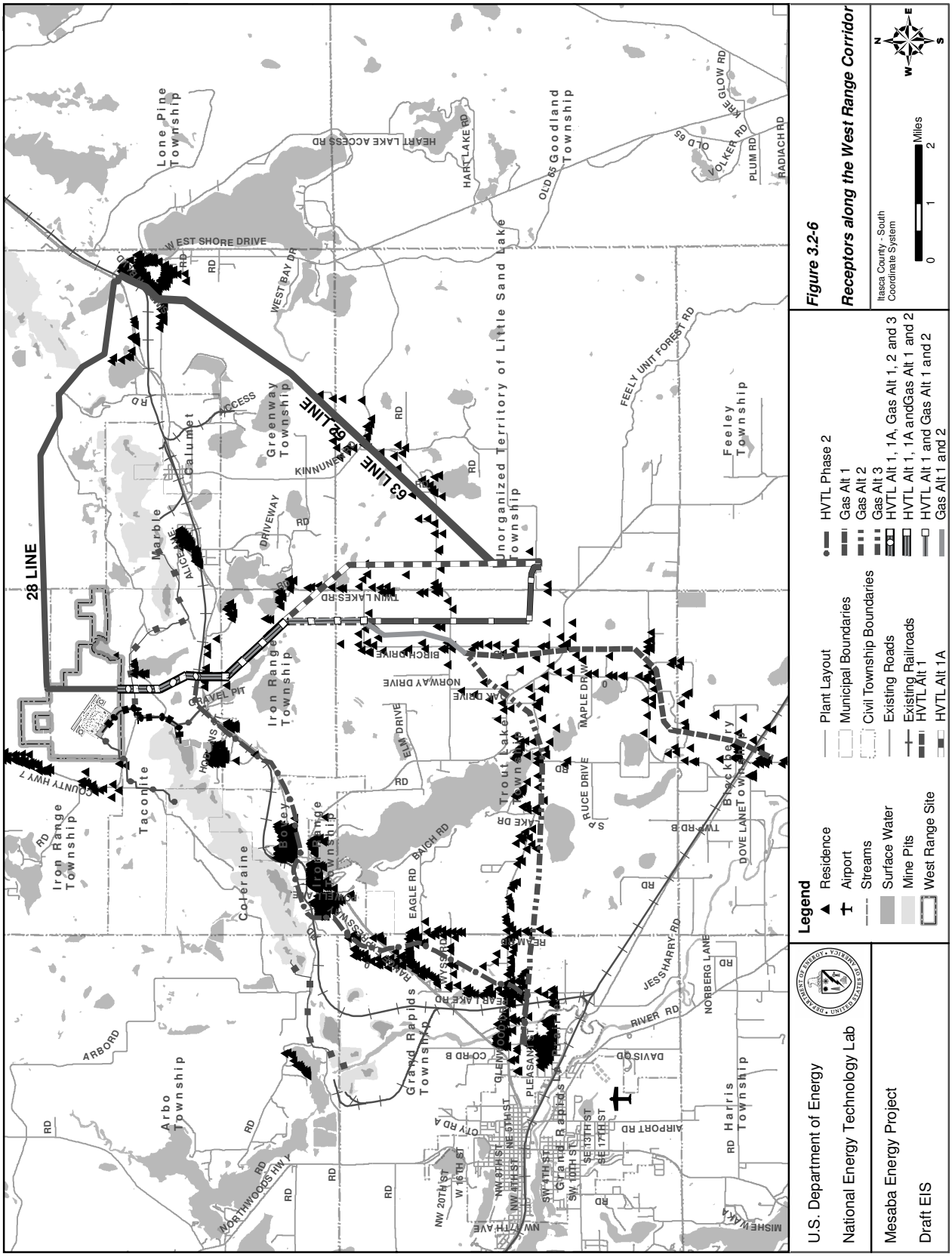


Figure 3.2-6
Receptors along the West Range Corridor

