



# Syilx Okanagan Flood and Debris Flow Risk Assessment Map Book

## Map Series 5 of 7: Affected People Indicator



*31 December 2019*



**PALMER**  
ENVIRONMENTAL  
CONSULTING  
GROUP INC.



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**IndigenEYEZ**  
Empowering People—Strengthening CommUNITY

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## Acknowledgement

The *Syilx* Okanagan Flood and Debris Flow Risk Assessment is made possible by the many *Syilx* Okanagan Nation members from across the territory who generously contributed their input, knowledge, and lived experience – all of which form the foundations of this Assessment. Special recognition is given to the *Syilx* Okanagan traditional knowledge keepers and Elders who led the watershed tours and were a guiding force in rooting the assessment in traditional *Syilx* Okanagan perspectives.

This Assessment is a testament to the power of collaboration and partnership between *Syilx* and non-*Syilx* organizations, including the project team at Ebbwater Consulting Inc. (Ebbwater), and exhibits a shared concern for how water is managed and recognized in the territory.

Support for this project came from Emergency Management British Columbia (EMBC) and Public Safety Canada (PSC) as part of the National Disaster Mitigation Program (NDMP), First Nation Adapt Program and the Real Estate Foundation of B.C. through successful applications submitted by the Okanagan Nation Alliance (ONA).

Okanagan Nation Alliance would like to acknowledge Ebbwater for the production of this Map Book, which was completed by Dickon Wells, M. Eng, with support from Silja Hund, Ph.D., Nikoletta Stamatatou, M.Sc., and Robert Larson, M.Sc. Qualitative input for the Map Book is owed to project participants, as well as Erica Crawford (SHIFT Collaborative) and Kelly Terbasket (indigenEYEZ) for leading the workshops. Cory McGregor, GIT and Derek Cronmiller, P.Geo (both of Palmer Environmental Consulting Group Ltd.) provided the information to quantitatively map debris flow hazard. The Map Book contains significant input from ONA team members Tessa Terbasket, Kathy Holland, and Skyeler Folks. The Map Book was reviewed by Tamsin Lyle, P.Eng of Ebbwater.

The team is grateful to *Syilx* Okanagan community staff who contributed to and supported the process; Colleen Marchand (OKIB), Brody Armstrong (PIB), Stephanie Paul (WFN), Jonathan Ford (WFN), Wendy Hawkes (LSIB), Trudy Peterson (LSIB), Mike Allison (USIB) and Robin Irwin (USIB). Finally, the team would like to thank the *Syilx* Okanagan Flood Adaptation Initiative Steering Committee members who will continue to work together and provide direction to co-build flood resilience in the region.

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## Introduction

The ONA was a successful Stream 1 applicant to the National Disaster Mitigation Program (NDMP) to study flood and debris flow hazard risk in the Okanagan-Similkameen region. This project is the initial phase of a multi-year flood and debris flow adaptation initiative. This project's goal is to **understand the risk due to flood and debris flows within the project area, to support priority-setting of future work.**

This Map Book is one of four outputs that form the risk assessment component of this project (Figure 1). The Map Book may also be used as the main visual reference to the Synthesis and Recommendations report, for readers to obtain a summary understanding of the project. The Qualitative, Quantitative, and Basis of, studies contain more detailed information. The Map Book summarizes the spatial results following the methods described in the Qualitative and Quantitative studies.

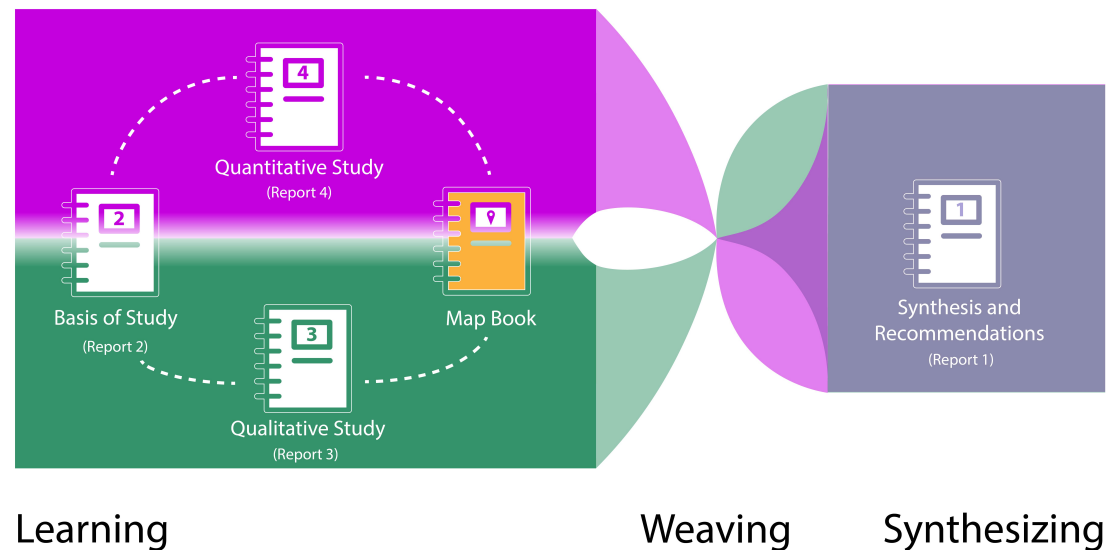


Figure 1: Project reporting diagram, with the Risk Assessment's four distinct outputs (i.e., Map Book, Basis of Study, and the complementary Qualitative and Quantitative studies).

## Overview of Maps

Ebbwater assessed the impacts from both flood and debris flow in the Okanagan-Similkameen watersheds. This assessment was done quantitatively and qualitatively. This map series is one out of a series of 7 that together form the Map Book. In aggregate, the 7 series cover the 2 hazards assessed and 6 exposure indicators. The table below lists the 7 series, and highlights the series contained herein. The qualitative maps combine impacts from both flood and debris flow hazards. The quantitative maps show consequences from flood and debris flow hazards separately. In the quantitative maps, the consequences for flood hazard are shown for the moderate magnitude scenario only.

| Series          | Map Book Title                   | Information Shown   |
|-----------------|----------------------------------|---|
| Series 1        | Flood and Debris Flow Hazard     | <ul style="list-style-type: none"><li>• Debris Flow</li><li>• Low, Moderate, and High Magnitude Flood</li></ul> |
| Series 2        | Environment Indicator            | <ul style="list-style-type: none"><li>• Qualitative (Impacts)</li><li>• Quantitative (Consequences)</li></ul>   |
| Series 3        | Culture Indicator                | <ul style="list-style-type: none"><li>• Qualitative (Impacts)</li><li>• Quantitative (Consequences)</li></ul>   |
| Series 4        | Mortality Indicator              | <ul style="list-style-type: none"><li>• Quantitative (Consequences)</li></ul>                                   |
| <b>Series 5</b> | <b>Affected People Indicator</b> | <ul style="list-style-type: none"><li>• Qualitative (Impacts)</li><li>• Quantitative (Consequences)</li></ul>   |
| Series 6        | Economy Indicator                | <ul style="list-style-type: none"><li>• Qualitative (Impacts)</li><li>• Quantitative (Consequences)</li></ul>   |
| Series 7        | Disruption Indicator             | <ul style="list-style-type: none"><li>• Qualitative (Impacts)</li><li>• Quantitative (Consequences)</li></ul>   |

## Printing and Document Navigation

All maps are designed and scaled to be printed in 'ANSI D' format. Maps are linked and can be navigated through by clicking within the following:

- Index line items on page 3.
- Blue tiles, watersheds or text, located in the top right-hand corner of the maps, where present.
- Sub-watershed index maps on pages 12 and 37.
- Hyperlinked Map index on page 7.

## Notes to User

### Qualitative

1. Impacts were recorded primarily in Workshop 1 in West Kelowna on 13 February 2019 and Workshop 2 on 25 April 2019. Impacts were also recorded based on input obtained from learning sessions, watershed tours, personal communications and electronic feedback.
2. Methodologies and impacts are discussed further in the Qualitative Study which accompanies this Map Book.

#### Data Sources

1. Lakes, Watercourses, Roads, and Trails: BC Data Catalogue.
2. *Sylix* Place Names: Okanagan Nation Alliance.
3. Base Layer: OpenStreetMap data – openstreetmap.org (© OpenStreetMap contributors; cartography licence CC BY-SA) and hill shade created using CDEM and USGM GMTED2010.



### Quantitative

1. Population density is based on census dissemination areas within the project area boundary. Population density is not shown for areas with a population density of less than 1 person per square km.
2. The population density (exposure) layer was clipped to the moderate flood or debris flow hazard area. The hazard layer is shown in the hazard maps, and was produced by Palmer Environmental Consulting Group Inc. The method used to produce the hazard layer is described in the Quantitative Study.



#### Data Sources

1. Lakes, Watercourses, Roads and Trails: BC Data Catalogue.
2. Population: Statistics Canada 2016 Census.
3. *Sylix* Place Names: Okanagan Nation Alliance.
4. Base Layer: OpenStreetMap data – openstreetmap.org (© OpenStreetMap contributors; cartography licence CC BY-SA) and hill shade created using CDEM and USGM GMTED2010.







## Icons

| Information Type  |              |
|---|--------------|
|  | Qualitative  |
|  | Quantitative |

| Hazard  |             |
|---|-------------|
|  | Flood       |
|  | Debris Flow |

| Exposure Indicator  |                 |
|---|-----------------|
|    | Environment     |
|   | Culture         |
|  | Mortality       |
|  | Affected People |
|  | Economy         |
|  | Disruption      |

## Map Index

### Qualitative Maps

- P-Q-001-001 Qualitative Impacts - Affected People - Project Area Map
- P-Q-001-002 Qualitative Impacts - Affected People - Okanagan Map
- P-Q-001-003 Qualitative Impacts - Affected People - Similkameen Map

### Quantitative Maps

- P-F-001-001 Flood - Affected People - Sub-watershed Index
- P-F-002-001 Flood - Affected People - Quantitative Project Area Map
- P-F-002-002 Flood - Affected People - Quantitative Okanagan Map
- P-F-002-003 Flood - Affected People - Quantitative Similkameen Map
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- P-F-003-002 Flood - Affected People - Quantitative Map Tile 2 of 20
- P-F-003-003 Flood - Affected People - Quantitative Map Tile 3 of 20
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- P-F-003-010 Flood - Affected People - Quantitative Map Tile 10 of 20
- P-F-003-011 Flood - Affected People - Quantitative Map Tile 11 of 20
- P-F-003-012 Flood - Affected People - Quantitative Map Tile 12 of 20
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- P-F-003-014 Flood - Affected People - Quantitative Map Tile 14 of 20
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- P-F-003-020 Flood - Affected People - Quantitative Map Tile 20 of 20

- P-D-001-001 Debris Flow - Affected People - Sub-watershed Index
- P-D-002-001 Debris Flow - Affected People - Quantitative Project Area Map
- P-D-002-002 Debris Flow - Affected People - Quantitative Okanagan Map
- P-D-002-003 Debris Flow - Affected People - Quantitative Similkameen Map
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- P-D-003-008 Debris Flow - Affected People - Quantitative Map Tile 8 of 20
- P-D-003-009 Debris Flow - Affected People - Quantitative Map Tile 9 of 20
- P-D-003-010 Debris Flow - Affected People - Quantitative Map Tile 10 of 20
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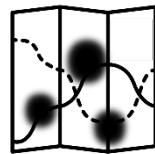
# Sylix Okanagan Flood and Debris Flow Risk Assessment

## Map Book

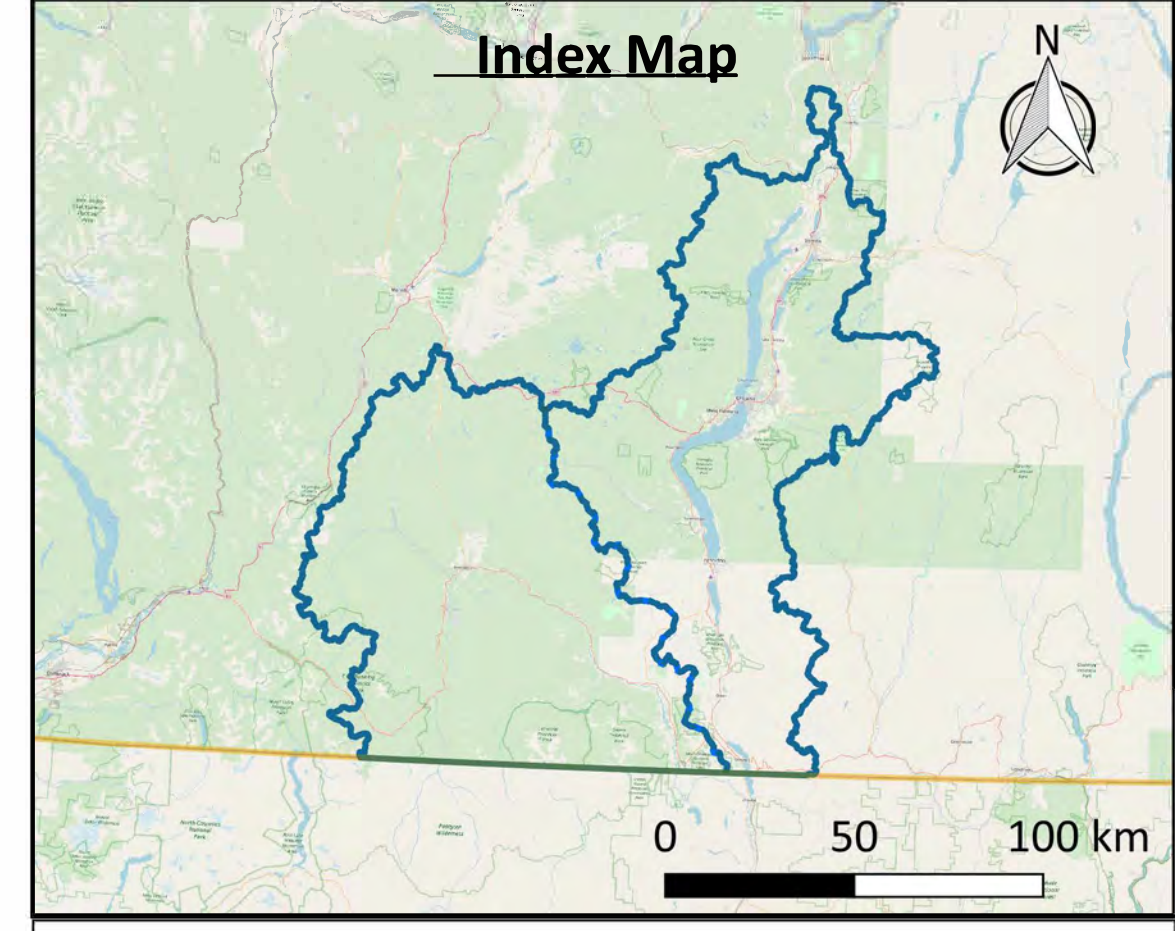
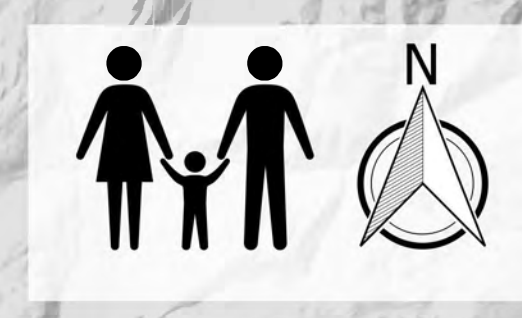
### Map Series 5 of 7: Affected People Indicator



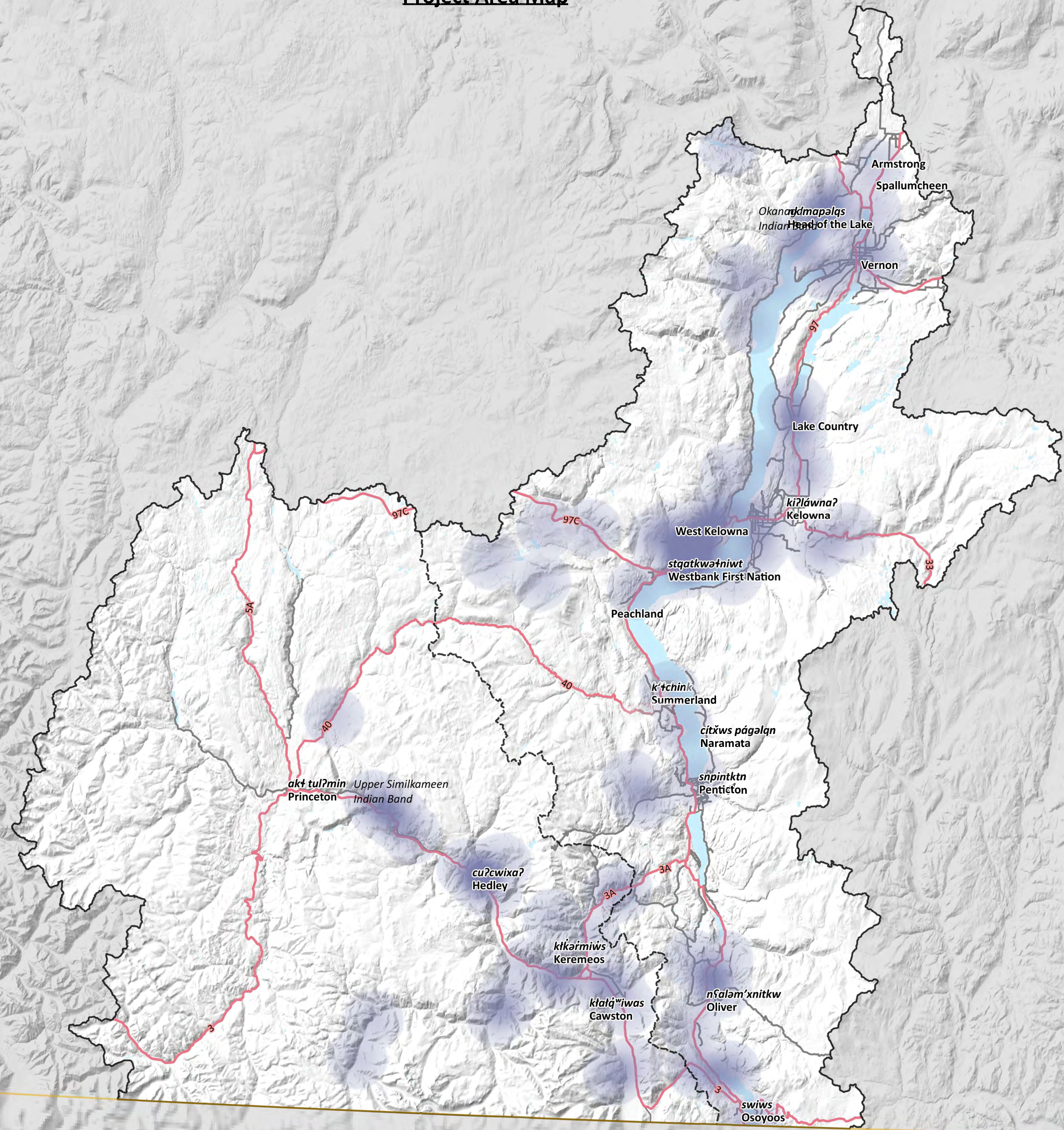
## Qualitative Flood and Debris Flow Impact Maps



# Project Area Map

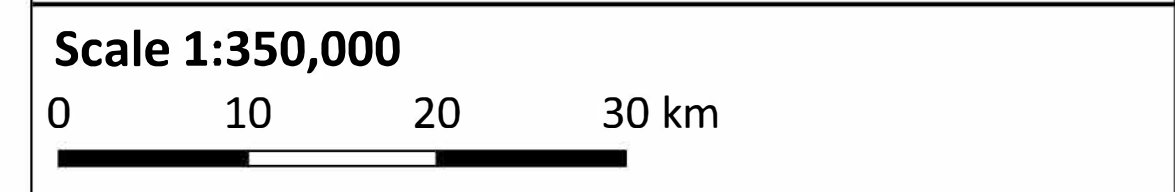


[Click here to go to Okanagan Map](#)  
[Click here to go to Similkameen Map](#)



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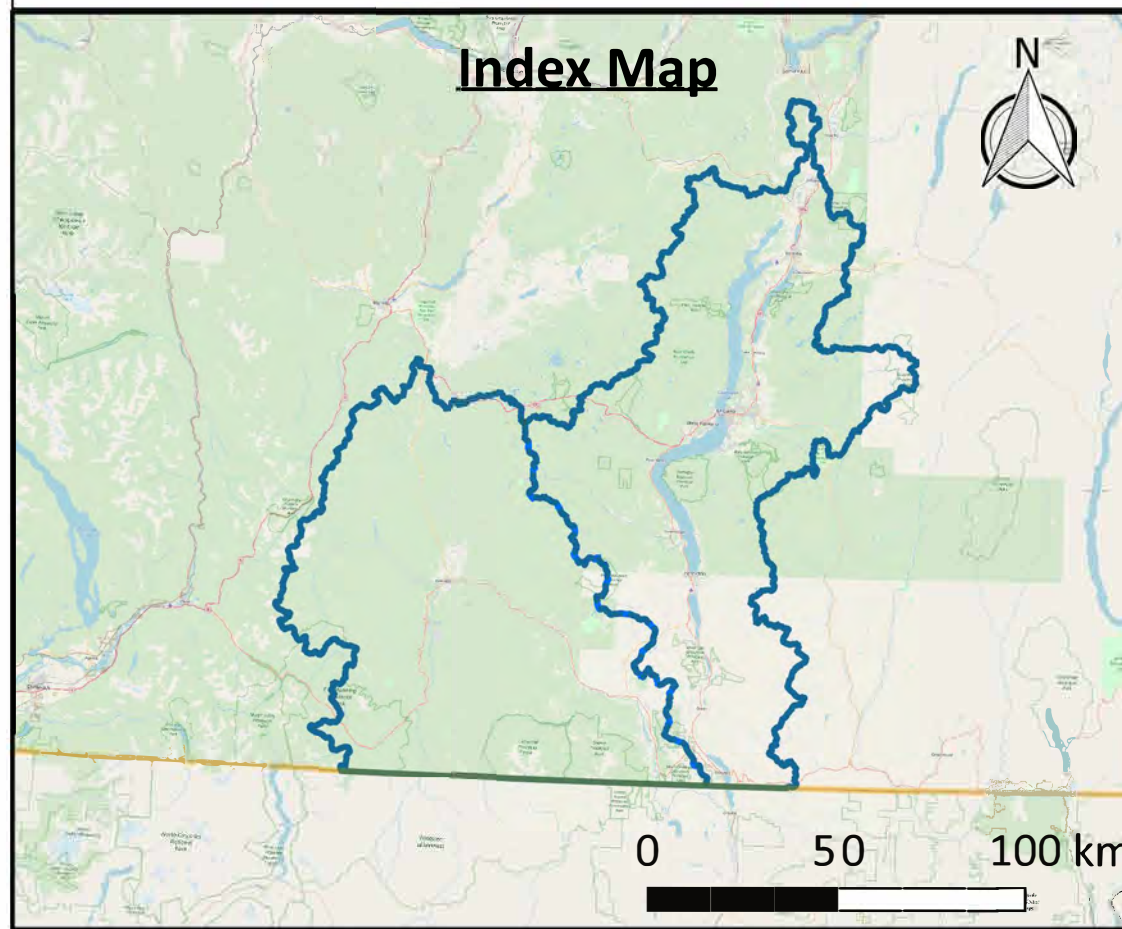
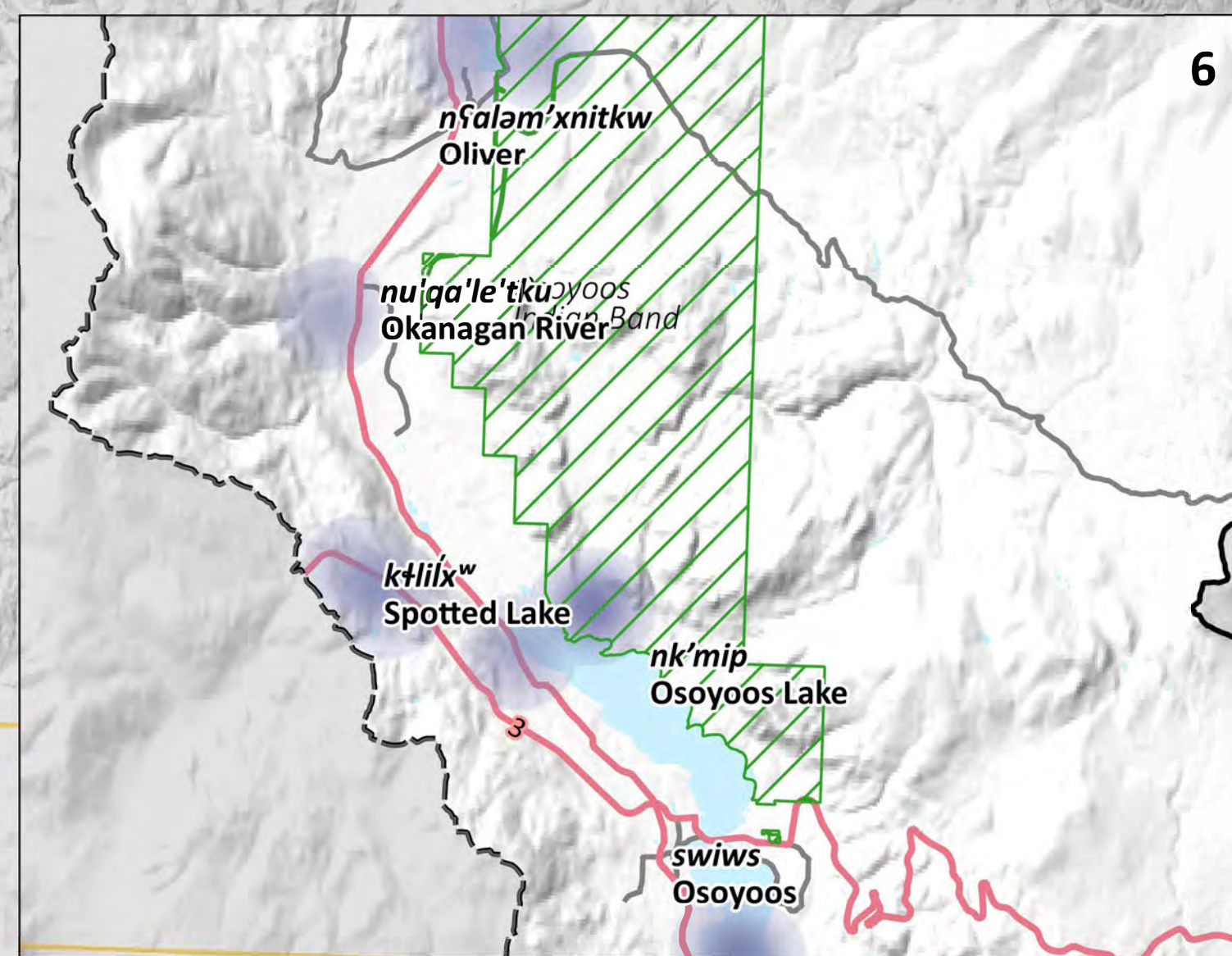
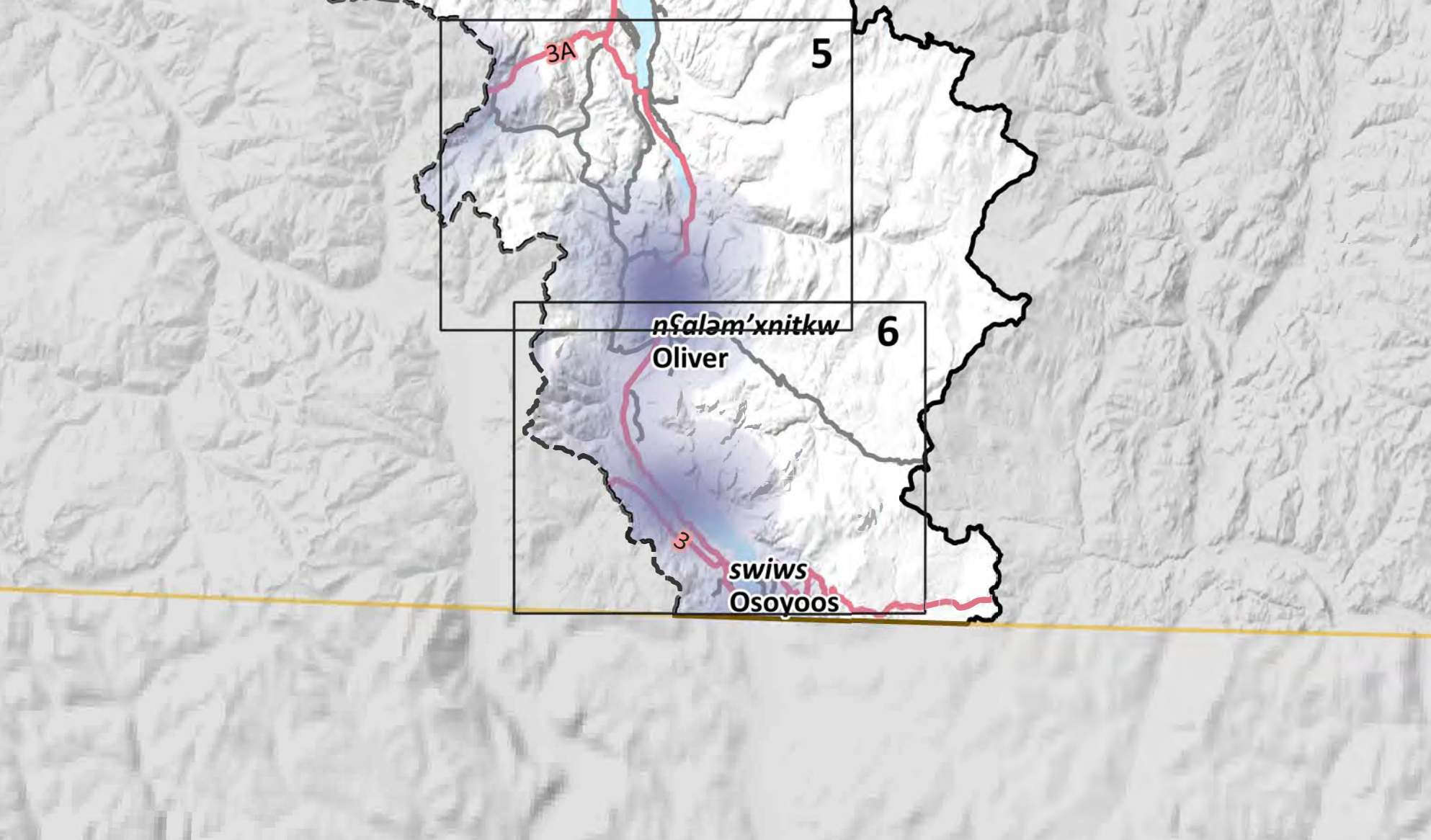
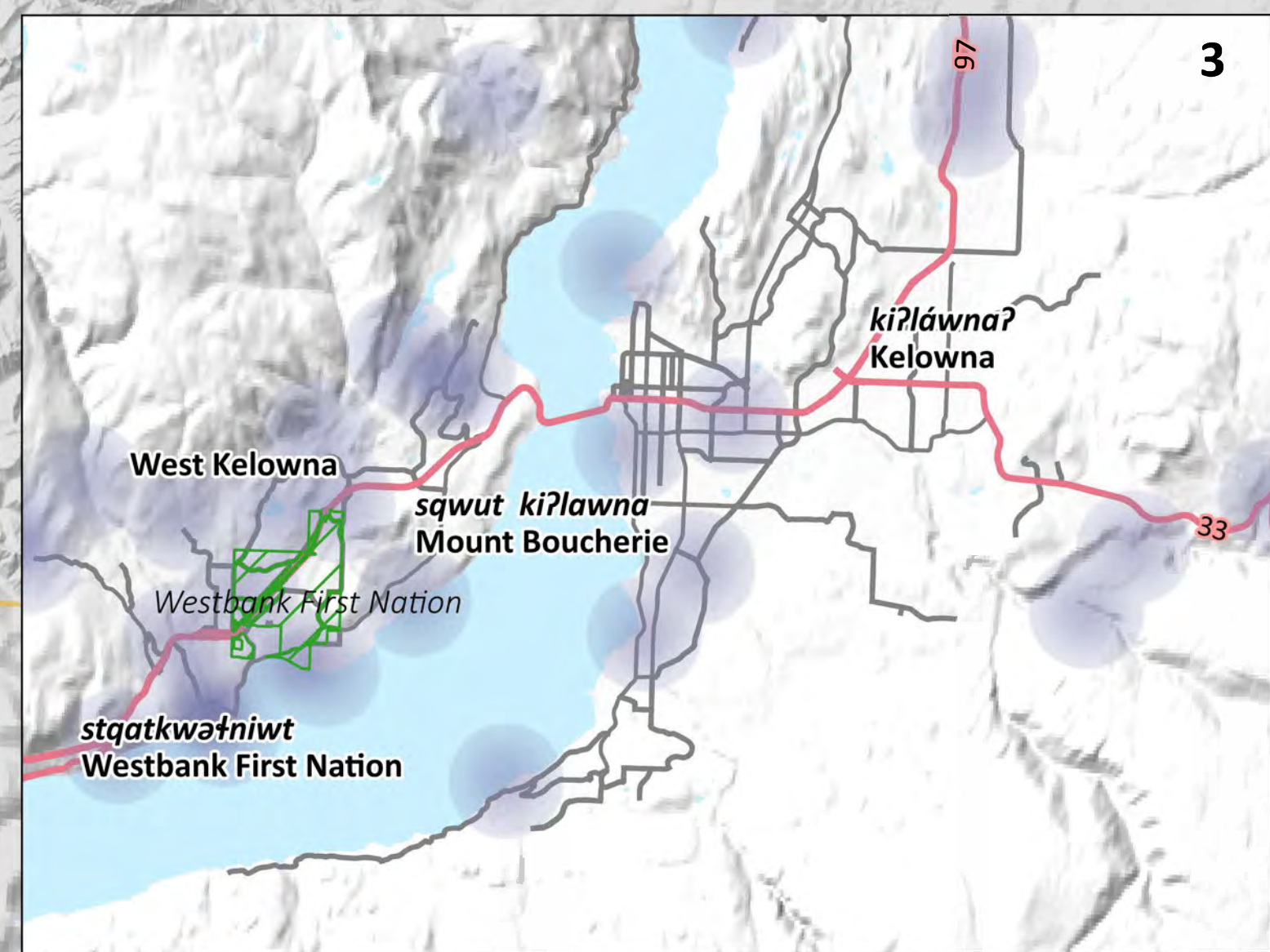
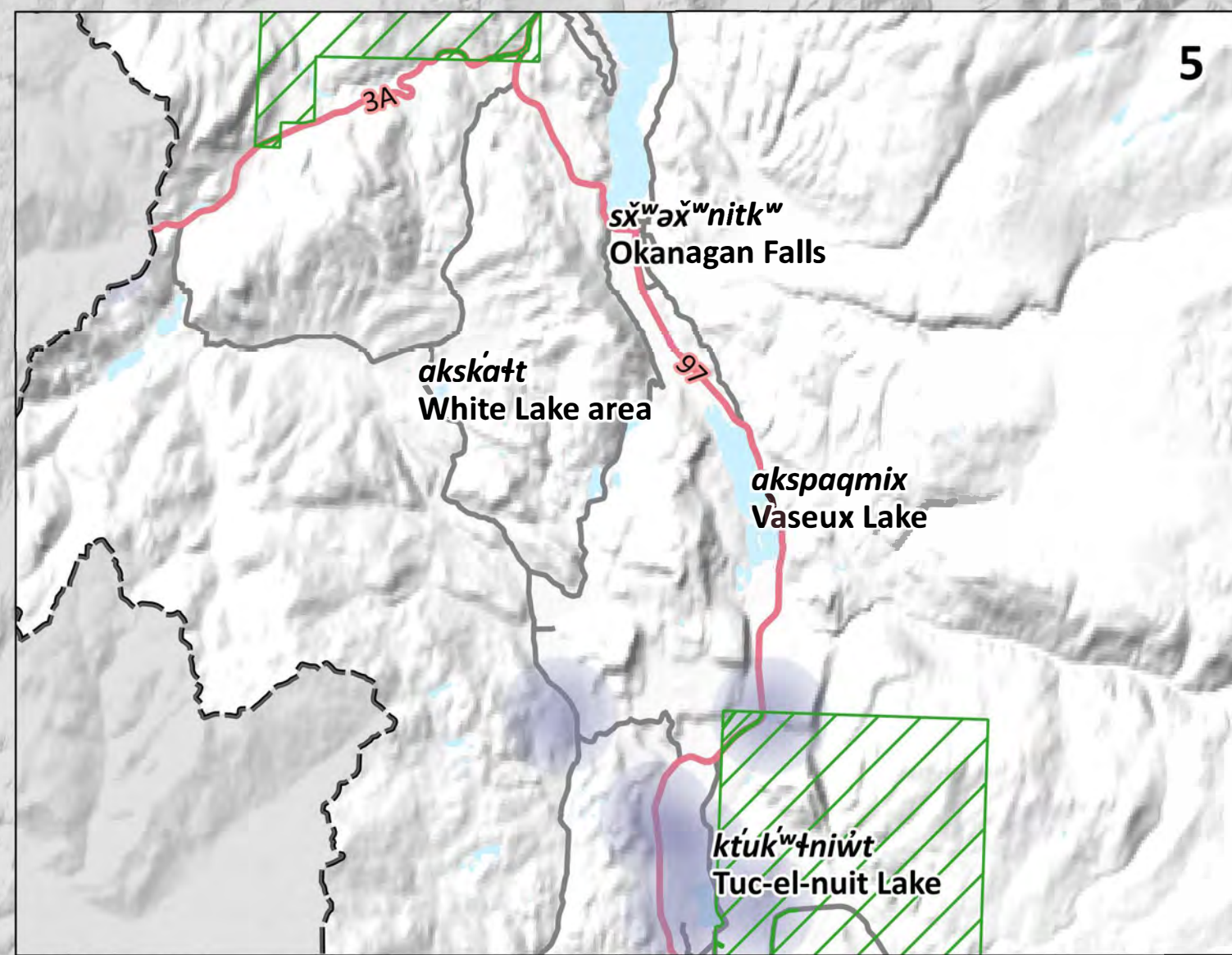
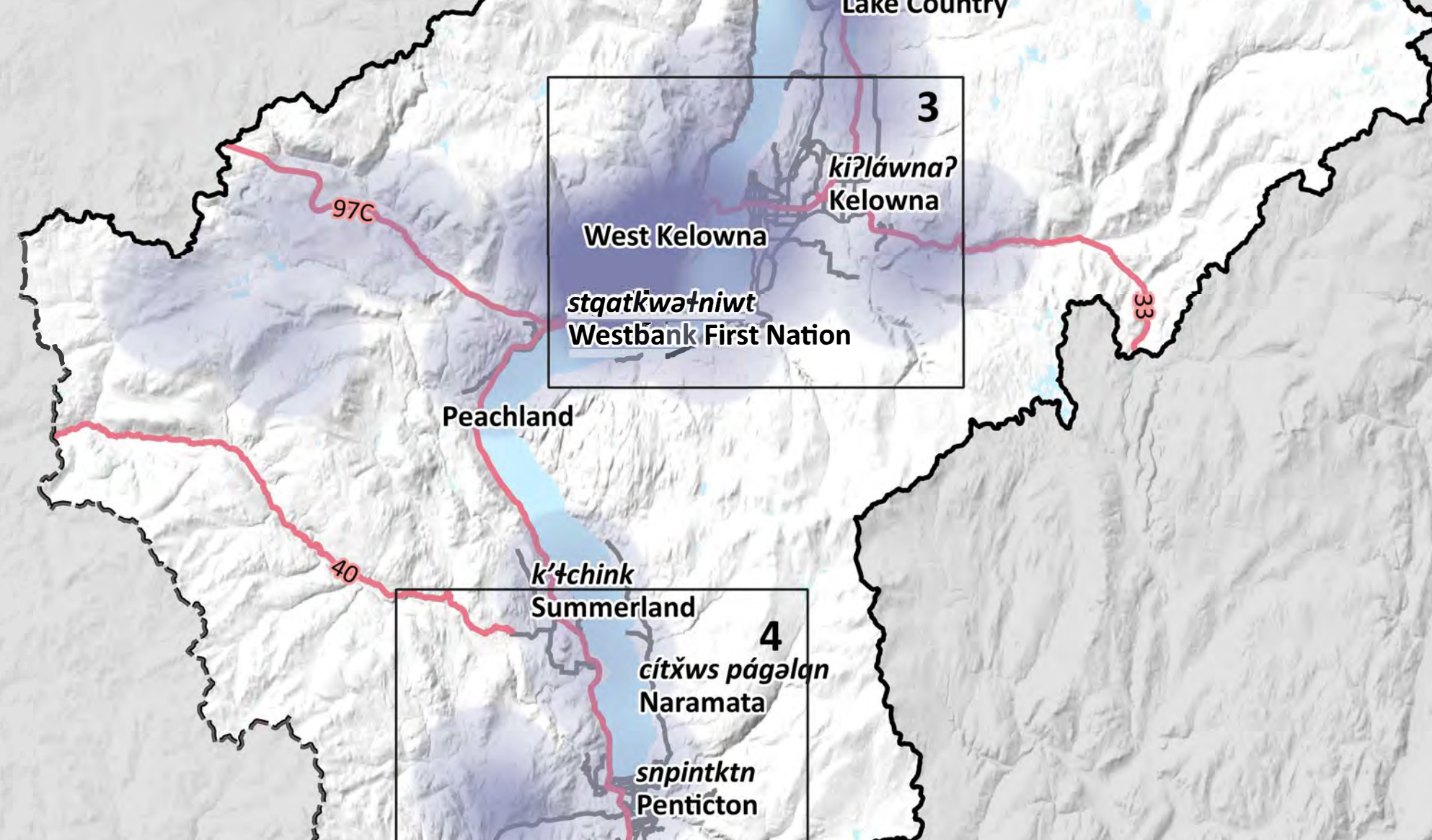
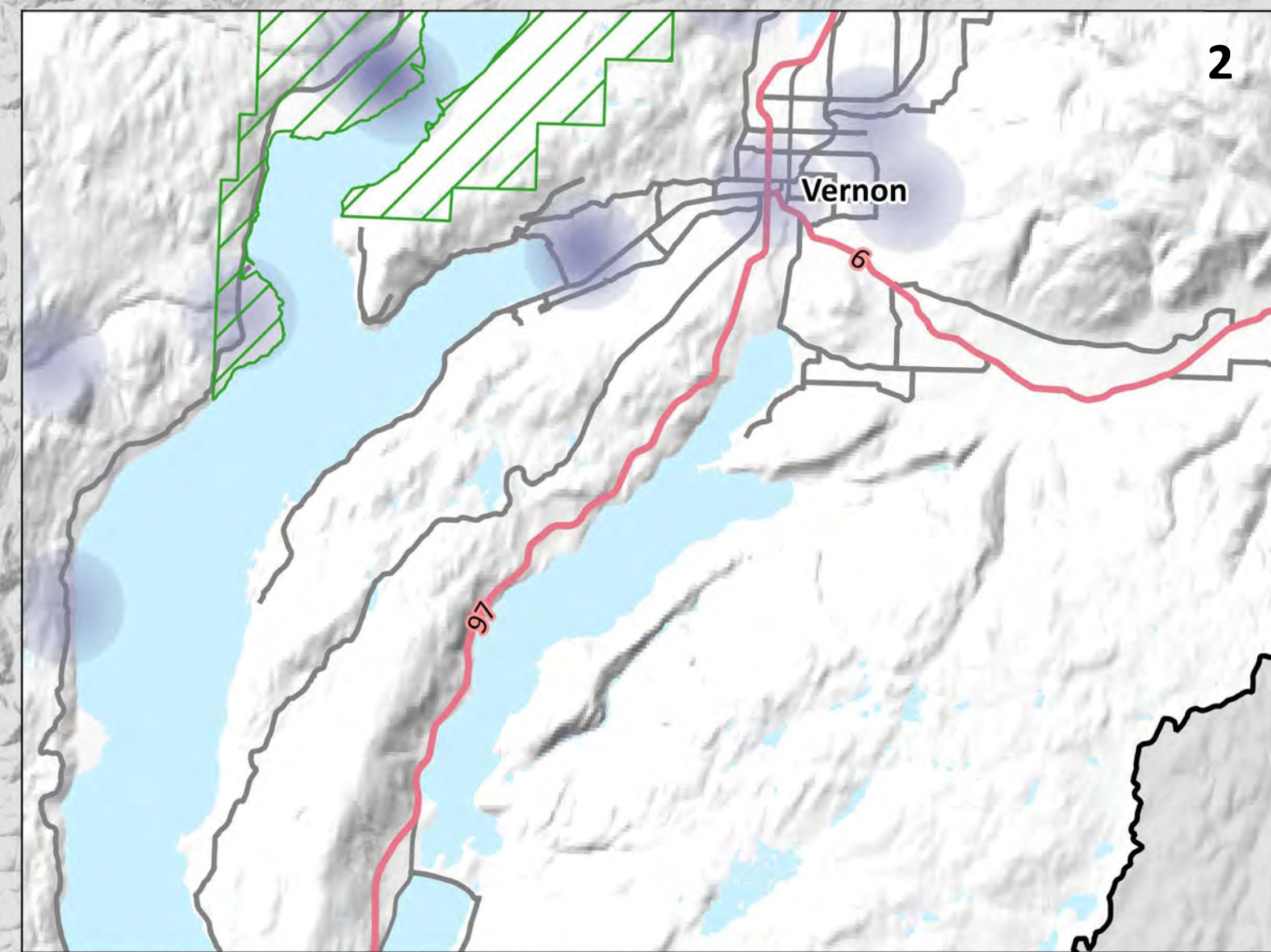
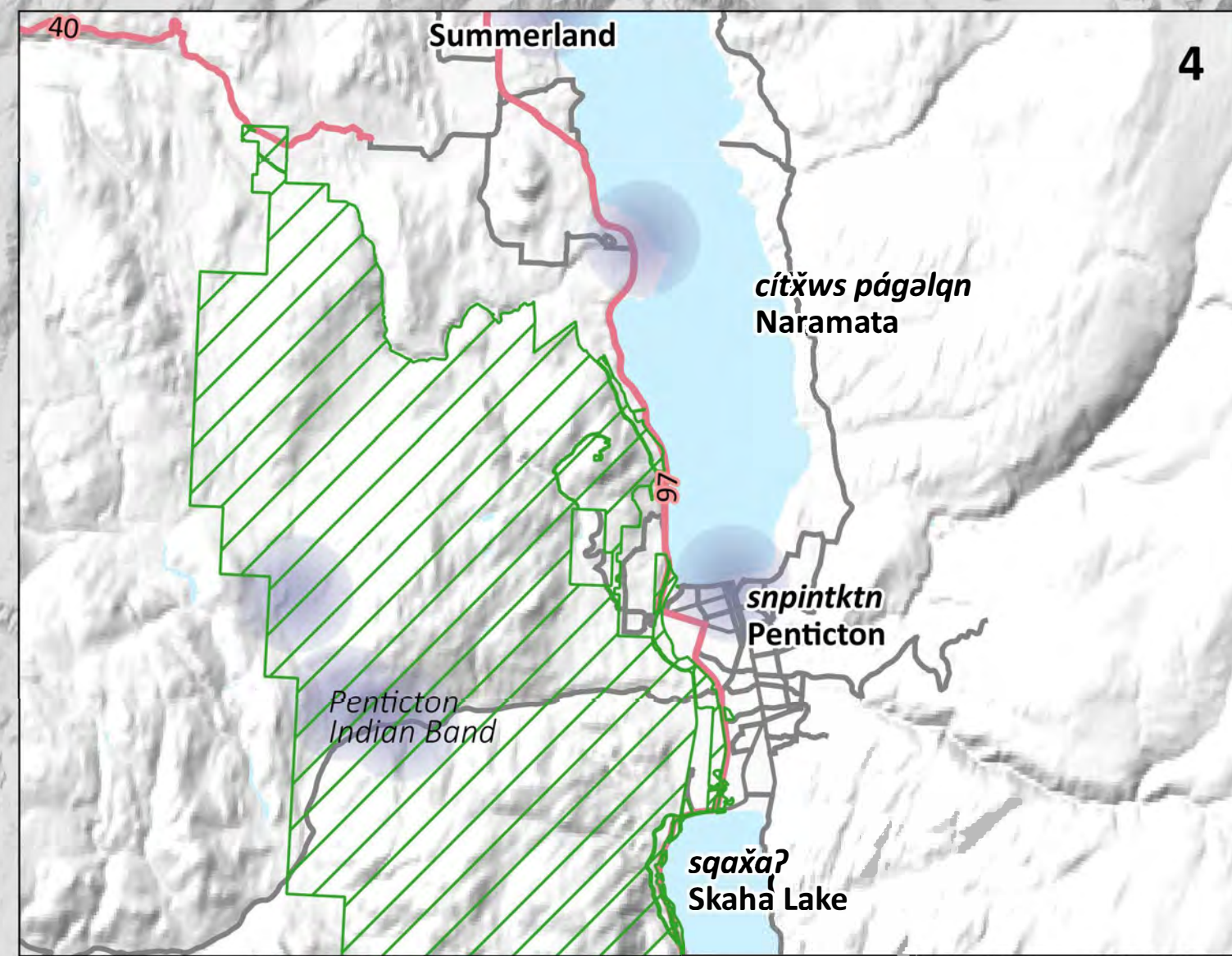
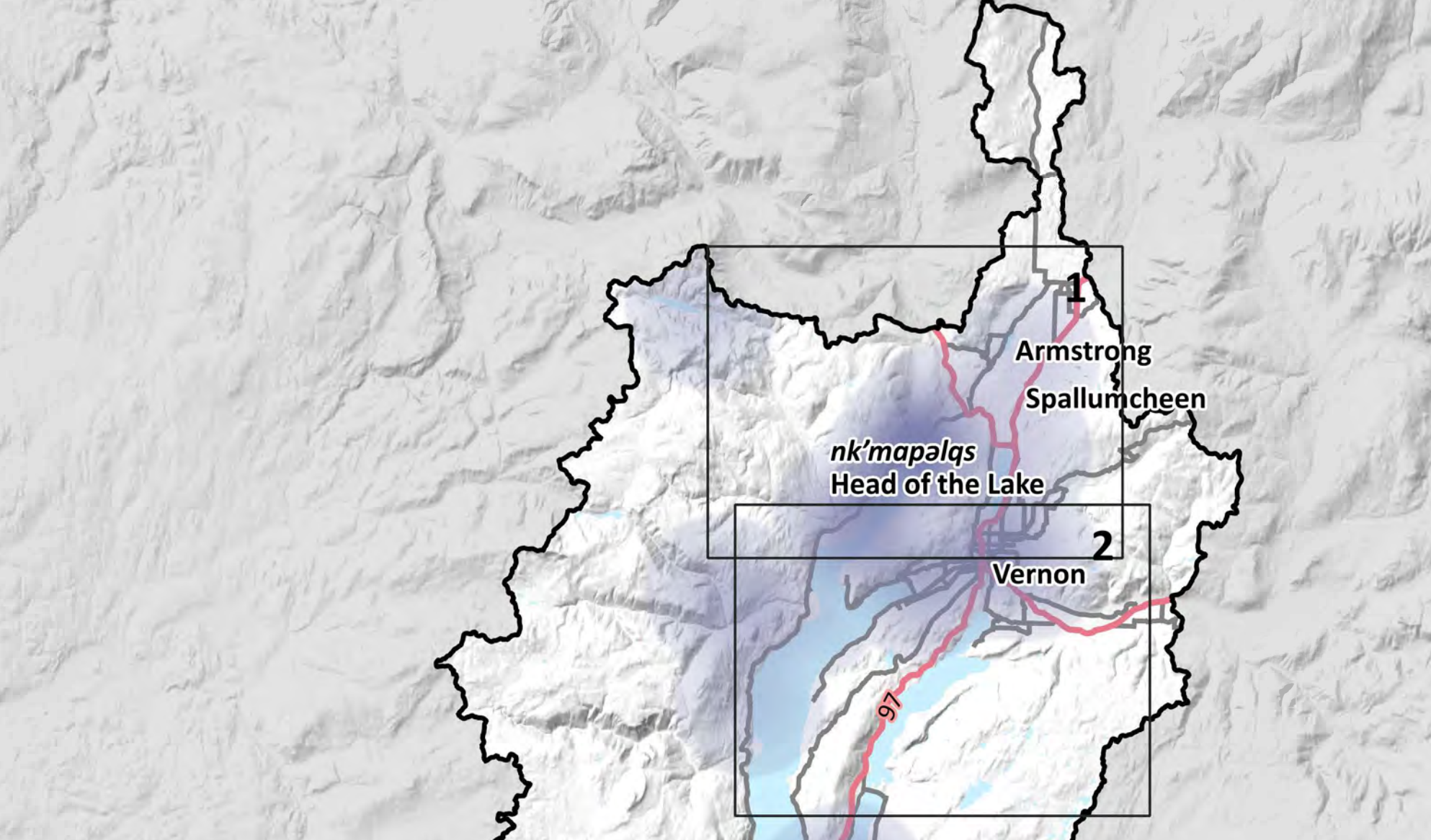
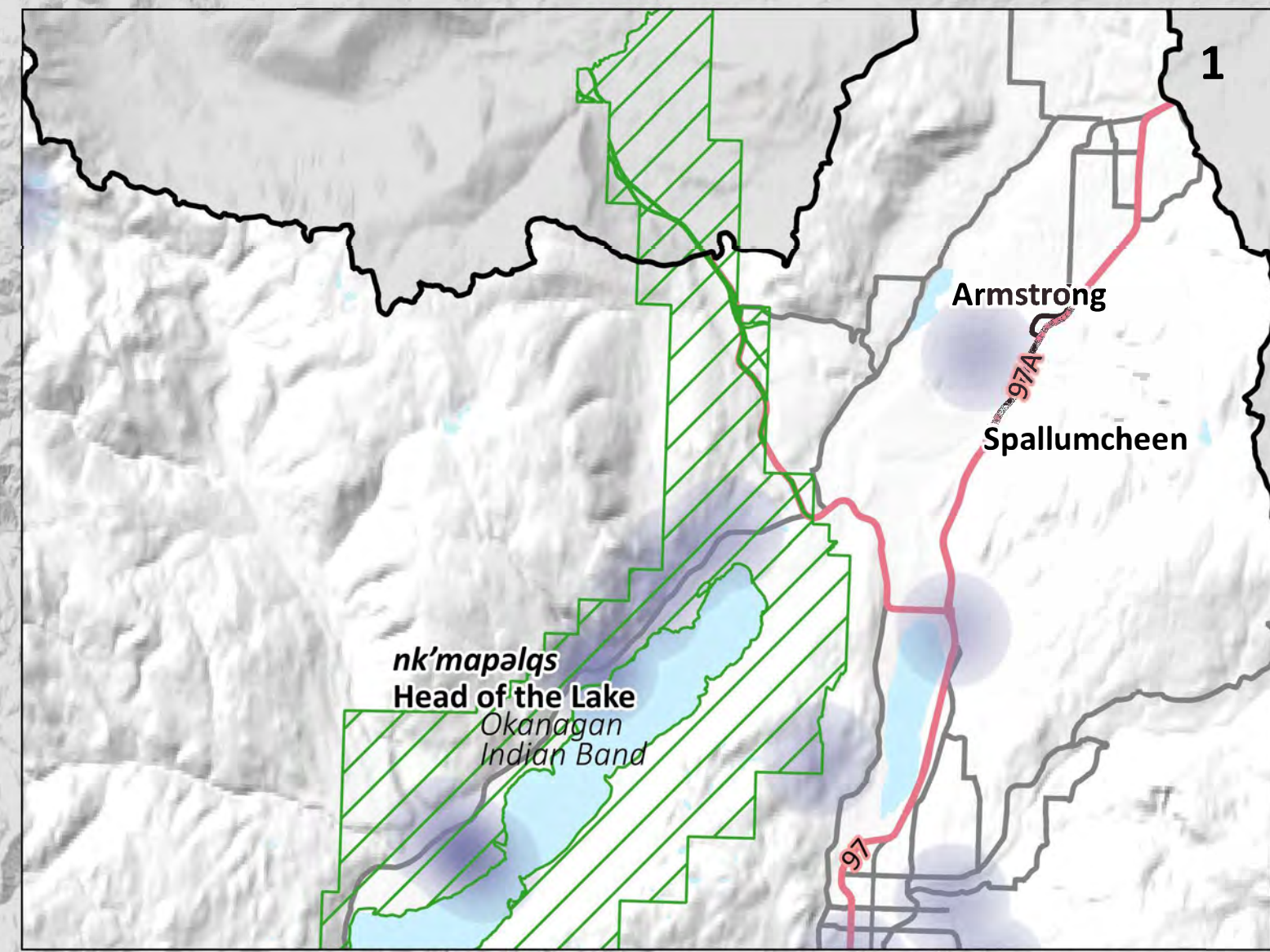
**Legend**

|  |                               |  |                 |
|--|-------------------------------|--|-----------------|
|  | Background                    |  | Affected People |
|  | Watershed Boundary            |  |                 |
|  | Okanagan-Similkameen Boundary |  |                 |
|  | Canada - US Border            |  |                 |
|  | Lakes                         |  |                 |
|  | Watercourses                  |  |                 |
|  | Highway                       |  |                 |
|  | Major Road                    |  |                 |

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**Produced by:** Ebbwater Consulting Inc.

**Sylix (Okanagan) Flood and Debris Flow Risk Assessment Project**  
**Qualitative Impacts - Affected People - Project Area**

# Okanagan Map



[Click here to go to Project Area Map](#)  
[Click here to go to Similkameen Map](#)

**Map Notes**

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**Scale**  
**Main Map 1:400,000**  
 0 10 20 30 km

**Inset Maps 1:150,000**  
 0 5 10 15 km

**Legend**

**Background**

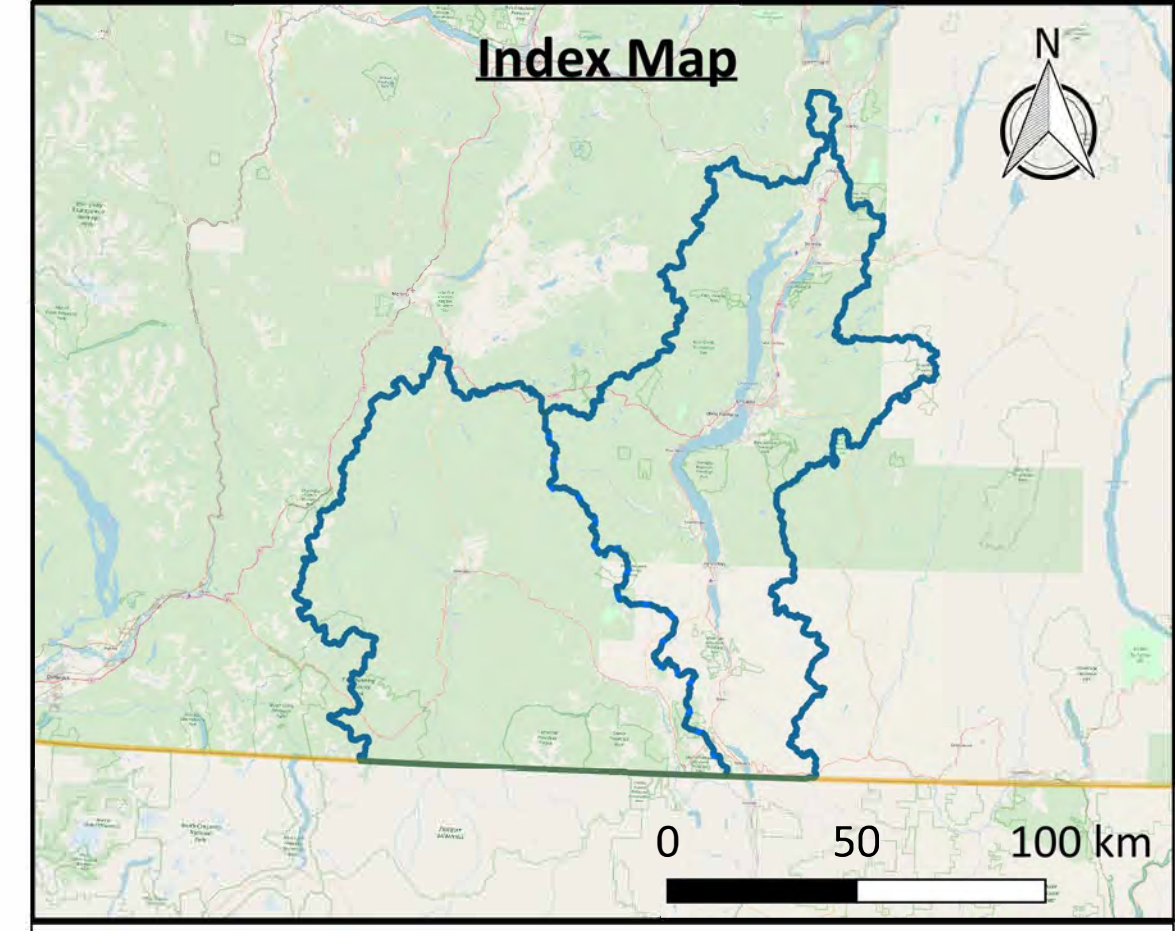
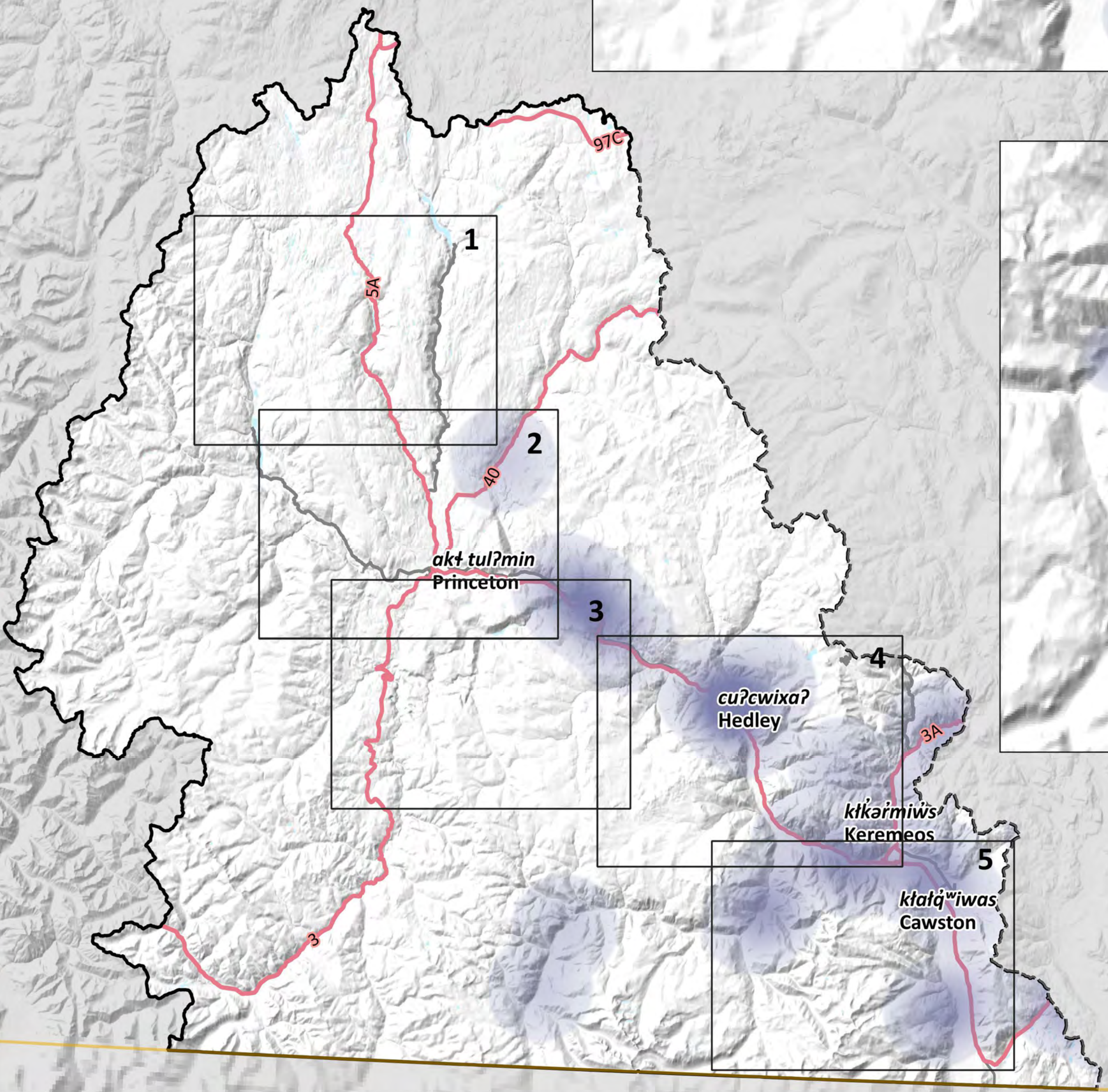
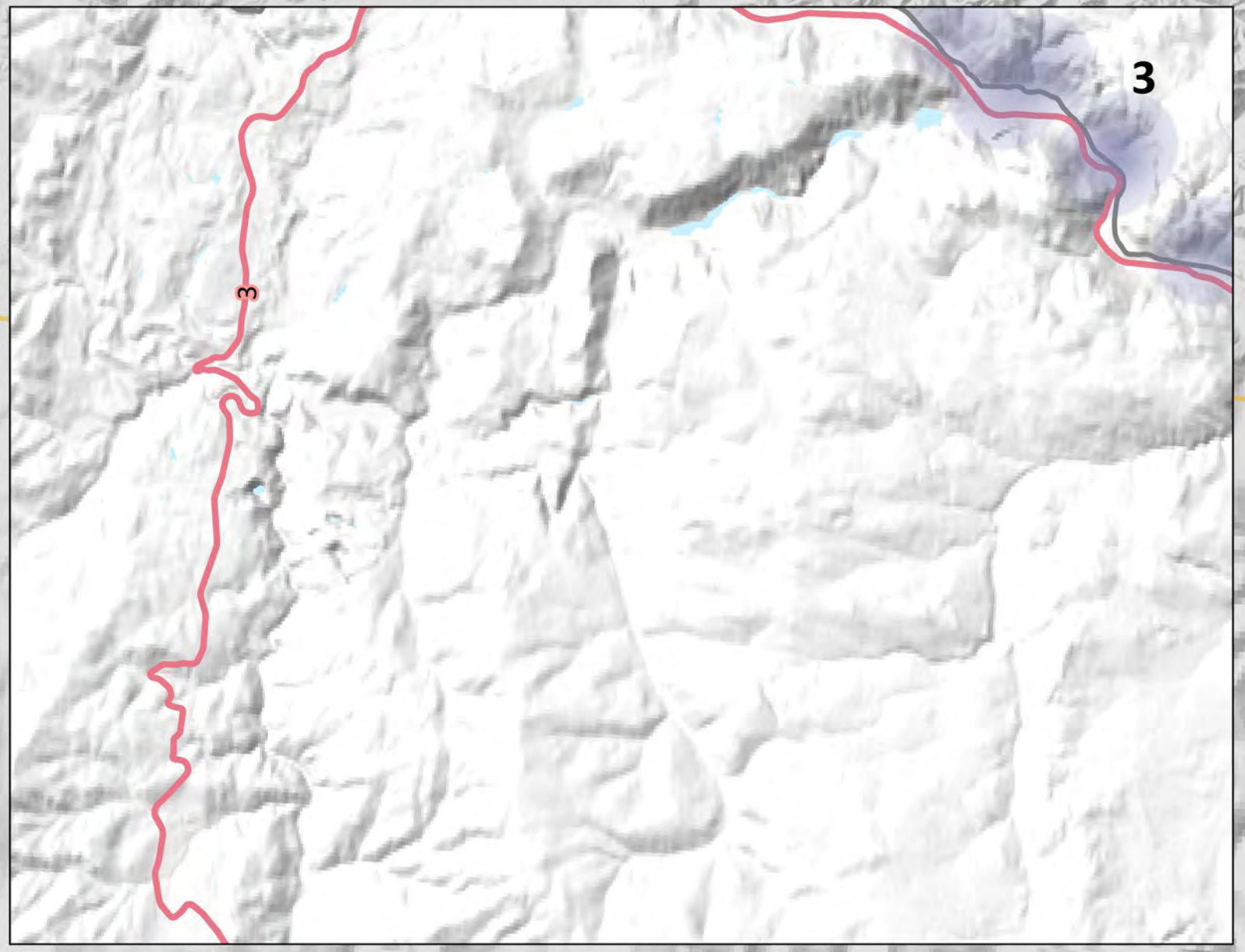
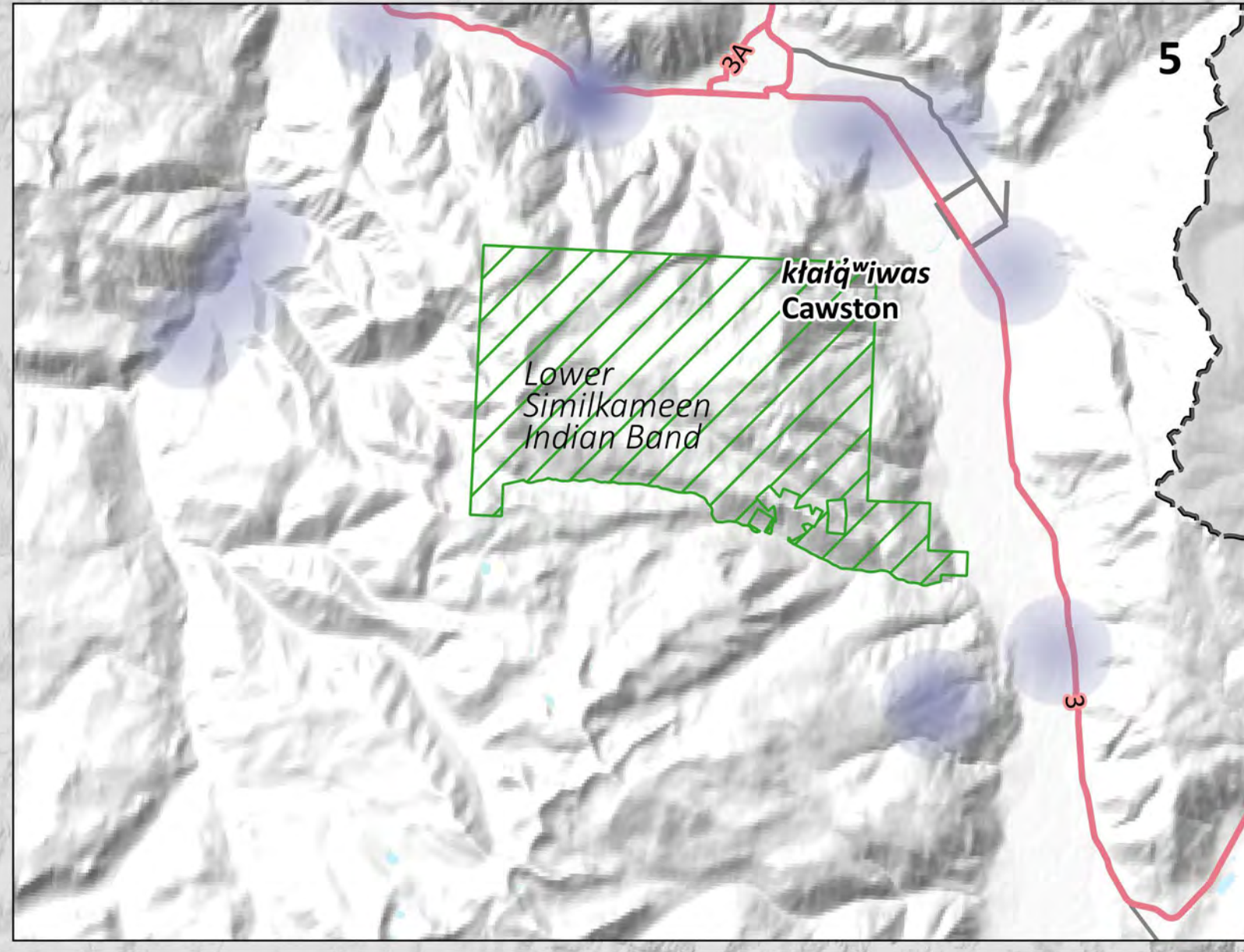
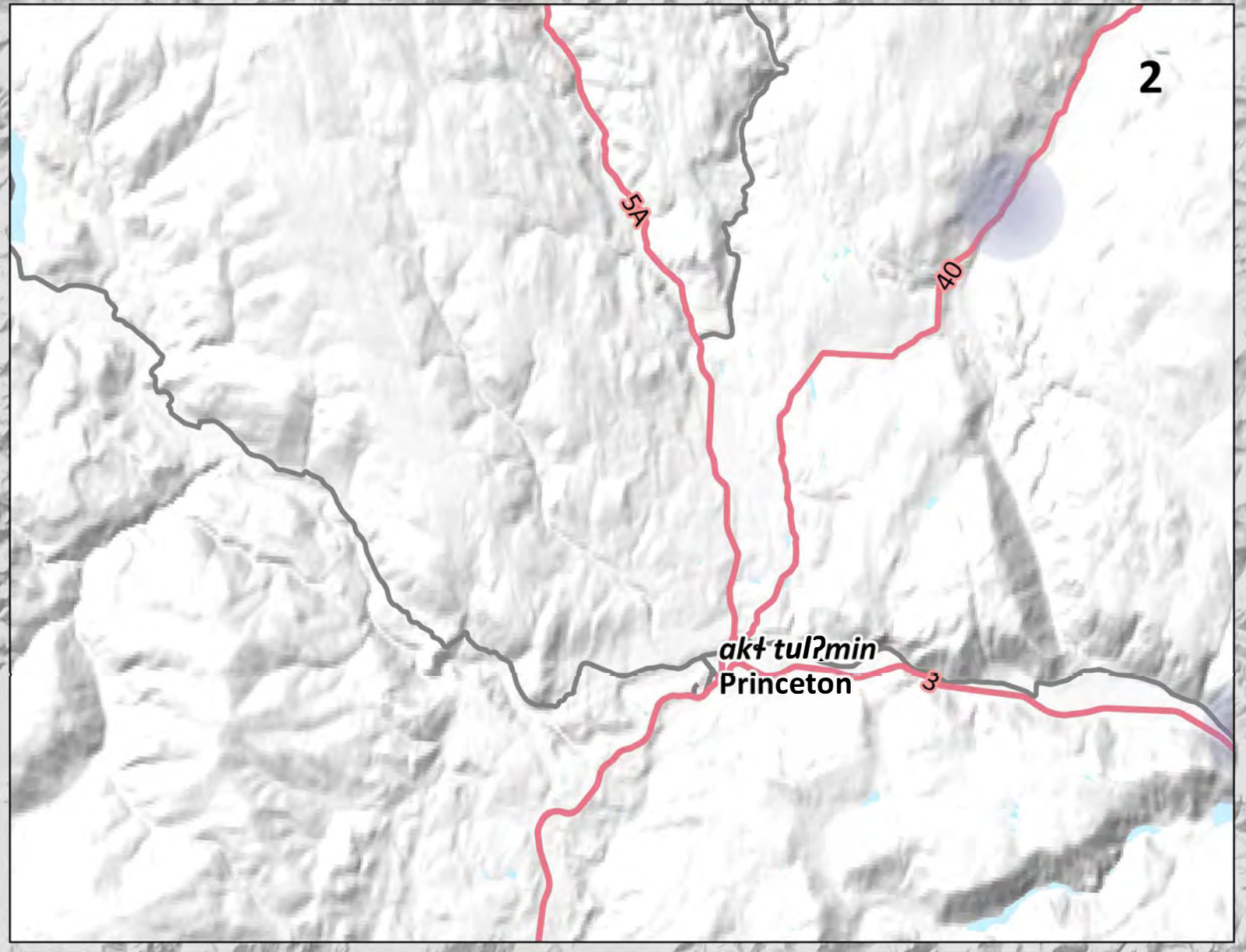
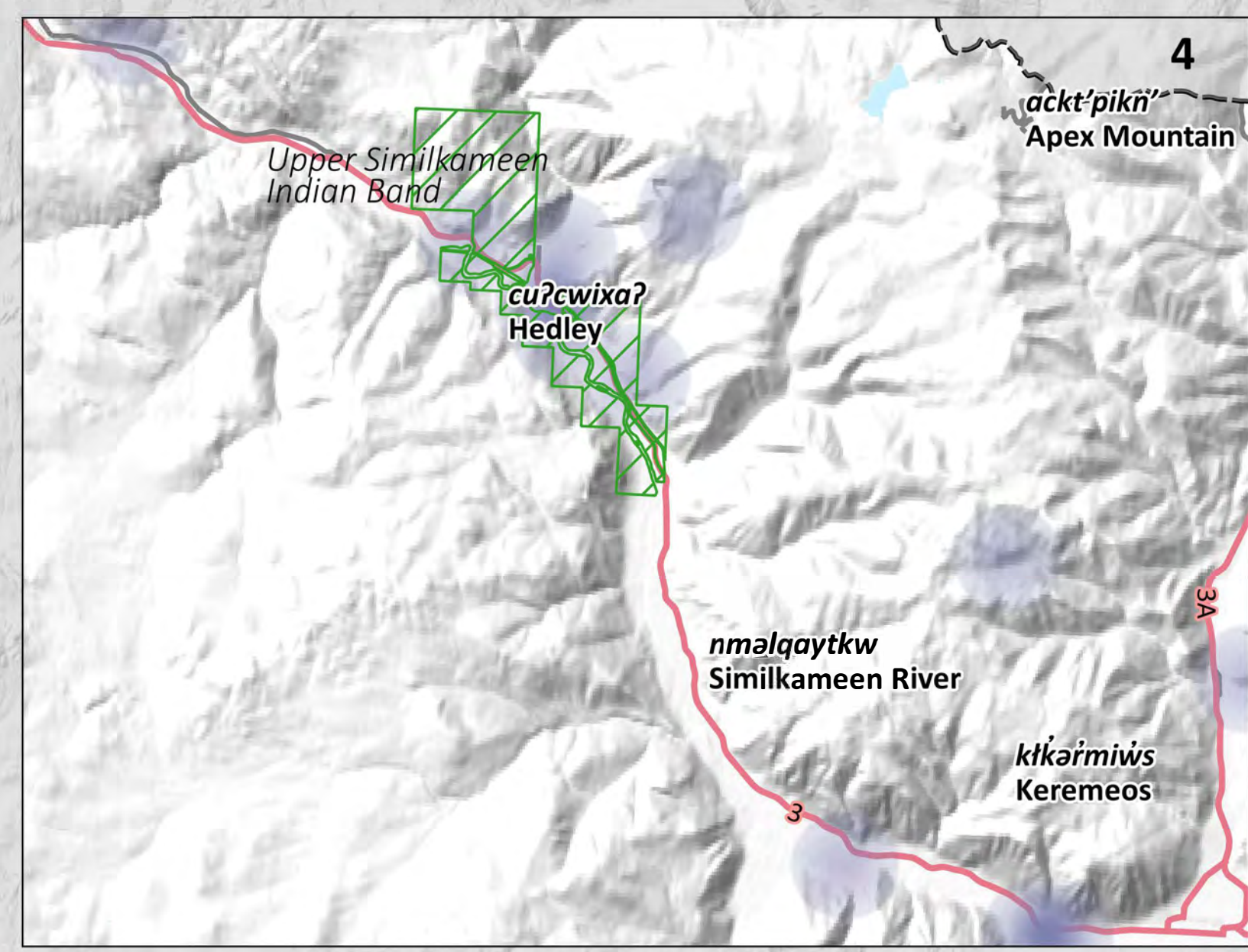
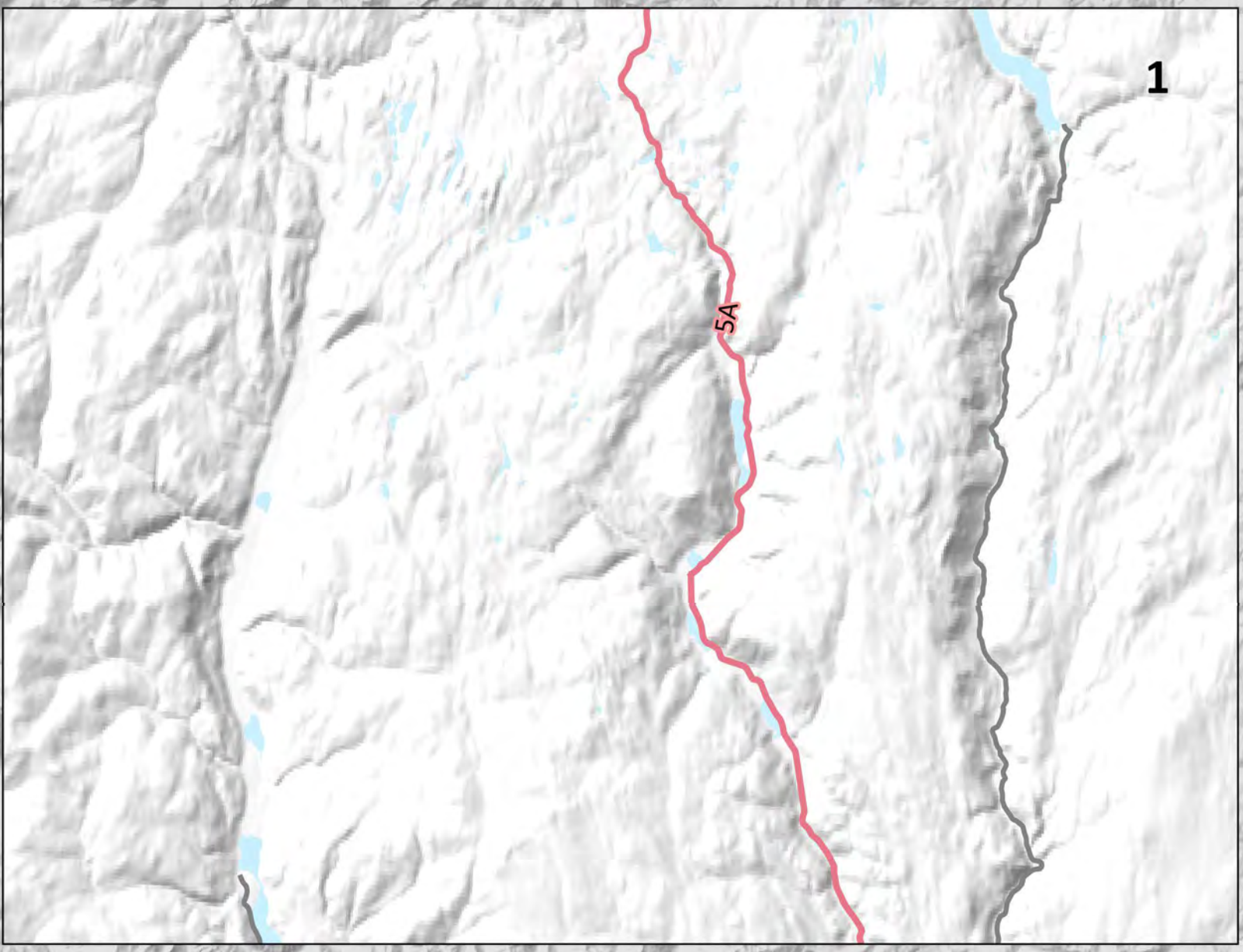
- Watershed Boundary
- Okanagan-Similkameen Boundary
- Canada - US Border
- Lakes
- Watercourses
- Highway
- Major Road
- Reserves

