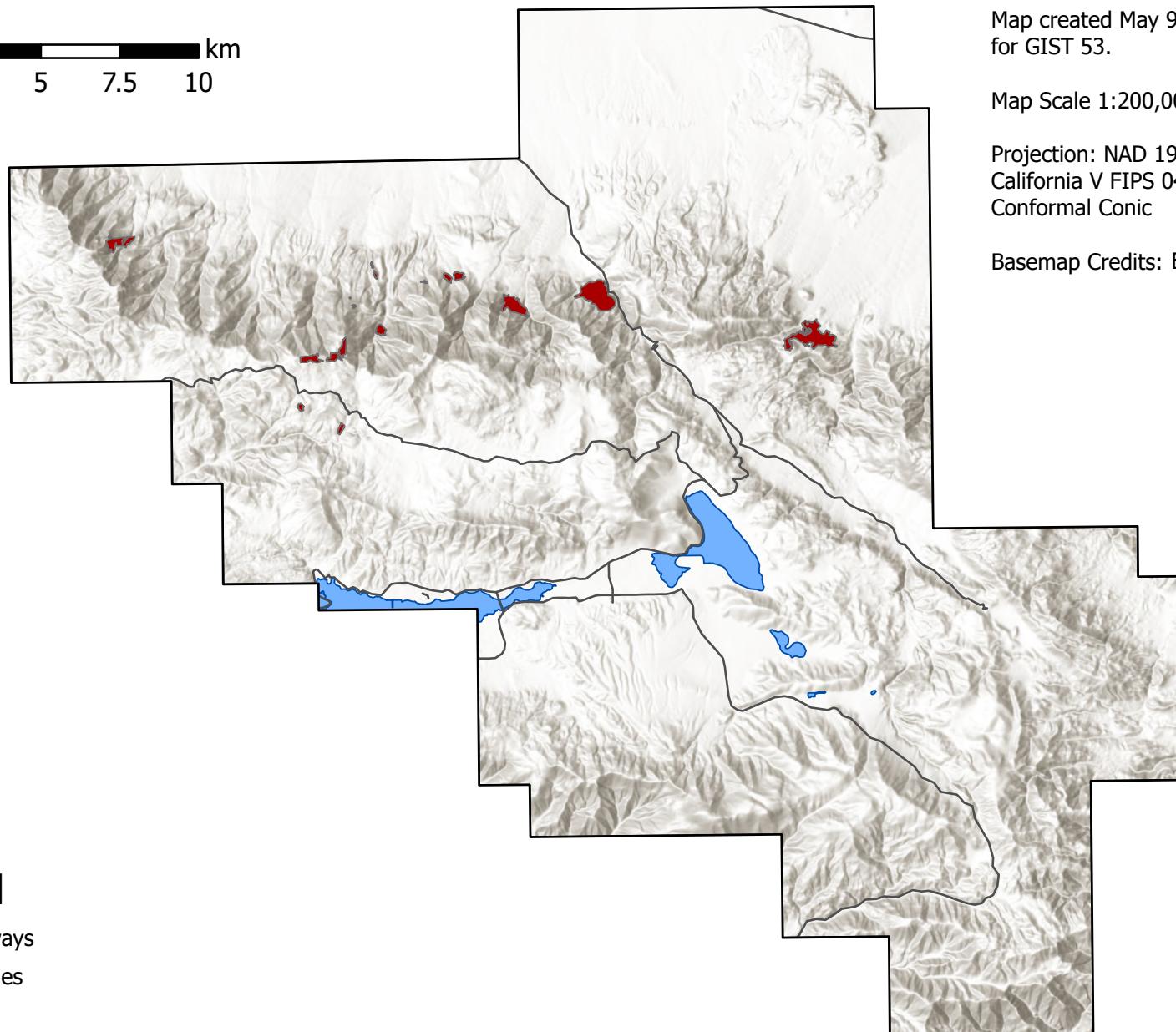


Template Map: Study Area in Big Bear National Forest, California

0 2.5 5 7.5 10 km



Map created May 9, 2023, by Surajit A. Bose
for GIST 53.

