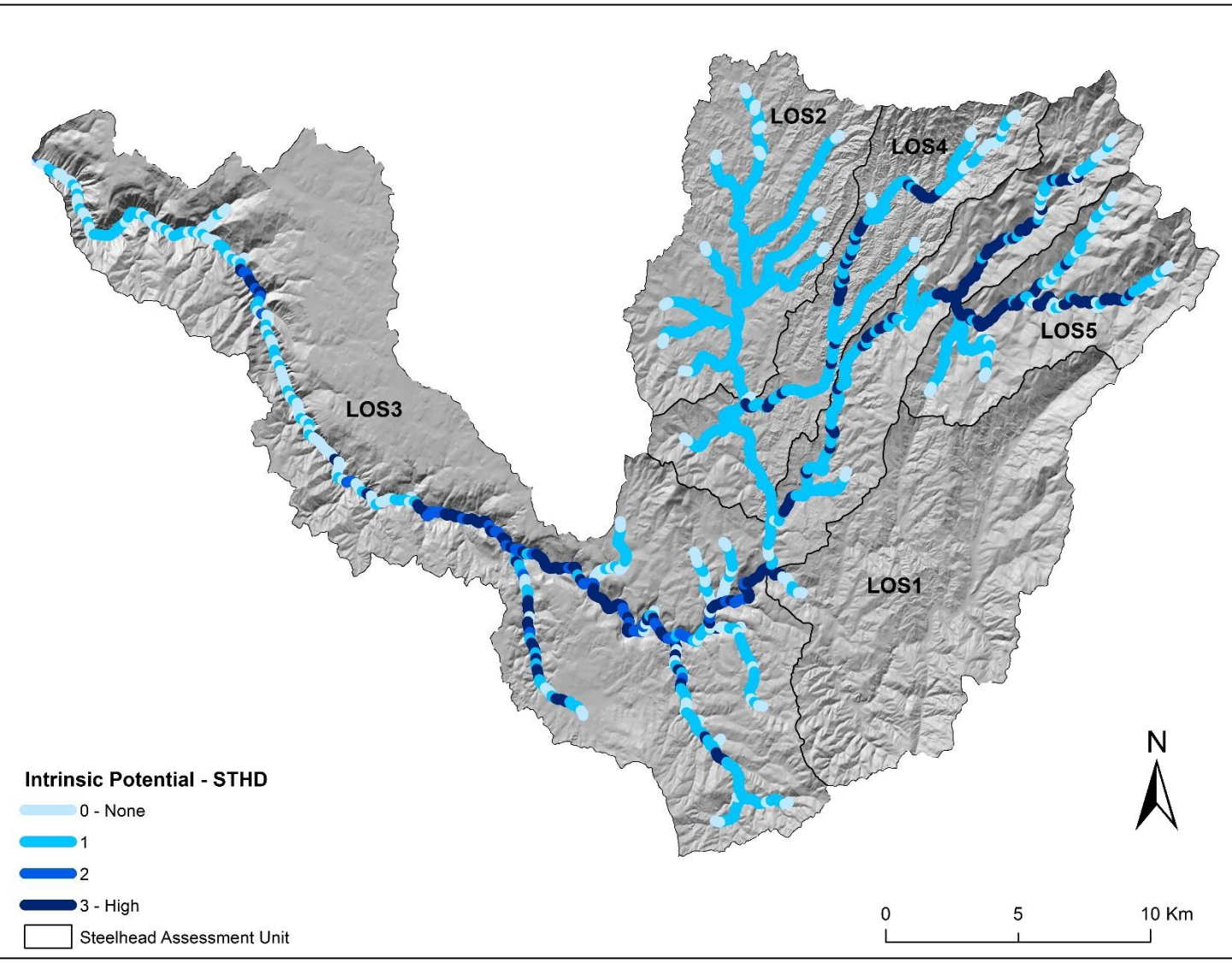
Lolo: Summary of CHaMP Metrics and Modeled Products

- CHaMP metrics are directly measured at each CHaMP site according to probabilistic sampling design. Metric included in this summary are:
  - Sinuosity
  - Substrate < 2 mm
  - Substrate < 6 mm
- Modeled products are built from CHaMP data and additional mechanistic or empirical knowledge, assessed at each CHaMP Site
  - Habitat Suitability Index (HSI)
  - Net Rate of Energy Investment (NREI)

Summary by Steelhead Assessment Unit

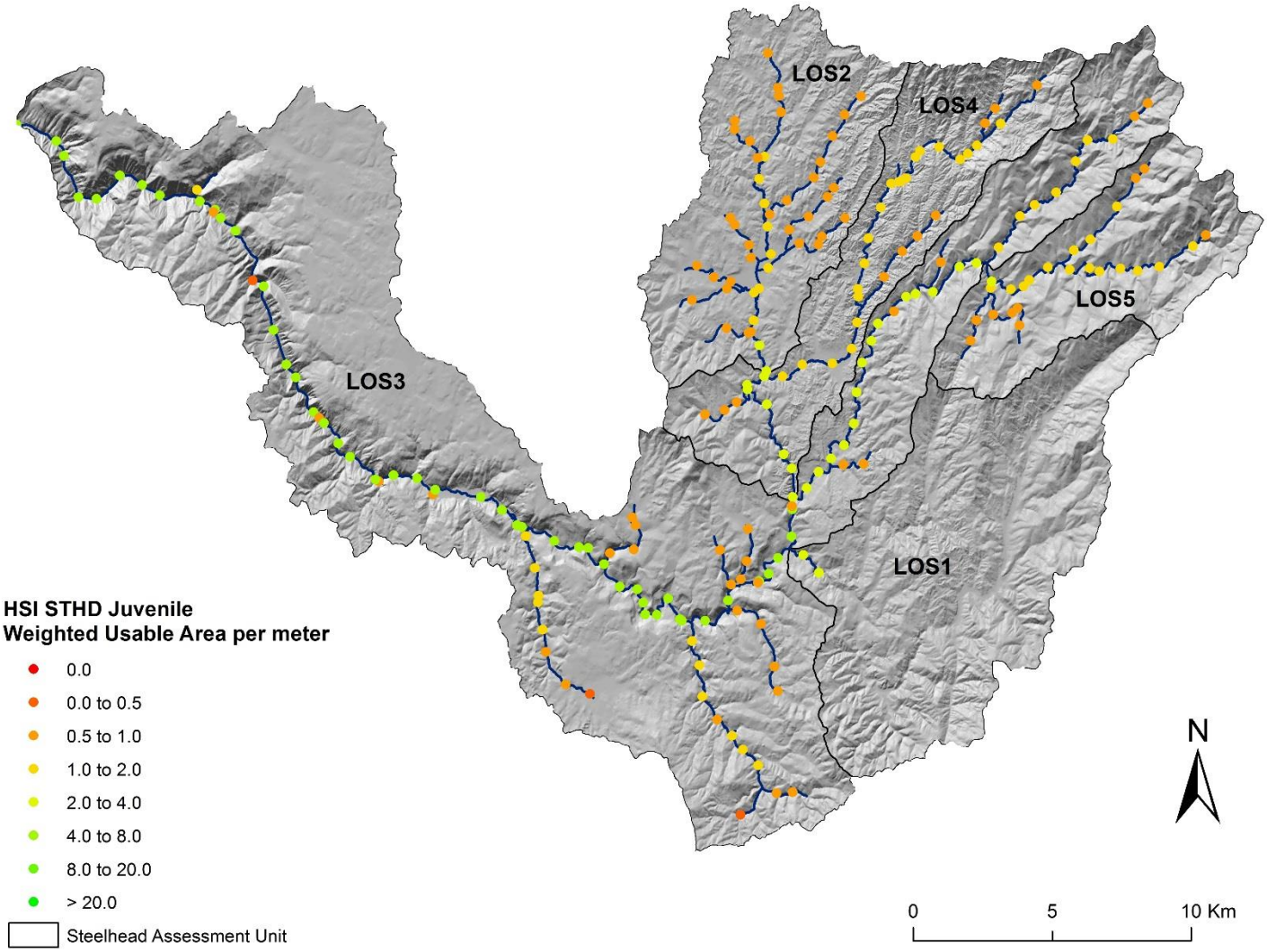
Lolo: Summary of CHaMP Metrics and Modeled Products