Affected People

**Date:** 31 December 2019  
**Produced by:** Ebbwater Consulting Inc.

**Siylx (Okanagan) Flood and Debris Flow Risk Assessment Project**  
**Qualitative Impacts - Affected People - Okanagan**

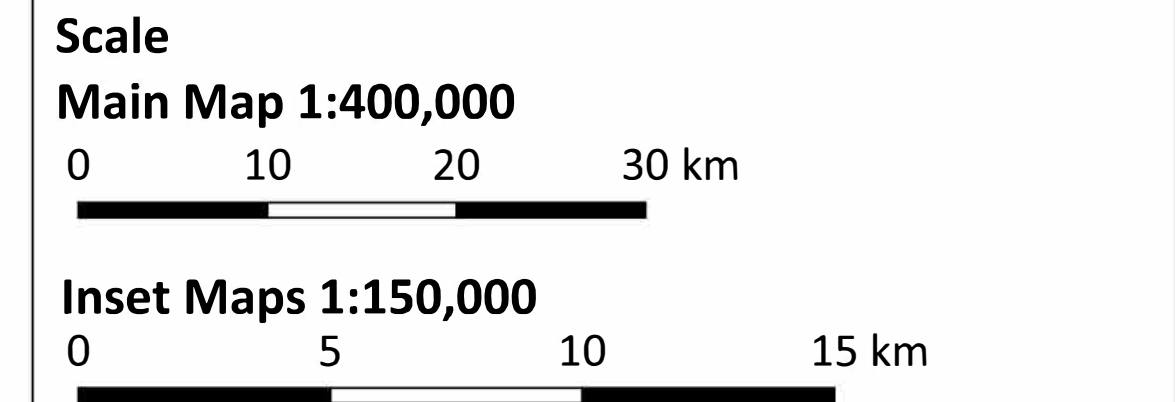
# Similkameen Map



[Click here to go to Project Area Map](#)  
[Click here to go to Okanagan Map](#)

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 2. Sylix Place Names: Okanagan Nation Alliance.  
 3. Base Layer: OpenStreetMap data – openstreetmap.org (© OpenStreetMap contributors; cartography licence CC BY-SA) and hill shade created using CDEM and USGM GMTED2010.



**Legend**

|                                     |                   |
|-------------------------------------|-------------------|
| Background                          |                   |
| — Watershed Boundary                | ● Affected People |
| - - - Okanagan-Similkameen Boundary |                   |
| — Canada - US Border                |                   |
| ■ Lakes                             |                   |
| — Watercourses                      |                   |
| — Highway                           |                   |
| — Major Road                        |                   |
| ▨ Reserves                          |                   |

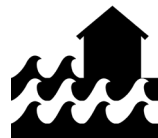
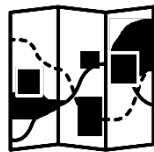
**Date:** 31 December 2019  
**Produced by:** Ebbwater Consulting Inc.

**Sylix (Okanagan) Flood and Debris Flow Risk Assessment Project**  
**Qualitative Impacts - Affected People - Similkameen**

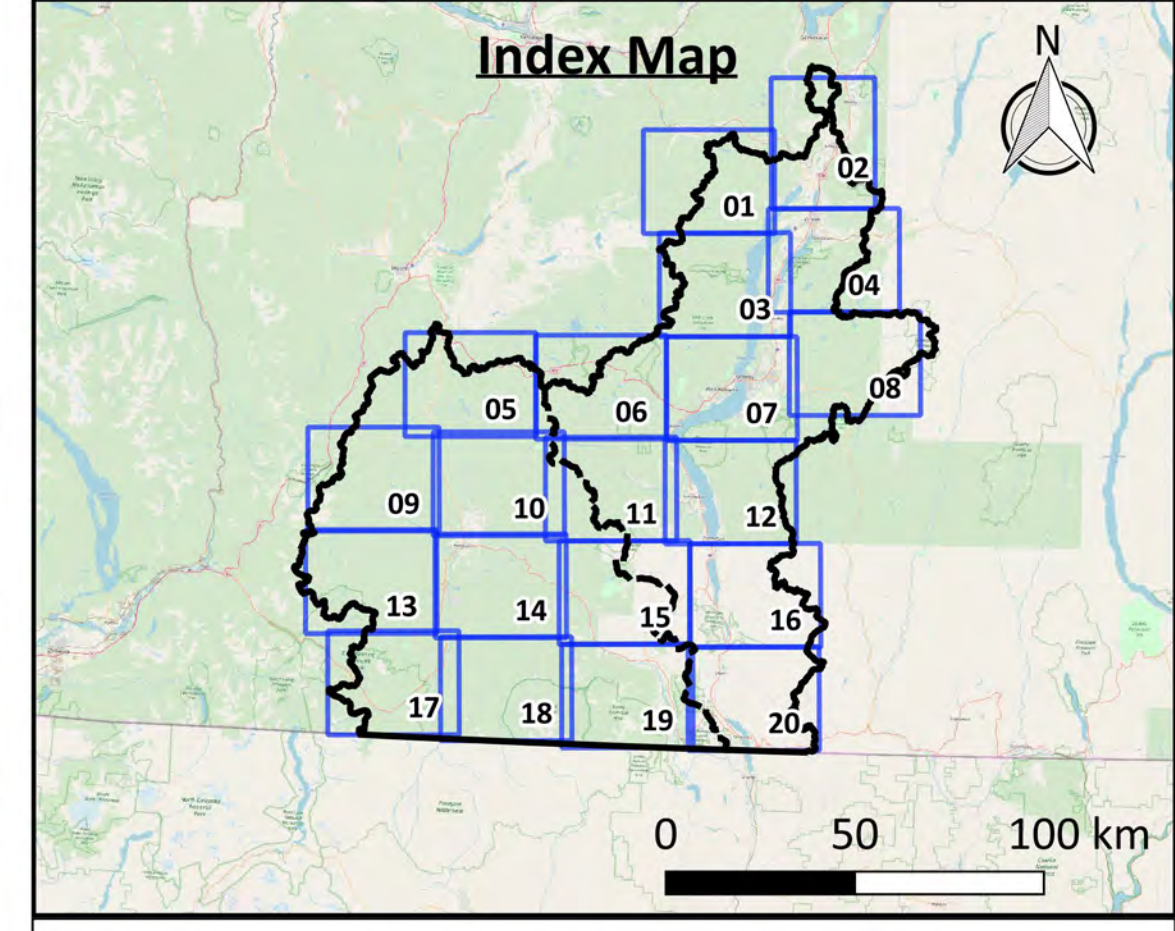
# Sylix Okanagan Flood and Debris Flow Risk Assessment Map Book Map Series 5 of 7: Affected People Indicator



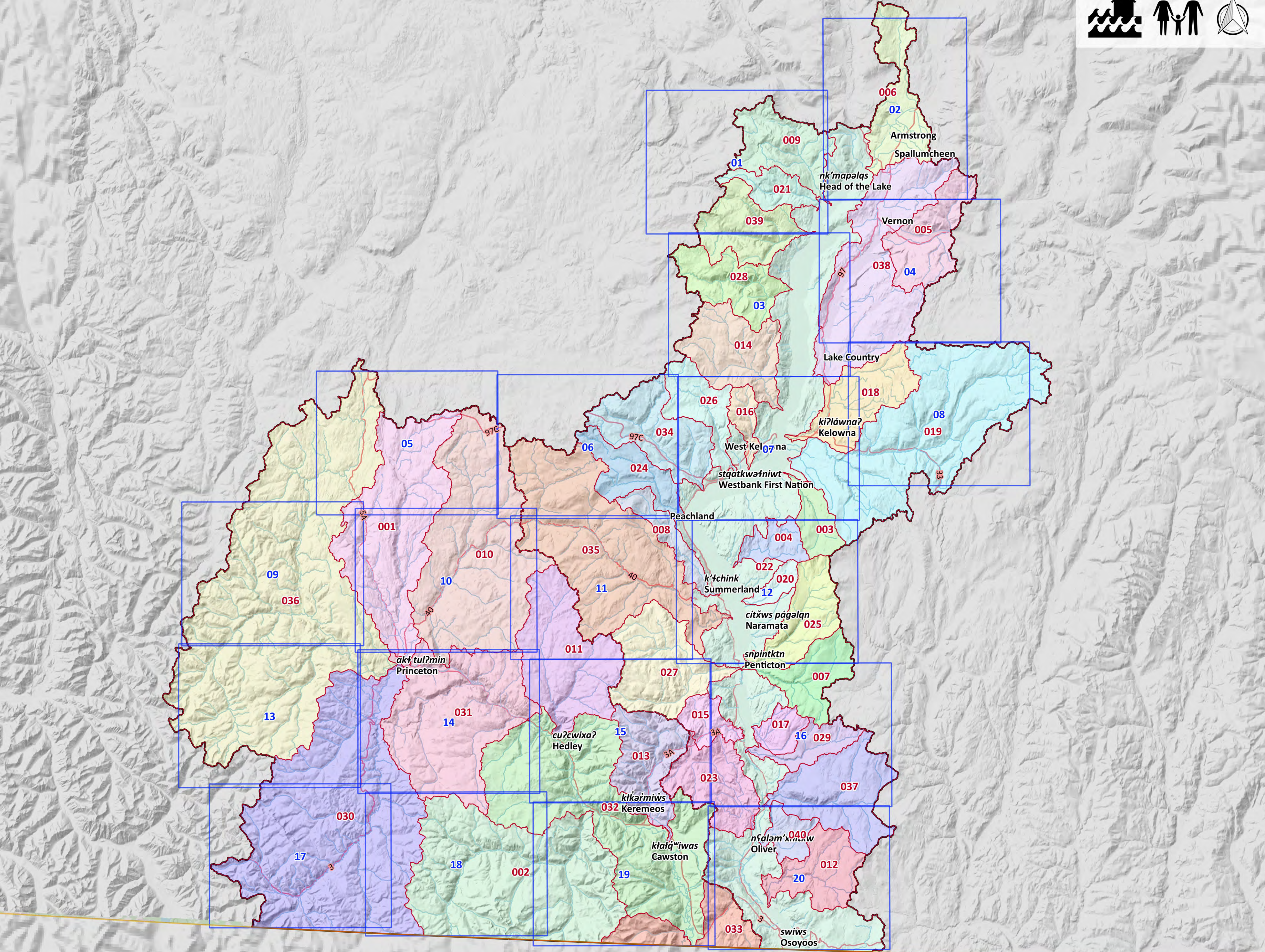
## Quantitative Flood Consequence Maps



# Watershed Index



Click on the blue map tile to go to the Zoom-In map



**Legend**

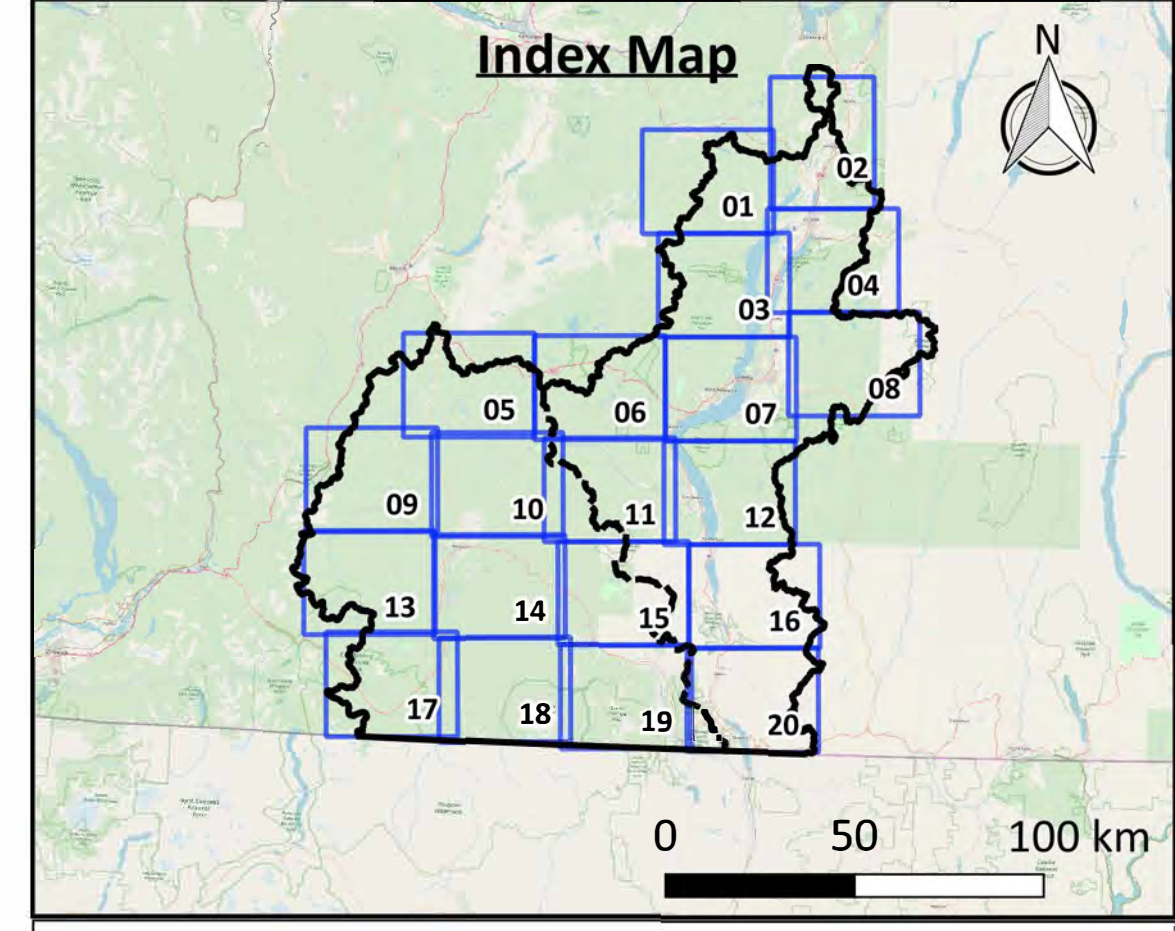
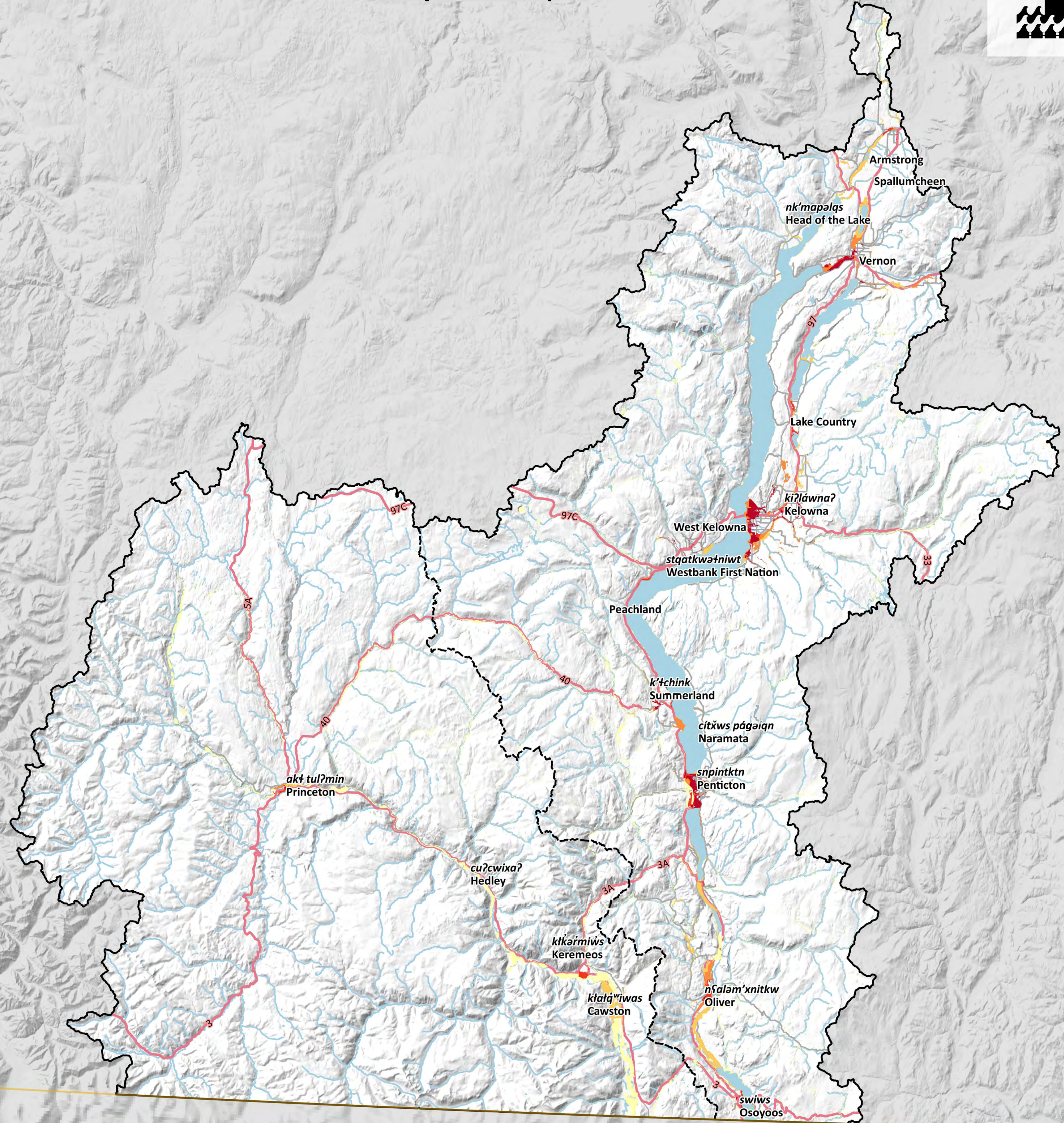
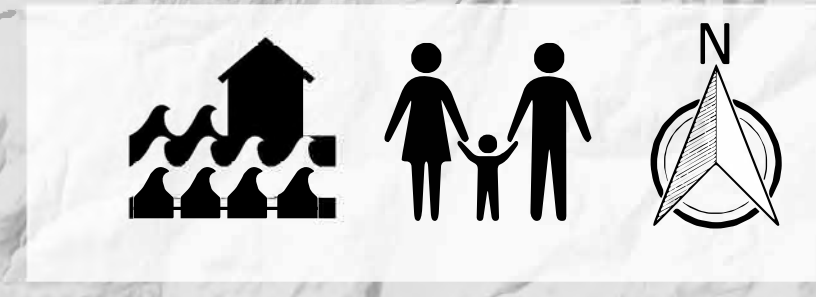
|                                   |                           |
|-----------------------------------|---------------------------|
| <b>Background</b>                 | <b>Sub-Watersheds</b>     |
| — Watershed Boundary              | 001 - Allison Creek       |
| --- Okanagan-Similkameen Boundary | 002 - Ashnola River       |
| — Canada - US Border              | 003 - Bellevue Creek      |
| — Lakes                           | 004 - Chute Creek         |
| — Watercourses                    | 005 - Coldstream Creek    |
| — Highway                         | 006 - Deep Creek          |
| — Major Road                      | 007 - Ellis Creek         |
| □ Map tiles                       | 008 - Eneas Creek         |
|                                   | 009 - Equis Creek         |
|                                   | 010 - Hayes Creek         |
|                                   | 011 - Hedley Creek        |
|                                   | 012 - Inkaneep Creek      |
|                                   | 013 - Keremeos Creek      |
|                                   | 014 - Lambly Creek        |
|                                   | 015 - Marron River        |
|                                   | 016 - McDougall Creek     |
|                                   | 017 - McLean Creek        |
|                                   | 018 - Mill Creek          |
|                                   | 019 - Mission Creek       |
|                                   | 020 - Naramata Creek      |
|                                   | 021 - Naswhito Creek      |
|                                   | 022 - Okanagan River      |
|                                   | 023 - Park Rill           |
|                                   | 024 - Peachland Creek     |
|                                   | 025 - Penticton Creek     |
|                                   | 026 - Powers Creek        |
|                                   | 027 - Shingle Creek       |
|                                   | 028 - Shorts Creek        |
|                                   | 029 - Shuttleworth Creek  |
|                                   | 030 - Similkameen River 1 |
|                                   | 031 - Similkameen River 2 |
|                                   | 032 - Similkameen River 3 |
|                                   | 033 - Similkameen River 4 |
|                                   | 034 - Trepanier Creek     |
|                                   | 035 - Trout Creek         |
|                                   | 036 - Tulameen River      |
|                                   | 037 - Vaseux Creek        |
|                                   | 038 - Vernon Creek        |
|                                   | 039 - Whiteman Creek      |
|                                   | 040 - Wolfcub Creek       |

Scale 1:350,000  
0 10 20 30 km

Date: 31 December 2019  
Produced by: Ebbwater Consulting Inc.

**Sylix (Okanagan) Flood and Debris Flow Risk Assessment Project**  
**Flood - Affected People**

# Project Area Map



Click above map tile for Zoom-In map  
[Click here to go to Okanagan Map](#)  
[Click here to go to Similkameen Map](#)

**Map Notes**

- Map produced by Ebbwater Consulting Inc.
- Population density is based on census dissemination areas within the project area boundary. Population density is not shown for areas with a population density of less than 1 person per square km.
- The population density (exposure) layer was clipped to the moderate flood hazard area. The hazard layer is shown in the hazard maps, and was produced by Ebbwater Consulting Inc. The method used to produce the hazard layer is described in the Quantitative Study.

**Data Sources**

- Lakes, Watercourses, Roads, and Trails: BC Data Catalogue.
- Population: Statistics Canada 2016 Census.
- Sylix Place Names: Okanagan Nation Alliance.
- Base Layer: OpenStreetMap data – openstreetmap.org (© OpenStreetMap contributors; cartography licence CC BY-SA) and hill shade created using CDEM and USGM GMTED2010.

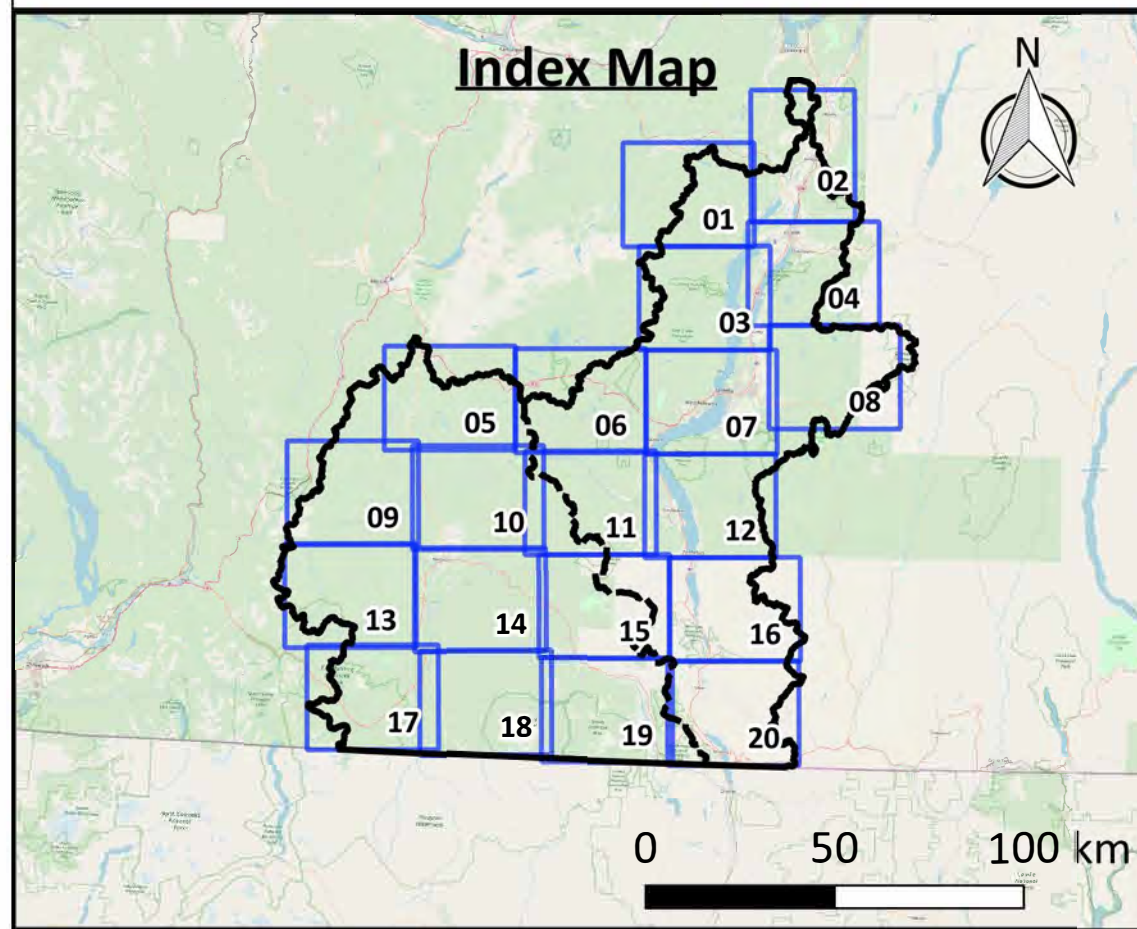
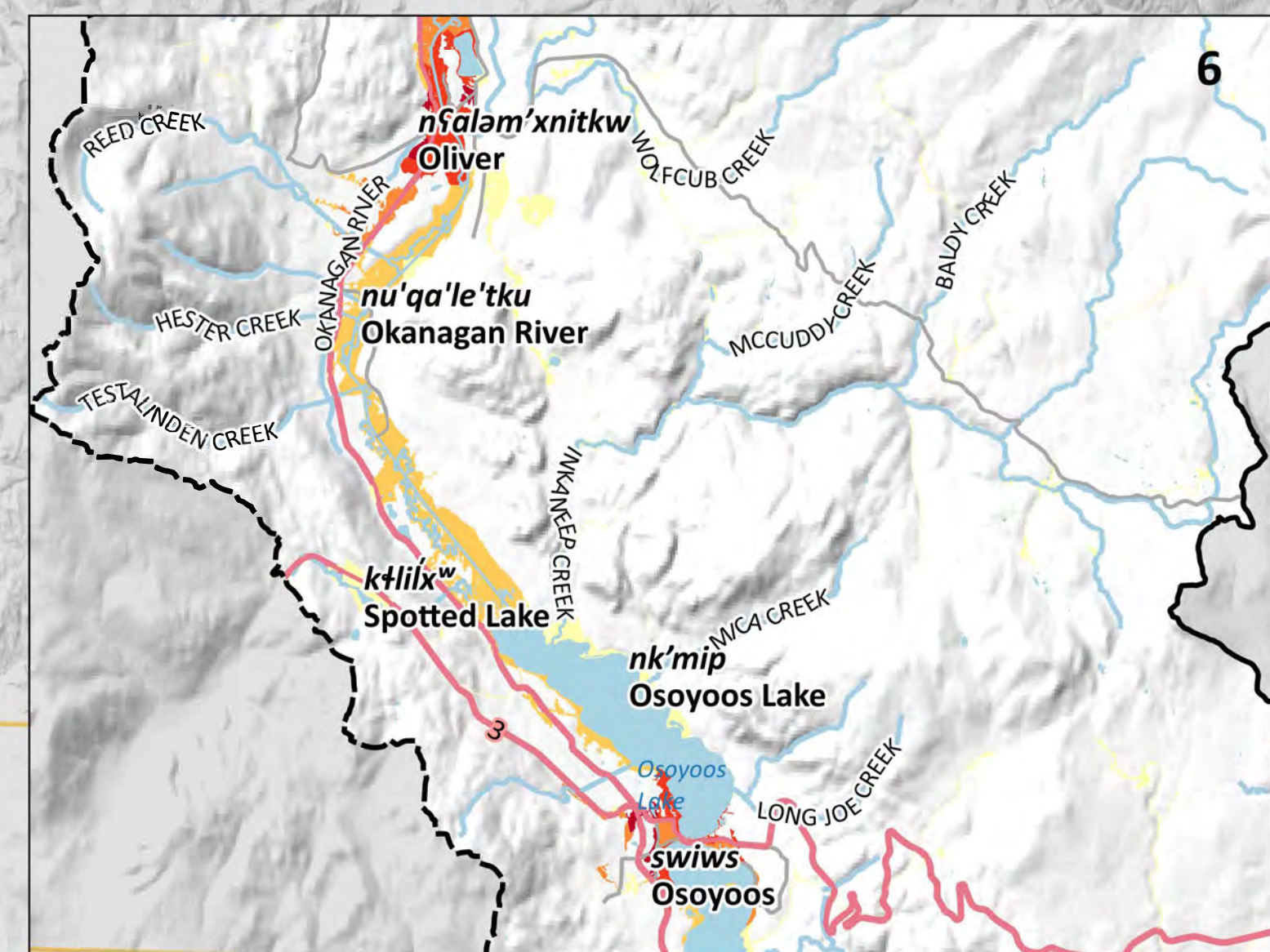
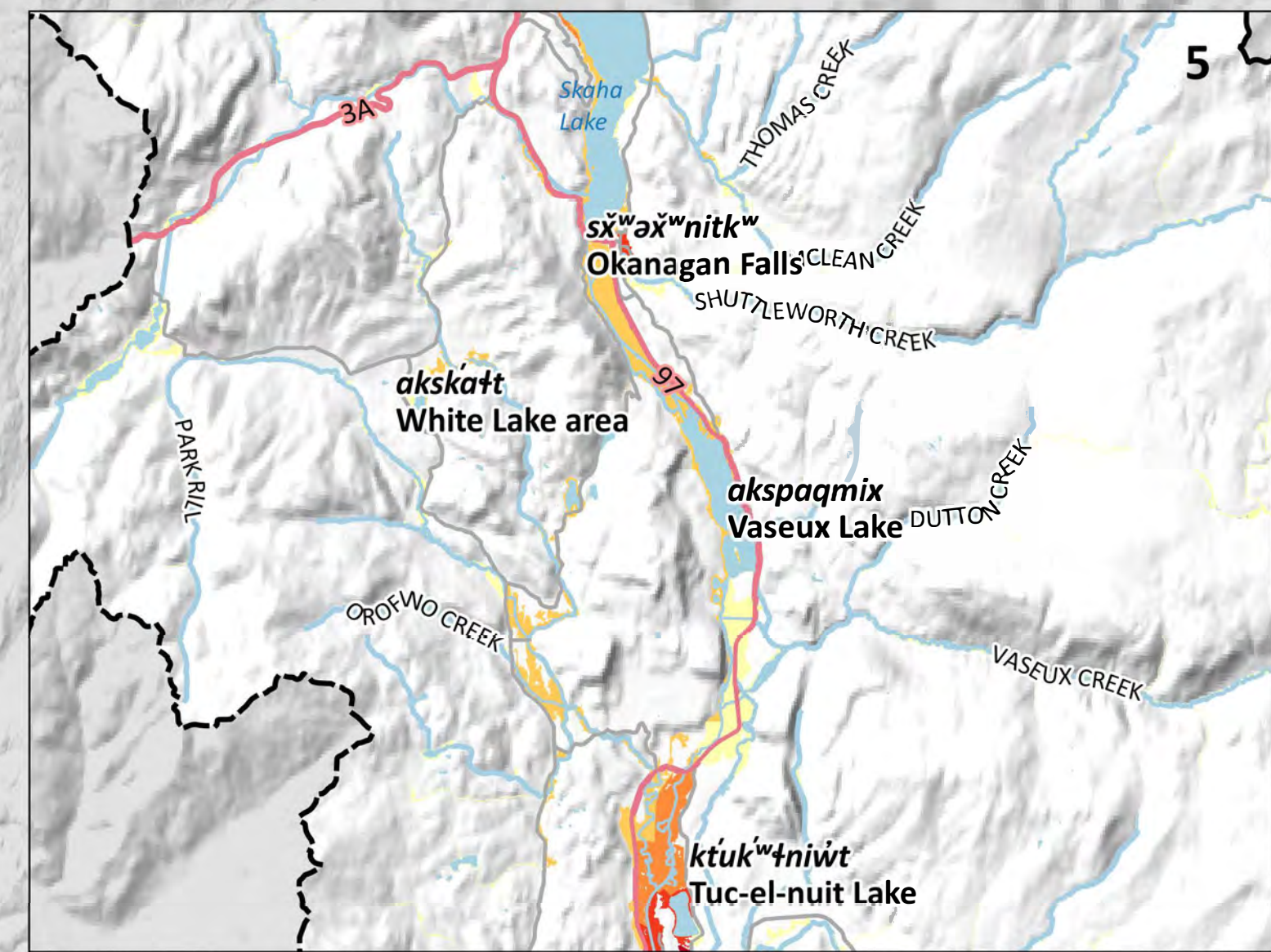
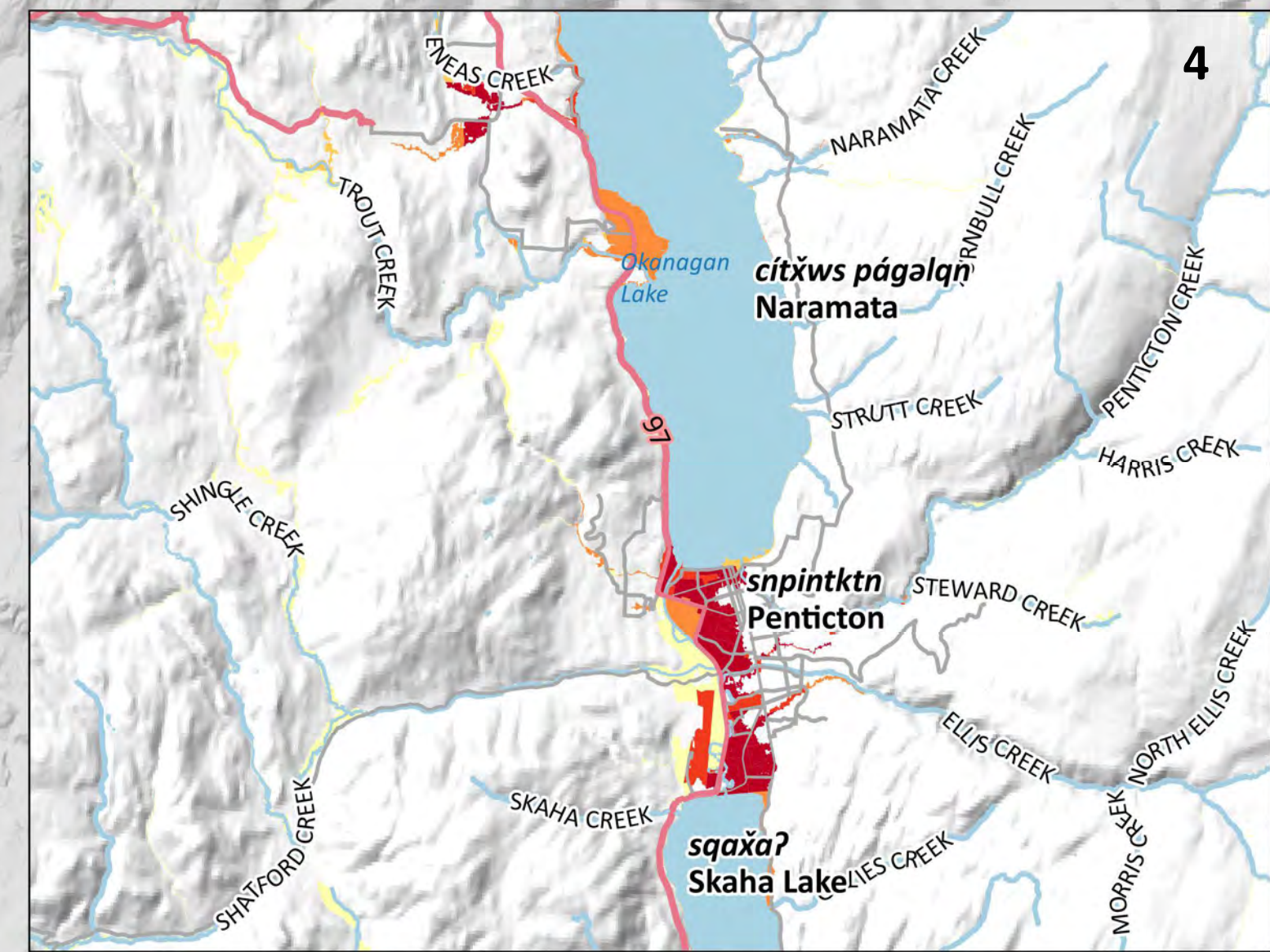
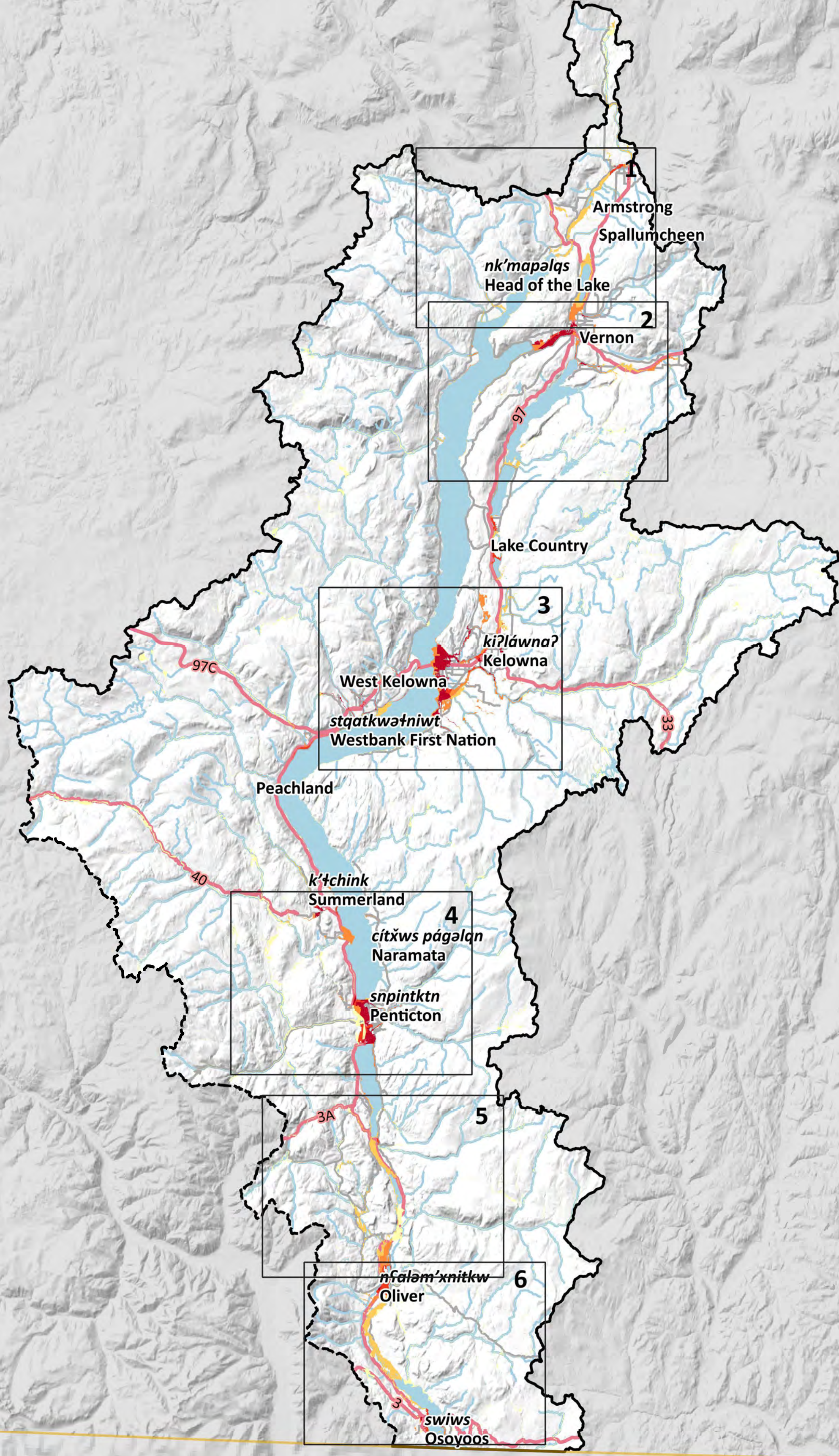
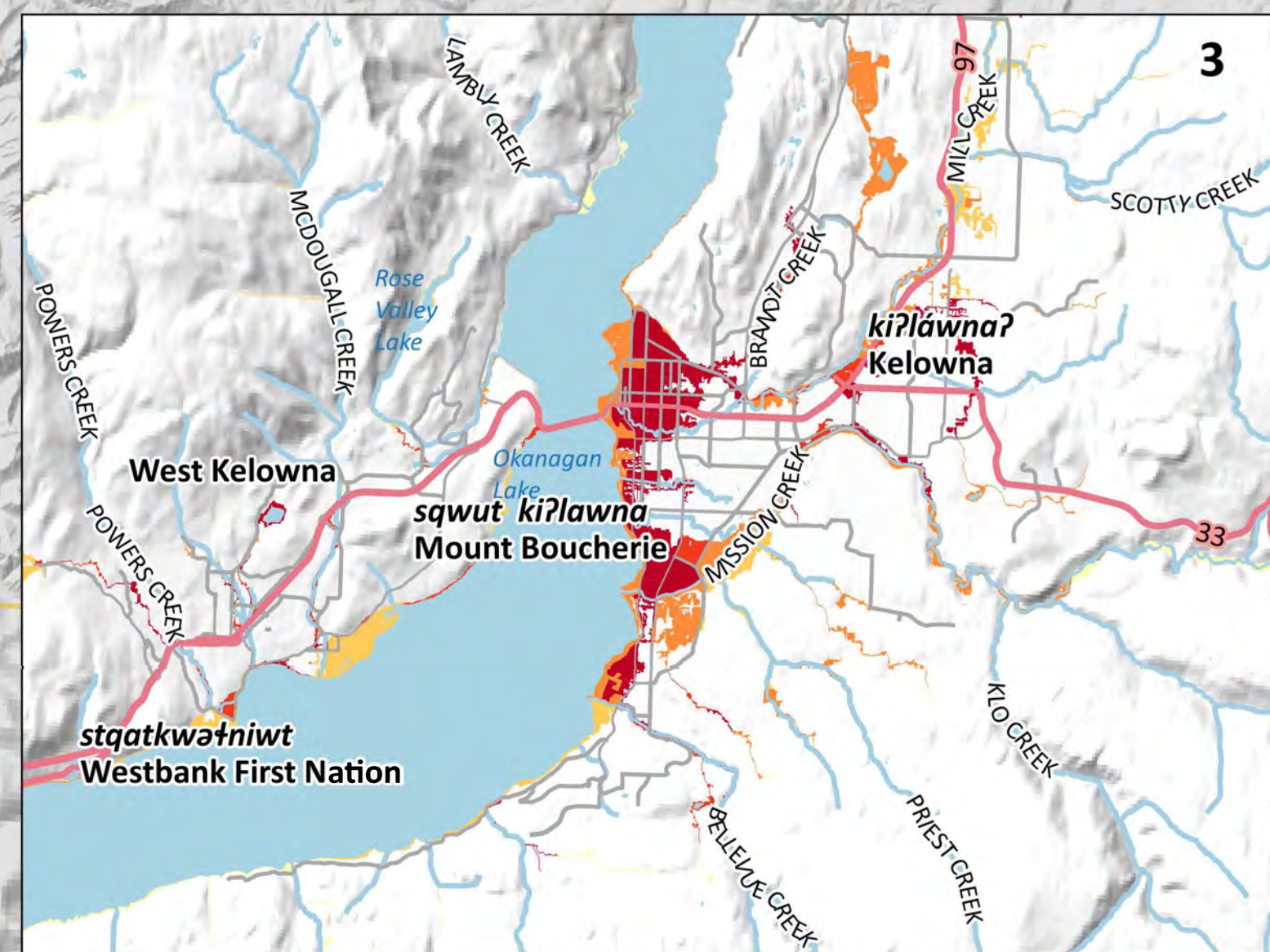
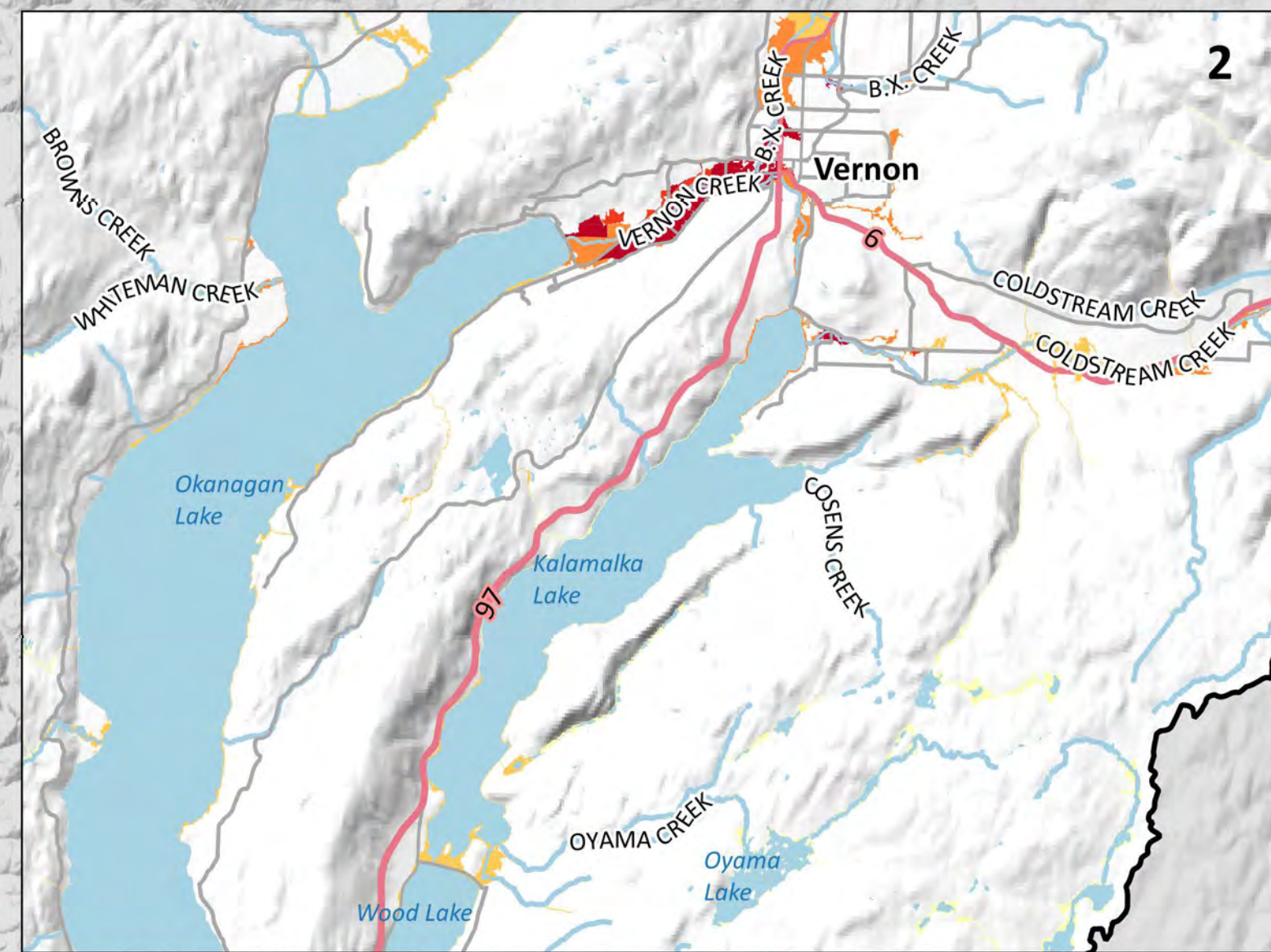
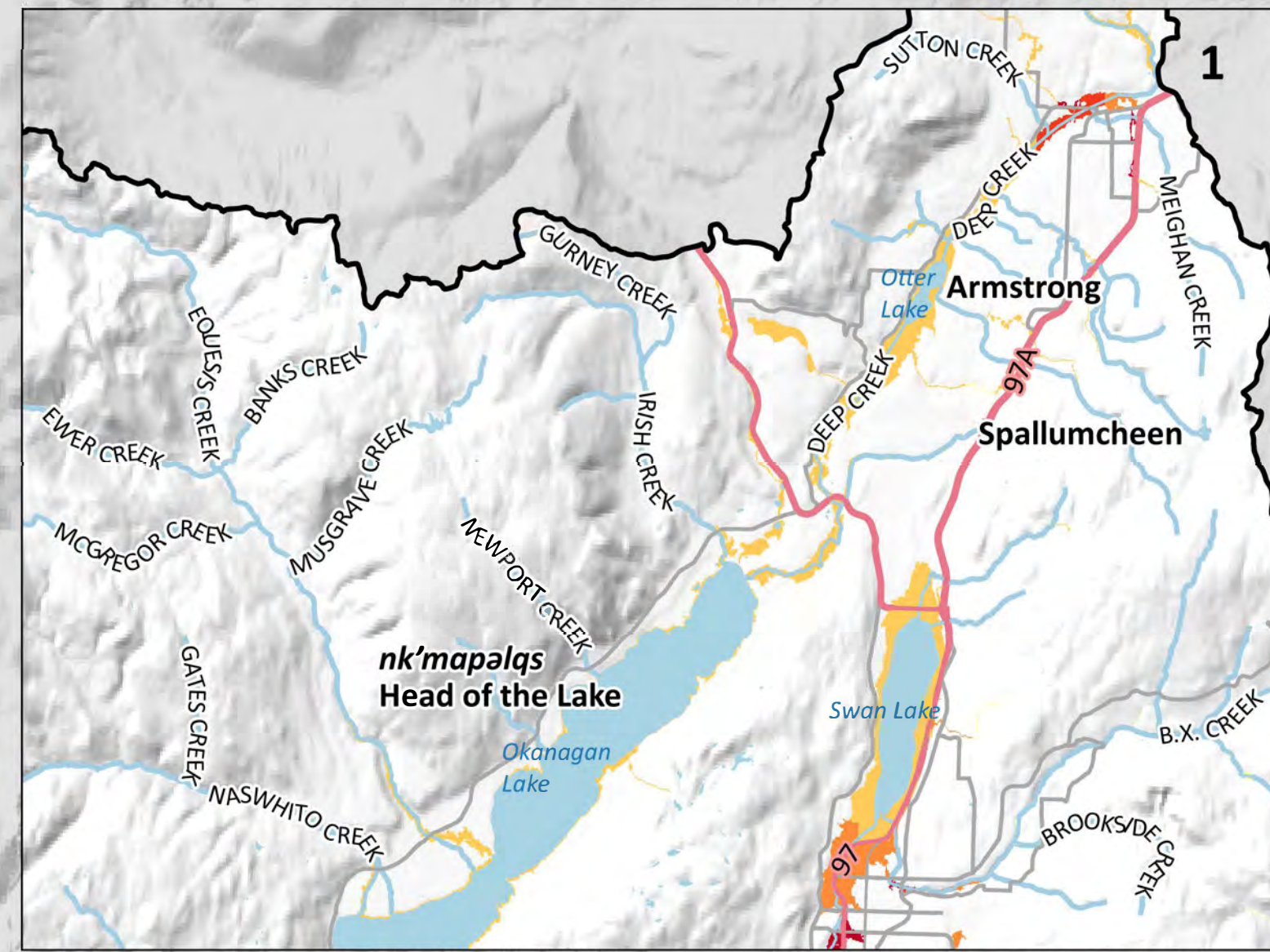
**Scale 1:350,000**  
 0 10 20 30 km

| Legend                 |  |
|------------------------|--|
|                        | Watershed Boundary                               |
|                        | Okanagan-Similkameen Boundary                    |
|                        | Canada - US Border                               |
|                        | Lakes  |
|                        | Watercourses                                     |
|                        | Highway  |
|                        | Major Road                                       |
| <b>Affected Assets</b> | <b>Population Density (people per square km)</b> |
|                        | 1 - 10   |
|                        | 10 - 100   |
|                        | 100 - 500  |
|                        | 500 - 1000                                       |
|                        | 1000 +   |

Date: 31 December 2019  
 Produced by: Ebbwater Consulting Inc.

**Sylix (Okanagan) Flood and Debris Flow Risk Assessment Project**  
**Flood - Affected People**

# Okanagan Map



[Click above map tile for Zoom-In map](#)  
[Click here to return to Project Area map](#)  
[Click here to go to Similkameen map](#)

**Map Notes**

- Map produced by Ebbwater Consulting Inc.
- Population density is based on census dissemination areas within the project area boundary. Population density is not shown for areas with a population density of less than 1 person per square km.
- The population density (exposure) layer was clipped to the moderate flood hazard area. The hazard layer is shown in the hazard maps, and was produced by Ebbwater Consulting Inc. The method used to produce the hazard layer is described in the Quantitative Study.

**Data Sources**

- Lakes and Watercourses, Roads and Trails, and Reserves: BC Data Catalogue.
- Population: Statistics Canada 2016 Census.
- Sylix Place Names: Okanagan Nation Alliance.
- Base Layer: OpenStreetMap data – openstreetmap.org (© OpenStreetMap contributors; cartography licence CC BY-SA) and hill shade created using CDEM and USGM GMTED2010.