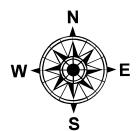
Map Scale 1:200,000

Projection: NAD 1983 (2011), State Plane
California V FIPS 0405 (Meters), Lambert
Conformal Conic

Basemap Credits: Esri, CGIAR, USGS

Legend

- Highways
- Quarries
- Lakes
- Study Area Boundary



Financial Potential of Minerals in Big Bear National Forest

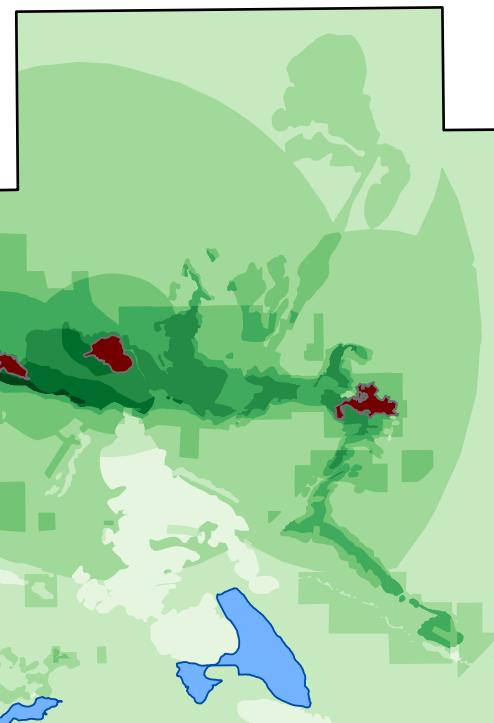
km
0 2.5 5 7.5 10

Legend

- Existing Quarries
- Lakes

Financial Potential of Minerals

- 1: Lowest Potential
- 2
- 3
- 4
- 5: Medium Potential
- 6
- 7
- 8
- 9: Highest Potential
- Study Area Boundary

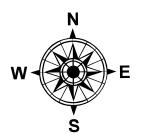


Map created May 9, 2023, by Surajit A. Bose
for GIST 53.

Map Scale 1:200,000

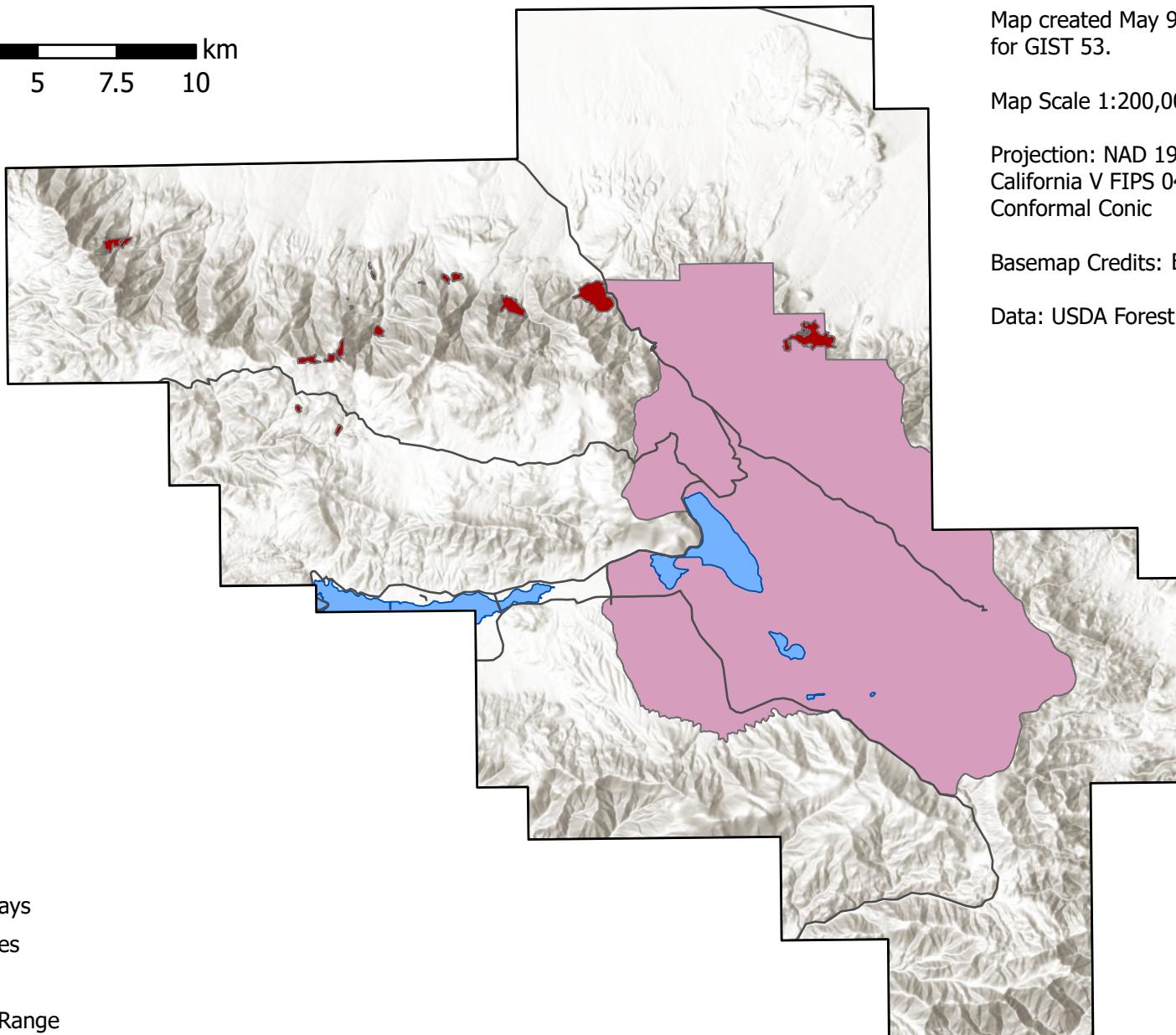
Projection: NAD 1983 (2011), State Plane California V FIPS 0405 (Meters), Lambert Conformal Conic

Data derived from California Division of
Mines and Geology Open-File Report 94-05,
1996.