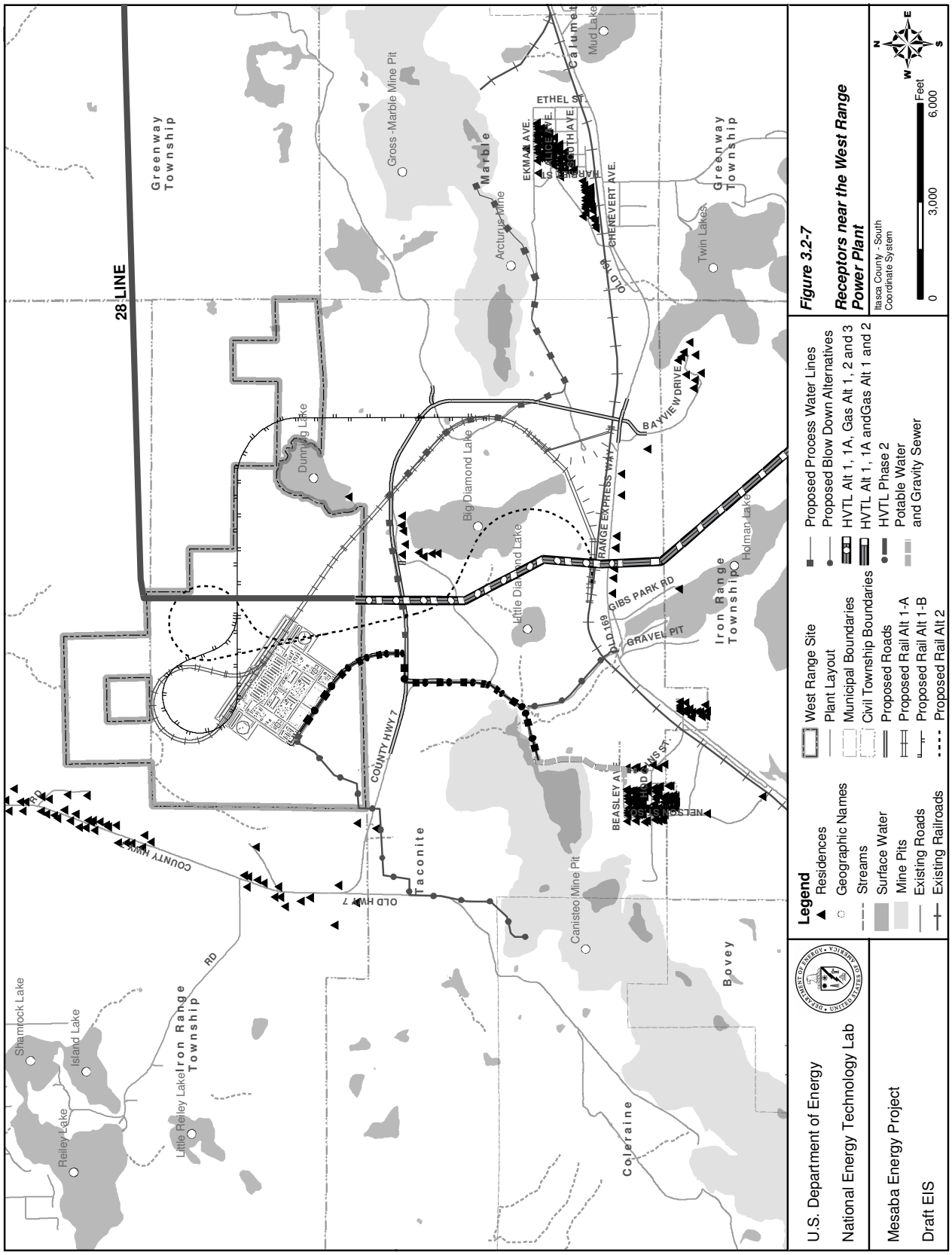
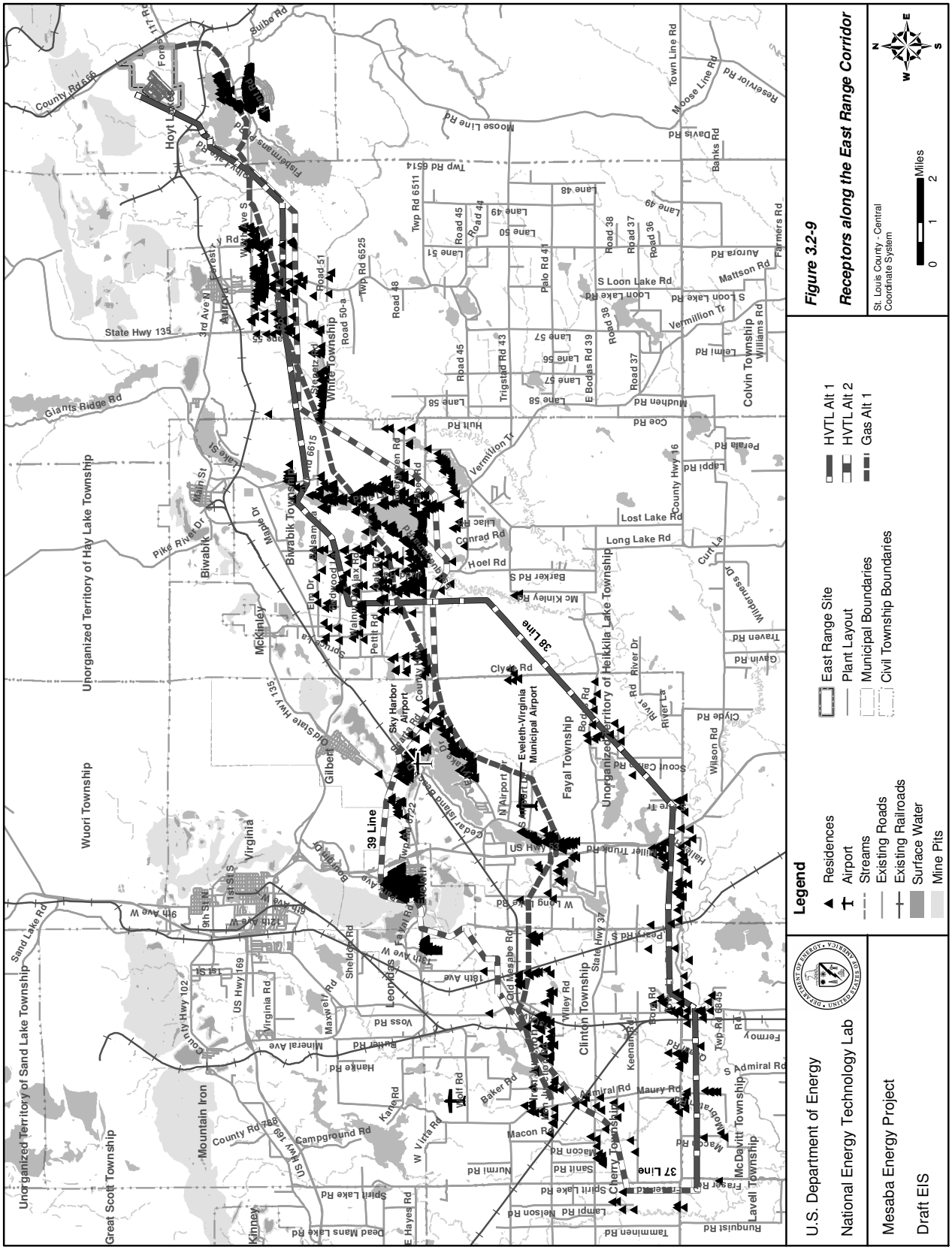
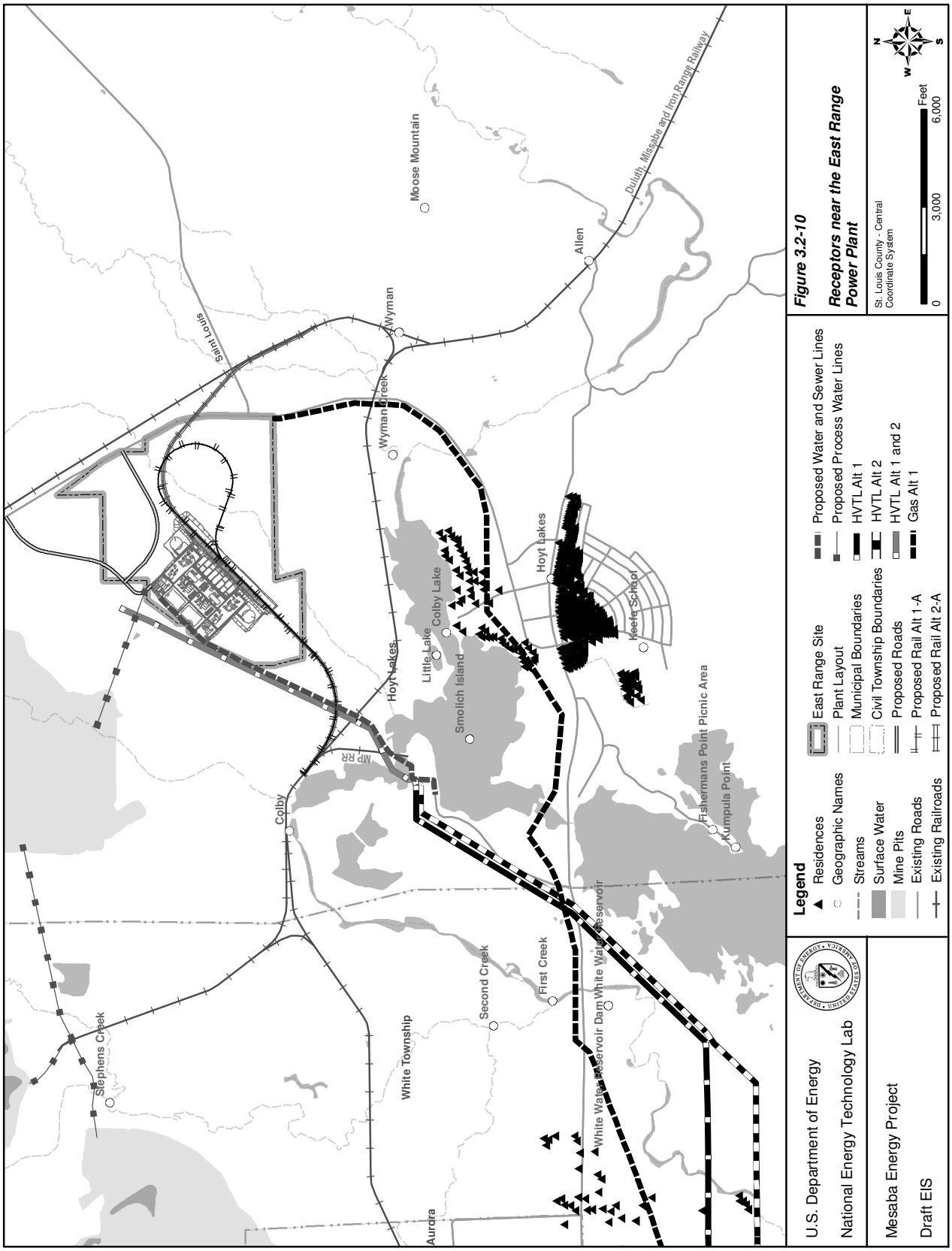