**Scale**  
**Main Map 1:400,000**  
 0 10 20 30 km

**Inset Maps 1:150,000**  
 0 5 10 15 km

**Legend**

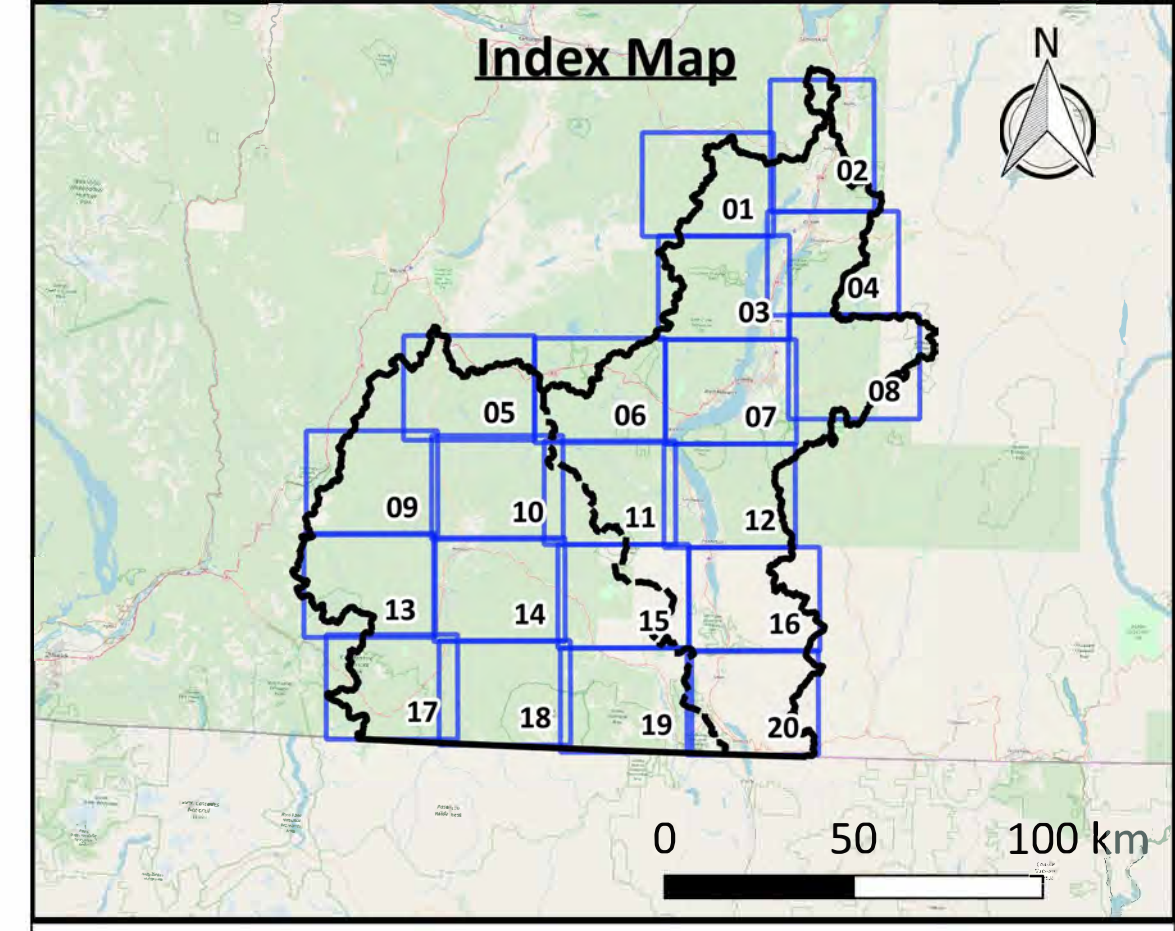
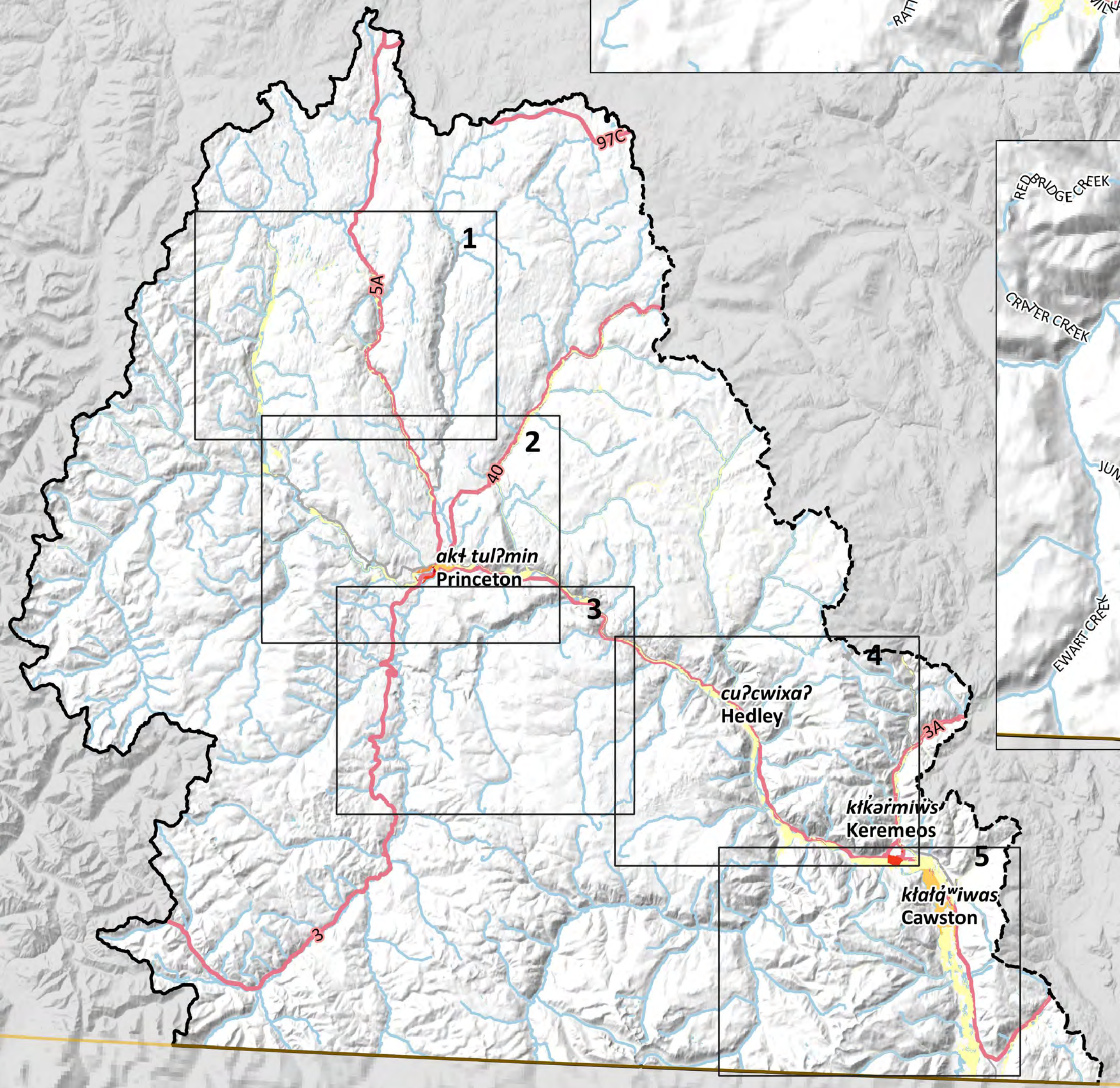
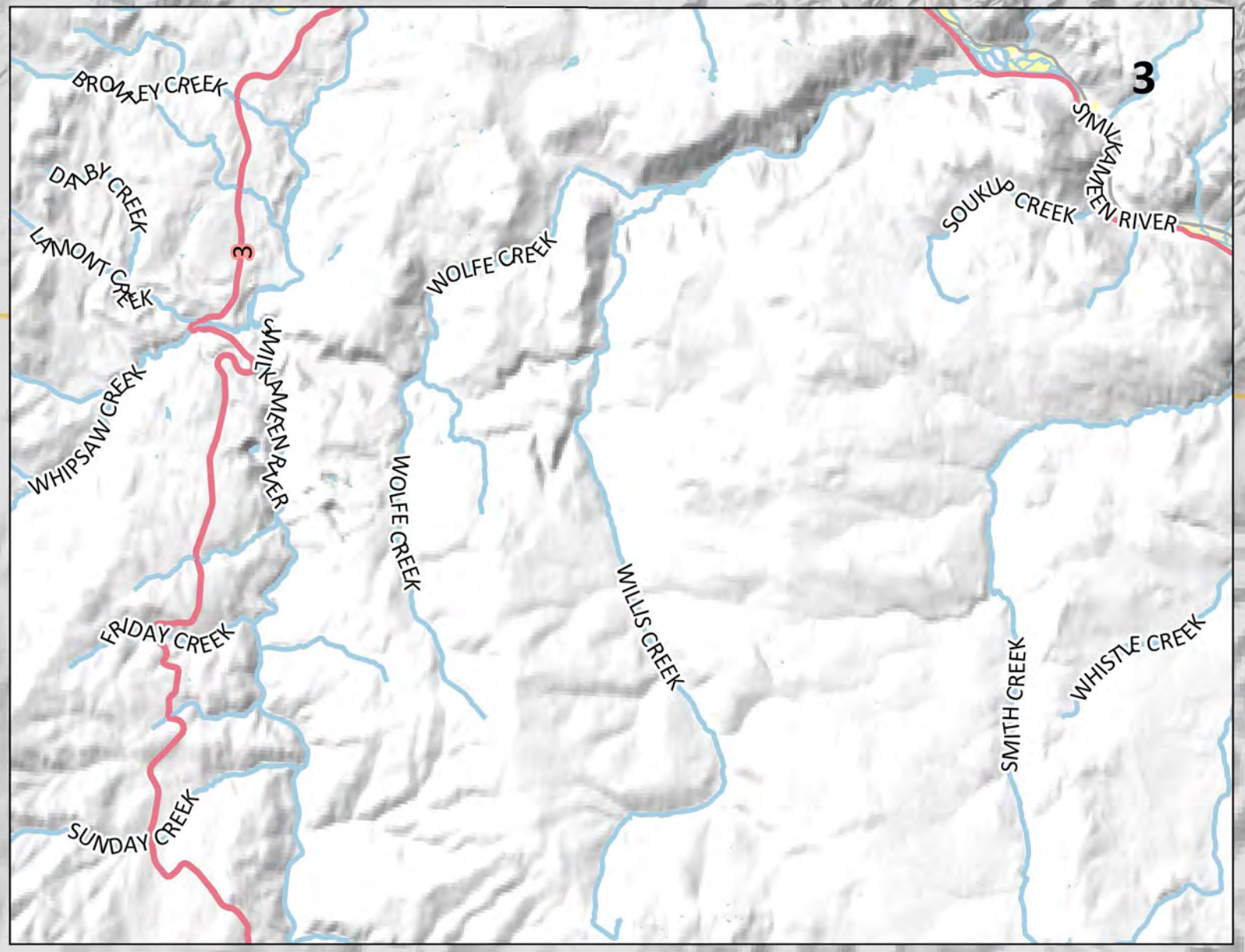
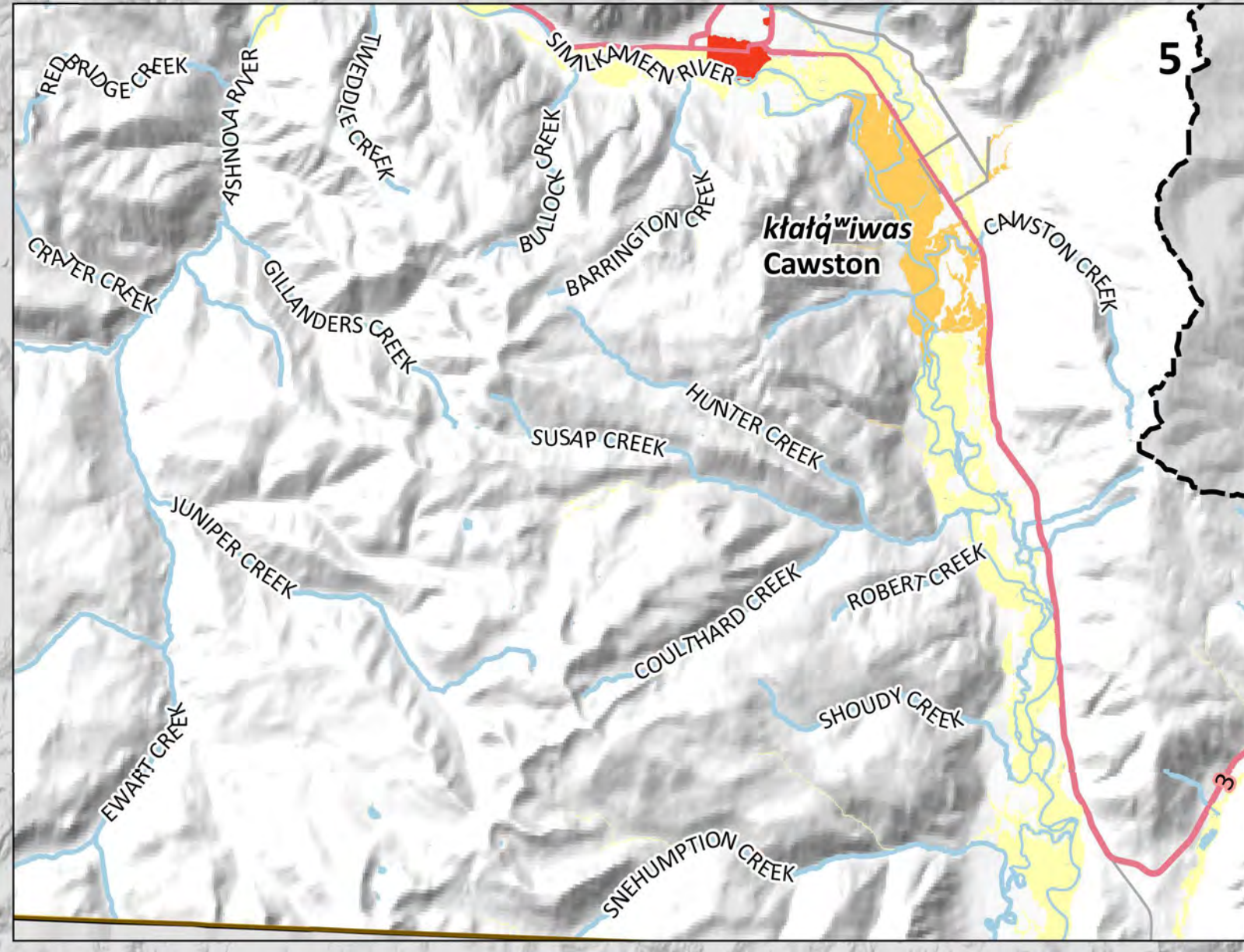
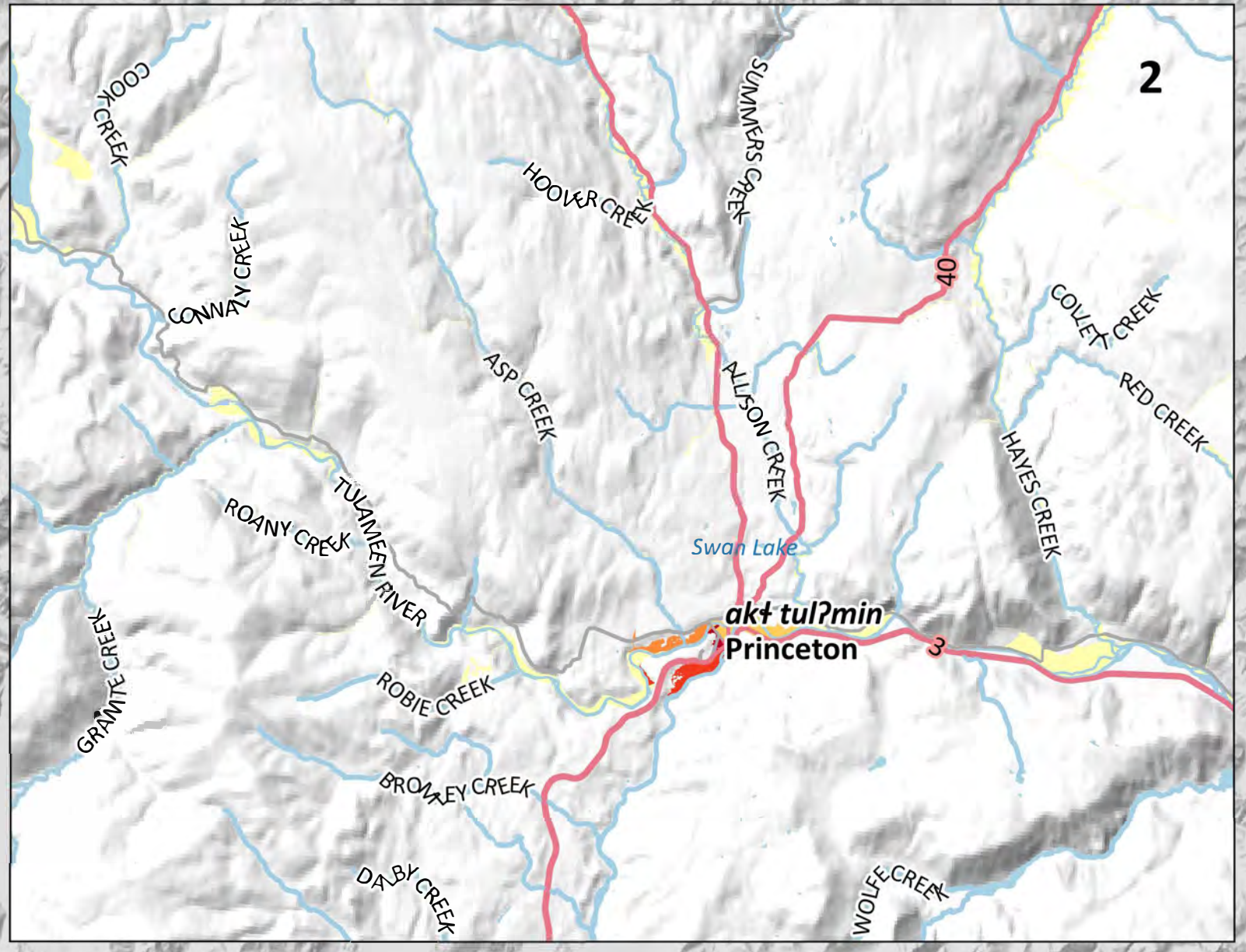
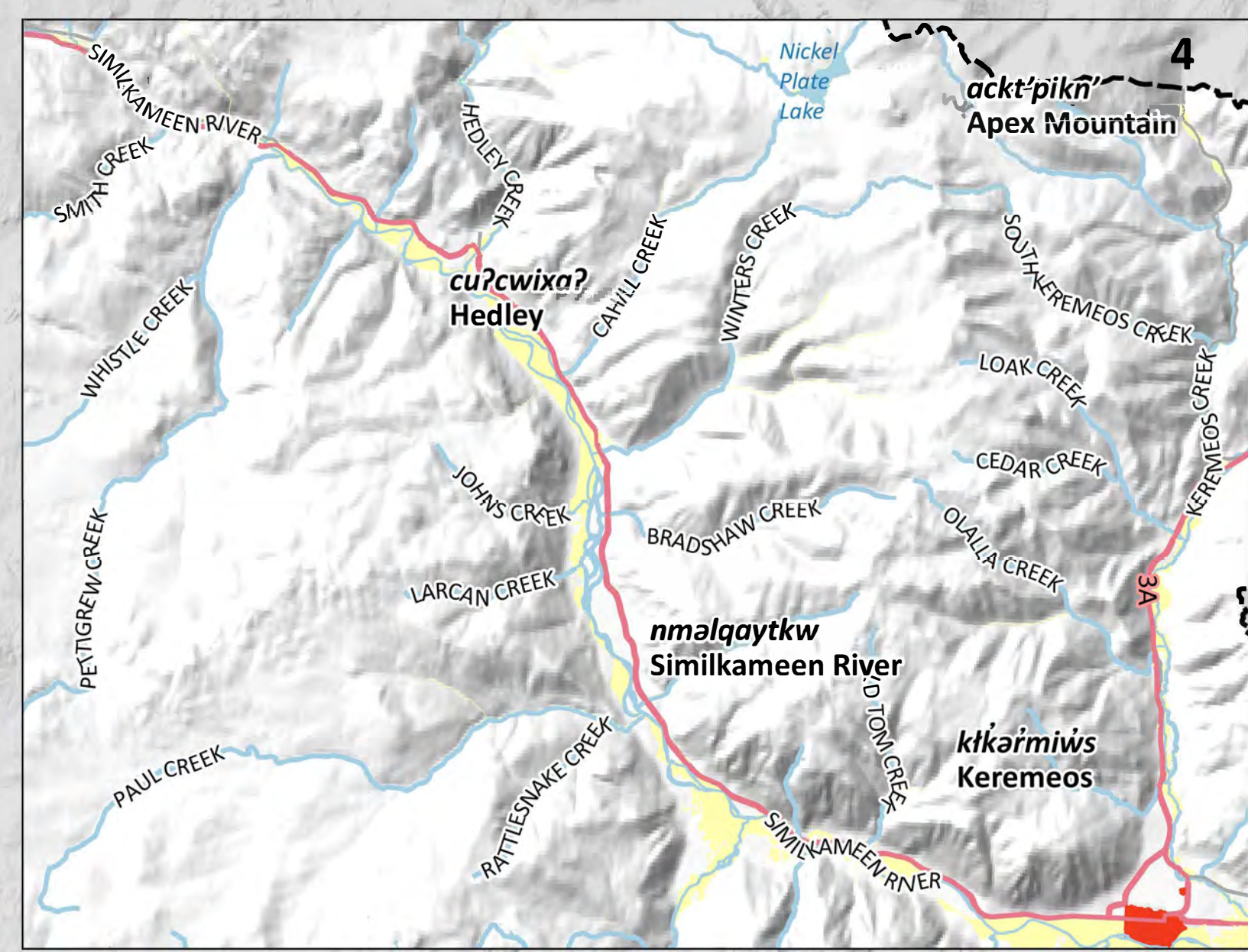
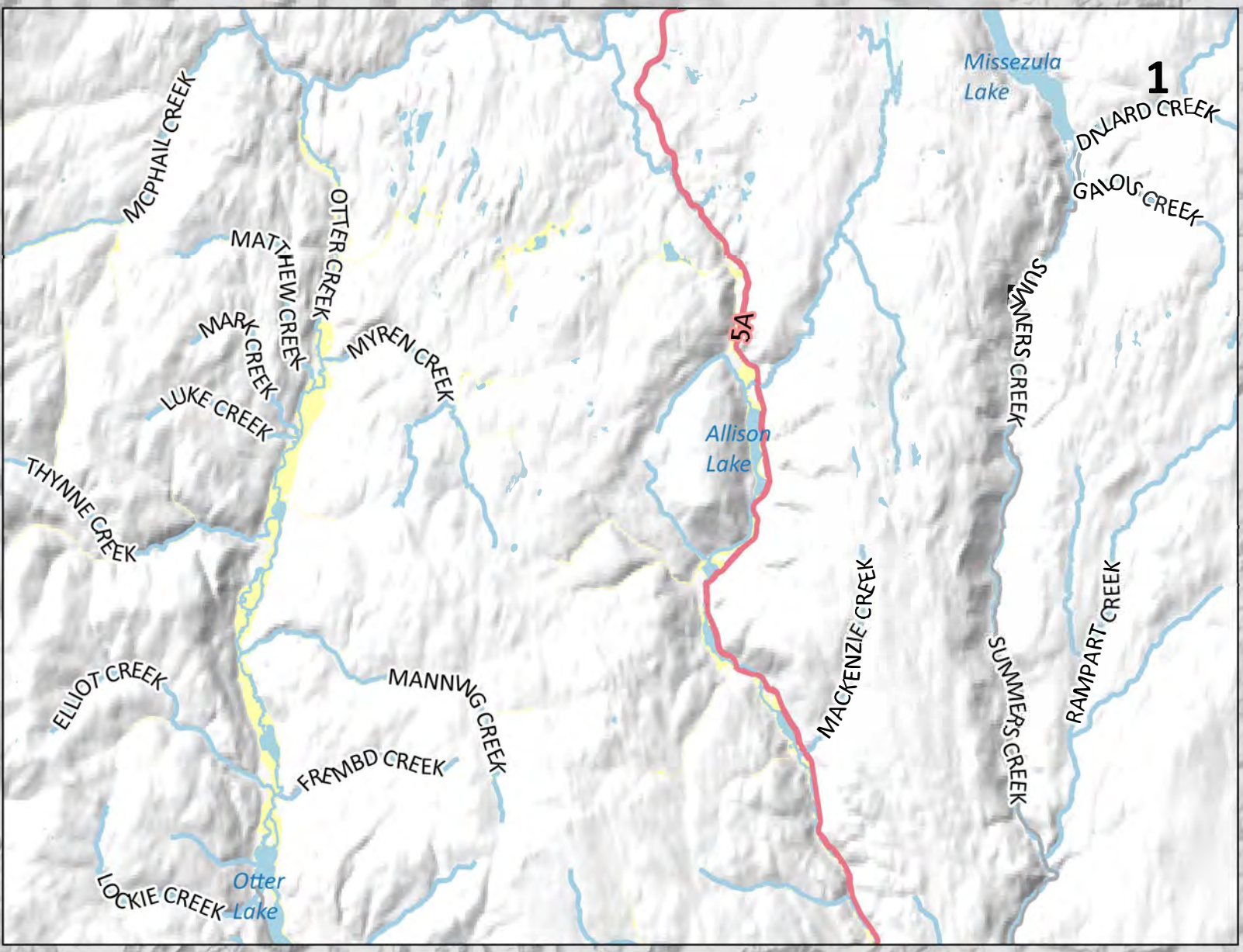
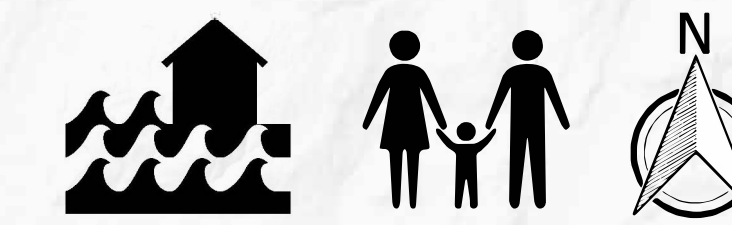
|                               |  |
|-------------------------------|--|
| Watershed Boundary            | <b>Affected Assets</b>                           |
| Okanagan-Similkameen Boundary | <b>Population Density (people per square km)</b> |
| Canada - US Border            | 1 - 10   |
| Lakes                         | 10 - 100   |
| Watercourses                  | 100 - 500  |
| Highway                       | 500 - 1000                                       |
| Major Road                    | 1000 +   |

Date: 31 December 2019  
 Produced by: Ebbwater Consulting Inc.

**Sylix (Okanagan) Flood and Debris Flow Risk Assessment Project**  
**Flood - Affected People - Okanagan**



# Similkameen Map



Click above map tile for Zoom-In map  
[Click here to return to Project Area map](#)  
[Click here to go to Okanagan map](#)

**Map Notes**

- Map produced by Ebbwater Consulting Inc.
- Population density is based on census dissemination areas within the project area boundary. Population density is not shown for areas with a population density of less than 1 person per square km.
- The population density (exposure) layer was clipped to the moderate flood hazard area. The hazard layer is shown in the hazard maps, and was produced by Ebbwater Consulting Inc. The method used to produce the hazard layer is described in the Quantitative Study.

**Data Sources**

- Lakes and Watercourses, Roads and Trails, and Reserves: BC Data Catalogue.
- Population: Statistics Canada 2016 Census.
- Sylix Place Names: Okanagan Nation Alliance.
- Base Layer: OpenStreetMap data – openstreetmap.org (© OpenStreetMap contributors; cartography licence CC BY-SA) and hill shade created using CDEM and USGM GMTED2010.

**Scale**  
**Main Map 1:400,000**  
 0 10 20 30 km

**Inset Maps 1:150,000**  
 0 5 10 15 km

**Legend**

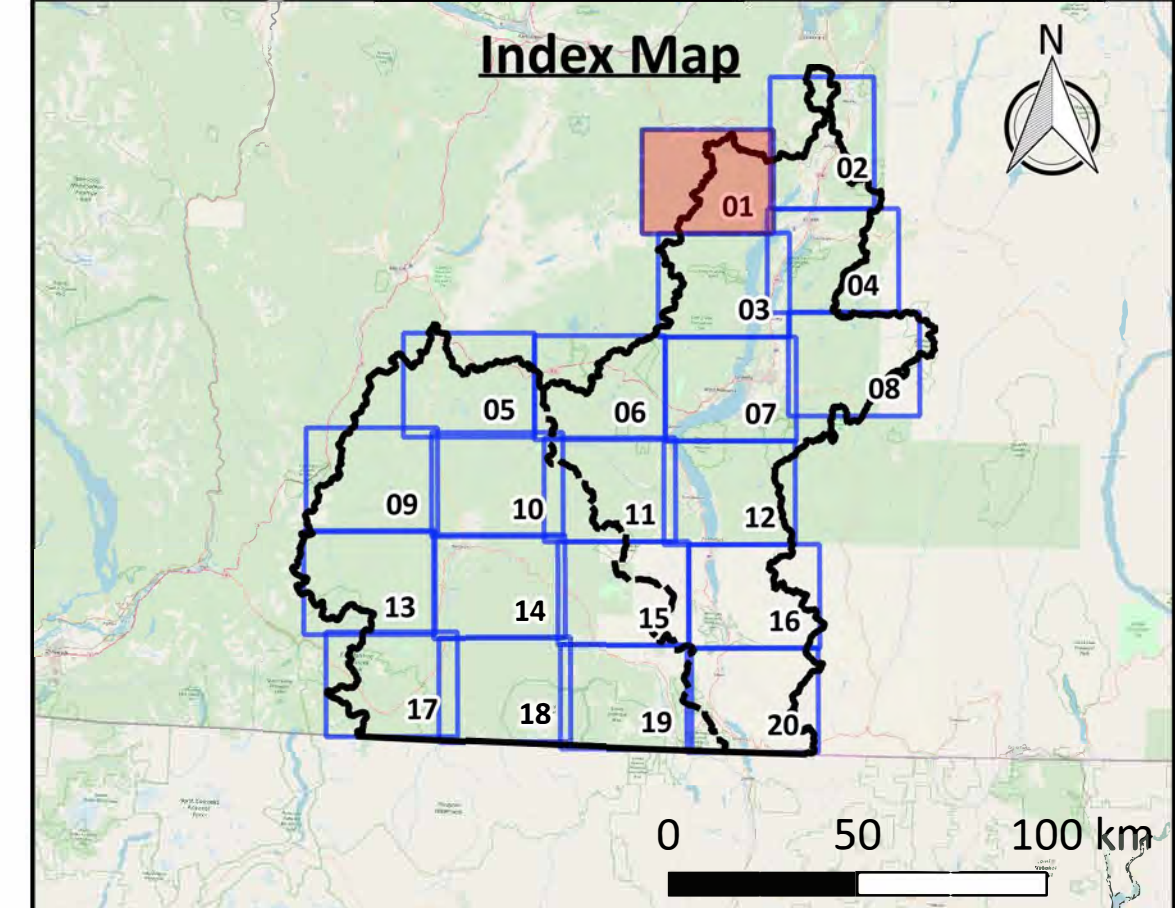
| Background                          | Affected Assets                                  |            |
|-------------------------------------|--|------------|
| — Watershed Boundary                | <b>Population Density (people per square km)</b> |            |
| - - - Okanagan-Similkameen Boundary |  | 1 - 10     |
| — Canada - US Border                |  | 10 - 100   |
| — Lakes                             |  | 100 - 500  |
| — Watercourses                      |  | 500 - 1000 |
| — Highway                           | 1000 +   |            |
| — Major Road                        |  |            |

**Date:** 31 December 2019  
**Produced by:** Ebbwater Consulting Inc.

**Sylix (Okanagan) Flood and Debris Flow Risk Assessment Project**  
**Flood - Affected People - Similkameen**

ANSI D - Map No. P-F-002-003

**Zoom-In Map**



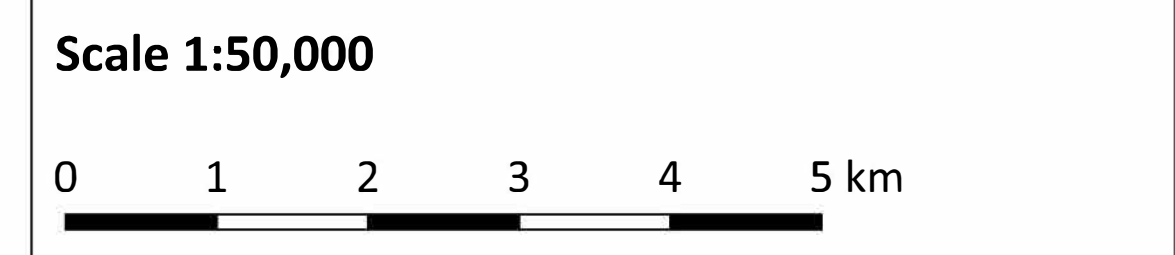
Click above map tile for Zoom-In map  
[Click here to return to Project Area map](#)  
[Click here to return to Okanagan map](#)  
[Click here to return to Similkameen map](#)

**Map Notes**

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- The population density (exposure) layer was clipped to the moderate flood hazard area. The hazard layer is shown in the hazard maps, and was produced by Ebbwater Consulting Inc. The method used to produce the hazard layer is described in the Quantitative Study.

**Data Sources**

- Lakes and Watercourses, Roads and Trails, and Reserves: BC Data Catalogue.
- Population: Statistics Canada 2016 Census.
- Building Footprints: Regional districts, municipalities, WFN and hand digitized using Bing Satellite Imagery.
- Sylix Place Names: Okanagan Nation Alliance.
- Base Layer: OpenStreetMap data – openstreetmap.org (© OpenStreetMap contributors; cartography licence CC BY-SA) and hill shade created using CDEM and USGM GMTED2010.



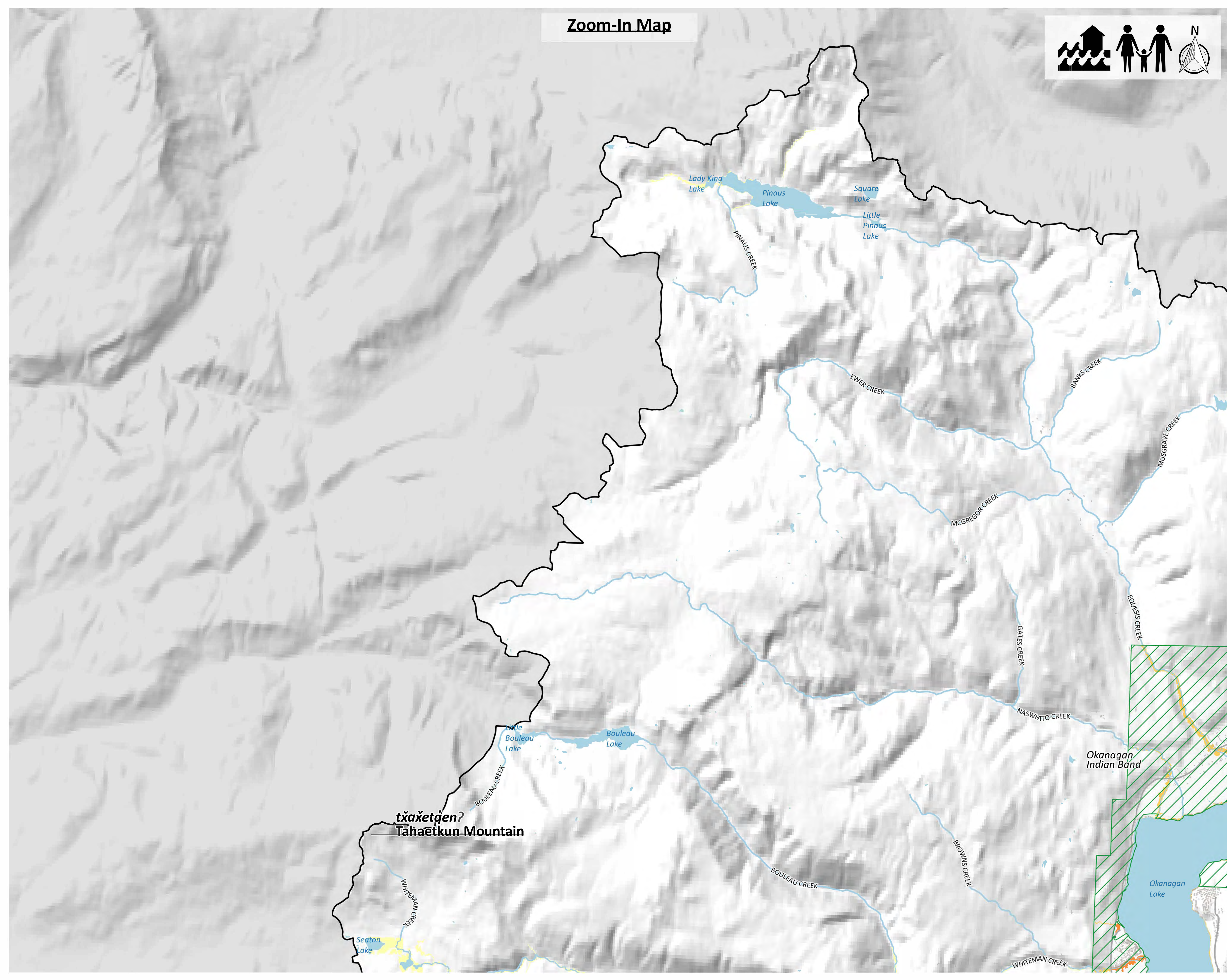
**Legend**

|                                     |  |
|-------------------------------------|--|
| <b>Background</b>                   | <b>Affected Assets</b>                           |
| — Watershed Boundary                | <b>Population Density (people per square km)</b> |
| - - - Okanagan-Similkameen Boundary | 1 - 10   |
| — Canada - US Border                | 10 - 100   |
| ▨ Reserves                          | 100 - 500  |
| ▨ Lakes                             | 500 - 1000                                       |
| — Watercourses                      | 1000 +   |
| — Highway                           |  |
| — Major Road                        |  |
| ▨ Building Footprints               |  |

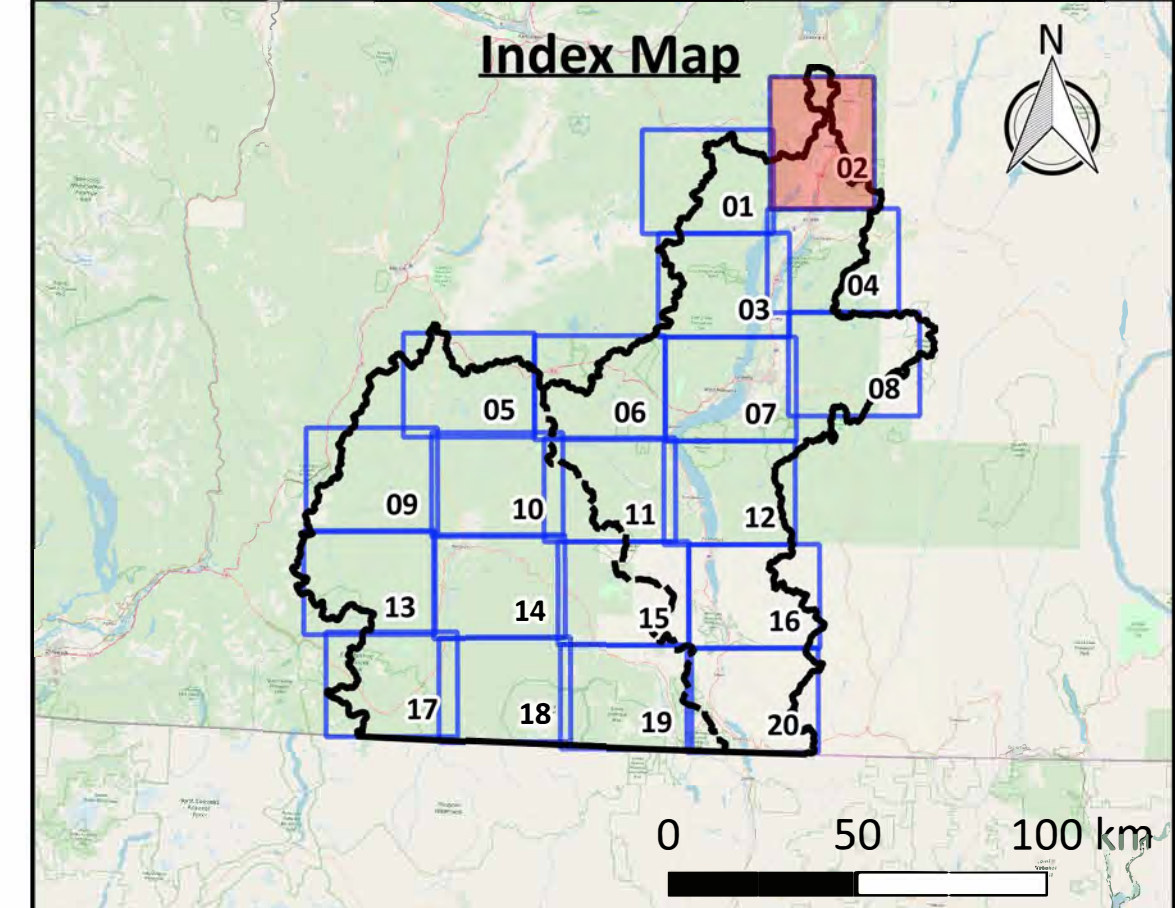
**Date:** 31 December 2019  
**Produced by:** Ebbwater Consulting Inc.

**Sylix (Okanagan) Flood and Debris Flow Risk Assessment Project**  
**Flood - Affected People**  
**Map tile 01 of 20**

ANSI D - Map No. P-F-003-001



**Zoom-In Map**



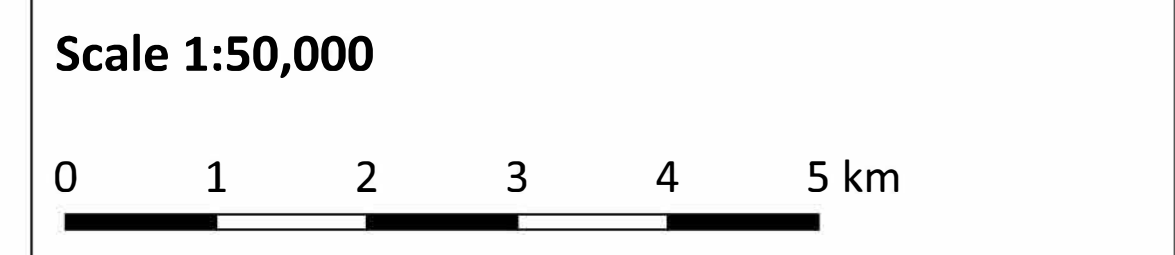
Click above map tile for Zoom-In map  
[Click here to return to Project Area map](#)  
[Click here to return to Okanagan map](#)  
[Click here to return to Similkameen map](#)

**Map Notes**

1. Map produced by Ebbwater Consulting Inc.
2. Population density is based on census dissemination areas within the project area boundary. Population density is not shown for areas with a population density of less than 1 person per square km.
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**Data Sources**

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2. Population: Statistics Canada 2016 Census.
3. Building Footprints: Regional districts, municipalities, WFN and hand digitized using Bing Satellite Imagery.
4. Sylix Place Names: Okanagan Nation Alliance.
5. Base Layer: OpenStreetMap data – openstreetmap.org (© OpenStreetMap contributors; cartography licence CC BY-SA) and hill shade created using CDEM and USGM GMTED2010.



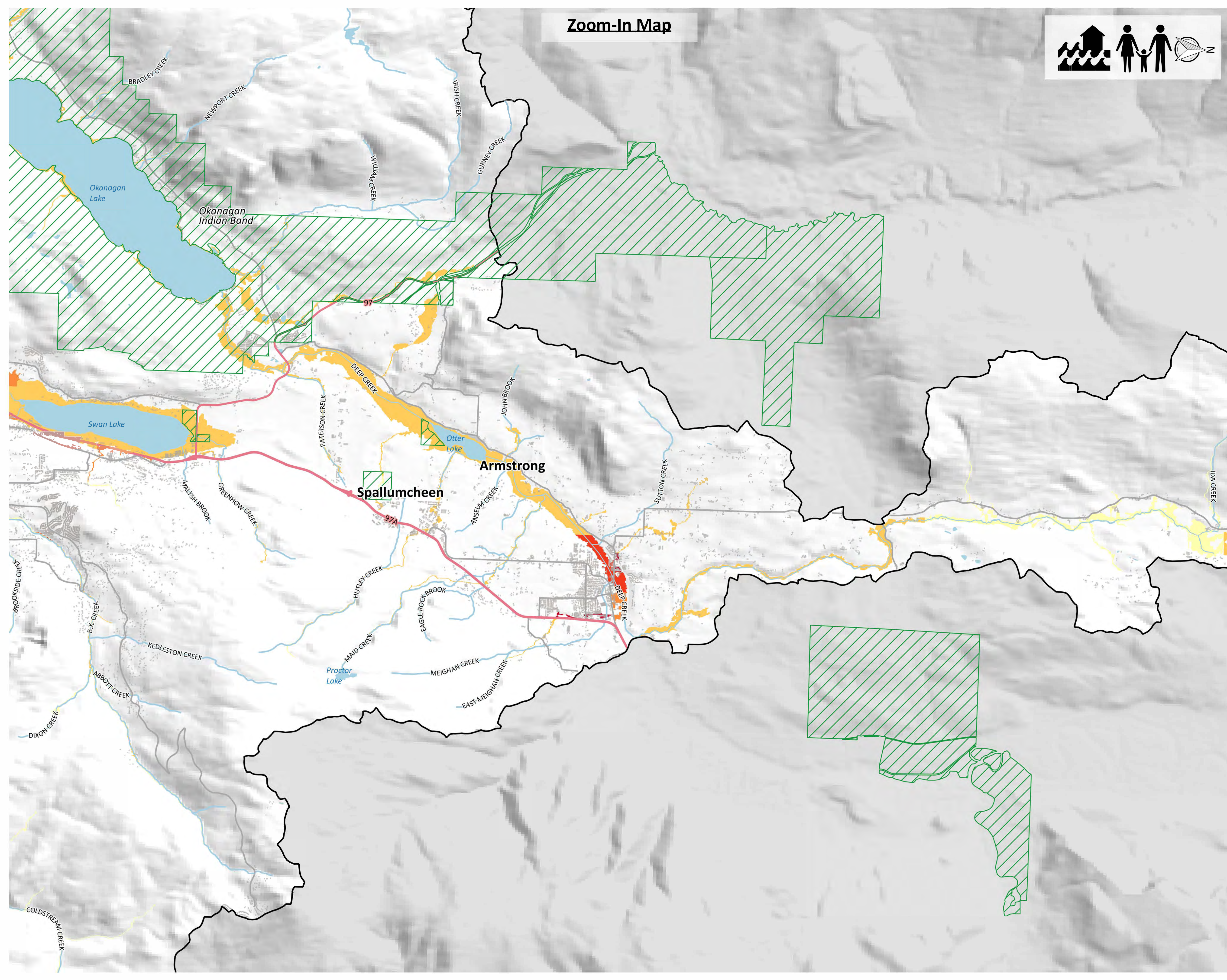
**Legend**

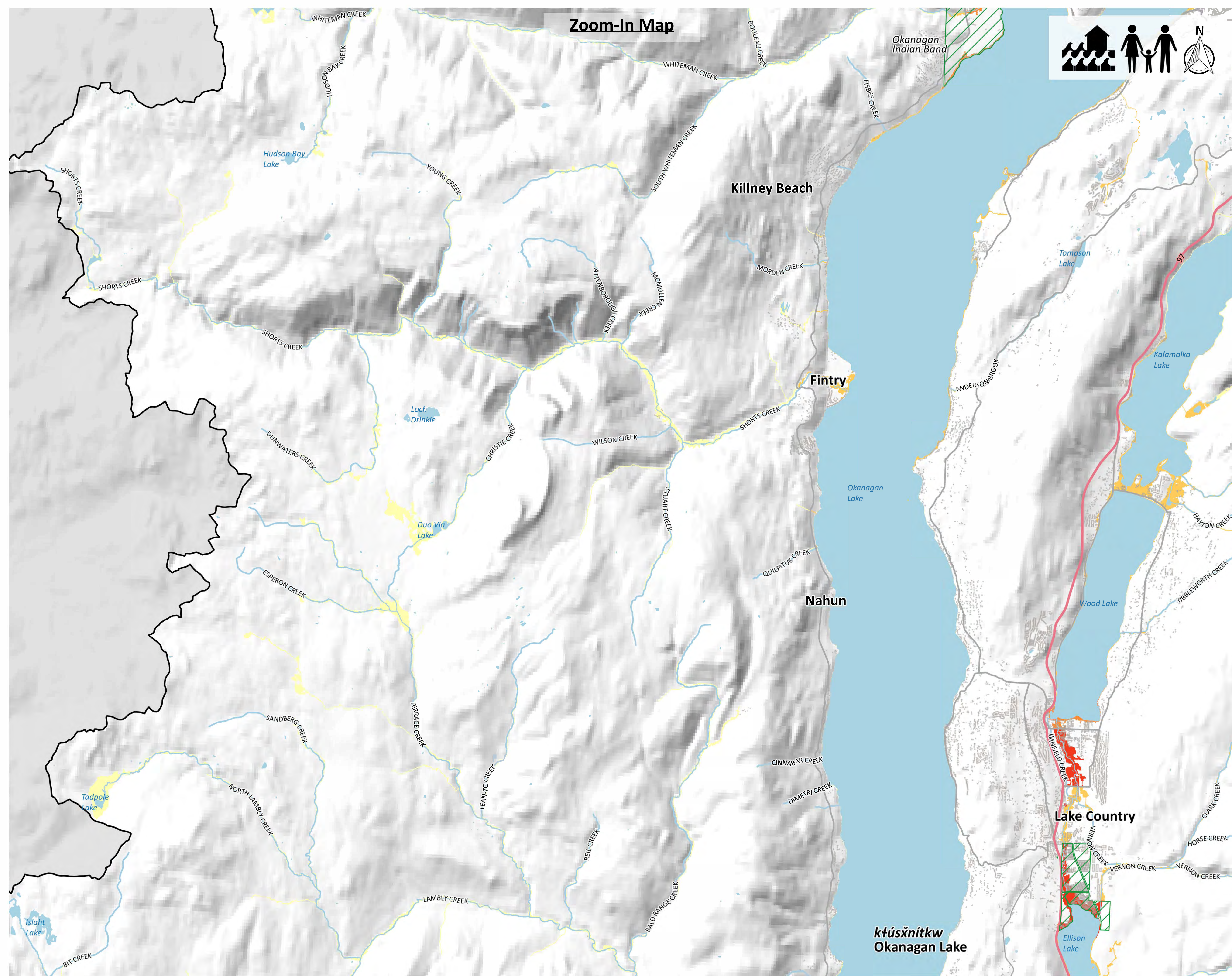
|                                     |                               |
|-------------------------------------|-------------------------------|
| <b>Background</b>                   | <b>Affected Assets</b>        |
| — Watershed Boundary                | <b>Population Density</b>     |
| - - - Okanagan-Similkameen Boundary | <b>(people per square km)</b> |
| — Canada - US Border                | 1 - 10                        |
| ▭ Reserves                          | 10 - 100                      |
| ▭ Lakes                             | 100 - 500                     |
| — Watercourses                      | 500 - 1000                    |
| — Highway                           | 1000 +                        |
| — Major Road                        |                               |
| ▭ Building Footprints               |                               |

Date: 31 December 2019  
 Produced by: Ebbwater Consulting Inc.

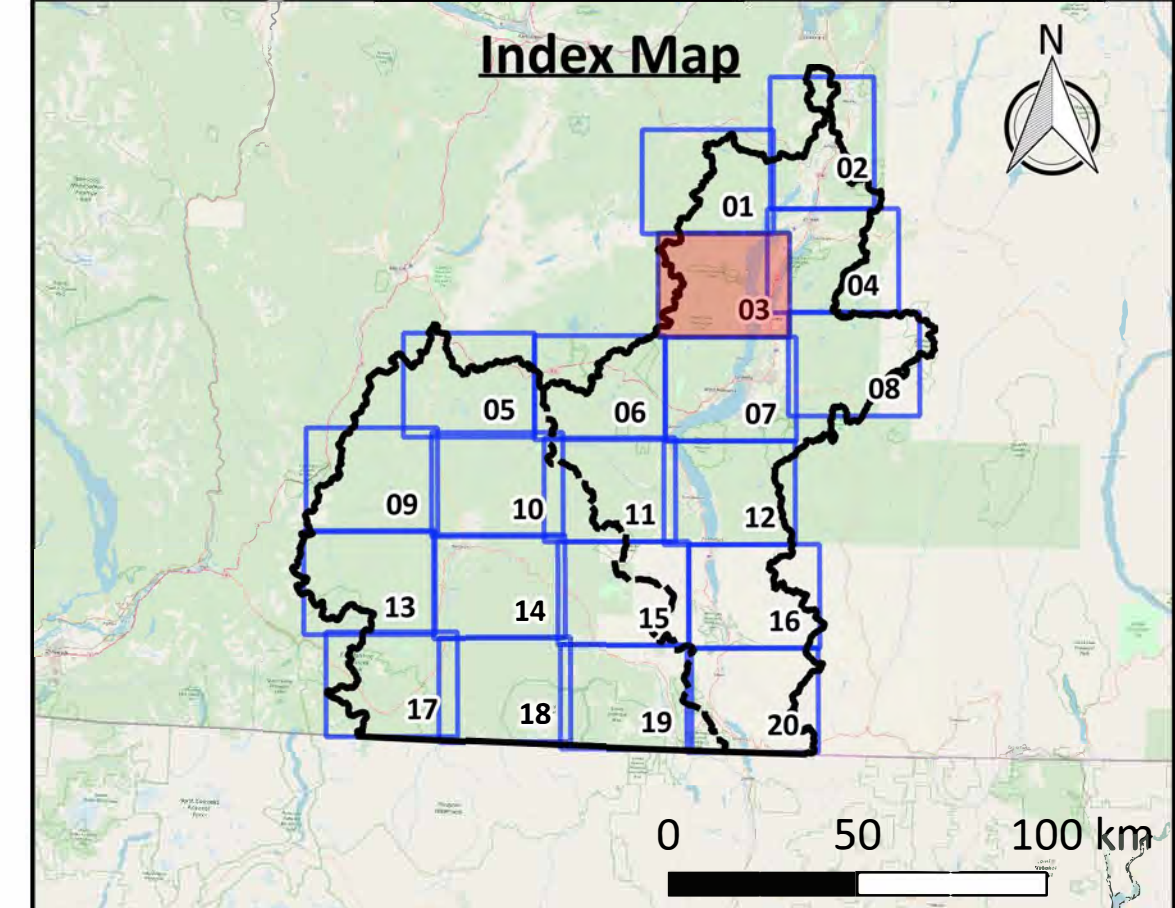
**Sylix (Okanagan) Flood and Debris Flow Risk Assessment Project**  
**Flood - Affected People**  
**Map tile 02 of 20**

ANSI D - Map No. P-F-003-002





**Zoom-In Map**



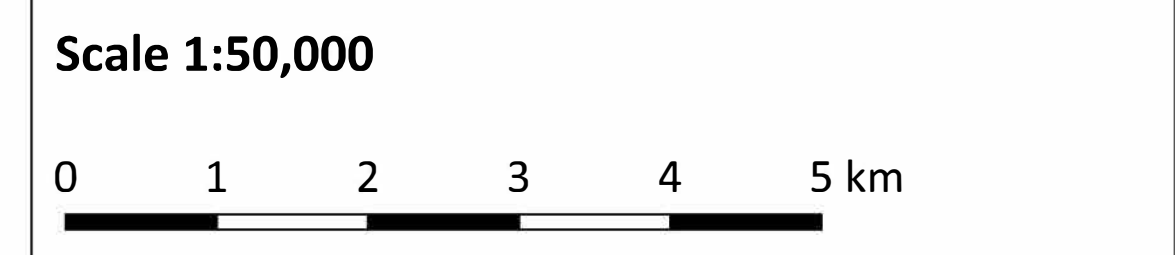
Click above map tile for Zoom-In map  
[Click here to return to Project Area map](#)  
[Click here to return to Okanagan map](#)  
[Click here to return to Similkameen map](#)

**Map Notes**

1. Map produced by Ebbwater Consulting Inc.
2. Population density is based on census dissemination areas within the project area boundary. Population density is not shown for areas with a population density of less than 1 person per square km.
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**Data Sources**

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2. Population: Statistics Canada 2016 Census.
3. Building Footprints: Regional districts, municipalities, WFN and hand digitized using Bing Satellite Imagery.
4. Sylix Place Names: Okanagan Nation Alliance.
5. Base Layer: OpenStreetMap data – openstreetmap.org (© OpenStreetMap contributors; cartography licence CC BY-SA) and hill shade created using CDEM and USGM GMTED2010.



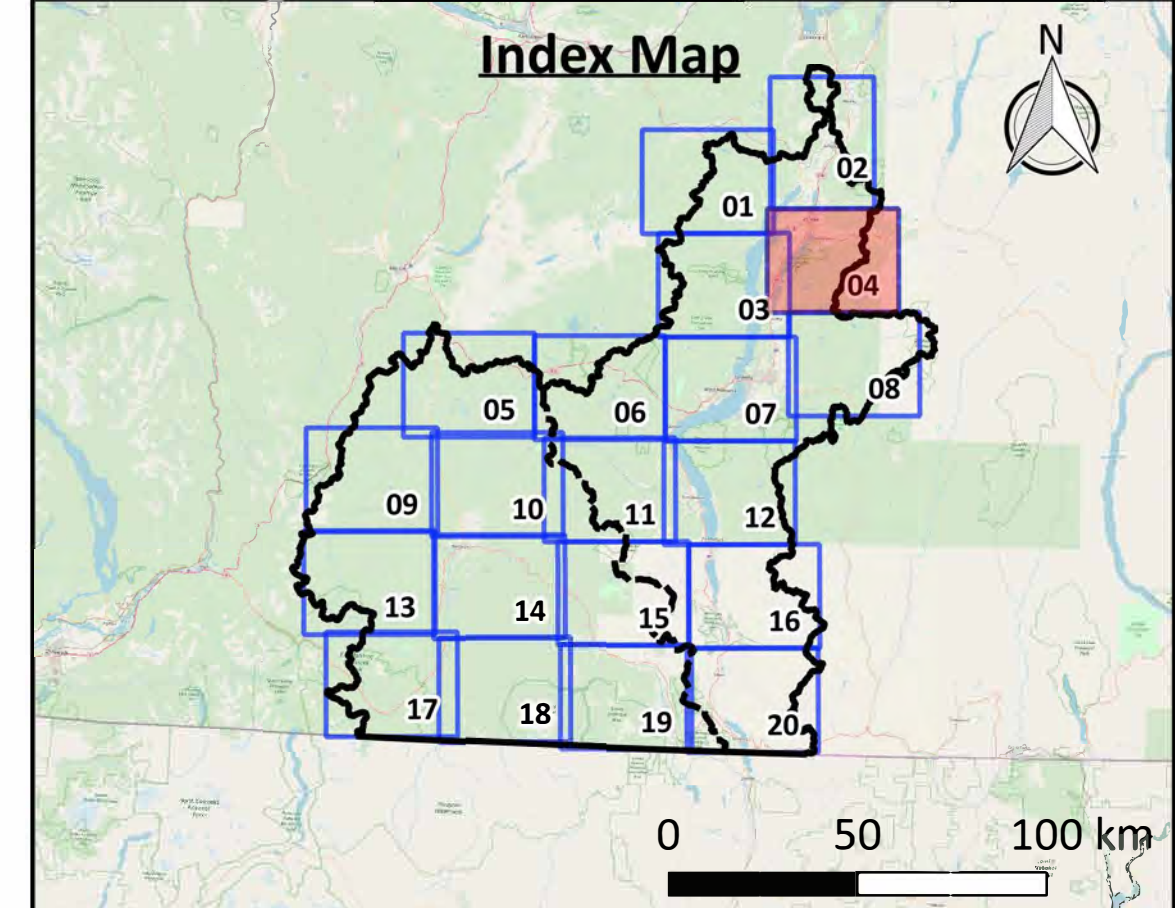
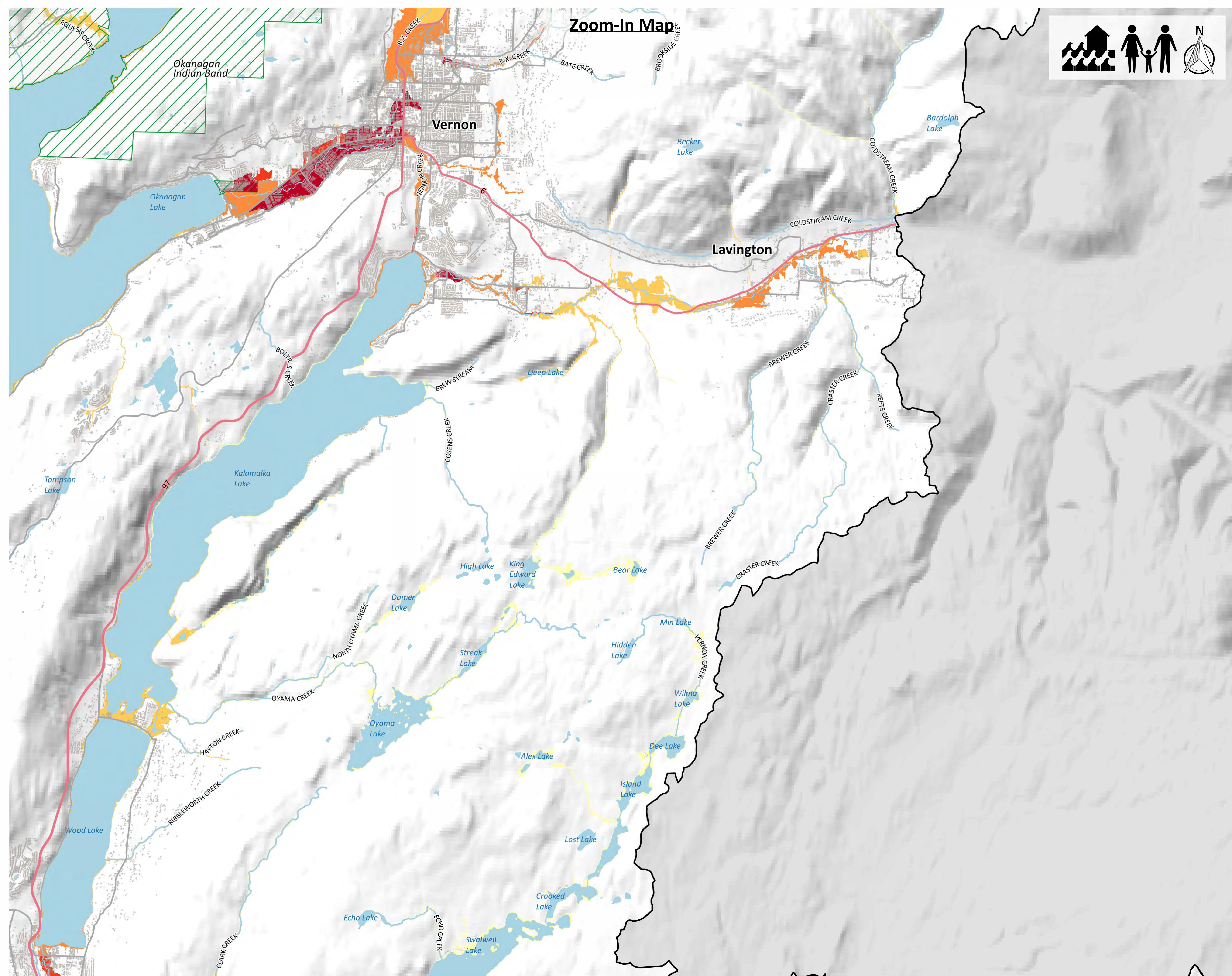
**Legend**

|                                     |                               |
|-------------------------------------|-------------------------------|
| <b>Background</b>                   | <b>Affected Assets</b>        |
| — Watershed Boundary                | <b>Population Density</b>     |
| - - - Okanagan-Similkameen Boundary | <b>(people per square km)</b> |
| — Canada - US Border                | 1 - 10                        |
| ▨ Reserves                          | 10 - 100                      |
| — Lakes                             | 100 - 500                     |
| — Watercourses                      | 500 - 1000                    |
| — Highway                           | 1000 +                        |
| — Major Road                        |                               |
| ▨ Building Footprints               |                               |

**Date:** 31 December 2019  
**Produced by:** Ebbwater Consulting Inc.

**Sylix (Okanagan) Flood and Debris Flow Risk Assessment Project**  
**Flood - Affected People**  
**Map tile 03 of 20**

ANSI D - Map No. P-F-003-003



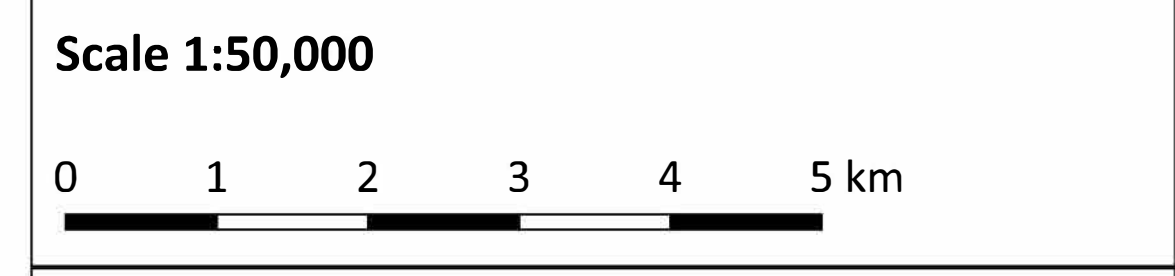
Click above map tile for Zoom-In map  
[Click here to return to Project Area map](#)  
[Click here to return to Okanagan map](#)  
[Click here to return to Similkameen map](#)

**Map Notes**

1. Map produced by Ebbwater Consulting Inc.
2. Population density is based on census dissemination areas within the project area boundary. Population density is not shown for areas with a population density of less than 1 person per square km.
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**Data Sources**

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2. Population: Statistics Canada 2016 Census.
3. Building Footprints: Regional districts, municipalities, WFN and hand digitized using Bing Satellite Imagery.
4. Sylix Place Names: Okanagan Nation Alliance.
5. Base Layer: OpenStreetMap data – openstreetmap.org (© OpenStreetMap contributors; cartography licence CC BY-SA) and hill shade created using CDEM and USGM GMTED2010.



**Legend**

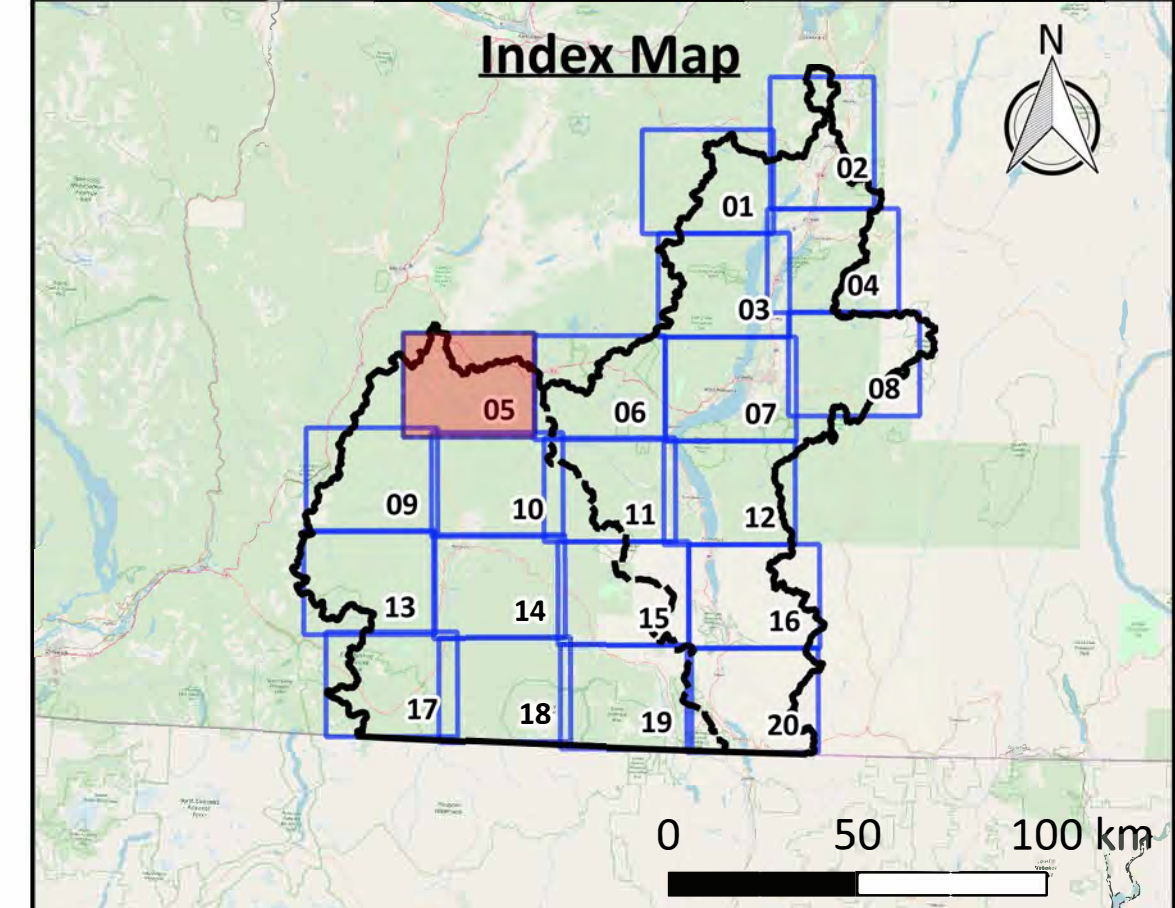
|                                   |                           |
|-----------------------------------|---------------------------|
| <b>Background</b>                 | <b>Affected Assets</b>    |
| — Watershed Boundary              | <b>Population Density</b> |
| --- Okanagan-Similkameen Boundary | (people per square km)    |
| — Canada - US Border              | 1 - 10                    |
| ▨ Reserves                        | 10 - 100                  |
| — Lakes                           | 100 - 500                 |
| — Watercourses                    | 500 - 1000                |
| — Highway                         | 1000 +                    |
| — Major Road                      |                           |
| ■ Building Footprints             |                           |

Date: 31 December 2019  
 Produced by: Ebbwater Consulting Inc.

**Sylix (Okanagan) Flood and Debris Flow Risk Assessment Project**  
**Flood - Affected People**  
**Map tile 04 of 20**

ANSI D - Map No. P-F-003-004

**Zoom-In Map**



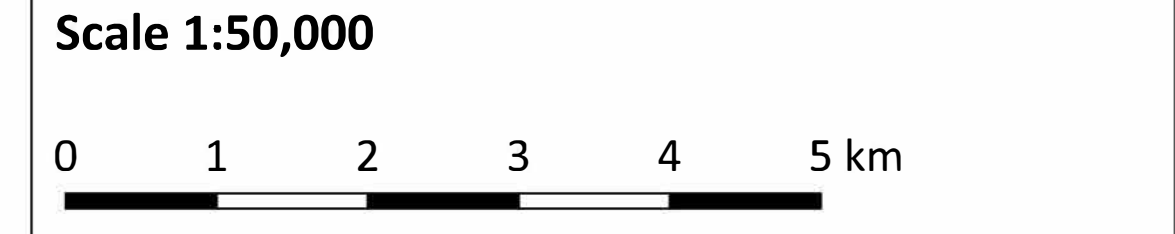
Click above map tile for Zoom-In map  
[Click here to return to Project Area map](#)  
[Click here to return to Okanagan map](#)  
[Click here to return to Similkameen map](#)

**Map Notes**

- Map produced by Ebbwater Consulting Inc.
- Population density is based on census dissemination areas within the project area boundary. Population density is not shown for areas with a population density of less than 1 person per square km.
- The population density (exposure) layer was clipped to the moderate flood hazard area. The hazard layer is shown in the hazard maps, and was produced by Ebbwater Consulting Inc. The method used to produce the hazard layer is described in the Quantitative Study.

**Data Sources**

- Lakes and Watercourses, Roads and Trails, and Reserves: BC Data Catalogue.
- Population: Statistics Canada 2016 Census.
- Building Footprints: Regional districts, municipalities, WFN and hand digitized using Bing Satellite Imagery.
- Sylix Place Names: Okanagan Nation Alliance.
- Base Layer: OpenStreetMap data – openstreetmap.org (© OpenStreetMap contributors; cartography licence CC BY-SA) and hill shade created using CDEM and USGM GMTED2010.



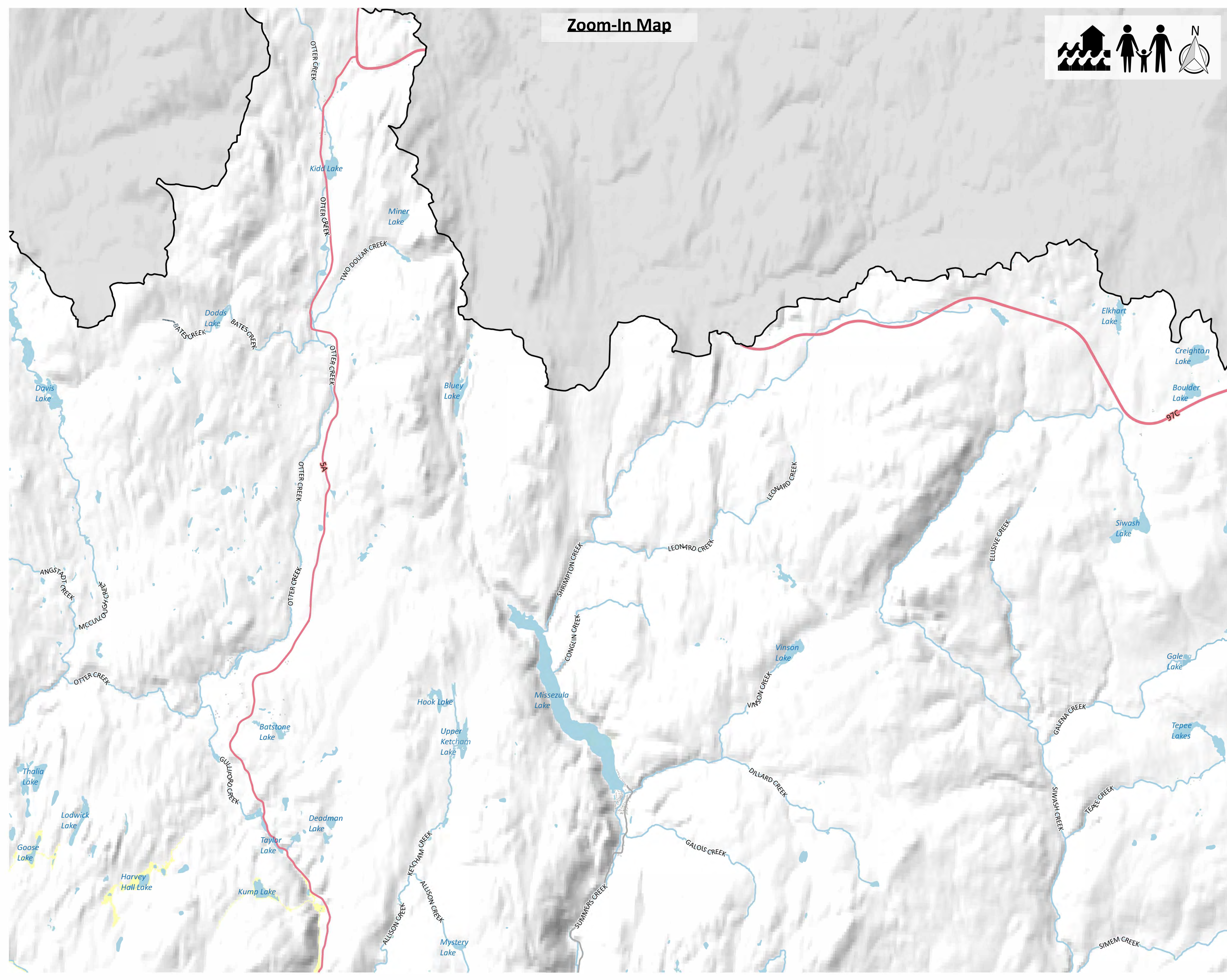
**Legend**

|                                     |  |
|-------------------------------------|--|
| <b>Background</b>                   | <b>Affected Assets</b>                           |
| — Watershed Boundary                | <b>Population Density (people per square km)</b> |
| - - - Okanagan-Similkameen Boundary | 1 - 10   |
| — Canada - US Border                | 10 - 100   |
| ▨ Reserves                          | 100 - 500  |
| ▨ Lakes                             | 500 - 1000                                       |
| — Watercourses                      | 1000 +   |
| — Highway                           |  |
| — Major Road                        |  |
| ▨ Building Footprints               |  |

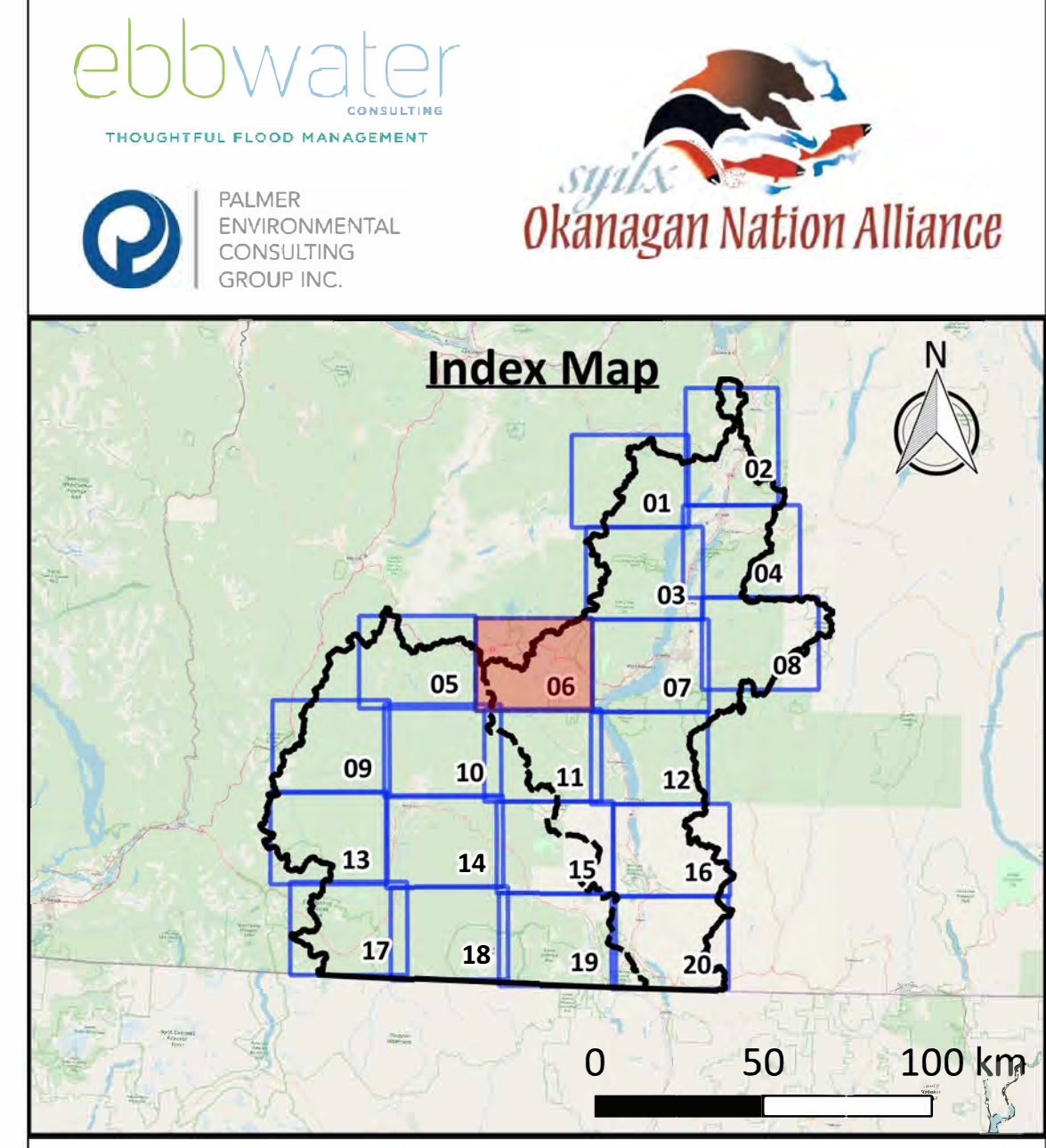
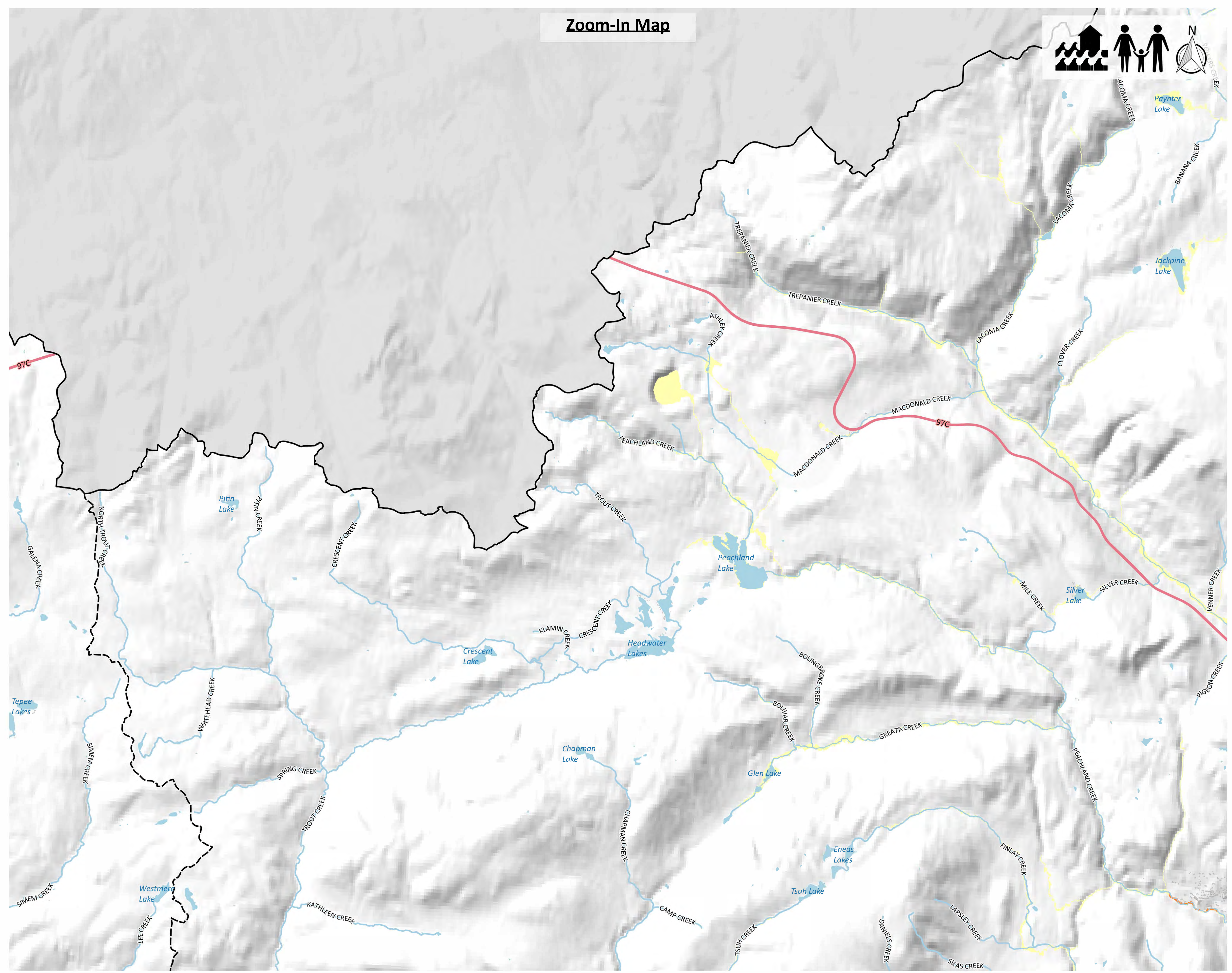
Date: 31 December 2019  
 Produced by: Ebbwater Consulting Inc.

