope (TOS) line using shale and other quality-tested compactible material from the floor of the mined area.

On the working face of non river side banks no~~No~~ more than 1,700 feet of ½:1 cut/fill sloping and 2,000 feet of ½:1 backfill sloping in any one phase will be needed and no more than 2000 feet will need armoring. Armoring will be done, using the technique, and materials described in the **BANK ARMORING PLAN** in the **APPENDIX** of this application packet.

Table D-1: Mining Phases (4-2025)

Phases	Years	ACRES ±		SLURRY WALL LENGTH	SLURRY WALL STATUS (CERTIFIED DATE)
		TOTAL	MINED		
Fort Lupton Sand and Gravel - North Area					
Parker-Panowicz	1-2	43.51	20.60	3,540	2/5/14
Swingle North	1-2	42.02	31.88	5,220	11/30/22
Fort Lupton West	2-3	47.81	41.25	4,320	10/13/04
Swingle South	½-1	67.45	52.31	6,400	Pending
Sandstead	done	50.05	36.64	2,945	Proposed
Blue Ribbon	done	55.55	37.77	5,675	Pending
Deep Lake	done	7.90	5.75	0	NA
South Area					
Funakoshi	1-3	42.97	27.39	4,770	Proposed
Parker #1	1-2	43.17	22.17	4,230	Proposed
Adams-Parker	2-3	72.92	43.83	11,755	Proposed
Parker #2	1-3	33.27	26.83	4,545	Proposed
Parker #3	1-2	43.12	32.71	7,860	Proposed
Parker #4	2-3	56.94	44.24	6,235	Proposed
New areas					
Northeast #1	3-4	70.87	57.17	7,350	Proposed
Northeast #2	2-3	67.00	45.43	6,880	Proposed
Northeast #3	½-1	12.12	5.21	2,925	Proposed
Northwest	1-2	52.33	27.47	6,220	Proposed
Totals	19-34	809.00	558.65		

on the agricultural areas because of the intensive agricultural practices that have taken place on the land. In most cases the oil/gas operations areas have little vegetation and the high pressure gasline ROW's have been farmed for many years and vegetation cover on those areas is consistent with farmed areas. The narrow band along Little Dry Creek/Slate Ditch and the Meadow Island/Lupton Bottoms ditches have been constantly disturbed by ditch maintenance leaving only the river corridor, that has not be disturbed, with vegetation that may be considered native. The typical vegetation descriptions that have been submitted in **EXHIBITS I & J - SOILS AND VEGETATION** in previous permitting packets will match these agricultural uses as the crops rotate throughout the years.

The **EXHIBIT F - RECLAMATION PLAN MAP** shows a cross section sketch of the proposed sloping plan and reclamation activities that will surround reservoirs in this plan.

Under the contract with City of Aurora for the water storage reservoirs, the applicant has to turn over to Aurora, for continued development, any reservoirs that have been significantly reclaimed. It has been agreed that this condition will exist once a reservoir liner has been certified by the Division of Water Resources, sloped, the surround gravel surface is complete. The change to graveling the band between the setbacks -and the highwater line (or armored areas) eliminates the concerns that during Aurora's development, any revegetated areas would be disturbed, destroying any grass planted.

~~In the new area where mining will take place within 400 feet of the river, the bank will be feet from the river bank at which point the slope into the reservoir will be backfilled and sloped.~~ Where mining will take place within 400 feet of the river, the banks will be backfilled to their final setbacks of 300 feet on the north area and 250 feet on the south area. At which point the slope into the reservoir will be backfilled and sloped. In these areas no more the 500 feet will need backfilling nor will it be left open for more than 12 months. Armoring will begin as soon as bank sloping is complete on each 500 ft section.

In this area, approximately 2,000 feet will need ½:1 backfilling, and will not be left open for more than 12 months. Armoring will begin as soon as bank sloping is complete on each 1,000-ft section. This will also ensure, that if mining ceases before the resource is exhausted, only a minor amount of work would have to be done to finish reclamation on the disturbed area

Armoring in the Northeast Phases #1 and #3 will progress with backfilling and sloping. No armoring will be done in the Parker #4 phase on the south area since there is armoring on the river bank anywhere the river is within 400 feet of the area to

be mined. The **BANK ARMORING PLAN** is in the **APPENDIX** and explains how and where the armoring will be placed.