Figure 3.2-7
Receptors near the West Range Power Plant


Legend
Residences
Airport
Streams
Existing Roads
Existing Railroads
Surface Water
Mine Pits
East Range Site
Plant Layout
Municipal Boundaries
Civil Township Boundaries
HVTL Alt 1
HVTL Alt 2
Gas Alt 1
Miles
0
1
2
N
E
S
W
U.S. Department of Energy
National Energy Technology Lab
Mesaba Energy Project
Draft EIS
Unorganized Territory of Sand Lake Township
Unorganized Territory of Hay Lake Township
Unorganized Territory of Helkkila Lake Township
Wuori Township
Great Scott Township
Mountain Iron
Virginia
Gilbert
Biwabik
Biwabik Township
White Township
Fayal Township
Clinton Township
Cherry Township
McDavitt Township
Lavell Township
Colvin Township
Kinney
Sky Harbor Airport
Eveleth-Virginia Municipal Airport
39 Line
38 Line
37 Line
State Hwy 135
US Hwy 169
US Hwy 53
Old State Hwy 135
County Hwy 102
County Hwy 16
Vermilion Tr
Moose Line Rd
Town Line Rd
Reservoir Rd
Giants Ridge Rd
Pike River Dr
Sand Lake Rd
Campground Rd
Spirit Lake Rd
Dead Mans Lake Rd
Tamminen Rd
Runquist Rd
Admiral Rd
Maury Rd
Macon Rd
Baker Rd
Wolf Rd
Kane Rd
Hanie Rd
Mineral Ave
Voss Rd
Maxwell Rd
Sheldon Rd
Leonidas
Virginia Rd
Wiley Rd
Keenan Rd
Ferroy Rd
Old Mesabe Rd
Cedar Island Lake Dr
Clyde Rd
Long Lake Rd
Lost Lake Rd
Conrad Rd
Hoel Rd
Barker Rd S
Mc Kinley Rd
Petit Rd
Pine Ridge Rd
Hull Rd
Cole Rd
Muchen Rd
Lappi Rd
Perala Rd
Trigstad Rd 43
E Bodas Rd 39
Palo Rd 41
S Loon Lake Rd
Loon Lake Rd
Mattson Rd
Aurora Rd
Davis Rd
Banks Rd
Farmers Rd
Lehmi Rd
Williams Rd
Twp Rd 6514
Twp Rd 6511
Twp Rd 6525
Twp Rd 6615
Road 48
Road 50-a
Road 51
Road 45
Road 44
Road 38
Road 37
Road 36
Lane 48
Lane 49
Lane 50
Lane 51
Lane 56
Lane 57
Lane 58
Wilderness Dr
Traven Rd
Galvin Rd
Clyde Rd
Wilson Rd
Scout Camp Rd
River Dr
River Rd
Hellier Trunk Rd
W Long Lake Rd
Sheldon Rd
Leonidas
Fayal Rd
Bodas Rd
Sand Lake Rd
Pike River Dr
Main St
Lake St
Mabe Dr
Biwabik
Mckinley
Spruce Ave
Elm Dr
Maple Ln
Pine Ridge Dr
Pine Ridge Rd
Hoyt Lakes
Forest Rd 117
Suiba Rd
County Rd 55
Fishdrum Bay Rd
Aurora
3rd Ave N
Forest Ave
Wolf Ave S
Pattison Rd
Pattison Rd
Pattison Rd


Moose Mountain
Duluth, Missabe and Iron Range Railway
Allen
Wyman
Wyman Creek
Saint Louis
Hoyt Lakes
Colby Lake
Little Lake
Smolich Island
Keefer School
Fishermans Point Picnic Area
Kumpula Point
MP RR
Colby
Stephens Creek
White Township
Second Creek
First Creek
White Water Reservoir Dam
White Water Reservoir
Aurora
Legend
Residences
Geographic Names
Streams
Surface Water
Mine Pits
Existing Roads
Existing Railroads
East Range Site
Plant Layout
Municipal Boundaries
Civil Township Boundaries
Proposed Roads
Proposed Rail Alt 1-A
Proposed Rail Alt 2-A
Proposed Water and Sewer Lines
Proposed Process Water Lines
HVTL Alt 1
HVTL Alt 2
HVTL Alt 1 and 2
Gas Alt 1
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National Energy Technology Lab
Mesaba Energy Project
Draft EIS
Figure 3.2-10
Receptors near the East Range Power Plant
St. Louis County - Central Coordinate System
0
3,000
6,000
Feet
N
E
S
W

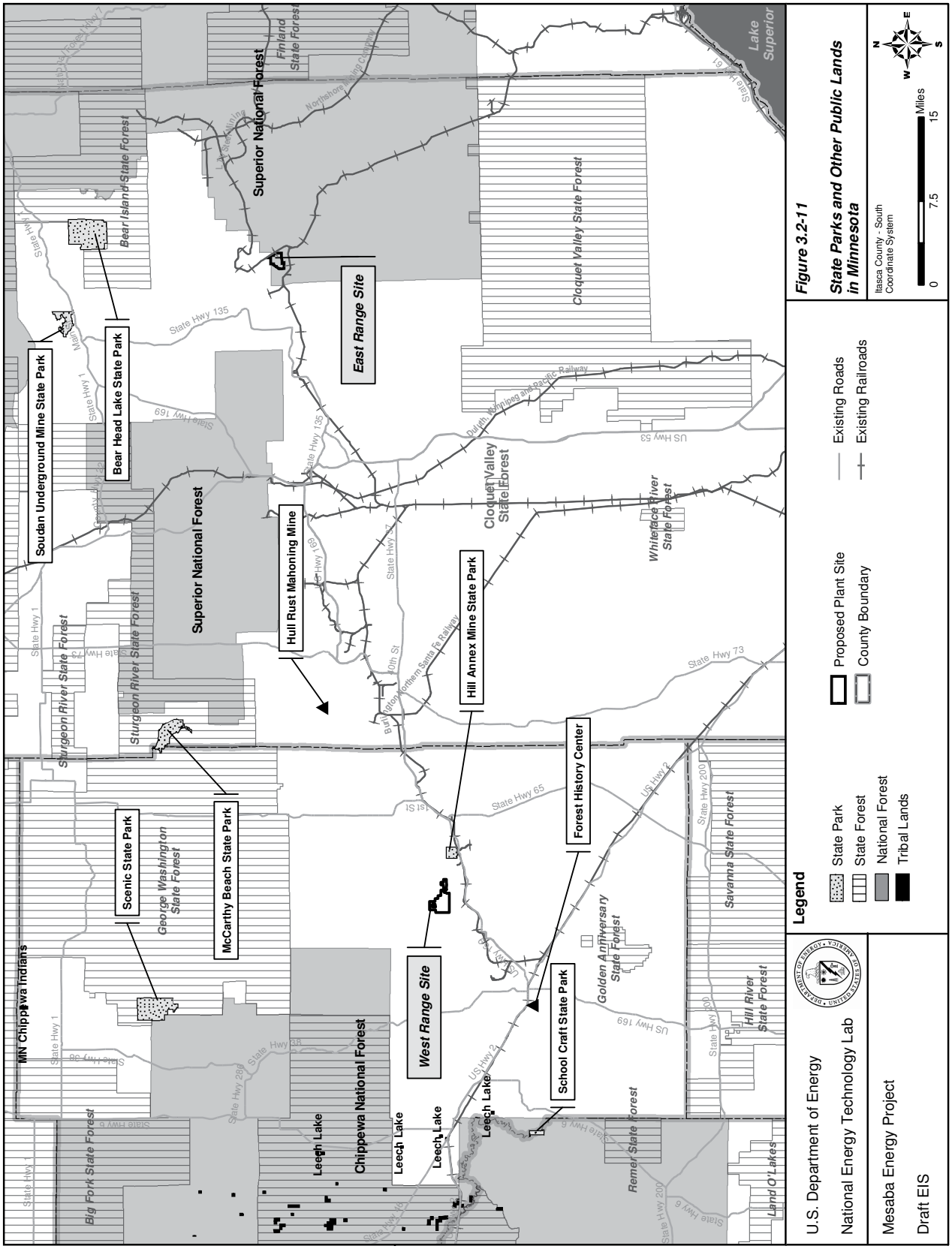
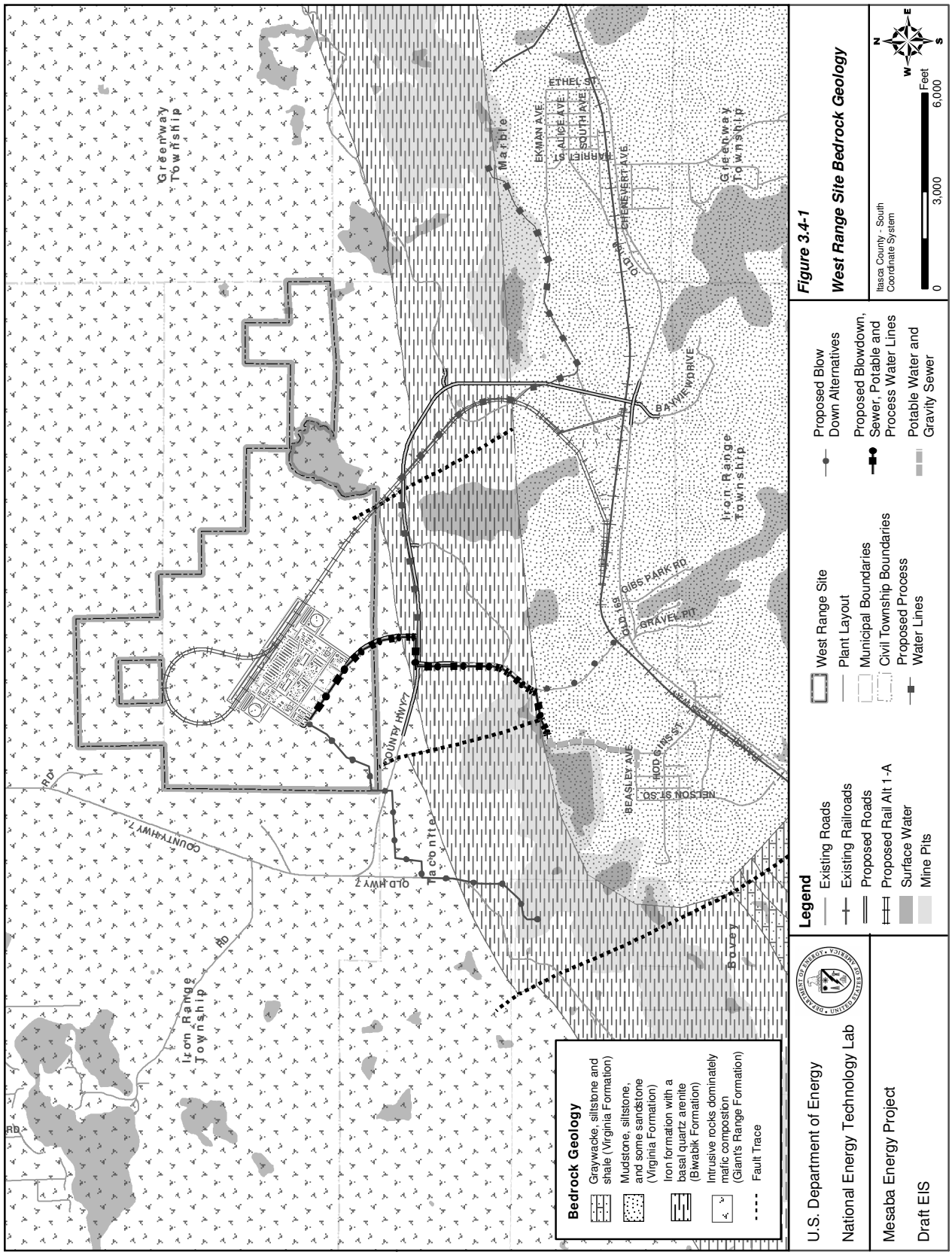