Steelhead Intrinsic Potential



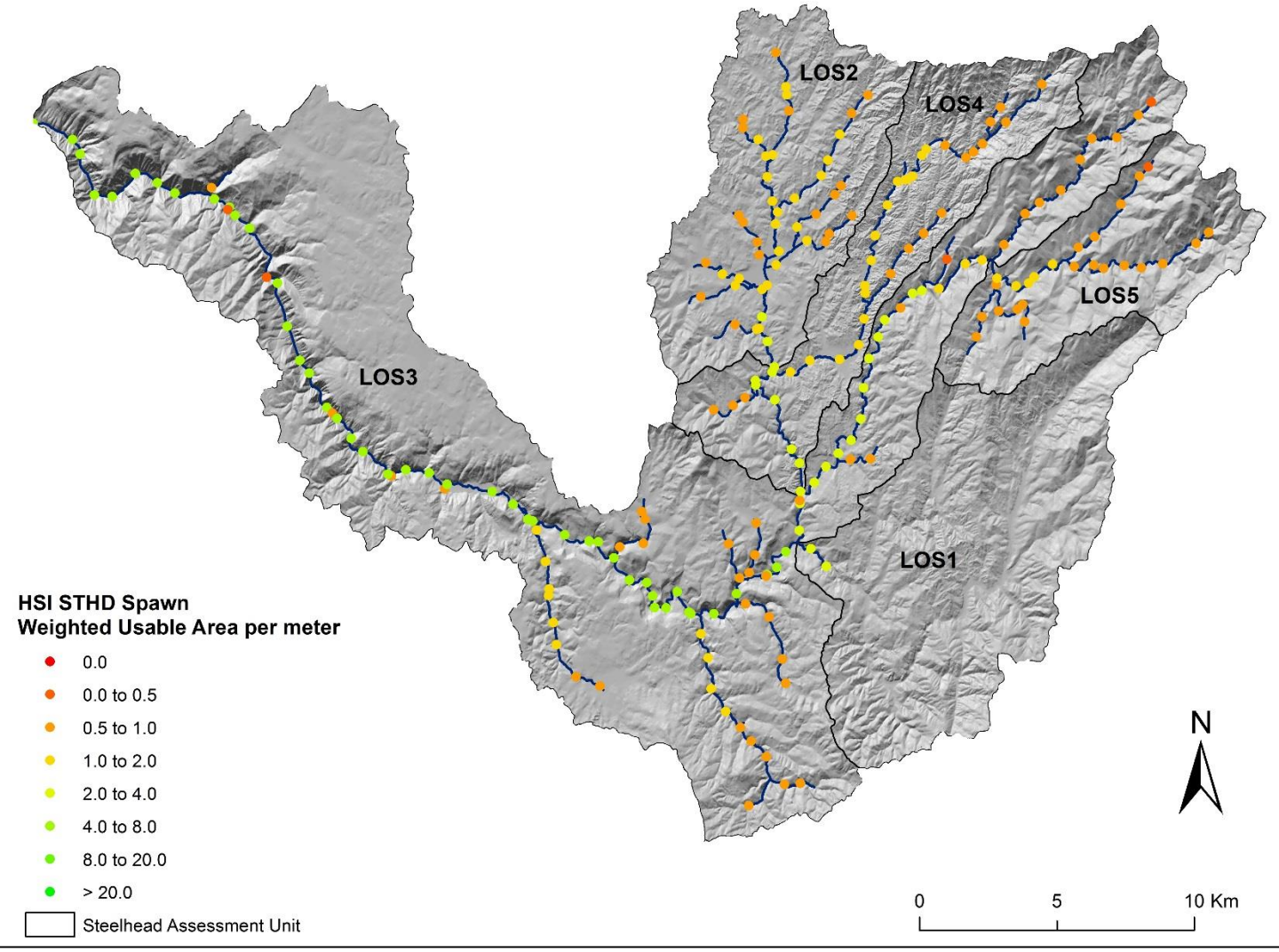
Steelhead Juvenile Weighted Usable Area

- Source: Habitat Suitability Index (HSI) Model
- Definition: Suitable habitat area (m^2) per meter of stream length for Juvenile Steelhead



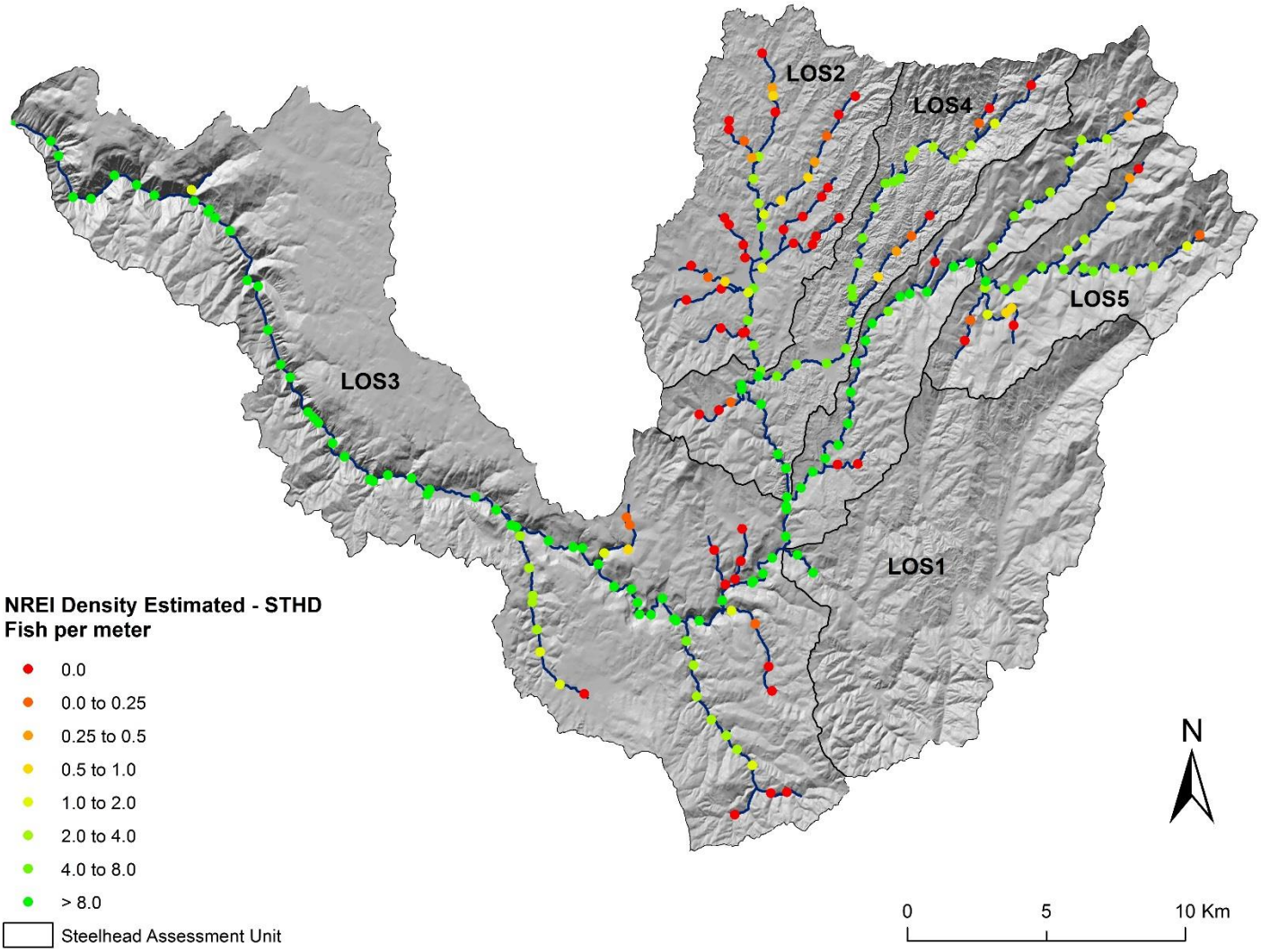
Steelhead Spawner Weighted Usable Area

- Source: Habitat Suitability Index (HSI) Model
- Definition: Suitable Spawning habitat area (m^2) per meter of stream length for Steelhead