Burro Habitat in Big Bear National Forest, California

0 2.5 5 7.5 10 km



Map created May 9, 2023, by Surajit A. Bose
for GIST 53.

Map Scale 1:200,000

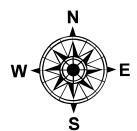
Projection: NAD 1983 (2011), State Plane California V FIPS 0405 (Meters), Lambert Conformal Conic

Basemap Credits: Esri, CGIAR, USGS

Data: USDA Forest Service

Legend

- Highways
- Quarries
- Lakes
- Burro Range
- Study Area Boundary



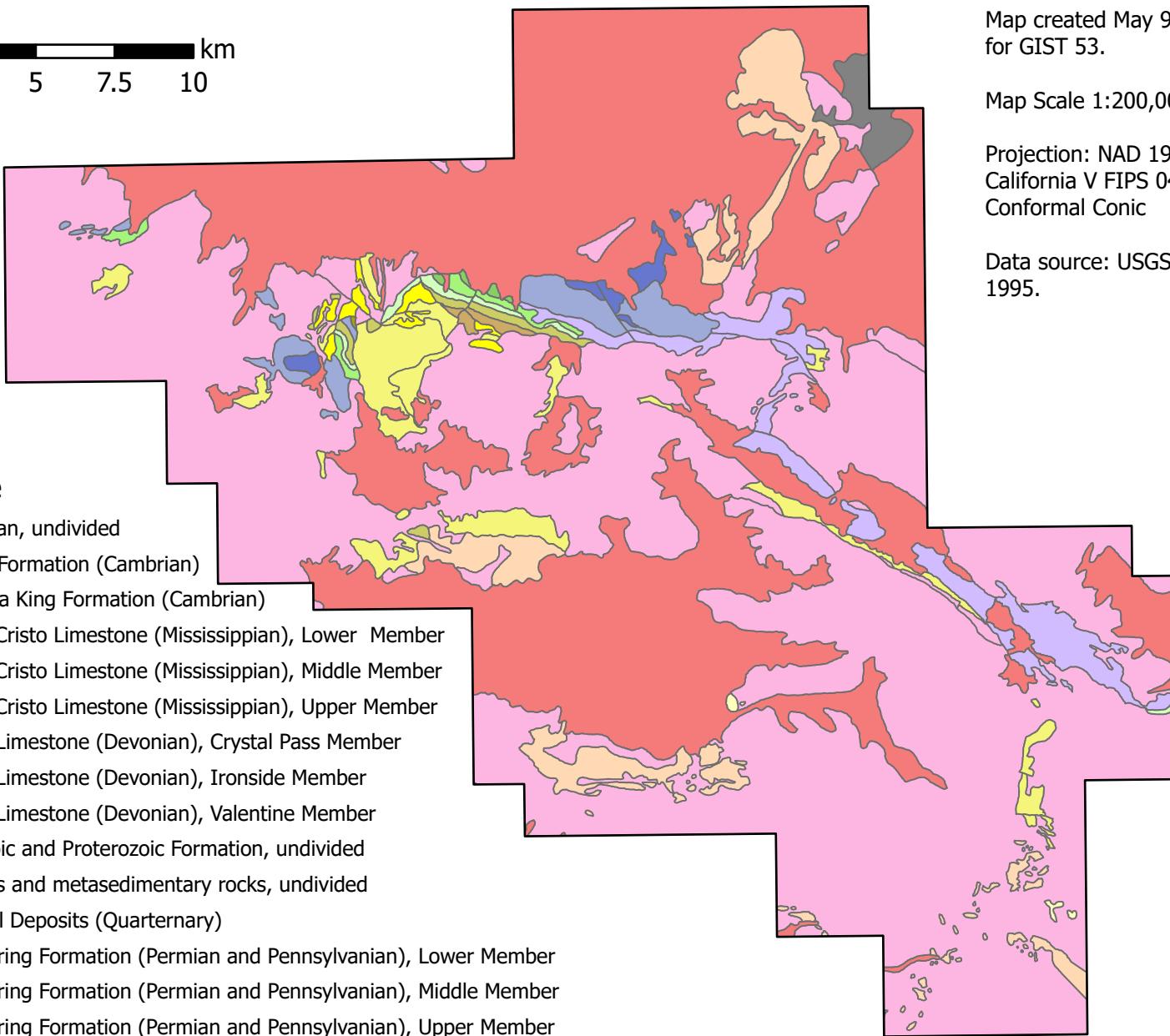
Geology of Study Area in Big Bear National Forest, California