Figure 3.2-11
State Parks and Other Public Lands in Minnesota
Itasca County - South Coordinate System


Bedrock Geology
Graywacke, siltstone and shale (Virginia Formation)
Mudstone, siltstone, and some sandstone (Virginia Formation)
Iron formation with a basal quartz arenite (Biwabik Formation)
Intrusive rocks dominately mafic composition (Giant's Range Formation)
Fault Trace
Legend
Existing Roads
Existing Railroads
Proposed Roads
Proposed Rail Alt 1-A
Surface Water
Mine Pits
West Range Site
Plant Layout
Municipal Boundaries
Civil Township Boundaries
Proposed Process Water Lines
Proposed Blow Down Alternatives
Proposed Blowdown, Sewer, Potable and Process Water Lines
Potable Water and Gravity Sewer
Greenway Township
Marble
Iron Range Township
Bovey
Taconite
COUNTY HWY 7
OLD HWY 7
EKMAN AVE
ETHEL ST
ALICE AVE
SOUTH AVE
HARRIET
CHENEVERT AVE
OLD 169
BAYVIEW DRIVE
GIBS PARK RD
GRAVEL PIT
BEASLEY AVE
NELSON ST SO
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National Energy Technology Lab
Mesaba Energy Project
Draft EIS
Figure 3.4-1
West Range Site Bedrock Geology
Itasca County - South Coordinate System
0
3,000
6,000
Feet
N
S
E
W

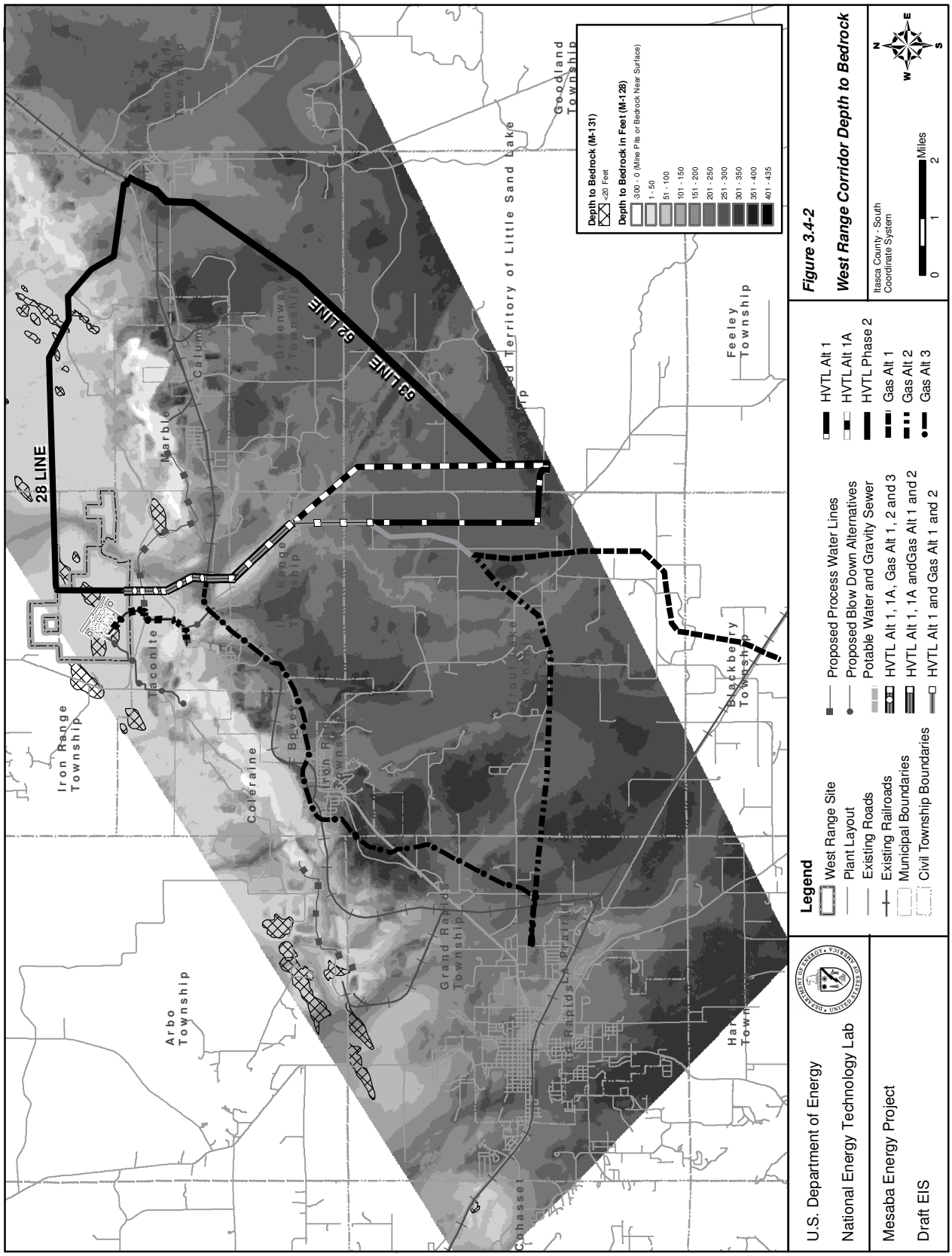
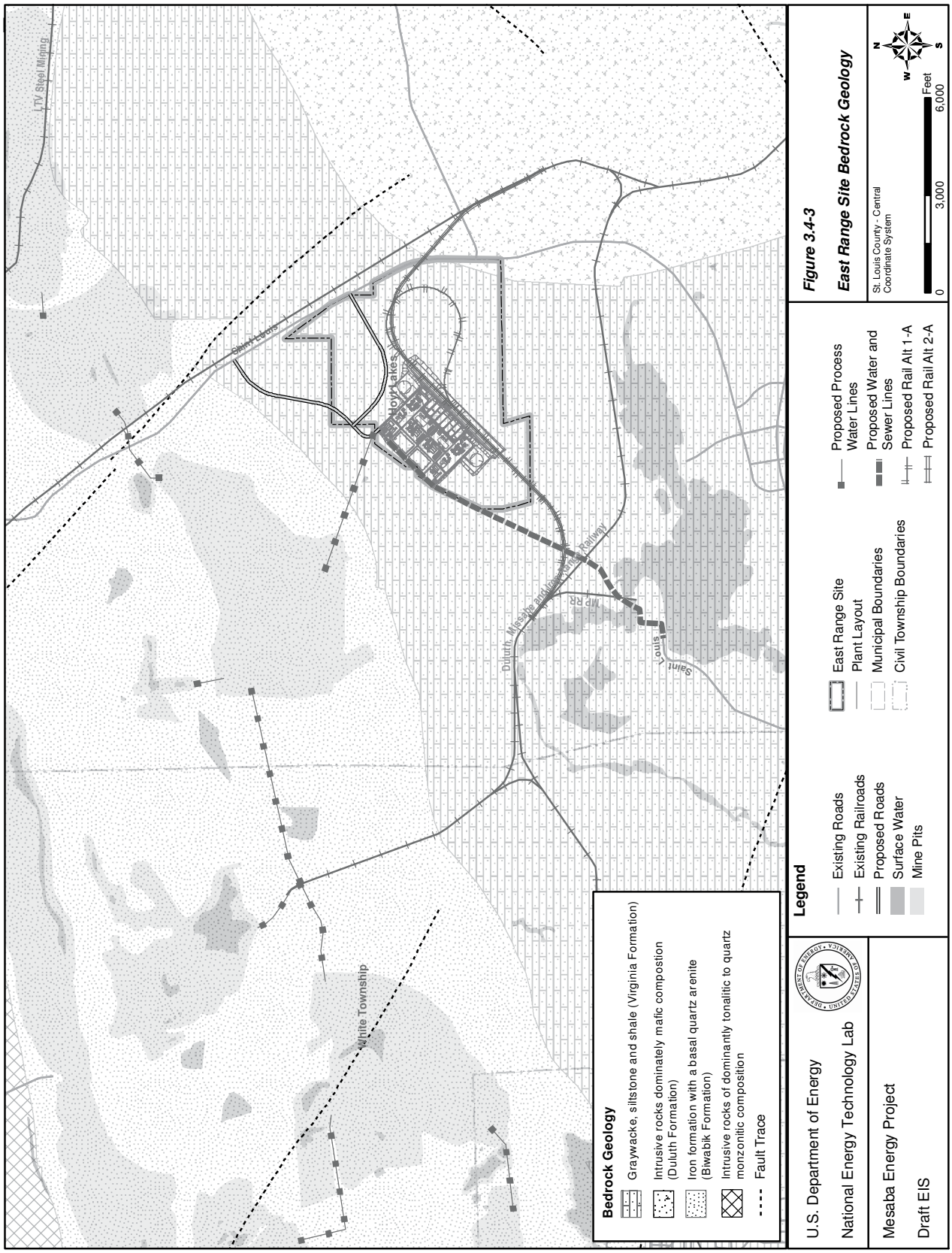