**Sylix (Okanagan) Flood and Debris Flow Risk Assessment Project**  
**Flood - Affected People**  
**Map tile 05 of 20**

ANSI D - Map No. P-F-003-005



# Zoom-In Map



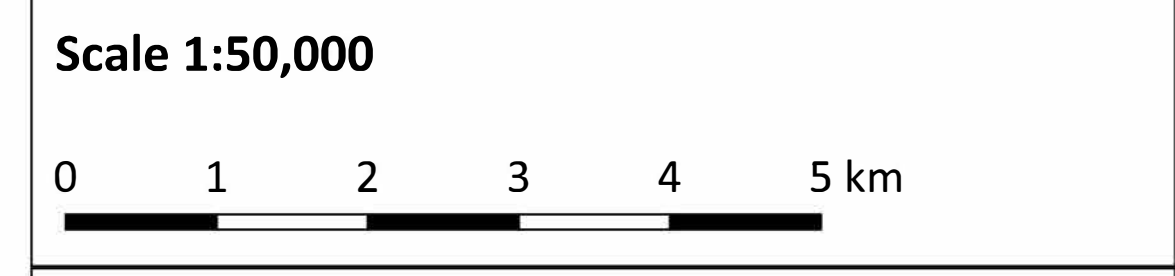
[Click above map tile for Zoom-In map](#)  
[Click here to return to Project Area map](#)  
[Click here to return to Okanagan map](#)  
[Click here to return to Similkameen map](#)

**Map Notes**

1. Map produced by Ebbwater Consulting Inc.
2. Population density is based on census dissemination areas within the project area boundary. Population density is not shown for areas with a population density of less than 1 person per square km.
3. The population density (exposure) layer was clipped to the moderate flood hazard area. The hazard layer is shown in the hazard maps, and was produced by Ebbwater Consulting Inc. The method used to produce the hazard layer is described in the Quantitative Study.

**Data Sources**

1. Lakes and Watercourses, Roads and Trails, and Reserves: BC Data Catalogue.
2. Population: Statistics Canada 2016 Census.
3. Building Footprints: Regional districts, municipalities, WFN and hand digitized using Bing Satellite Imagery.
4. Sylix Place Names: Okanagan Nation Alliance.
5. Base Layer: OpenStreetMap data – openstreetmap.org (© OpenStreetMap contributors; cartography licence CC BY-SA) and hill shade created using CDEM and USGM GMTED2010.



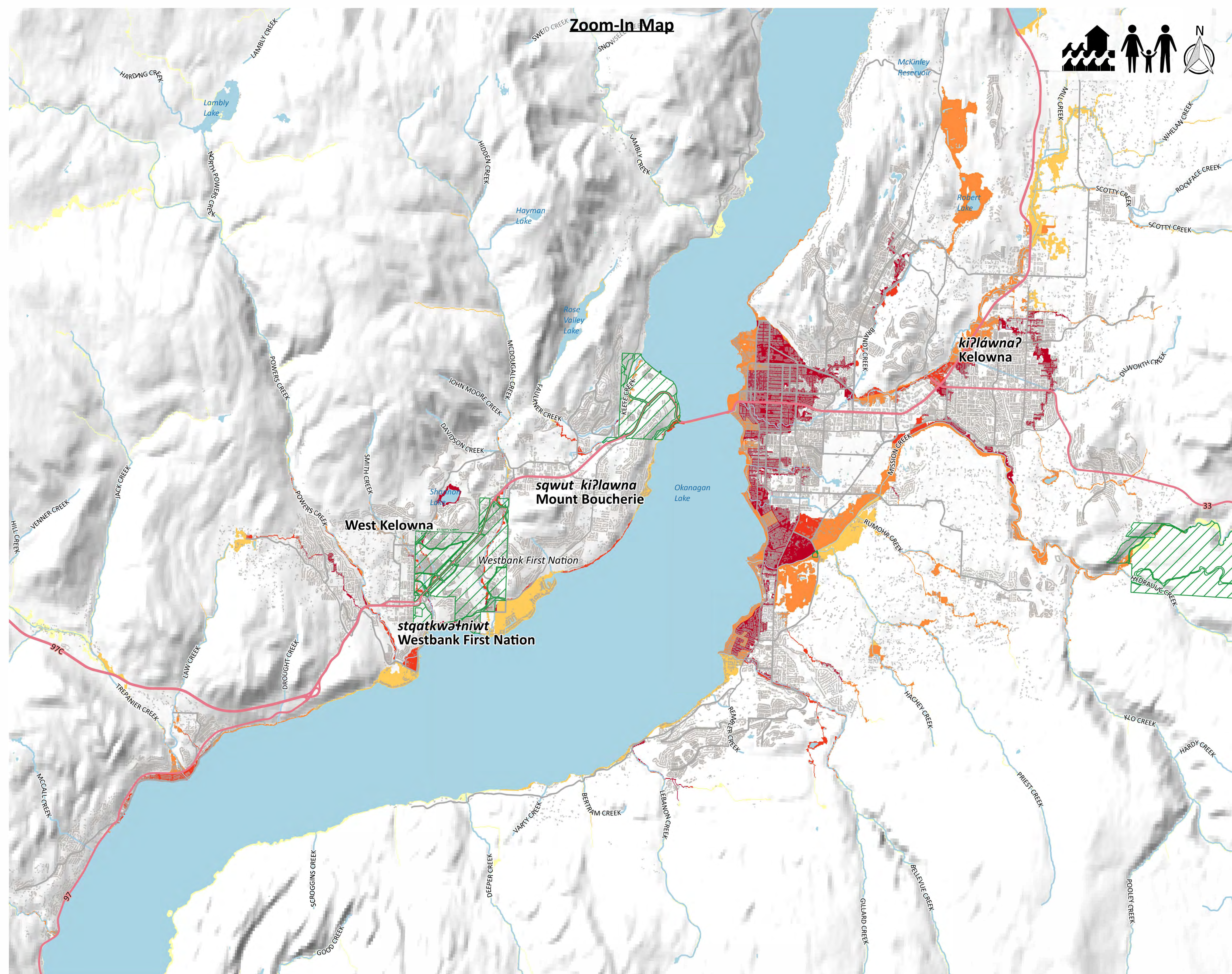
**Legend**

|                                     |  |
|-------------------------------------|--|
| <b>Background</b>                   | <b>Affected Assets</b>                           |
| — Watershed Boundary                | <b>Population Density (people per square km)</b> |
| - - - Okanagan-Similkameen Boundary | 1 - 10   |
| — Canada - US Border                | 10 - 100   |
| ▨ Reserves                          | 100 - 500  |
| ▨ Lakes                             | 500 - 1000                                       |
| — Watercourses                      | 1000 +   |
| — Highway                           |  |
| — Major Road                        |  |
| ▨ Building Footprints               |  |

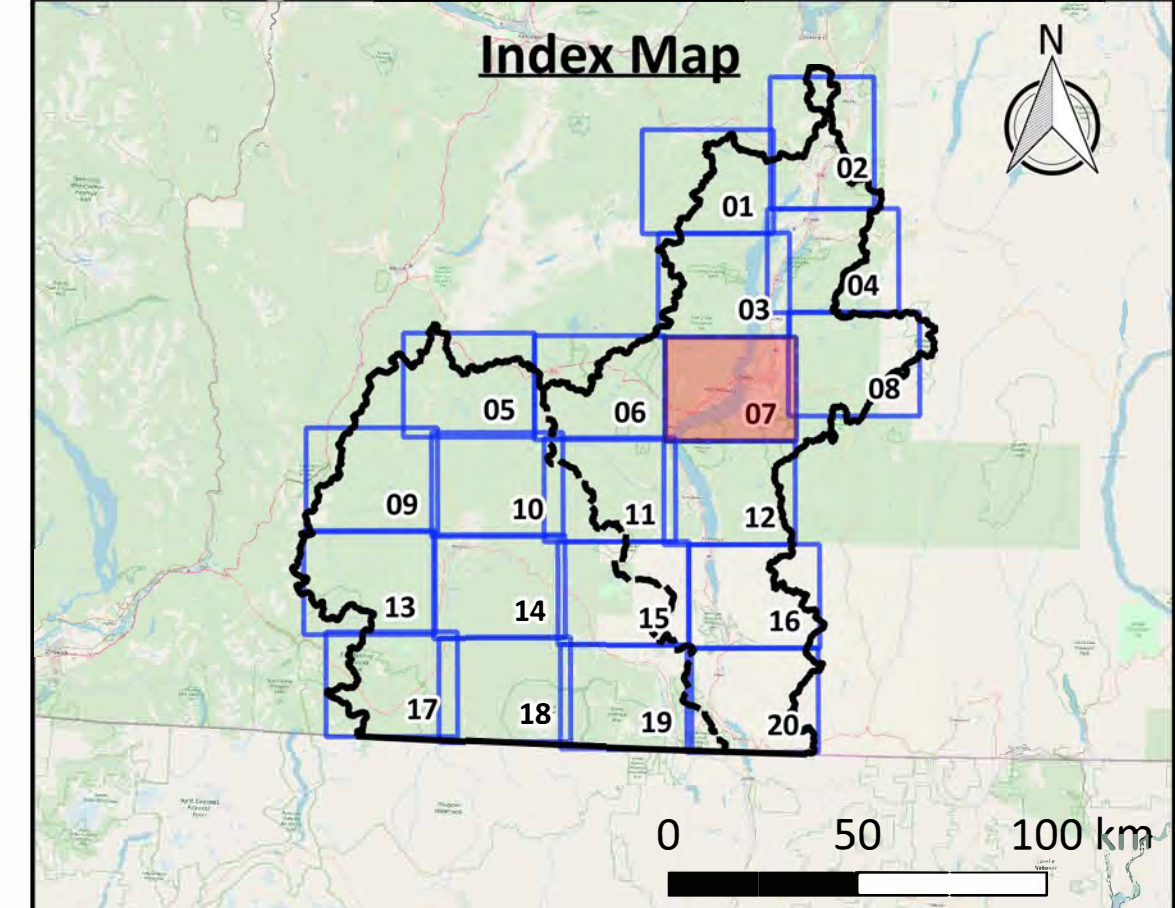
**Date:** 31 December 2019  
**Produced by:** Ebbwater Consulting Inc.

**Sylix (Okanagan) Flood and Debris Flow Risk Assessment Project**  
**Flood - Affected People**  
**Map tile 06 of 20**

ANSI D - Map No. P-F-003-006



**Zoom-In Map**



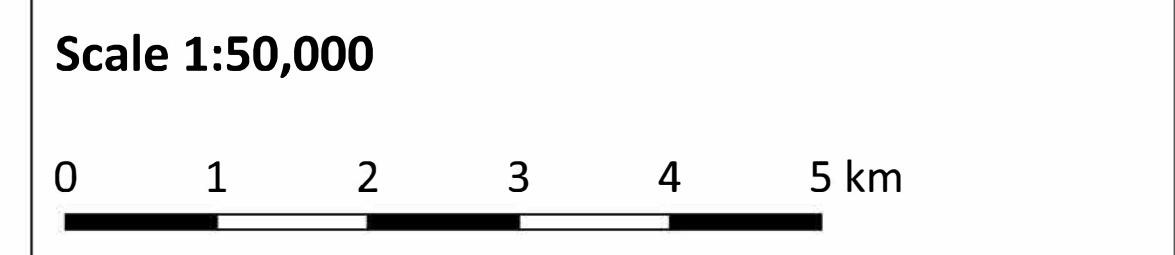
Click above map tile for Zoom-In map  
[Click here to return to Project Area map](#)  
[Click here to return to Okanagan map](#)  
[Click here to return to Similkameen map](#)

**Map Notes**

1. Map produced by Ebbwater Consulting Inc.
2. Population density is based on census dissemination areas within the project area boundary. Population density is not shown for areas with a population density of less than 1 person per square km.
3. The population density (exposure) layer was clipped to the moderate flood hazard area. The hazard layer is shown in the hazard maps, and was produced by Ebbwater Consulting Inc. The method used to produce the hazard layer is described in the Quantitative Study.

**Data Sources**

1. Lakes and Watercourses, Roads and Trails, and Reserves: BC Data Catalogue.
2. Population: Statistics Canada 2016 Census.
3. Building Footprints: Regional districts, municipalities, WFN and hand digitized using Bing Satellite Imagery.
4. Sylix Place Names: Okanagan Nation Alliance.
5. Base Layer: OpenStreetMap data – openstreetmap.org (© OpenStreetMap contributors; cartography licence CC BY-SA) and hill shade created using CDEM and USGM GMTED2010.



**Legend**

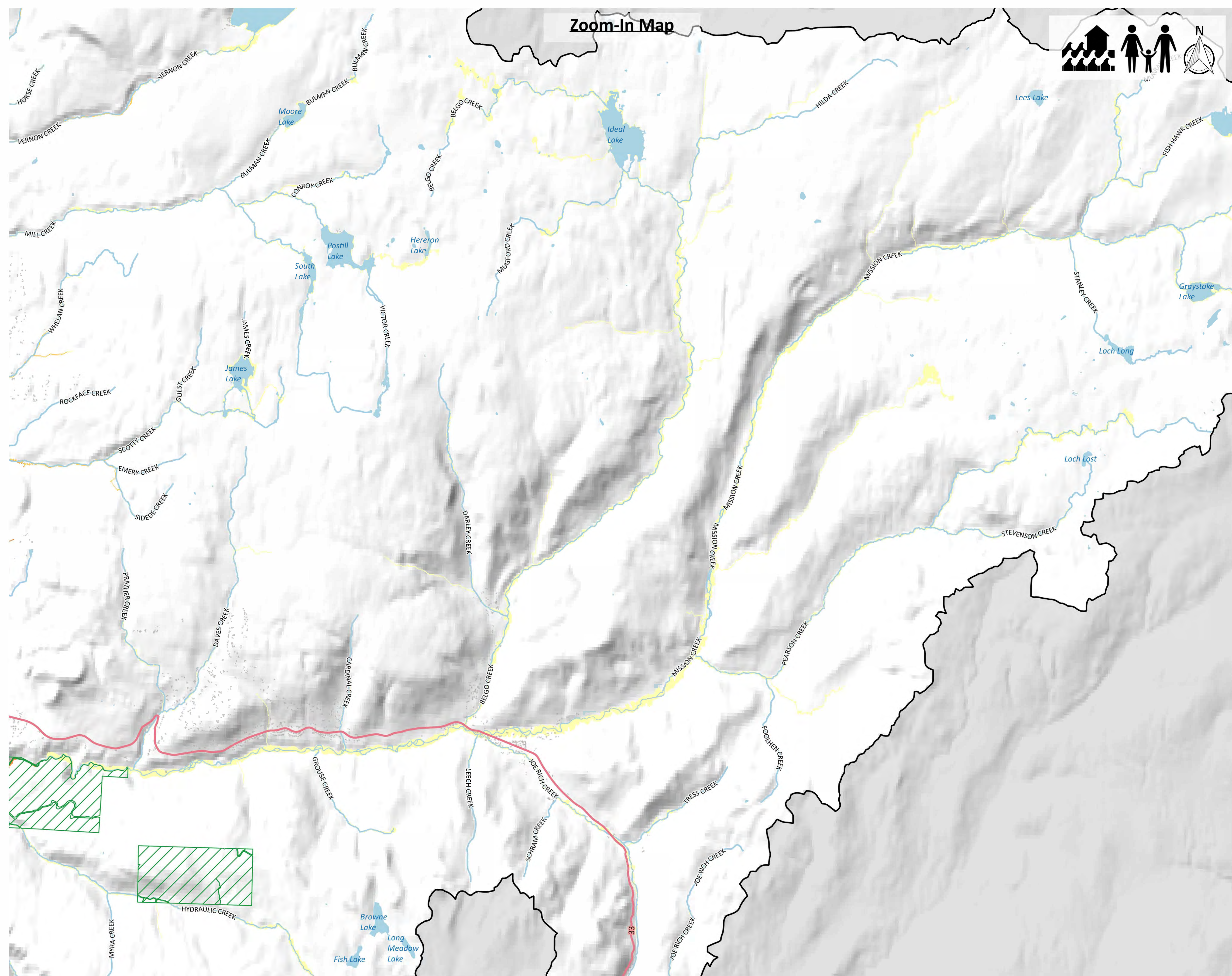
|                                     |  |
|-------------------------------------|--|
| <b>Background</b>                   | <b>Affected Assets</b>                           |
| — Watershed Boundary                | <b>Population Density (people per square km)</b> |
| - - - Okanagan-Similkameen Boundary | 1 - 10   |
| — Canada - US Border                | 10 - 100   |
| ▨ Reserves                          | 100 - 500  |
| ▨ Lakes                             | 500 - 1000                                       |
| — Watercourses                      | 1000 +   |
| — Highway                           |  |
| — Major Road                        |  |
| ▨ Building Footprints               |  |

Date: 31 December 2019  
 Produced by: Ebbwater Consulting Inc.

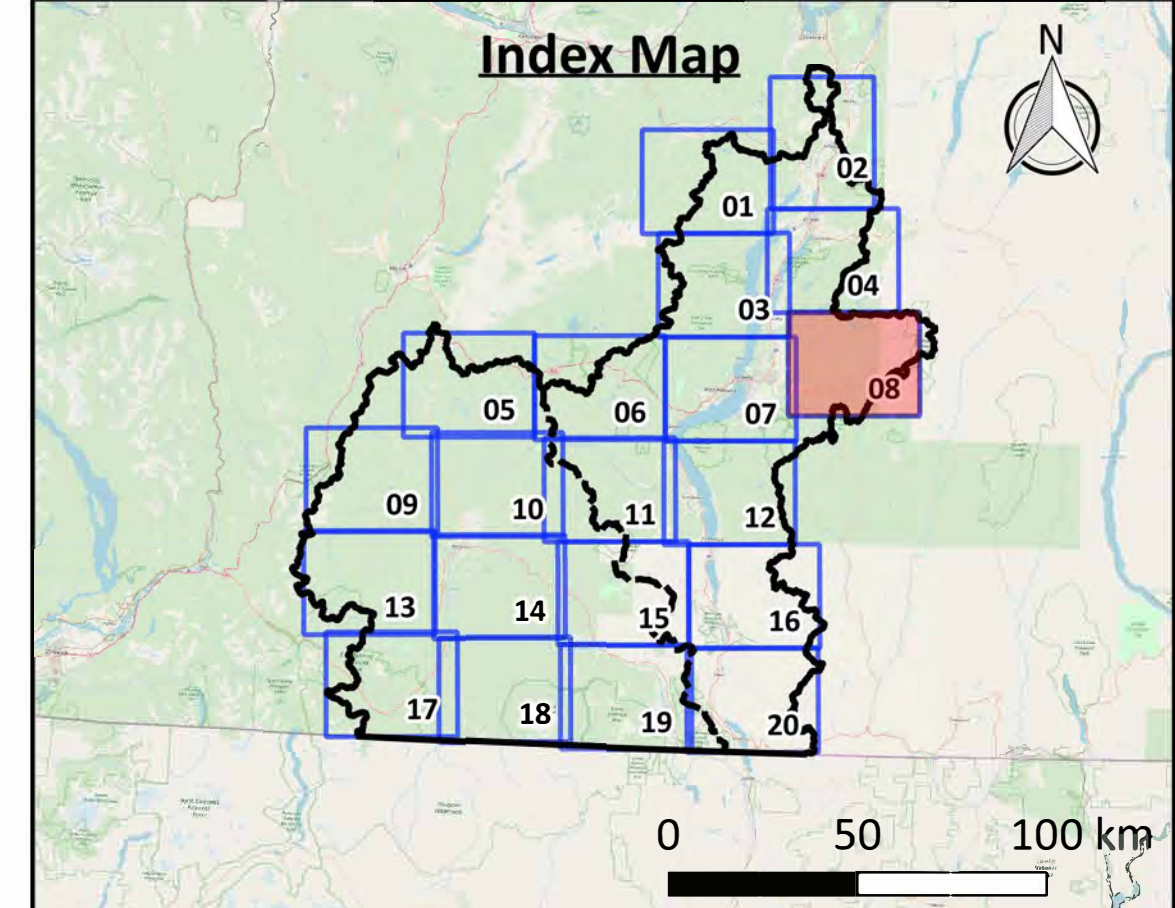
**Sylix (Okanagan) Flood and Debris Flow Risk Assessment Project**  
**Flood - Affected People**  
**Map tile 07 of 20**

ANSI D - Map No. P-F-003-007





**Zoom-In Map**



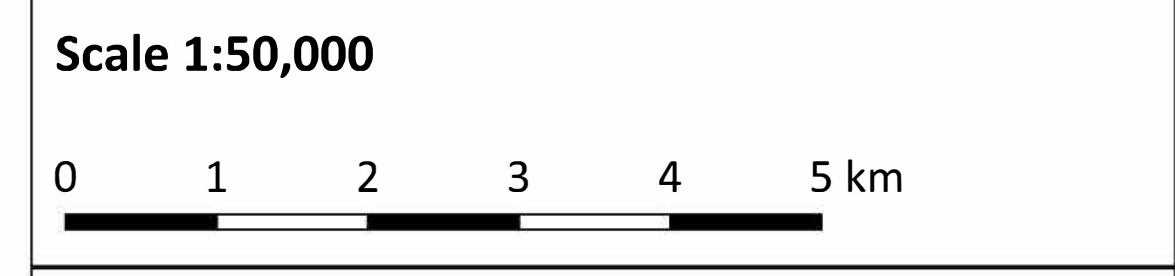
Click above map tile for Zoom-In map  
[Click here to return to Project Area map](#)  
[Click here to return to Okanagan map](#)  
[Click here to return to Similkameen map](#)

**Map Notes**

- Map produced by Ebbwater Consulting Inc.
- Population density is based on census dissemination areas within the project area boundary. Population density is not shown for areas with a population density of less than 1 person per square km.
- The population density (exposure) layer was clipped to the moderate flood hazard area. The hazard layer is shown in the hazard maps, and was produced by Ebbwater Consulting Inc. The method used to produce the hazard layer is described in the Quantitative Study.

**Data Sources**

- Lakes and Watercourses, Roads and Trails, and Reserves: BC Data Catalogue.
- Population: Statistics Canada 2016 Census.
- Building Footprints: Regional districts, municipalities, WFN and hand digitized using Bing Satellite Imagery.
- Sylix Place Names: Okanagan Nation Alliance.
- Base Layer: OpenStreetMap data – openstreetmap.org (© OpenStreetMap contributors; cartography licence CC BY-SA) and hill shade created using CDEM and USGM GMTED2010.



**Legend**

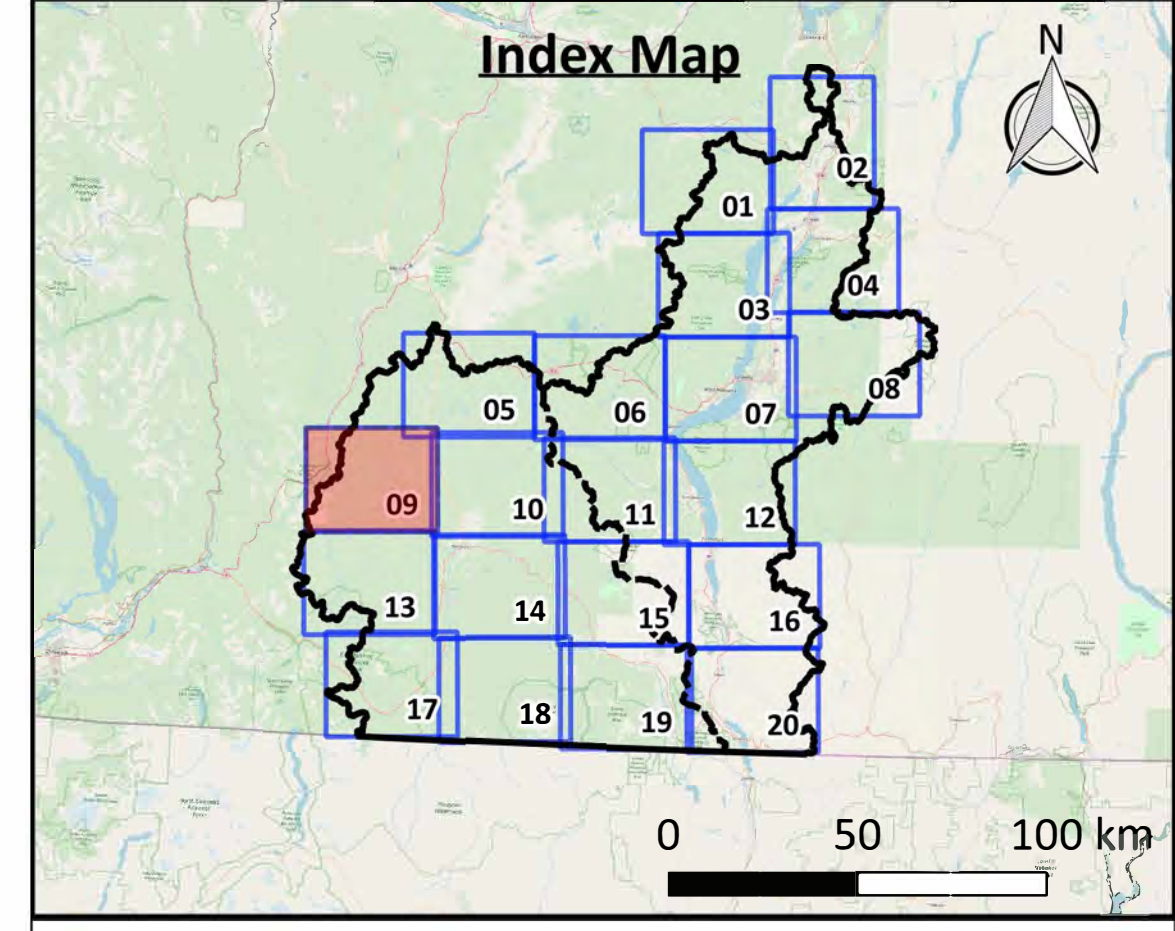
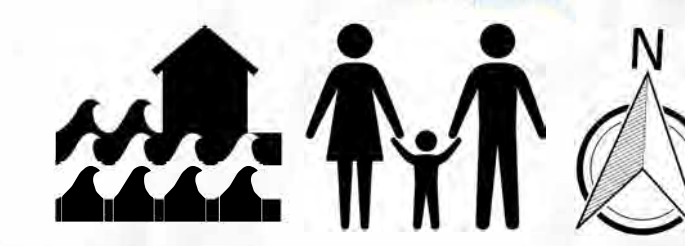
|                                     |  |
|-------------------------------------|--|
| <b>Background</b>                   | <b>Affected Assets</b>                           |
| — Watershed Boundary                | <b>Population Density (people per square km)</b> |
| - - - Okanagan-Similkameen Boundary | 1 - 10   |
| — Canada - US Border                | 10 - 100   |
| ▨ Reserves                          | 100 - 500  |
| ▭ Lakes                             | 500 - 1000                                       |
| — Watercourses                      | 1000 +   |
| — Highway                           |  |
| — Major Road                        |  |
| ■ Building Footprints               |  |

Date: 31 December 2019  
 Produced by: Ebbwater Consulting Inc.

**Sylix (Okanagan) Flood and Debris Flow Risk Assessment Project**  
**Flood - Affected People**  
 Map tile 08 of 20

ANSI D - Map No. P-F-003-008

**Zoom-In Map**



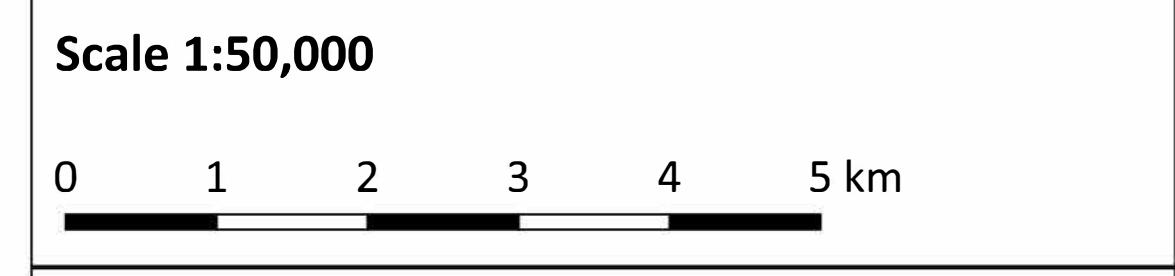
Click above map tile for Zoom-In map  
[Click here to return to Project Area map](#)  
[Click here to return to Okanagan map](#)  
[Click here to return to Similkameen map](#)

**Map Notes**

1. Map produced by Ebbwater Consulting Inc.
2. Population density is based on census dissemination areas within the project area boundary. Population density is not shown for areas with a population density of less than 1 person per square km.
3. The population density (exposure) layer was clipped to the moderate flood hazard area. The hazard layer is shown in the hazard maps, and was produced by Ebbwater Consulting Inc. The method used to produce the hazard layer is described in the Quantitative Study.

**Data Sources**

1. Lakes and Watercourses, Roads and Trails, and Reserves: BC Data Catalogue.
2. Population: Statistics Canada 2016 Census.
3. Building Footprints: Regional districts, municipalities, WFN and hand digitized using Bing Satellite Imagery.
4. Sylix Place Names: Okanagan Nation Alliance.
5. Base Layer: OpenStreetMap data – openstreetmap.org (© OpenStreetMap contributors; cartography licence CC BY-SA) and hill shade created using CDEM and USGM GMTED2010.



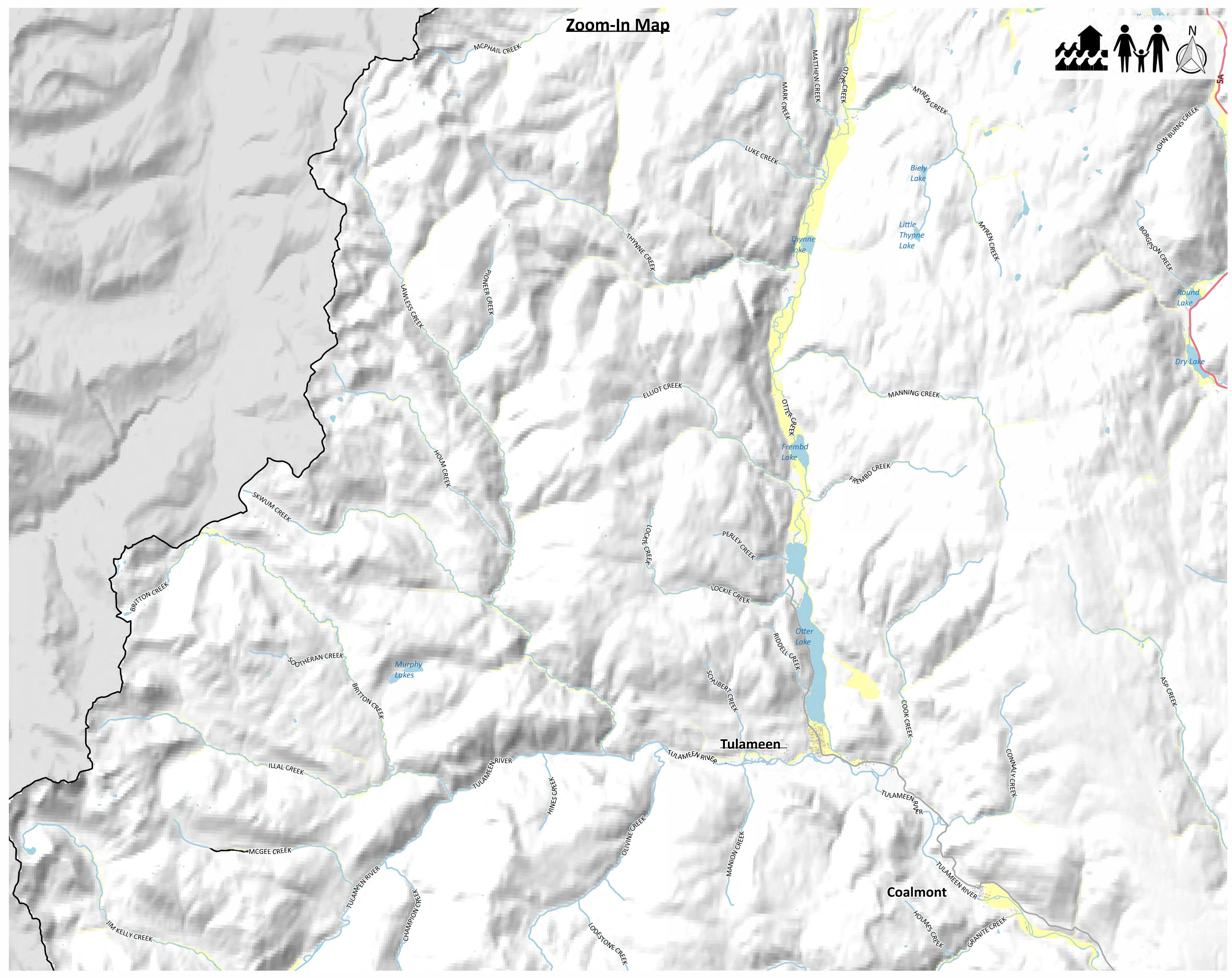
**Legend**

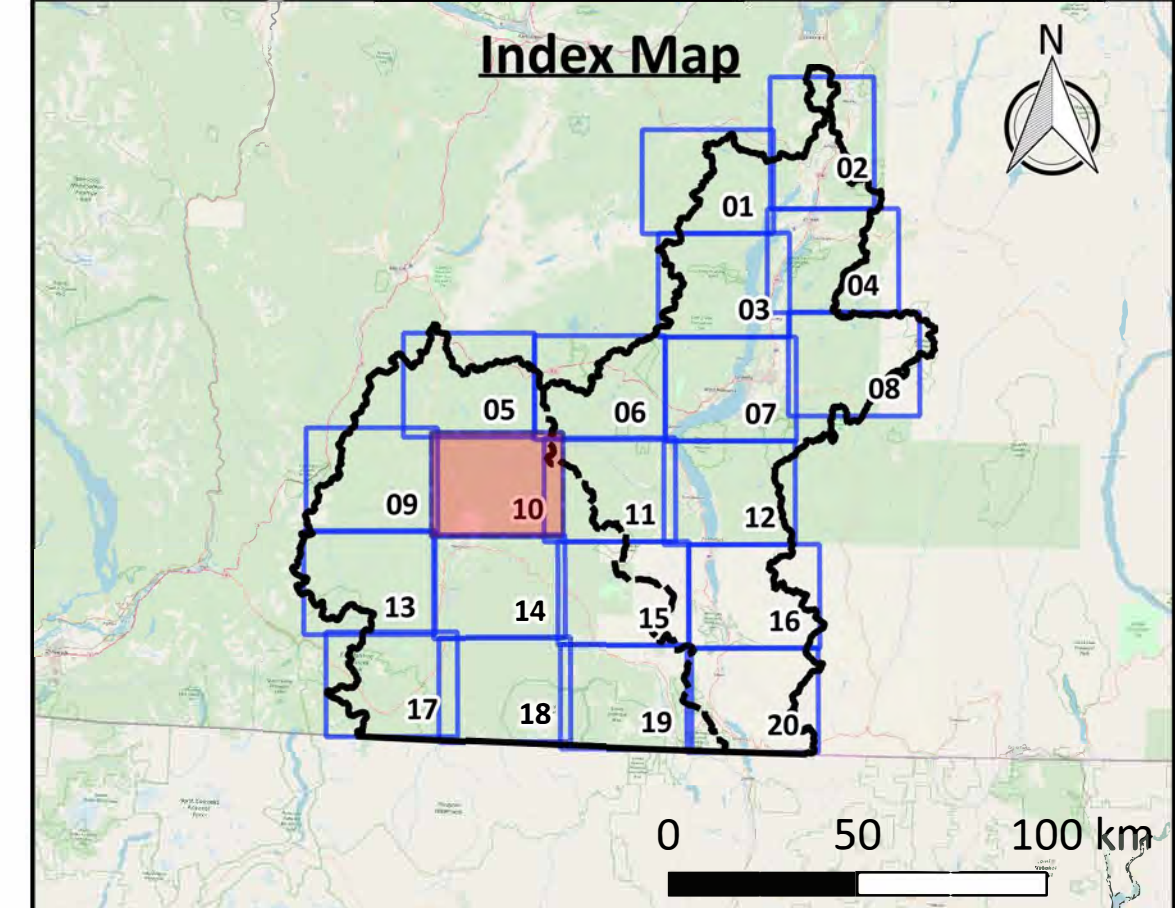
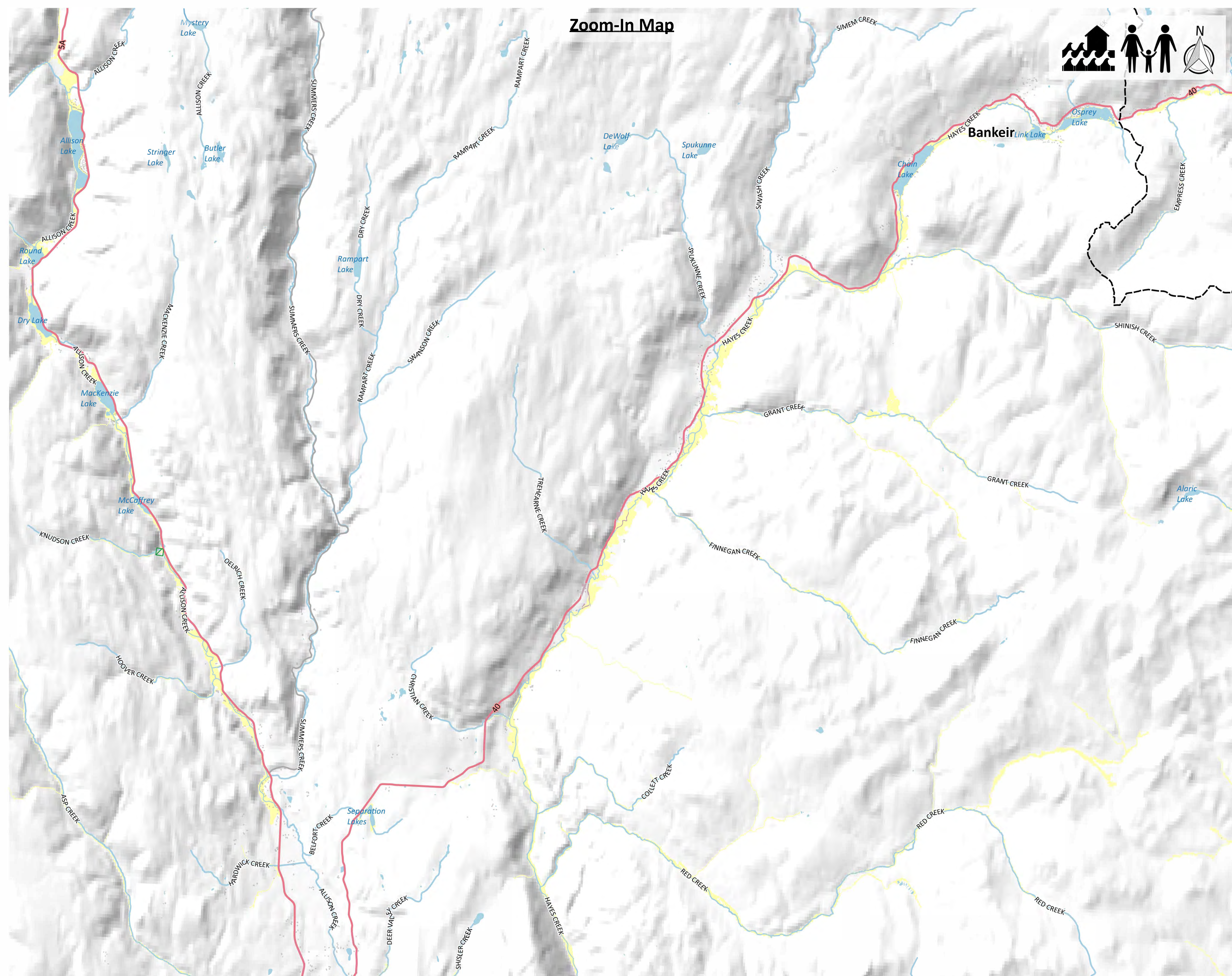
|                                     |                               |
|-------------------------------------|-------------------------------|
| <b>Background</b>                   | <b>Affected Assets</b>        |
| — Watershed Boundary                | <b>Population Density</b>     |
| - - - Okanagan-Similkameen Boundary | <b>(people per square km)</b> |
| — Canada - US Border                | 1 - 10                        |
| ▭ Reserves                          | 10 - 100                      |
| ▭ Lakes                             | 100 - 500                     |
| ▭ Watercourses                      | 500 - 1000                    |
| ▭ Highway                           | 1000 +                        |
| ▭ Major Road                        |                               |
| ▭ Building Footprints               |                               |

**Date:** 31 December 2019  
**Produced by:** Ebbwater Consulting Inc.

**Sylix (Okanagan) Flood and Debris Flow Risk Assessment Project**  
**Flood - Affected People**  
**Map tile 09 of 20**

ANSI D - Map No. P-F-003-009





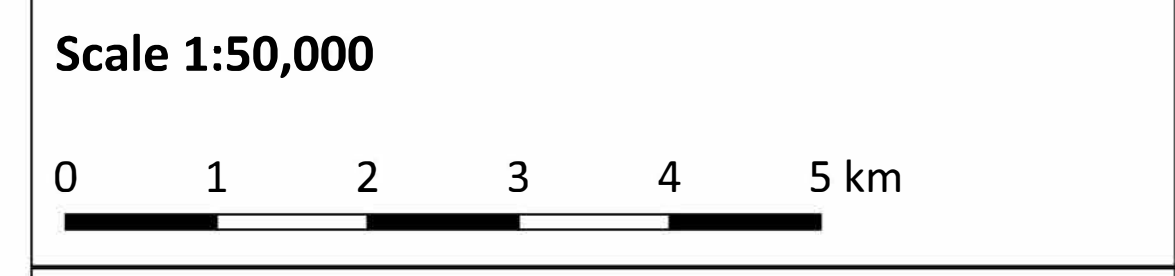
[Click above map tile for Zoom-In map](#)  
[Click here to return to Project Area map](#)  
[Click here to return to Okanagan map](#)  
[Click here to return to Similkameen map](#)

**Map Notes**

- Map produced by Ebbwater Consulting Inc.
- Population density is based on census dissemination areas within the project area boundary. Population density is not shown for areas with a population density of less than 1 person per square km.
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**Data Sources**

- Lakes and Watercourses, Roads and Trails, and Reserves: BC Data Catalogue.
- Population: Statistics Canada 2016 Census.
- Building Footprints: Regional districts, municipalities, WFN and hand digitized using Bing Satellite Imagery.
- Sylix Place Names: Okanagan Nation Alliance.
- Base Layer: OpenStreetMap data – openstreetmap.org (© OpenStreetMap contributors; cartography licence CC BY-SA) and hill shade created using CDEM and USGM GMTED2010.

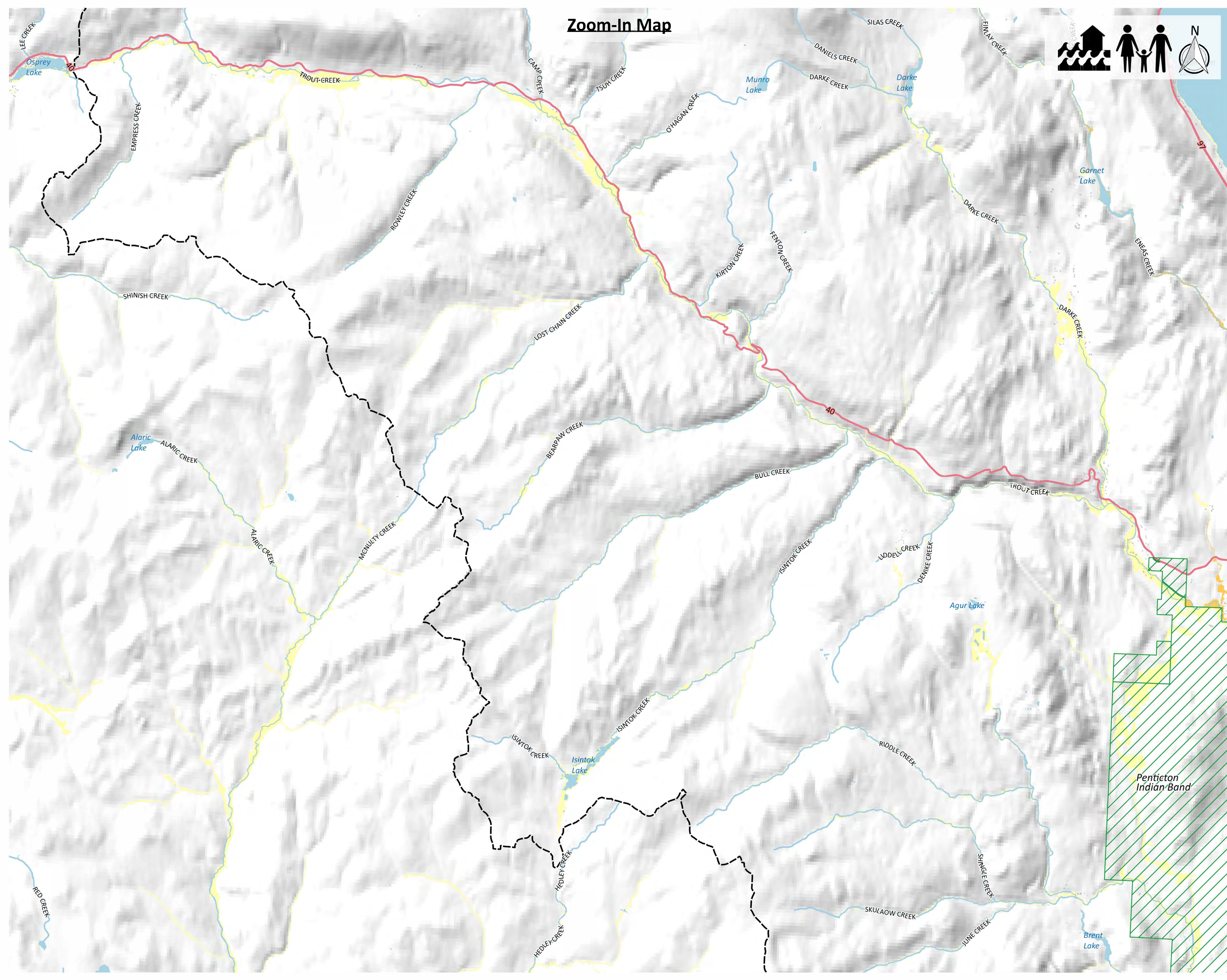


| Legend                              |  |
|-------------------------------------|--|
| <b>Background</b>                   | <b>Affected Assets</b>                           |
| — Watershed Boundary                | <b>Population Density (people per square km)</b> |
| - - - Okanagan-Similkameen Boundary | 1 - 10   |
| — Canada - US Border                | 10 - 100   |
| ▭ Reserves                          | 100 - 500  |
| ▭ Lakes                             | 500 - 1000                                       |
| — Watercourses                      | 1000 +   |
| — Highway                           |  |
| — Major Road                        |  |
| ▭ Building Footprints               |  |

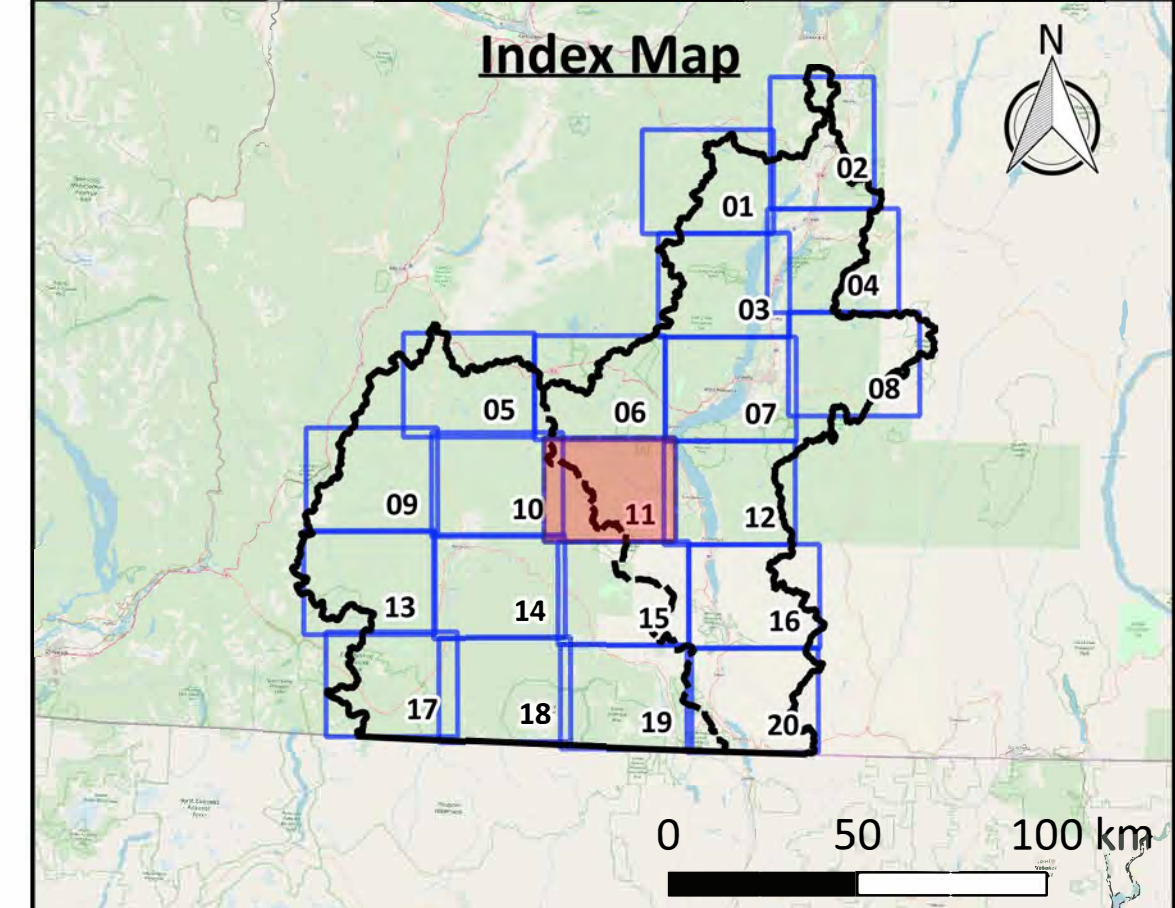
**Date:** 31 December 2019  
**Produced by:** Ebbwater Consulting Inc.

**Sylix (Okanagan) Flood and Debris Flow Risk Assessment Project**  
**Flood - Affected People**  
**Map tile 10 of 20**

ANSI D - Map No. P-F-003-010



**Zoom-In Map**



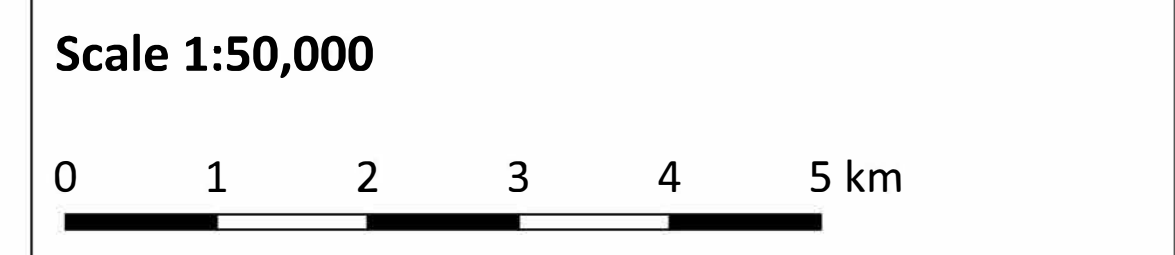
[Click above map tile for Zoom-In map](#)  
[Click here to return to Project Area map](#)  
[Click here to return to Okanagan map](#)  
[Click here to return to Similkameen map](#)

**Map Notes**

1. Map produced by Ebbwater Consulting Inc.
2. Population density is based on census dissemination areas within the project area boundary. Population density is not shown for areas with a population density of less than 1 person per square km.
3. The population density (exposure) layer was clipped to the moderate flood hazard area. The hazard layer is shown in the hazard maps, and was produced by Ebbwater Consulting Inc. The method used to produce the hazard layer is described in the Quantitative Study.

**Data Sources**

1. Lakes and Watercourses, Roads and Trails, and Reserves: BC Data Catalogue.
2. Population: Statistics Canada 2016 Census.
3. Building Footprints: Regional districts, municipalities, WFN and hand digitized using Bing Satellite Imagery.
4. Sylix Place Names: Okanagan Nation Alliance.
5. Base Layer: OpenStreetMap data – openstreetmap.org (© OpenStreetMap contributors; cartography licence CC BY-SA) and hill shade created using CDEM and USGM GMTED2010.



**Legend**

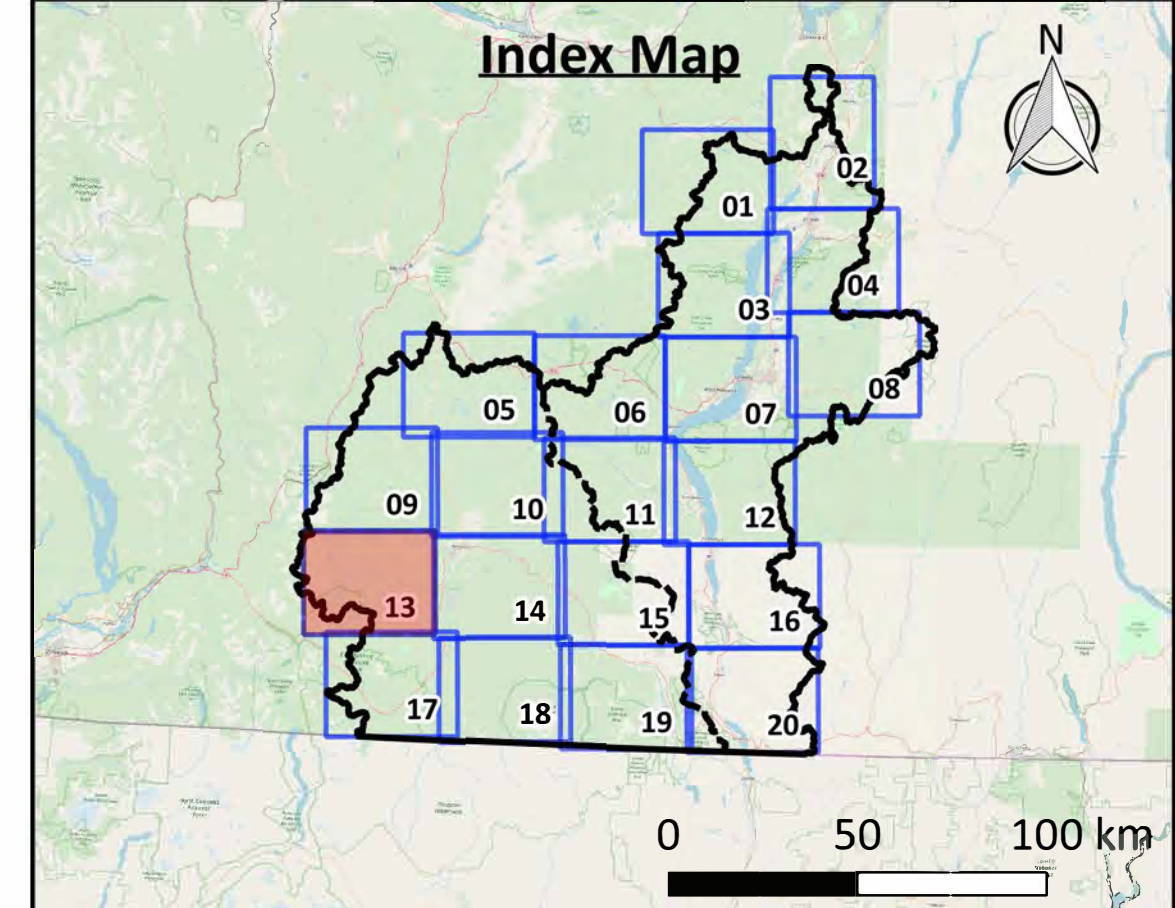
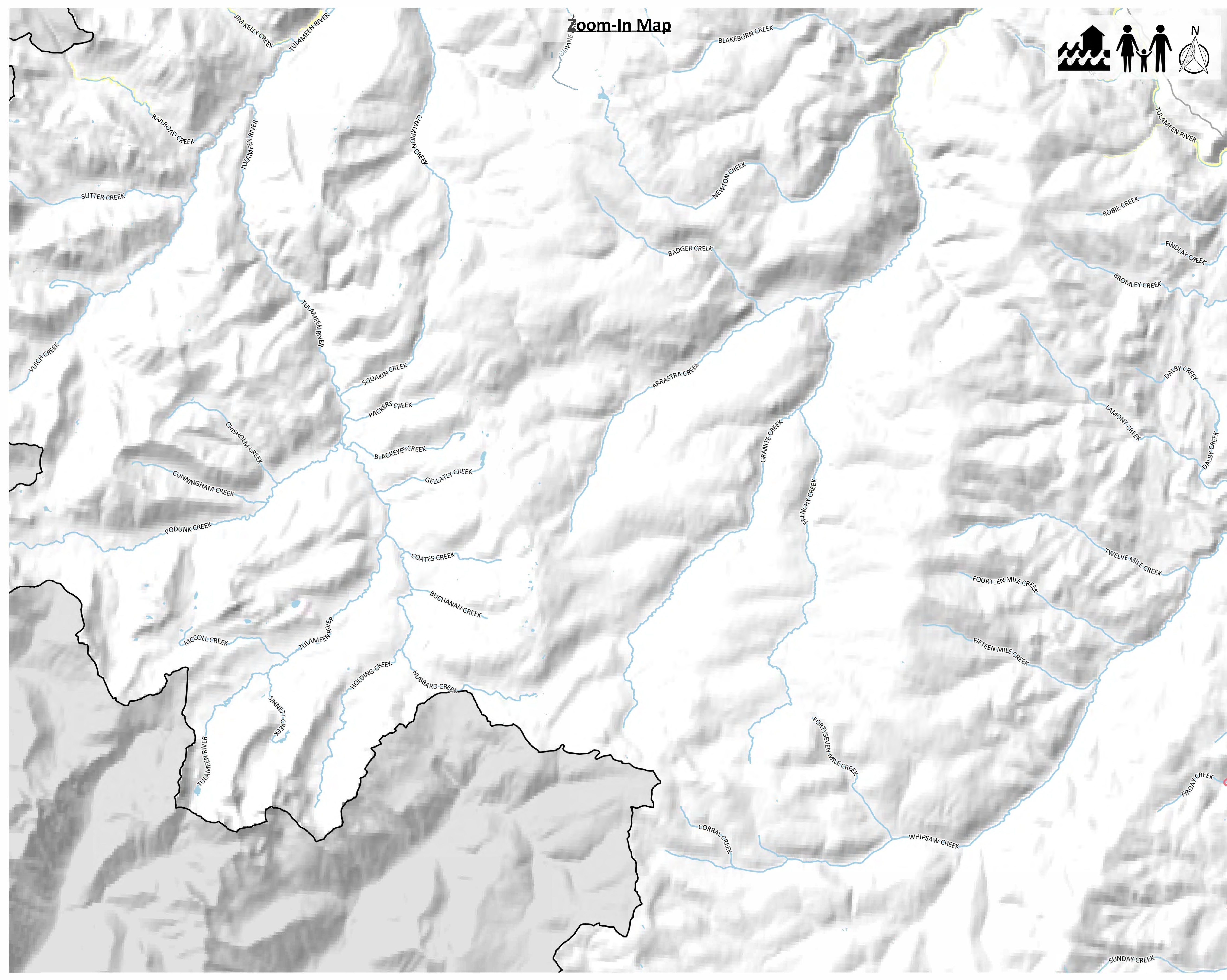
|                                     |  |
|-------------------------------------|--|
| <b>Background</b>                   | <b>Affected Assets</b>                           |
| — Watershed Boundary                | <b>Population Density (people per square km)</b> |
| - - - Okanagan-Similkameen Boundary | 1 - 10   |
| — Canada - US Border                | 10 - 100   |
| ▭ Reserves                          | 100 - 500  |
| ▭ Lakes                             | 500 - 1000                                       |
| ▭ Watercourses                      | 1000 +   |
| ▭ Highway                           |  |
| ▭ Major Road                        |  |
| ▭ Building Footprints               |  |

**Date:** 31 December 2019  
**Produced by:** Ebbwater Consulting Inc.

**Sylix (Okanagan) Flood and Debris Flow Risk Assessment Project**  
**Flood - Affected People**  
**Map tile 11 of 20**

ANSI D - Map No. P-F-003-011





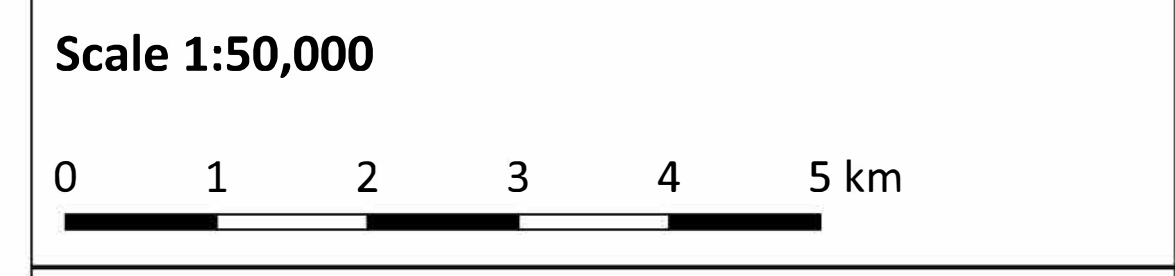
Click above map tile for Zoom-In map  
[Click here to return to Project Area map](#)  
[Click here to return to Okanagan map](#)  
[Click here to return to Similkameen map](#)

**Map Notes**

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3. The population density (exposure) layer was clipped to the moderate flood hazard area. The hazard layer is shown in the hazard maps, and was produced by Ebbwater Consulting Inc. The method used to produce the hazard layer is described in the Quantitative Study.

**Data Sources**

1. Lakes and Watercourses, Roads and Trails, and Reserves: BC Data Catalogue.
2. Population: Statistics Canada 2016 Census.
3. Building Footprints: Regional districts, municipalities, WFN and hand digitized using Bing Satellite Imagery.
4. Sylix Place Names: Okanagan Nation Alliance.
5. Base Layer: OpenStreetMap data – openstreetmap.org (© OpenStreetMap contributors; cartography licence CC BY-SA) and hill shade created using CDEM and USGM GMTED2010.



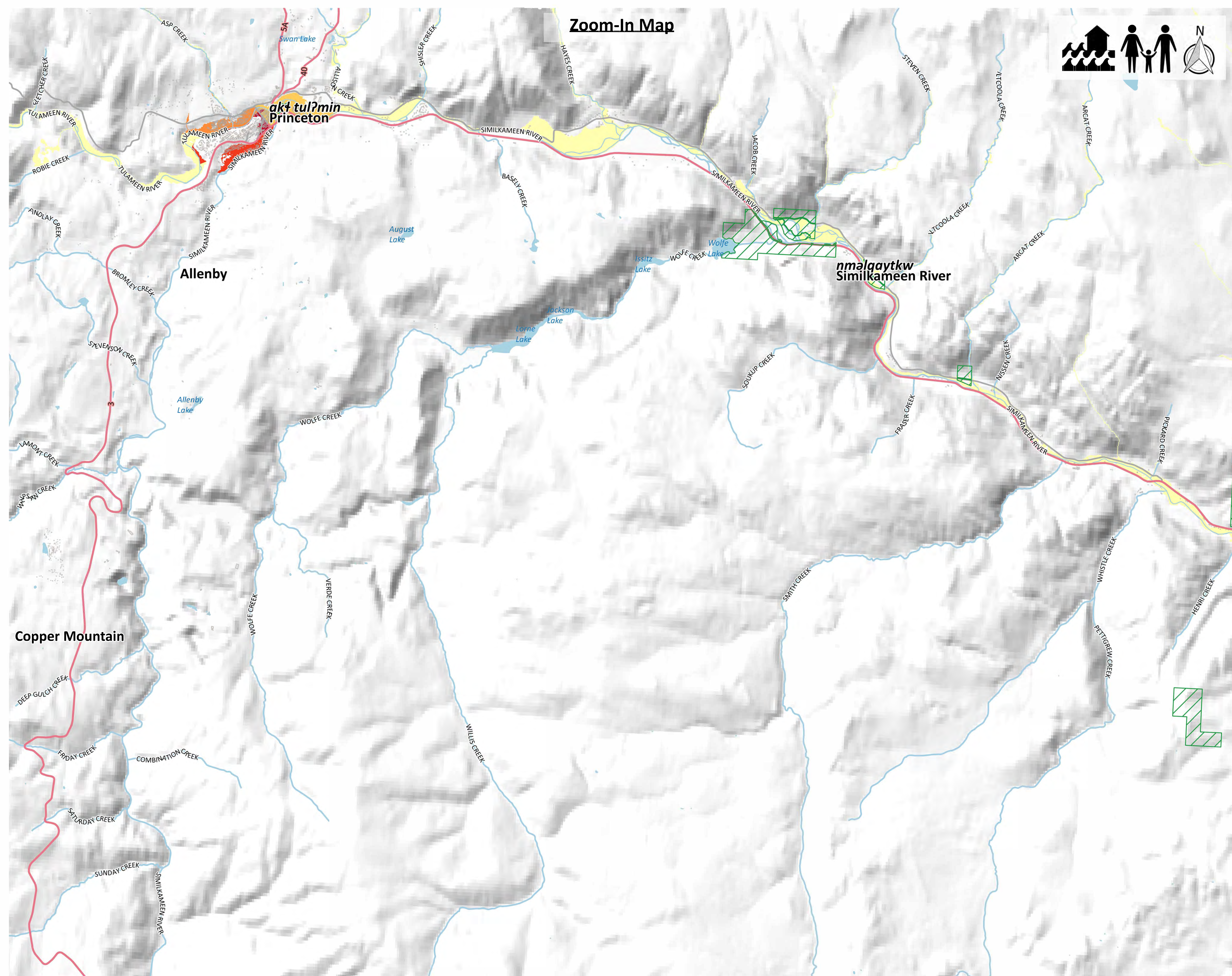
**Legend**

|                                     |  |
|-------------------------------------|--|
| <b>Background</b>                   | <b>Affected Assets</b>                           |
| — Watershed Boundary                | <b>Population Density (people per square km)</b> |
| - - - Okanagan-Similkameen Boundary | 1 - 10   |
| — Canada - US Border                | 10 - 100   |
| ▨ Reserves                          | 100 - 500  |
| ▨ Lakes                             | 500 - 1000                                       |
| — Watercourses                      | 1000 +   |
| — Highway                           |  |
| — Major Road                        |  |
| ▨ Building Footprints               |  |

**Date:** 31 December 2019  
**Produced by:** Ebbwater Consulting Inc.

**Sylix (Okanagan) Flood and Debris Flow Risk Assessment Project**  
**Flood - Affected People**  
**Map tile 13 of 20**

ANSI D - Map No. P-F-003-013



**Zoom-In Map**

**ebbwater** CONSULTING  
THOUGHTFUL FLOOD MANAGEMENT

**Sylix**  
Okanagan Nation Alliance

PALMER ENVIRONMENTAL CONSULTING GROUP INC.

**Index Map**

0 50 100 km

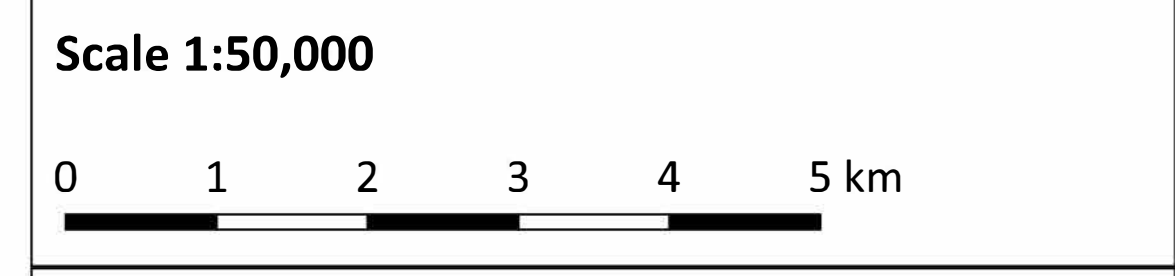
Click above map tile for Zoom-In map  
[Click here to return to Project Area map](#)  
[Click here to return to Okanagan map](#)  
[Click here to return to Similkameen map](#)

**Map Notes**

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**Data Sources**

1. Lakes and Watercourses, Roads and Trails, and Reserves: BC Data Catalogue.
2. Population: Statistics Canada 2016 Census.
3. Building Footprints: Regional districts, municipalities, WFN and hand digitized using Bing Satellite Imagery.
4. Sylix Place Names: Okanagan Nation Alliance.
5. Base Layer: OpenStreetMap data – openstreetmap.org (© OpenStreetMap contributors; cartography licence CC BY-SA) and hill shade created using CDEM and USGM GMTED2010.