km
0 2.5 5 7.5 10

Legend

Rock Type

- Cambrian, undivided
- Nopah Formation (Cambrian)
- Bonanza King Formation (Cambrian)
- Monte Cristo Limestone (Mississippian), Lower Member
- Monte Cristo Limestone (Mississippian), Middle Member
- Monte Cristo Limestone (Mississippian), Upper Member
- Sultan Limestone (Devonian), Crystal Pass Member
- Sultan Limestone (Devonian), Ironside Member
- Sultan Limestone (Devonian), Valentine Member
- Paleozoic and Proterozoic Formation, undivided
- Igneous and metasedimentary rocks, undivided
- Surficial Deposits (Quaternary)
- Bird Spring Formation (Permian and Pennsylvanian), Lower Member
- Bird Spring Formation (Permian and Pennsylvanian), Middle Member
- Bird Spring Formation (Permian and Pennsylvanian), Upper Member
- Unknown

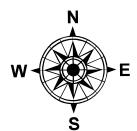


Map created May 9, 2023, by Surajit A. Bose
for GIST 53.

Map Scale 1:200,000

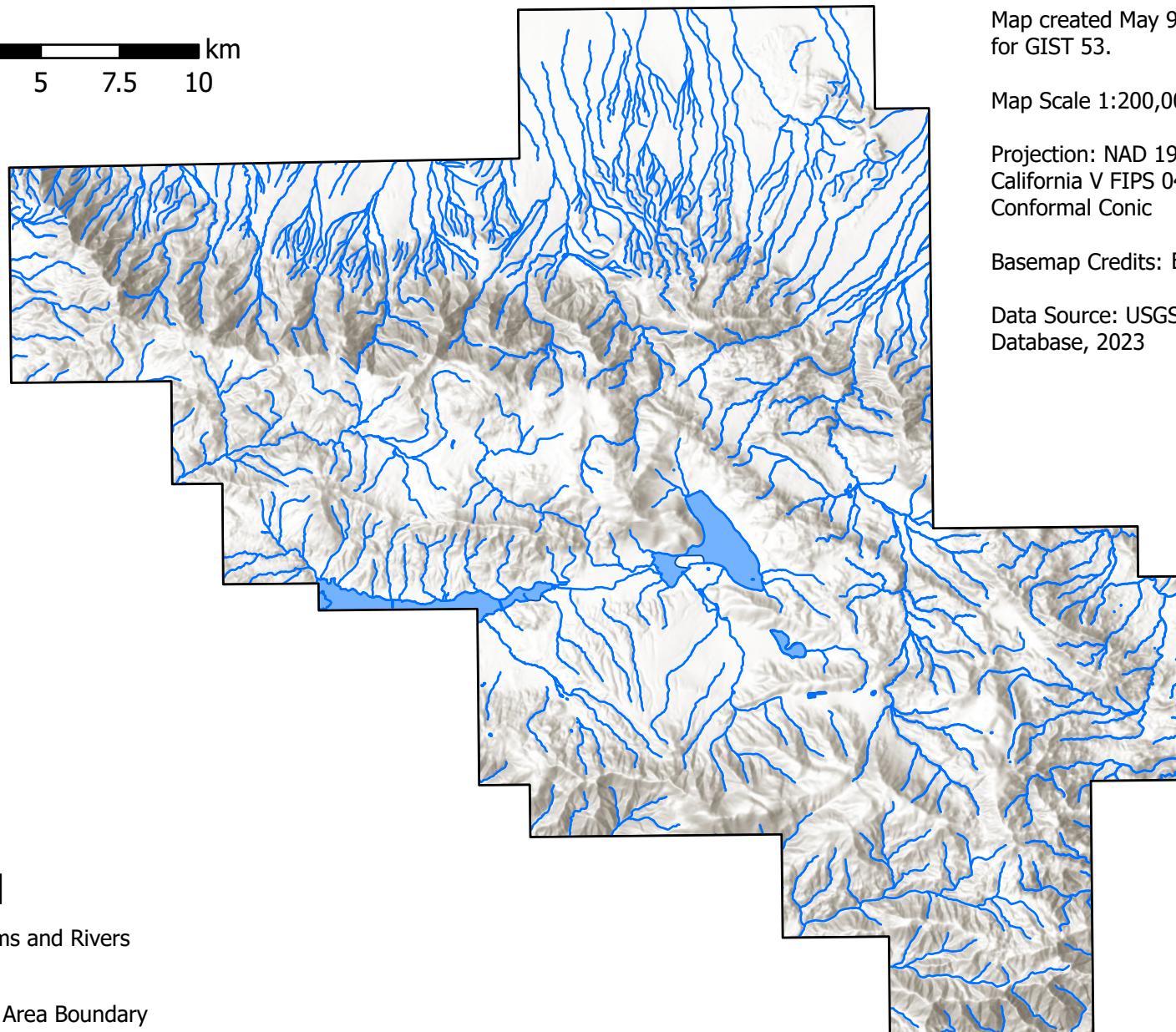
Projection: NAD 1983 (2011), State Plane California V FIPS 0405 (Meters), Lambert Conformal Conic