Figure 3.4-2
West Range Corridor Depth to Bedrock


LTV Steel Mining
Saint Louis
Hoyt Lakes
Duluth, Missabe and Iron Range Railway
MP RR
Saint Louis
White Township
Bedrock Geology
Graywacke, siltstone and shale (Virginia Formation)
Intrusive rocks dominately mafic compostion (Duluth Formation)
Iron formation with a basal quartz arenite (Biwabik Formation)
Intrusive rocks of dominantly tonalitic to quartz monzonitic composition
Fault Trace
Legend
Existing Roads
Existing Railroads
Proposed Roads
Surface Water
Mine Pits
East Range Site
Plant Layout
Municipal Boundaries
Civil Township Boundaries
Proposed Process Water Lines
Proposed Water and Sewer Lines
Proposed Rail Alt 1-A
Proposed Rail Alt 2-A
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National Energy Technology Lab
Mesaba Energy Project
Draft EIS
Figure 3.4-3
East Range Site Bedrock Geology
St. Louis County - Central Coordinate System
0
3,000
6,000
Feet
N
E
S
W

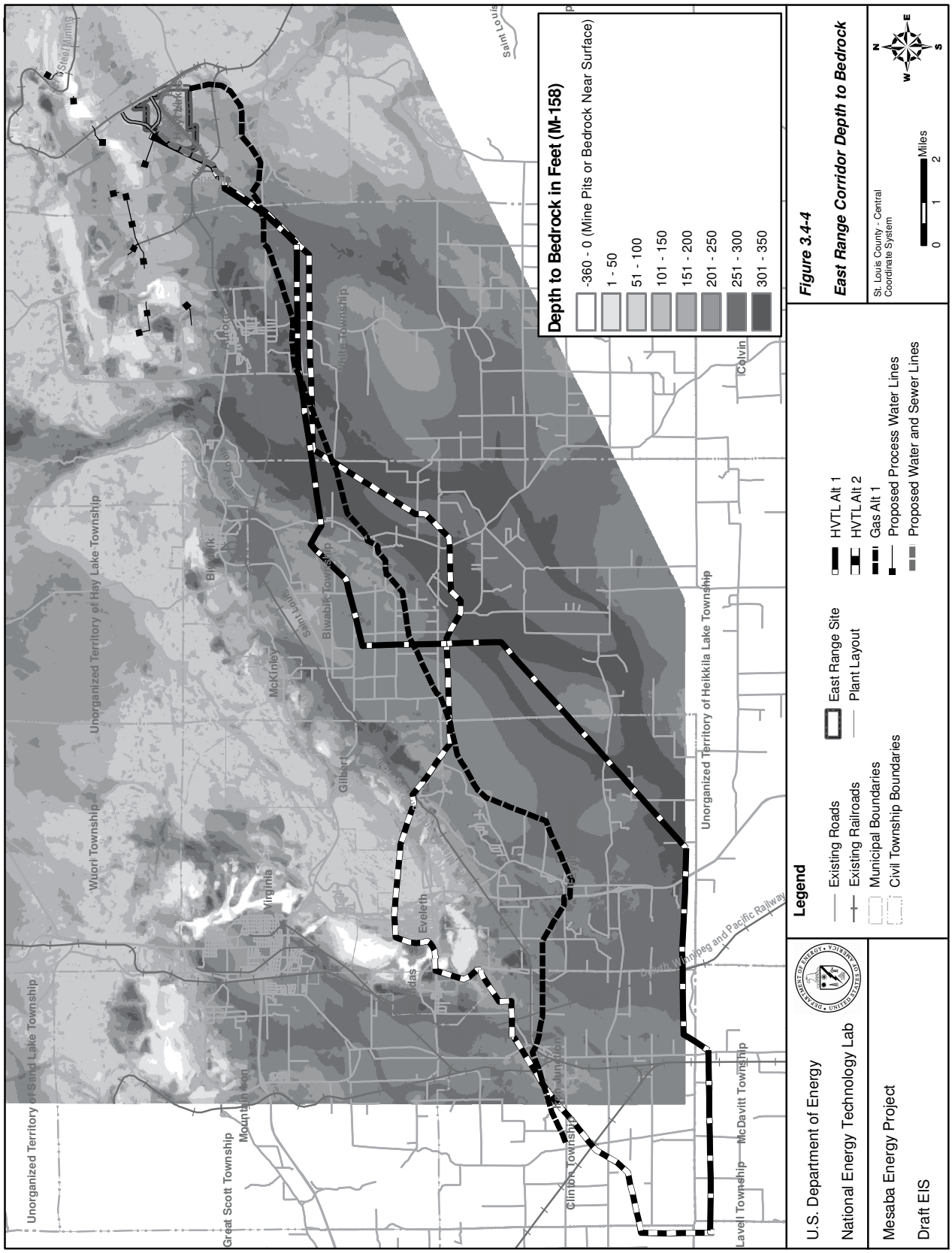


Figure 3.4-4

East Range Corridor Depth to Bedrock

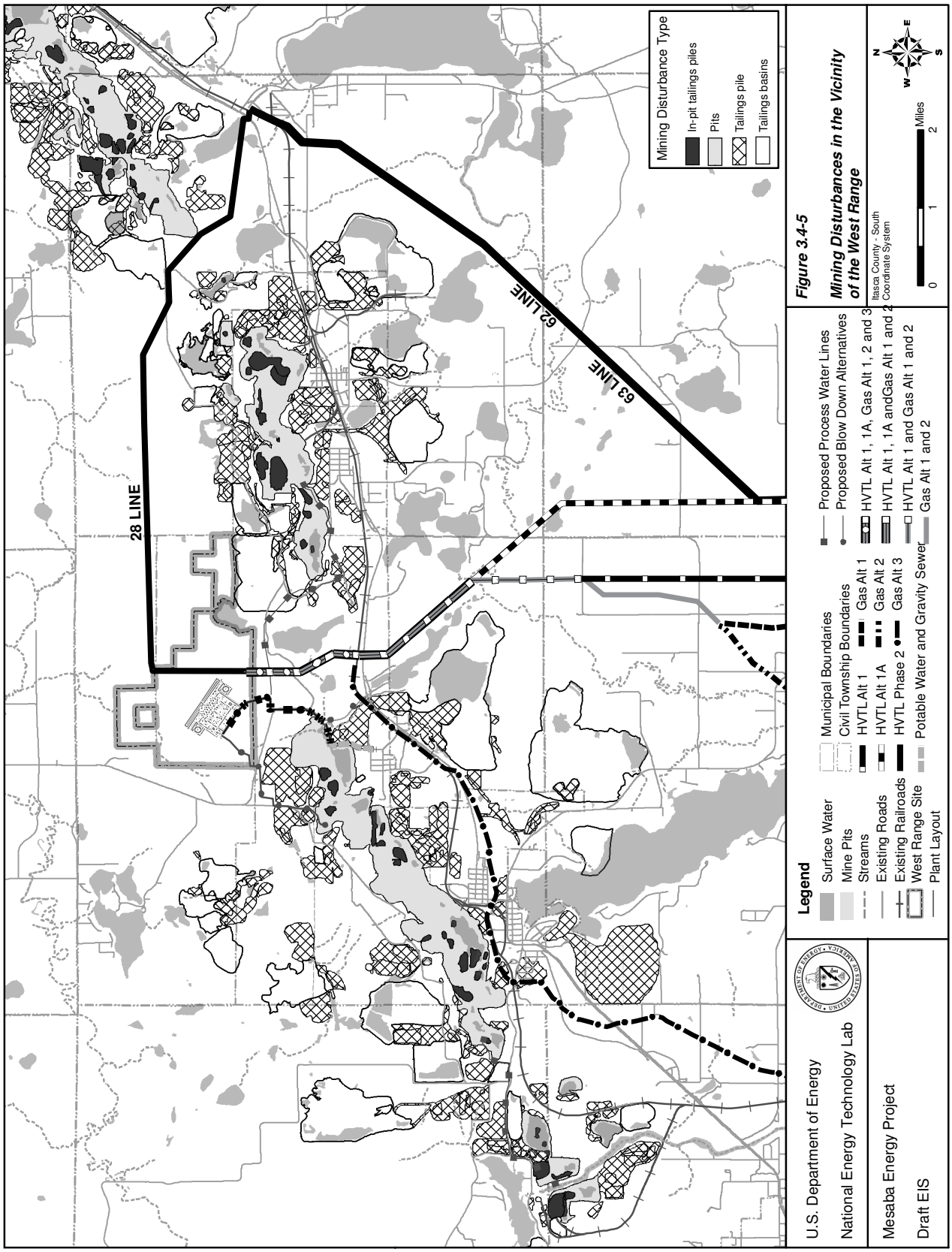
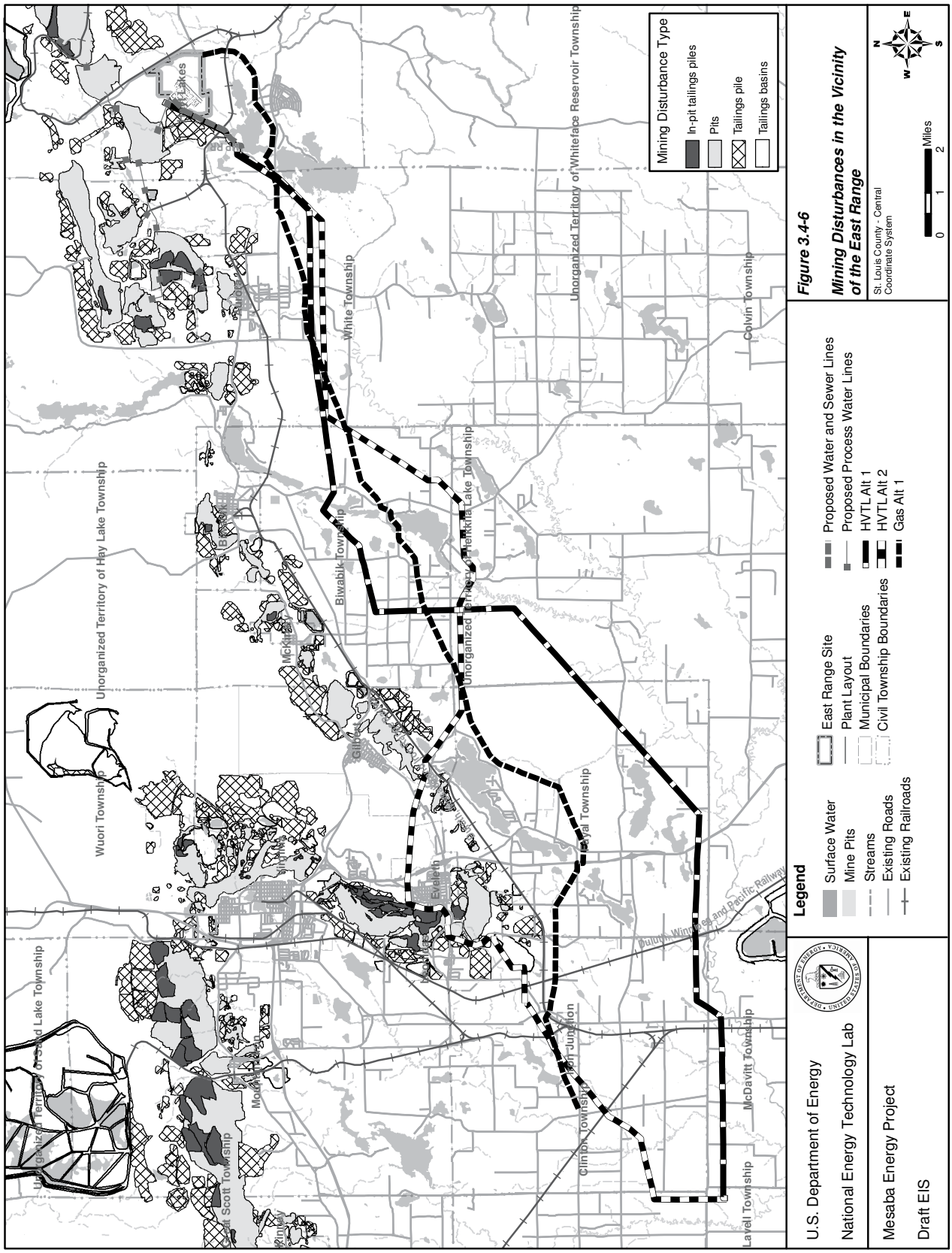