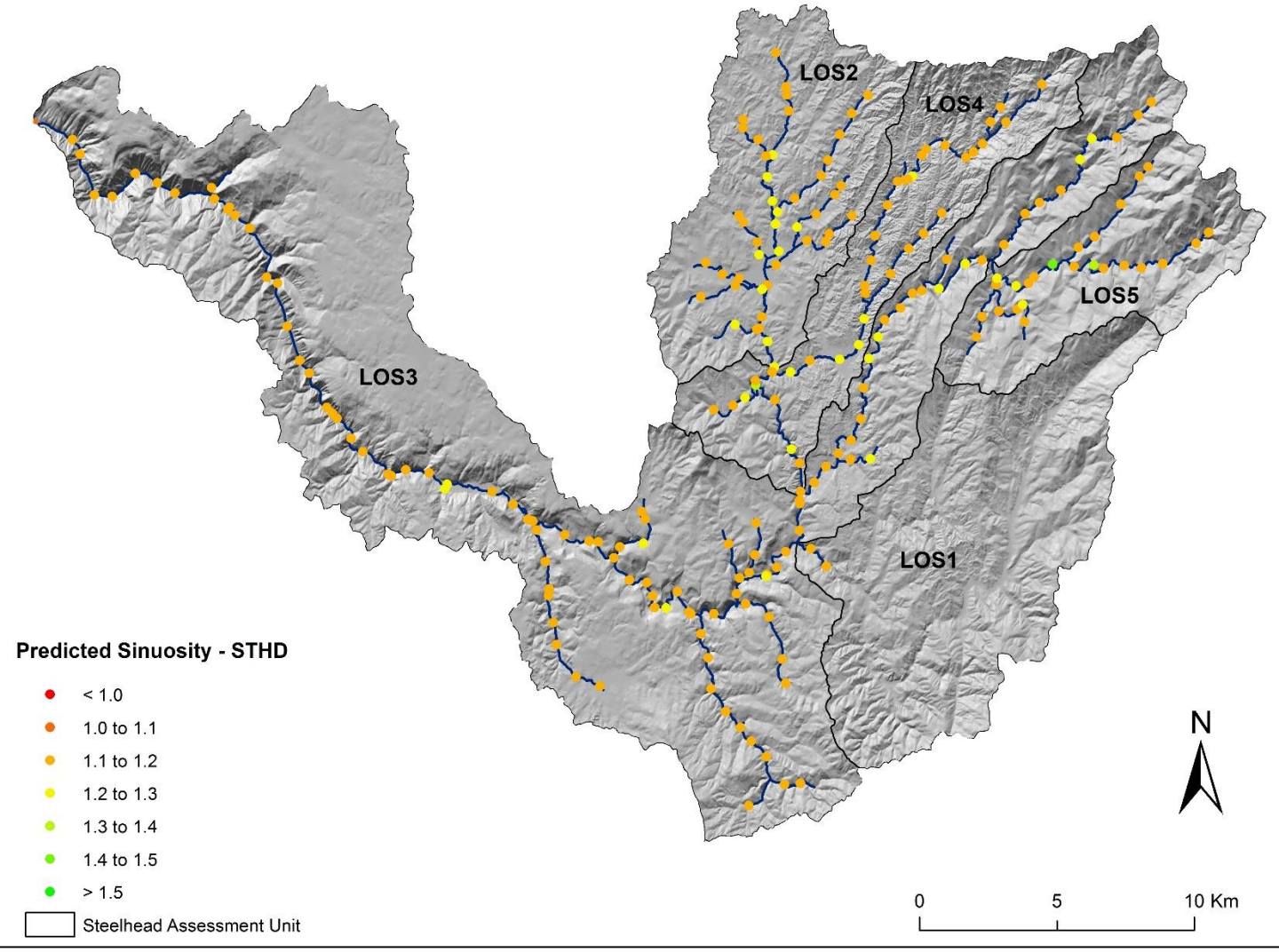
Juvenile Salmonid Capacity

- Source: Net Rate of Energy Intake (NREI) Model
- Definition: Carrying capacity (fish) per meter of stream length



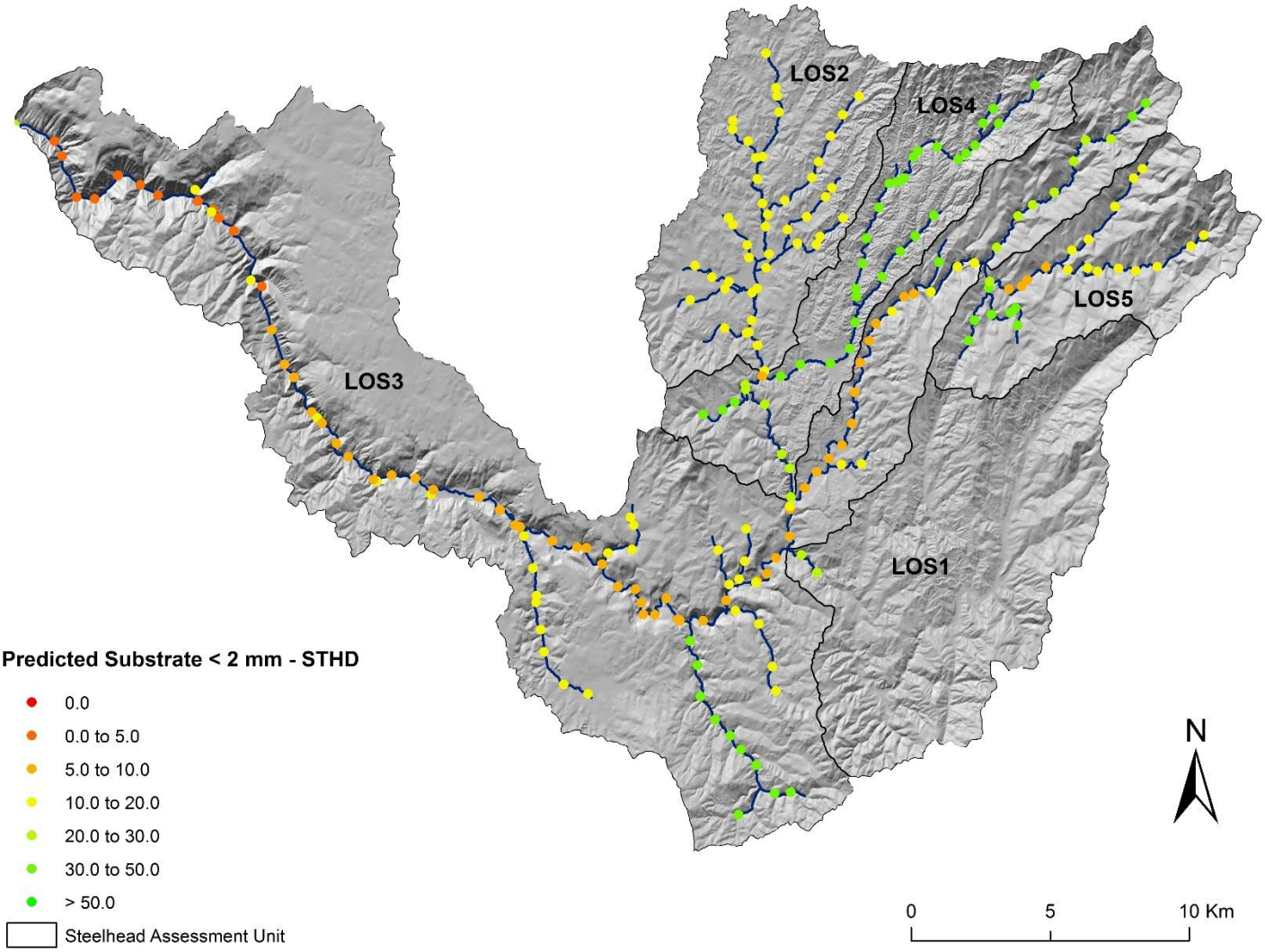
Sinuosity

- Source: CHaMP Metrics (www.champmonitoring.org)
- Definition: Ratio of the thalweg length to the straight line distance between the start and end points of the thalweg.