Data source: USGS Open File Report 95-39,
1995.



Streams, Rivers, and Lakes in Big Bear National Forest, California

0 2.5 5 7.5 10 km



Map created May 9, 2023, by Surajit A. Bose
for GIST 53.

Map Scale 1:200,000

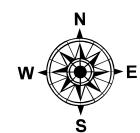
Projection: NAD 1983 (2011), State Plane
California V FIPS 0405 (Meters), Lambert
Conformal Conic

Basemap Credits: Esri, CGIAR, USGS

Data Source: USGS National Hydrographical
Database, 2023

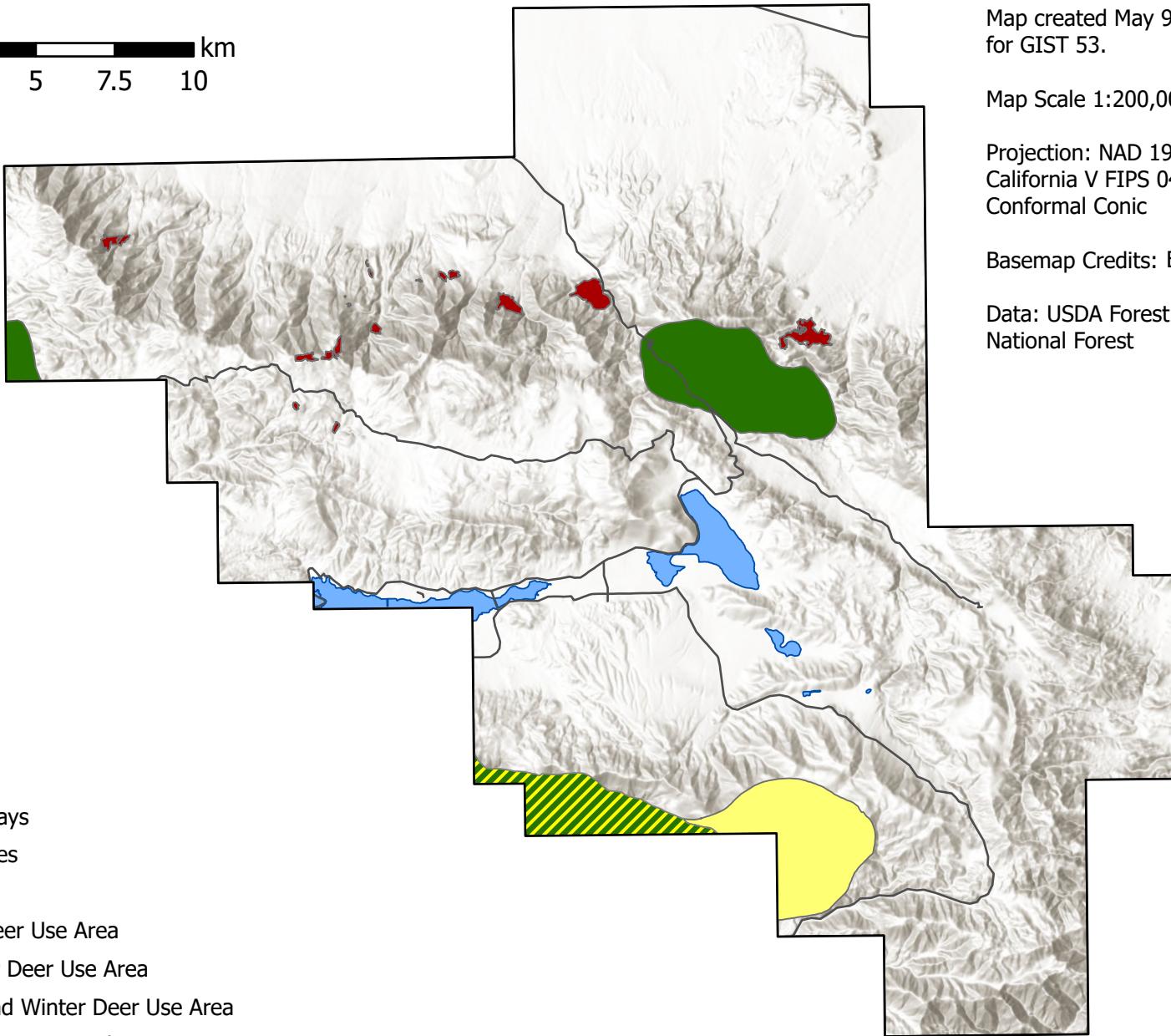
Legend

- Streams and Rivers
- Lakes
- Study Area Boundary



Deer Use Areas in Big Bear National Forest, California

km
0 2.5 5 7.5 10



