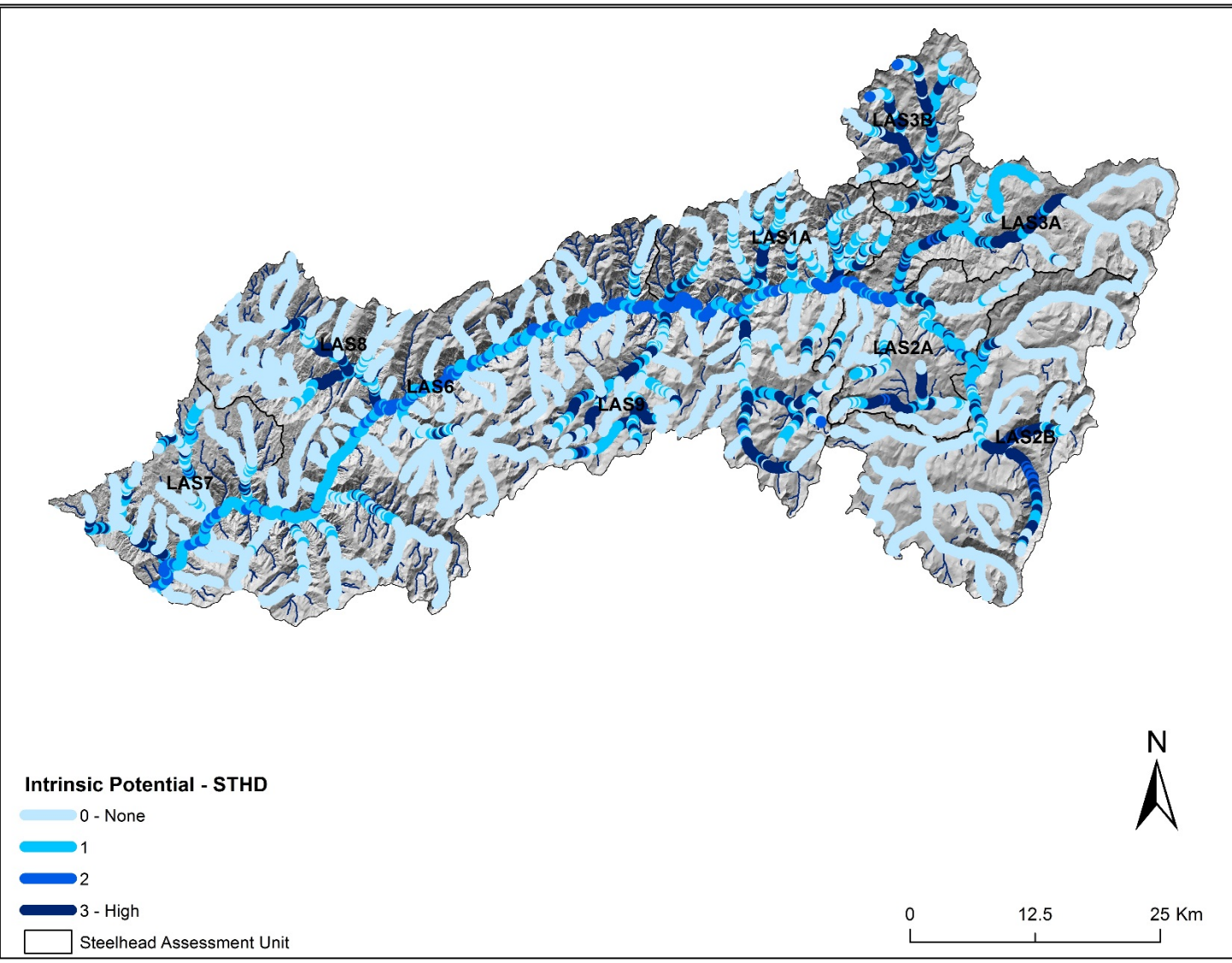
Lochsa: Summary of CHaMP Metrics and Modeled Products

- 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

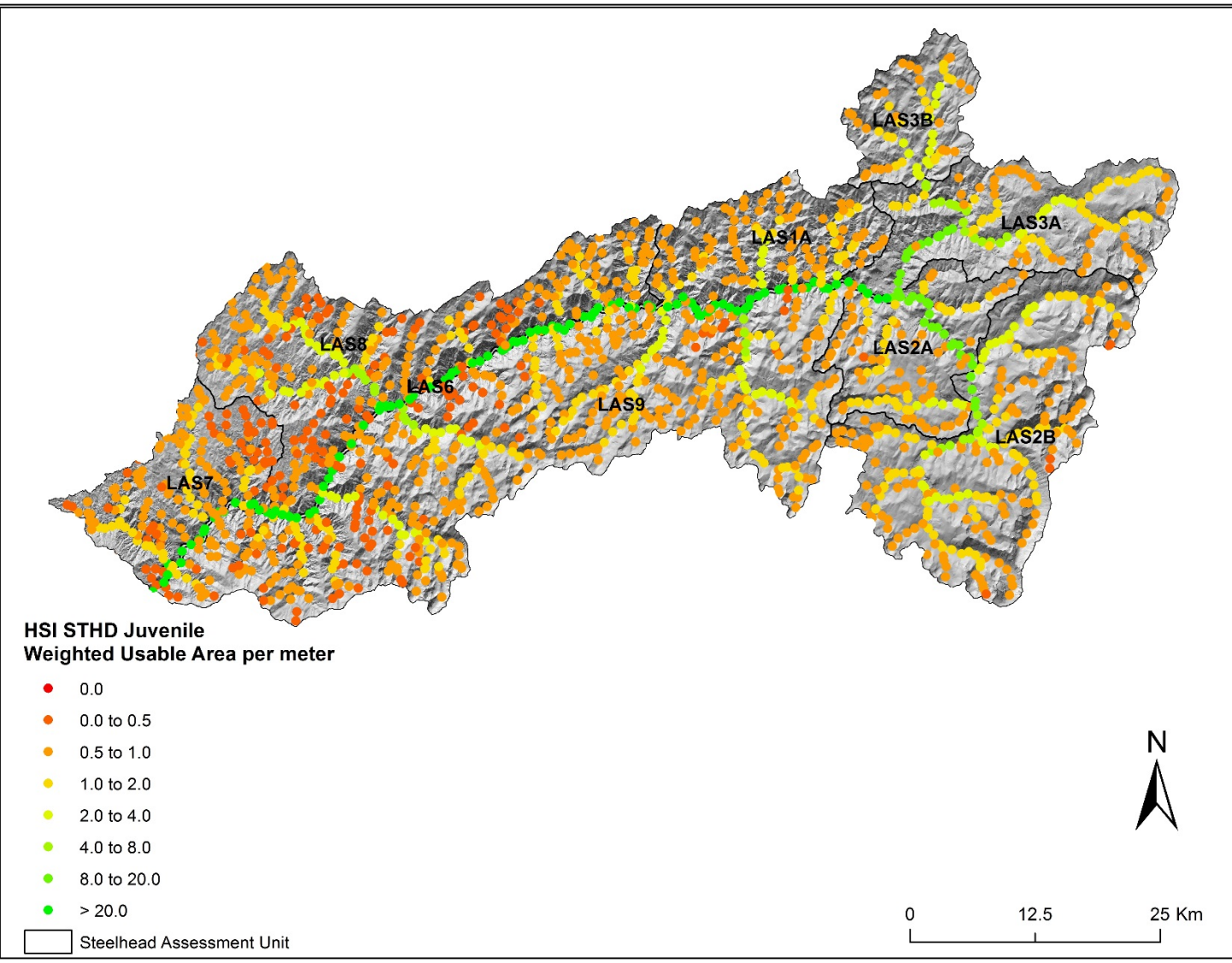
Lochsa: Summary of CHaMP Metrics and Modeled Products