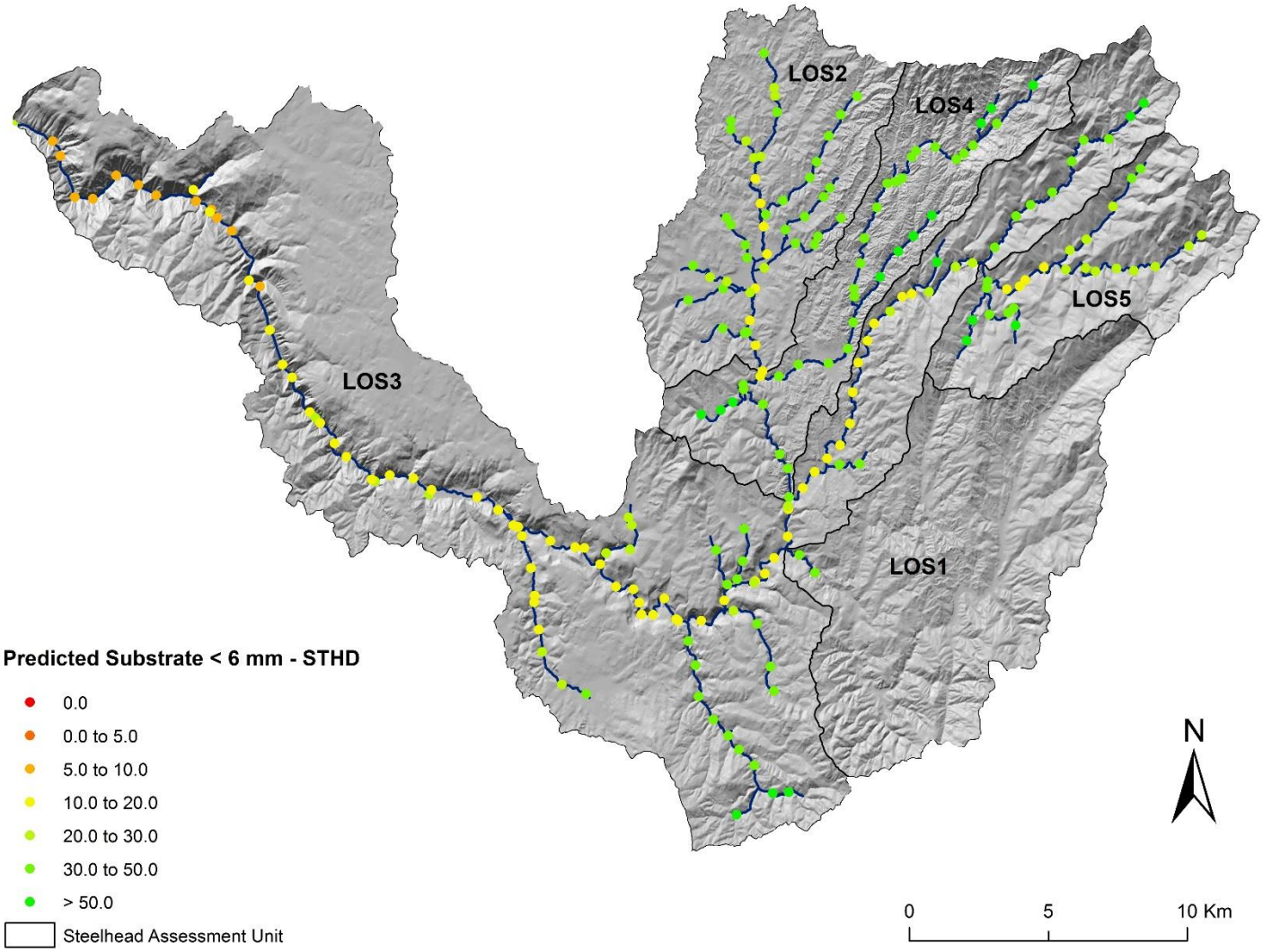
Substrate < 2 mm

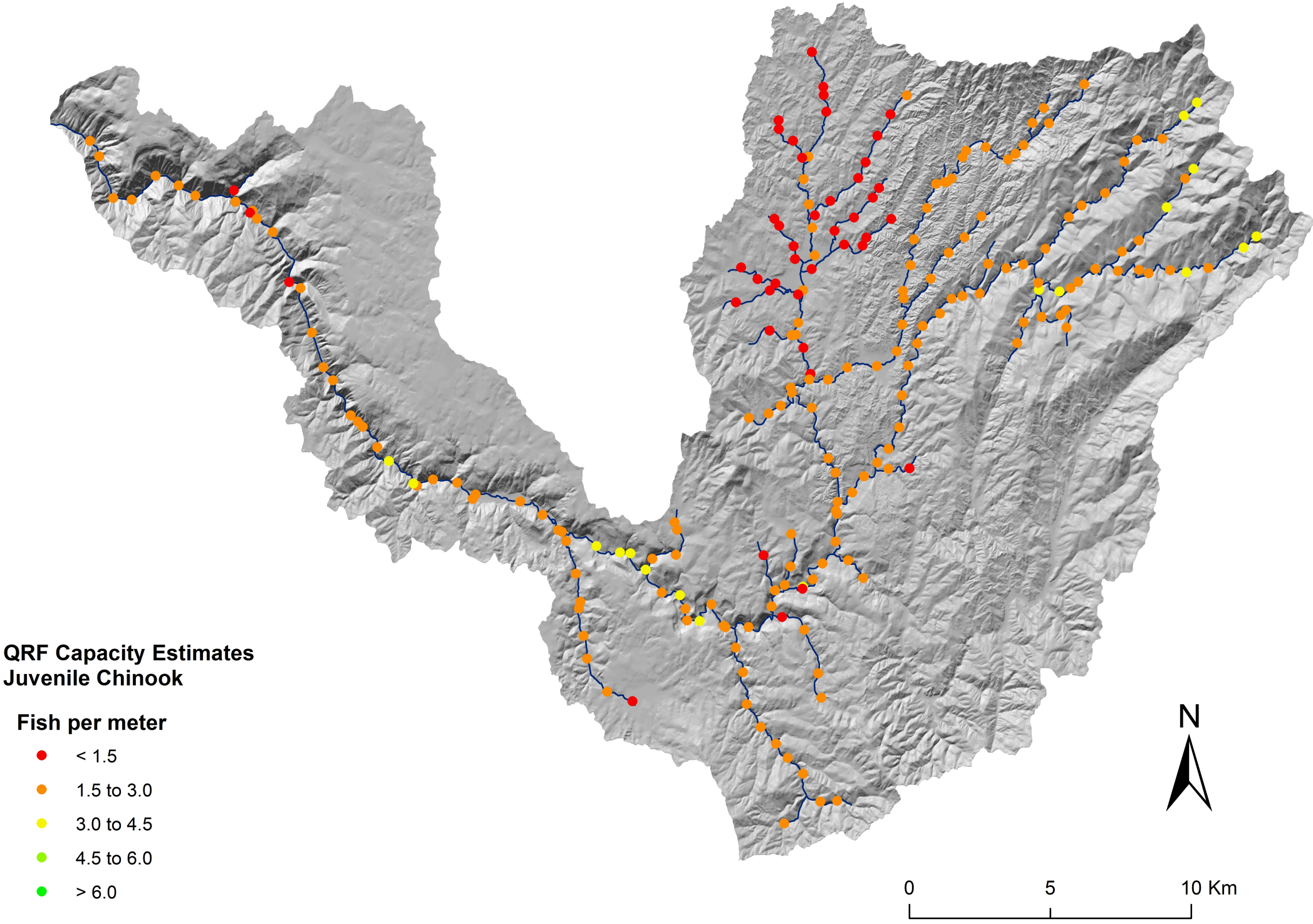
- Source: CHaMP Metrics (www.champmonitoring.org)
- Definition: Average percentage of pool tail substrates comprised of fine sediment <2 mm



Substrate < 6 mm

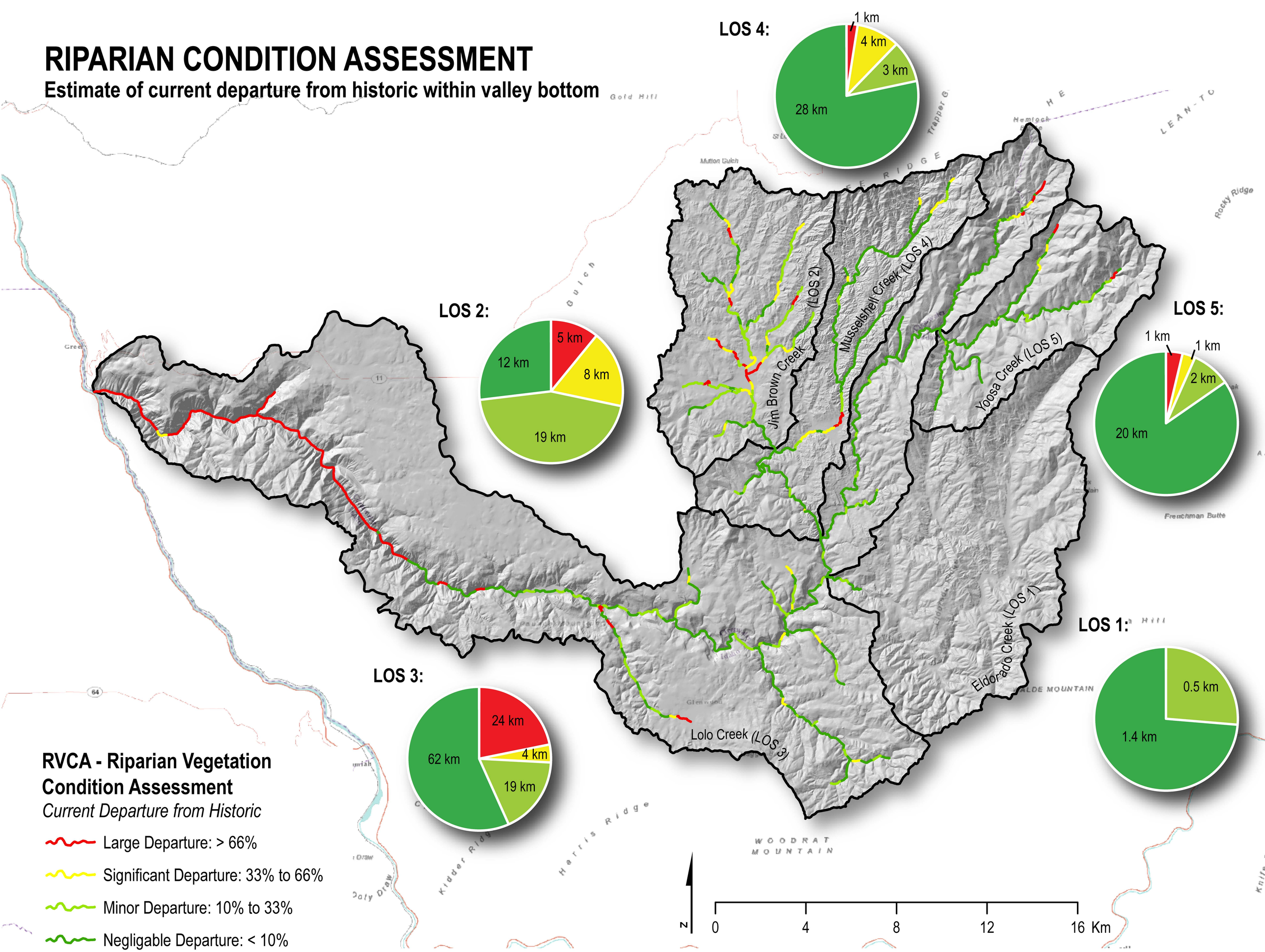
- Source: CHaMP Metrics (www.champmonitoring.org)
- Definition: Average percentage of pool tail substrates comprised of fine sediment <6 mm