Map created May 9, 2023, by Surajit A. Bose
for GIST 53.

Map Scale 1:200,000

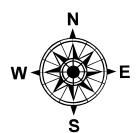
Projection: NAD 1983 (2011), State Plane California V FIPS 0405 (Meters), Lambert Conformal Conic

Basemap Credits: Esri, CGIAR, USGS

Data: USDA Forest Service, San Bernardino National Forest

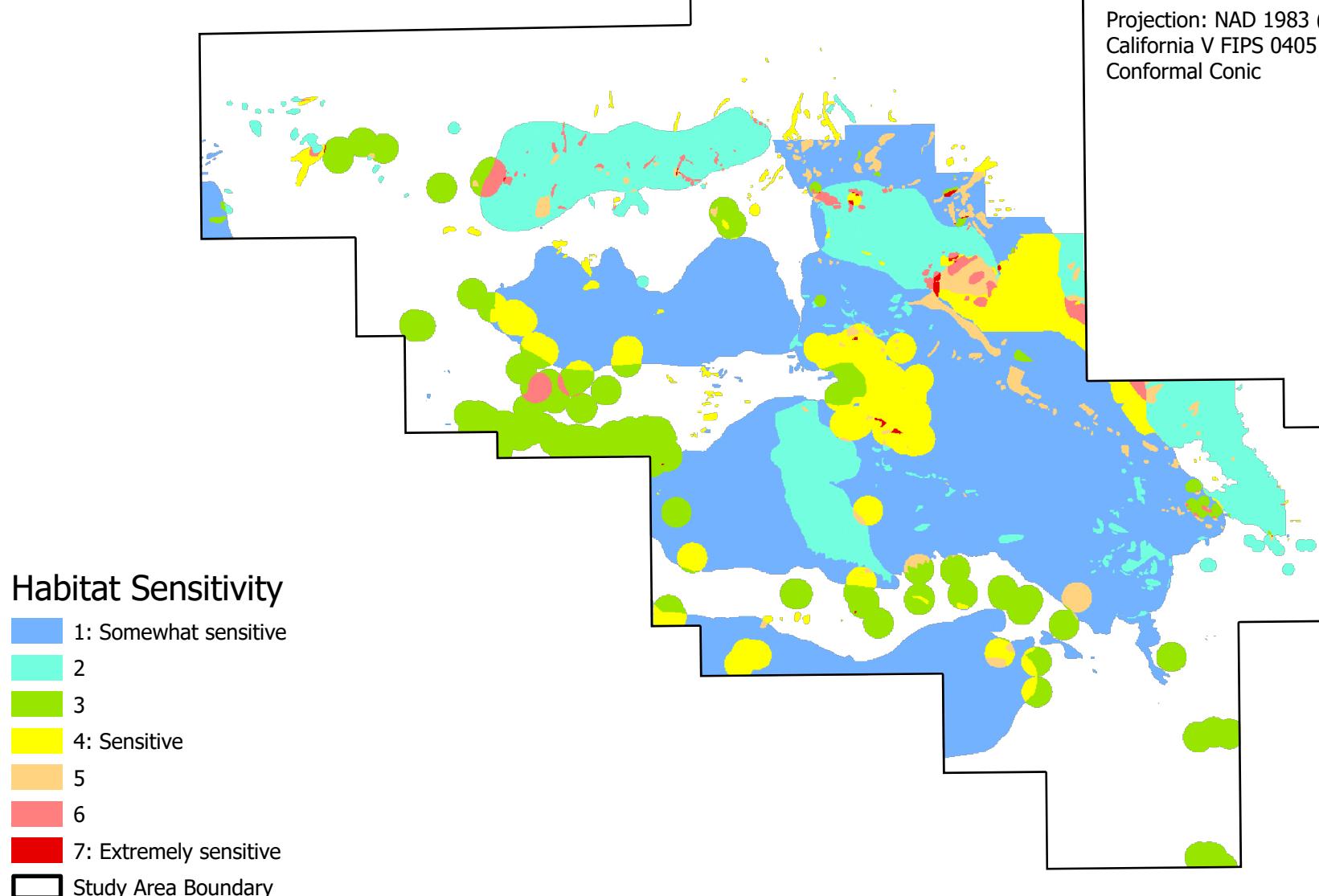
Legend

- Highways
- Quarries
- Lakes
- Key Deer Use Area
- Winter Deer Use Area
- Key and Winter Deer Use Area
- Study Area Boundary



Habitat Sensitivity in Big Bear National Forest, California

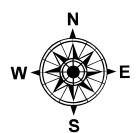
0 2.5 5 7.5 10 km



Map created June 25, 2023, by Surajit A. Bose for GIST 53.