Steelhead Intrinsic Potential



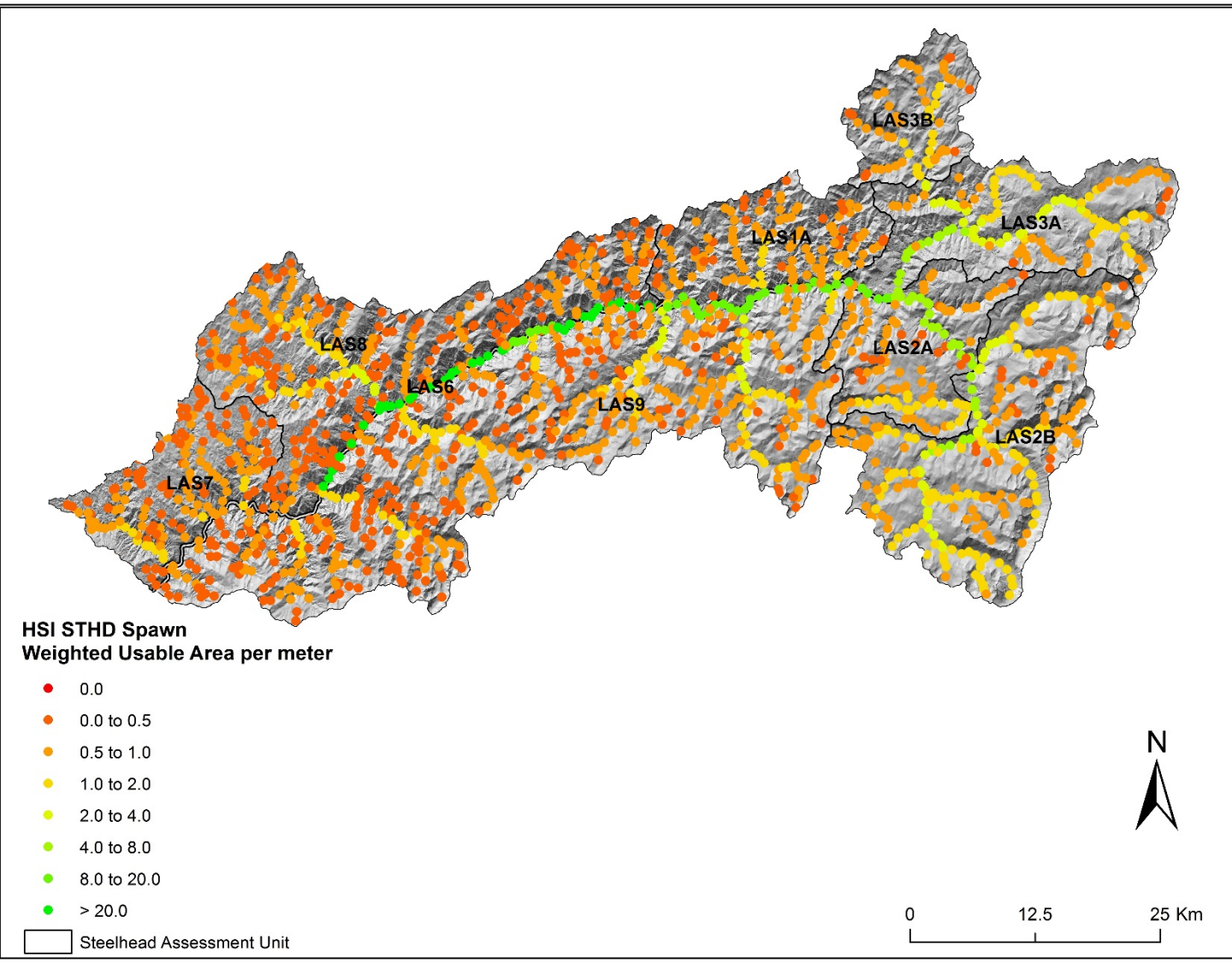
Steelhead Juvenile Weighted Usable Area

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



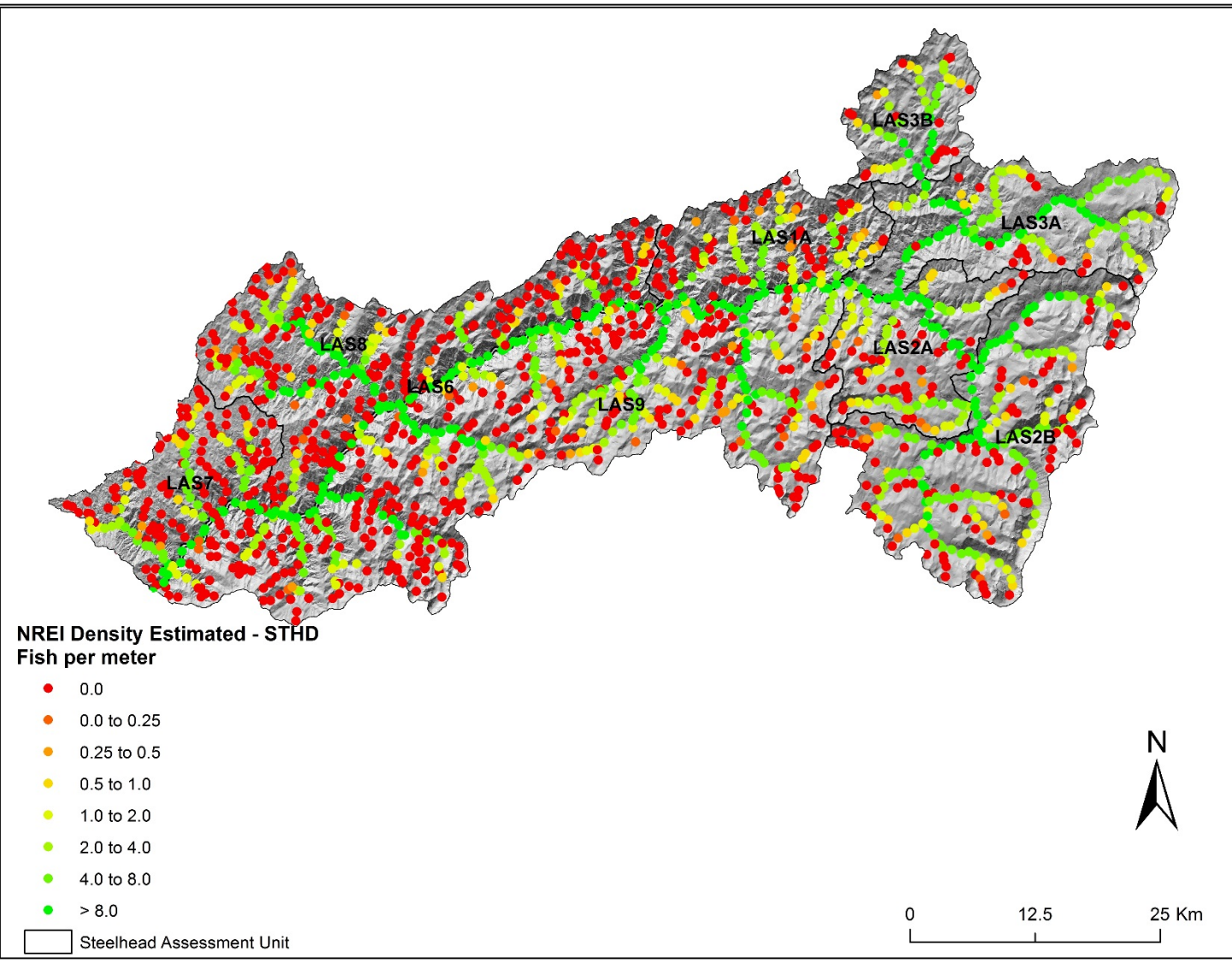
Steelhead Spawner Weighted Usable Area

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



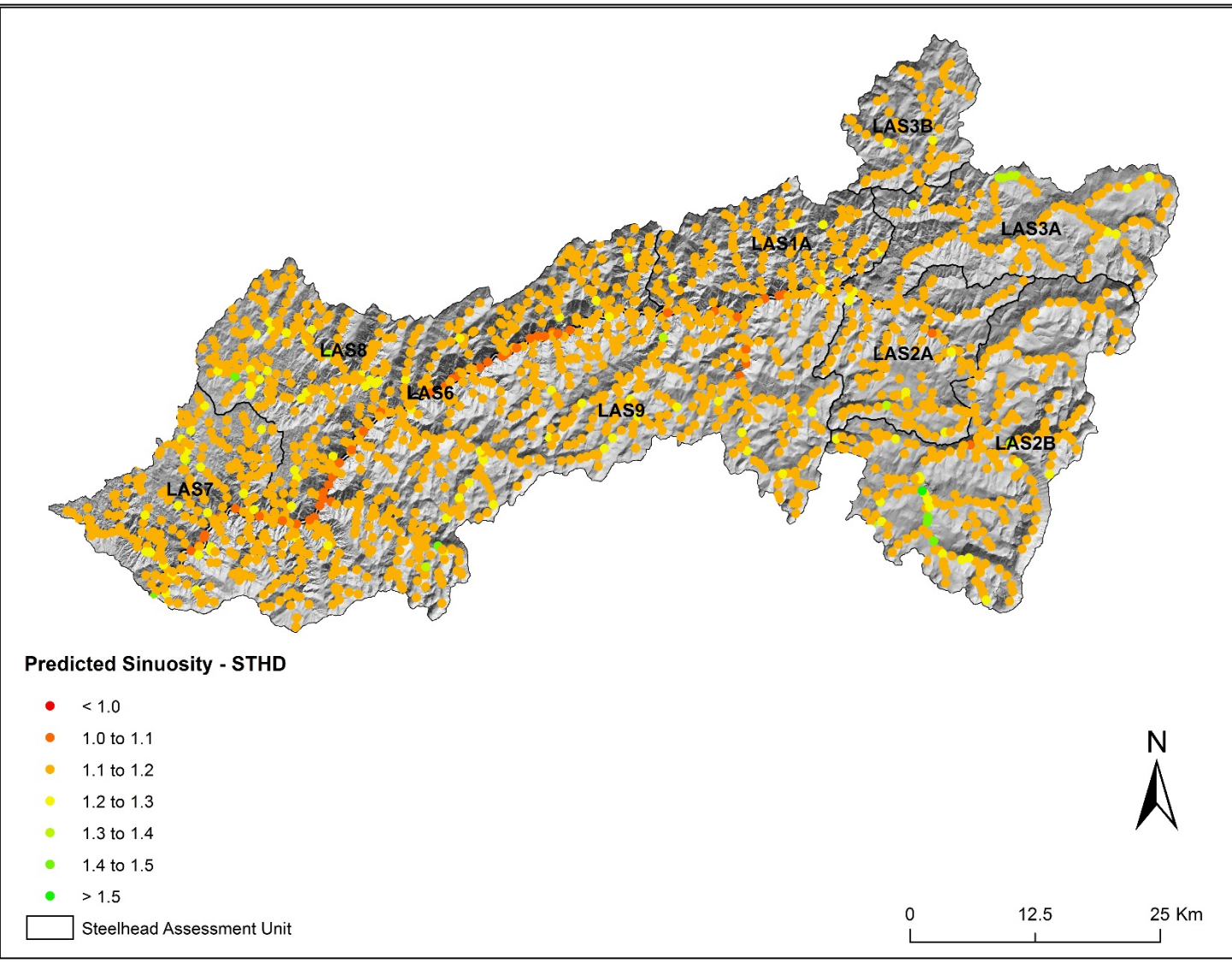
Juvenile Salmonid Capacity

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



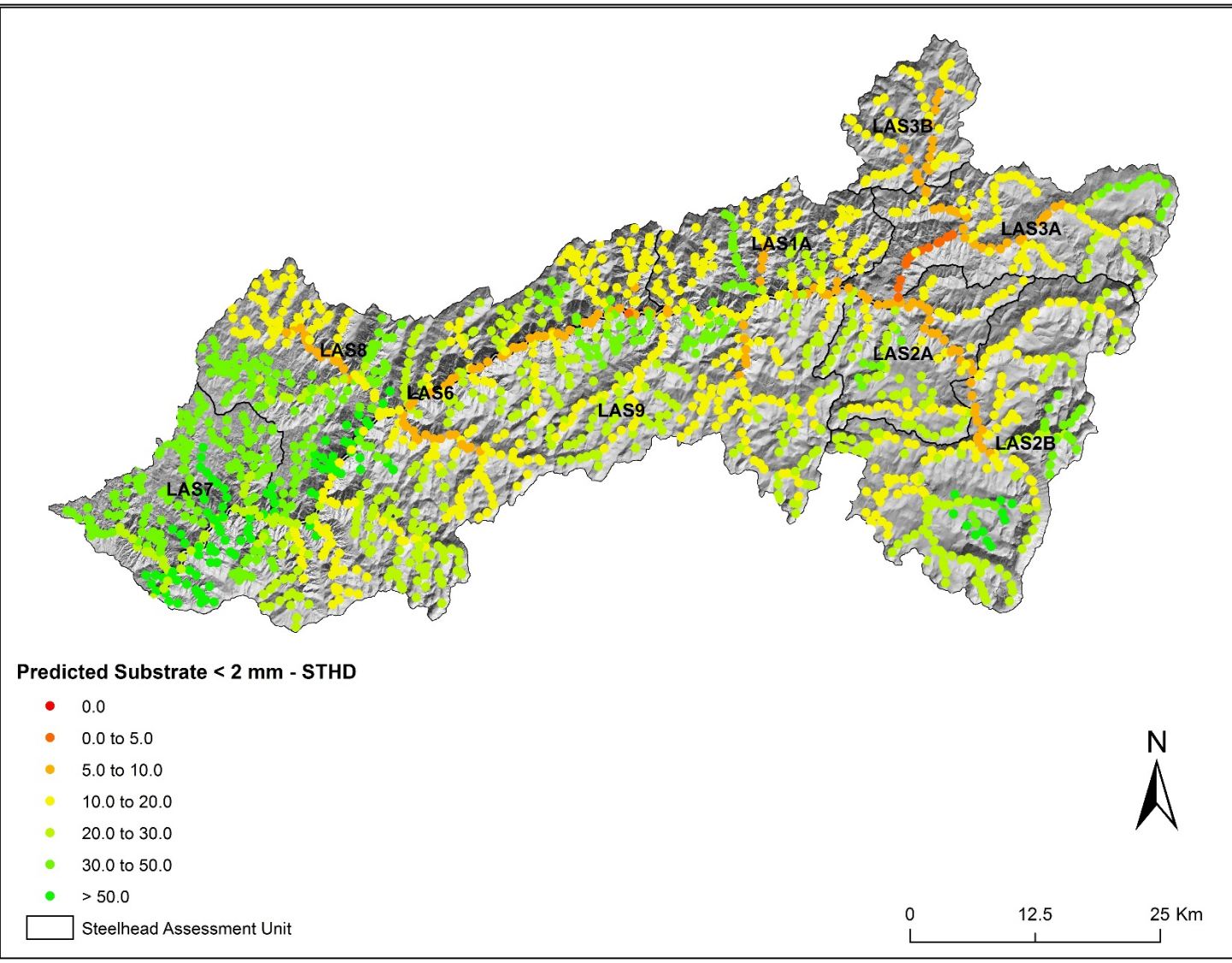
Sinuosity

- 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.