**Legend**

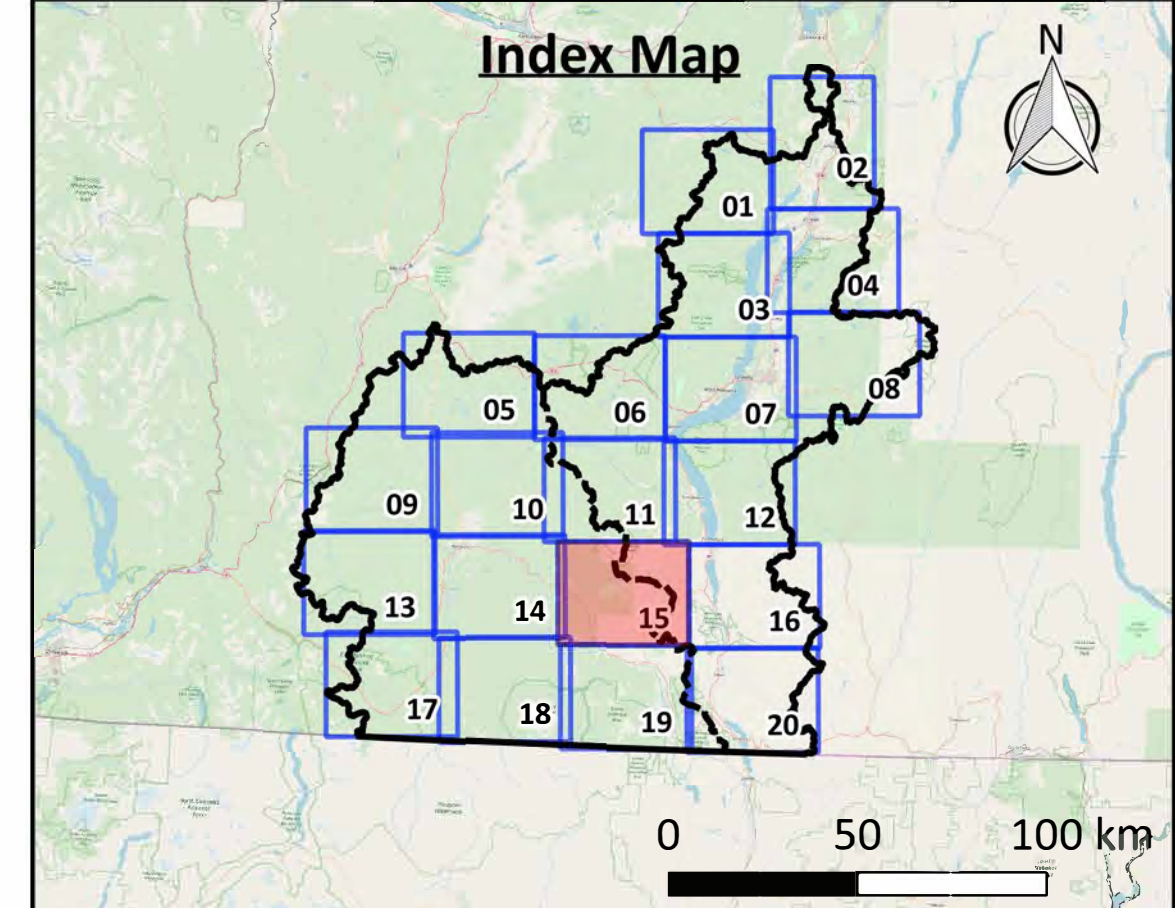
|                                     |                               |
|-------------------------------------|-------------------------------|
| <b>Background</b>                   | <b>Affected Assets</b>        |
| — Watershed Boundary                | <b>Population Density</b>     |
| - - - Okanagan-Similkameen Boundary | <b>(people per square km)</b> |
| — Canada - US Border                | 1 - 10                        |
| ▨ Reserves                          | 10 - 100                      |
| ▨ Lakes                             | 100 - 500                     |
| — Watercourses                      | 500 - 1000                    |
| — Highway                           | 1000 +                        |
| — Major Road                        |                               |
| ▨ Building Footprints               |                               |

**Date:** 31 December 2019  
**Produced by:** Ebbwater Consulting Inc.

**Sylix (Okanagan) Flood and Debris Flow Risk Assessment Project**  
**Flood - Affected People**  
**Map tile 14 of 20**

ANSI D - Map No. P-F-003-014

# Zoom-In Map



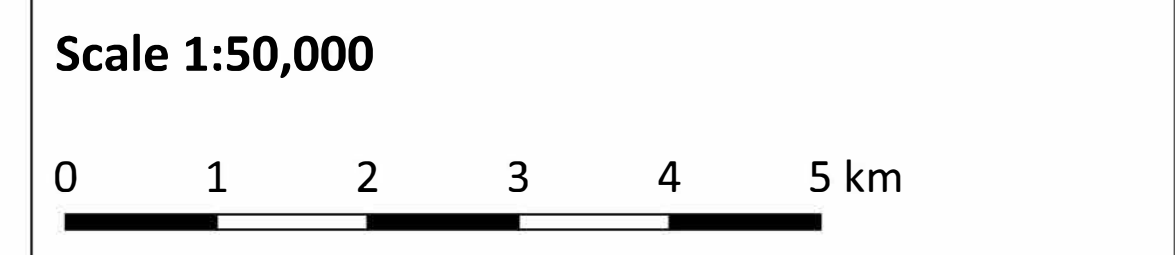
Click above map tile for Zoom-In map  
[Click here to return to Project Area map](#)  
[Click here to return to Okanagan map](#)  
[Click here to return to Similkameen map](#)

**Map Notes**

1. Map produced by Ebbwater Consulting Inc.
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**Data Sources**

1. Lakes and Watercourses, Roads and Trails, and Reserves: BC Data Catalogue.
2. Population: Statistics Canada 2016 Census.
3. Building Footprints: Regional districts, municipalities, WFN and hand digitized using Bing Satellite Imagery.
4. Sylix Place Names: Okanagan Nation Alliance.
5. Base Layer: OpenStreetMap data – openstreetmap.org (© OpenStreetMap contributors; cartography licence CC BY-SA) and hill shade created using CDEM and USGM GMTED2010.



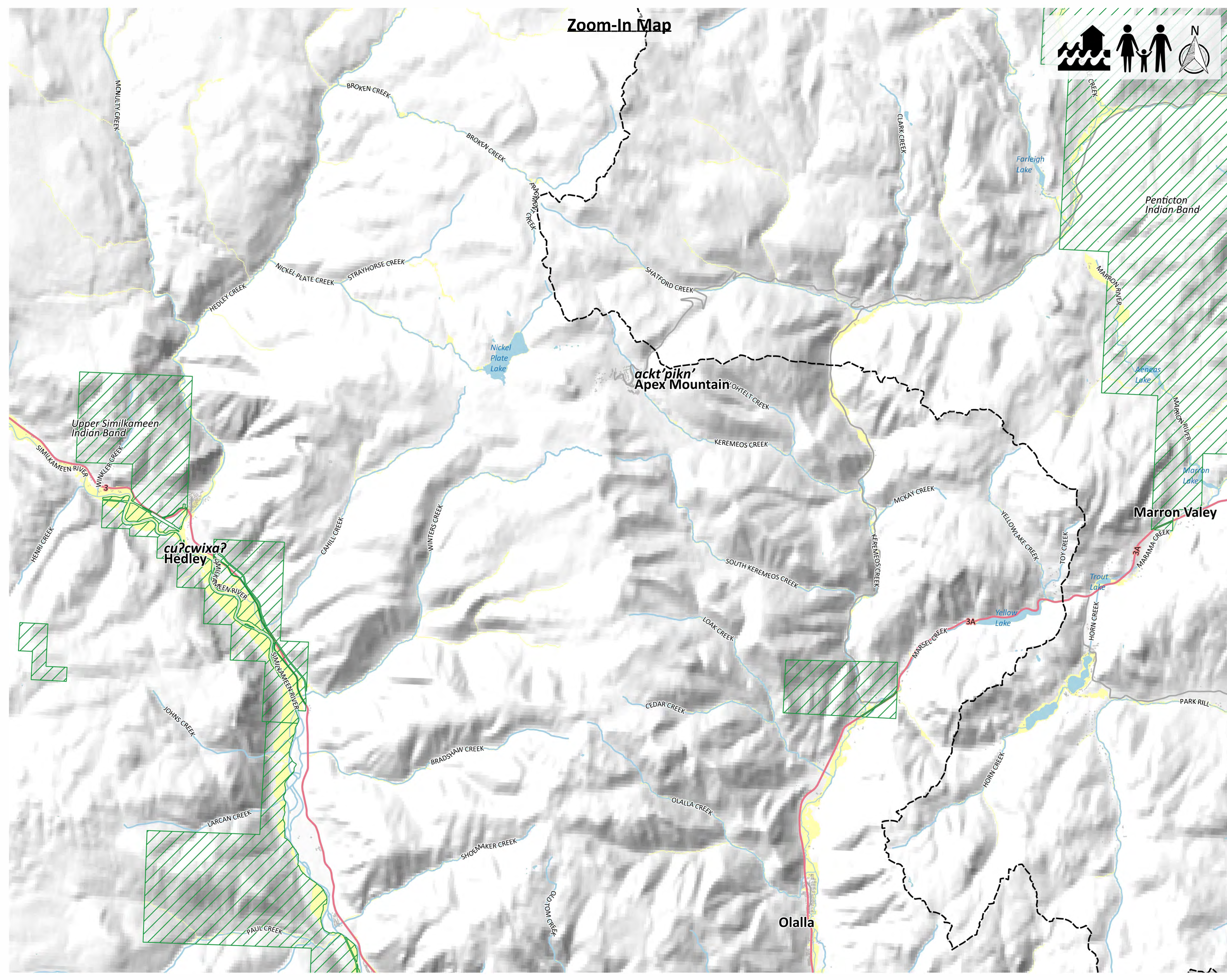
**Legend**

|                                     |  |
|-------------------------------------|--|
| <b>Background</b>                   | <b>Affected Assets</b>                           |
| — Watershed Boundary                | <b>Population Density (people per square km)</b> |
| - - - Okanagan-Similkameen Boundary | 1 - 10   |
| — Canada - US Border                | 10 - 100   |
| ▨ Reserves                          | 100 - 500  |
| ▨ Lakes                             | 500 - 1000                                       |
| — Watercourses                      | 1000 +   |
| — Highway                           |  |
| — Major Road                        |  |
| ▨ Building Footprints               |  |

Date: 31 December 2019  
 Produced by: Ebbwater Consulting Inc.

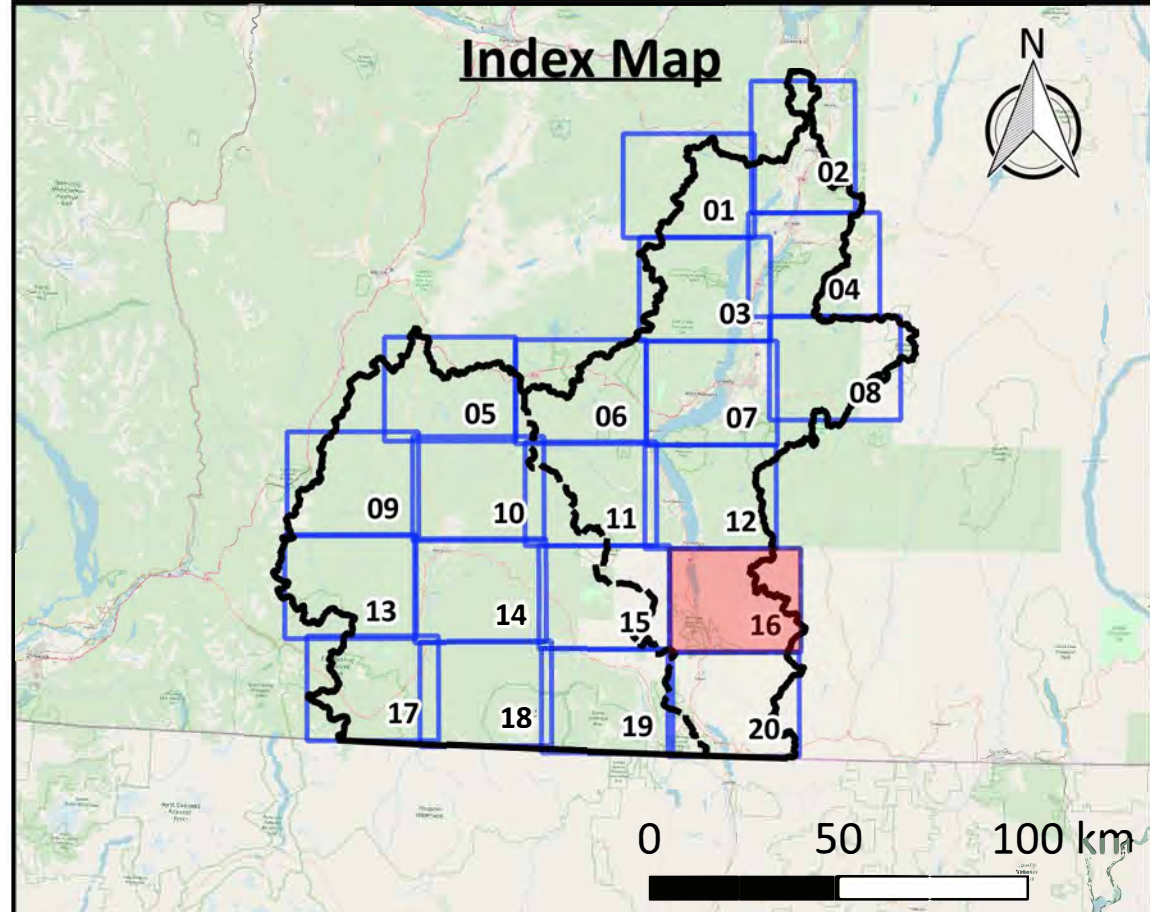
**Sylix (Okanagan) Flood and Debris Flow Risk Assessment Project**  
**Flood - Affected People**  
**Map tile 15 of 20**

ANSI D - Map No. P-F-003-015





**Zoom-In Map**



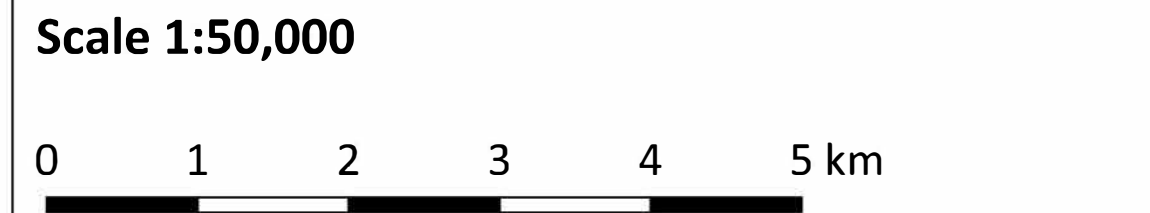
Click above map tile for Zoom-In map  
[Click here to return to Project Area map](#)  
[Click here to return to Okanagan map](#)  
[Click here to return to Similkameen map](#)

**Map Notes**

1. Map produced by Ebbwater Consulting Inc.
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**Data Sources**

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2. Population: Statistics Canada 2016 Census.
3. Building Footprints: Regional districts, municipalities, WFN and hand digitized using Bing Satellite Imagery.
4. Sylix Place Names: Okanagan Nation Alliance.
5. Base Layer: OpenStreetMap data – openstreetmap.org (© OpenStreetMap contributors; cartography licence CC BY-SA) and hill shade created using CDEM and USGM GMTED2010.



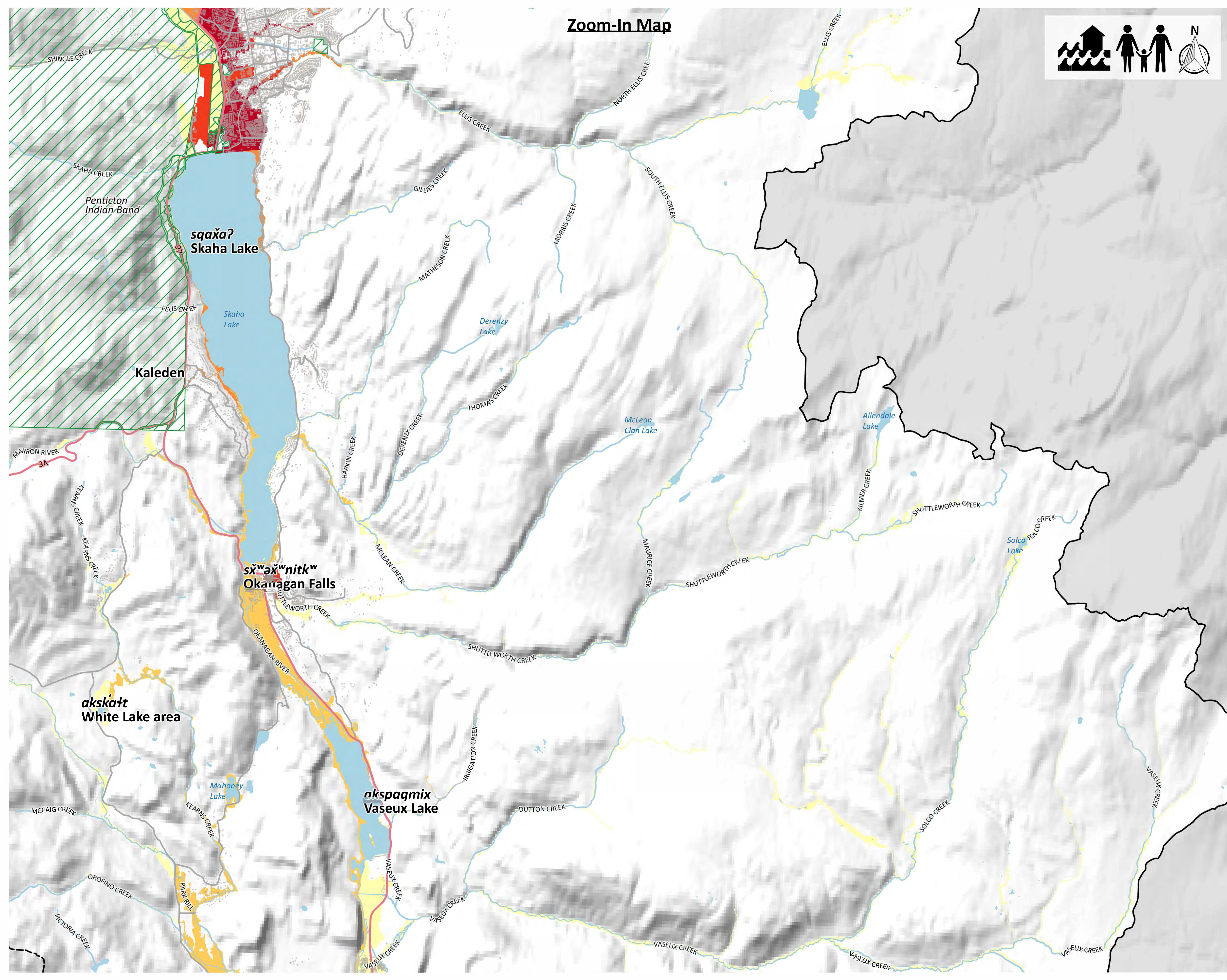
**Legend**

|                                     |                               |
|-------------------------------------|-------------------------------|
| <b>Background</b>                   | <b>Affected Assets</b>        |
| — Watershed Boundary                | <b>Population Density</b>     |
| - - - Okanagan-Similkameen Boundary | <b>(people per square km)</b> |
| — Canada - US Border                | 1 - 10                        |
| ▨ Reserves                          | 10 - 100                      |
| ▨ Lakes                             | 100 - 500                     |
| — Watercourses                      | 500 - 1000                    |
| — Highway                           | 1000 +                        |
| — Major Road                        |                               |
| ▨ Building Footprints               |                               |

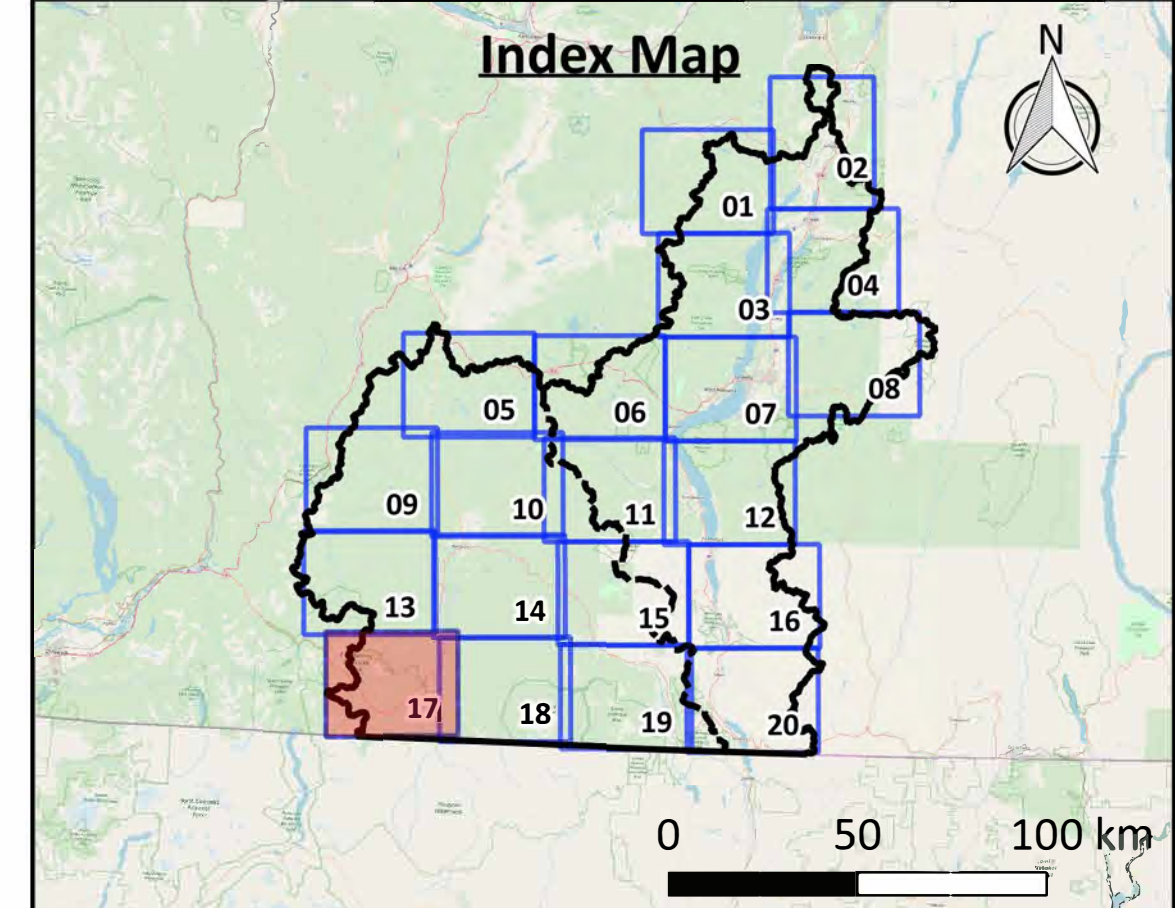
Date: 31 December 2019  
 Produced by: Ebbwater Consulting Inc.

**Sylix (Okanagan) Flood and Debris Flow Risk Assessment Project**  
**Flood - Affected People**  
**Map tile 16 of 20**

ANSI D - Map No. P-F-003-016



# Zoom-In Map



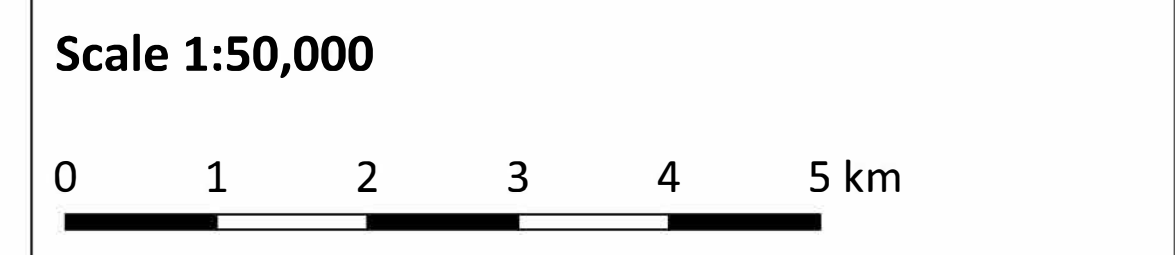
Click above map tile for Zoom-In map  
[Click here to return to Project Area map](#)  
[Click here to return to Okanagan map](#)  
[Click here to return to Similkameen map](#)

**Map Notes**

1. Map produced by Ebbwater Consulting Inc.
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2. Population: Statistics Canada 2016 Census.
3. Building Footprints: Regional districts, municipalities, WFN and hand digitized using Bing Satellite Imagery.
4. Sylix Place Names: Okanagan Nation Alliance.
5. Base Layer: OpenStreetMap data – openstreetmap.org (© OpenStreetMap contributors; cartography licence CC BY-SA) and hill shade created using CDEM and USGM GMTED2010.



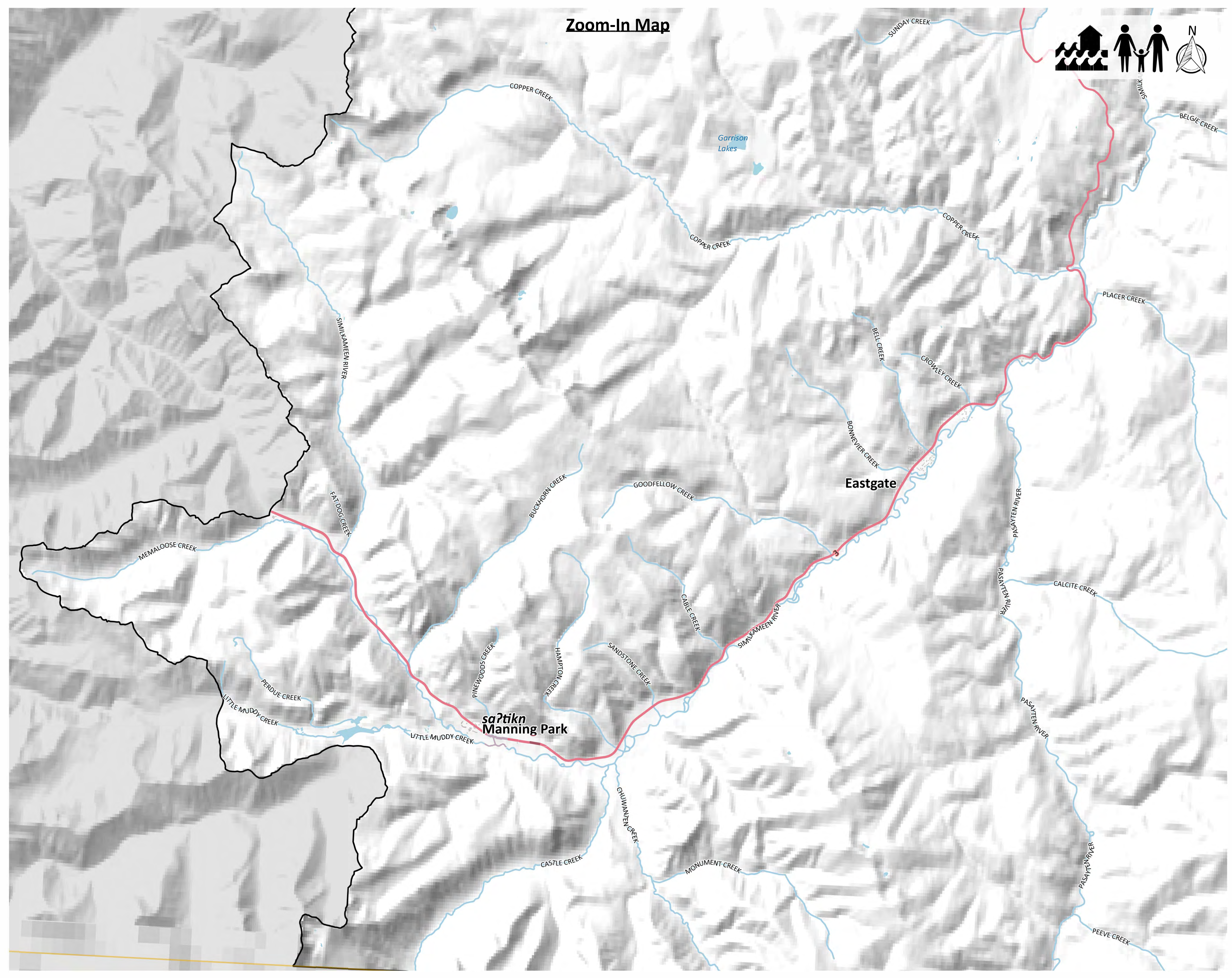
**Legend**

|                                   |  |
|-----------------------------------|--|
| <b>Background</b>                 | <b>Affected Assets</b>                           |
| — Watershed Boundary              | <b>Population Density (people per square km)</b> |
| --- Okanagan-Similkameen Boundary | 1 - 10   |
| — Canada - US Border              | 10 - 100   |
| ▨ Reserves                        | 100 - 500  |
| ▨ Lakes                           | 500 - 1000                                       |
| — Watercourses                    | 1000 +   |
| — Highway                         |  |
| — Major Road                      |  |
| ▨ Building Footprints             |  |

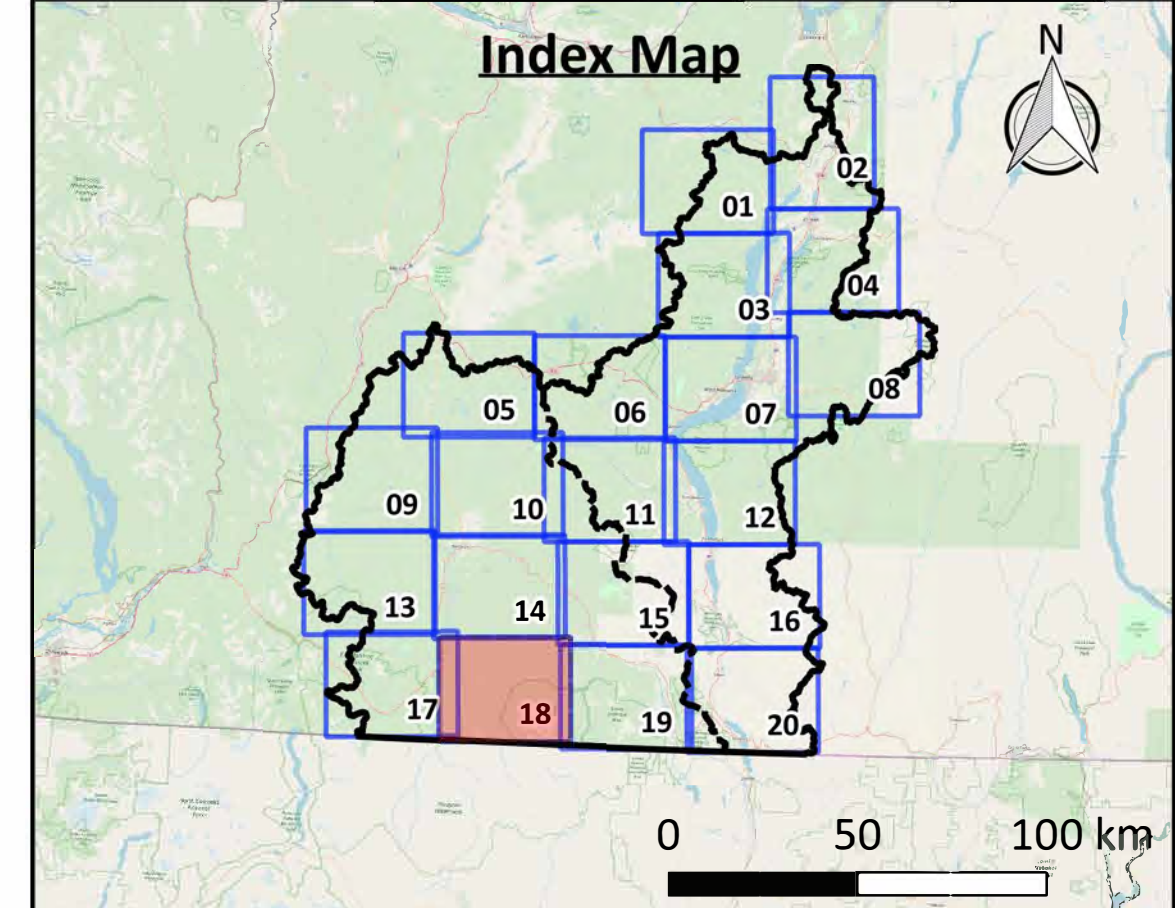
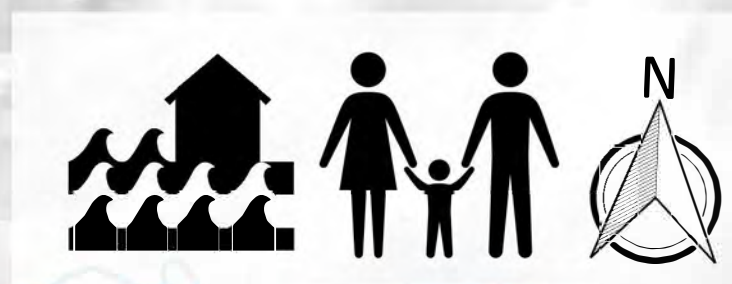
**Date:** 31 December 2019  
**Produced by:** Ebbwater Consulting Inc.

**Sylix (Okanagan) Flood and Debris Flow Risk Assessment Project**  
**Flood - Affected People**  
**Map tile 17 of 20**

ANSI D - Map No. P-F-003-017



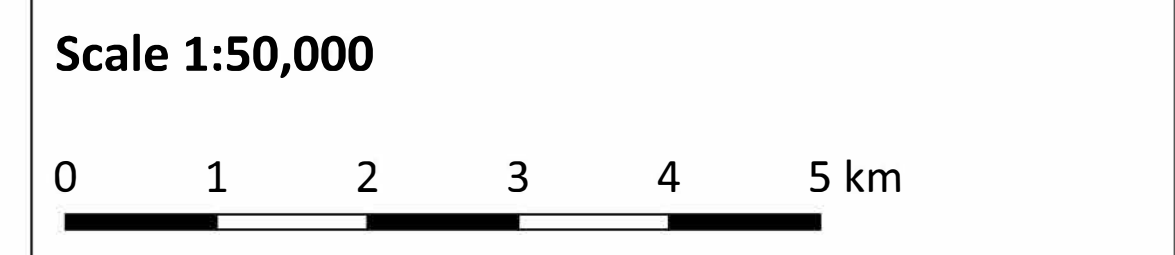
# Zoom-In Map



[Click above map tile for Zoom-In map](#)  
[Click here to return to Project Area map](#)  
[Click here to return to Okanagan map](#)  
[Click here to return to Similkameen map](#)

**Map Notes**  
 1. Map produced by Ebbwater Consulting Inc.  
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 4. Sylix Place Names: Okanagan Nation Alliance.  
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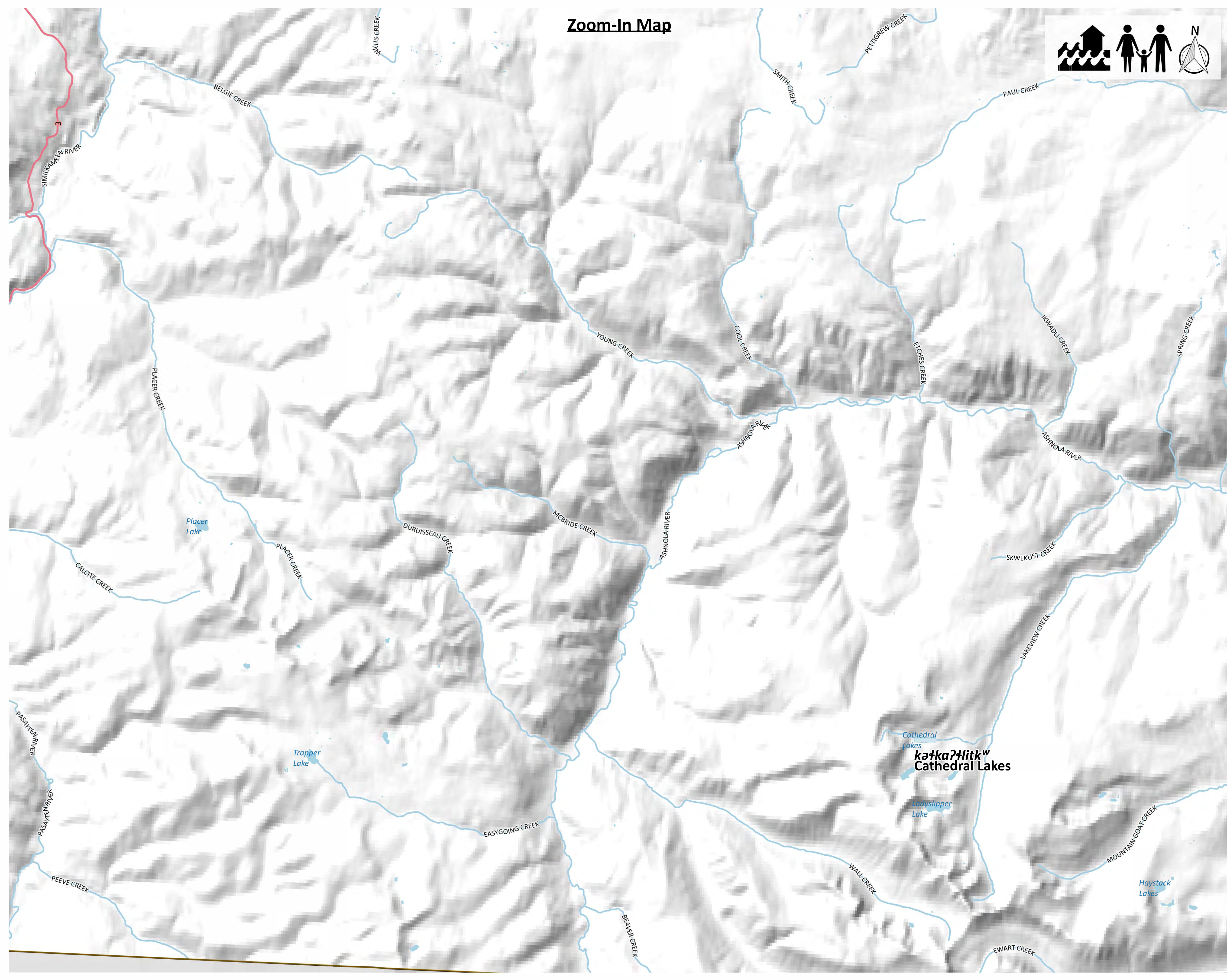
**Legend**

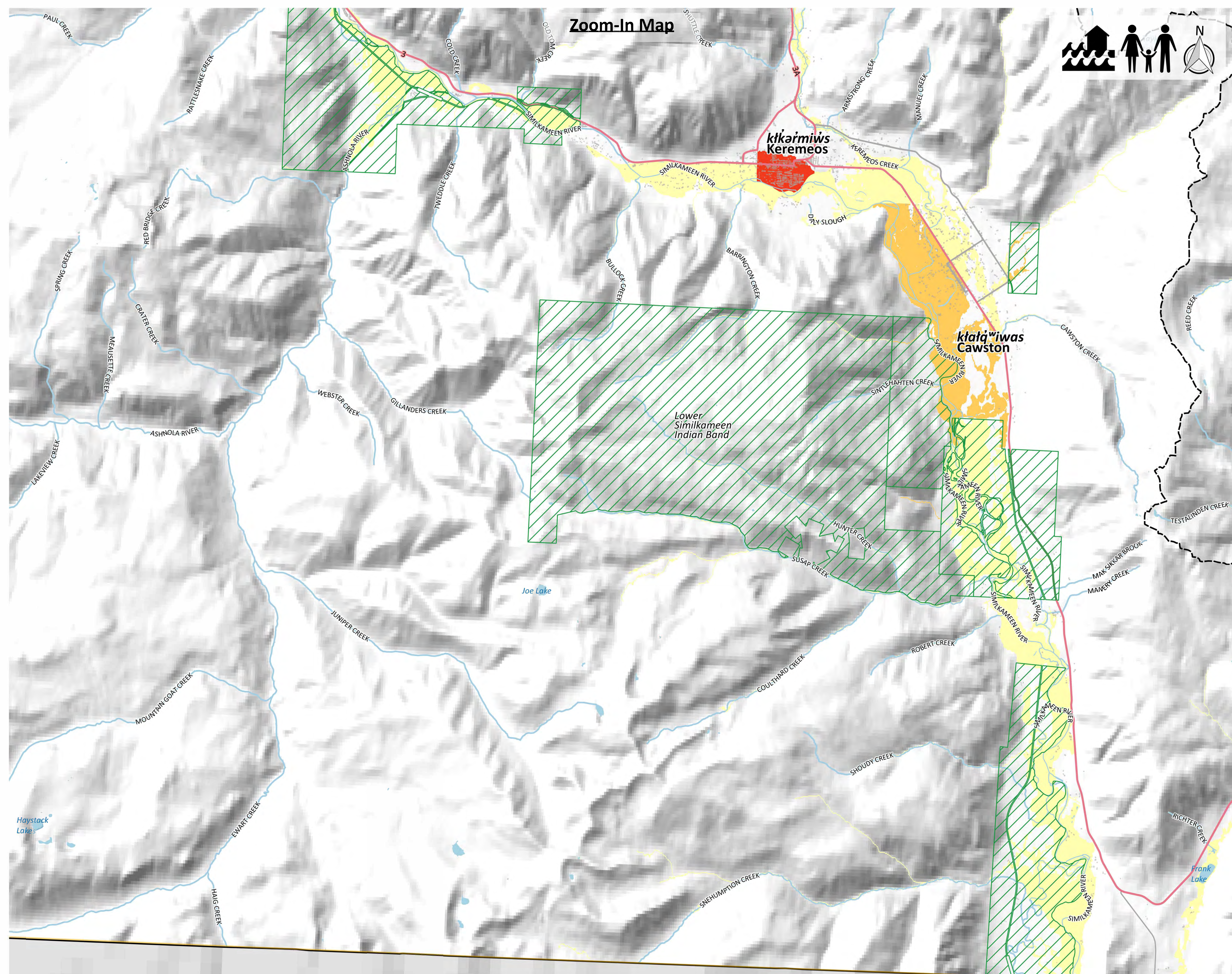
|                                     |  |
|-------------------------------------|--|
| <b>Background</b>                   | <b>Affected Assets</b>                           |
| — Watershed Boundary                | <b>Population Density (people per square km)</b> |
| - - - Okanagan-Similkameen Boundary | 1 - 10   |
| — Canada - US Border                | 10 - 100   |
| ▨ Reserves                          | 100 - 500  |
| ▨ Lakes                             | 500 - 1000                                       |
| — Watercourses                      | 1000 +   |
| — Highway                           |  |
| — Major Road                        |  |
| ▨ Building Footprints               |  |

**Date:** 31 December 2019  
**Produced by:** Ebbwater Consulting Inc.

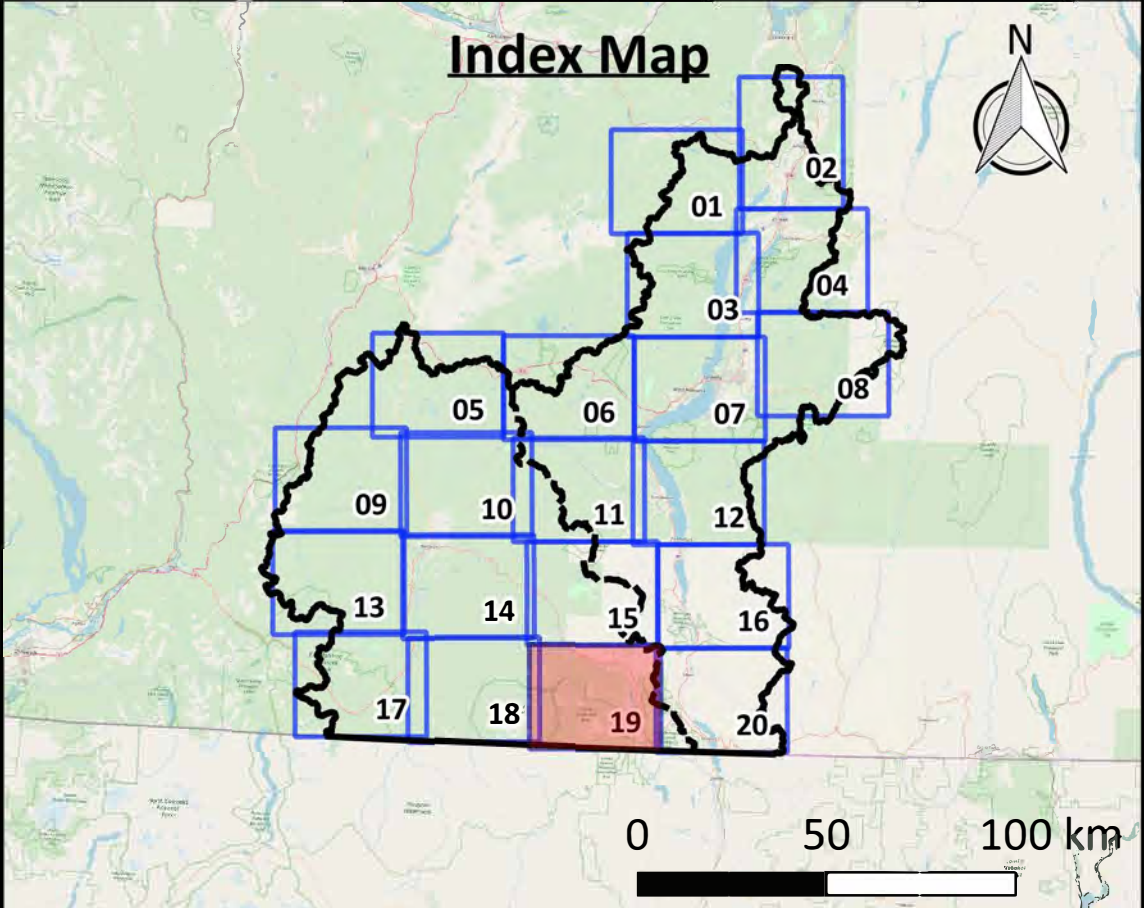
**Sylix (Okanagan) Flood and Debris Flow Risk Assessment Project**  
**Flood - Affected People**  
**Map tile 18 of 20**

ANSI D - Map No. P-F-003-018





**Zoom-In Map**



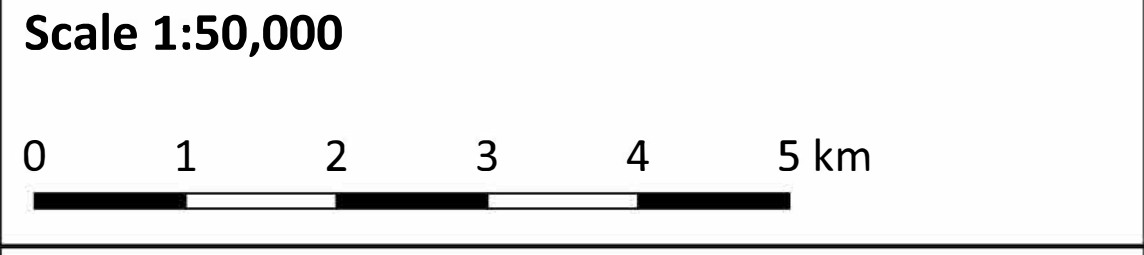
[Click above map tile for Zoom-In map](#)  
[Click here to return to Project Area map](#)  
[Click here to return to Okanagan map](#)  
[Click here to return to Similkameen map](#)

**Map Notes**

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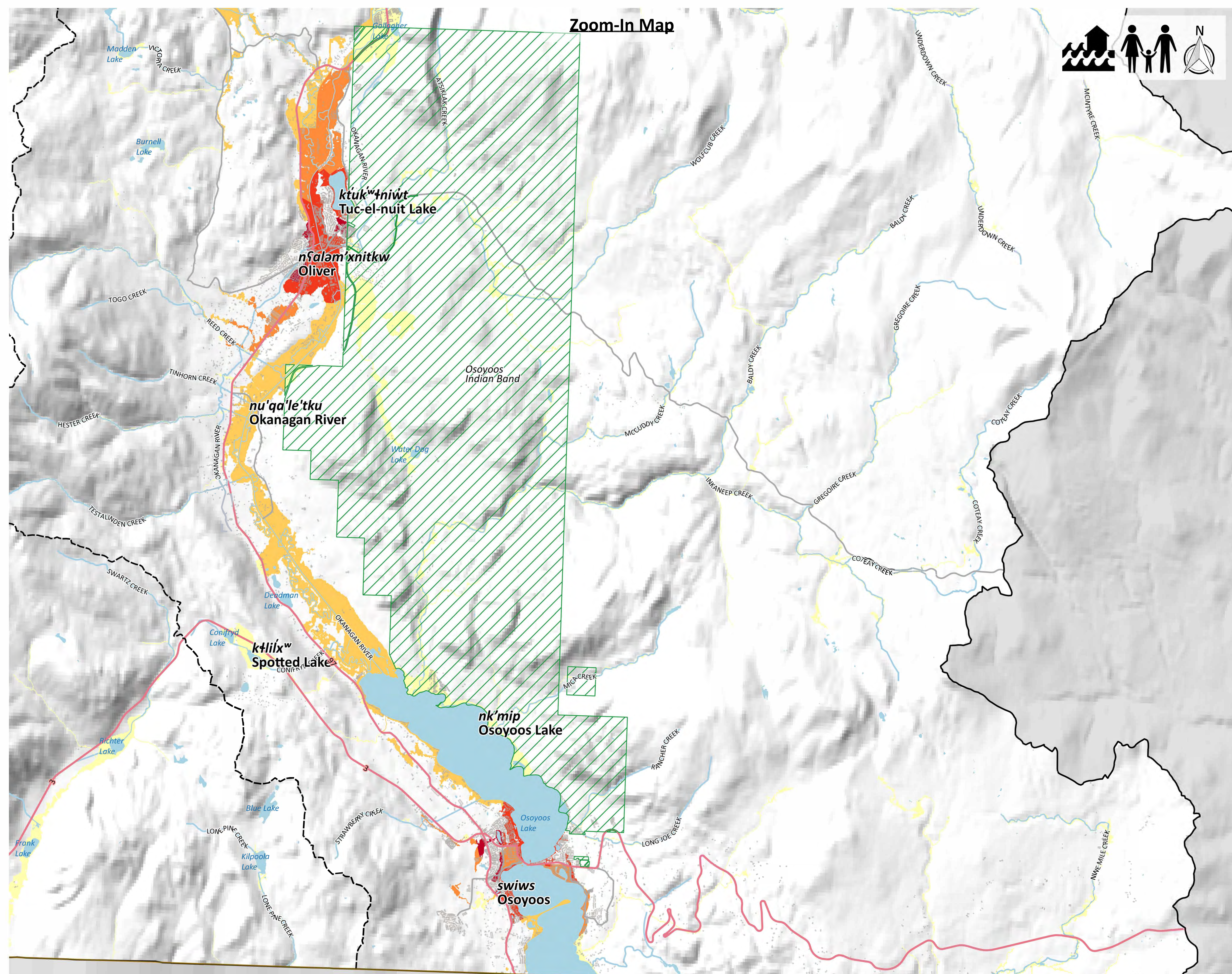
**Legend**

|                                   |                               |
|-----------------------------------|-------------------------------|
| <b>Background</b>                 | <b>Affected Assets</b>        |
| — Watershed Boundary              | <b>Population Density</b>     |
| --- Okanagan-Similkameen Boundary | <b>(people per square km)</b> |
| — Canada - US Border              | 1 - 10                        |
| ▨ Reserves                        | 10 - 100                      |
| ▨ Lakes                           | 100 - 500                     |
| — Watercourses                    | 500 - 1000                    |
| — Highway                         | 1000 +                        |
| — Major Road                      |                               |
| ▨ Building Footprints             |                               |

**Date:** 31 December 2019  
**Produced by:** Ebbwater Consulting Inc.

**Sylix (Okanagan) Flood and Debris Flow Risk Assessment Project**  
**Flood - Affected People**  
**Map tile 19 of 20**

ANSI D - Map No. P-F-003-019



**Zoom-In Map**



**ebbwater** CONSULTING  
THOUGHTFUL FLOOD MANAGEMENT

**Palmer Environmental Consulting Group Inc.**

**Sylix Okanagan Nation Alliance**

**Index Map**

0 50 100 km

Click above map tile for Zoom-In map  
[Click here to return to Project Area map](#)  
[Click here to return to Okanagan map](#)  
[Click here to return to Similkameen map](#)

**Map Notes**

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**Scale 1:50,000**

**Legend**

|                                     |  |
|-------------------------------------|--|
| <b>Background</b>                   | <b>Affected Assets</b>                           |
| — Watershed Boundary                | <b>Population Density (people per square km)</b> |
| - - - Okanagan-Similkameen Boundary | 1 - 10   |
| — Canada - US Border                | 10 - 100   |
| ▨ Reserves                          | 100 - 500  |
| ▭ Lakes                             | 500 - 1000                                       |
| — Watercourses                      | 1000 +   |
| — Highway                           |  |
| — Major Road                        |  |
| ▭ Building Footprints               |  |

Date: 31 December 2019  
 Produced by: Ebbwater Consulting Inc.

**Sylix (Okanagan) Flood and Debris Flow Risk Assessment Project**  
**Flood - Affected People**  
**Map tile 20 of 20**

ANSI D - Map No. P-F-003-020

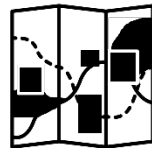
# Syilx Okanagan Flood and Debris Flow Risk Assessment

## Map Book

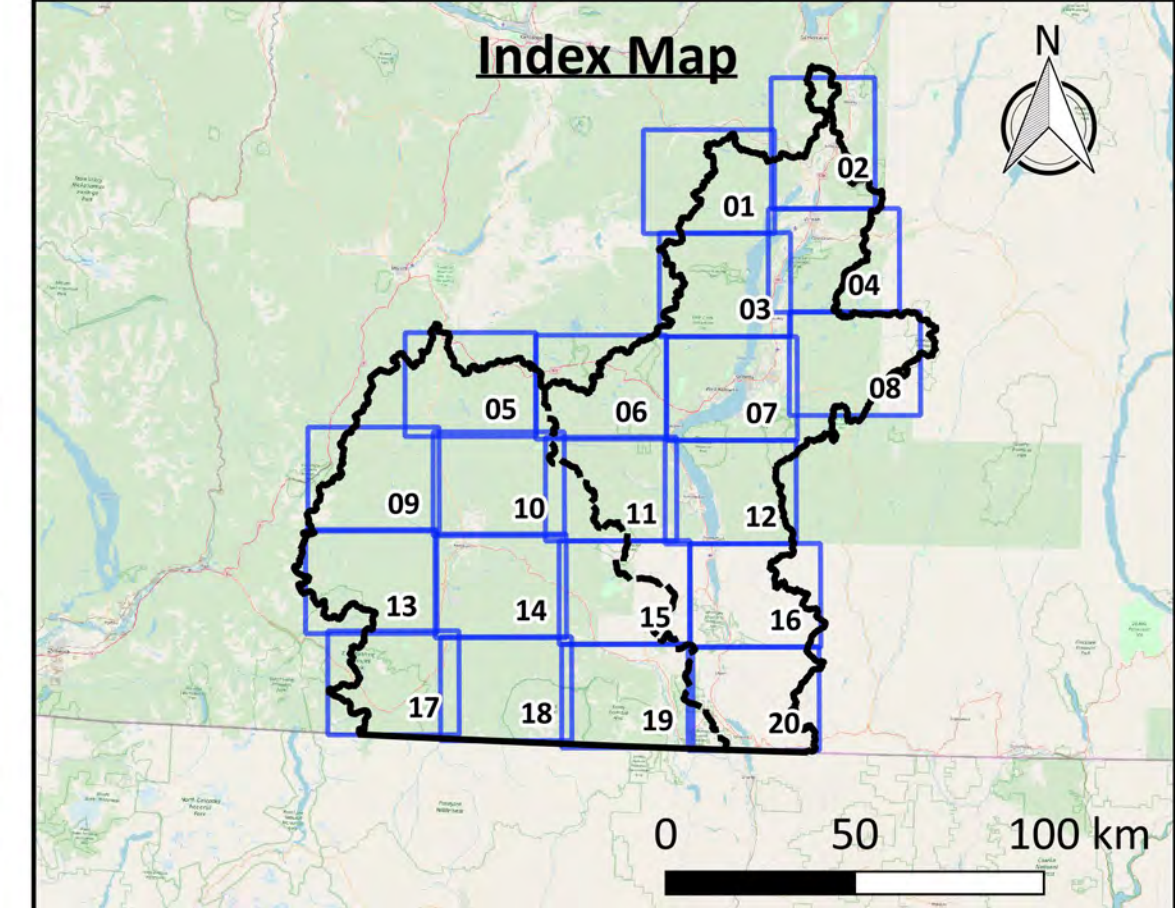
### Map Series 5 of 7: Affected People Indicator



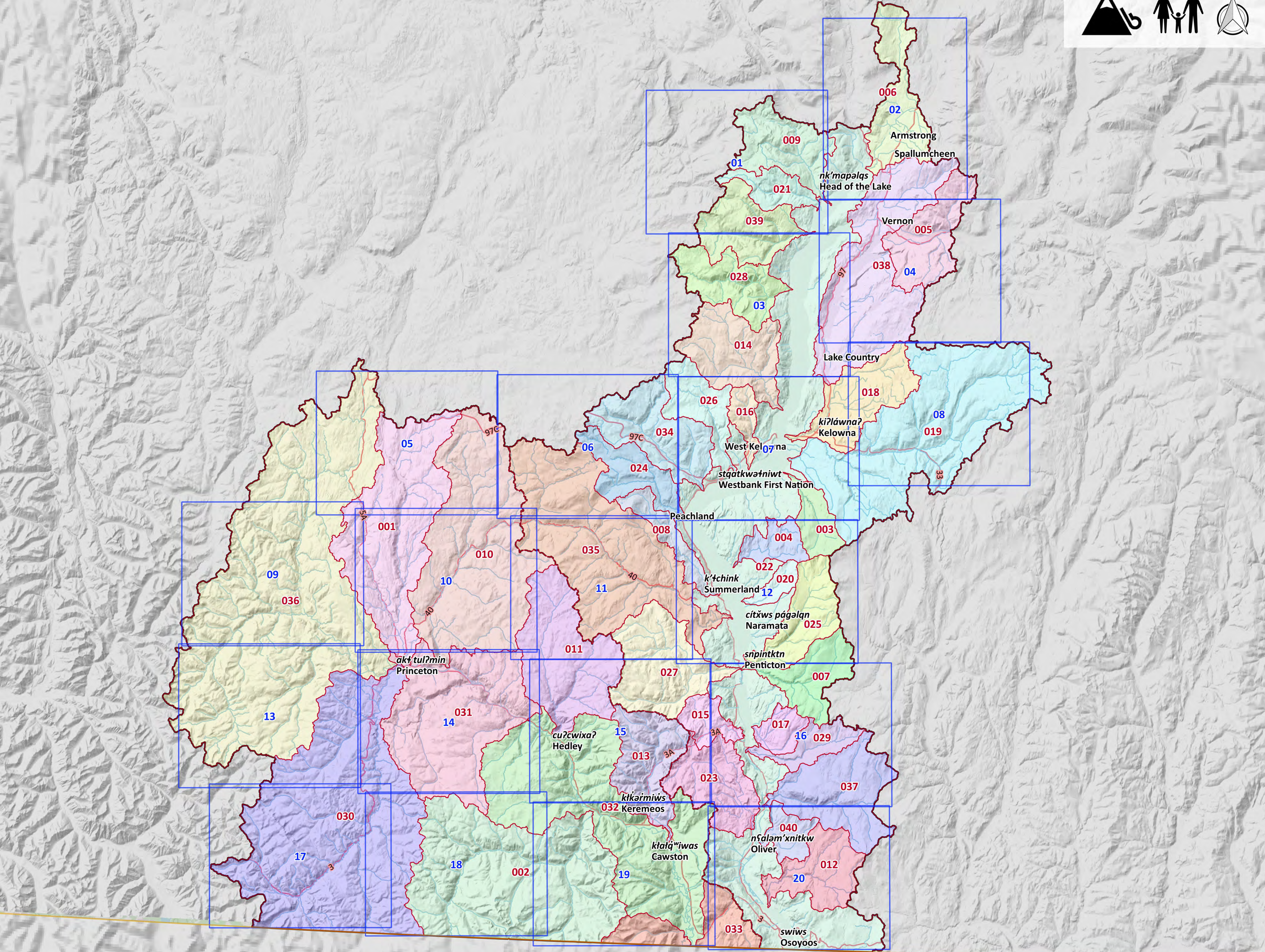
## Quantitative Debris Flow Consequence Maps



# Watershed Index



Click on the blue map tile to go to the Zoom-In map



## Legend

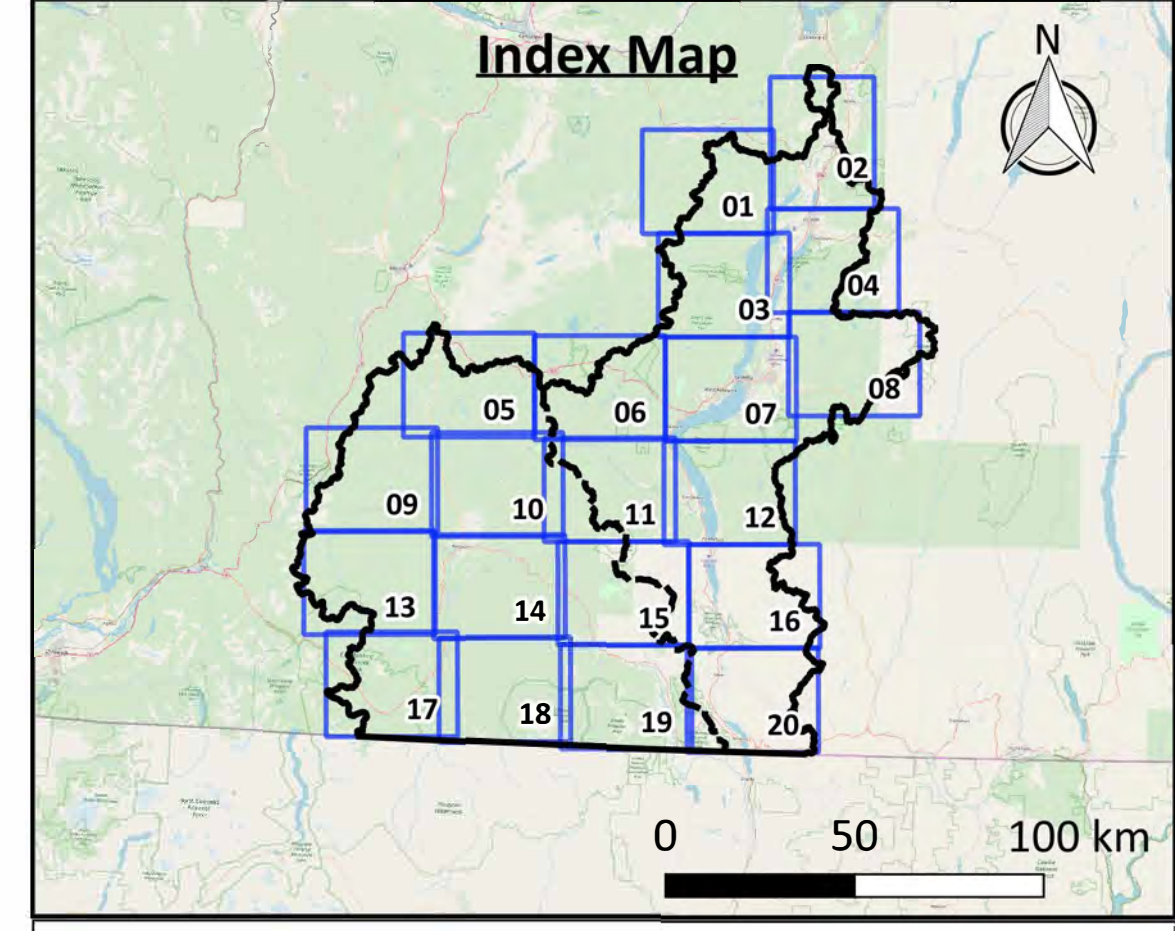
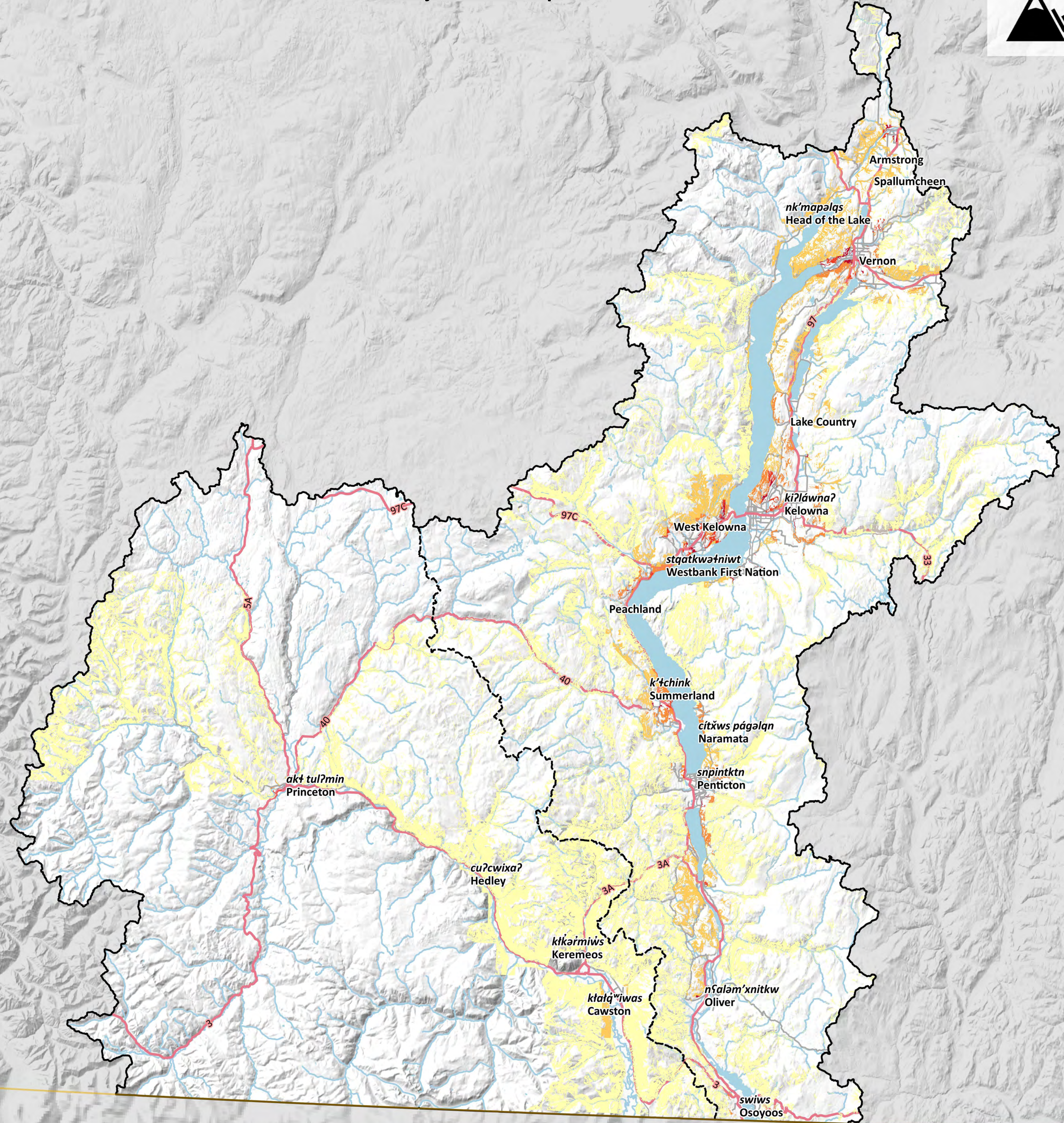
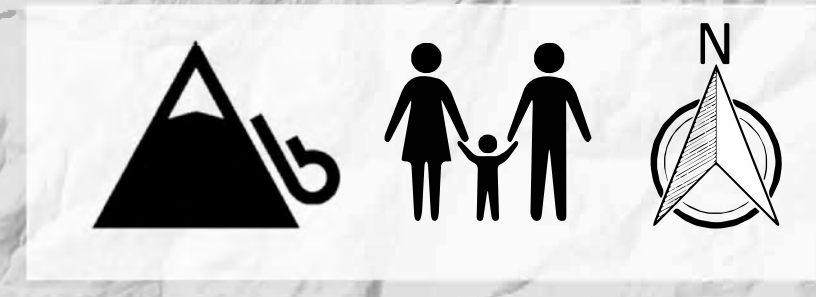
- |                                   |                           |
|-----------------------------------|---------------------------|
| <b>Background</b>                 | <b>Sub-Watersheds</b>     |
| — Watershed Boundary              | 001 - Allison Creek       |
| --- Okanagan-Similkameen Boundary | 002 - Ashnola River       |
| — Canada - US Border              | 003 - Bellevue Creek      |
| — Lakes                           | 004 - Chute Creek         |
| — Watercourses                    | 005 - Coldstream Creek    |
| — Highway                         | 006 - Deep Creek          |
| — Major Road                      | 007 - Ellis Creek         |
| □ Map tiles                       | 008 - Eneas Creek         |
|                                   | 009 - Equis Creek         |
|                                   | 010 - Hayes Creek         |
|                                   | 011 - Hedley Creek        |
|                                   | 012 - Inkaneep Creek      |
|                                   | 013 - Keremeos Creek      |
|                                   | 014 - Lambly Creek        |
|                                   | 015 - Marron River        |
|                                   | 016 - McDougall Creek     |
|                                   | 017 - McLean Creek        |
|                                   | 018 - Mill Creek          |
|                                   | 019 - Mission Creek       |
|                                   | 020 - Naramata Creek      |
|                                   | 021 - Naswhito Creek      |
|                                   | 022 - Okanagan River      |
|                                   | 023 - Park Rill           |
|                                   | 024 - Peachland Creek     |
|                                   | 025 - Penticton Creek     |
|                                   | 026 - Powers Creek        |
|                                   | 027 - Shingle Creek       |
|                                   | 028 - Shorts Creek        |
|                                   | 029 - Shuttleworth Creek  |
|                                   | 030 - Similkameen River 1 |
|                                   | 031 - Similkameen River 2 |
|                                   | 032 - Similkameen River 3 |
|                                   | 033 - Similkameen River 4 |
|                                   | 034 - Trepanier Creek     |
|                                   | 035 - Trout Creek         |
|                                   | 036 - Tulameen River      |
|                                   | 037 - Vaseux Creek        |
|                                   | 038 - Vernon Creek        |
|                                   | 039 - Whiteman Creek      |
|                                   | 040 - Wolfcub Creek       |

Scale 1:350,000  
0 10 20 30 km

Date: 31 December 2019  
Produced by: Ebbwater Consulting Inc.