QRF Capacity Estimates
Juvenile Chinook
Fish per meter
< 1.5
1.5 to 3.0
3.0 to 4.5
4.5 to 6.0
> 6.0
N
0
5
10 Km

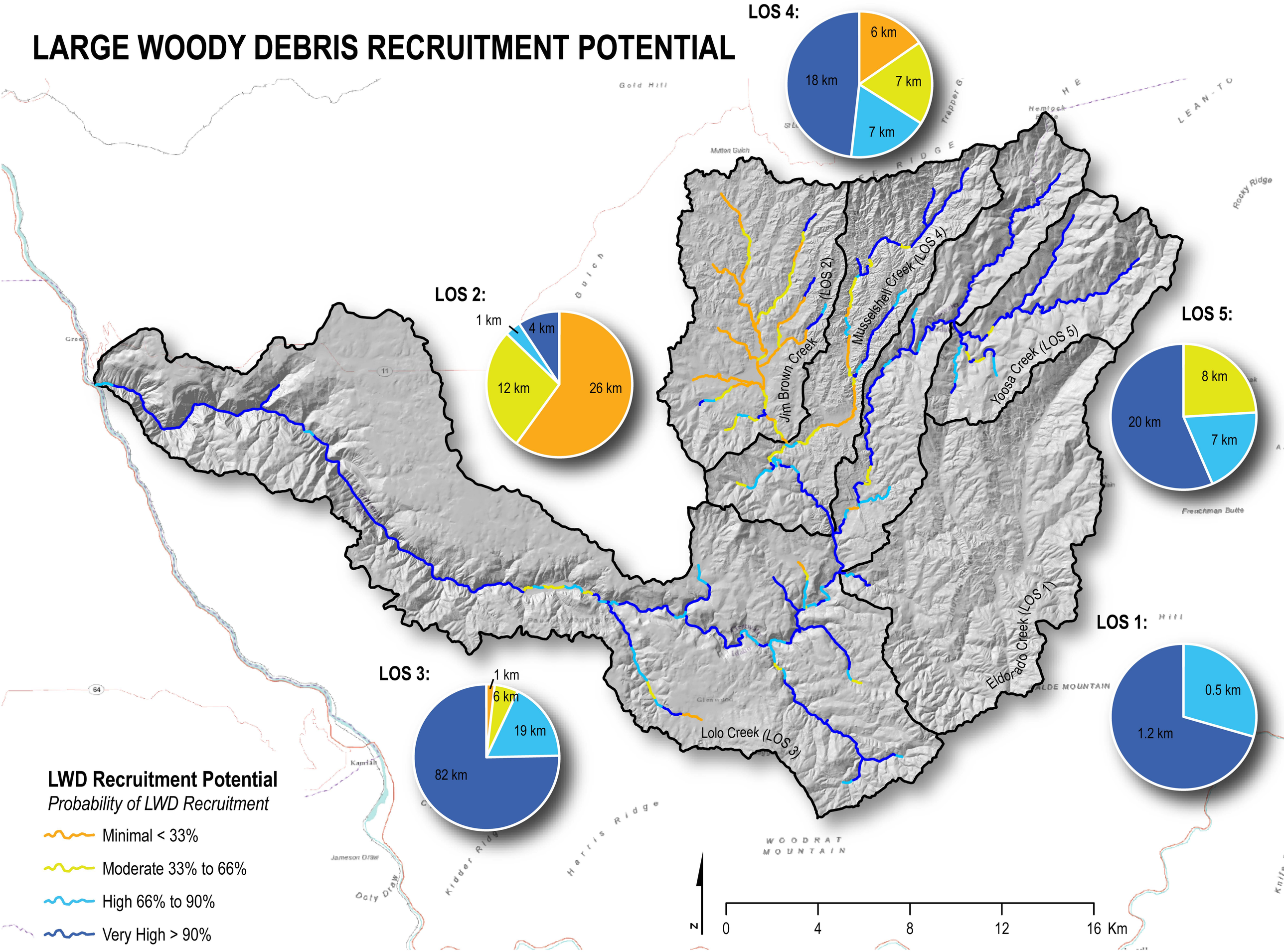
RIPARIAN CONDITION ASSESSMENT

Estimate of current departure from historic within valley bottom



Sources: Esri, DeLorme, USGS, NPS

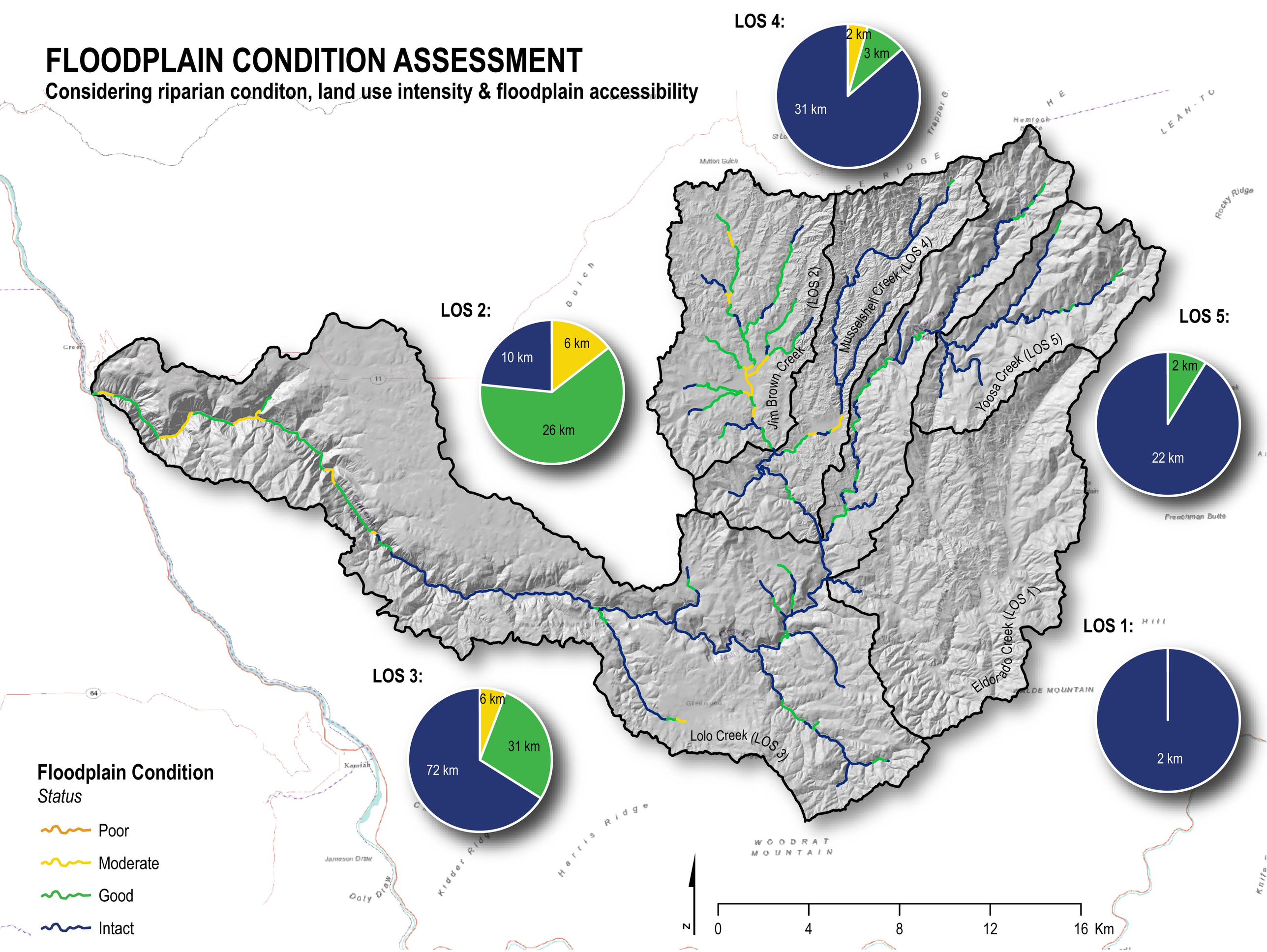
LARGE WOODY DEBRIS RECRUITMENT POTENTIAL