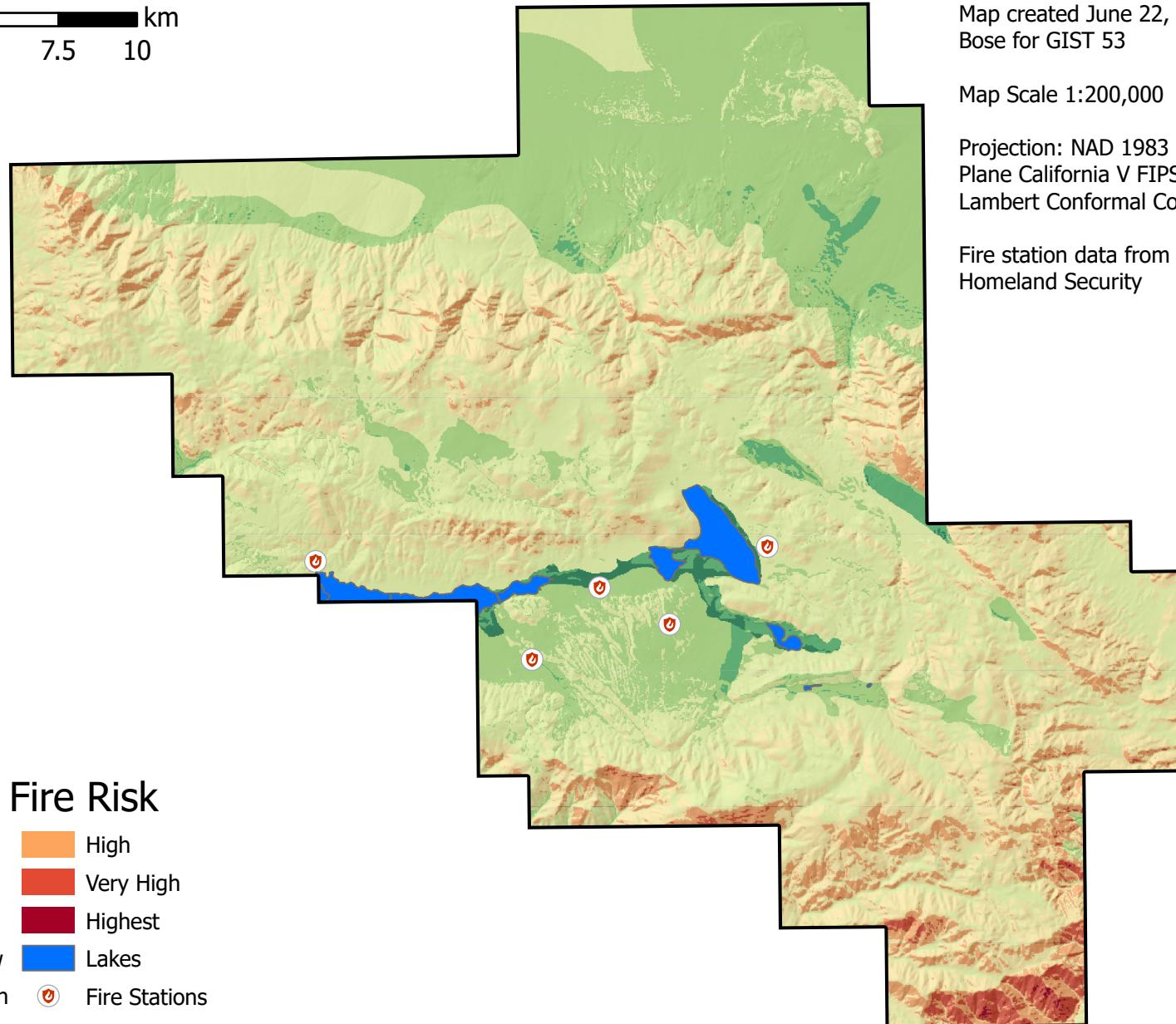
Map Scale 1:200,000

Projection: NAD 1983 (2011), State Plane California V FIPS 0405 (Meters), Lambert Conformal Conic