Figure 3.4-5
Mining Disturbances in the Vicinity of the West Range


Mining Disturbance Type
In-pit tailings piles
Pits
Tailings pile
Tailings basins
Unorganized Territory of Whiteface Reservoir Township
White Township
Colvin Township
Unorganized Territory of Hay Lake Township
Wuori Township
Biwabik Township
Unorganized Territory of Pehkonen Lake Township
Gilbert
Eveleth
Leyal Township
Duluth, Winnipeg and Pacific Railway
Clinton Township
McDavitt Township
Laveil Township
Legend
Surface Water
Mine Pits
Streams
Existing Roads
Existing Railroads
East Range Site
Plant Layout
Municipal Boundaries
Civil Township Boundaries
Proposed Water and Sewer Lines
Proposed Process Water Lines
HVTL Alt 1
HVTL Alt 2
Gas Alt 1
Figure 3.4-6
Mining Disturbances in the Vicinity of the East Range
St. Louis County - Central Coordinate System
Miles
0
1
2
N
S
E
W
U.S. Department of Energy
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Mesaba Energy Project
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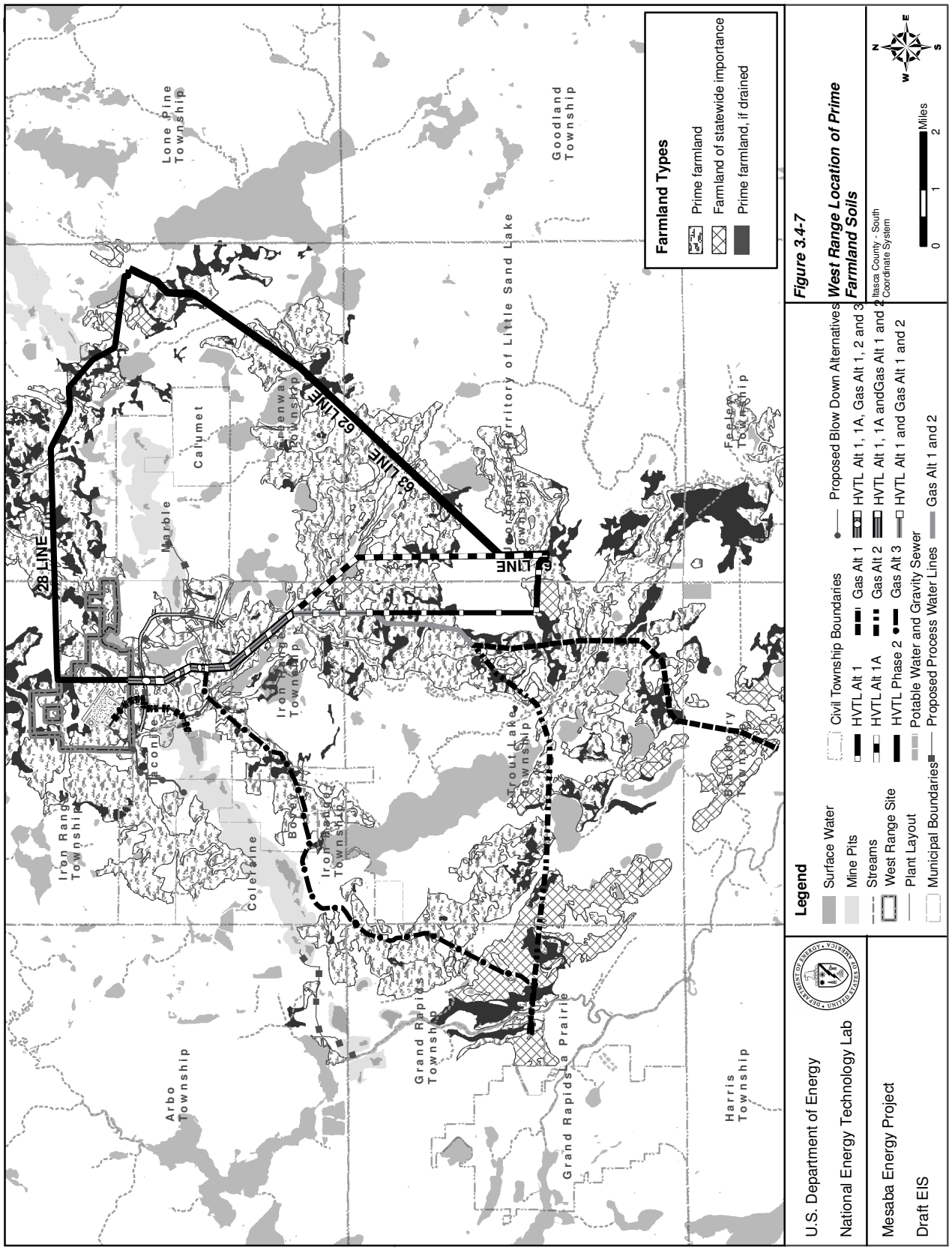