**Sjilx (Okanagan) Flood and Debris Flow Risk Assessment Project**  
**Debris Flow - Affected People**

# Project Area Map



Click above map tile for Zoom-In map  
[Click here to go to Okanagan Map](#)  
[Click here to go to Similkameen Map](#)

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**Scale 1:350,000**  
 0 10 20 30 km

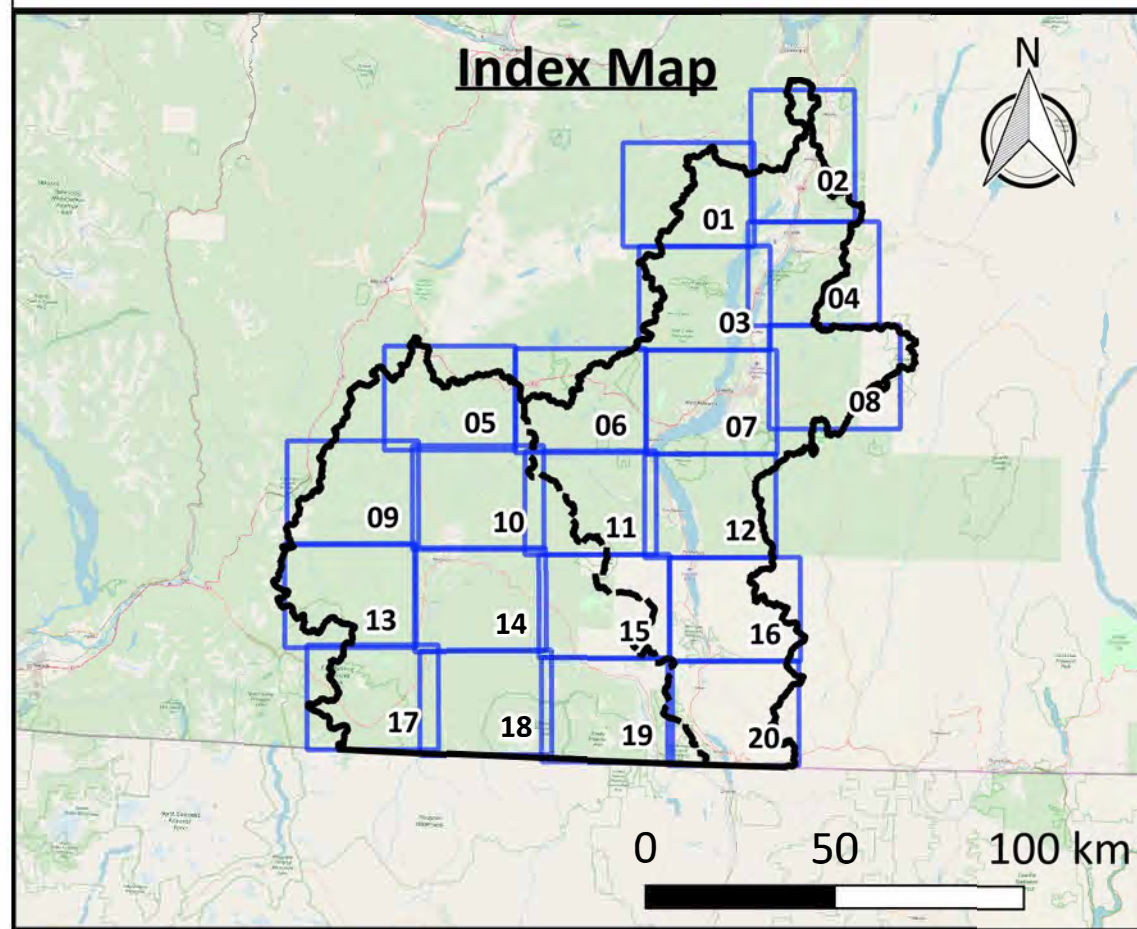
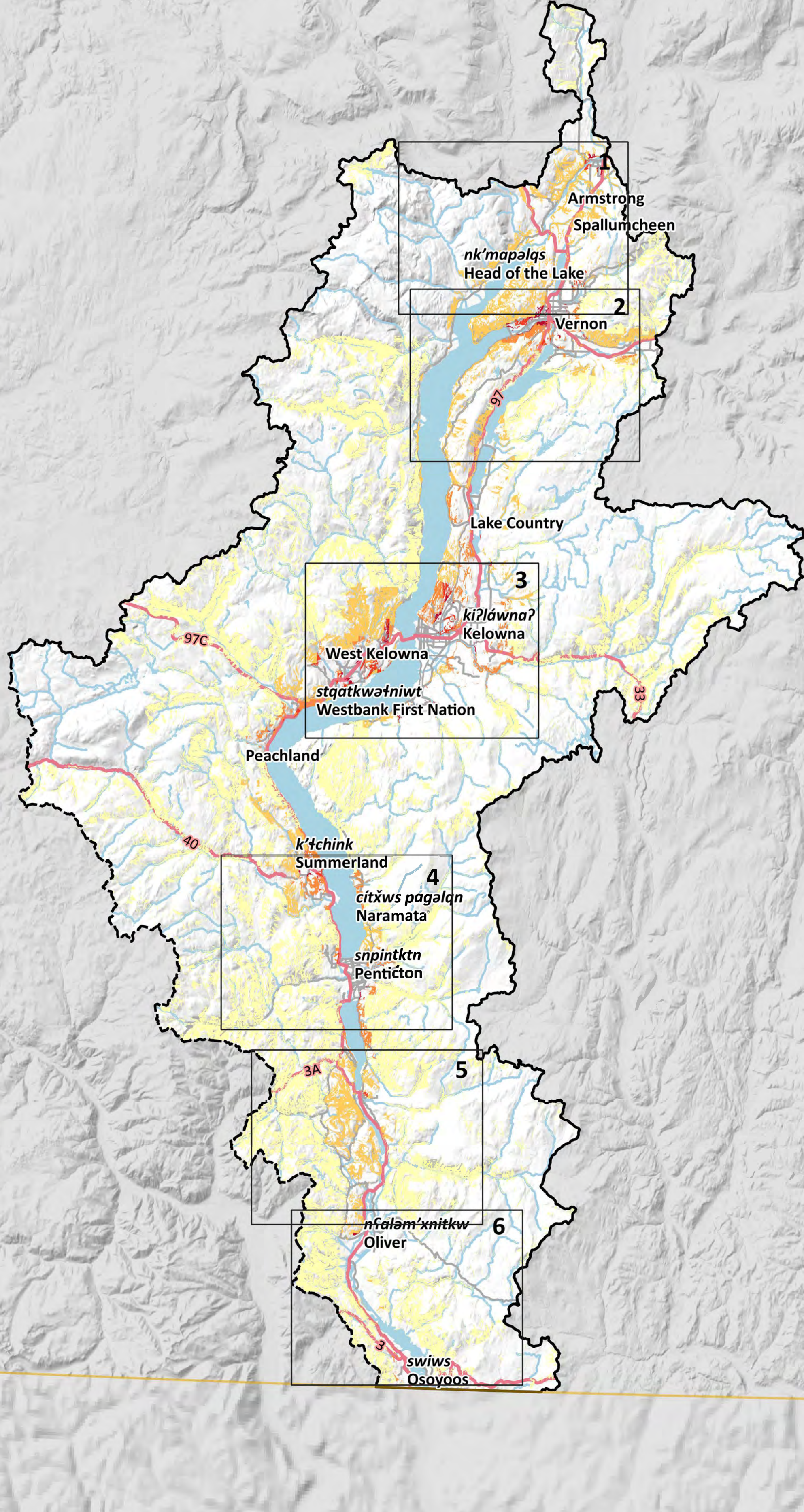
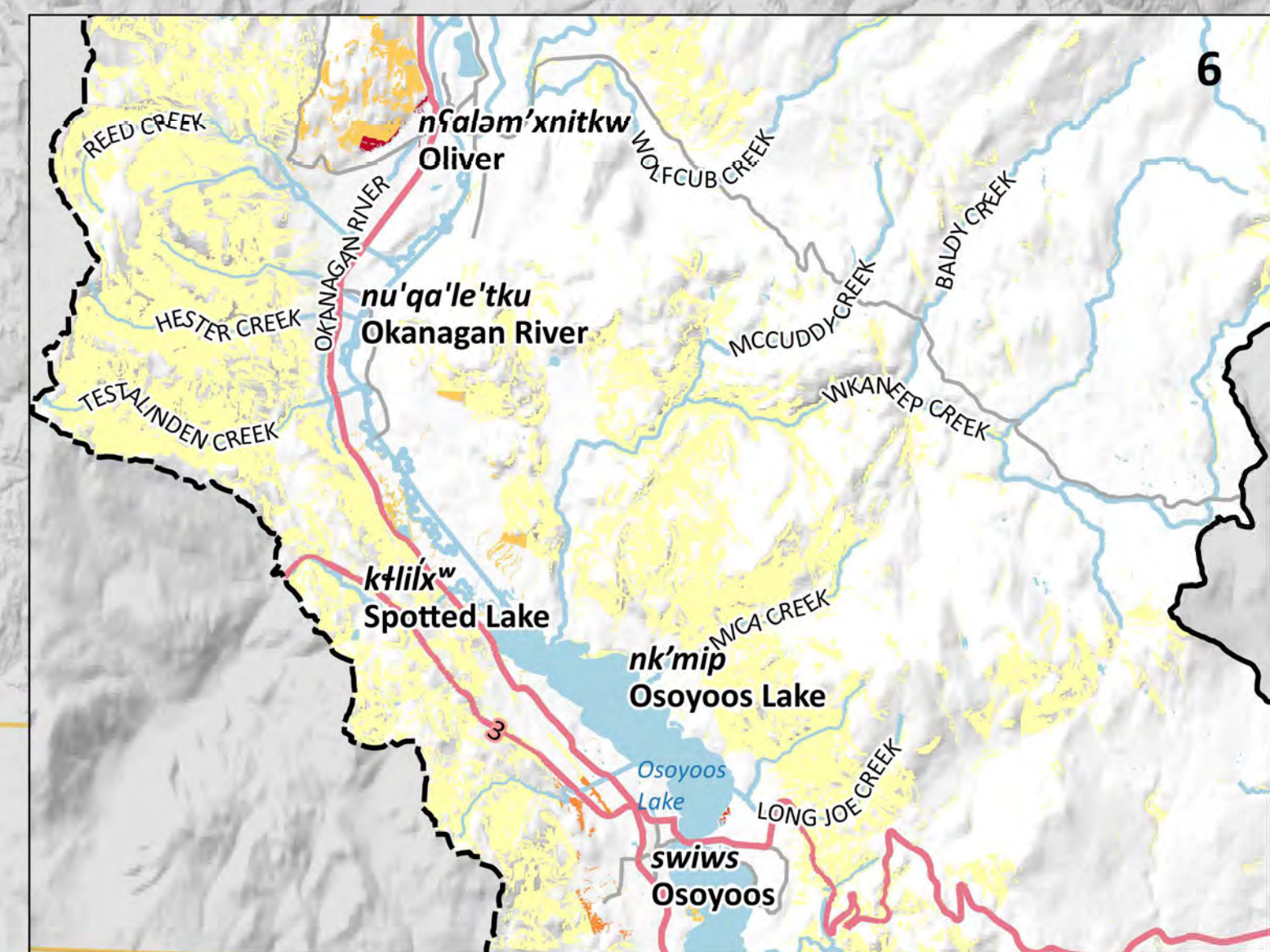
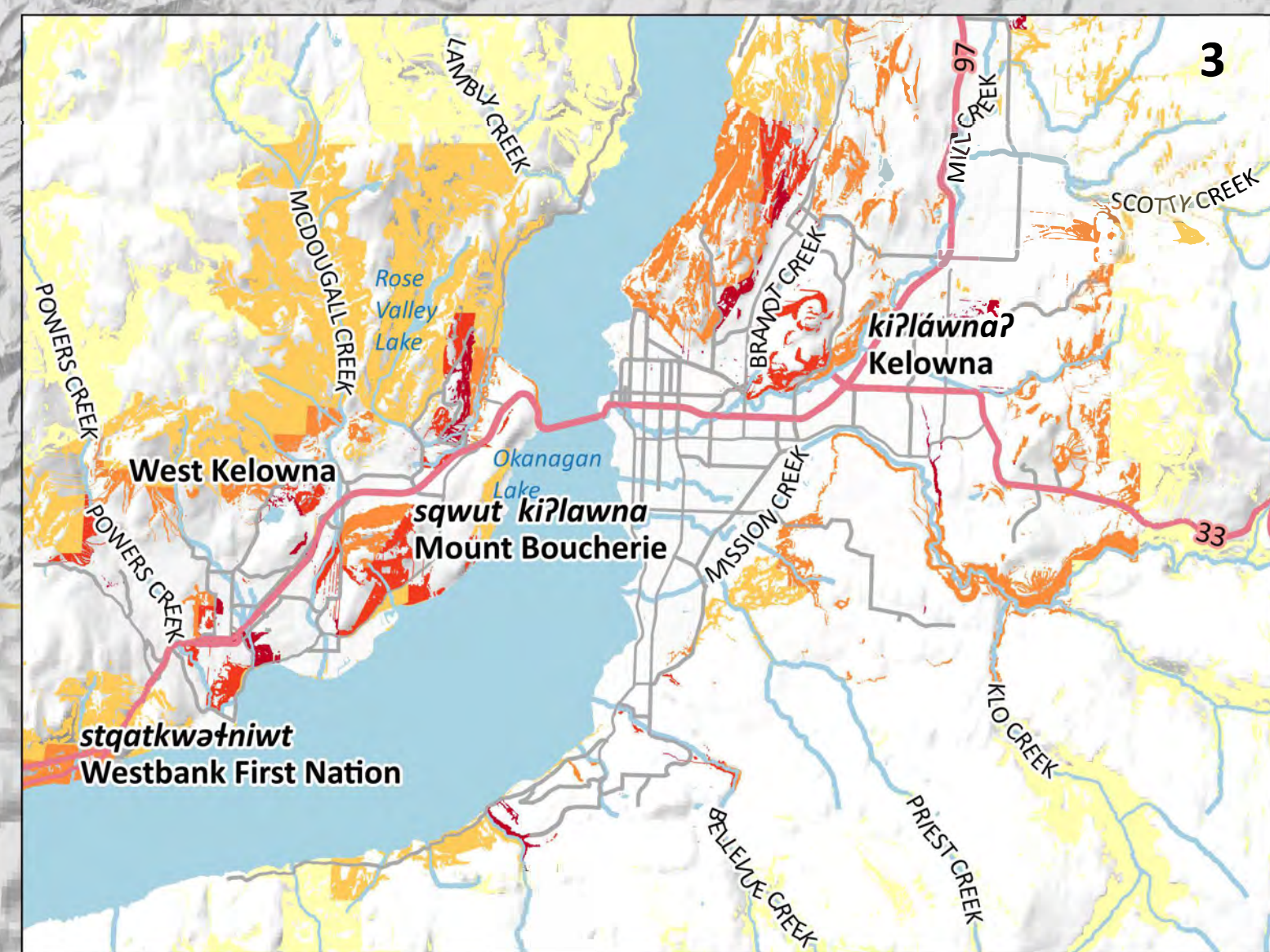
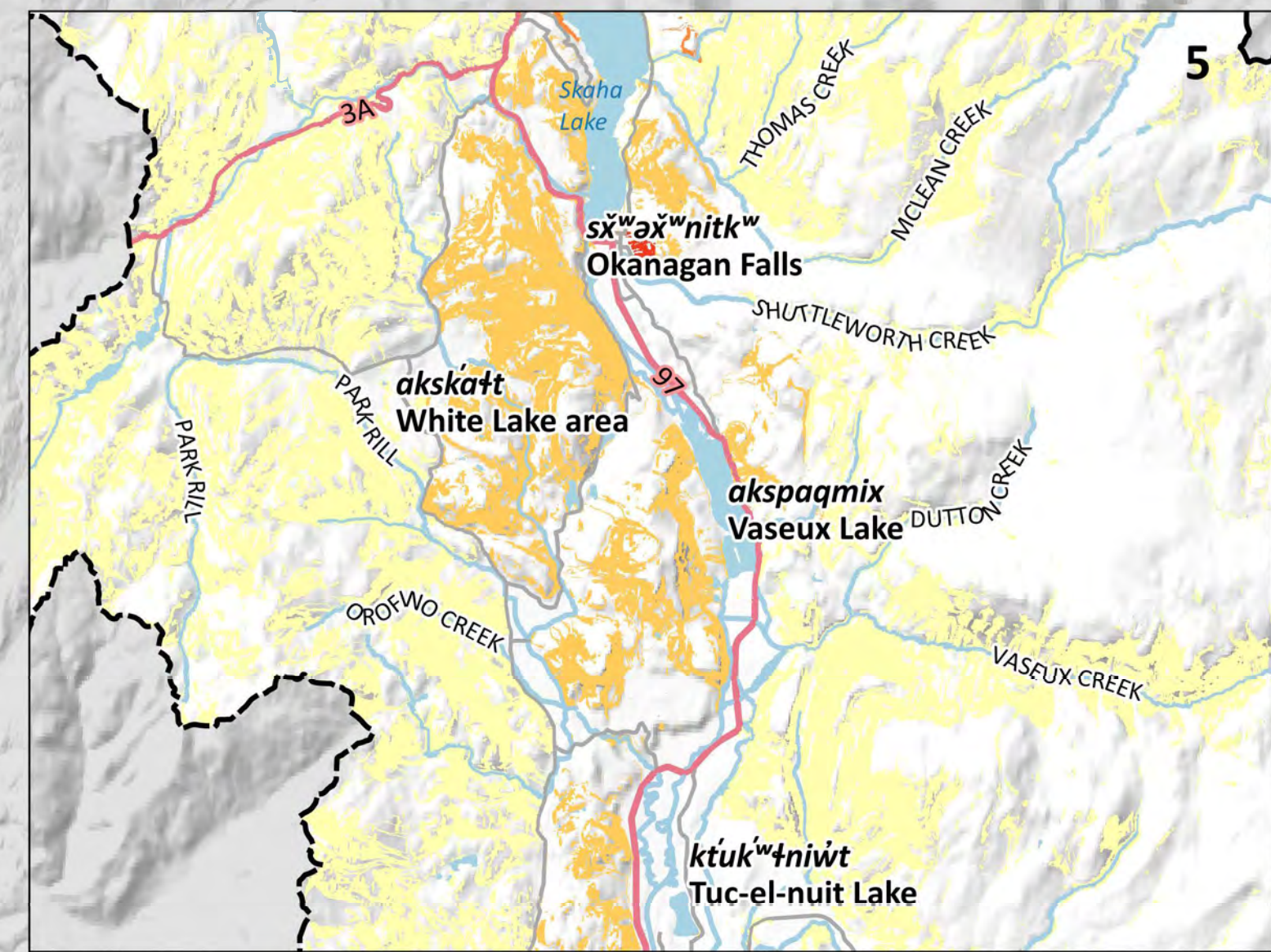
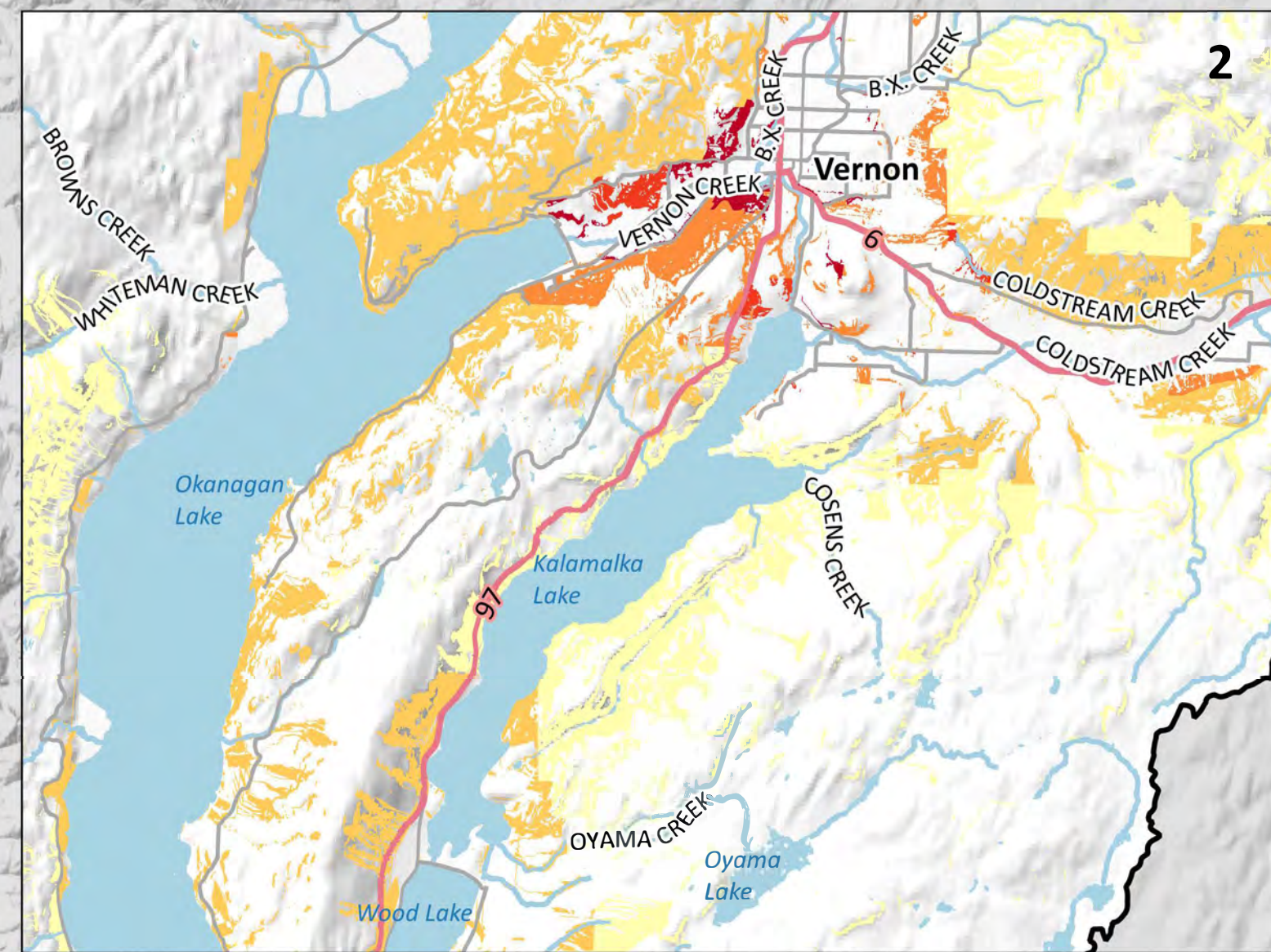
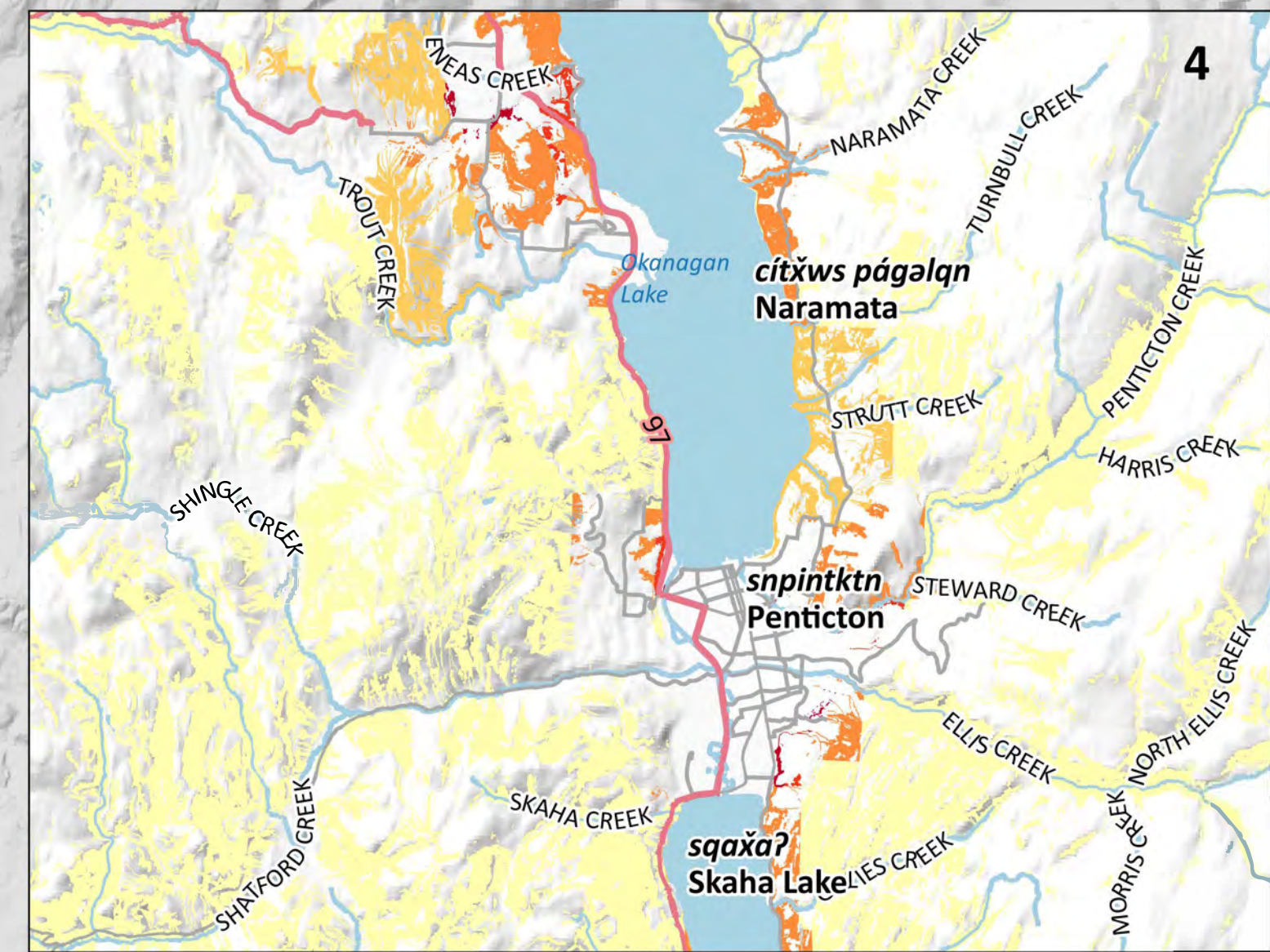
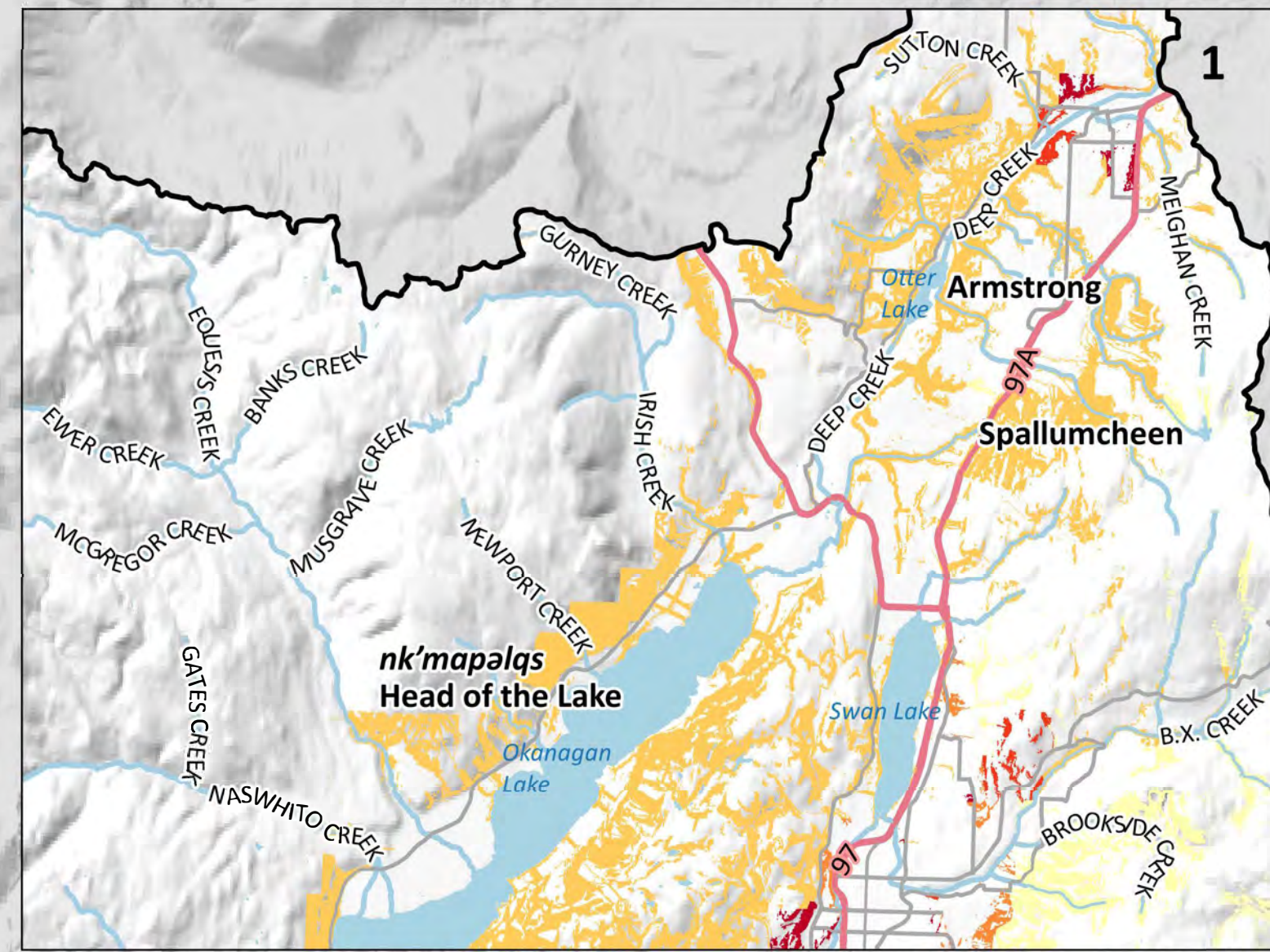
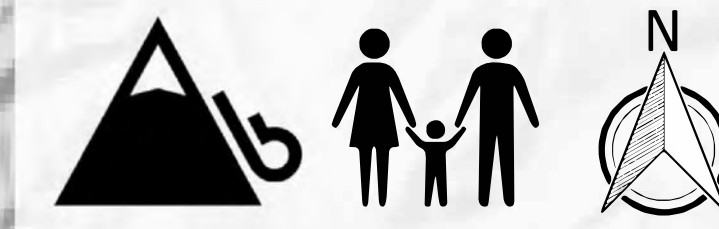
| Legend                           |  |
|----------------------------------|--|
| <b>Background</b>                | <b>Affected Assets</b>                           |
| — Watershed Boundary             | <b>Population Density (people per square km)</b> |
| -- Okanagan-Similkameen Boundary | 1 - 10   |
| — Canada - US Border             | 10 - 100   |
| — Lakes                          | 100 - 500  |
| — Watercourses                   | 500 - 1000                                       |
| — Highway                        | 1000 +   |
| — Major Road                     |  |

Date: 31 December 2019  
 Produced by: Ebbwater Consulting Inc.

**Sylix (Okanagan) Flood and Debris Flow Risk Assessment Project**  
**Debris Flow - Affected People**



# Okanagan Map



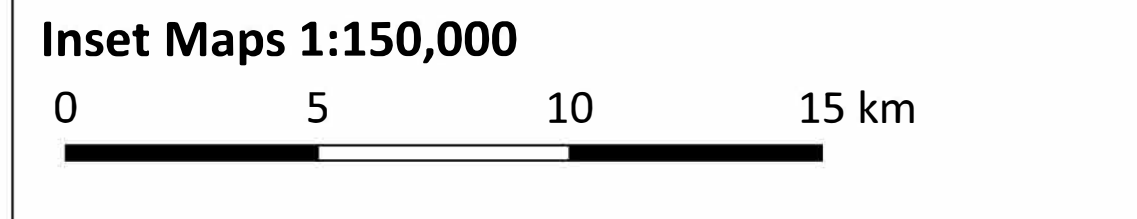
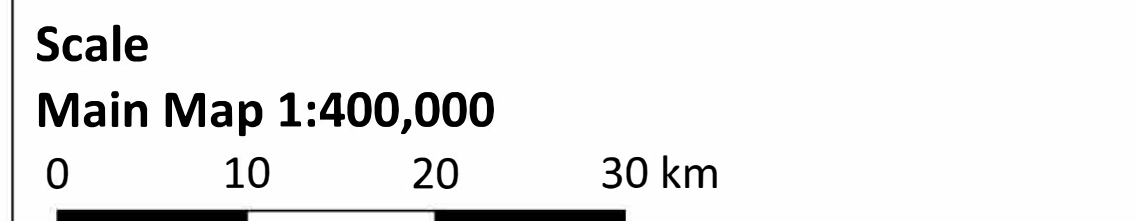
Click above map tile for Zoom-In map  
[Click here to return to Project Area map](#)  
[Click here to go to Similkameen map](#)

**Map Notes**

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**Legend**

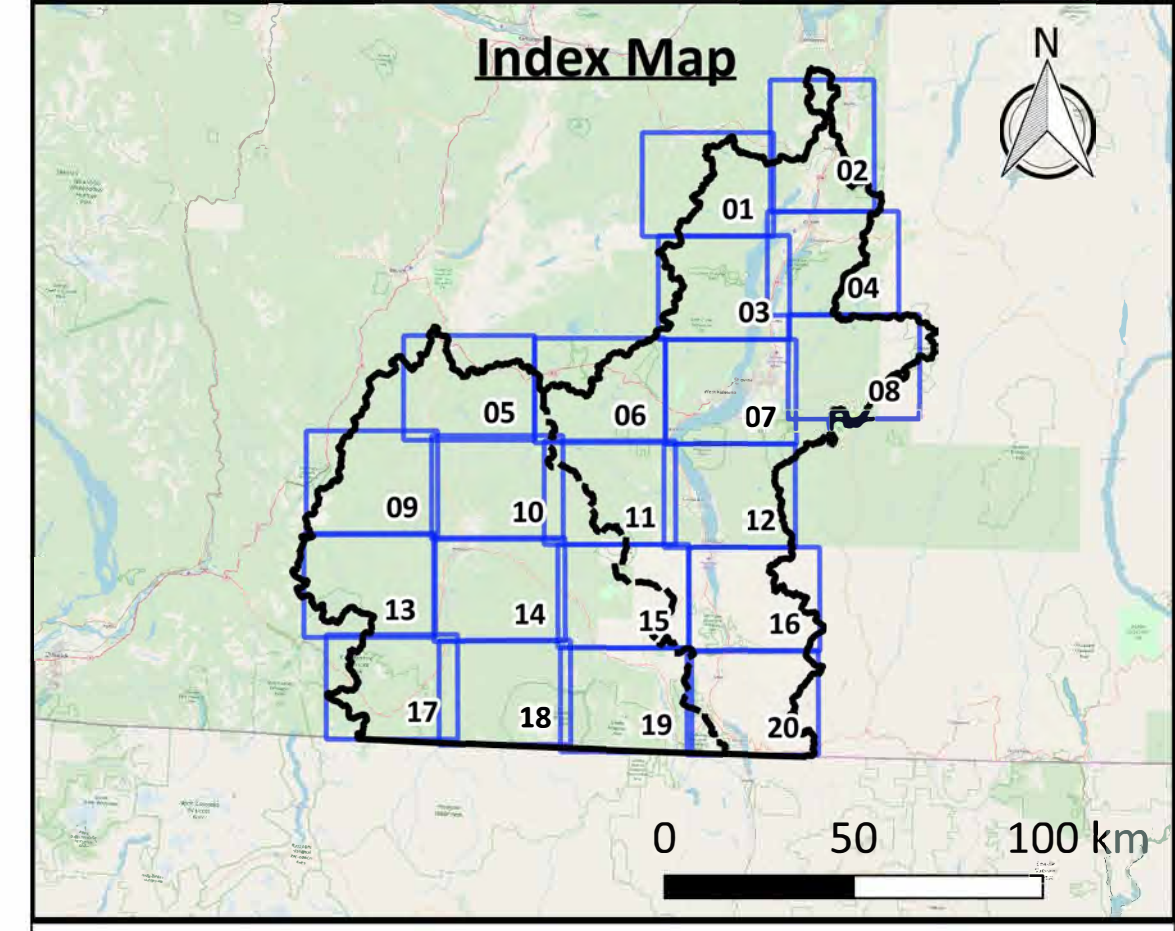
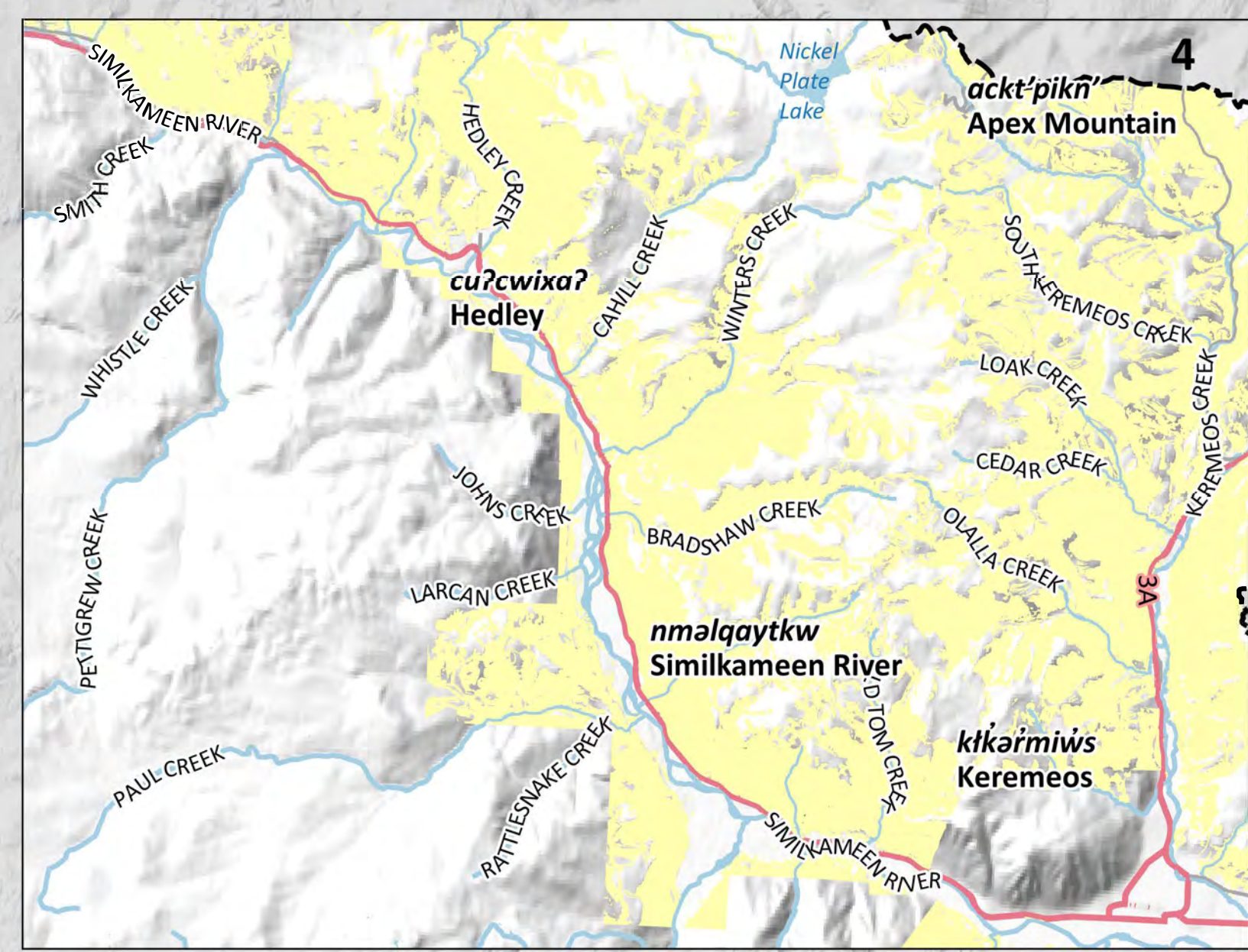
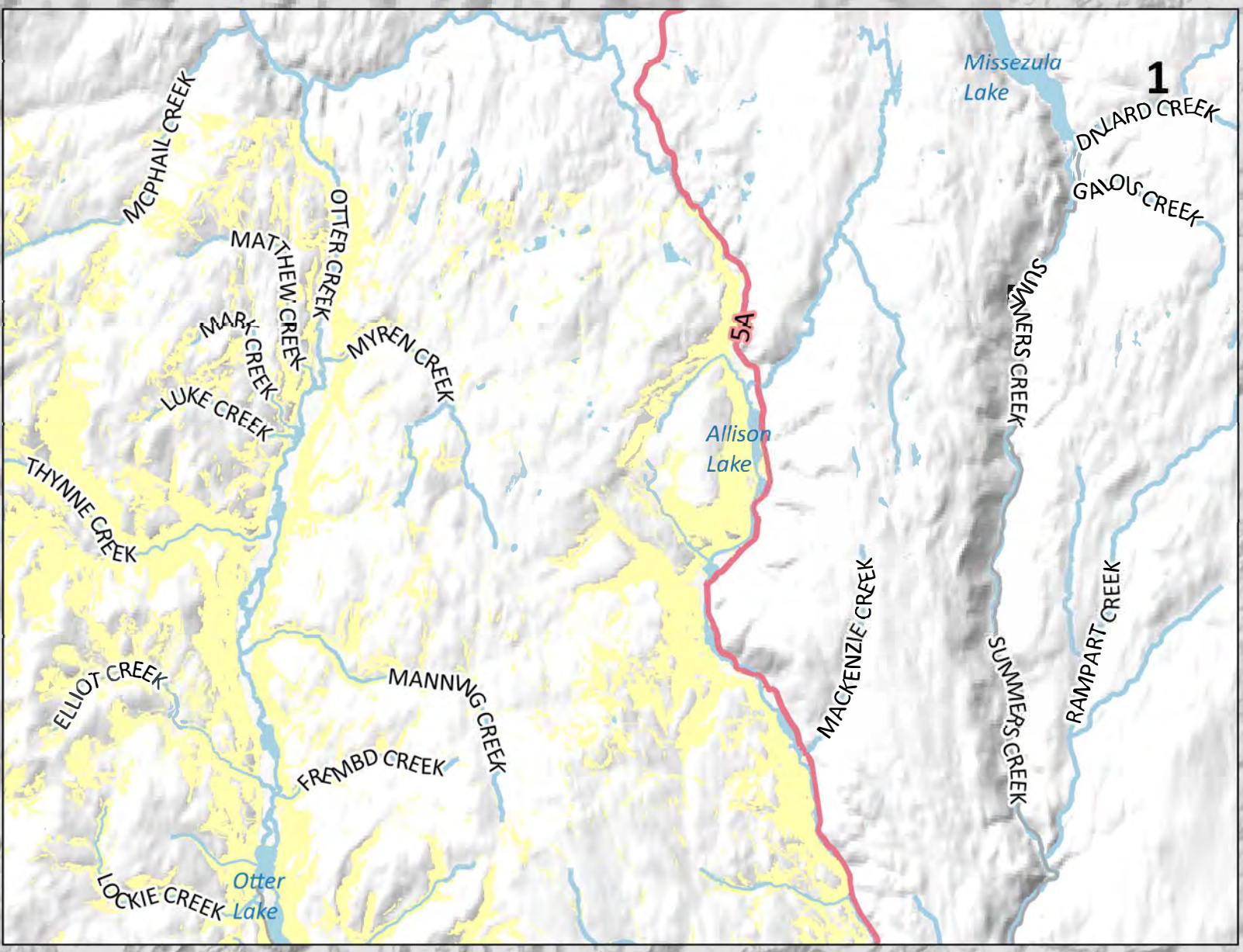
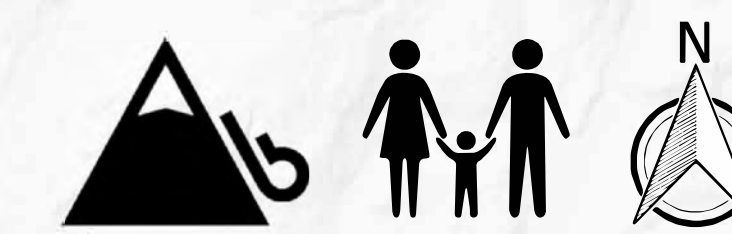
|                               |  |
|-------------------------------|--|
| Watershed Boundary            | <b>Affected Assets</b>                           |
| Okanagan-Similkameen Boundary | <b>Population Density (people per square km)</b> |
| Canada - US Border            | 1 - 10   |
| Lakes                         | 10 - 100   |
| Watercourses                  | 100 - 500  |
| Highway                       | 500 - 1000                                       |
| Major Road                    | 1000 +   |

Date: 31 December 2019  
 Produced by: Ebbwater Consulting Inc.

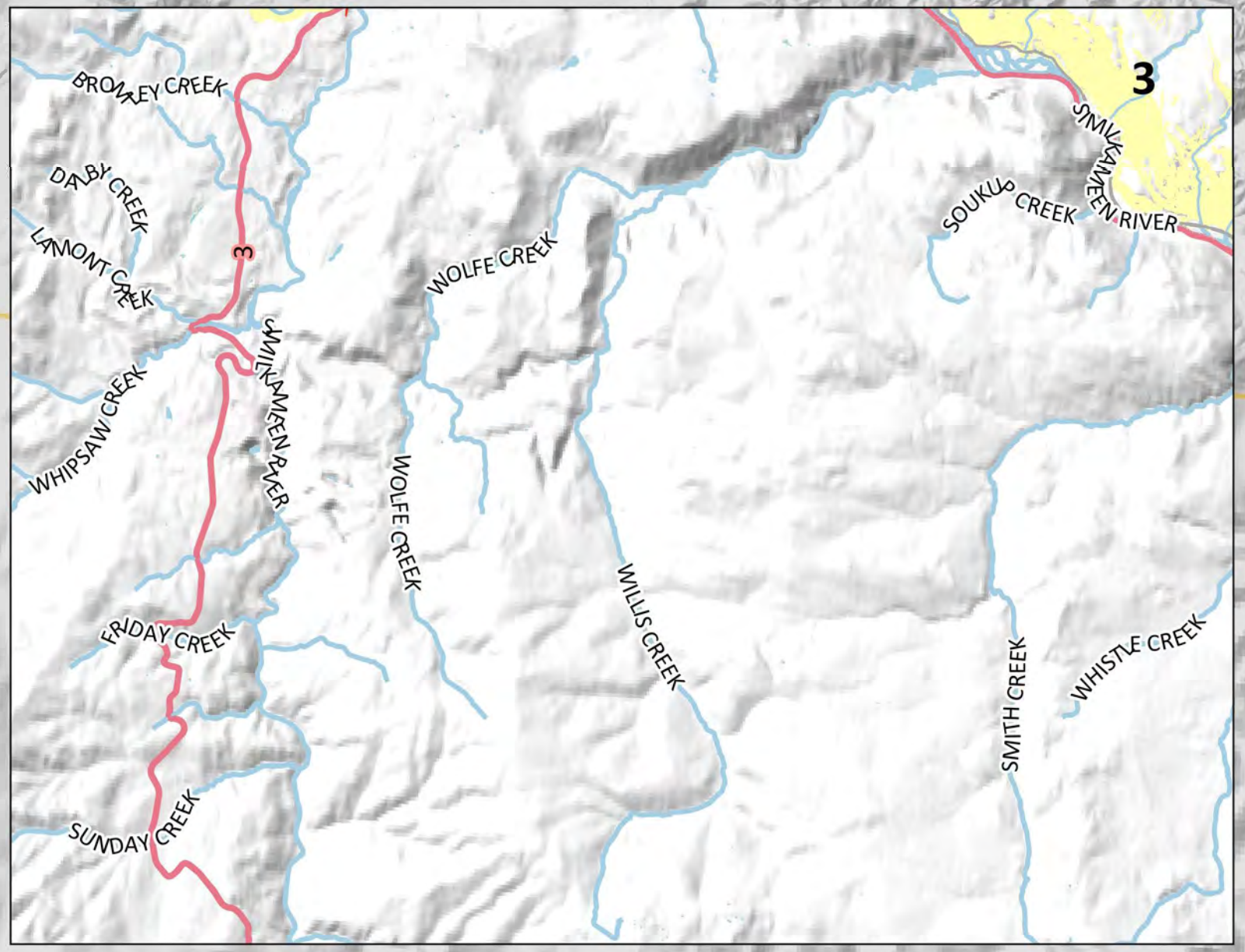
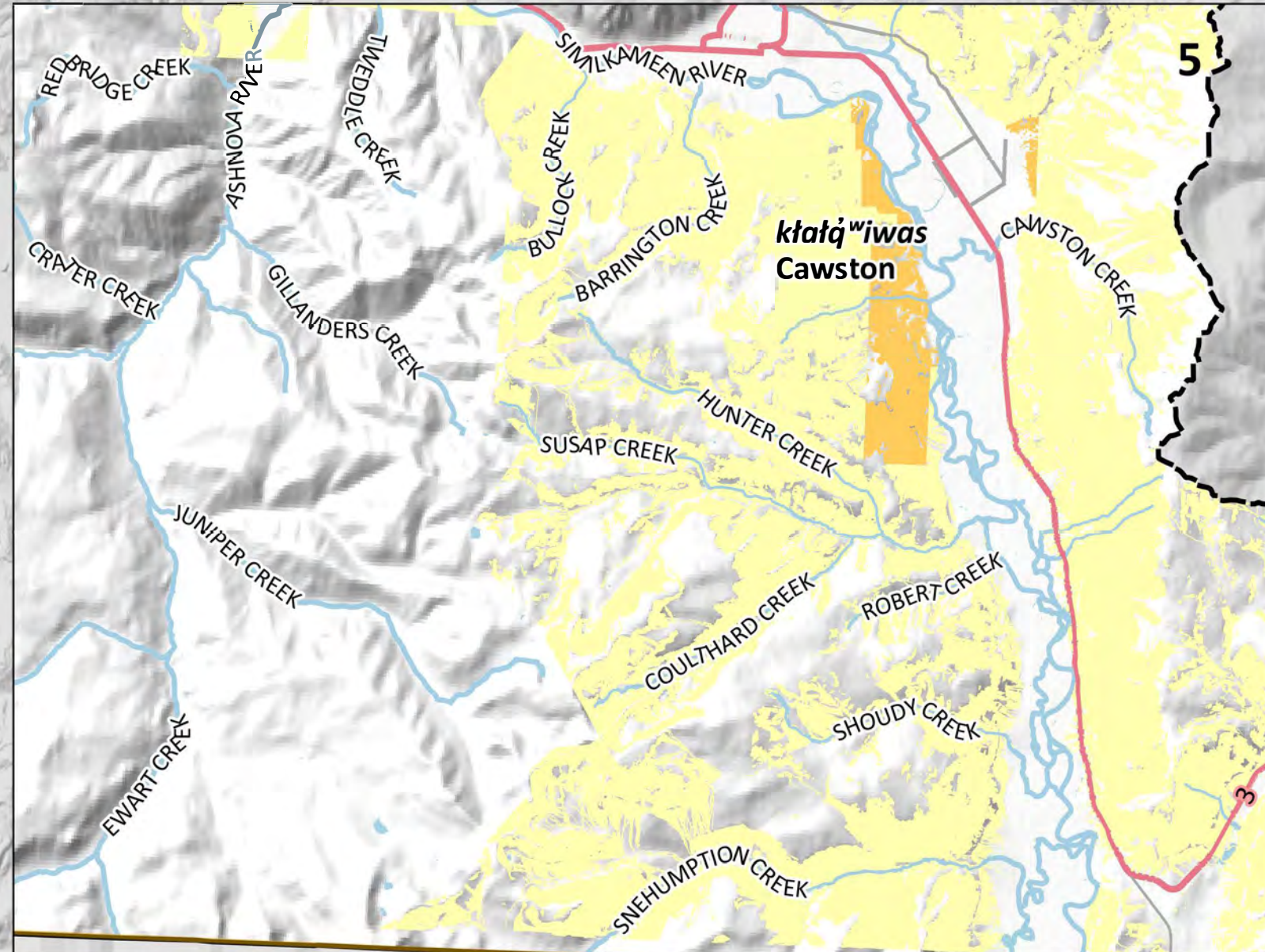
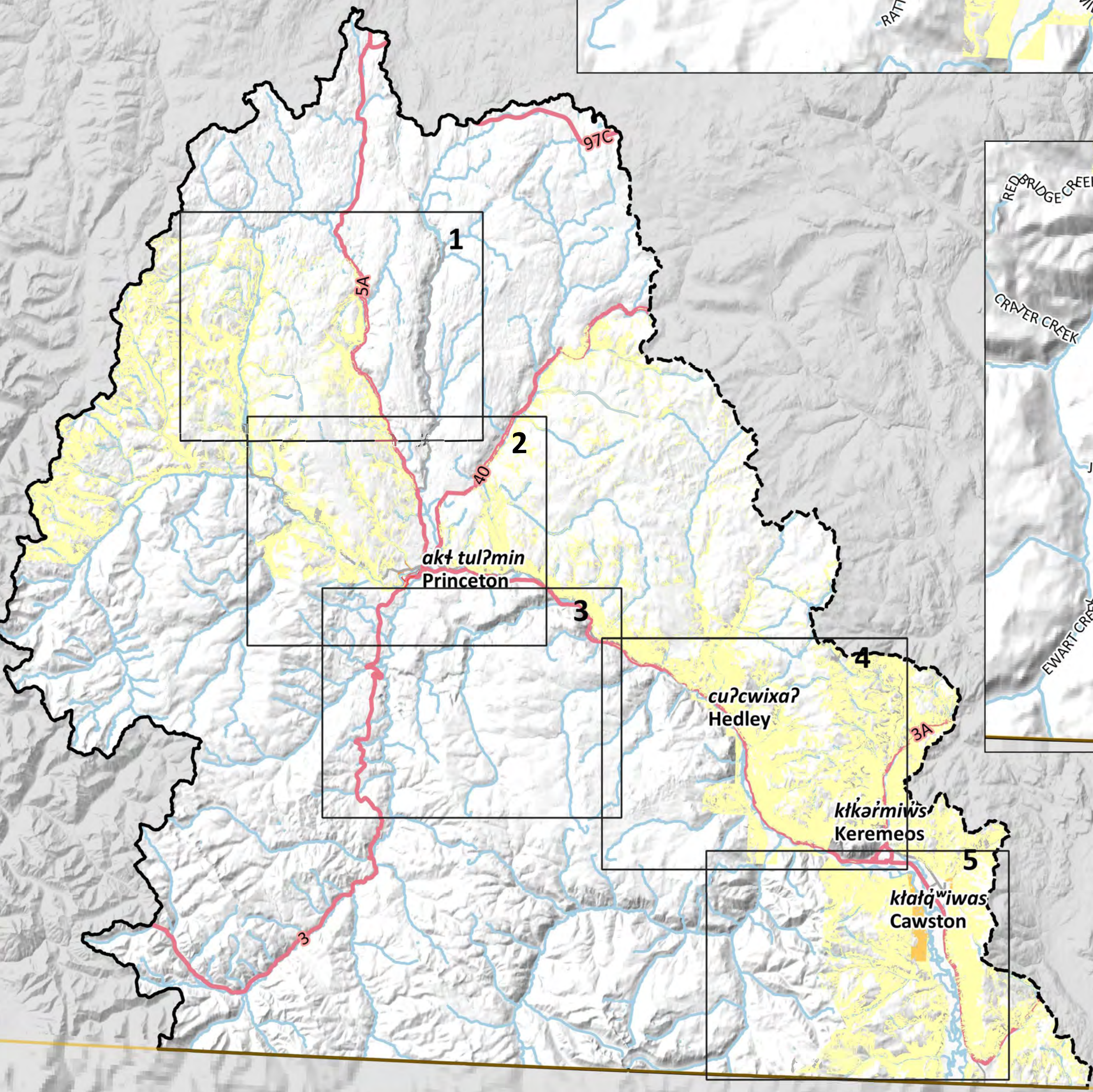
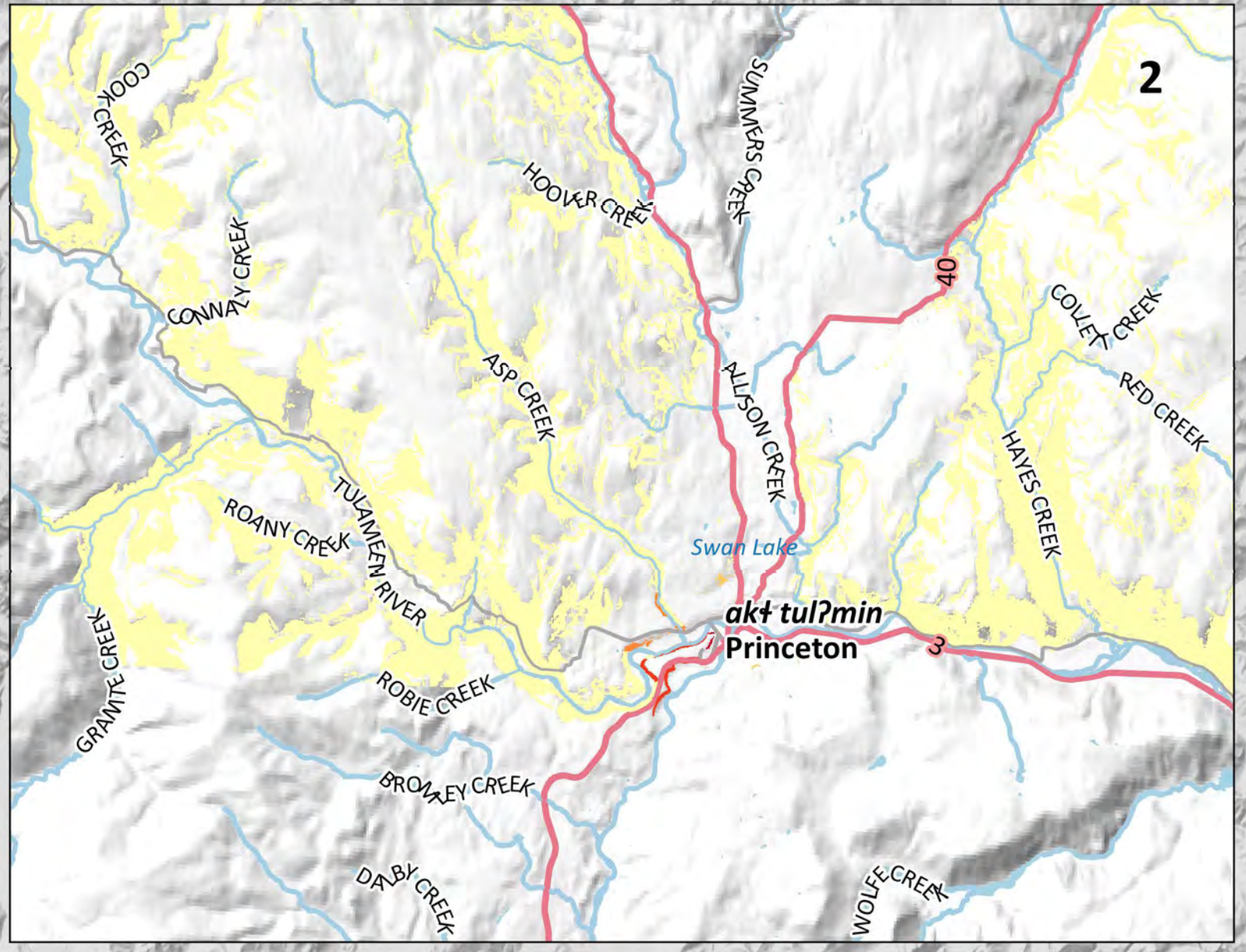
**Sylix (Okanagan) Flood and Debris Flow Risk Assessment Project**  
**Debris Flow - Affected People - Okanagan**

ANSI D - Map No. P-D-002-002

# Similkameen Map



Click above map tile for Zoom-In map  
[Click here to return to Project Area map](#)  
[Click here to go to Okanagan map](#)



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**Scale**  
**Main Map 1:400,000**  
 0 10 20 30 km

**Inset Maps 1:150,000**  
 0 5 10 15 km

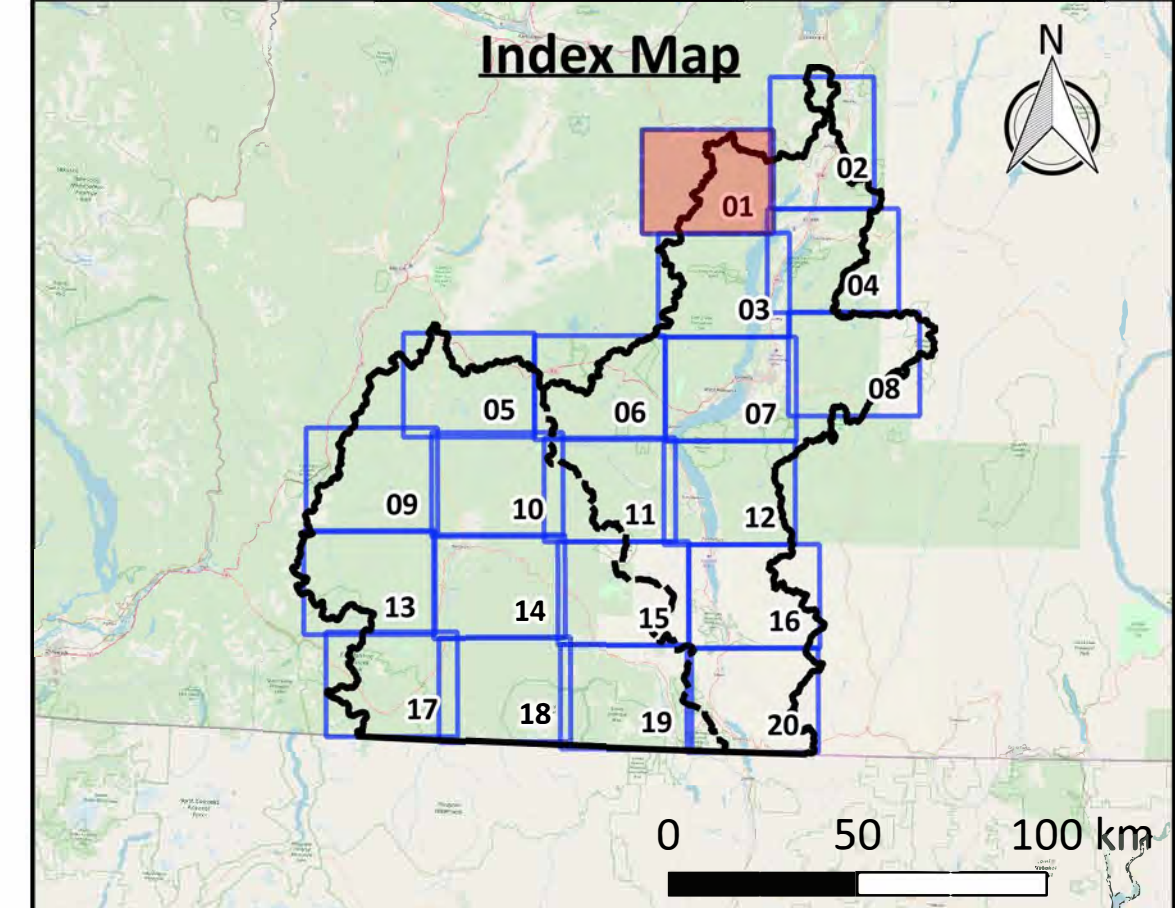
**Legend**

|                          |  |
|--------------------------|--|
| <b>Background</b>        | <b>Affected Assets</b>                           |
| — Watershed Boundary     | <b>Population Density (people per square km)</b> |
| - - Okanagan-Similkameen | 1 - 10   |
| — Boundary               | 10 - 100   |
| — Canada - US Border     | 100 - 500  |
| — Lakes                  | 500 - 1000                                       |
| — Watercourses           | 1000 +   |
| — Highway                |  |
| — Major Road             |  |

**Date:** 31 December 2019  
**Produced by:** Ebbwater Consulting Inc.

**Sylix (Okanagan) Flood and Debris Flow Risk Assessment Project**  
**Debris Flow - Affected People - Similkameen**

**Zoom-In Map**



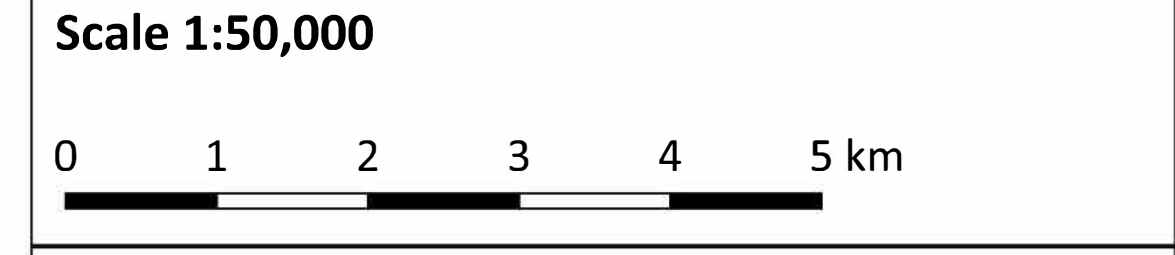
Click above map tile for Zoom-In map  
[Click here to return to Project Area map](#)  
[Click here to return to Okanagan map](#)  
[Click here to return to Similkameen map](#)

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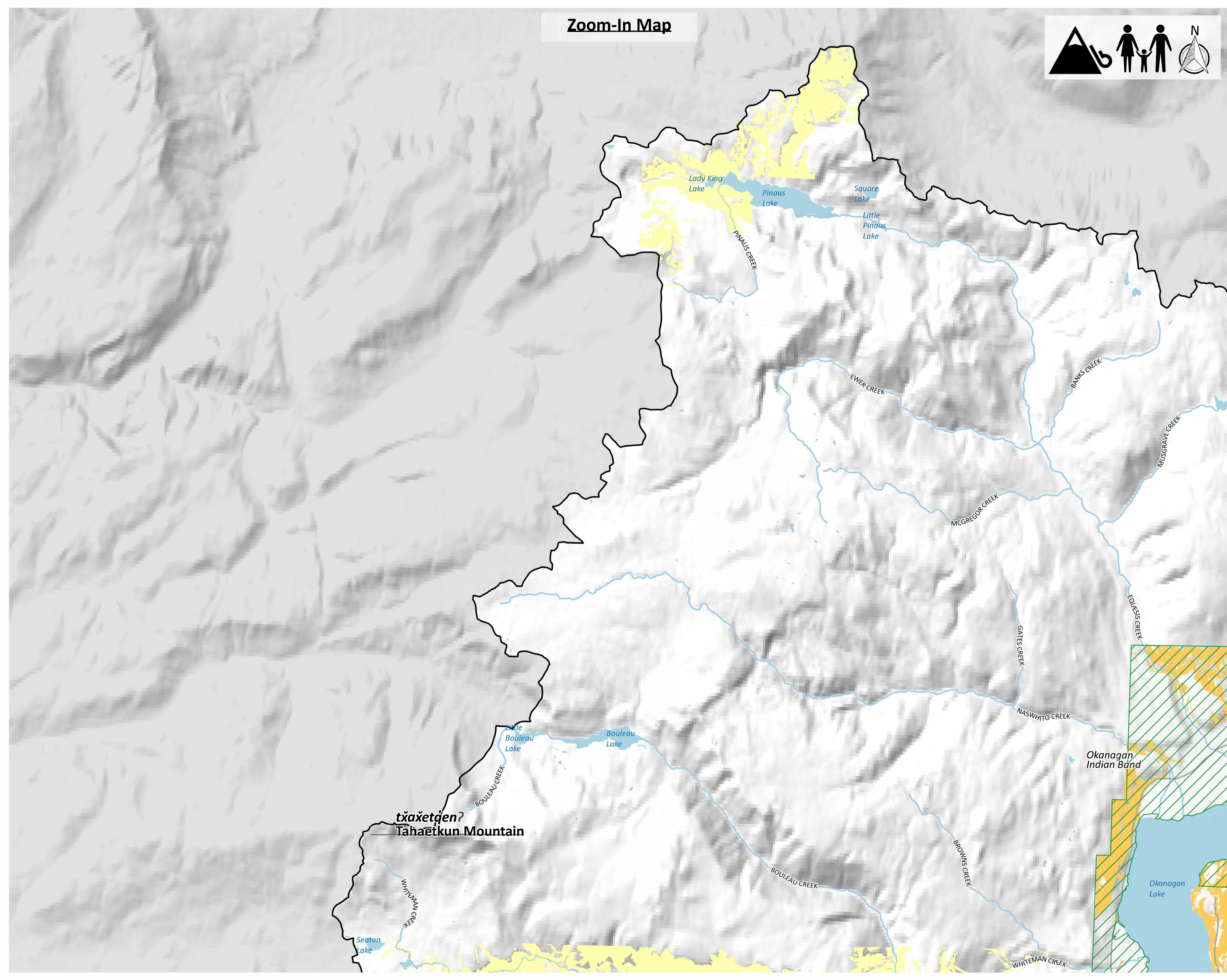
**Legend**

|                                   |  |
|-----------------------------------|--|
| <b>Background</b>                 | <b>Affected Assets</b>                           |
| — Watershed Boundary              | <b>Population Density (people per square km)</b> |
| - - Okanagan-Similkameen Boundary |  |
| — Canada - US Border              |  |
| ▨ Reserves                        |  |
| ▭ Lakes                           |  |
| — Watercourses                    | 1 - 10   |
| — Highway                         | 10 - 100   |
| — Major Road                      | 100 - 500  |
| ▭ Building Footprints             | 500 - 1000                                       |
|                                   | 1000 +   |

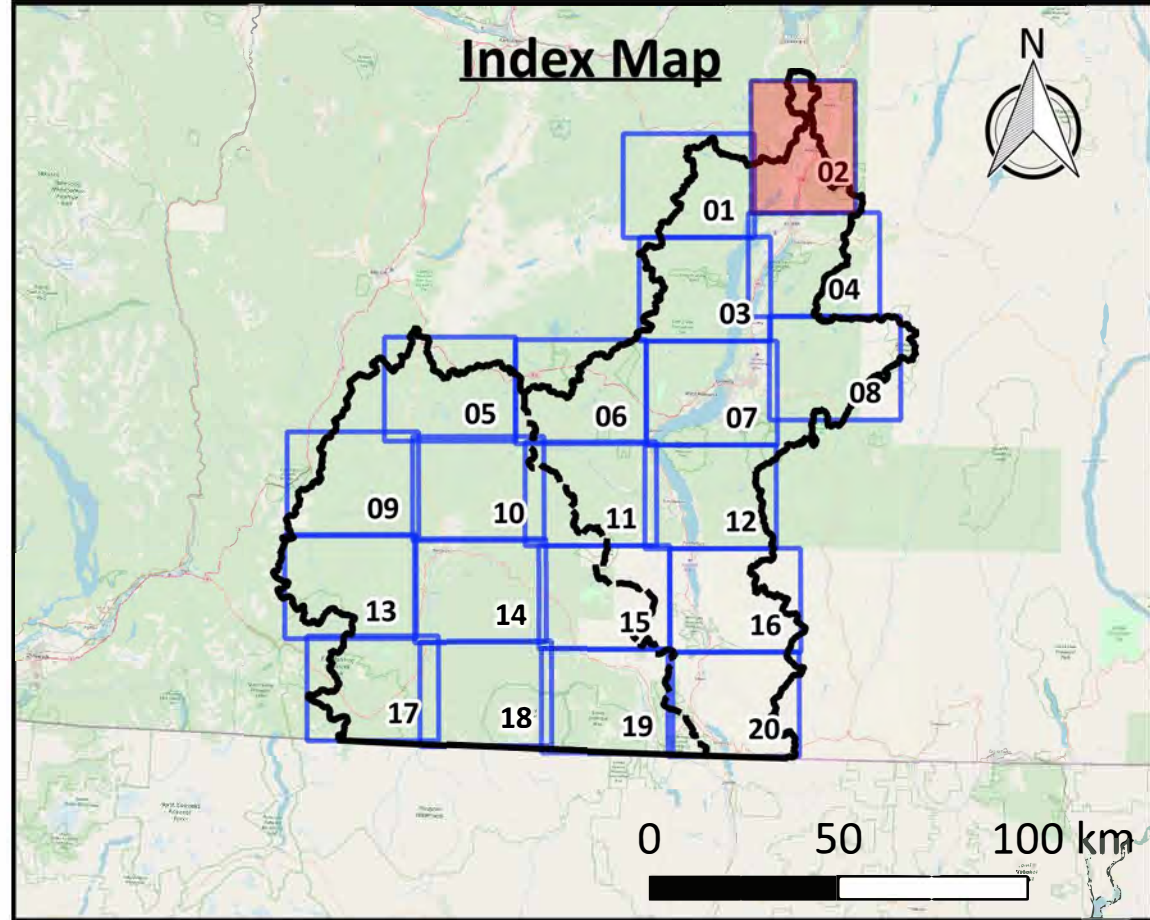
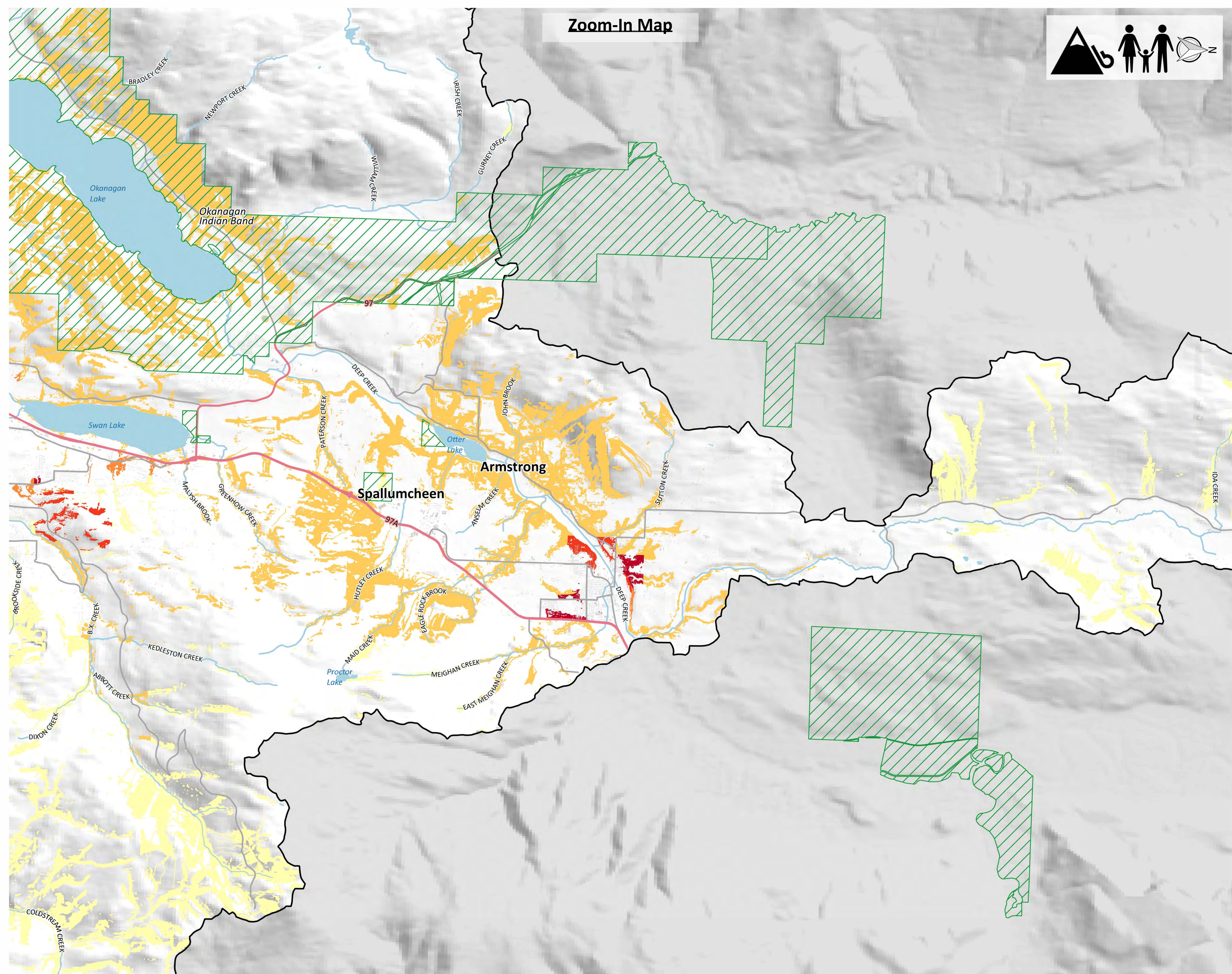
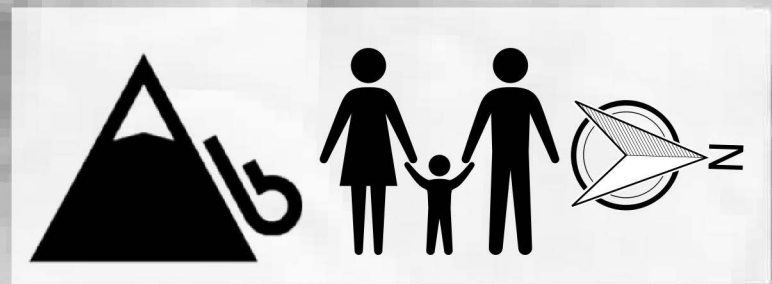
Date: 31 December 2019  
 Produced by: Ebbwater Consulting Inc.