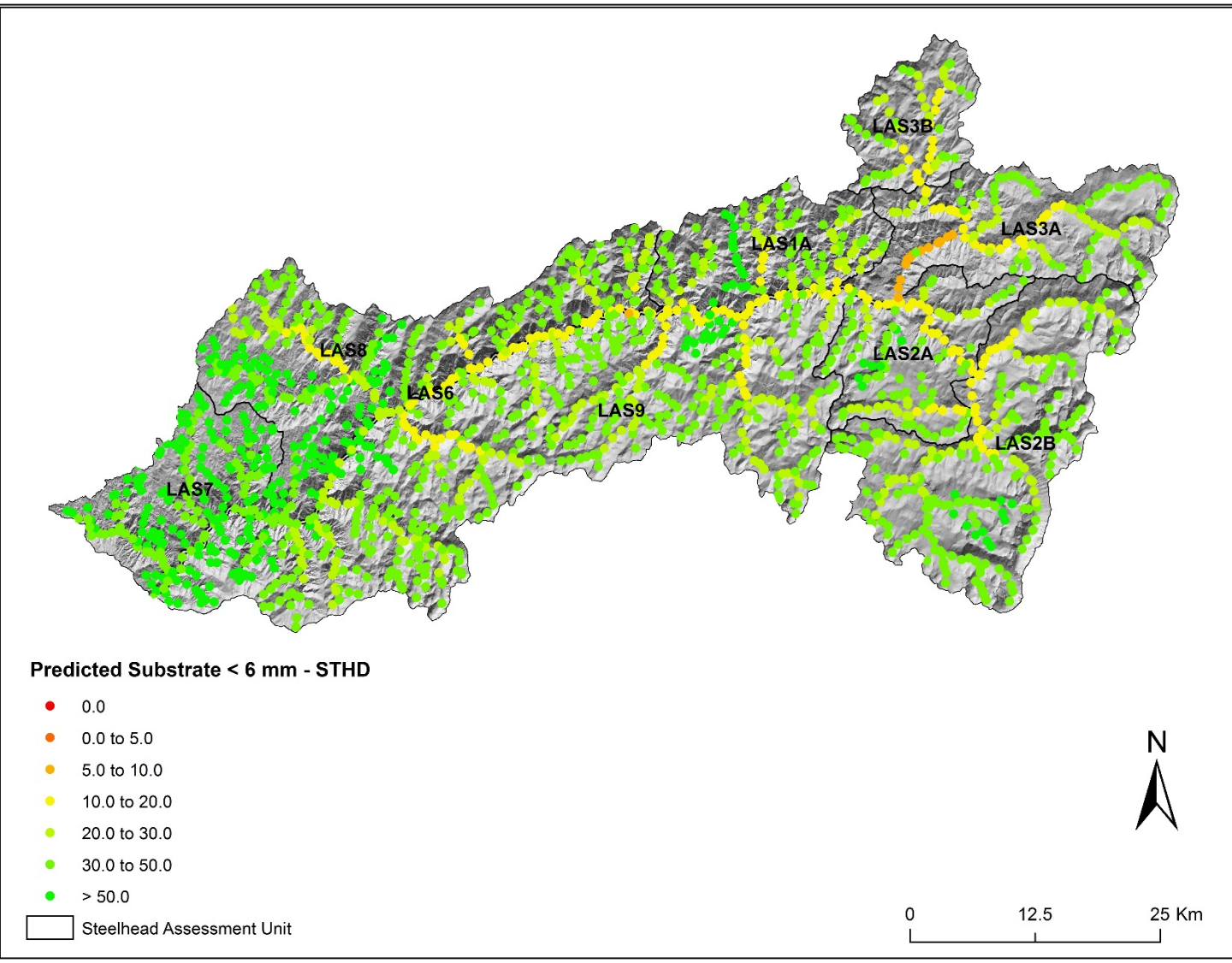
Substrate < 2 mm

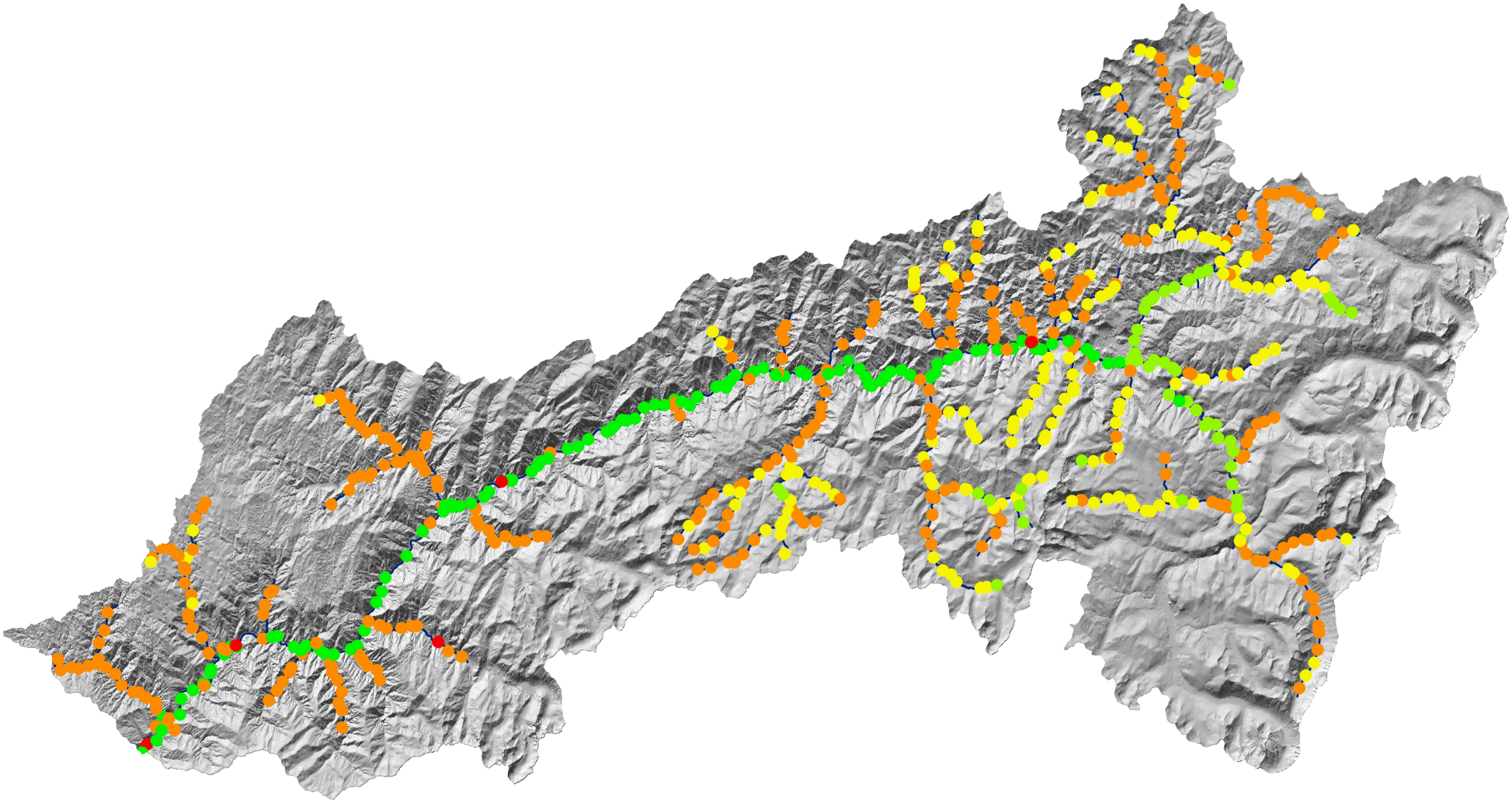
- Source: CHaMP Metrics (www.champmonitoring.org)
- Definition: Average percentage of pool tail substrates comprised of fine sediment <2 mm



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

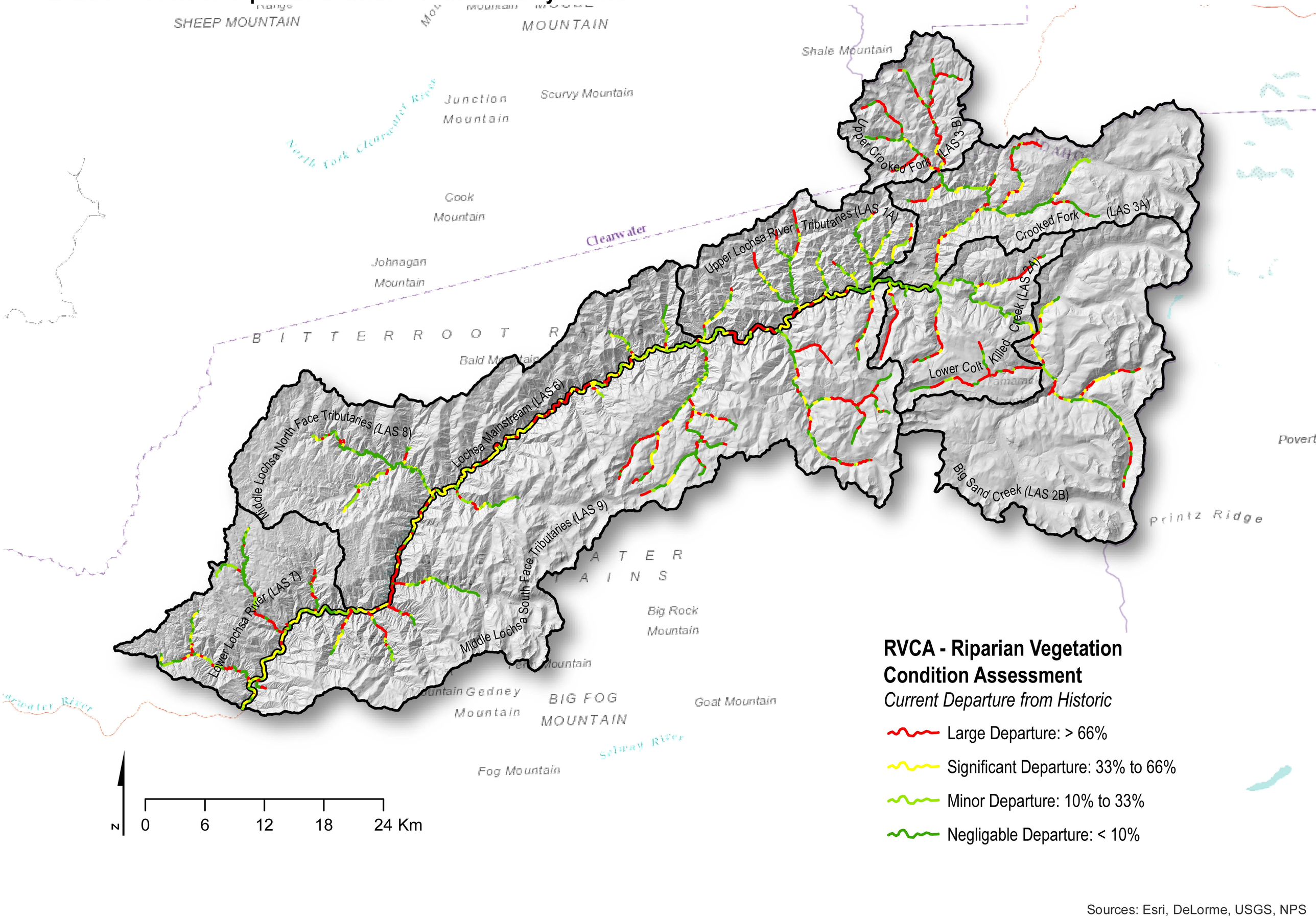
- < 1.5
- 1.5 to 3.0
- 3.0 to 4.5
- 4.5 to 6.0
- > 6.0

N

0 12.5 25 Km

RIPARIAN CONDITION ASSESSMENT

Estimate of current departure from historic within valley bottom



RVCA - Riparian Vegetation Condition Assessment

Current Departure from Historic

- Large Departure: > 66%
- Significant Departure: 33% to 66%
- Minor Departure: 10% to 33%
- Negligable Departure: < 10%

Sources: Esri, DeLorme, USGS, NPS

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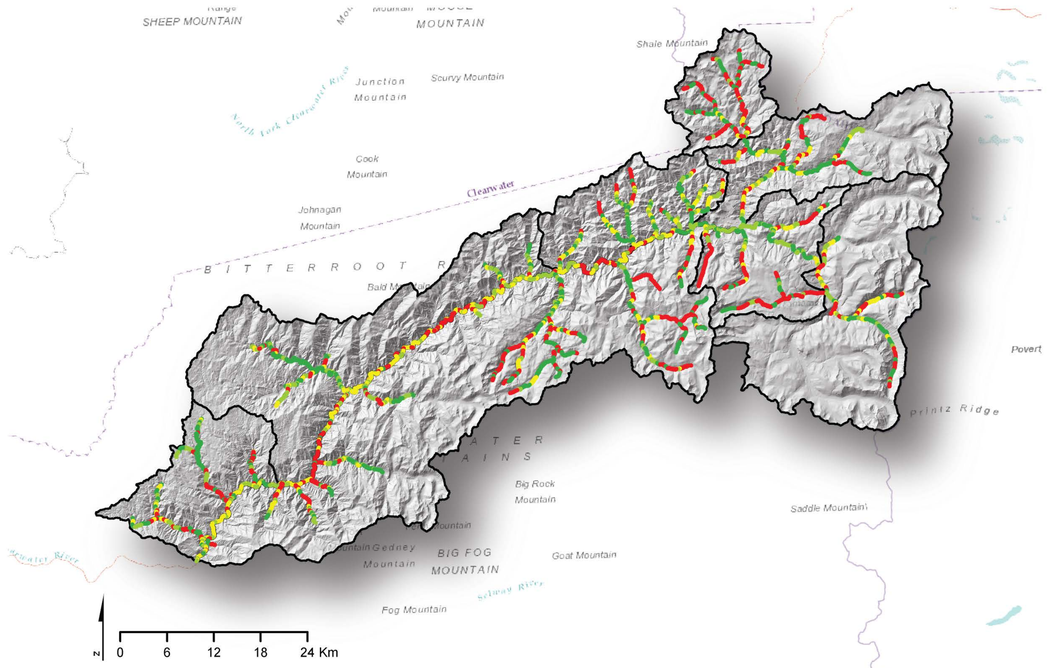
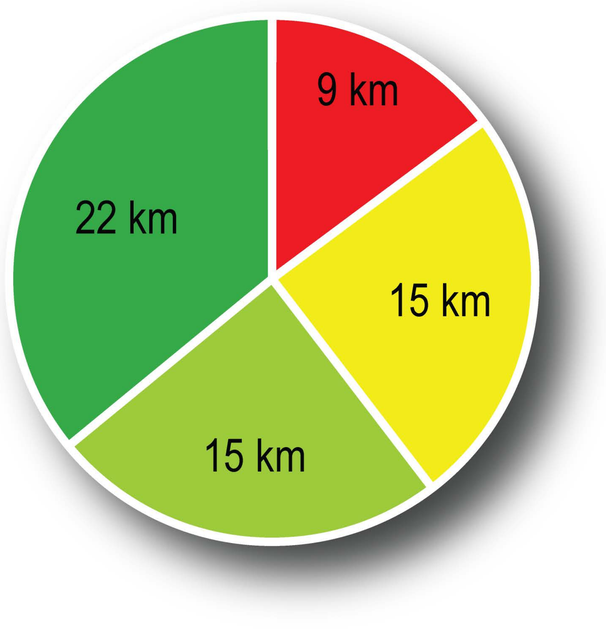


LAS 1A:



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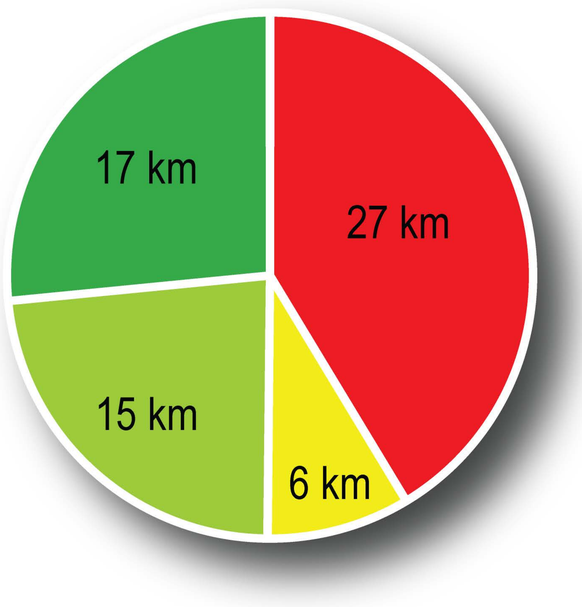

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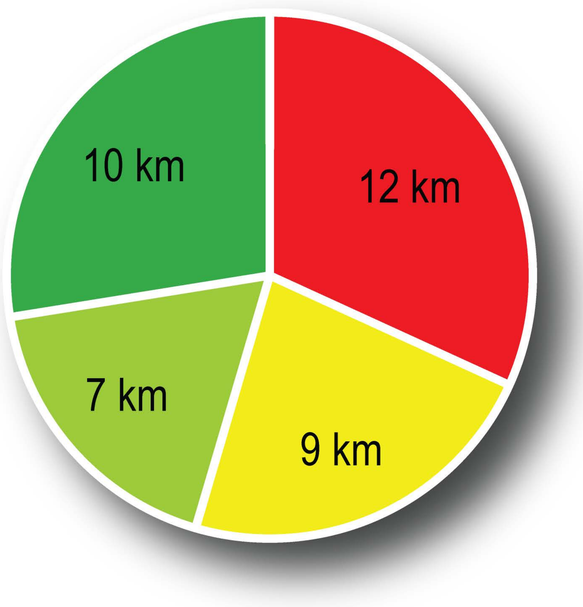

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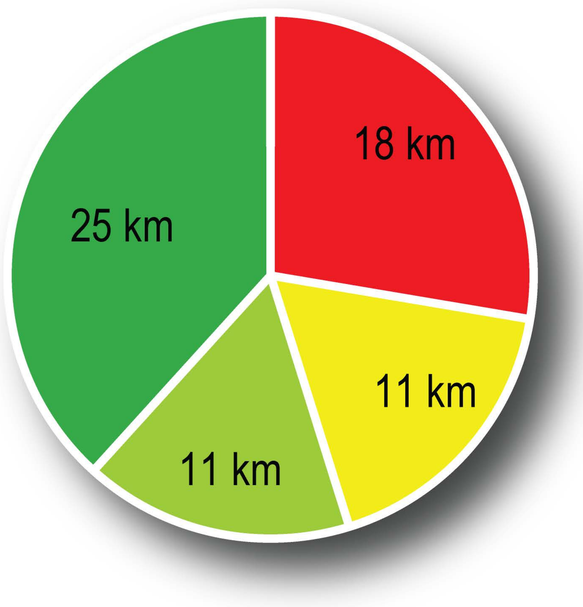

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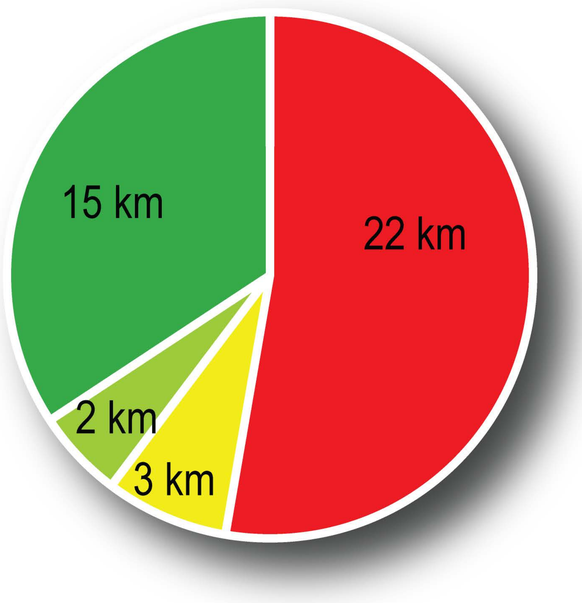

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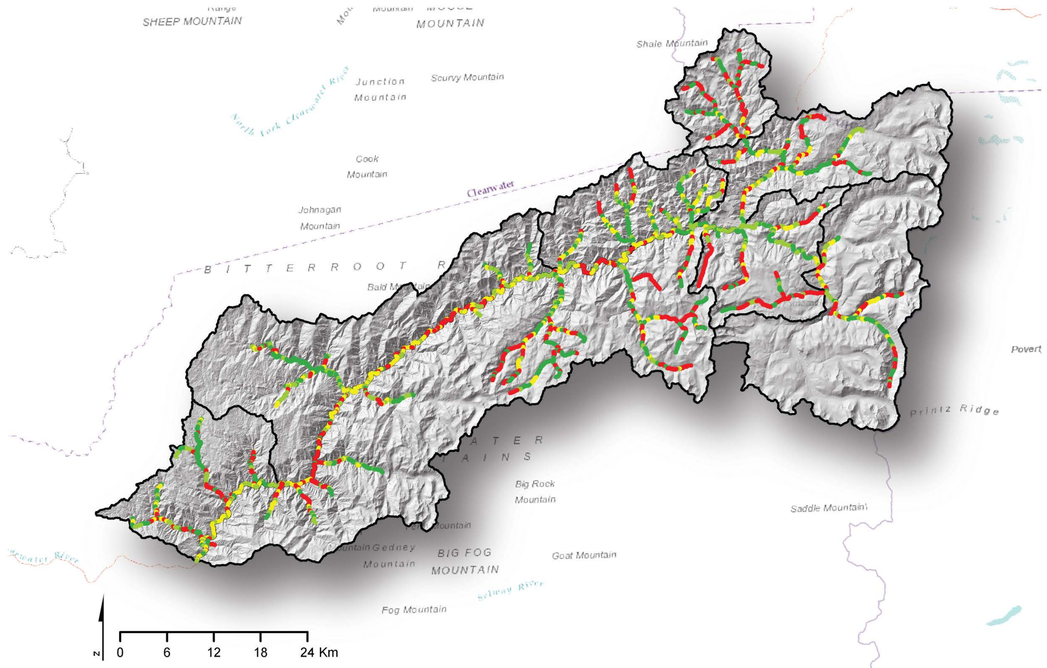

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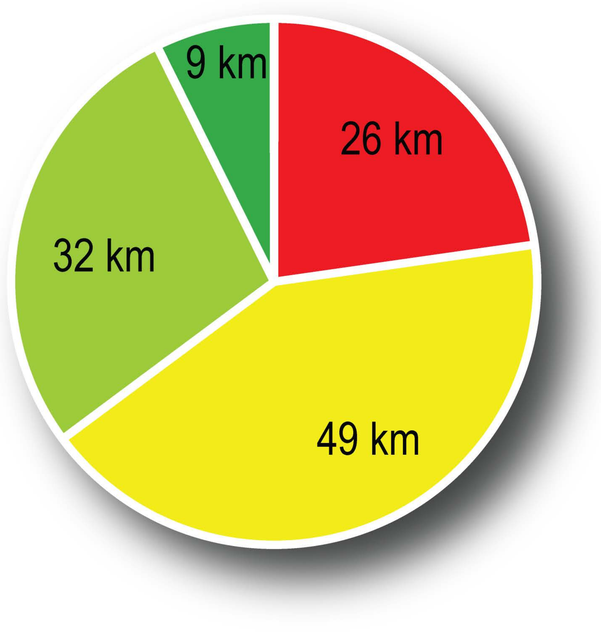

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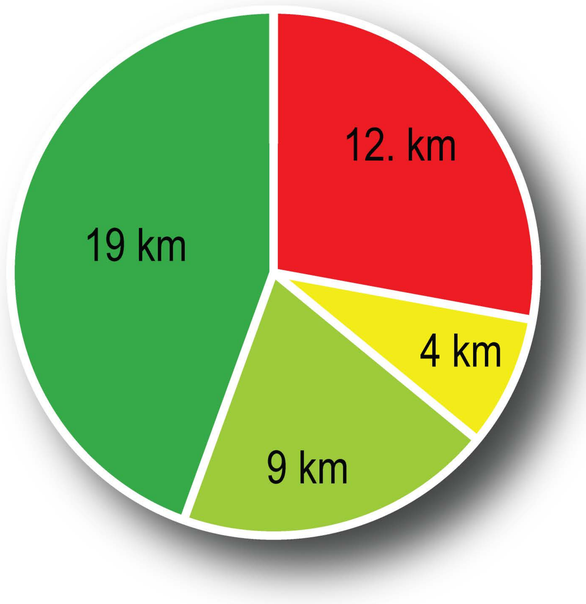

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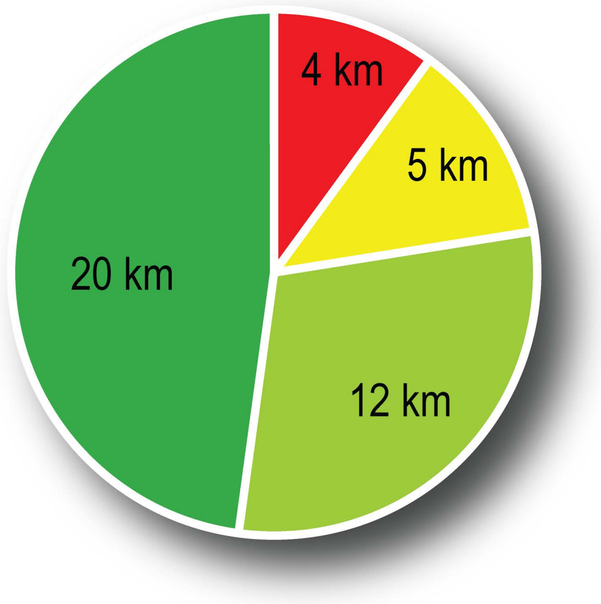

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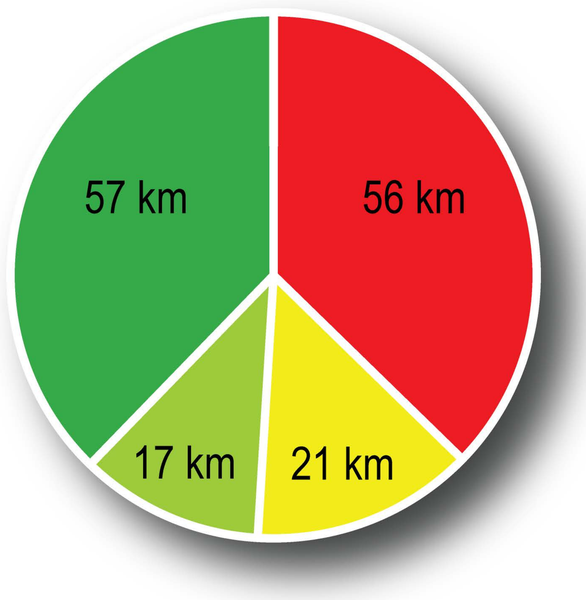