Fire Risk in Big Bear National Forest, California

0 2.5 5 7.5 10 km



Map created June 22, 2023, by Surajit A. Bose for GIST 53

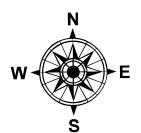
Map Scale 1:200,000

Projection: NAD 1983 (2011), State Plane California V FIPS 0405 (Meters), Lambert Conformal Conic

Fire station data from US Department of Homeland Security

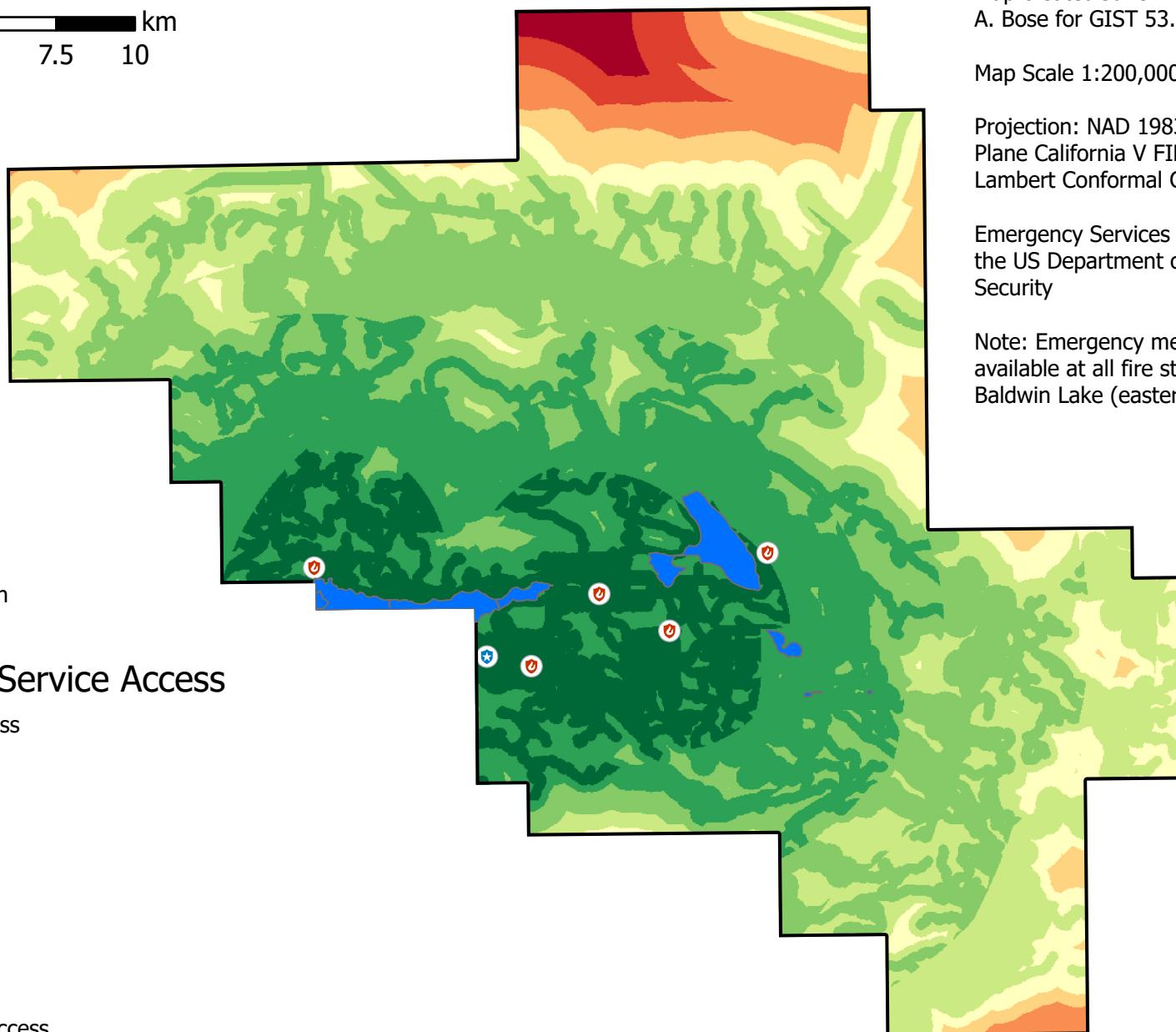
Calculated Fire Risk

Lowest	High
Very low	Very High
Low	Highest
Medium Low	Lakes
Medium High	Fire Stations



Emergency Service Access in Big Bear National Forest, California

0 2.5 5 7.5 10 km



Map created June 22, 2023, by Surajit A. Bose for GIST 53.

Map Scale 1:200,000

Projection: NAD 1983 (2011), State Plane California V FIPS 0405 (Meters), Lambert Conformal Conic

Emergency Services Information from the US Department of Homeland Security

Note: Emergency medical services are available at all fire stations except Baldwin Lake (easternmost on map)