Sources: Esri, DeLorme, USGS, NPS

FLOODPLAIN CONDITION ASSESSMENT

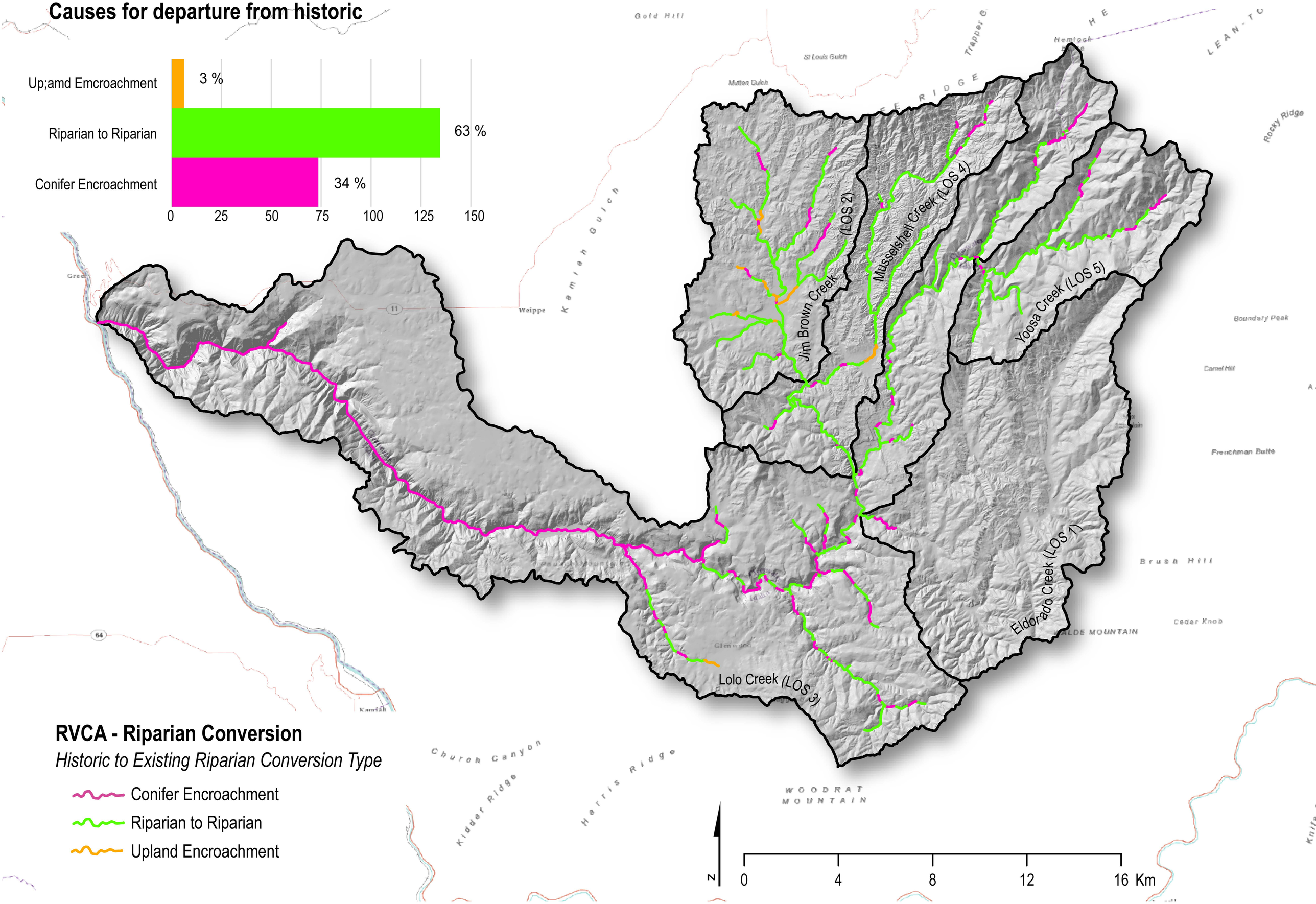
Considering riparian conditon, land use intensity & floodplain accessibility



Sources: Esri, DeLorme, USGS, NPS

RIPARIAN CONVERSION

Causes for departure from historic



RVCA - Riparian Conversion

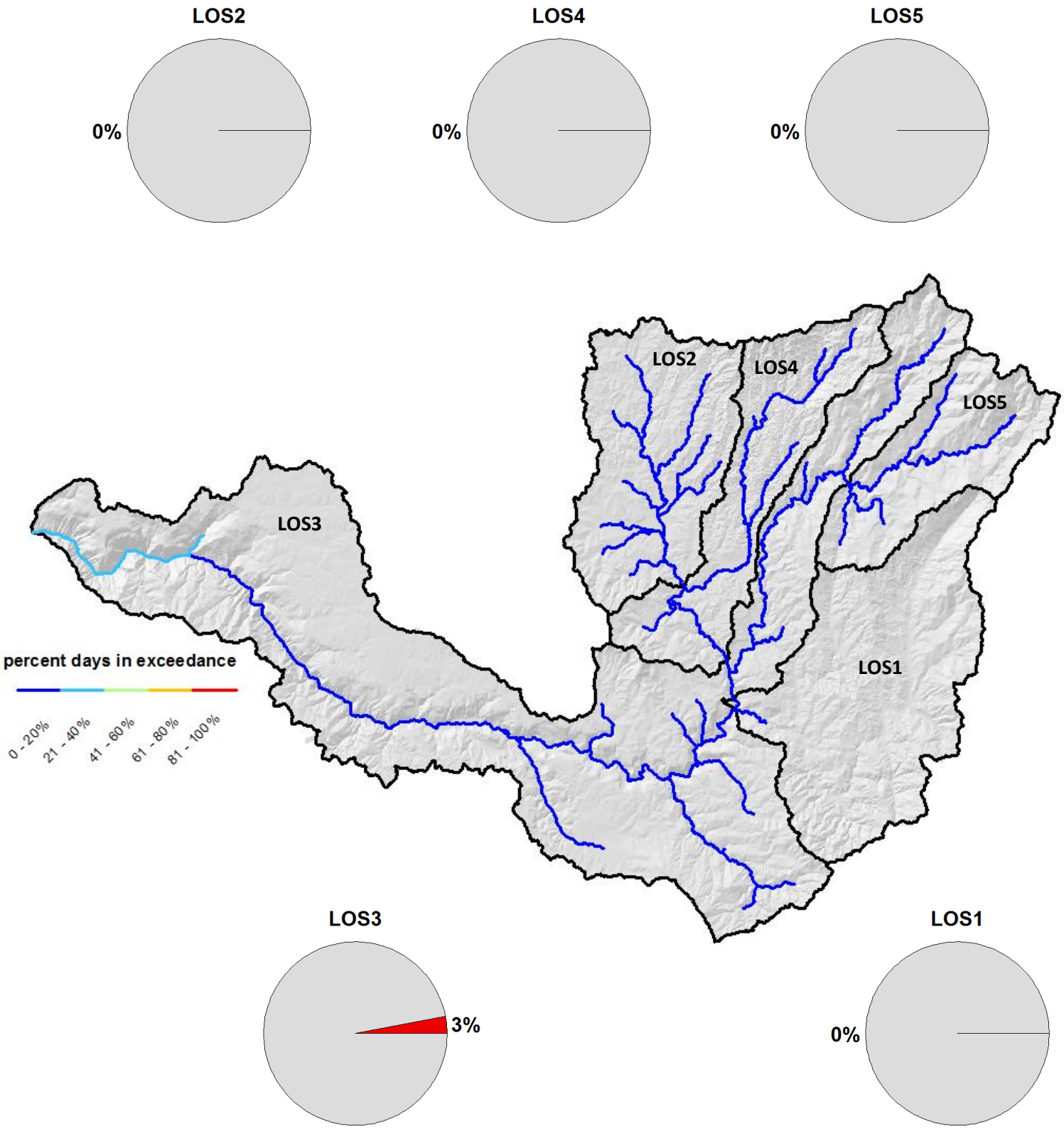
Historic to Existing Riparian Conversion Type