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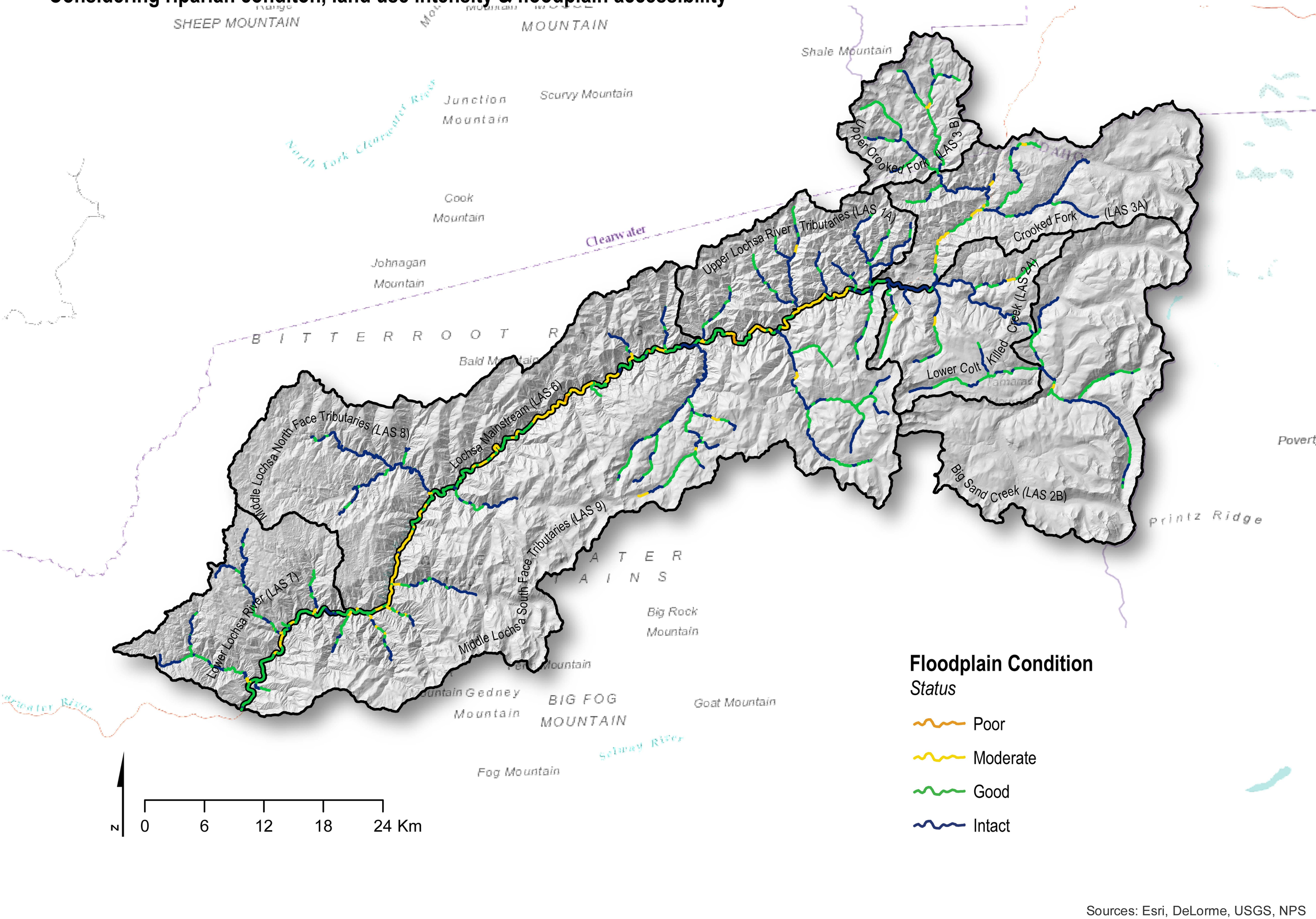
FLOODPLAIN CONDITION ASSESSMENT

Considering riparian conditon, land use intensity & floodplain accessibility



Sources: Esri, DeLorme, USGS, NPS

FLOODPLAIN CONDITION ASSESSMENT

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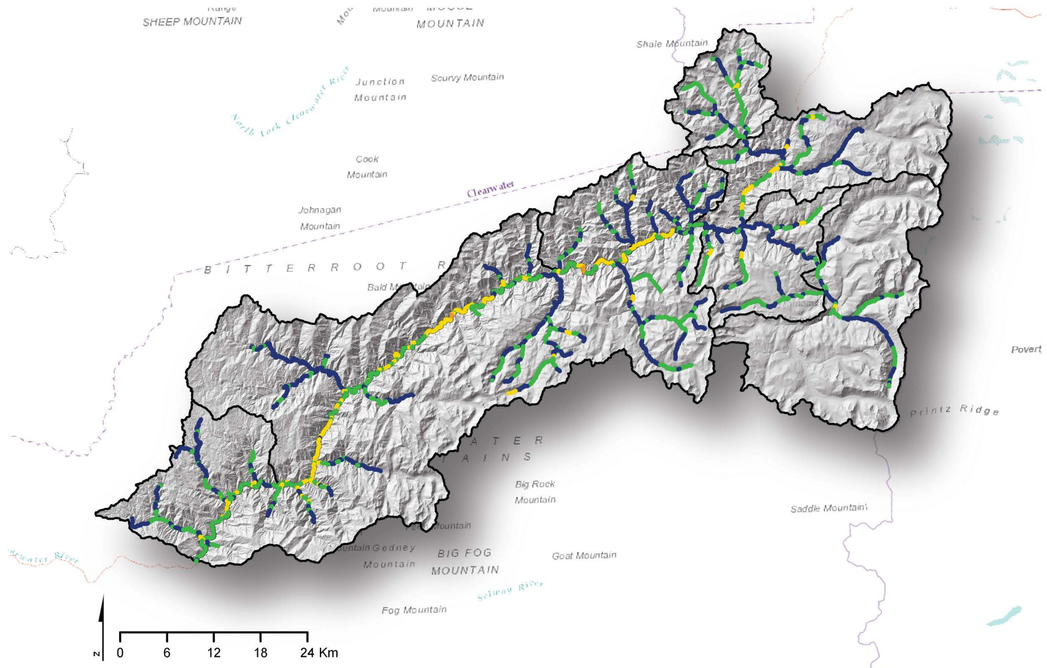

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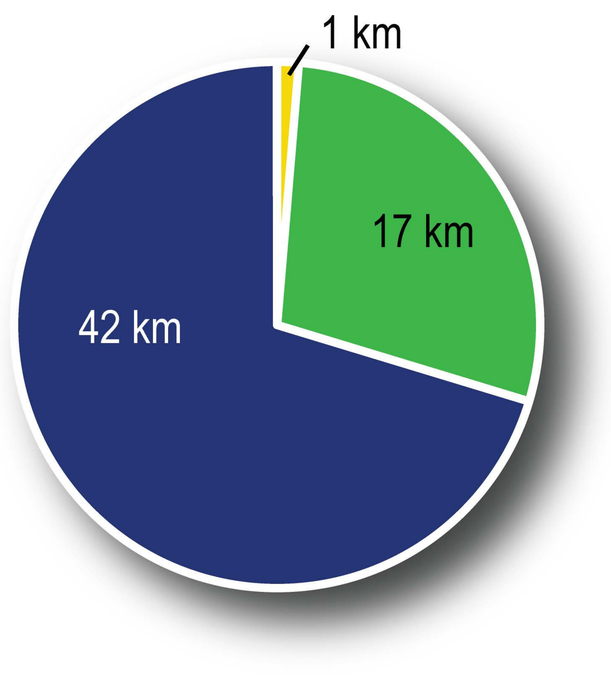

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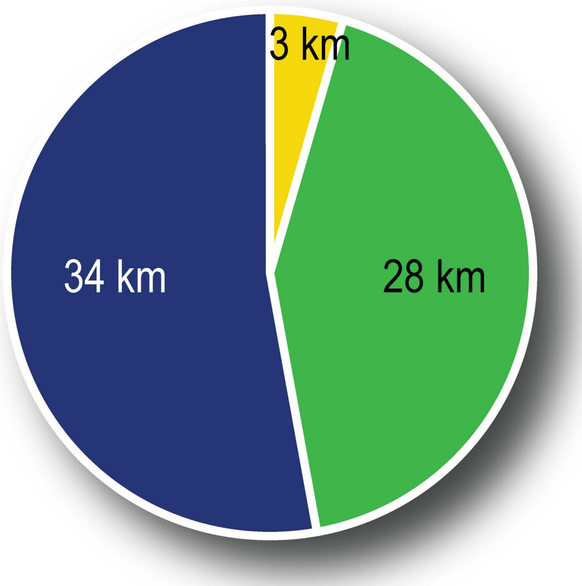

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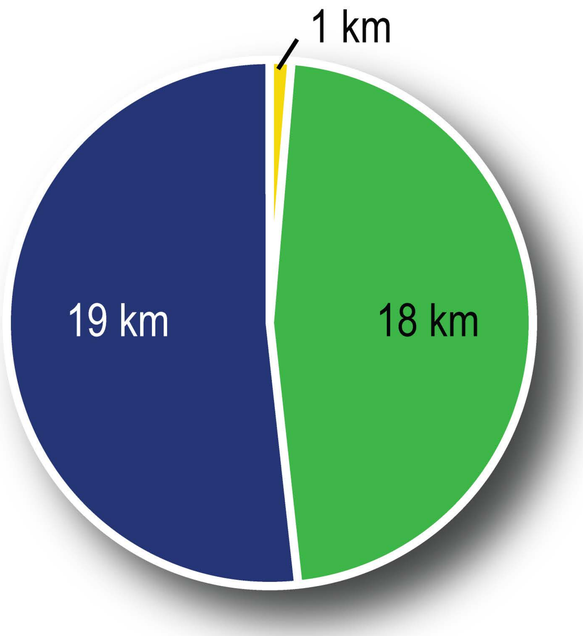

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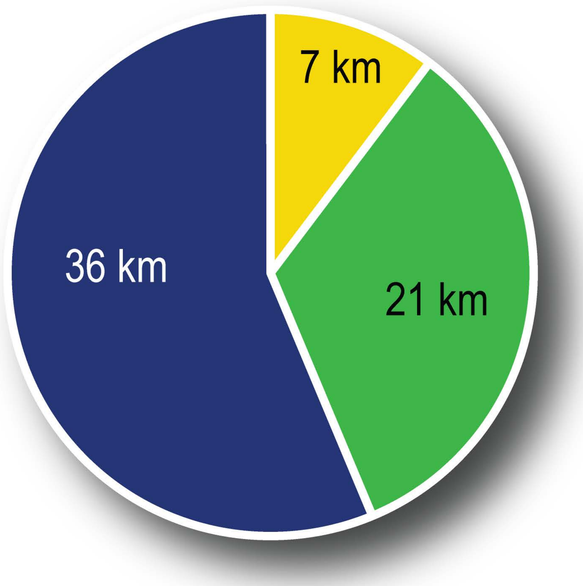

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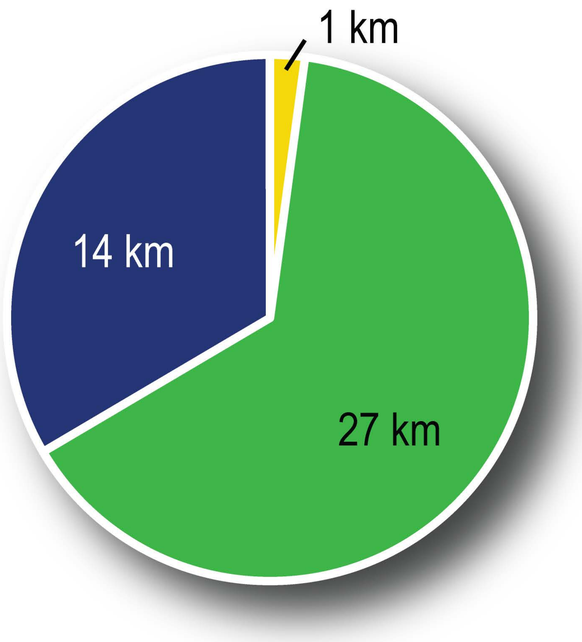


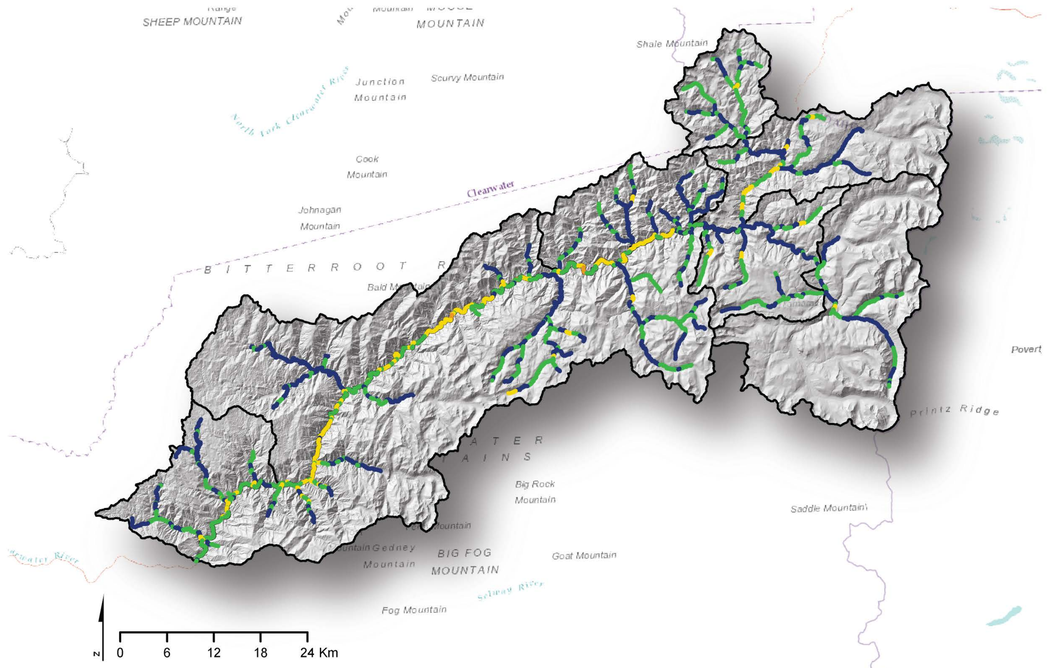
Floodplain Condition

Status

- Poor
- Moderate
- Good
- Intact

FLOODPLAIN CONDITION ASSESSMENT

Considering riparian conditon, land use intensity & floodplain accessibility



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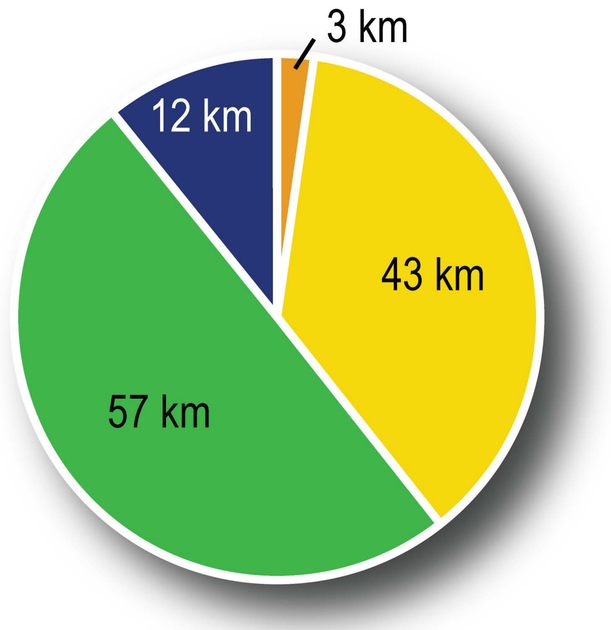