**Sylix (Okanagan) Flood and Debris Flow Risk Assessment Project**  
**Debris Flow - Affected People**  
**Map Tile 01 of 20**

ANSI D - Map No. P-D-003-001



**Zoom-In Map**



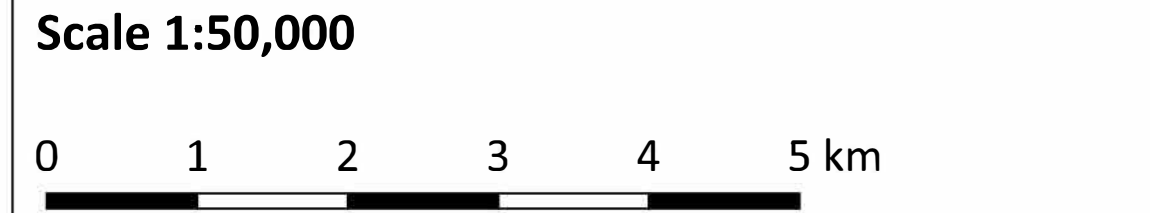
Click above map tile for Zoom-In map  
[Click here to return to Project Area map](#)  
[Click here to return to Okanagan map](#)  
[Click here to return to Similkameen map](#)

**Map Notes**

- Map produced by Ebbwater Consulting Inc.
- Population density is based on census dissemination areas within the project area boundary. Population density is not shown for areas with a population density of less than 1 person per square km.
- The population density (exposure) layer was clipped to the debris flow hazard area. The hazard layer is shown in the hazard maps, and was produced by Palmer Environmental Consulting Group Inc. The method used to produce the hazard layer is described in the Quantitative Study.

**Data Sources**

- Lakes and Watercourses, Roads and Trails, and Reserves: BC Data Catalogue.
- Population: Statistics Canada 2016 Census.
- Building Footprints: Regional districts, municipalities, WFN and hand digitized using Bing Satellite Imagery.
- Sylix Place Names: Okanagan Nation Alliance.
- Base Layer: OpenStreetMap data – openstreetmap.org (© OpenStreetMap contributors; cartography licence CC BY-SA) and hill shade created using CDEM and USGM GMTED2010.



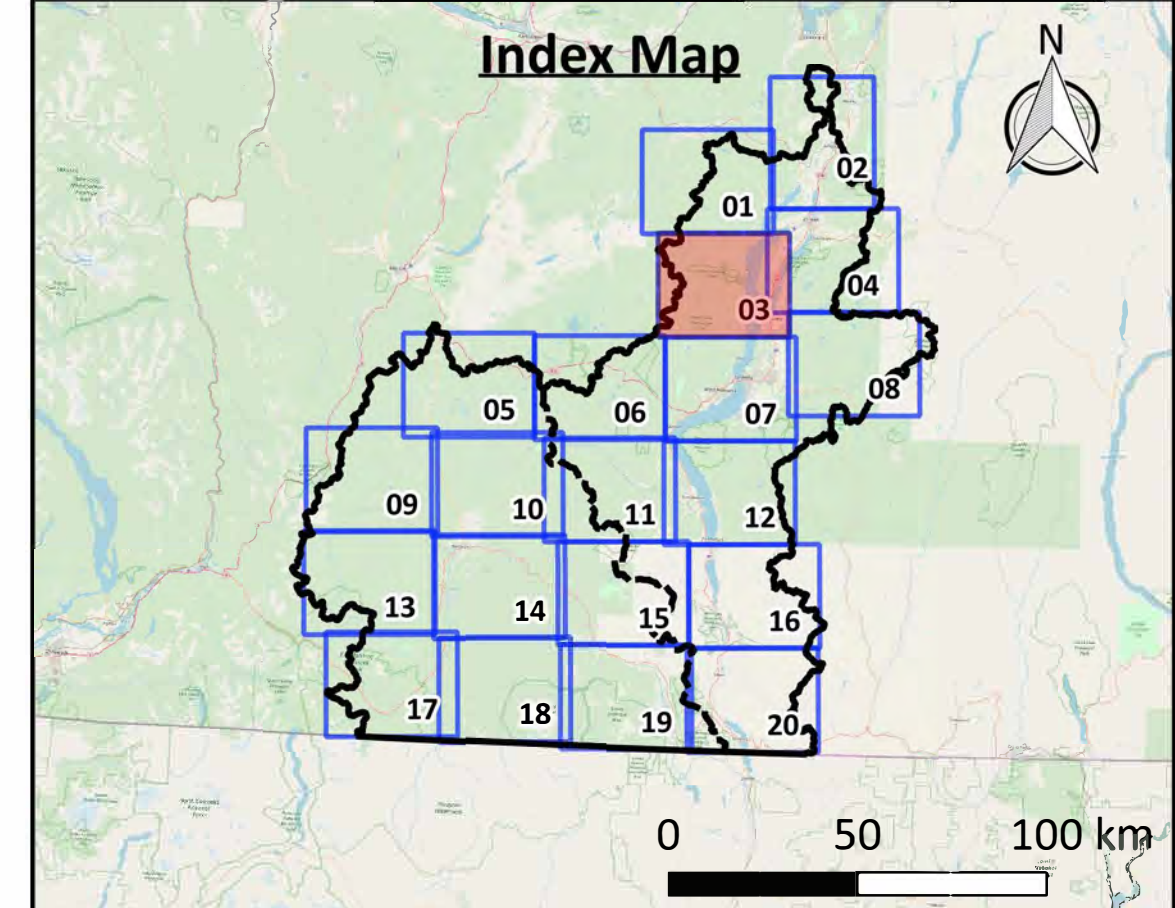
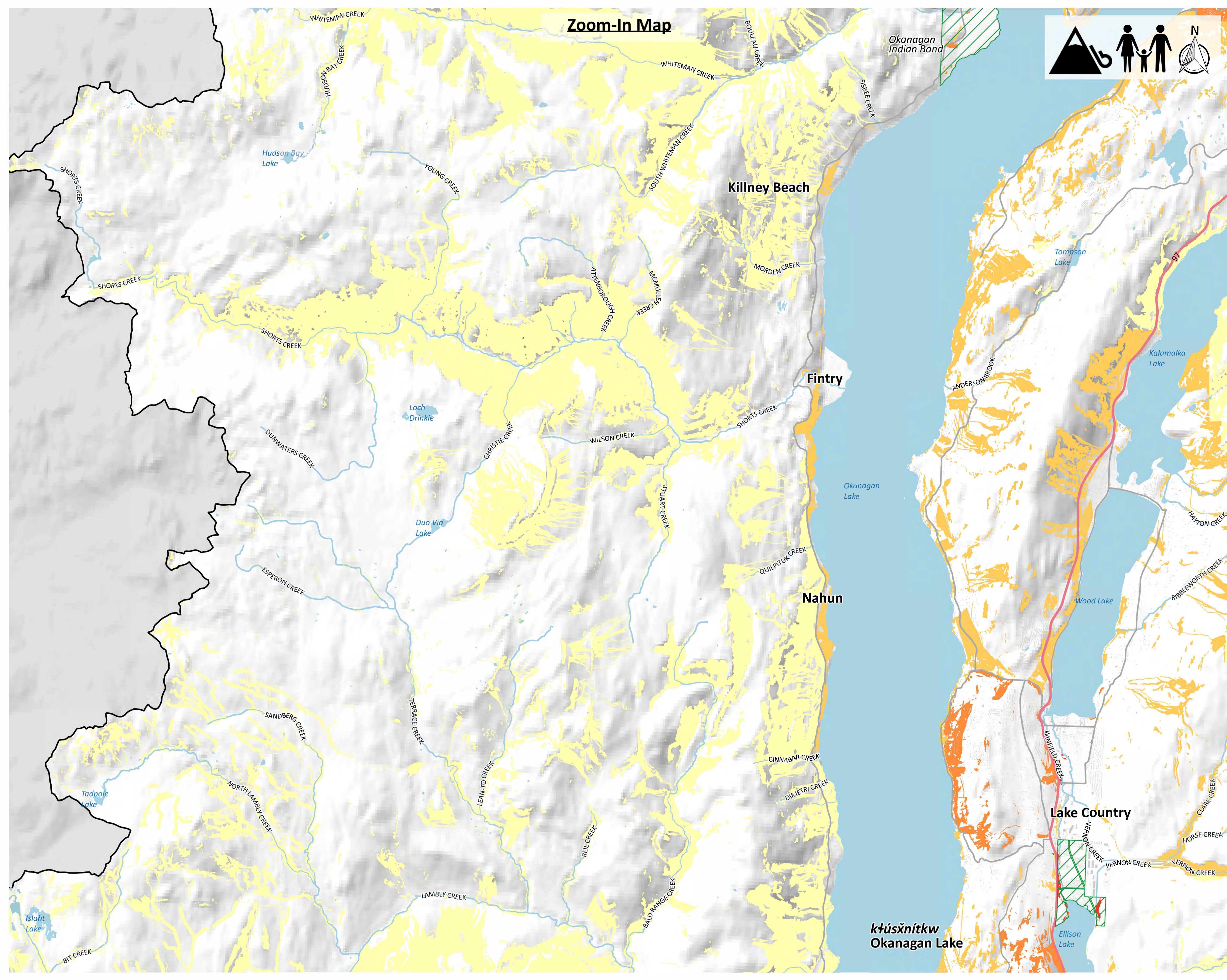
**Legend**

|                                   |  |
|-----------------------------------|--|
| <b>Background</b>                 | <b>Affected Assets</b>                           |
| — Watershed Boundary              | <b>Population Density (people per square km)</b> |
| - - Okanagan-Similkameen Boundary | 1 - 10   |
| — Canada - US Border              | 10 - 100   |
| ▨ Reserves                        | 100 - 500  |
| ■ Lakes                           | 500 - 1000                                       |
| — Watercourses                    | 1000 +   |
| — Highway                         |  |
| — Major Road                      |  |
| ■ Building Footprints             |  |

Date: 31 December 2019  
 Produced by: Ebbwater Consulting Inc.

**Sylix (Okanagan) Flood and Debris Flow Risk Assessment Project**  
**Debris Flow - Affected People**  
**Map Tile 02 of 20**

ANSI D - Map No. P-D-003-002



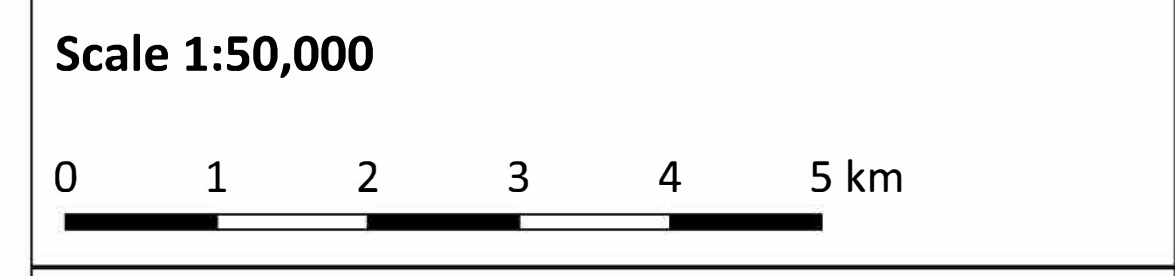
Click above map tile for Zoom-In map  
[Click here to return to Project Area map](#)  
[Click here to return to Okanagan map](#)  
[Click here to return to Similkameen map](#)

**Map Notes**

- Map produced by Ebbwater Consulting Inc.
- Population density is based on census dissemination areas within the project area boundary. Population density is not shown for areas with a population density of less than 1 person per square km.
- The population density (exposure) layer was clipped to the debris flow hazard area. The hazard layer is shown in the hazard maps, and was produced by Palmer Environmental Consulting Group Inc. The method used to produce the hazard layer is described in the Quantitative Study.

**Data Sources**

- Lakes and Watercourses, Roads and Trails, and Reserves: BC Data Catalogue.
- Population: Statistics Canada 2016 Census.
- Building Footprints: Regional districts, municipalities, WFN and hand digitized using Bing Satellite Imagery.
- Sylix Place Names: Okanagan Nation Alliance.
- Base Layer: OpenStreetMap data – openstreetmap.org (© OpenStreetMap contributors; cartography licence CC BY-SA) and hill shade created using CDEM and USGM GMTED2010.



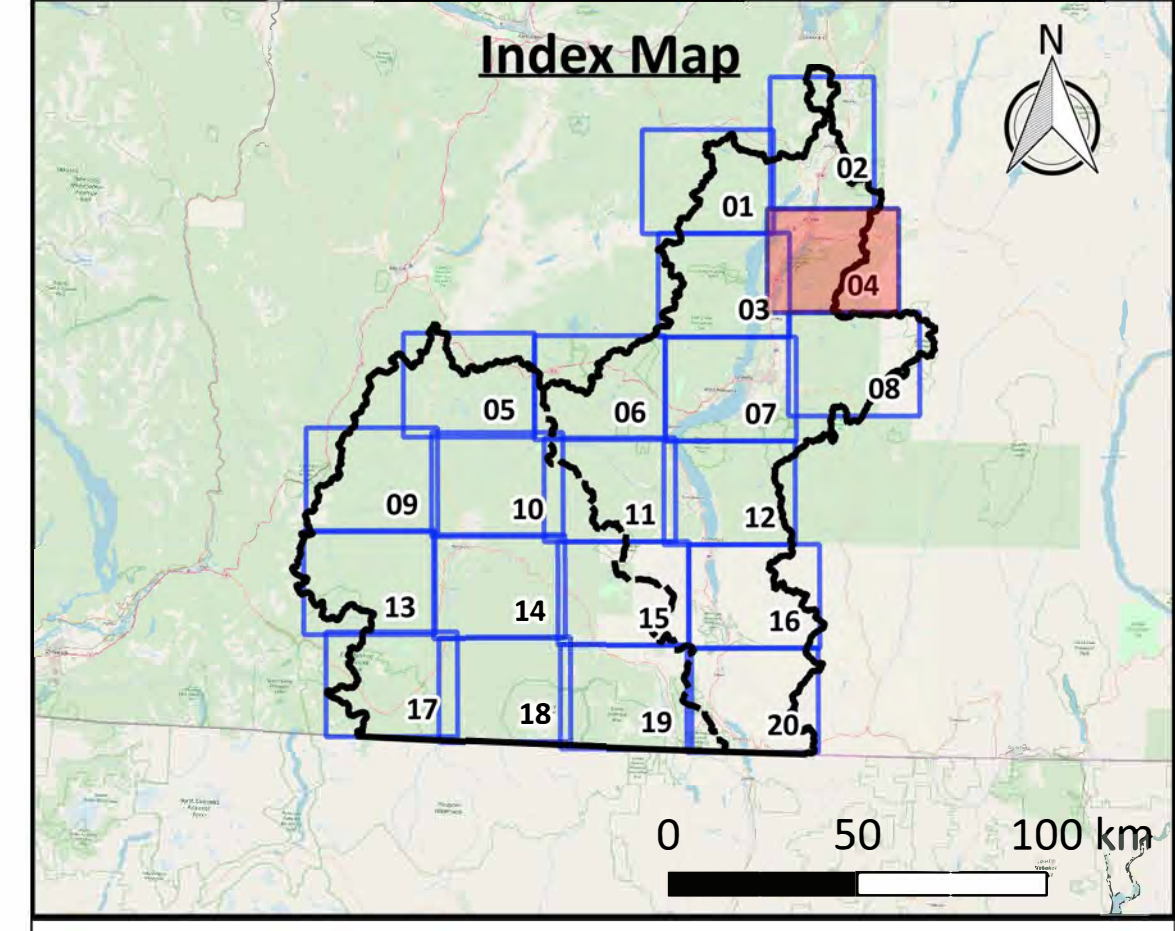
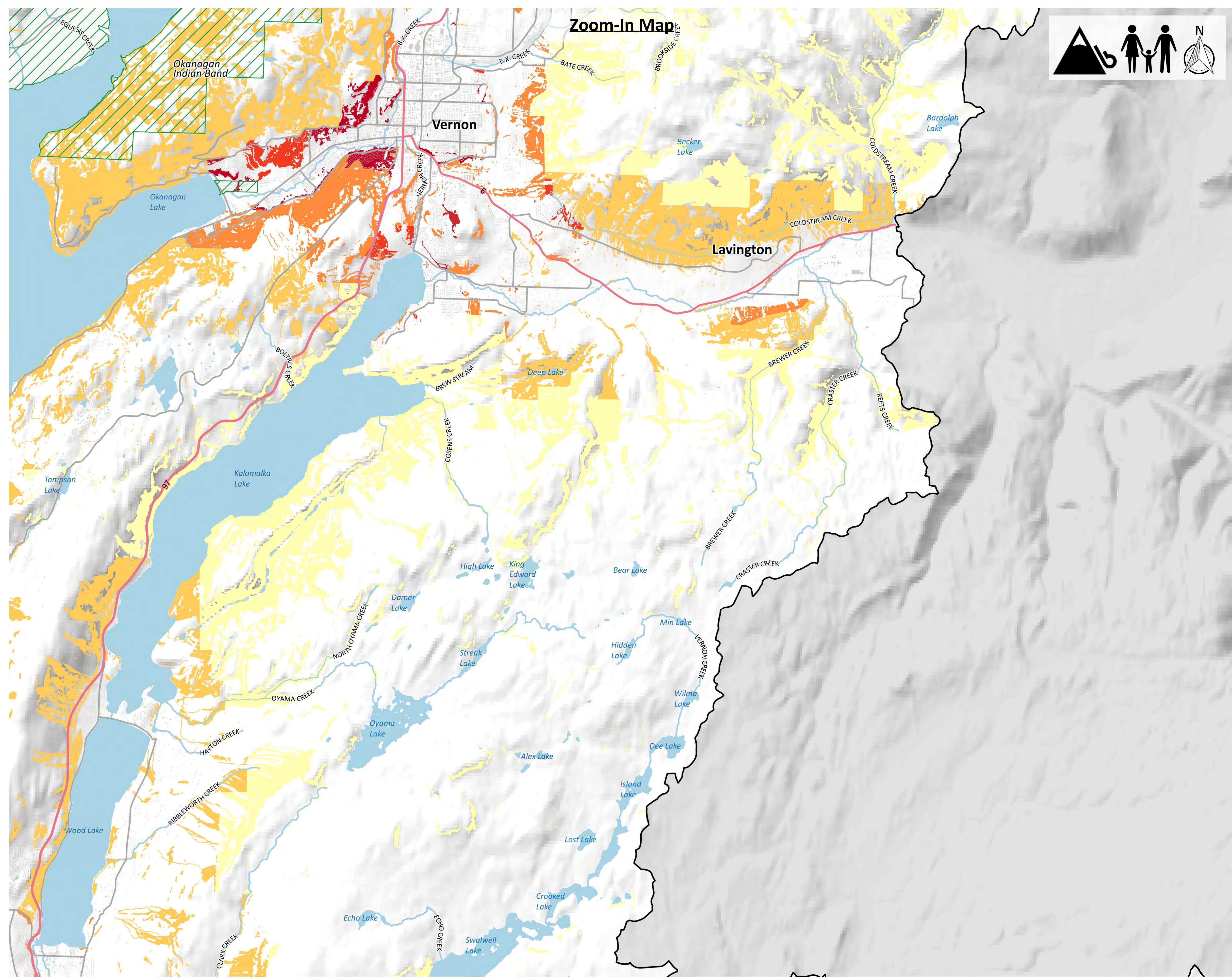
**Legend**

|                                   |  |
|-----------------------------------|--|
| <b>Background</b>                 | <b>Affected Assets</b>                           |
| — Watershed Boundary              | <b>Population Density (people per square km)</b> |
| - - Okanagan-Similkameen Boundary | 1 - 10   |
| — Canada - US Border              | 10 - 100   |
| ▨ Reserves                        | 100 - 500  |
| ▨ Lakes                           | 500 - 1000                                       |
| — Watercourses                    | 1000 +   |
| — Highway                         |  |
| — Major Road                      |  |
| ▨ Building Footprints             |  |

**Date:** 31 December 2019  
**Produced by:** Ebbwater Consulting Inc.

**Sylix (Okanagan) Flood and Debris Flow Risk Assessment Project**  
**Debris Flow - Affected People**  
**Map Tile 03 of 20**

ANSI D - Map No. P-D-003-003



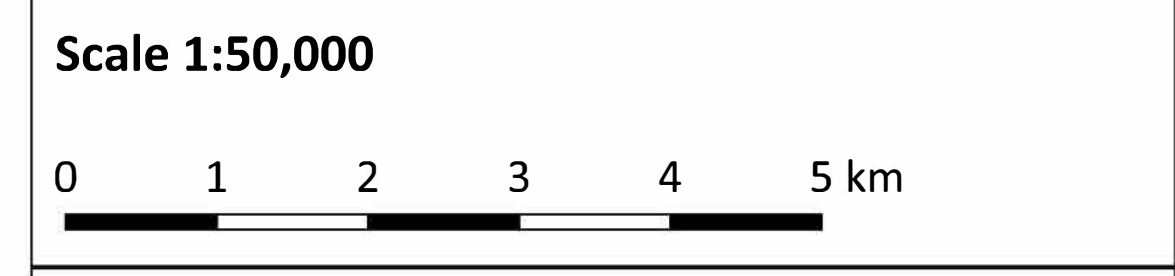
Click above map tile for Zoom-In map  
[Click here to return to Project Area map](#)  
[Click here to return to Okanagan map](#)  
[Click here to return to Similkameen map](#)

**Map Notes**

1. Map produced by Ebbwater Consulting Inc.
2. Population density is based on census dissemination areas within the project area boundary. Population density is not shown for areas with a population density of less than 1 person per square km.
3. The population density (exposure) layer was clipped to the debris flow hazard area. The hazard layer is shown in the hazard maps, and was produced by Palmer Environmental Consulting Group Inc. The method used to produce the hazard layer is described in the Quantitative Study.

**Data Sources**

1. Lakes and Watercourses, Roads and Trails, and Reserves: BC Data Catalogue.
2. Population: Statistics Canada 2016 Census.
3. Building Footprints: Regional districts, municipalities, WFN and hand digitized using Bing Satellite Imagery.
4. Sylix Place Names: Okanagan Nation Alliance.
5. Base Layer: OpenStreetMap data – openstreetmap.org (© OpenStreetMap contributors; cartography licence CC BY-SA) and hill shade created using CDEM and USGM GMTED2010.



**Legend**

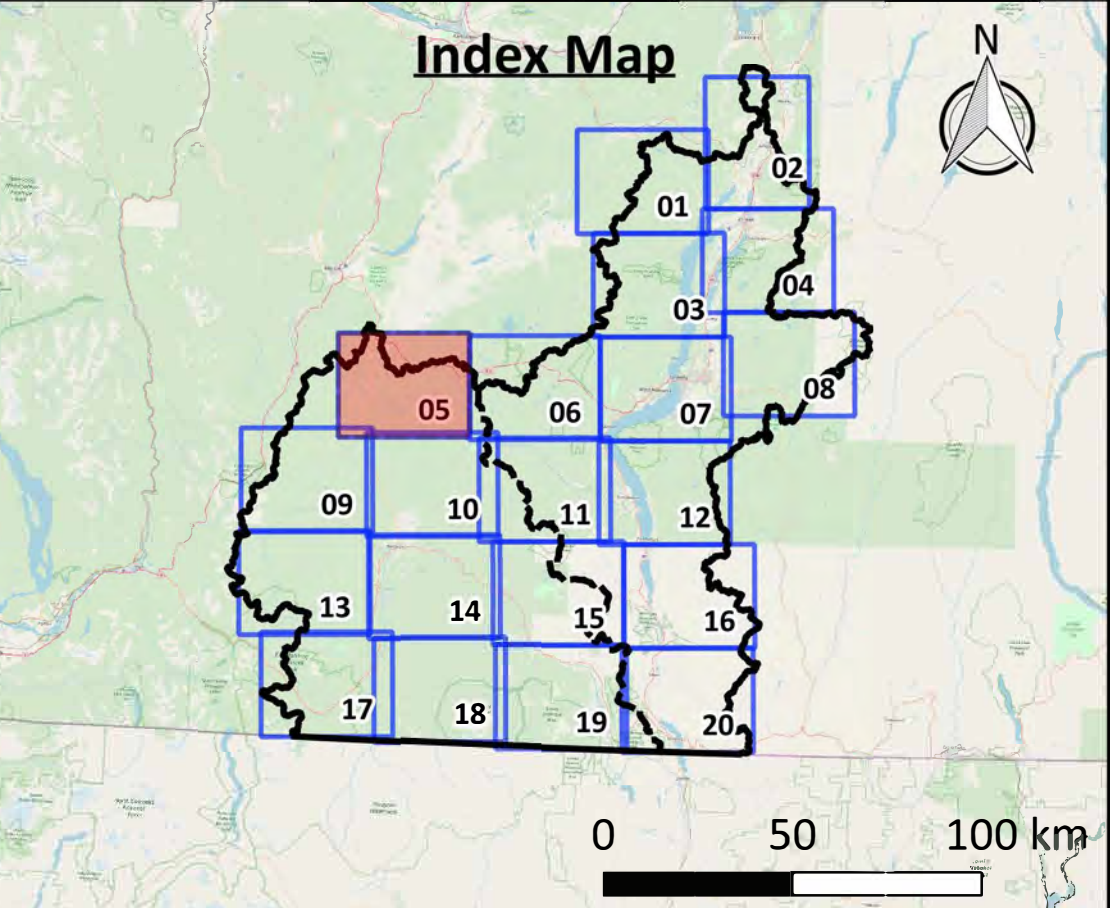
|                                   |  |
|-----------------------------------|--|
| <b>Background</b>                 | <b>Affected Assets</b>                           |
| — Watershed Boundary              | <b>Population Density (people per square km)</b> |
| - - Okanagan-Similkameen Boundary | 1 - 10   |
| — Canada - US Border              | 10 - 100   |
| ▨ Reserves                        | 100 - 500  |
| ▭ Lakes                           | 500 - 1000                                       |
| — Watercourses                    | 1000 +   |
| — Highway                         |  |
| — Major Road                      |  |
| ▭ Building Footprints             |  |

Date: 31 December 2019  
 Produced by: Ebbwater Consulting Inc.

**Sylix (Okanagan) Flood and Debris Flow Risk Assessment Project**  
**Debris Flow - Affected People**  
**Map Tile 04 of 20**

ANSI D - Map No. P-D-003-004

**Zoom-In Map**



Click above map tile for Zoom-In map  
[Click here to return to Project Area map](#)  
[Click here to return to Okanagan map](#)  
[Click here to return to Similkameen map](#)

**Map Notes**

- Map produced by Ebbwater Consulting Inc.
- Population density is based on census dissemination areas within the project area boundary. Population density is not shown for areas with a population density of less than 1 person per square km.
- The population density (exposure) layer was clipped to the debris flow hazard area. The hazard layer is shown in the hazard maps, and was produced by Palmer Environmental Consulting Group Inc. The method used to produce the hazard layer is described in the Quantitative Study.

**Data Sources**

- Lakes and Watercourses, Roads and Trails, and Reserves: BC Data Catalogue.
- Population: Statistics Canada 2016 Census.
- Building Footprints: Regional districts, municipalities, WFN and hand digitized using Bing Satellite Imagery.
- Sylix Place Names: Okanagan Nation Alliance.
- Base Layer: OpenStreetMap data – openstreetmap.org (© OpenStreetMap contributors; cartography licence CC BY-SA) and hill shade created using CDEM and USGM GMTED2010.

**Scale 1:50,000**

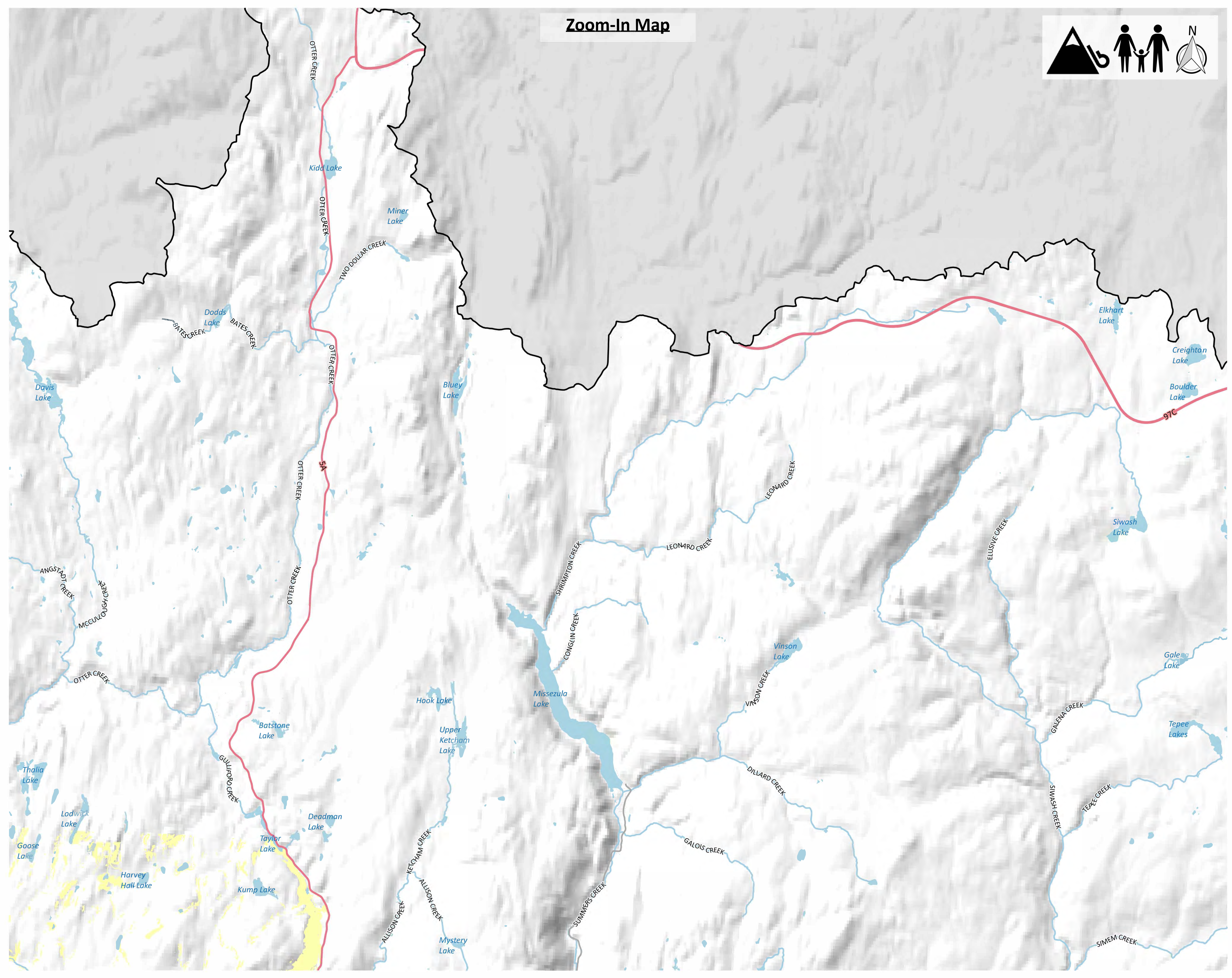
**Legend**

|                                   |  |
|-----------------------------------|--|
| <b>Background</b>                 | <b>Affected Assets</b>                           |
| — Watershed Boundary              | <b>Population Density (people per square km)</b> |
| - - Okanagan-Similkameen Boundary | 1 - 10   |
| — Canada - US Border              | 10 - 100   |
| ▭ Reserves                        | 100 - 500  |
| ▭ Lakes                           | 500 - 1000                                       |
| — Watercourses                    | 1000 +   |
| — Highway                         |  |
| — Major Road                      |  |
| ▭ Building Footprints             |  |

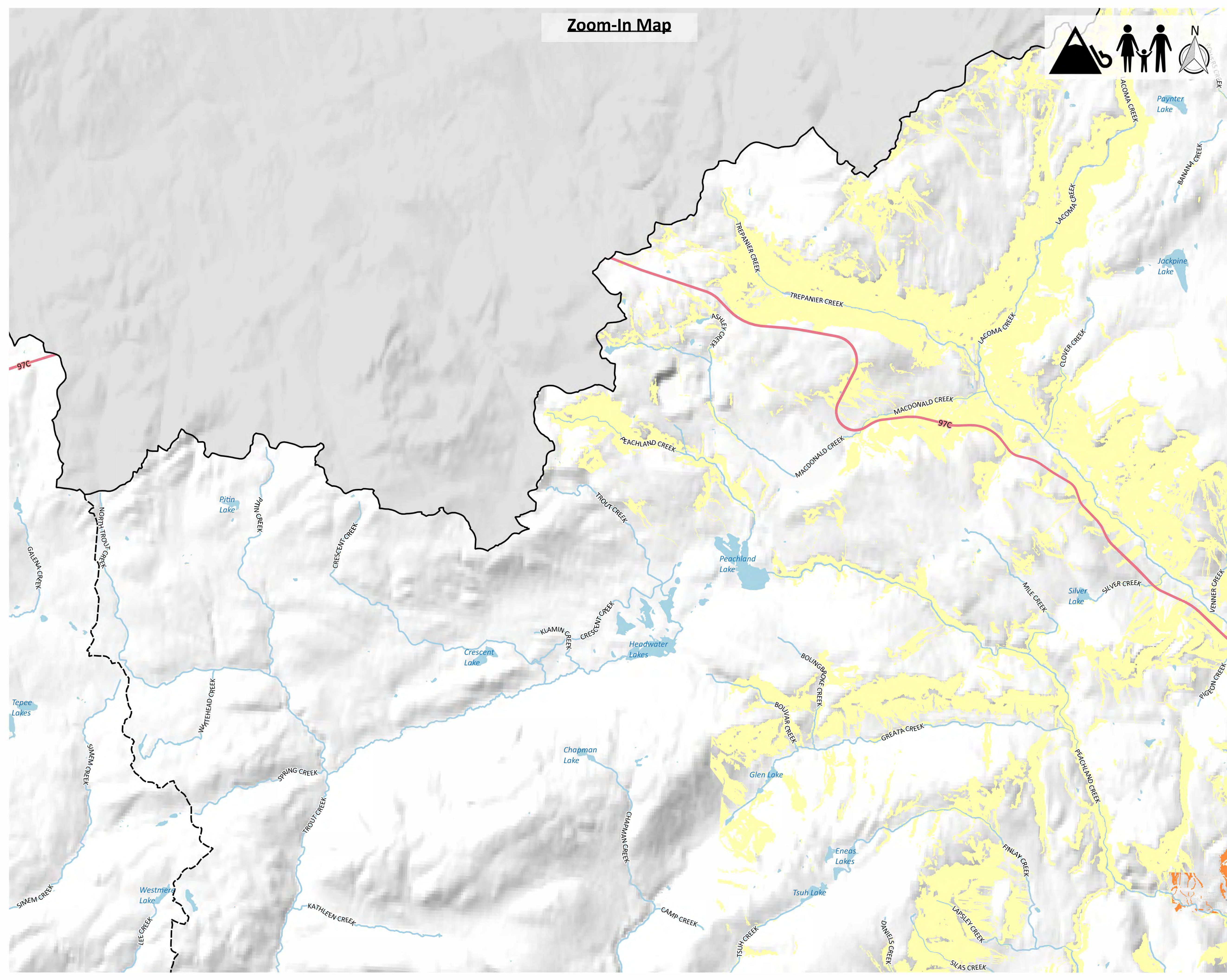
Date: 31 December 2019  
 Produced by: Ebbwater Consulting Inc.

**Sylix (Okanagan) Flood and Debris Flow Risk Assessment Project**  
**Debris Flow - Affected People**  
**Map Tile 05 of 20**

ANSI D - Map No. P-D-003-005



**Zoom-In Map**



**ebbwater**  
CONSULTING  
THOUGHTFUL FLOOD MANAGEMENT

**PALMER**  
ENVIRONMENTAL  
CONSULTING  
GROUP INC.

**Index Map**

0 50 100 km

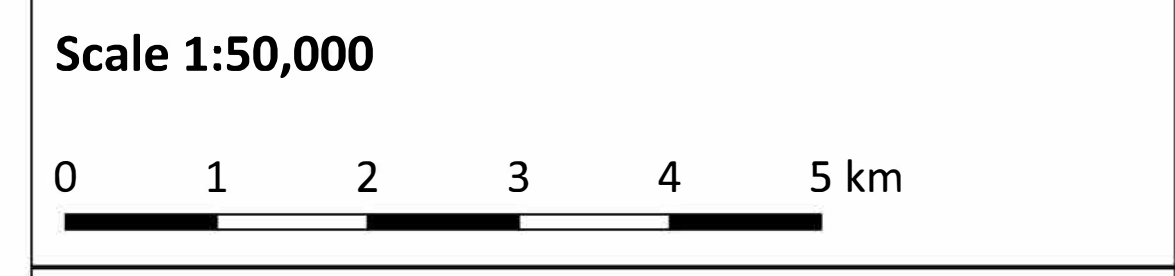
[Click above map tile for Zoom-In map](#)  
[Click here to return to Project Area map](#)  
[Click here to return to Okanagan map](#)  
[Click here to return to Similkameen map](#)

**Map Notes**

1. Map produced by Ebbwater Consulting Inc.
2. Population density is based on census dissemination areas within the project area boundary. Population density is not shown for areas with a population density of less than 1 person per square km.
3. The population density (exposure) layer was clipped to the debris flow hazard area. The hazard layer is shown in the hazard maps, and was produced by Palmer Environmental Consulting Group Inc. The method used to produce the hazard layer is described in the Quantitative Study.

**Data Sources**

1. Lakes and Watercourses, Roads and Trails, and Reserves: BC Data Catalogue.
2. Population: Statistics Canada 2016 Census.
3. Building Footprints: Regional districts, municipalities, WFN and hand digitized using Bing Satellite Imagery.
4. Sylix Place Names: Okanagan Nation Alliance.
5. Base Layer: OpenStreetMap data – openstreetmap.org (© OpenStreetMap contributors; cartography licence CC BY-SA) and hill shade created using CDEM and USGM GMTED2010.



**Legend**

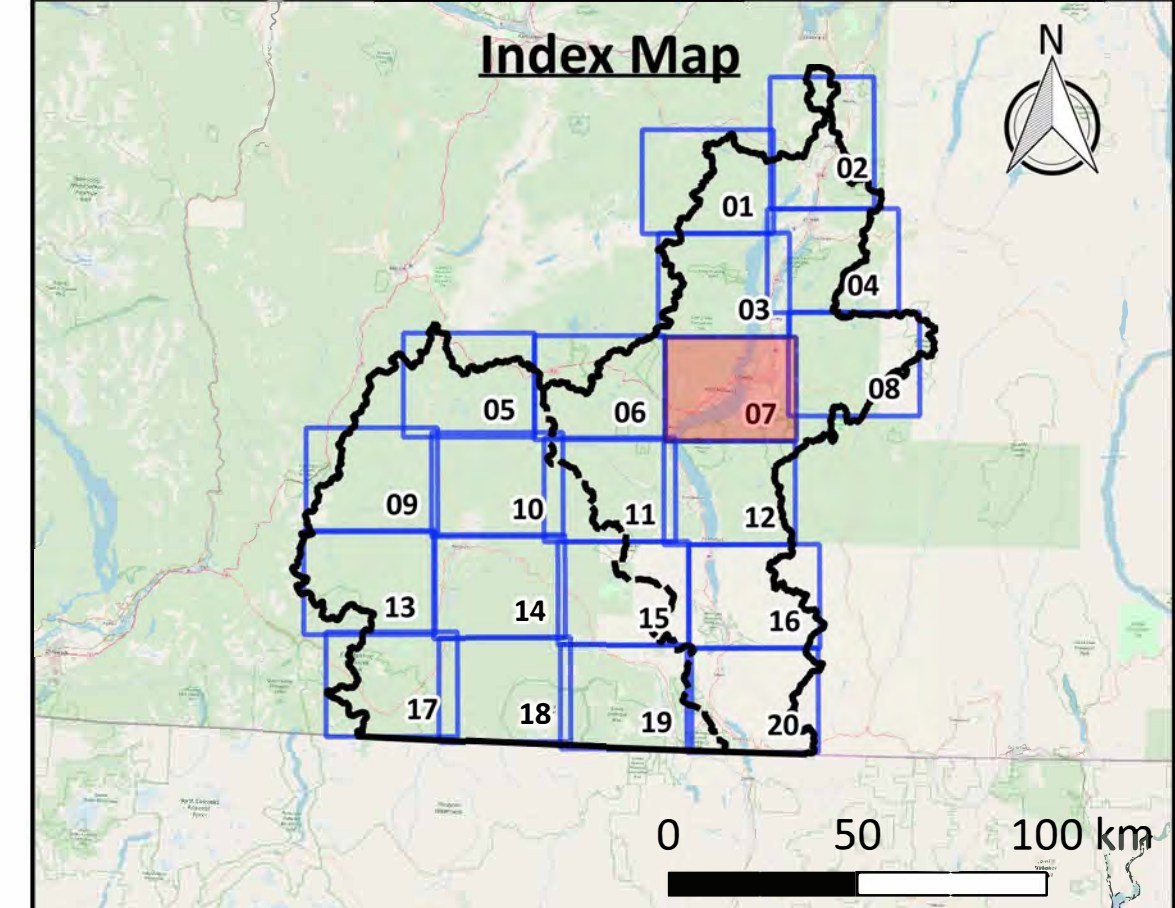
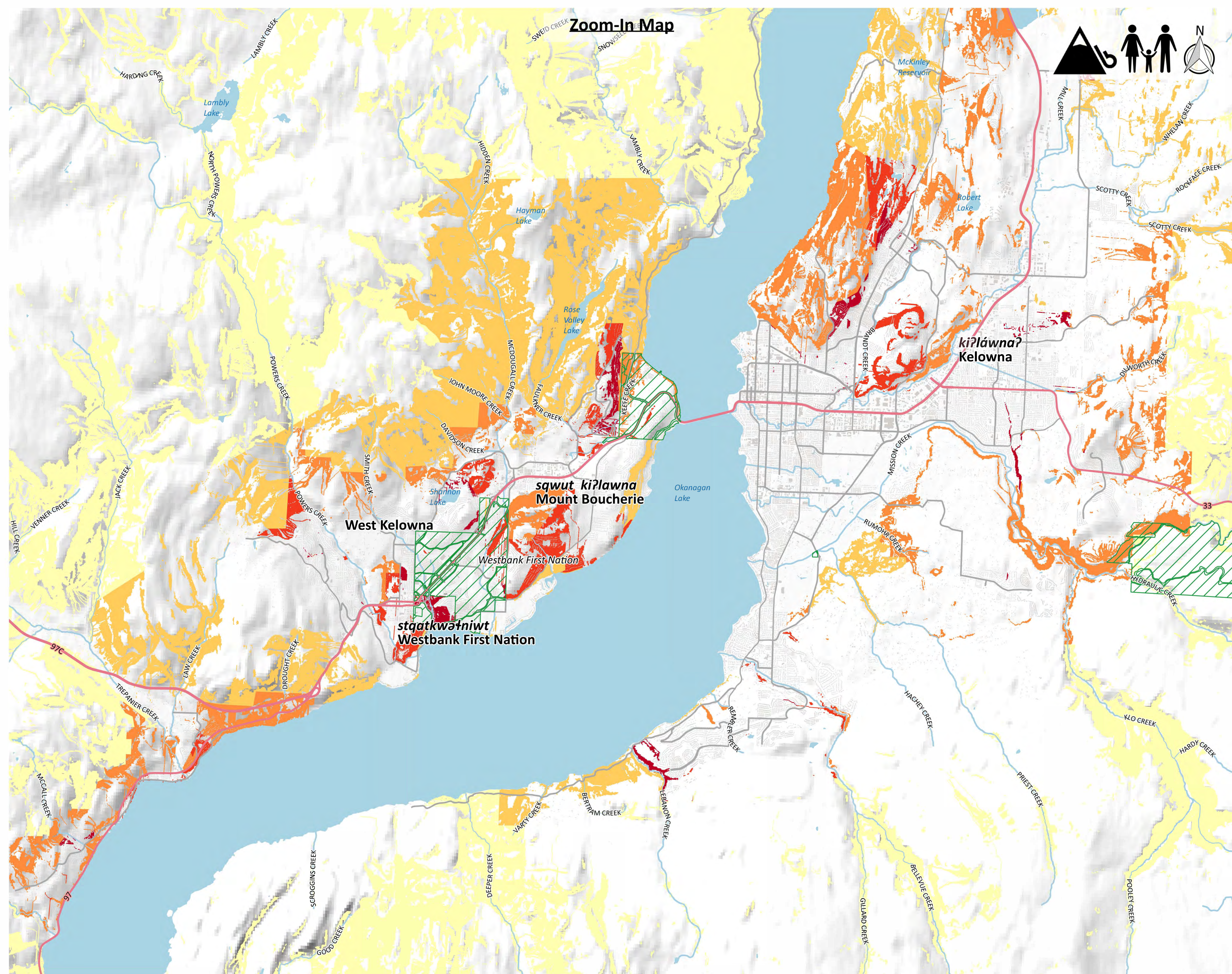
|   |   |
|---|---|
| <p><b>Background</b></p> <ul style="list-style-type: none"> <li>— Watershed Boundary</li> <li>- - Okanagan-Similkameen Boundary</li> <li>— Canada - US Border</li> <li>▭ Reserves</li> <li>▭ Lakes</li> <li>— Watercourses</li> <li>— Highway</li> <li>— Major Road</li> <li>▭ Building Footprints</li> </ul> | <p><b>Affected Assets</b></p> <p><b>Population Density (people per square km)</b></p> <ul style="list-style-type: none"> <li>▭ 1 - 10</li> <li>▭ 10 - 100</li> <li>▭ 100 - 500</li> <li>▭ 500 - 1000</li> <li>▭ 1000 +</li> </ul> |
|---|---|

**Date:** 31 December 2019  
**Produced by:** Ebbwater Consulting Inc.

**Sylix (Okanagan) Flood and Debris Flow Risk Assessment Project**  
**Debris Flow - Affected People**  
**Map Tile 06 of 20**

ANSI D - Map No. P-D-003-006





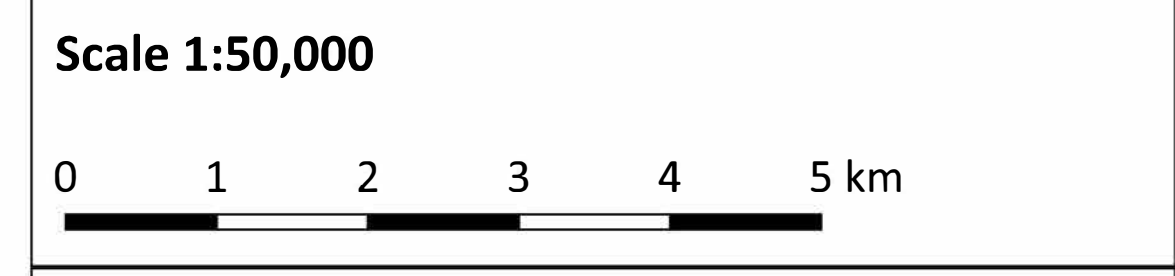
Click above map tile for Zoom-In map  
[Click here to return to Project Area map](#)  
[Click here to return to Okanagan map](#)  
[Click here to return to Similkameen map](#)

**Map Notes**

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- Population density is based on census dissemination areas within the project area boundary. Population density is not shown for areas with a population density of less than 1 person per square km.
- The population density (exposure) layer was clipped to the debris flow hazard area. The hazard layer is shown in the hazard maps, and was produced by Palmer Environmental Consulting Group Inc. The method used to produce the hazard layer is described in the Quantitative Study.

**Data Sources**

- Lakes and Watercourses, Roads and Trails, and Reserves: BC Data Catalogue.
- Population: Statistics Canada 2016 Census.
- Building Footprints: Regional districts, municipalities, WFN and hand digitized using Bing Satellite Imagery.
- Sylix Place Names: Okanagan Nation Alliance.
- Base Layer: OpenStreetMap data – openstreetmap.org (© OpenStreetMap contributors; cartography licence CC BY-SA) and hill shade created using CDEM and USGM GMTED2010.



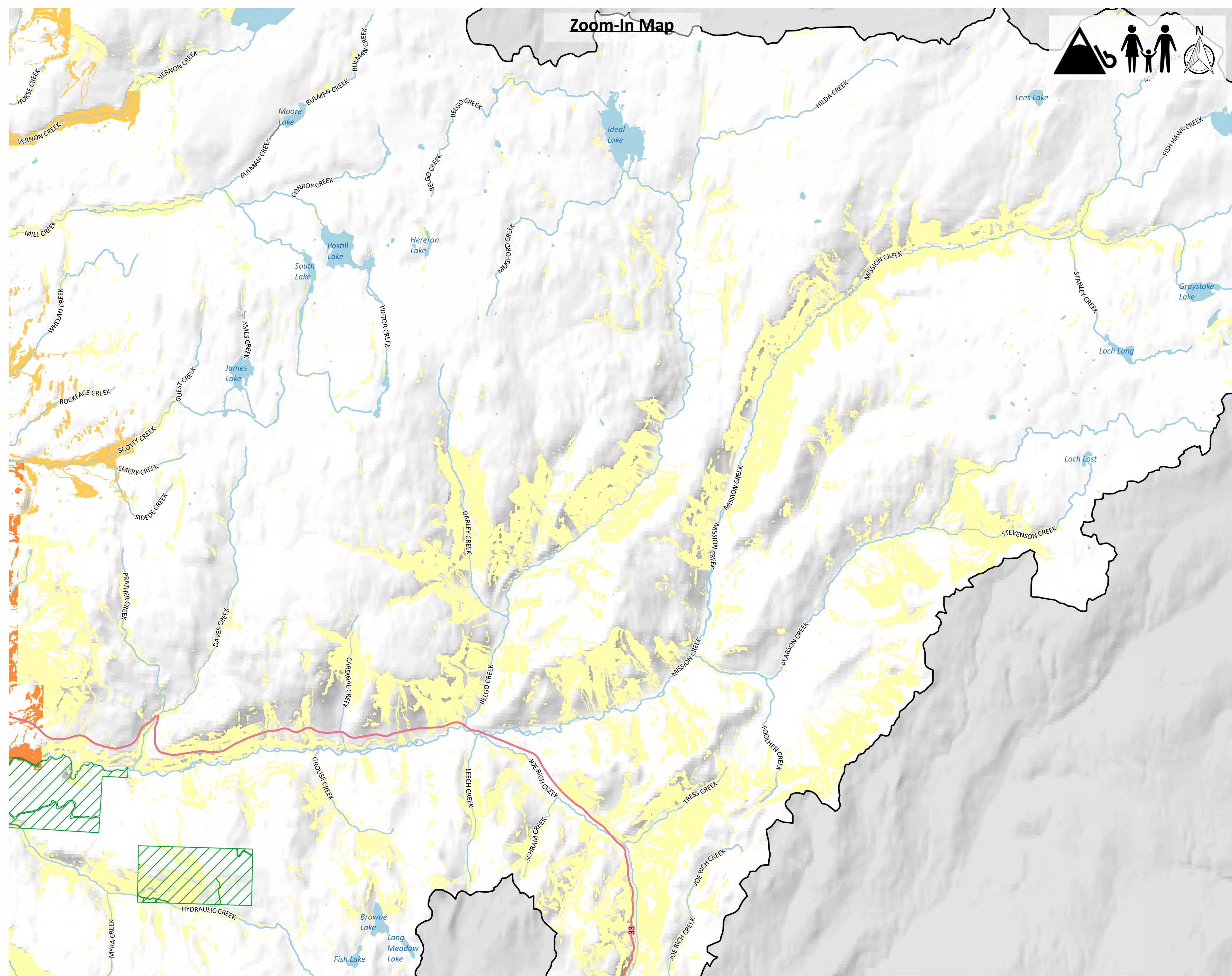
**Legend**

|                                   |  |
|-----------------------------------|--|
| <b>Background</b>                 | <b>Affected Assets</b>                           |
| — Watershed Boundary              | <b>Population Density (people per square km)</b> |
| - - Okanagan-Similkameen Boundary | 1 - 10   |
| — Canada - US Border              | 10 - 100   |
| ▨ Reserves                        | 100 - 500  |
| ■ Lakes                           | 500 - 1000                                       |
| — Watercourses                    | 1000 +   |
| — Highway                         |  |
| — Major Road                      |  |
| ■ Building Footprints             |  |

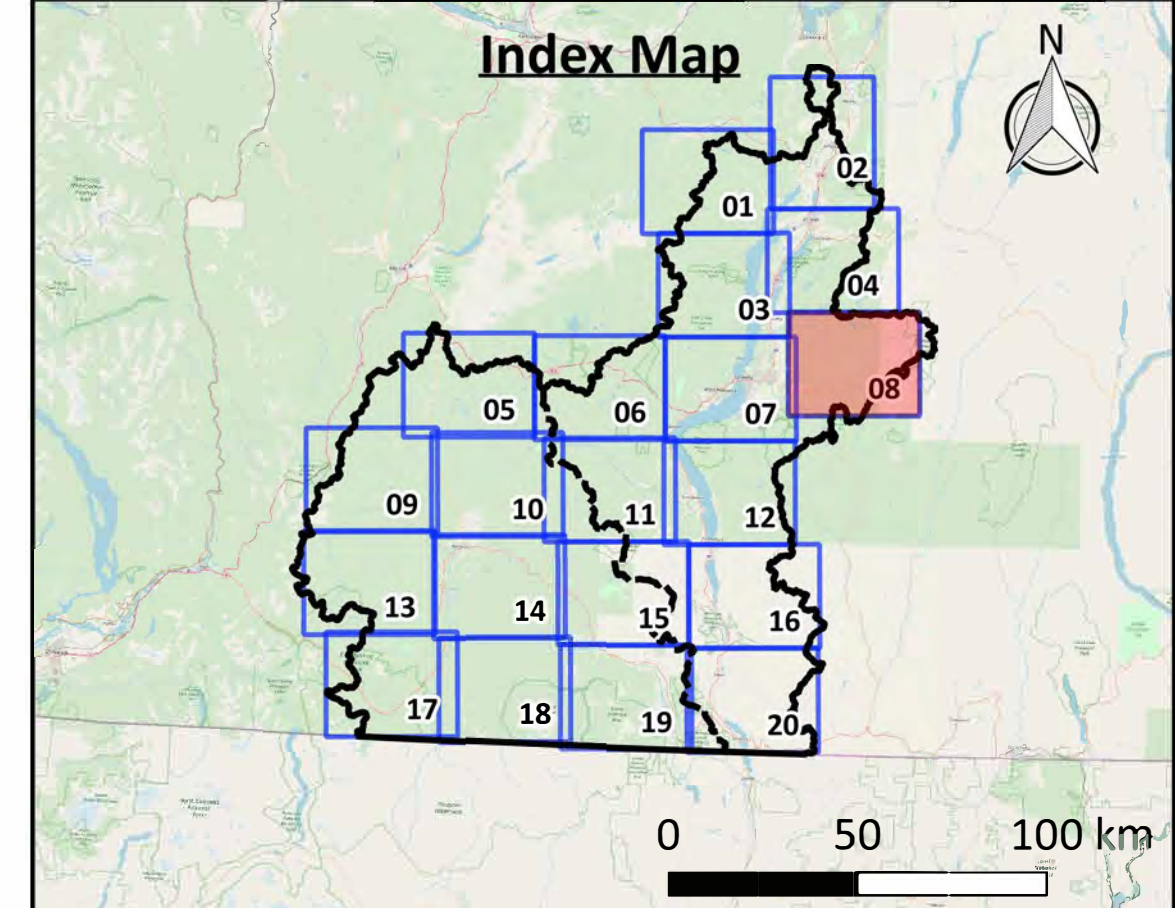
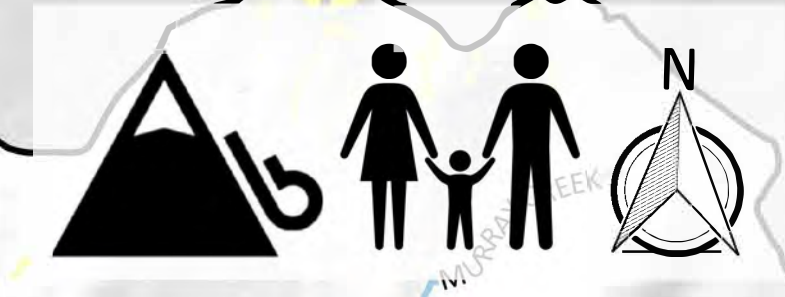
Date: 31 December 2019  
 Produced by: Ebbwater Consulting Inc.

**Sylix (Okanagan) Flood and Debris Flow Risk Assessment Project**  
**Debris Flow - Affected People**  
**Map Tile 07 of 20**

ANSI D - Map No. P-D-003-007



**Zoom-In Map**



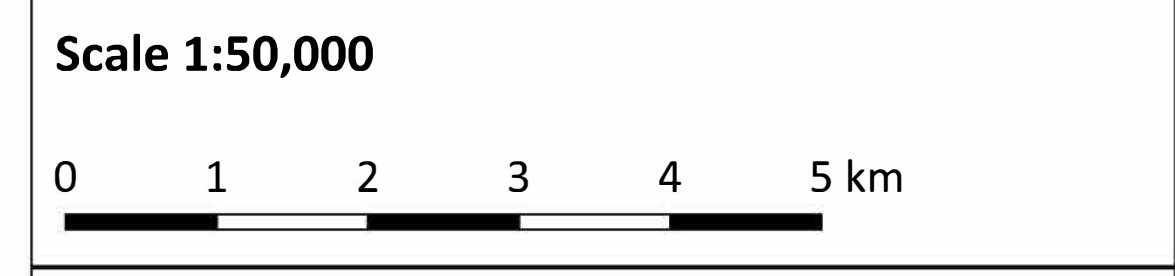
Click above map tile for Zoom-In map  
[Click here to return to Project Area map](#)  
[Click here to return to Okanagan map](#)  
[Click here to return to Similkameen map](#)

**Map Notes**

1. Map produced by Ebbwater Consulting Inc.
2. Population density is based on census dissemination areas within the project area boundary. Population density is not shown for areas with a population density of less than 1 person per square km.
3. The population density (exposure) layer was clipped to the debris flow hazard area. The hazard layer is shown in the hazard maps, and was produced by Palmer Environmental Consulting Group Inc. The method used to produce the hazard layer is described in the Quantitative Study.

**Data Sources**

1. Lakes and Watercourses, Roads and Trails, and Reserves: BC Data Catalogue.
2. Population: Statistics Canada 2016 Census.
3. Building Footprints: Regional districts, municipalities, WFN and hand digitized using Bing Satellite Imagery.
4. Sylix Place Names: Okanagan Nation Alliance.
5. Base Layer: OpenStreetMap data – openstreetmap.org (© OpenStreetMap contributors; cartography licence CC BY-SA) and hill shade created using CDEM and USGM GMTED2010.



**Legend**

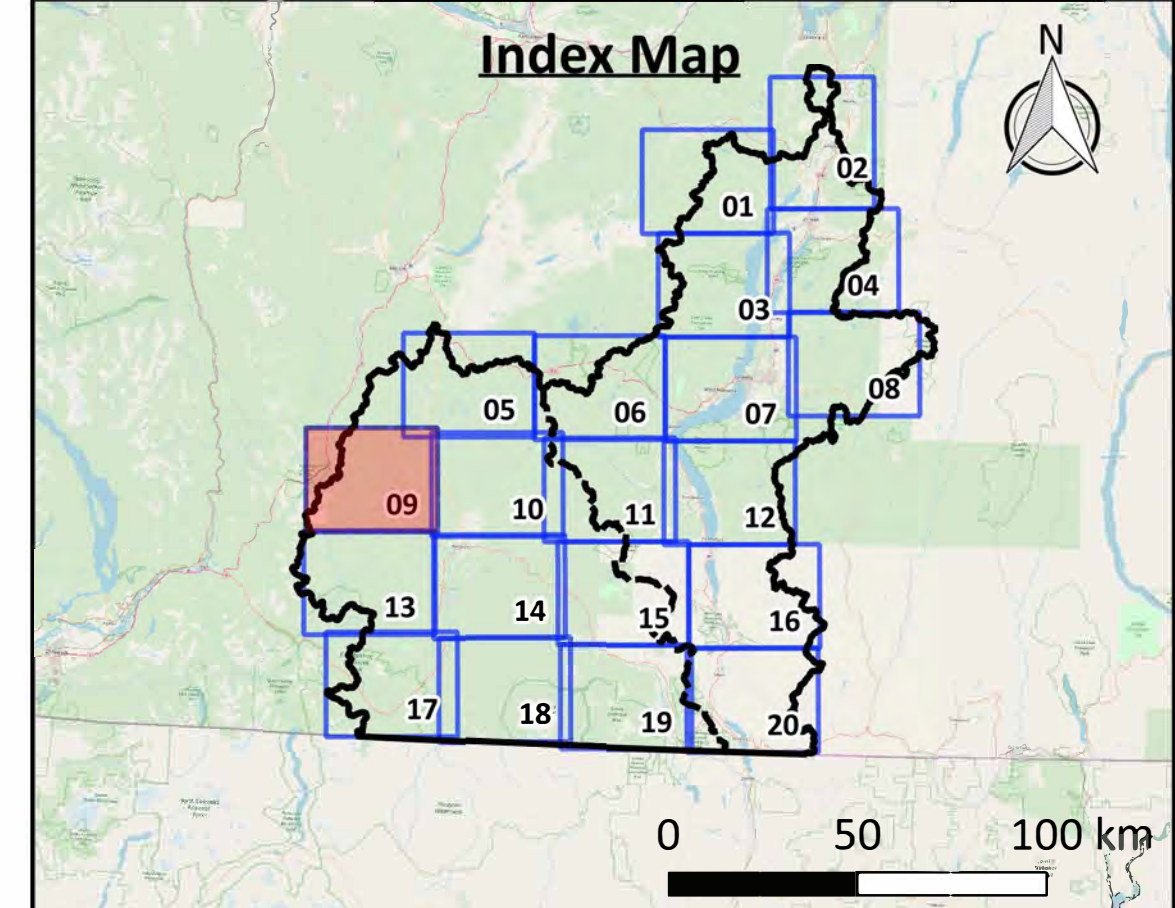
|                                     |                           |
|-------------------------------------|---------------------------|
| <b>Background</b>                   | <b>Affected Assets</b>    |
| — Watershed Boundary                | <b>Population Density</b> |
| - - - Okanagan-Similkameen Boundary | (people per square km)    |
| — Canada - US Border                | 1 - 10                    |
| ▨ Reserves                          | 10 - 100                  |
| ■ Lakes                             | 100 - 500                 |
| — Watercourses                      | 500 - 1000                |
| — Highway                           | 1000 +                    |
| — Major Road                        |                           |
| ■ Building Footprints               |                           |

Date: 31 December 2019  
 Produced by: Ebbwater Consulting Inc.

**Sylix (Okanagan) Flood and Debris Flow Risk Assessment Project**  
**Debris Flow - Affected People**  
**Map Tile 08 of 20**

ANSI D - Map No. P-D-003-008

# Zoom-In Map



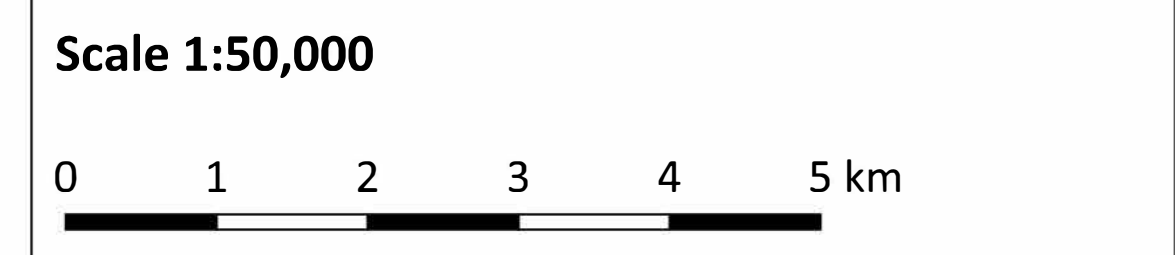
Click above map tile for Zoom-In map  
[Click here to return to Project Area map](#)  
[Click here to return to Okanagan map](#)  
[Click here to return to Similkameen map](#)

**Map Notes**

- Map produced by Ebbwater Consulting Inc.
- Population density is based on census dissemination areas within the project area boundary. Population density is not shown for areas with a population density of less than 1 person per square km.
- The population density (exposure) layer was clipped to the debris flow hazard area. The hazard layer is shown in the hazard maps, and was produced by Palmer Environmental Consulting Group Inc. The method used to produce the hazard layer is described in the Quantitative Study.

**Data Sources**

- Lakes and Watercourses, Roads and Trails, and Reserves: BC Data Catalogue.
- Population: Statistics Canada 2016 Census.
- Building Footprints: Regional districts, municipalities, WFN and hand digitized using Bing Satellite Imagery.
- Sylix Place Names: Okanagan Nation Alliance.
- Base Layer: OpenStreetMap data – openstreetmap.org (© OpenStreetMap contributors; cartography licence CC BY-SA) and hill shade created using CDEM and USGM GMTED2010.



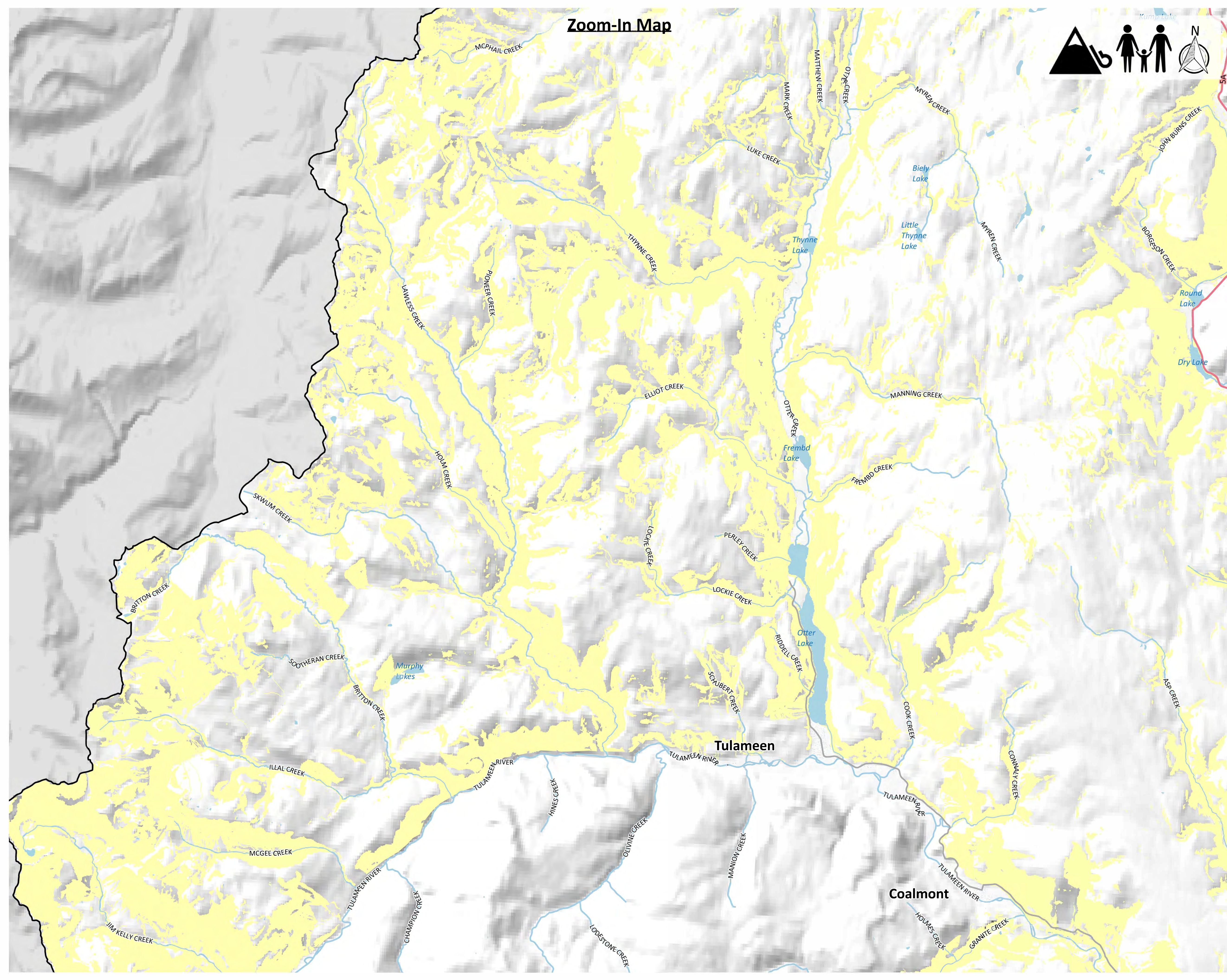
**Legend**

|                                   |  |
|-----------------------------------|--|
| <b>Background</b>                 | <b>Affected Assets</b>                           |
| — Watershed Boundary              | <b>Population Density (people per square km)</b> |
| - - Okanagan-Similkameen Boundary | 1 - 10   |
| — Canada - US Border              | 10 - 100   |
| ▭ Reserves                        | 100 - 500  |
| ▭ Lakes                           | 500 - 1000                                       |
| ▭ Watercourses                    | 1000 +   |
| — Highway                         |  |
| — Major Road                      |  |
| ▭ Building Footprints             |  |

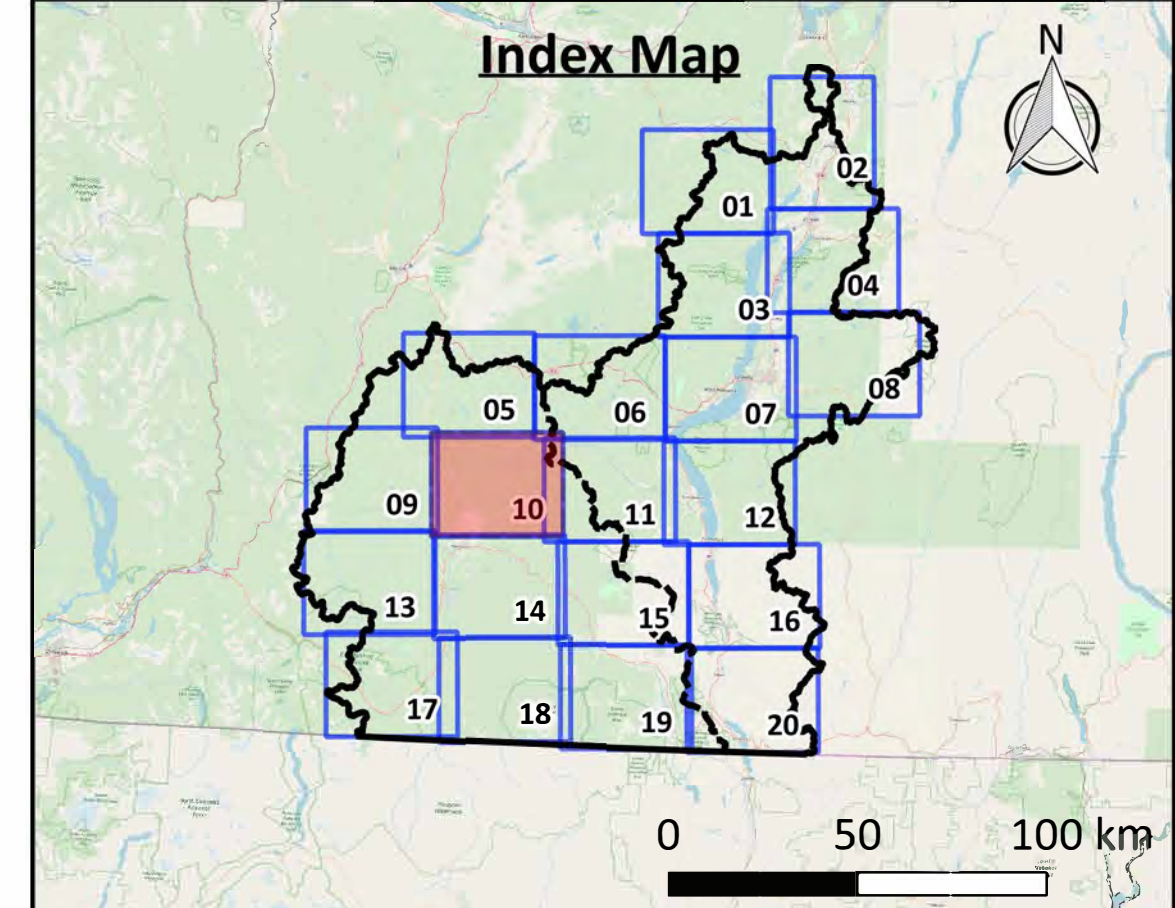
Date: 31 December 2019  
 Produced by: Ebbwater Consulting Inc.