Figure 3.4-7
West Range Location of Prime Farmland Soils

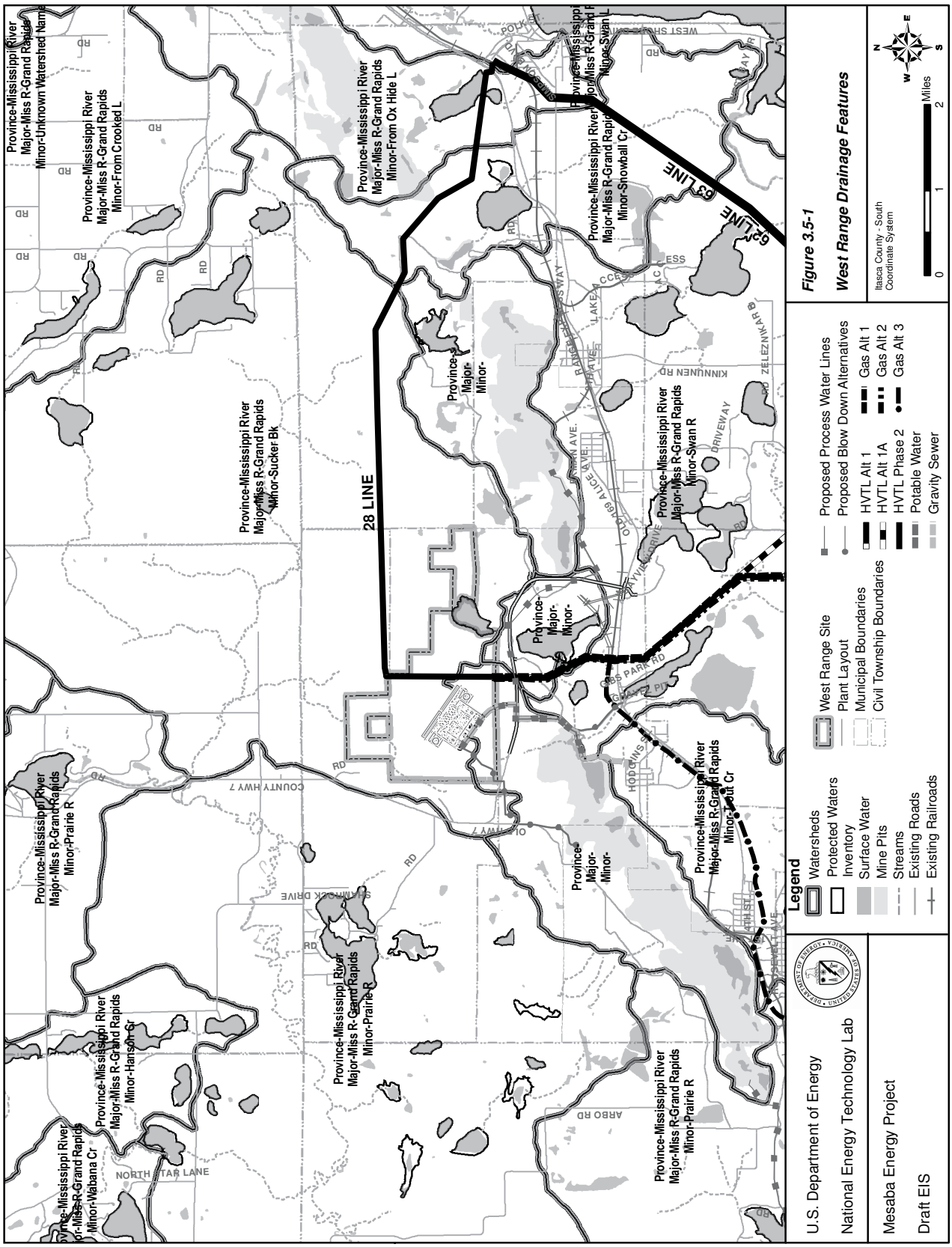


Figure 3.5-1
West Range Drainage Features

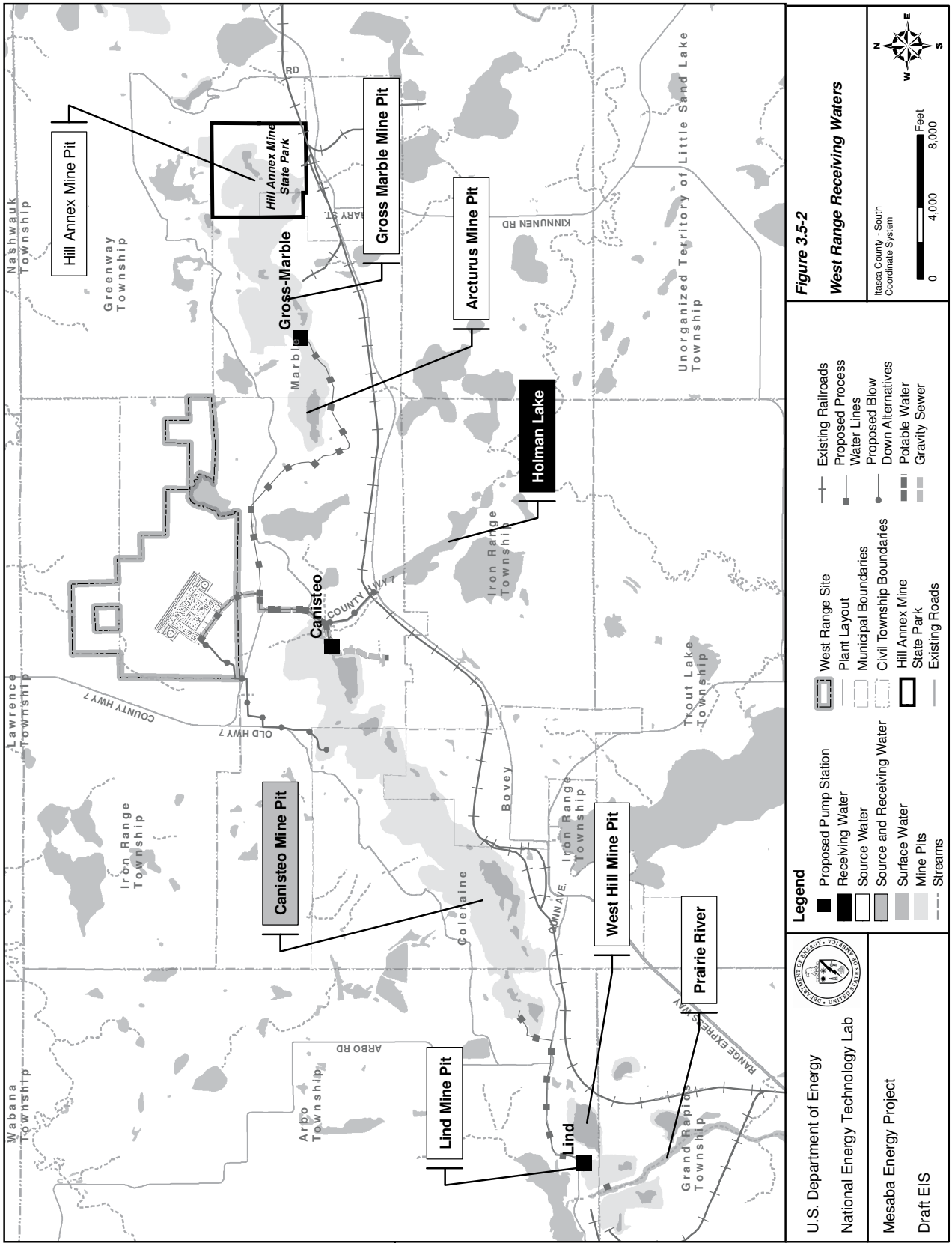
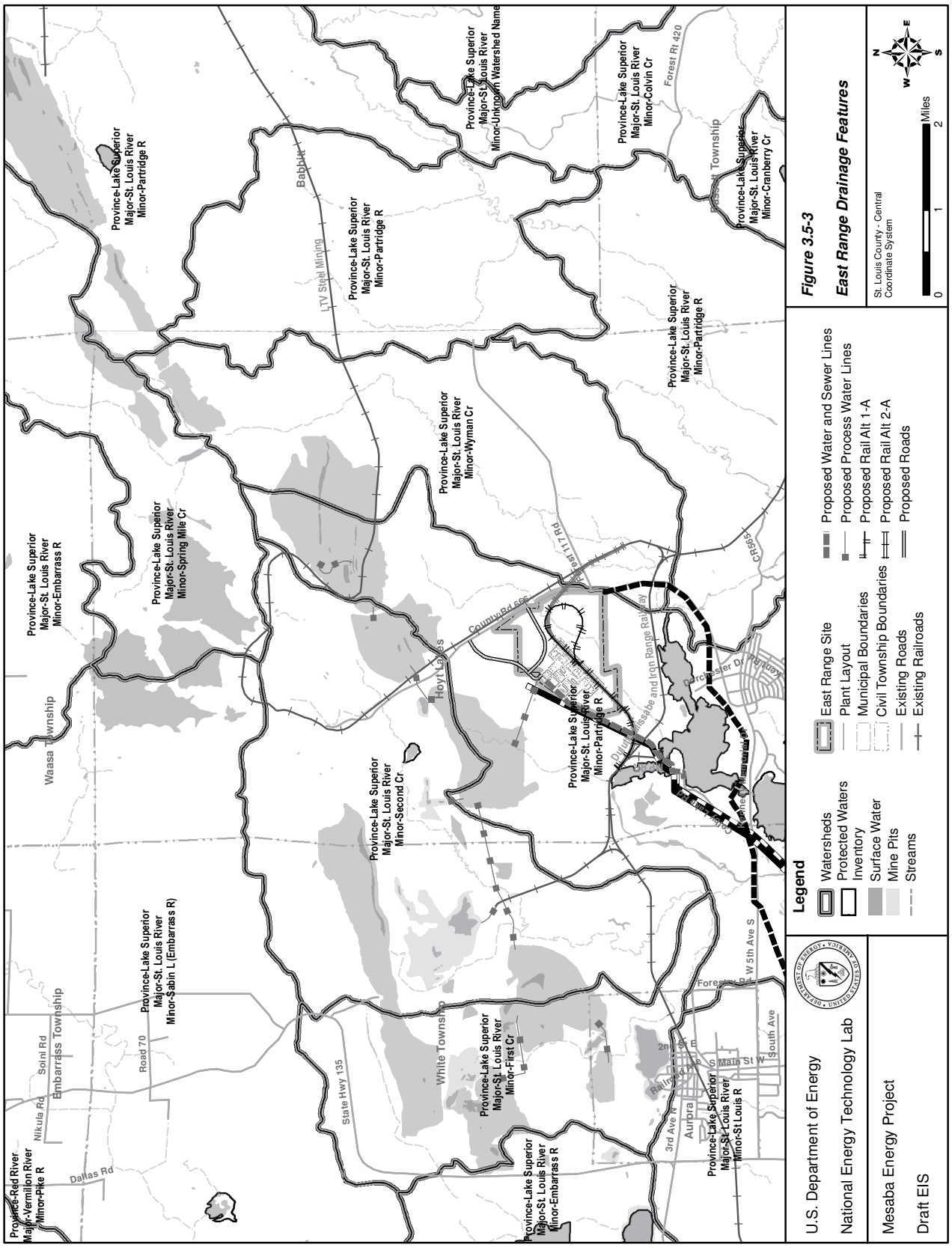


Figure 3.5-2
West Range Receiving Waters


Province-Red River Major-Vermilion River Minor-Pike R
Province-Lake Superior Major-St. Louis River Minor-Embarrass R
Province-Lake Superior Major-St. Louis River Minor-Sabin L (Embarrass R)
Province-Lake Superior Major-St. Louis River Minor-Spring Mile Cr
Province-Lake Superior Major-St. Louis River Minor-Partridge R
Province-Lake Superior Major-St. Louis River Minor-Unknown Watershed Name
Province-Lake Superior Major-St. Louis River Minor-Colvin Cr
Province-Lake Superior Major-St. Louis River Minor-Cranberry Cr
Province-Lake Superior Major-St. Louis River Minor-Wyman Cr
Province-Lake Superior Major-St. Louis River Minor-Second Cr
Province-Lake Superior Major-St. Louis River Minor-First Cr
Province-Lake Superior Major-St. Louis River Minor-St Louis R
Waasa Township
Embarrass Township
White Township
Forest Township
Hoyt Lakes
Aurora
LTV Steel Mining
Babbitt
Dallas Rd
Nikula Rd
Soini Rd
Road 70
State Hwy 135
County Rd 666
Forest Rt 420
Forest Rd
Duluth, Missabe and Iron Range Railway
Legend
Watersheds
Protected Waters Inventory
Surface Water
Mine Pits
Streams
East Range Site
Plant Layout
Municipal Boundaries
Civil Township Boundaries
Existing Roads
Existing Railroads
Proposed Water and Sewer Lines
Proposed Process Water Lines
Proposed Rail Alt 1-A
Proposed Rail Alt 2-A
Proposed Roads
Figure 3.5-3
East Range Drainage Features
St. Louis County - Central Coordinate System
Miles
0
1
2
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Draft EIS