- Conifer Encroachment
- Riparian to Riparian
- Upland Encroachment

Sources: Esri, DeLorme, USGS, NPS

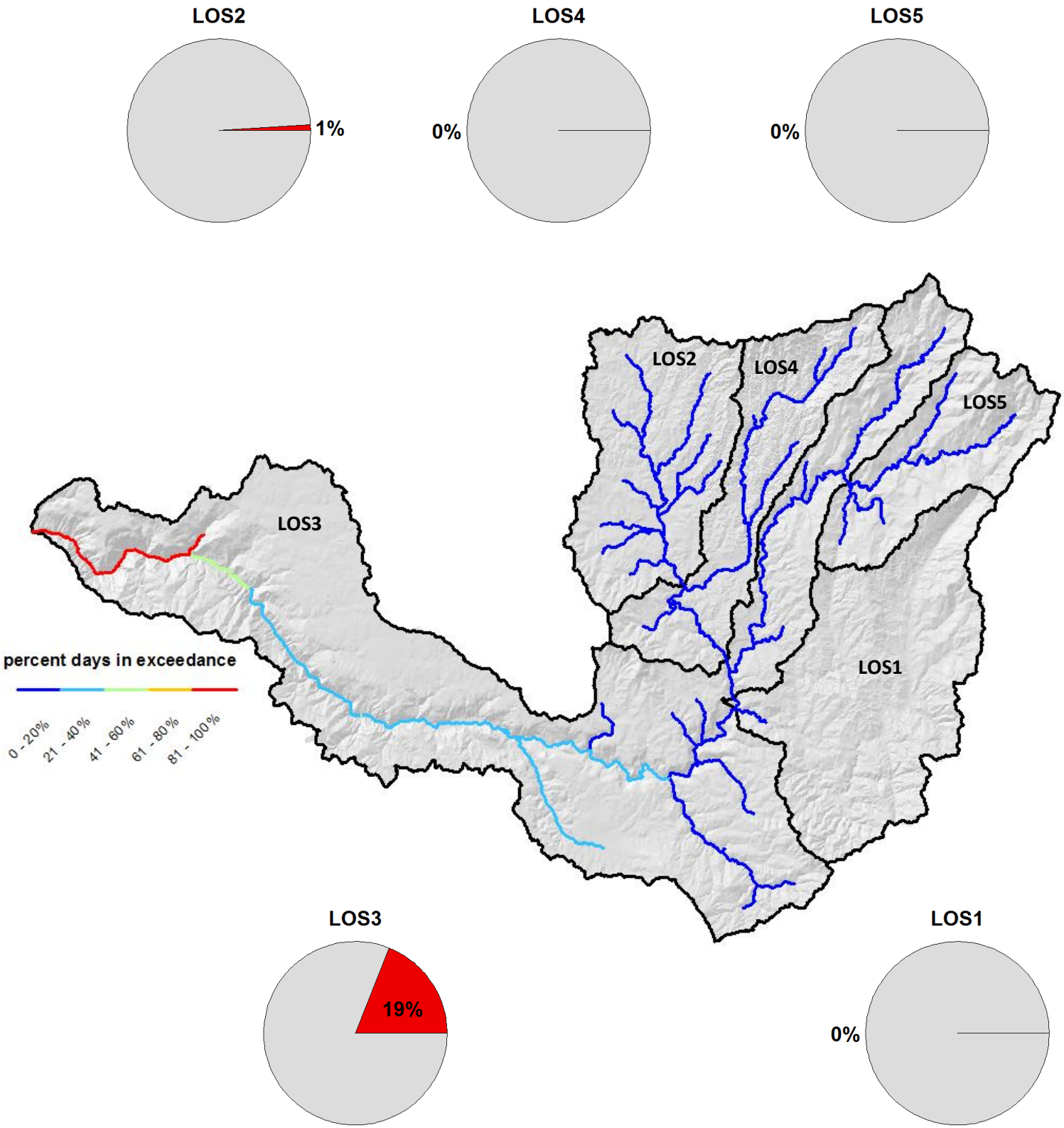
Lolo River 2011

Percent summer days (20 July – 31 August) in exceedance of 18°C maximum stream temperature
Steelhead extent



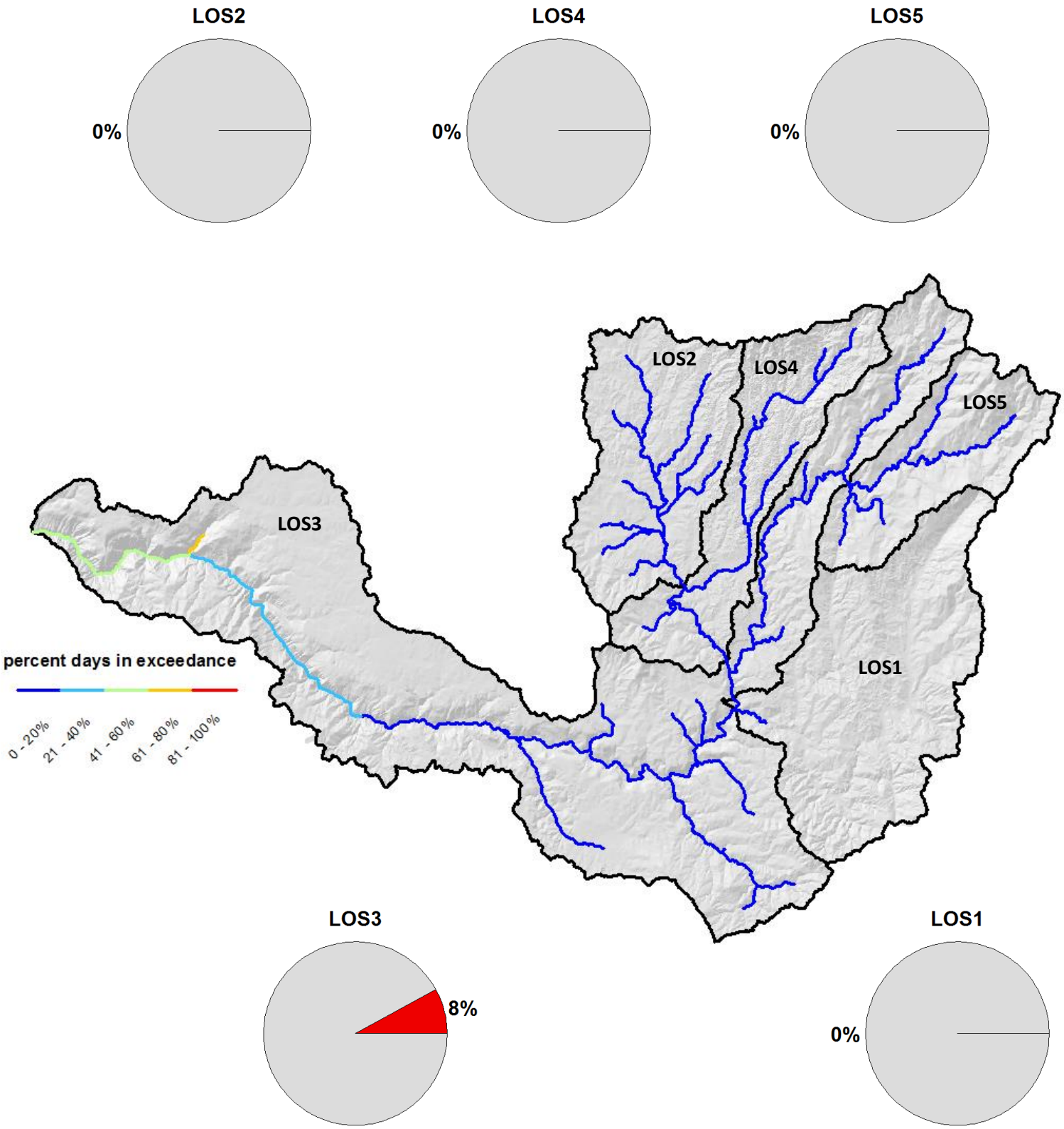
Lolo River 2012

Percent summer days (20 July – 31 August) in exceedance of 18°C maximum stream temperature
Steelhead extent