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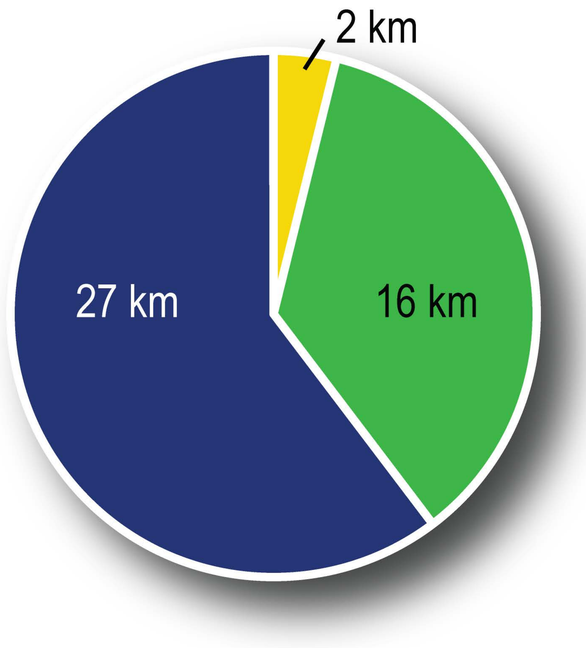

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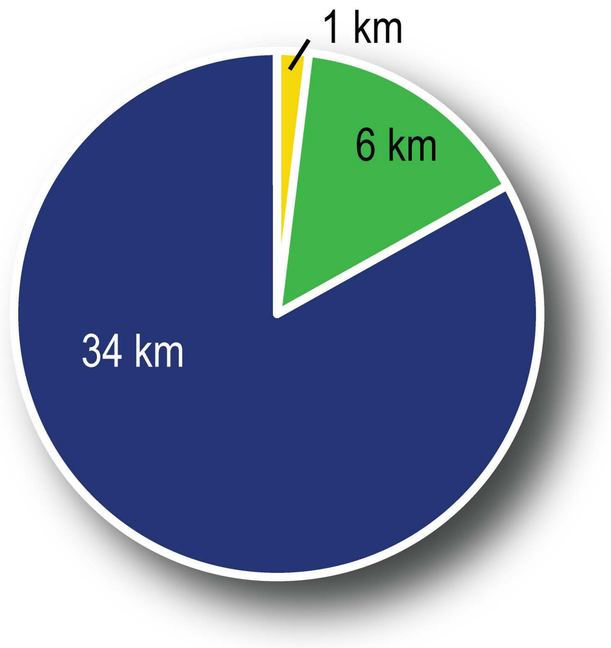
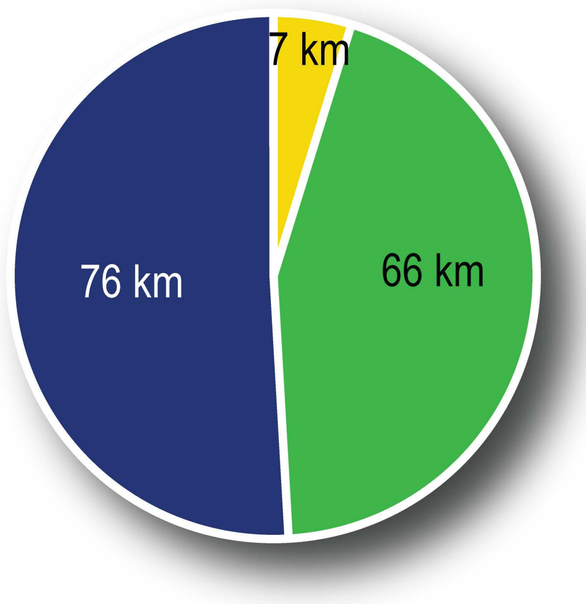


LAS 9:



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- Moderate
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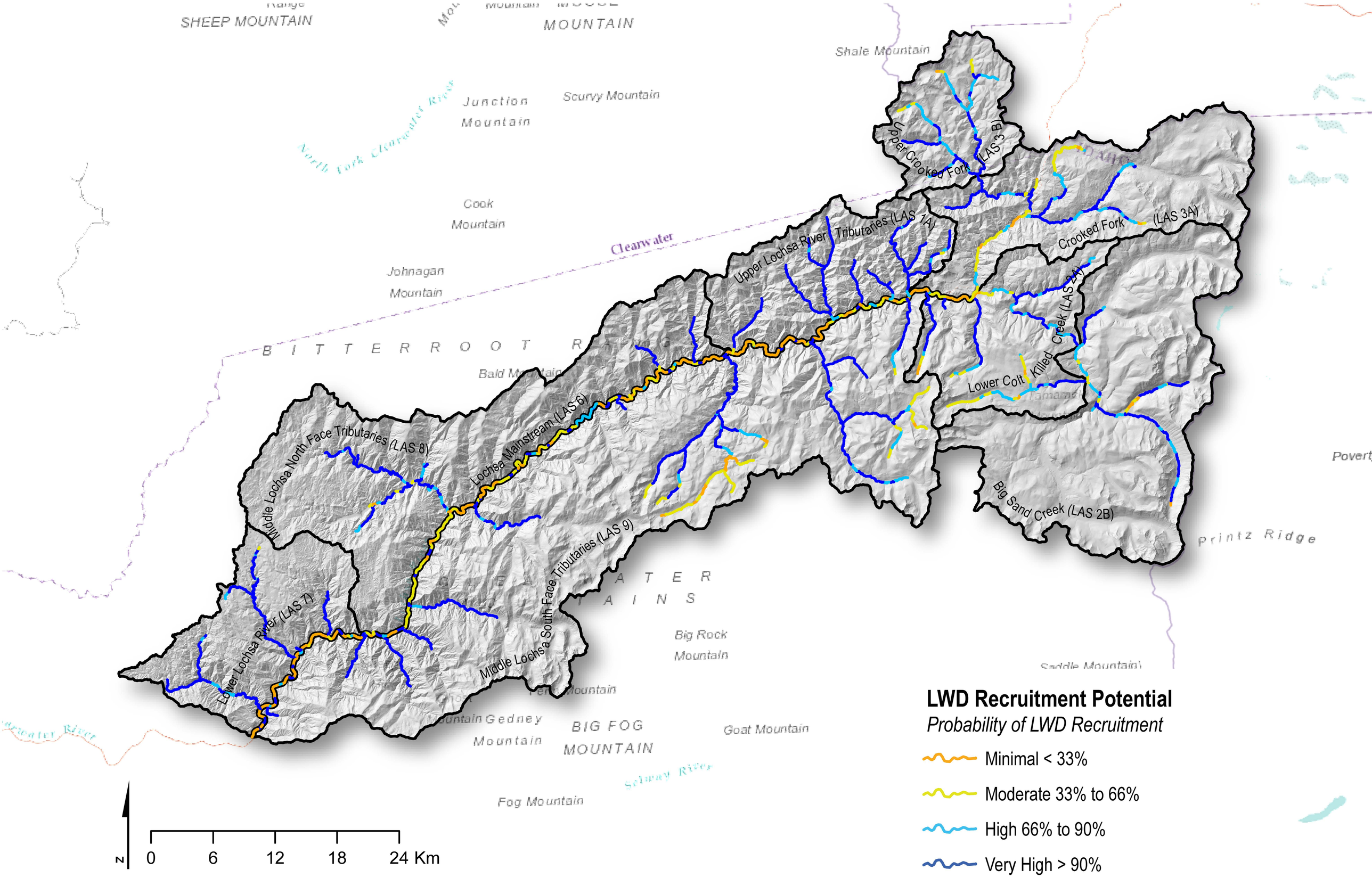
LARGE WOODY DEBRIS RECRUITMENT POTENTIAL



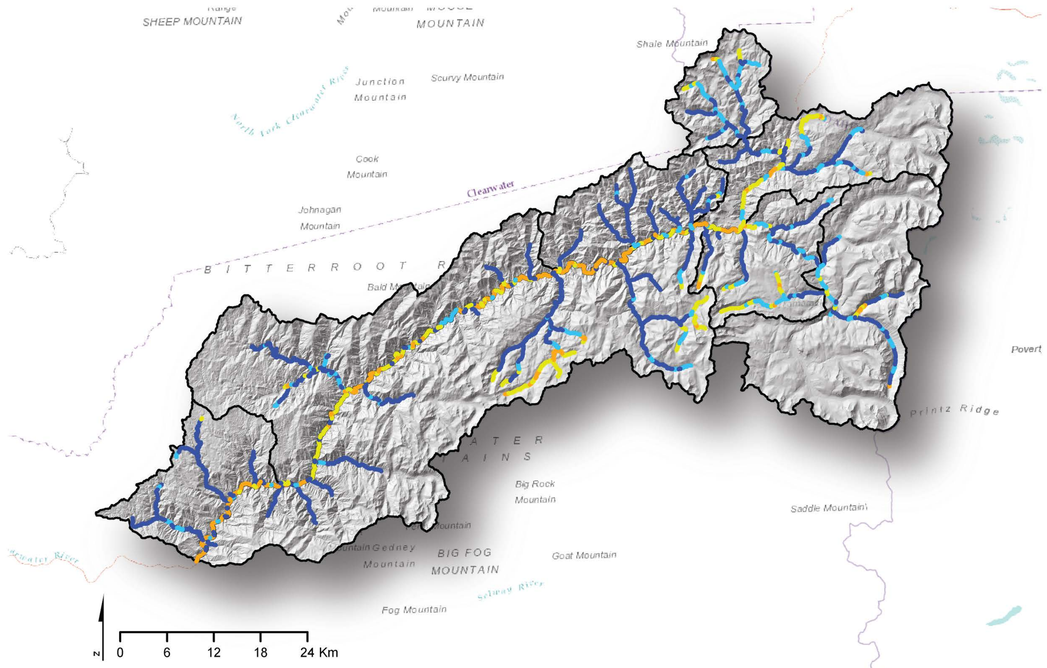
LWD Recruitment Potential

Probability of LWD Recruitment

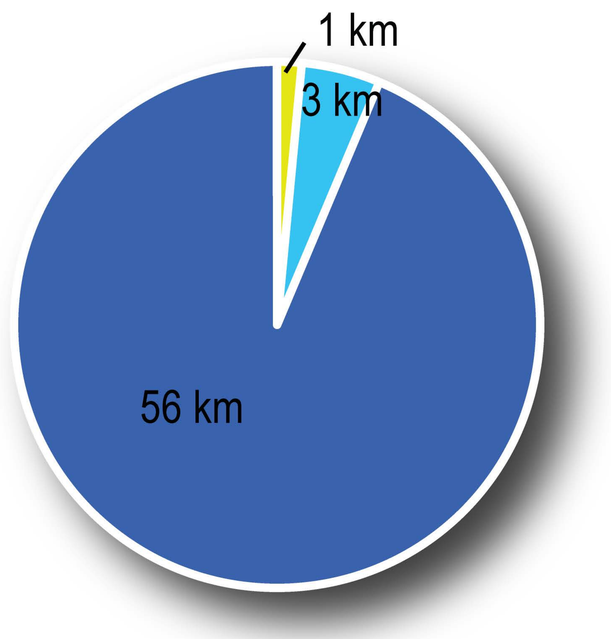
- Minimal < 33%
- Moderate 33% to 66%
- High 66% to 90%
- Very High > 90%