LGE will be working with the Town of Ft. Lupton for directions on Flood Plain development. This facility is not in an Urban Area, not near public land, or facilities where public safety is a concern so, inlet/outlet structures for private reservoirs are not needed. There are no plans to install Inlets or Outlets for the reservoirs. Those will be the responsibility of the reservoir developers.

The following approved seed mix will be used to seed areas where reclamation calls for revegetation. This mix will place approximately 41.2 seeds per pound per sq-ft as prescribed by the NRCS planting guidelines.

<u>APPROVED SEED MIX</u>	
<u>Species</u>	<u>Lbs. PLS/Acre</u>
Western Wheatgrass (Aribba)	5.00
Big Bluestem (Champ)	2.50
Blue Grama (Hachita)	0.60
Switchgrass (Blackwell)	1.75
TOTALS	9.85

The reclamation timetable shows the types and amount of land use in each Phase when reclamation is complete. Approximately 12.2% of the area in the permit will not be disturbed by mining, either because it is setbacks around well facilities, gaslines ROW's, along the ditches or areas too small to mine that will be kept in their natural state.

As mining progresses, the perimeter slopes will be backfilled and graded at or near 3h to 1v as discussed in the **MINING PLAN**. This will insure that when mining ceases only a minor amount of work will have to be done to finish reclamation in the disturbed area. The placement of the temporary soil stockpiles around the setback/perimeter of the mined area would be there if needed. Since the area between the liner, the water line and/or top of the armoring will be a graveled surface area, no resoiling will be needed. The graveled surface will mean the above-water-line areas simply have to be shaped and graded.

We expect to salvage sufficient topsoil to meet reclamation requirements. Of the 809.0 acres $\pm$ in the permit area, only 42.1 acres $\pm$ or approximately 5.7% will need resoiling and revegetated and remaining above water gravel surface will cover 146.5 acres or 18.1% of the area to be reclaimed. The remaining area will be reservoir area, covered with water or undisturbed area.

Observations at the site show that topsoil on the property has a salvageable depth of 6 to 12 inches, averaging 8 inches except in isolated locations. There appears to be more than adequate soils to meet the demand for this site. Setback areas will not be stripped, and the disturbed areas inside the setbacks will not be resoiled. Gravel surface maintenance roads

Table E-1: Reclamation Phases (3-2025)

Phases	Years	ACRES ±					
		TOTAL	LAKE AREA	GRAVEL SURFACES	REVEGE- TATION	ROAD	MISC. (DITCHES, UNDIS- TURBED AREAS, ETC.)
Fort Lupton Sand and Gravel - North Area							
Parker-Panowicz	3-5	43.51	20.45	10.51	5.17	5.97	2.99
Swingle North	3-5	42.02	29.53	9.16		1.35	3.33
Fort Lupton West	3-5	47.81	41.39	6.13		1.54	0.29
Swingle South	3-5	67.45	48.70	13.90		1.77	4.85
Sandstead	3-5	50.05	10.35	0.00	32.94	2.11	4.65
Blue Ribbon	3-5	55.55	37.04	10.34		1.54	8.17
Deep Lake	3-5	7.90	3.62	0.00	3.98	0.00	0.30
South Area							
Funakoshi	3-5	42.97	26.77	6.02		1.25	10.18
Parker #1	3-5	43.17	20.31	6.82		1.13	16.04
Adams-Parker	3-5	72.92	47.84	18.81		3.55	6.27
Parker #2	3-5	33.27	24.77	6.10		10.22	2.40
Parker #3	3-5	43.12	29.21	10.66		2.08	3.25
Parker #4	3-5	56.94	43.43	9.91		1.68	3.60
New areas							
Northeast #1	3-5	70.87	53.26	11.88		1.97	5.73
Northeast #2	3-5	67.00	49.45	13.44		1.84	4.11
Northeast #3	3-5	12.12	3.81	3.98		0.70	4.33
Northwest	3-5	52.33	22.44	11.13		1.56	18.76
Totals		809.00	512.37	148.79	42.09	40.26	99.25