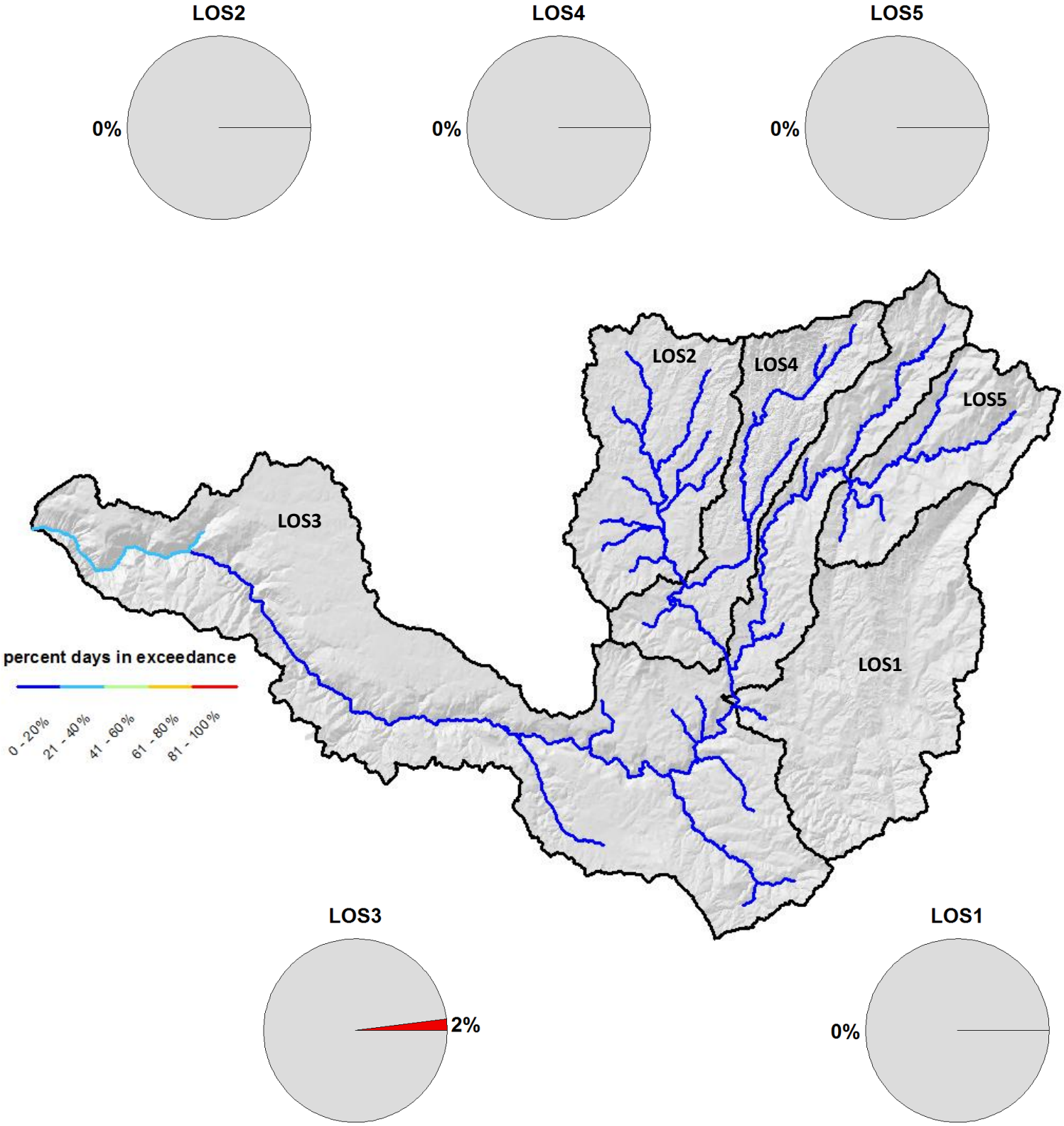
Lolo River 2012

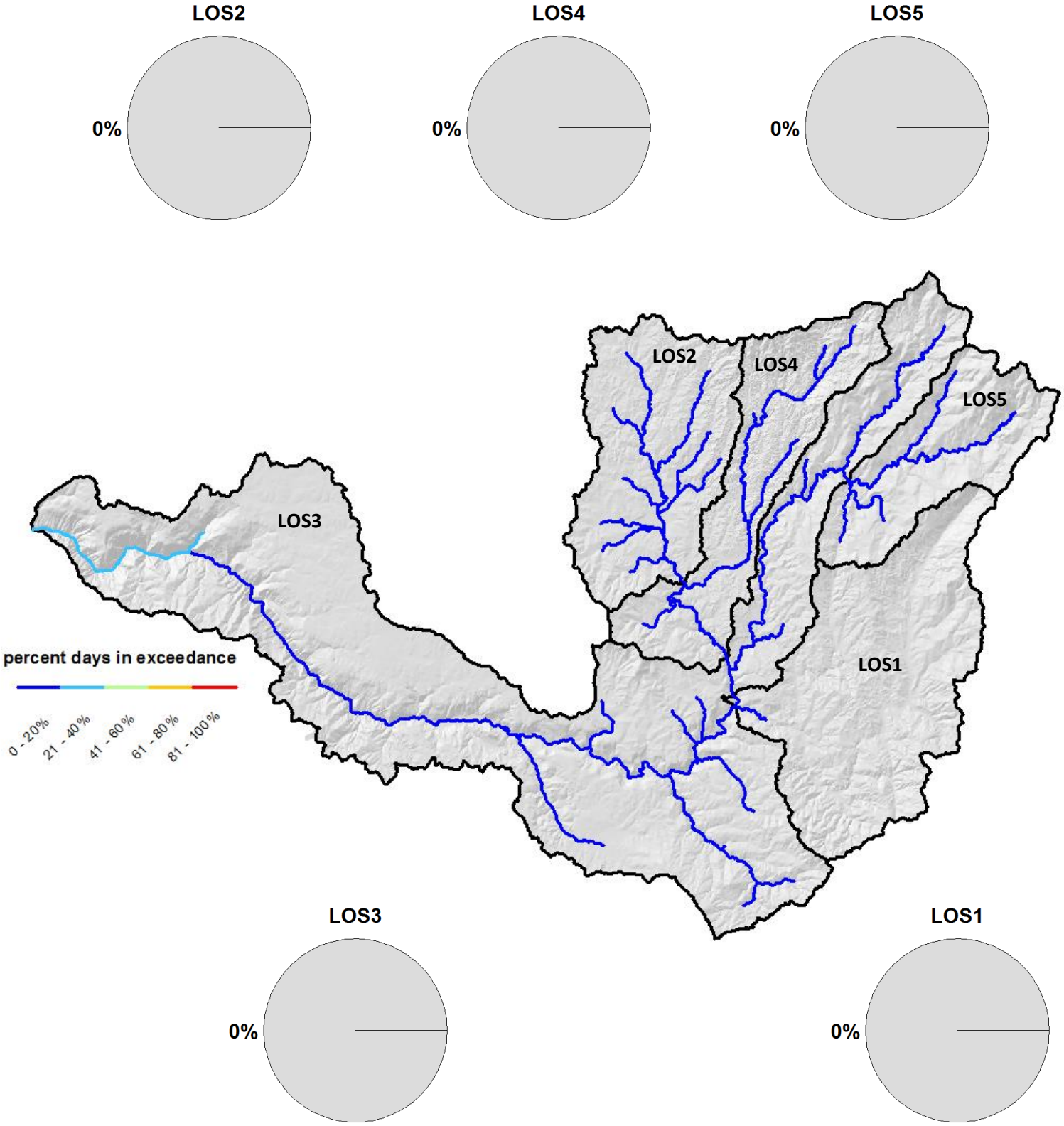
Percent summer days (20 July – 31 August) in exceedance of 20°C maximum stream temperature
Steelhead extent



Lolo River 2012

Percent summer days (20 July – 31 August) in exceedance of 22°C maximum stream temperature
Steelhead extent



Lolo River 2013

Percent summer days (20 July – 31 August) in exceedance of 18°C maximum stream temperature
Steelhead extent