Sources: Esri, DeLorme, USGS, NPS

LARGE WOODY DEBRIS RECRUITMENT POTENTIAL

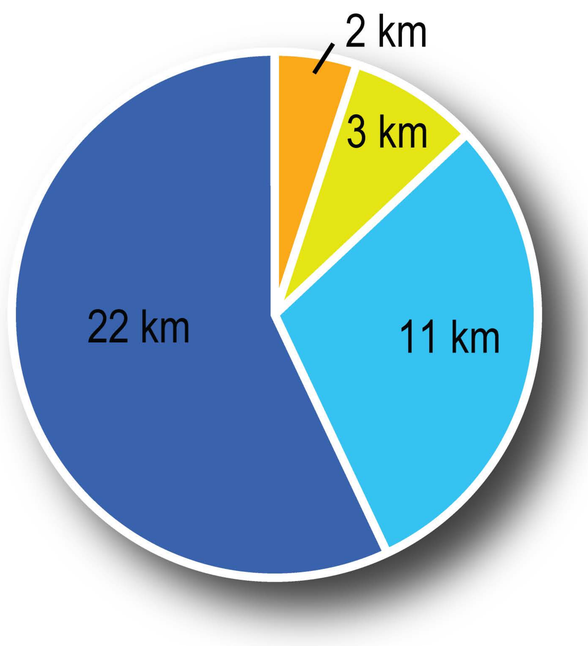


LAS 1A:



LAS 2A:

LAS 2B:



LAS 3A:

LAS 3B:

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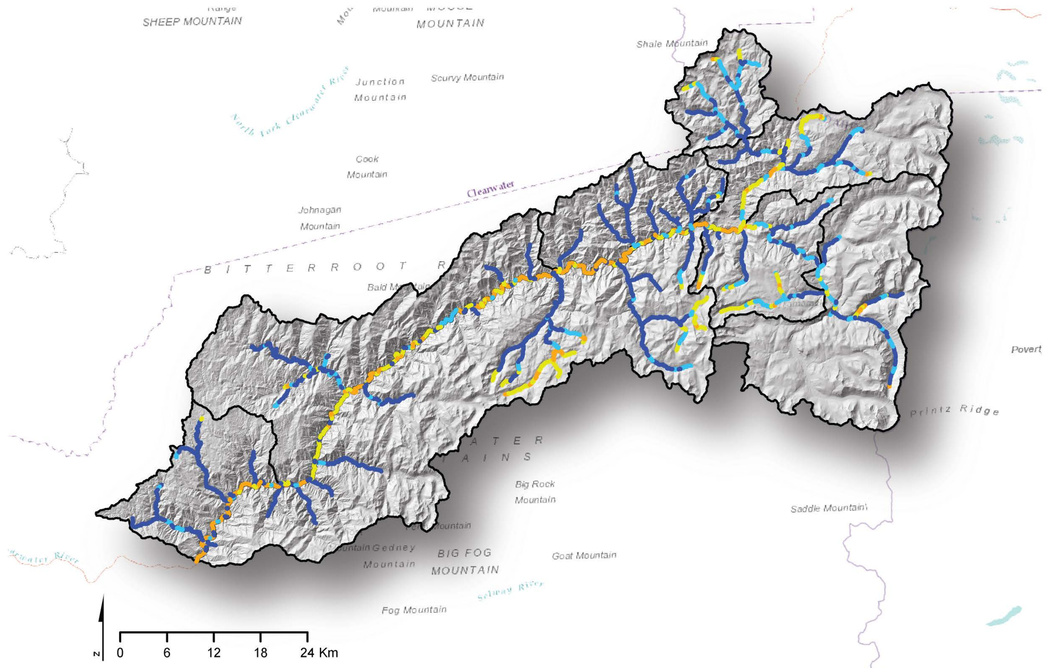
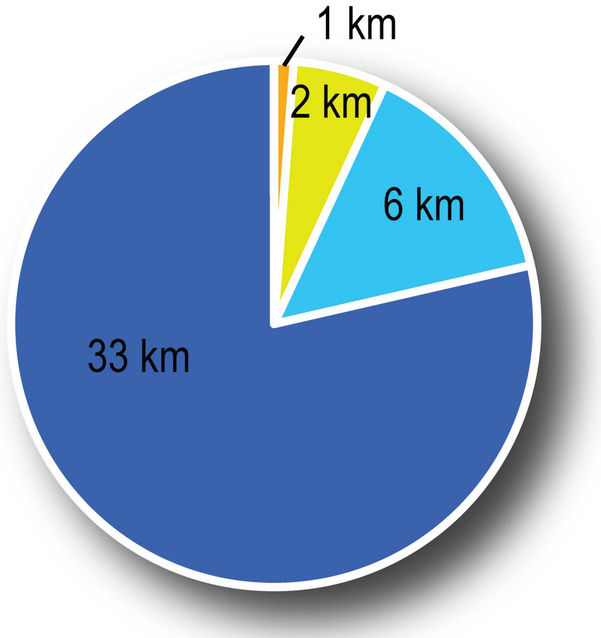


LAS 6:

LAS 7:

LAS 8:



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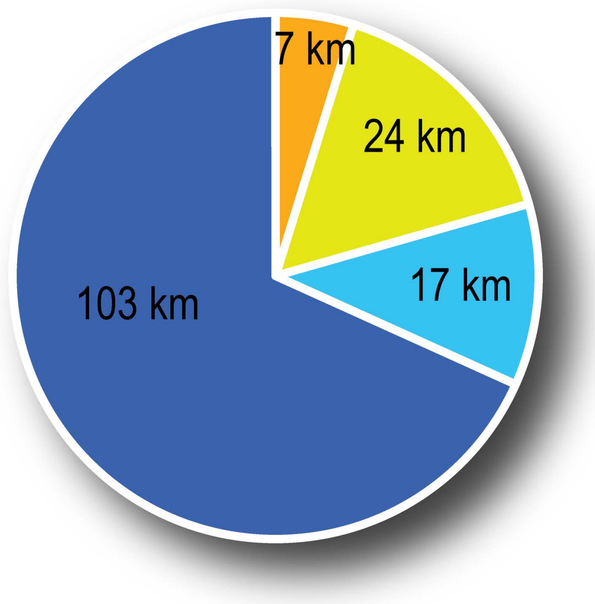

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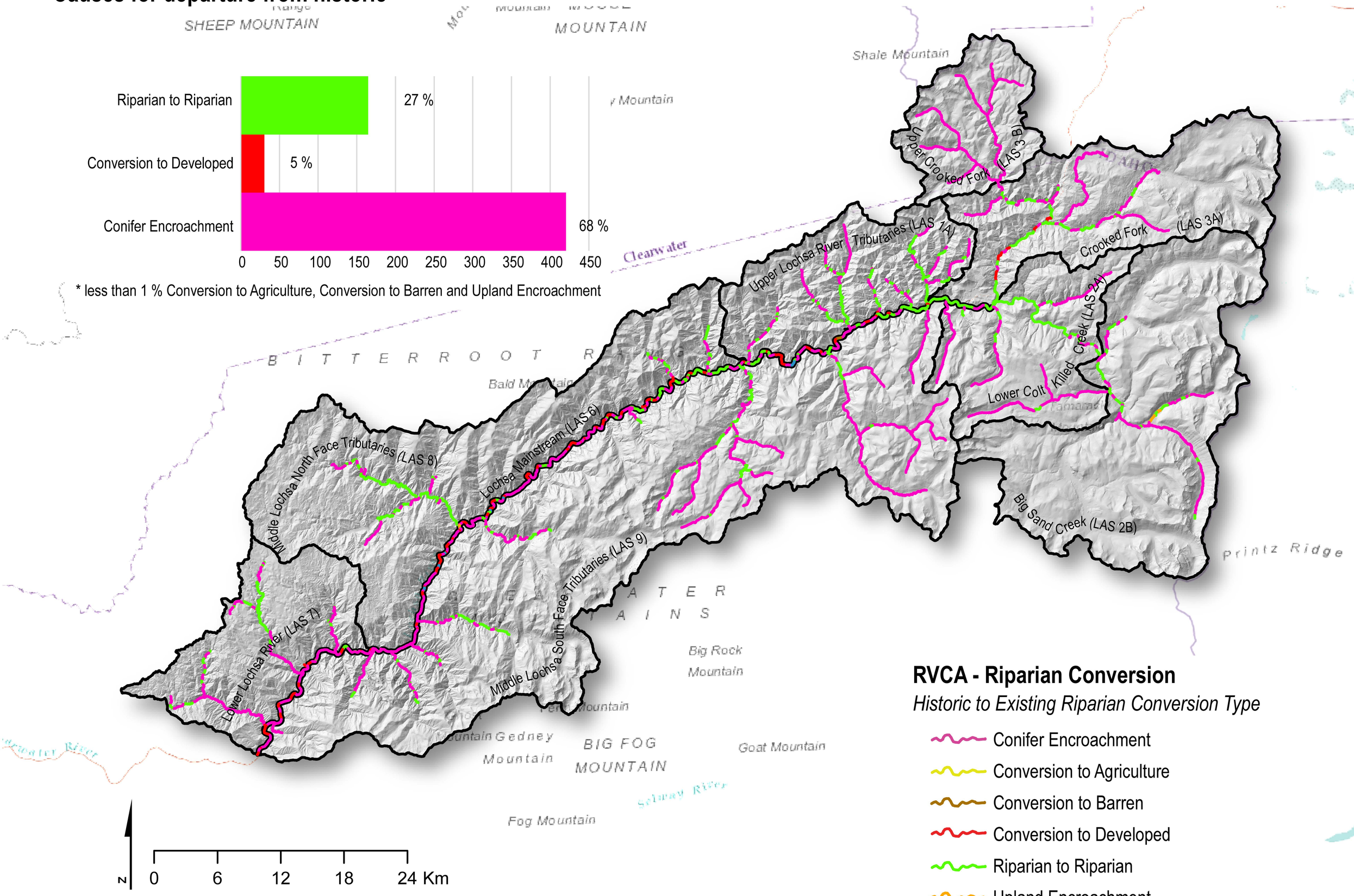
RIPARIAN CONVERSION

Causes for departure from historic

* less than 1 % Conversion to Agriculture, Conversion to Barren and Upland Encroachment



RVCA - Riparian Conversion

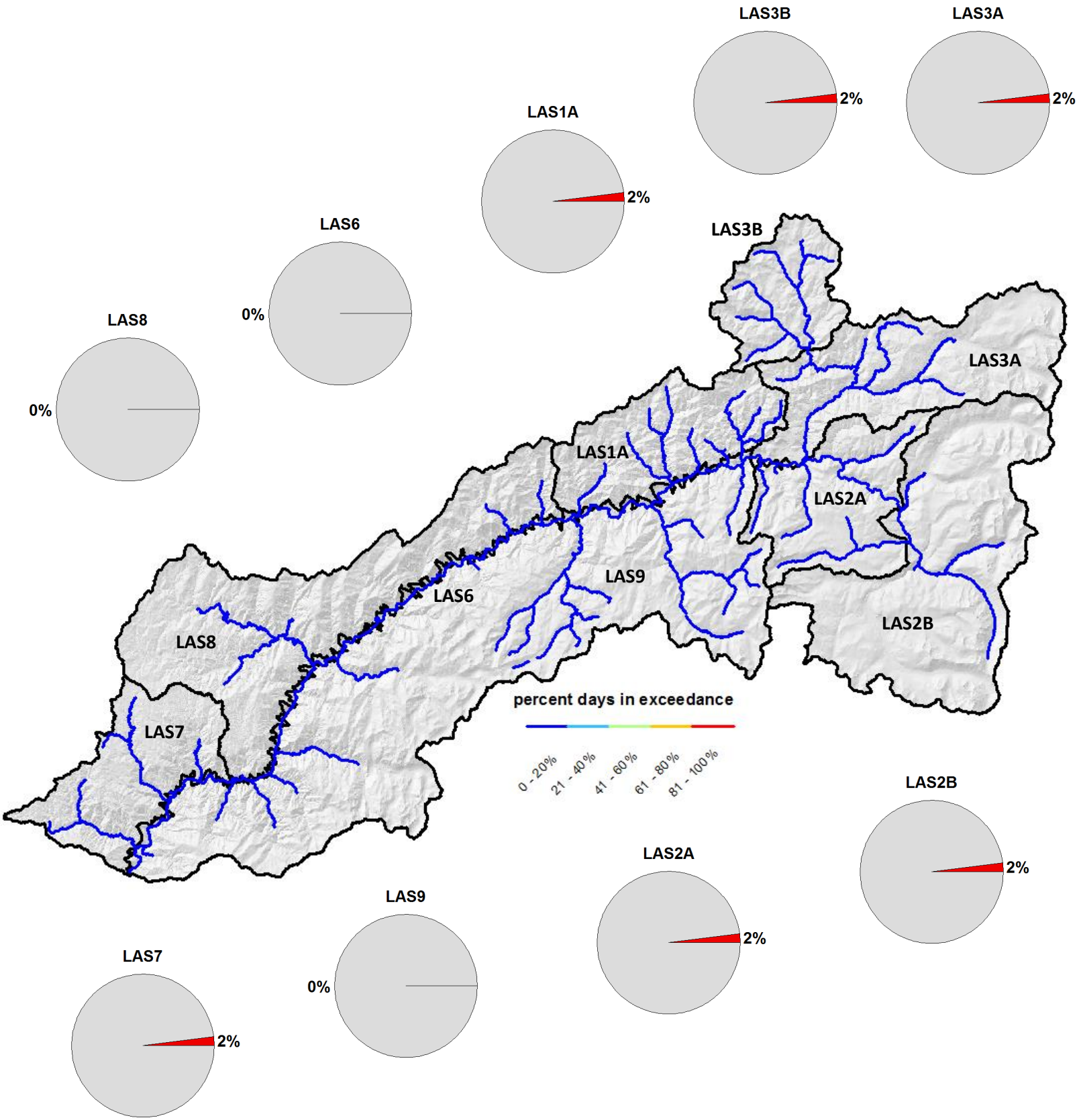
Historic to Existing Riparian Conversion Type

- Conifer Encroachment
- Conversion to Agriculture
- Conversion to Barren
- Conversion to Developed
- Riparian to Riparian
- Upland Encroachment

Sources: Esri, DeLorme, USGS, NPS

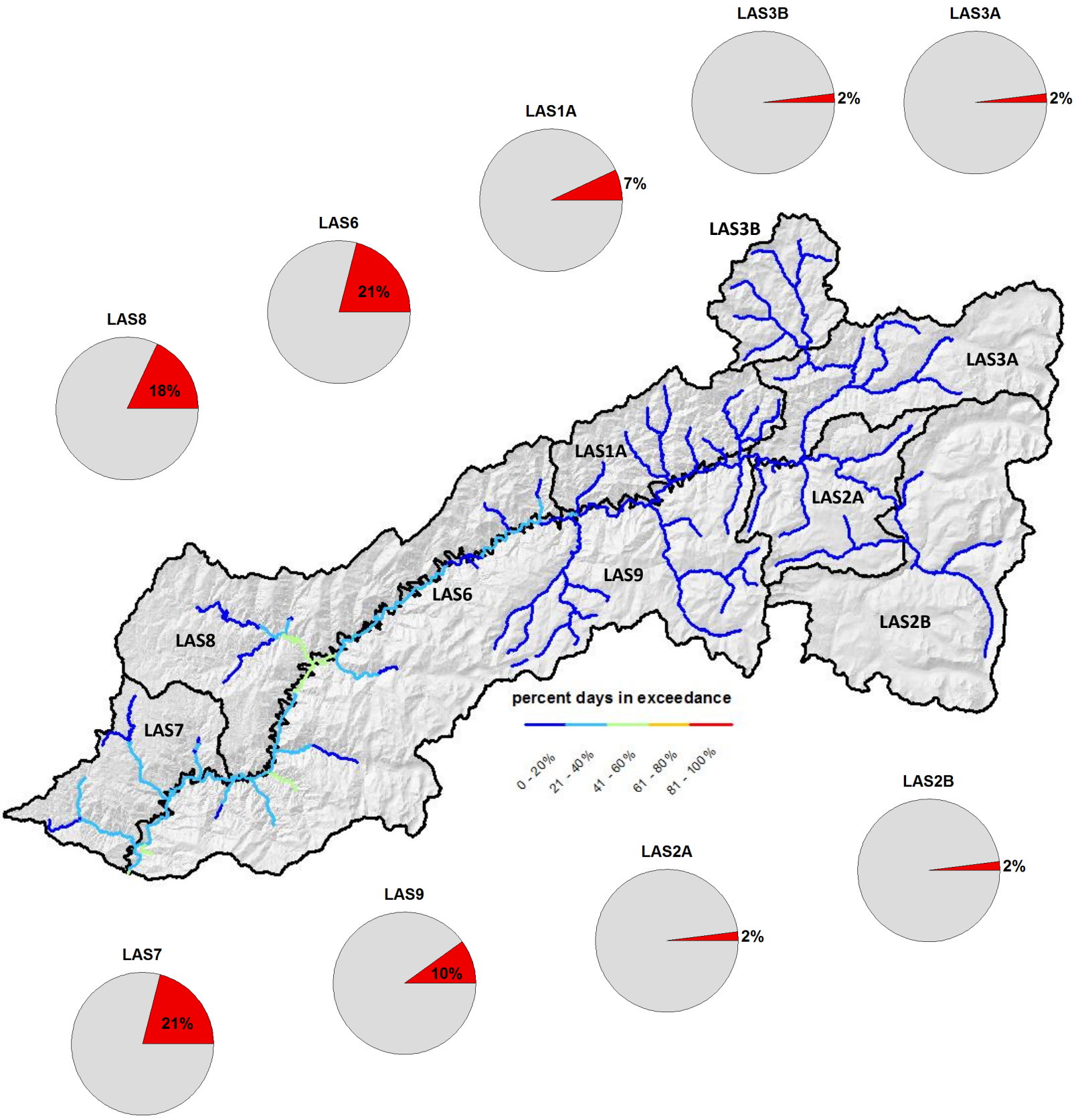
Lochsa River 2011

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



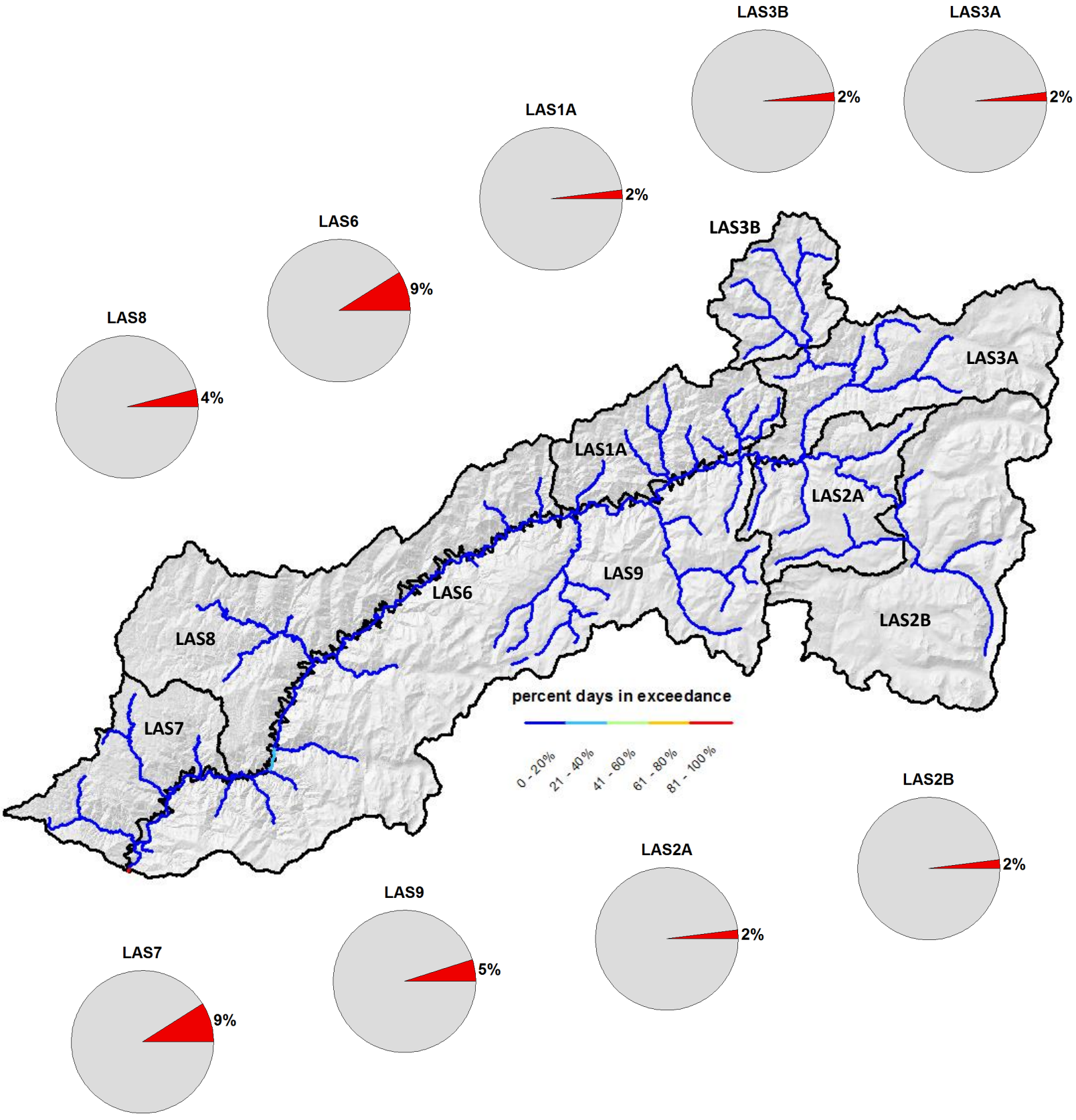
Lochsa River 2012

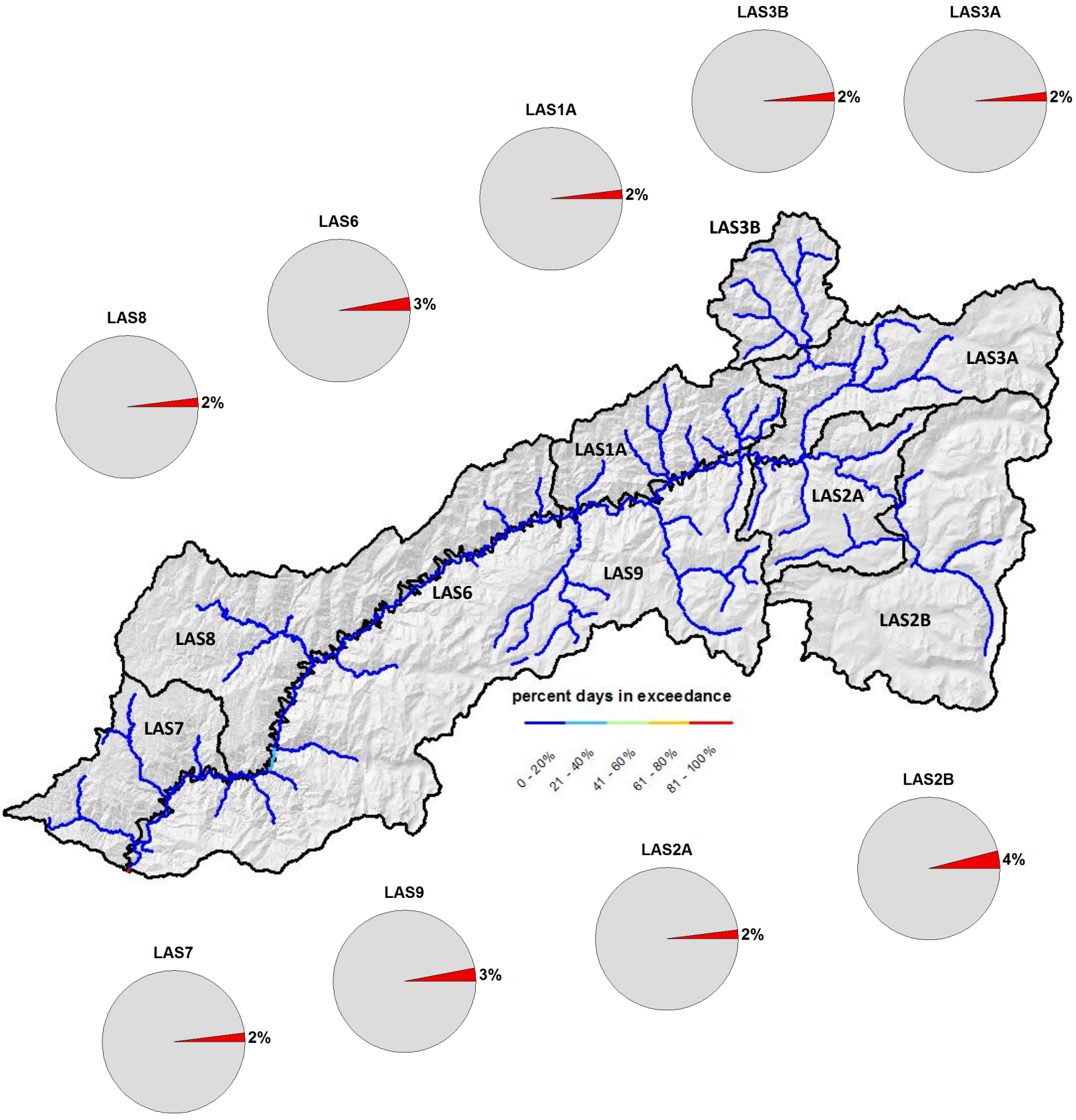
Percent summer days (20 July – 31 August) in exceedance of 18°C maximum stream temperature
Steelhead extent



Lochsa River 2012

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



Lochsa River 2013

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