**Sylix (Okanagan) Flood and Debris Flow Risk Assessment Project**  
**Debris Flow - Affected People**  
**Map Tile 09 of 20**

ANSI D - Map No. P-D-003-009



# Zoom-In Map



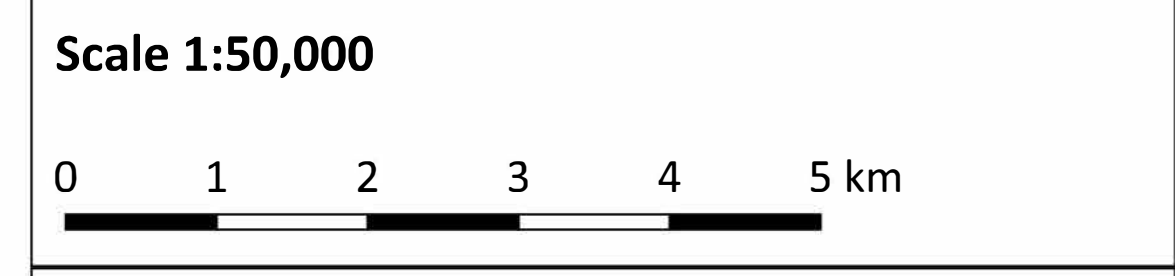
Click above map tile for Zoom-In map  
[Click here to return to Project Area map](#)  
[Click here to return to Okanagan map](#)  
[Click here to return to Similkameen map](#)

**Map Notes**

- Map produced by Ebbwater Consulting Inc.
- Population density is based on census dissemination areas within the project area boundary. Population density is not shown for areas with a population density of less than 1 person per square km.
- The population density (exposure) layer was clipped to the debris flow hazard area. The hazard layer is shown in the hazard maps, and was produced by Palmer Environmental Consulting Group Inc. The method used to produce the hazard layer is described in the Quantitative Study.

**Data Sources**

- Lakes and Watercourses, Roads and Trails, and Reserves: BC Data Catalogue.
- Population: Statistics Canada 2016 Census.
- Building Footprints: Regional districts, municipalities, WFN and hand digitized using Bing Satellite Imagery.
- Sylix Place Names: Okanagan Nation Alliance.
- Base Layer: OpenStreetMap data – openstreetmap.org (© OpenStreetMap contributors; cartography licence CC BY-SA) and hill shade created using CDEM and USGM GMTED2010.



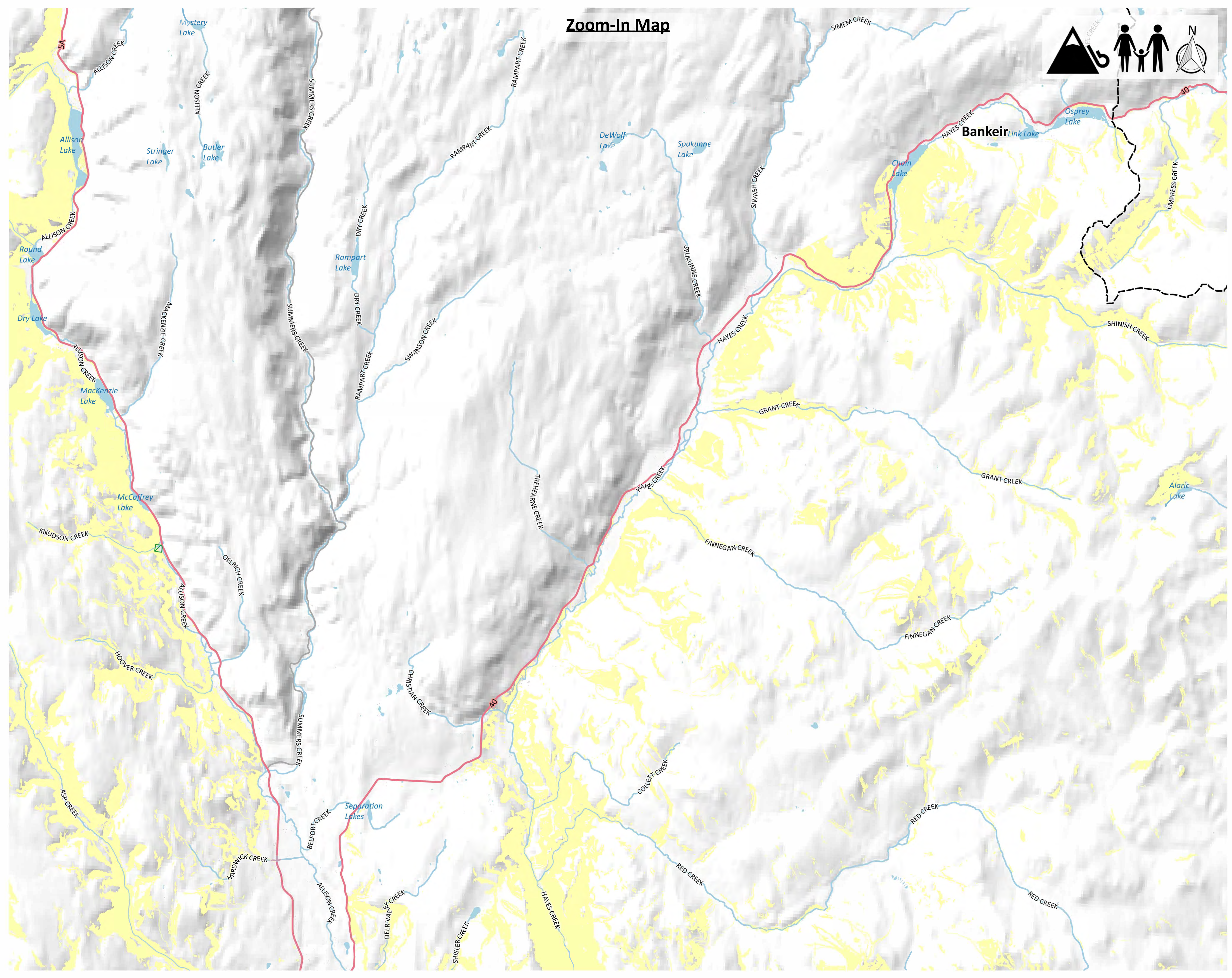
**Legend**

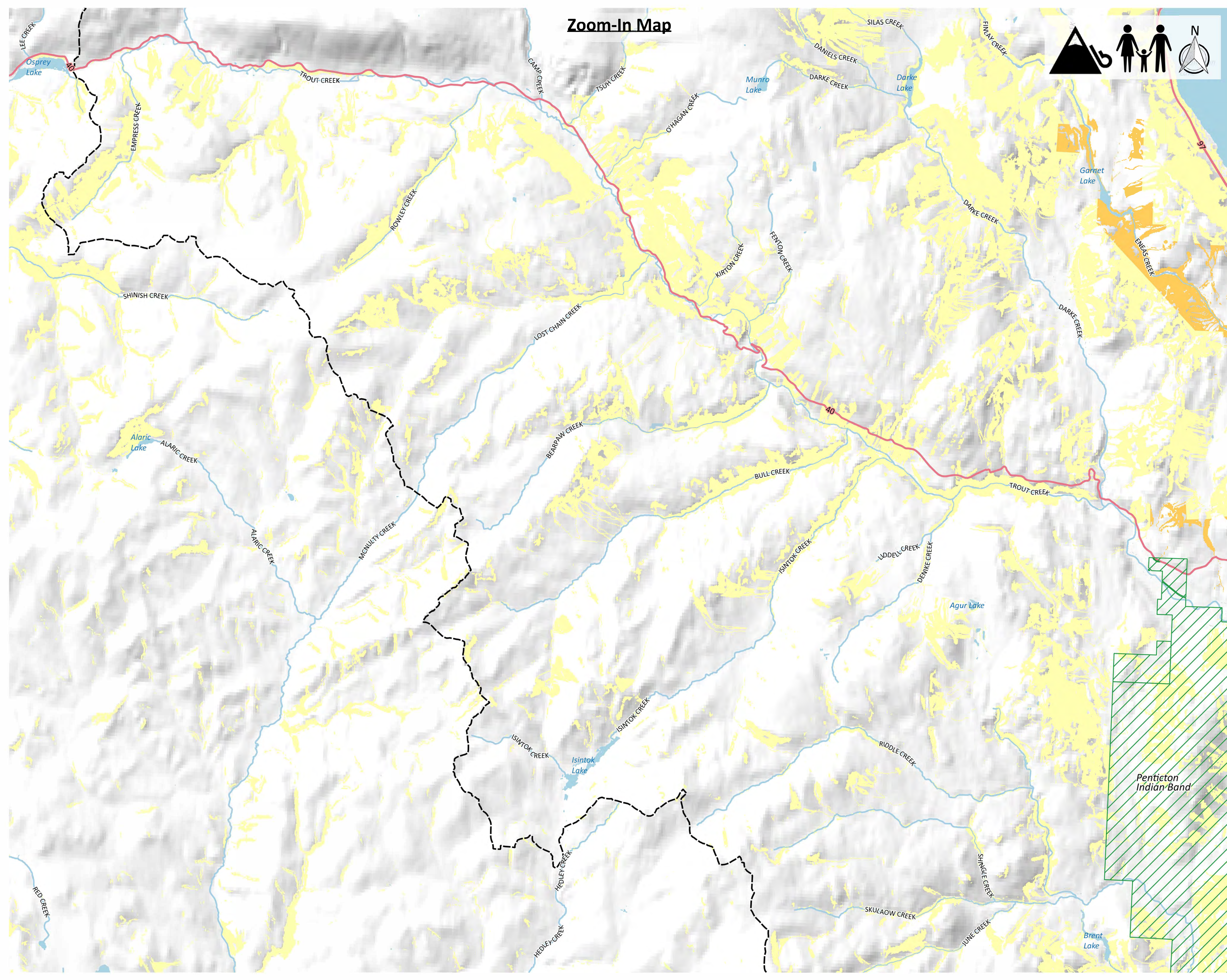
|                                     |  |
|-------------------------------------|--|
| <b>Background</b>                   | <b>Affected Assets</b>                           |
| — Watershed Boundary                | <b>Population Density (people per square km)</b> |
| - - - Okanagan-Similkameen Boundary | 1 - 10   |
| — Canada - US Border                | 10 - 100   |
| ▭ Reserves                          | 100 - 500  |
| ▭ Lakes                             | 500 - 1000                                       |
| — Watercourses                      | 1000 +   |
| — Highway                           |  |
| — Major Road                        |  |
| ▭ Building Footprints               |  |

Date: 31 December 2019  
 Produced by: Ebbwater Consulting Inc.

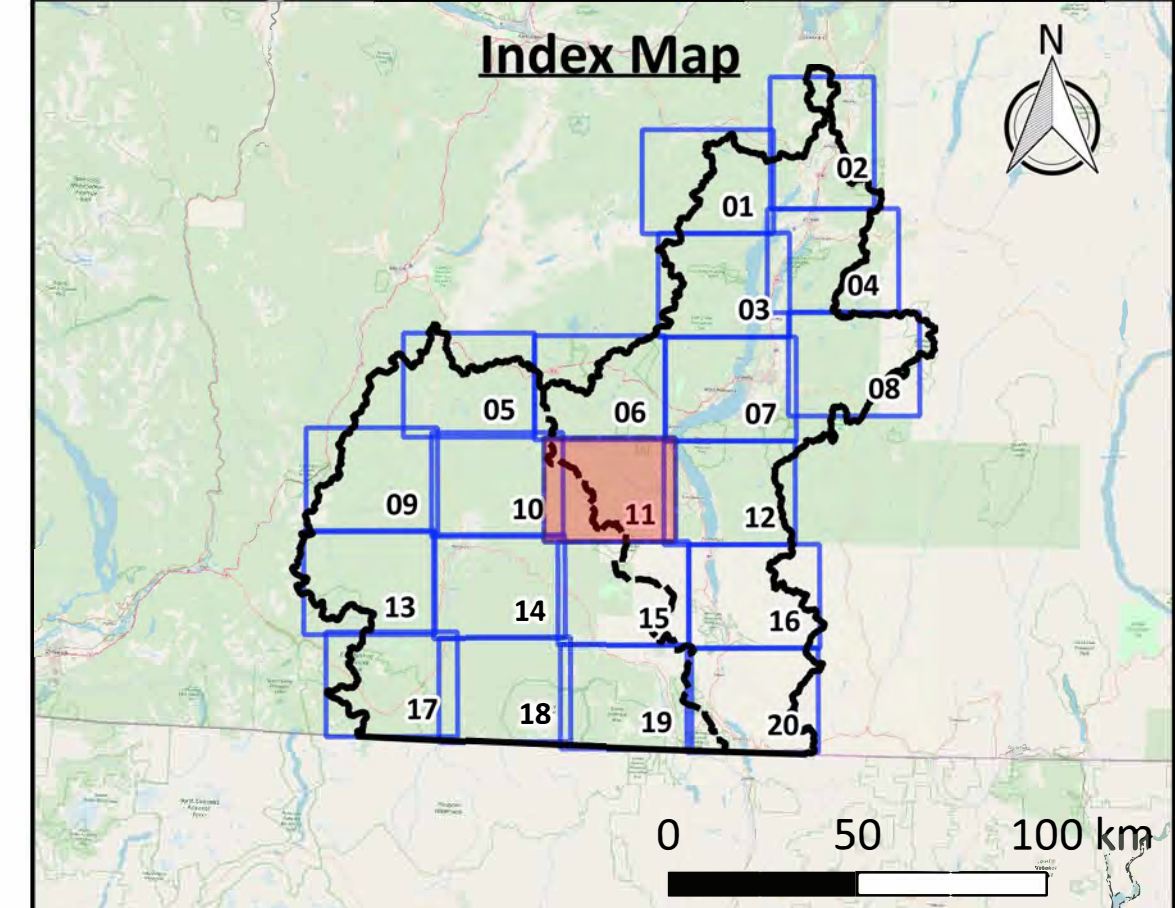
**Sylix (Okanagan) Flood and Debris Flow Risk Assessment Project**  
**Debris Flow - Affected People**  
**Map Tile 10 of 20**

ANSI D - Map No. P-D-003-010





**Zoom-In Map**



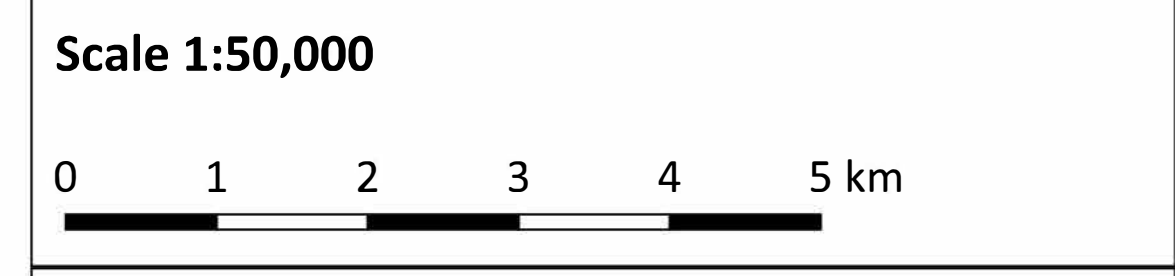
[Click above map tile for Zoom-In map](#)  
[Click here to return to Project Area map](#)  
[Click here to return to Okanagan map](#)  
[Click here to return to Similkameen map](#)

**Map Notes**

1. Map produced by Ebbwater Consulting Inc.
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3. The population density (exposure) layer was clipped to the debris flow hazard area. The hazard layer is shown in the hazard maps, and was produced by Palmer Environmental Consulting Group Inc. The method used to produce the hazard layer is described in the Quantitative Study.

**Data Sources**

1. Lakes and Watercourses, Roads and Trails, and Reserves: BC Data Catalogue.
2. Population: Statistics Canada 2016 Census.
3. Building Footprints: Regional districts, municipalities, WFN and hand digitized using Bing Satellite Imagery.
4. Sylix Place Names: Okanagan Nation Alliance.
5. Base Layer: OpenStreetMap data – openstreetmap.org (© OpenStreetMap contributors; cartography licence CC BY-SA) and hill shade created using CDEM and USGM GMTED2010.



**Legend**

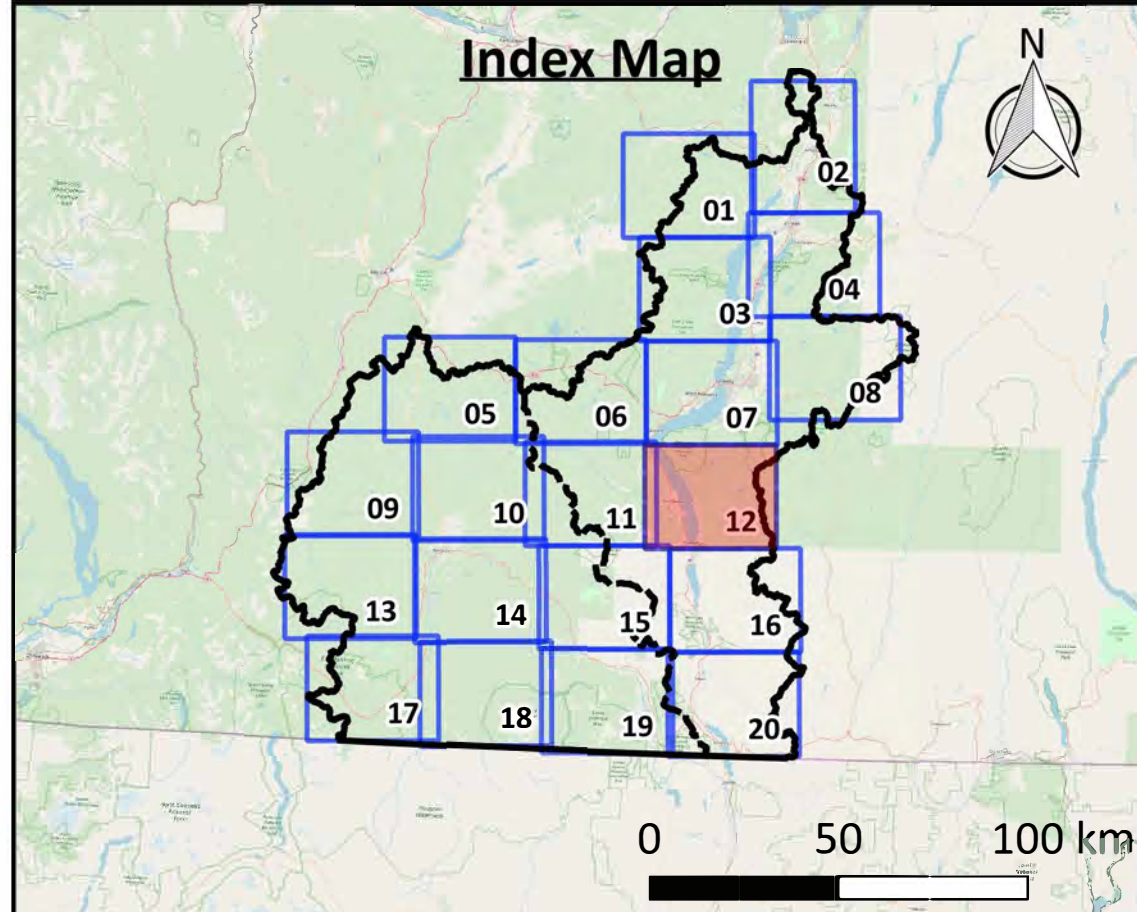
|                                   |  |
|-----------------------------------|--|
| <b>Background</b>                 | <b>Affected Assets</b>                           |
| — Watershed Boundary              | <b>Population Density (people per square km)</b> |
| - - Okanagan-Similkameen Boundary | 1 - 10   |
| — Canada - US Border              | 10 - 100   |
| ▨ Reserves                        | 100 - 500  |
| ■ Lakes                           | 500 - 1000                                       |
| — Watercourses                    | 1000 +   |
| — Highway                         |  |
| — Major Road                      |  |
| ■ Building Footprints             |  |

**Date:** 31 December 2019  
**Produced by:** Ebbwater Consulting Inc.

**Sylix (Okanagan) Flood and Debris Flow Risk Assessment Project**  
**Debris Flow - Affected People**  
**Map Tile 11 of 20**

ANSI D - Map No. P-D-003-011

# Zoom-In Map



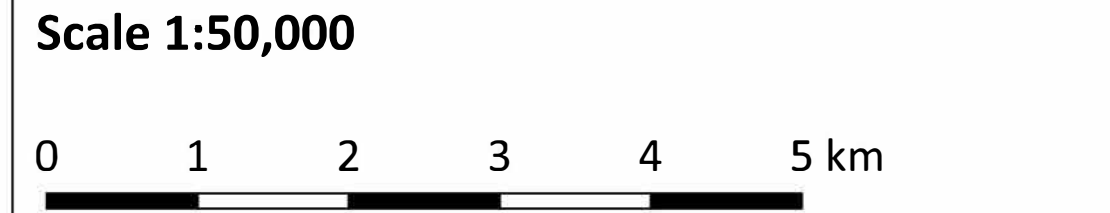
Click above map tile for Zoom-In map  
[Click here to return to Project Area map](#)  
[Click here to return to Okanagan map](#)  
[Click here to return to Similkameen map](#)

**Map Notes**

- Map produced by Ebbwater Consulting Inc.
- Population density is based on census dissemination areas within the project area boundary. Population density is not shown for areas with a population density of less than 1 person per square km.
- The population density (exposure) layer was clipped to the debris flow hazard area. The hazard layer is shown in the hazard maps, and was produced by Palmer Environmental Consulting Group Inc. The method used to produce the hazard layer is described in the Quantitative Study.

**Data Sources**

- Lakes and Watercourses, Roads and Trails, and Reserves: BC Data Catalogue.
- Population: Statistics Canada 2016 Census.
- Building Footprints: Regional districts, municipalities, WFN and hand digitized using Bing Satellite Imagery.
- Sylix Place Names: Okanagan Nation Alliance.
- Base Layer: OpenStreetMap data – openstreetmap.org (© OpenStreetMap contributors; cartography licence CC BY-SA) and hill shade created using CDEM and USGM GMTED2010.



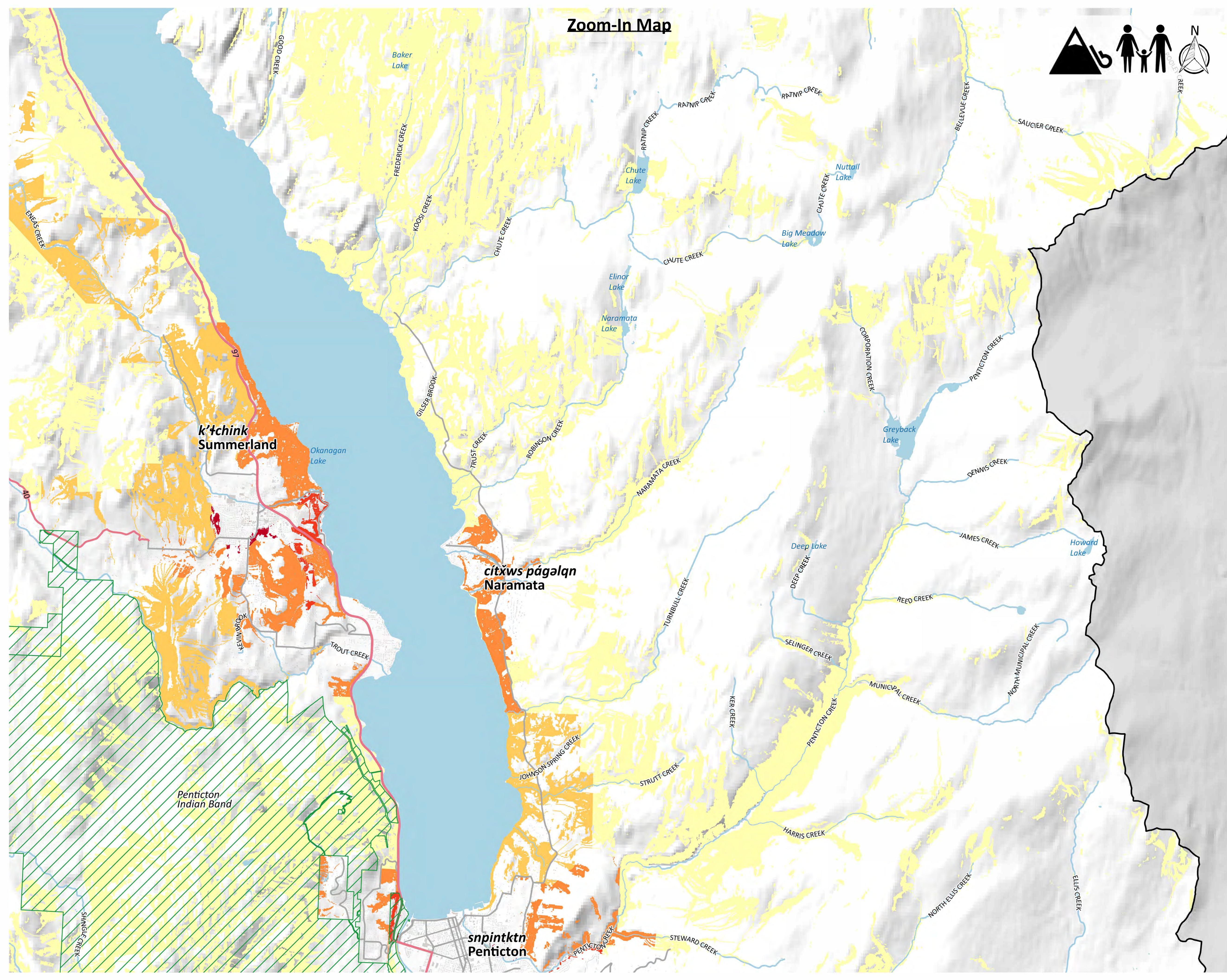
**Legend**

|                                   |  |
|-----------------------------------|--|
| <b>Background</b>                 | <b>Affected Assets</b>                           |
| — Watershed Boundary              | <b>Population Density (people per square km)</b> |
| - - Okanagan-Similkameen Boundary | 1 - 10   |
| — Canada - US Border              | 10 - 100   |
| ▨ Reserves                        | 100 - 500  |
| ■ Lakes                           | 500 - 1000                                       |
| — Watercourses                    | 1000 +   |
| — Highway                         |  |
| — Major Road                      |  |
| ■ Building Footprints             |  |

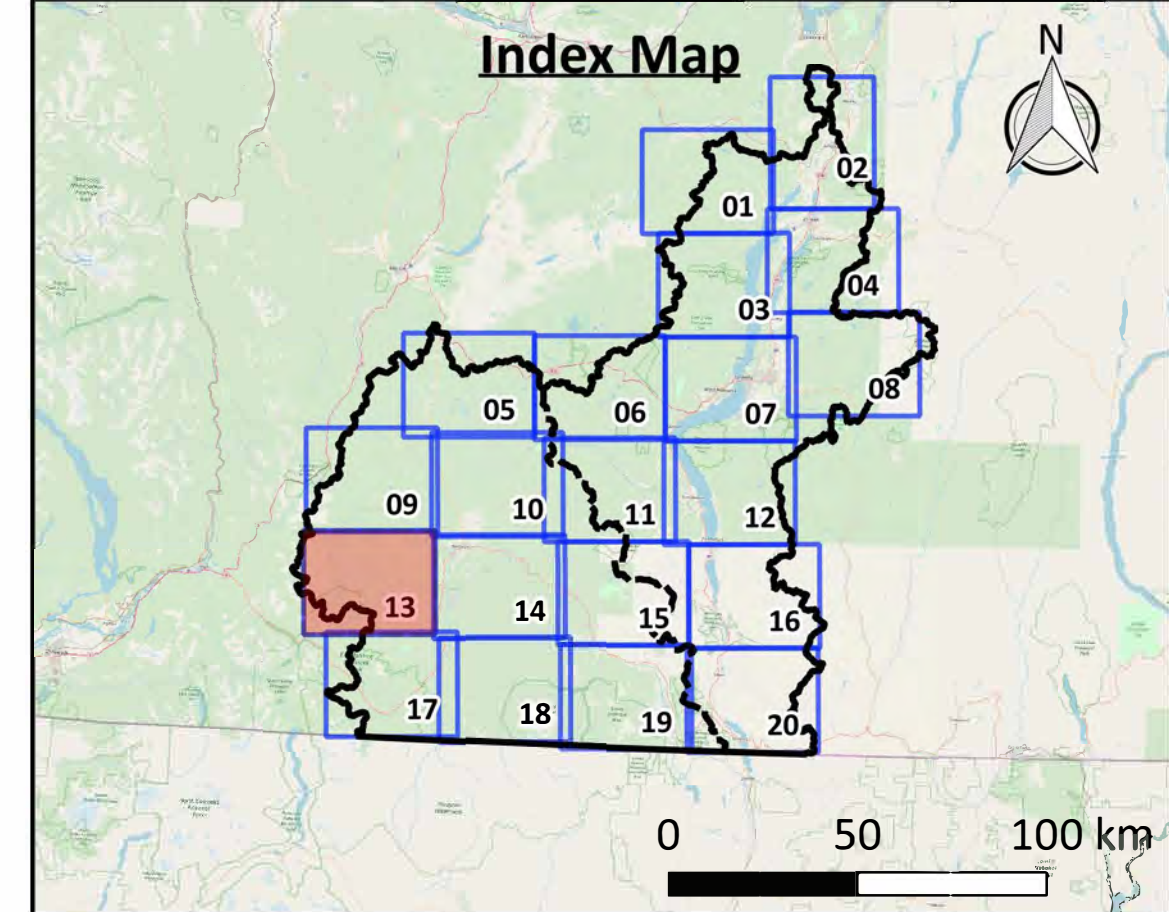
Date: 31 December 2019  
 Produced by: Ebbwater Consulting Inc.

**Sylix (Okanagan) Flood and Debris Flow Risk Assessment Project**  
**Debris Flow - Affected People**  
**Map Tile 12 of 20**

ANSI D - Map No. P-D-003-012



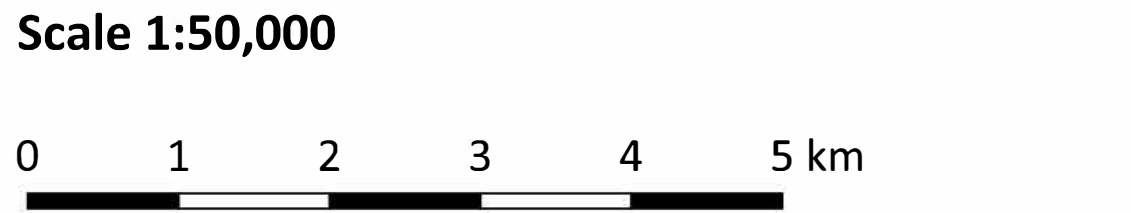
# Zoom-In Map



[Click above map tile for Zoom-In map](#)  
[Click here to return to Project Area map](#)  
[Click here to return to Okanagan map](#)  
[Click here to return to Similkameen map](#)

- Map Notes
1. Map produced by Ebbwater Consulting Inc.
  2. Population density is based on census dissemination areas within the project area boundary. Population density is not shown for areas with a population density of less than 1 person per square km.
  3. The population density (exposure) layer was clipped to the debris flow hazard area. The hazard layer is shown in the hazard maps, and was produced by Palmer Environmental Consulting Group Inc. The method used to produce the hazard layer is described in the Quantitative Study.

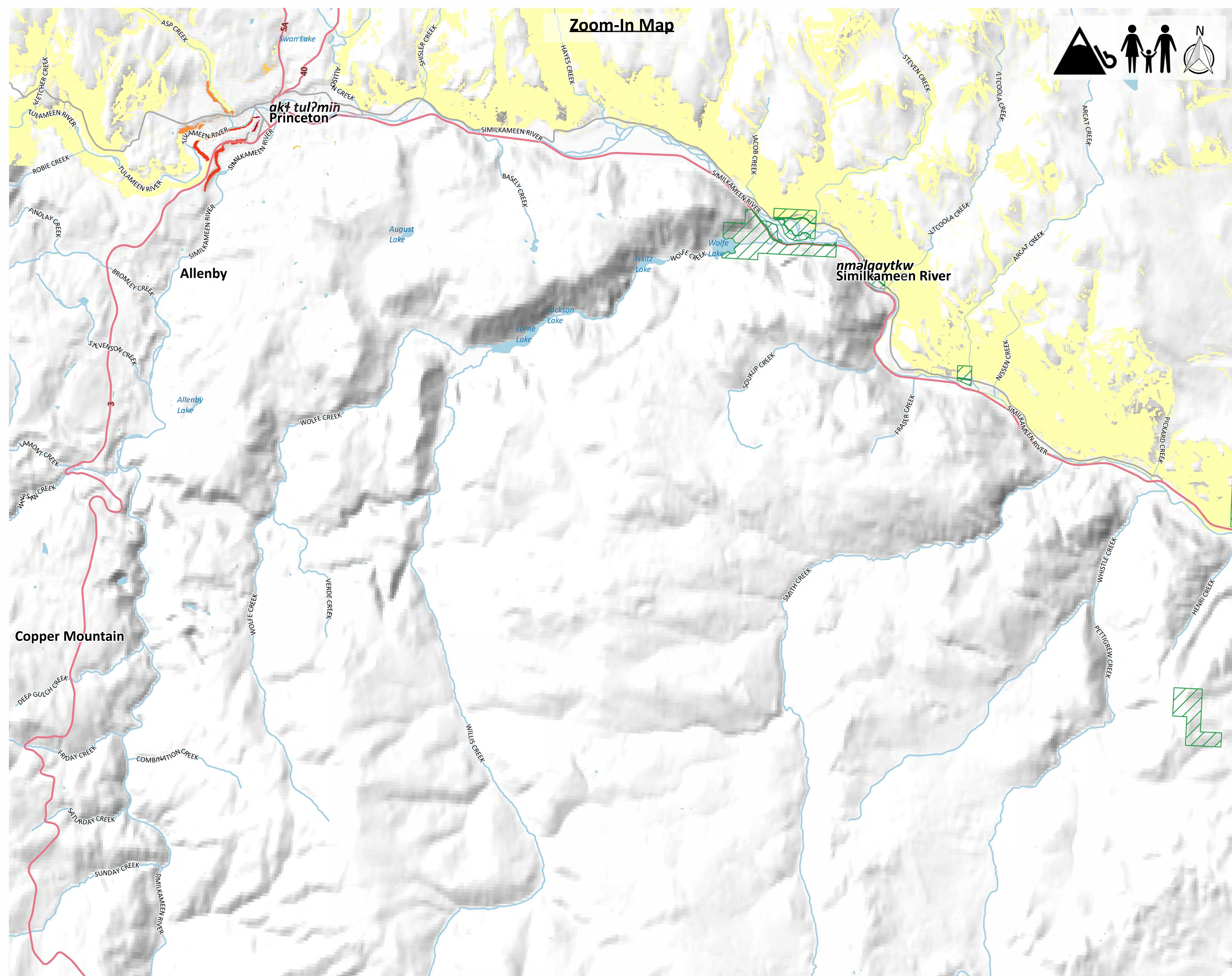
- Data Sources
1. Lakes and Watercourses, Roads and Trails, and Reserves: BC Data Catalogue.
  2. Population: Statistics Canada 2016 Census.
  3. Building Footprints: Regional districts, municipalities, WFN and hand digitized using Bing Satellite Imagery.
  4. Sylix Place Names: Okanagan Nation Alliance.
  5. Base Layer: OpenStreetMap data – openstreetmap.org (© OpenStreetMap contributors; cartography licence CC BY-SA) and hill shade created using CDEM and USGM GMTED2010.



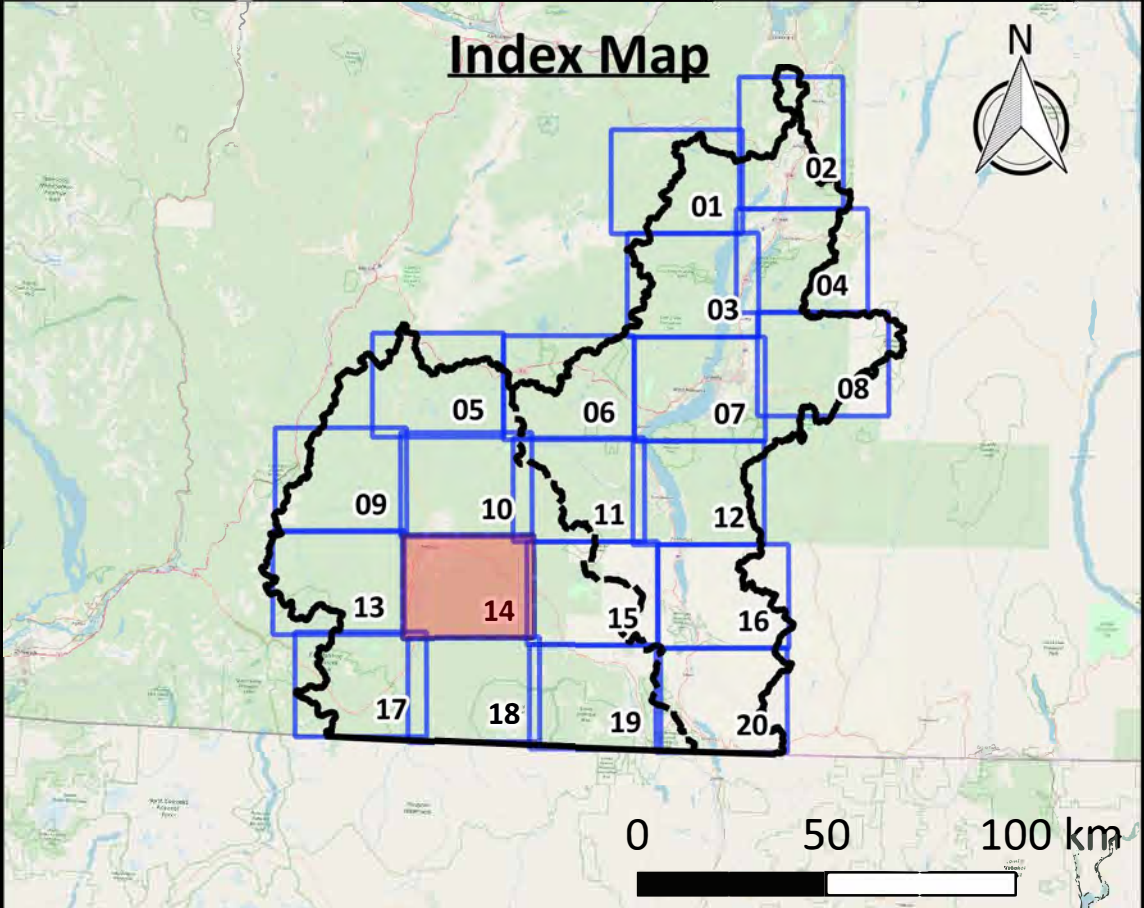
| Legend                            |  |
|-----------------------------------|--|
| <b>Background</b>                 | <b>Affected Assets</b>                           |
| — Watershed Boundary              | <b>Population Density (people per square km)</b> |
| --- Okanagan-Similkameen Boundary |  |
| — Canada - US Border              |  |
| ▭ Reserves                        |  |
| ▭ Lakes                           |  |
| — Watercourses                    | 1 - 10   |
| — Highway                         | 10 - 100   |
| — Major Road                      | 100 - 500  |
| ▭ Building Footprints             | 500 - 1000                                       |
|                                   | 1000 +   |

Date: 31 December 2019  
Produced by: Ebbwater Consulting Inc.

**Sylix (Okanagan) Flood and Debris Flow Risk Assessment Project**  
**Debris Flow - Affected People**  
**Map Tile 13 of 20**



**Zoom-In Map**



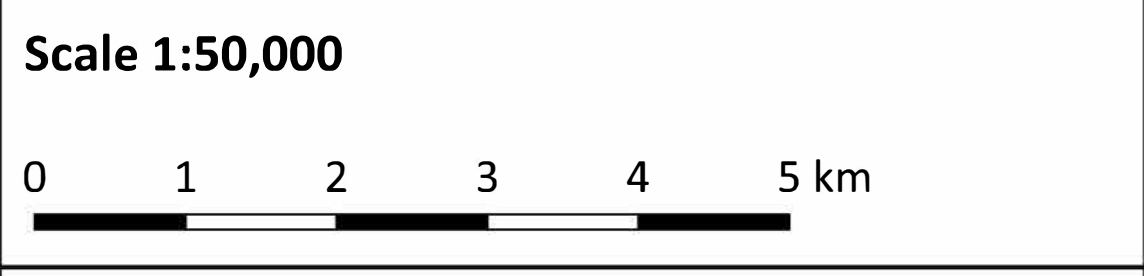
Click above map tile for Zoom-In map  
[Click here to return to Project Area map](#)  
[Click here to return to Okanagan map](#)  
[Click here to return to Similkameen map](#)

**Map Notes**

1. Map produced by Ebbwater Consulting Inc.
2. Population density is based on census dissemination areas within the project area boundary. Population density is not shown for areas with a population density of less than 1 person per square km.
3. The population density (exposure) layer was clipped to the debris flow hazard area. The hazard layer is shown in the hazard maps, and was produced by Palmer Environmental Consulting Group Inc. The method used to produce the hazard layer is described in the Quantitative Study.

**Data Sources**

1. Lakes and Watercourses, Roads and Trails, and Reserves: BC Data Catalogue.
2. Population: Statistics Canada 2016 Census.3. Building Footprints: Regional districts, municipalities, WFN and hand digitized using Bing Satellite Imagery.
4. Sylix Place Names: Okanagan Nation Alliance.
5. Base Layer: OpenStreetMap data – openstreetmap.org (© OpenStreetMap contributors; cartography licence CC BY-SA) and hill shade created using CDEM and USGM GMTED2010.



**Legend**

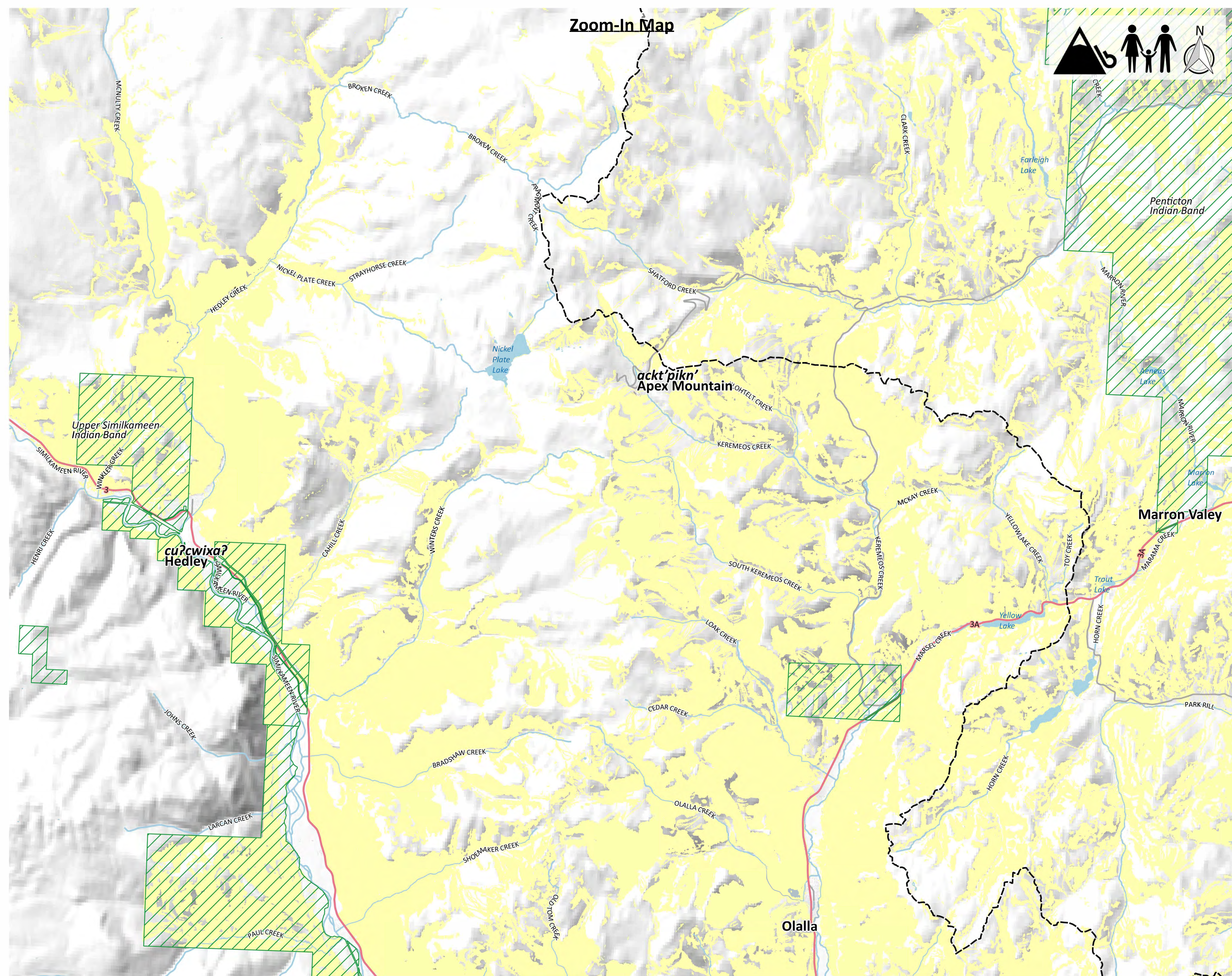
|                                     |                               |
|-------------------------------------|-------------------------------|
| <b>Background</b>                   | <b>Affected Assets</b>        |
| — Watershed Boundary                | <b>Population Density</b>     |
| - - - Okanagan-Similkameen Boundary | <b>(people per square km)</b> |
| — Canada - US Border                | 1 - 10                        |
| ▨ Reserves                          | 10 - 100                      |
| ■ Lakes                             | 100 - 500                     |
| — Watercourses                      | 500 - 1000                    |
| — Highway                           | 1000 +                        |
| — Major Road                        |                               |
| ■ Building Footprints               |                               |

**Date:** 31 December 2019  
**Produced by:** Ebbwater Consulting Inc.

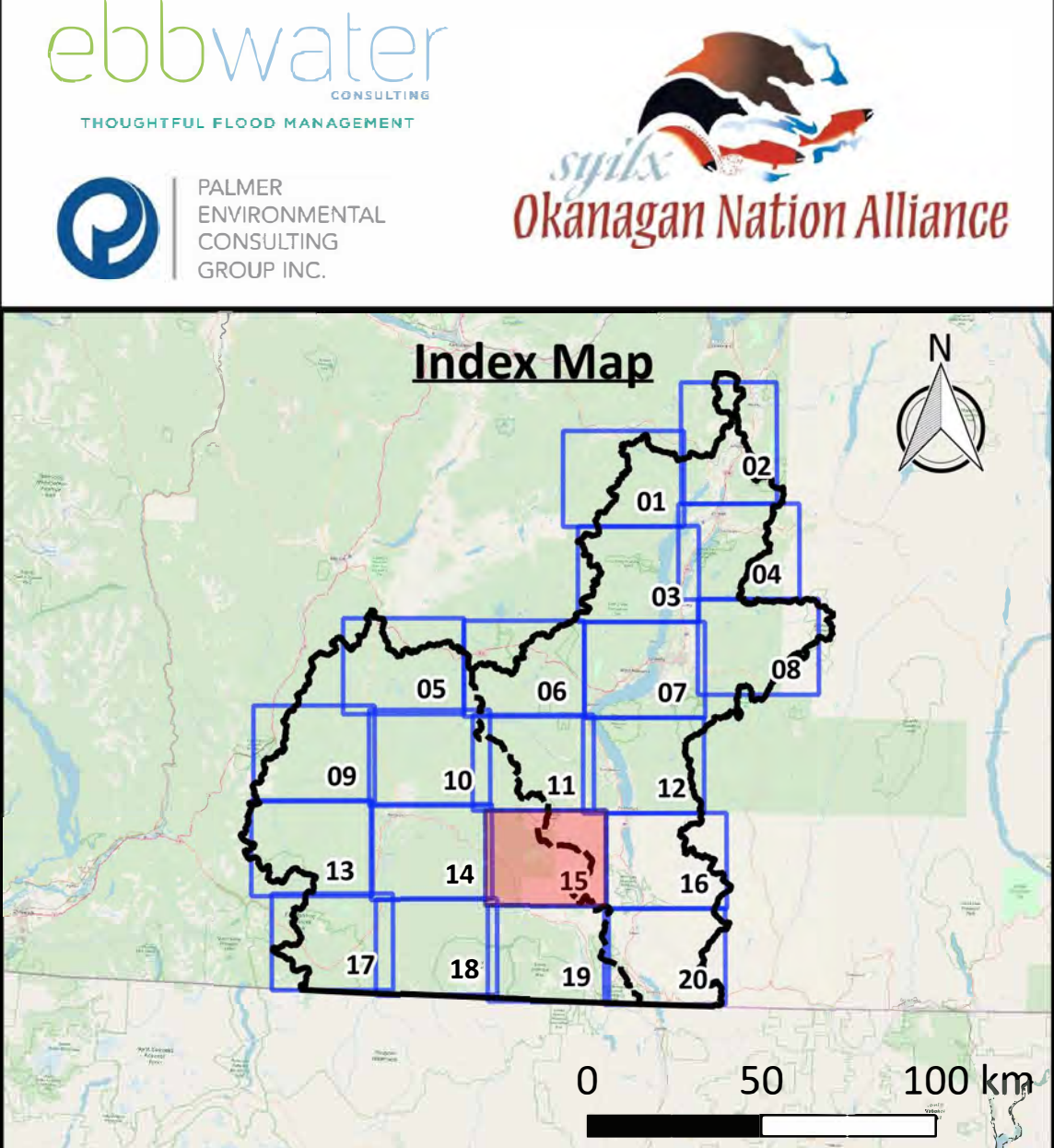
**Sylix (Okanagan) Flood and Debris Flow Risk Assessment Project**  
**Debris Flow - Affected People**  
**Map Tile 14 of 20**

ANSI D - Map No. P-D-003-014





**Zoom-In Map**



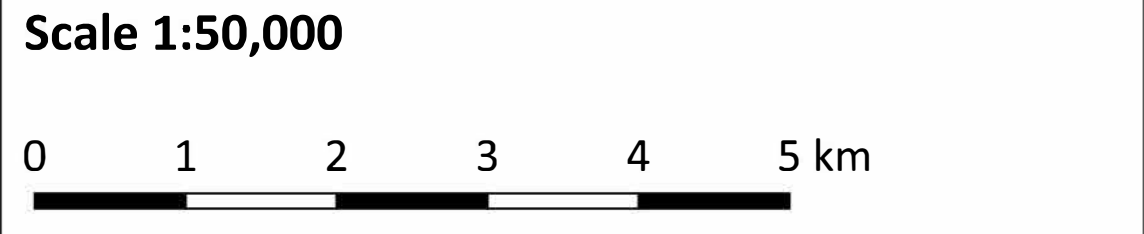
Click above map tile for Zoom-In map  
[Click here to return to Project Area map](#)  
[Click here to return to Okanagan map](#)  
[Click here to return to Similkameen map](#)

**Map Notes**

- Map produced by Ebbwater Consulting Inc.
- Population density is based on census dissemination areas within the project area boundary. Population density is not shown for areas with a population density of less than 1 person per square km.
- The population density (exposure) layer is clipped to the debris flow hazard area. The hazard layer is shown in the hazard maps, and was produced by Palmer Environmental Consulting Group Inc. The method used to produce the hazard layer is described in the Quantitative Study.

**Data Sources**

- Lakes and Watercourses, Roads and Trails, and Reserves: BC Data Catalogue.
- Population: Statistics Canada 2016 Census.
- Building Footprints: Regional districts, municipalities, WFN and hand digitized using Bing Satellite Imagery.
- Sylix Place Names: Okanagan Nation Alliance.
- Base Layer: OpenStreetMap data – openstreetmap.org (© OpenStreetMap contributors; cartography licence CC BY-SA) and hill shade created using CDEM and USGM GMTED2010.



**Legend**

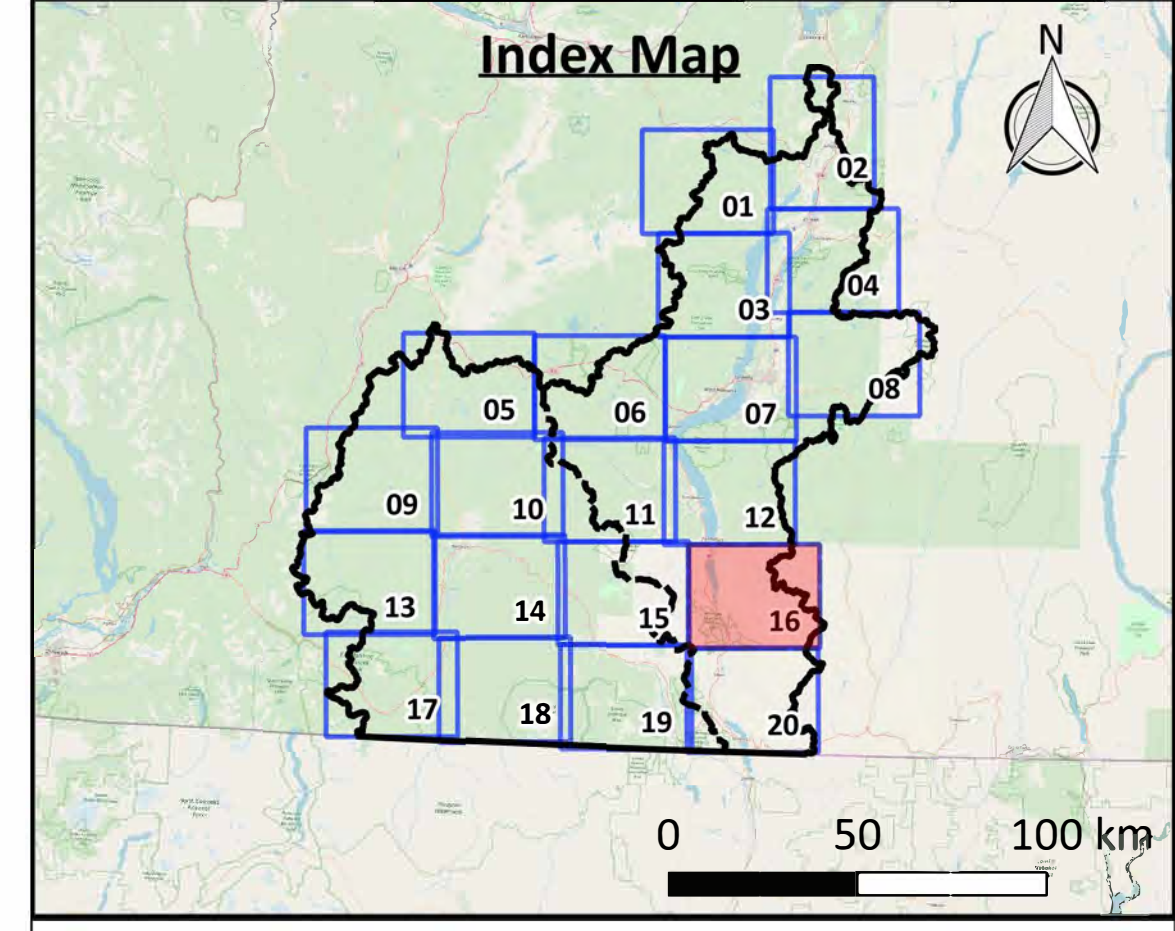
|                                   |  |
|-----------------------------------|--|
| <b>Background</b>                 | <b>Affected Assets</b>                           |
| — Watershed Boundary              | <b>Population Density</b>                        |
| - - Okanagan-Similkameen Boundary | <b>Population Density (people per square km)</b> |
| — Canada - US Border              | 1 - 10   |
| ▨ Reserves                        | 10 - 100   |
| ■ Lakes                           | 100 - 500  |
| — Watercourses                    | 500 - 1000                                       |
| — Highway                         | 1000 +   |
| — Major Road                      |  |
| ■ Building Footprints             |  |

Date: 31 December 2019  
 Produced by: Ebbwater Consulting Inc.

**Sylix (Okanagan) Flood and Debris Flow Risk Assessment Project**  
**Debris Flow - Affected People**  
**Map Tile 15 of 20**

ANSI D - Map No. P-D-003-015

# Zoom-In Map



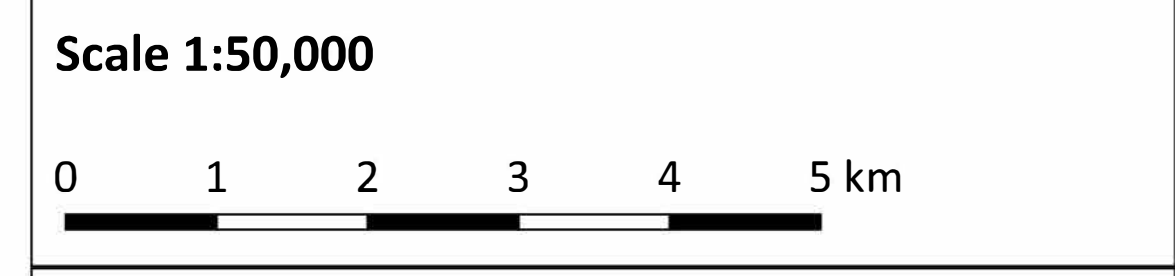
Click above map tile for Zoom-In map  
[Click here to return to Project Area map](#)  
[Click here to return to Okanagan map](#)  
[Click here to return to Similkameen map](#)

**Map Notes**

- Map produced by Ebbwater Consulting Inc.
- Population density is based on census dissemination areas within the project area boundary. Population density is not shown for areas with a population density of less than 1 person per square km.
- The population density (exposure) layer was clipped to the debris flow hazard area. The hazard layer is shown in the hazard maps, and was produced by Palmer Environmental Consulting Group Inc. The method used to produce the hazard layer is described in the Quantitative Study.

**Data Sources**

- Lakes and Watercourses, Roads and Trails, and Reserves: BC Data Catalogue.
- Population: Statistics Canada 2016 Census.
- Building Footprints: Regional districts, municipalities, WFN and hand digitized using Bing Satellite Imagery.
- Sylix Place Names: Okanagan Nation Alliance.
- Base Layer: OpenStreetMap data – openstreetmap.org (© OpenStreetMap contributors; cartography licence CC BY-SA) and hill shade created using CDEM and USGM GMTED2010.



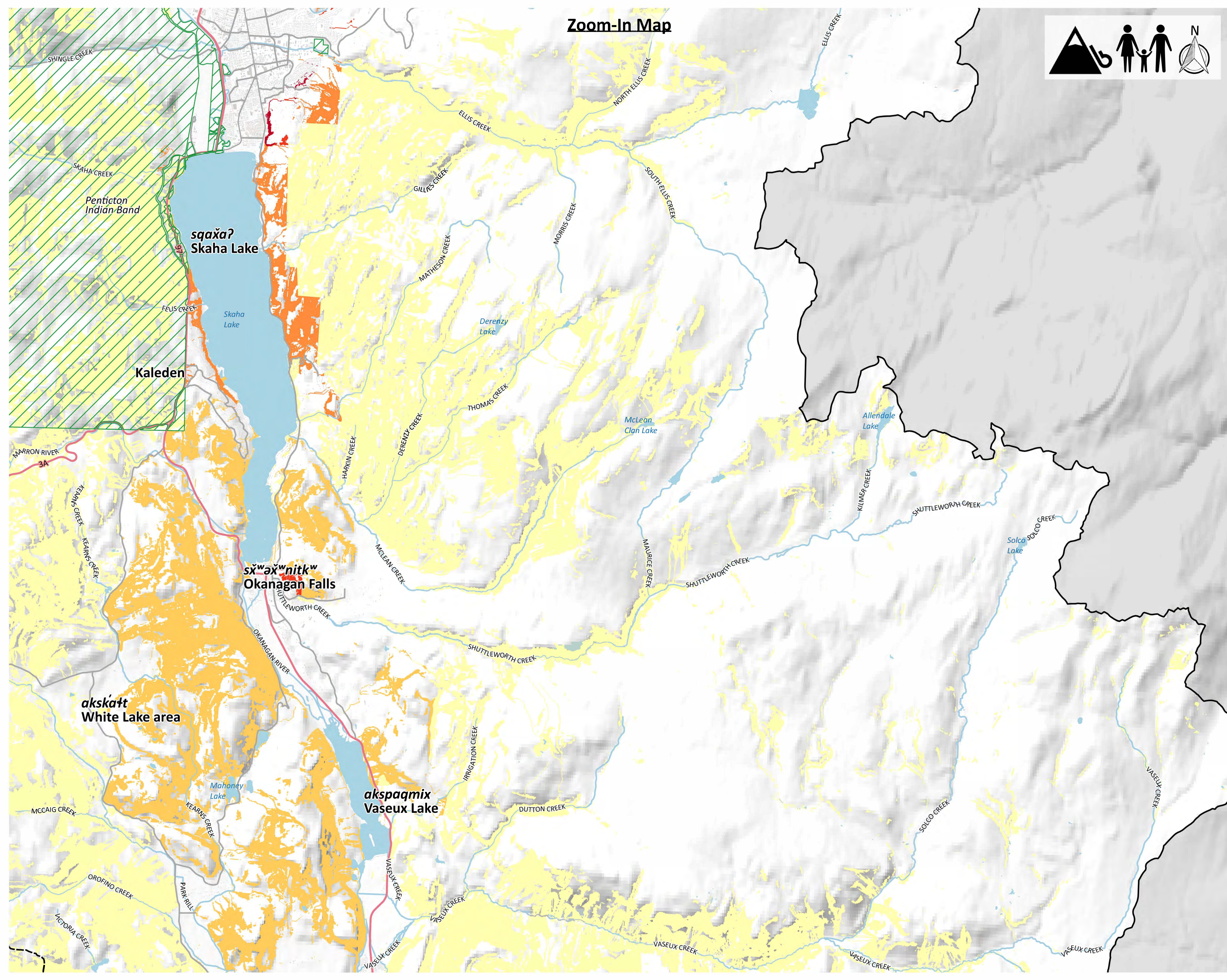
**Legend**

|                                   |  |
|-----------------------------------|--|
| <b>Background</b>                 | <b>Affected Assets</b>                           |
| — Watershed Boundary              | <b>Population Density (people per square km)</b> |
| - - Okanagan-Similkameen Boundary | 1 - 10   |
| — Canada - US Border              | 10 - 100   |
| ▨ Reserves                        | 100 - 500  |
| ■ Lakes                           | 500 - 1000                                       |
| — Watercourses                    | 1000 +   |
| — Highway                         |  |
| — Major Road                      |  |
| ■ Building Footprints             |  |

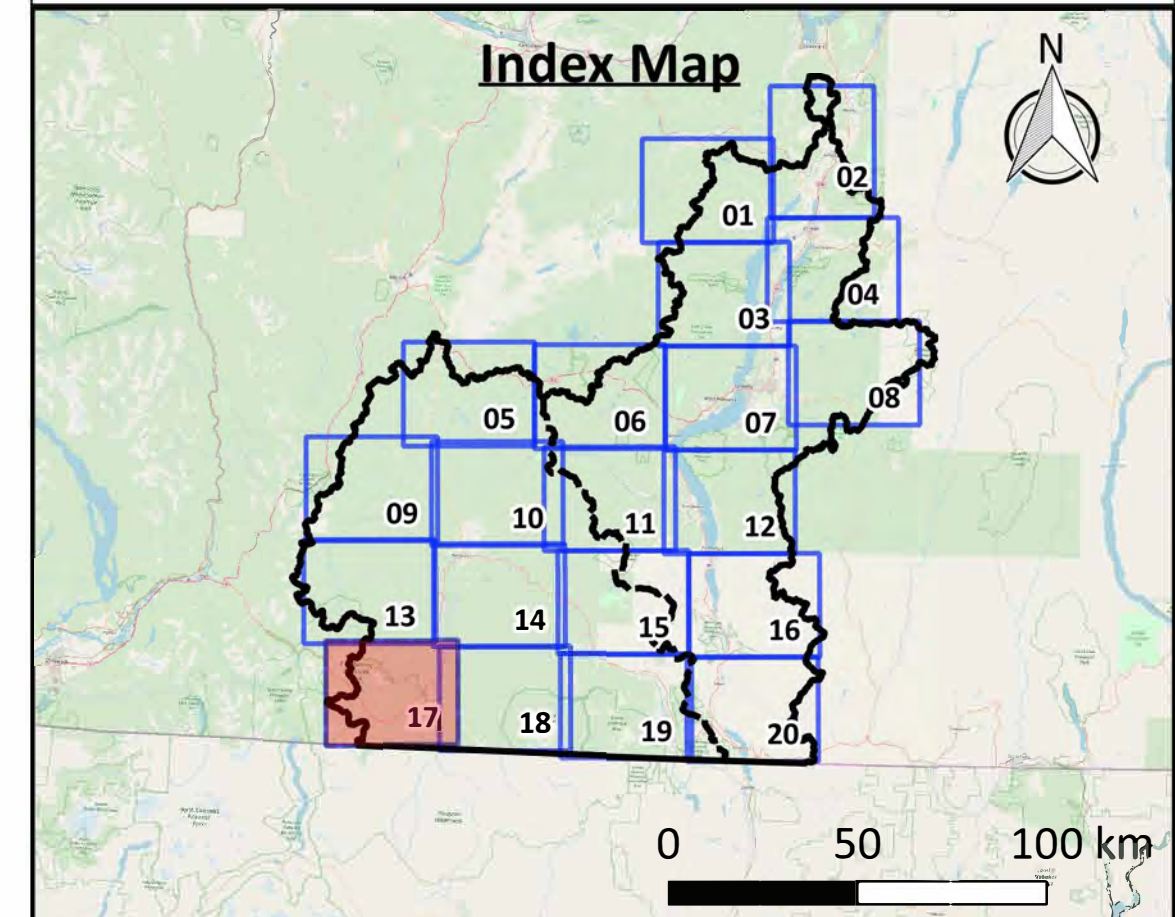
Date: 31 December 2019  
 Produced by: Ebbwater Consulting Inc.

**Sylix (Okanagan) Flood and Debris Flow Risk Assessment Project**  
**Debris Flow - Affected People**  
**Map Tile 16 of 20**

ANSI D - Map No. P-D-003-016



# Zoom-In Map



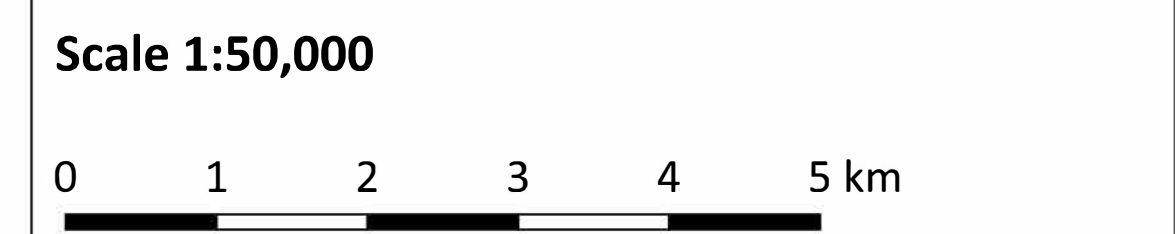
Click above map tile for Zoom-In map  
[Click here to return to Project Area map](#)  
[Click here to return to Okanagan map](#)  
[Click here to return to Similkameen map](#)

**Map Notes**

1. Map produced by Ebbwater Consulting Inc.
2. Population density is based on census dissemination areas within the project area boundary. Population density is not shown for areas with a population density of less than 1 person per square km.
3. The population density (exposure) layer was clipped to the debris flow hazard area. The hazard layer is shown in the hazard maps, and was produced by Palmer Environmental Consulting Group Inc. The method used to produce the hazard layer is described in the Quantitative Study.

**Data Sources**

1. Lakes and Watercourses, Roads and Trails, and Reserves: BC Data Catalogue.
2. Population: Statistics Canada 2016 Census.
3. Building Footprints: Regional districts, municipalities, WFN and hand digitized using Bing Satellite Imagery.
4. Sylix Place Names: Okanagan Nation Alliance.
5. Base Layer: OpenStreetMap data – openstreetmap.org (© OpenStreetMap contributors; cartography licence CC BY-SA) and hill shade created using CDEM and USGM GMTED2010.



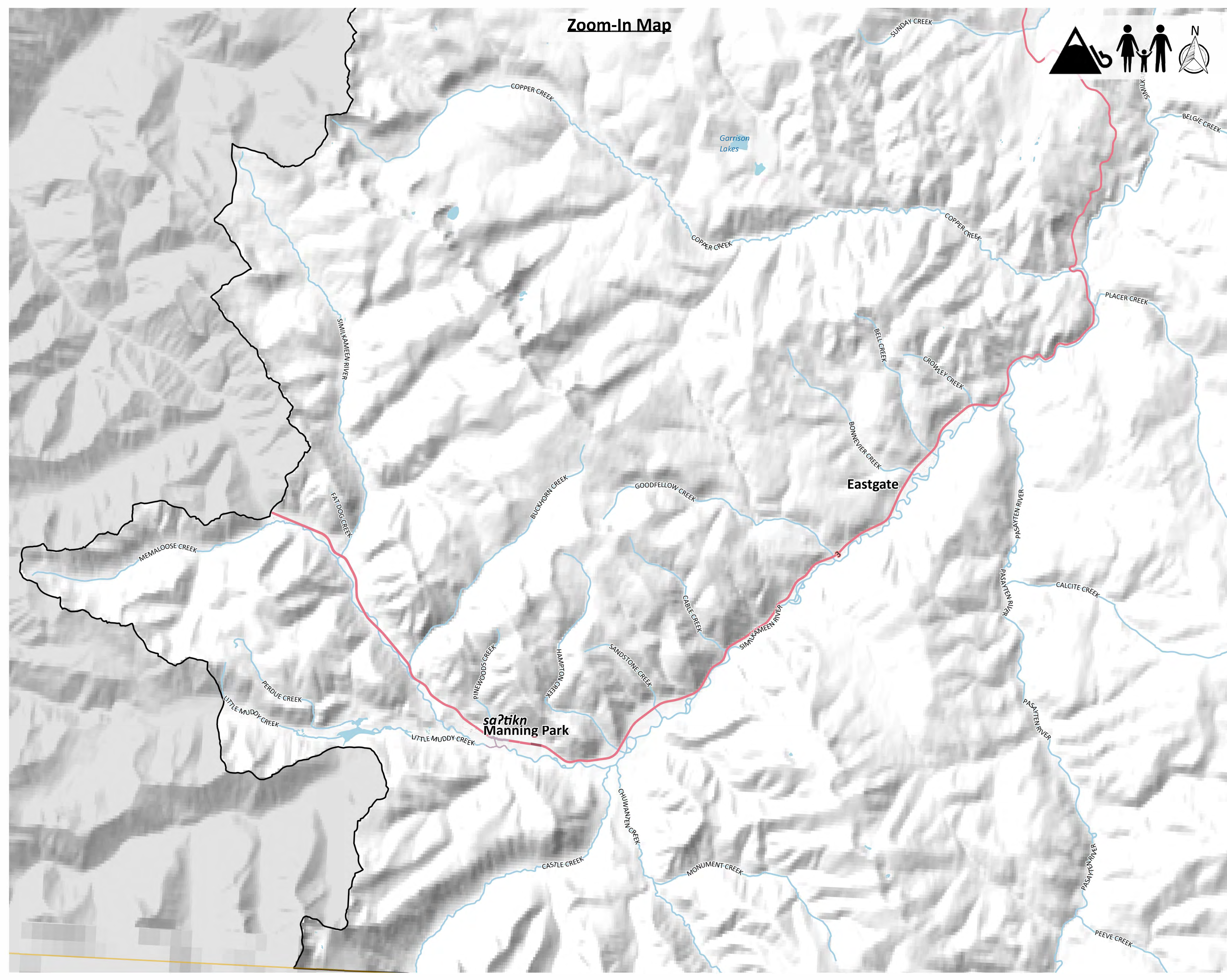
**Legend**

|                                   |  |
|-----------------------------------|--|
| <b>Background</b>                 | <b>Affected Assets</b>                           |
| — Watershed Boundary              | <b>Population Density (people per square km)</b> |
| - - Okanagan-Similkameen Boundary | 1 - 10   |
| — Canada - US Border              | 10 - 100   |
| ▭ Reserves                        | 100 - 500  |
| ▭ Lakes                           | 500 - 1000                                       |
| — Watercourses                    | 1000 +   |
| — Highway                         |  |
| — Major Road                      |  |
| ▭ Building Footprints             |  |

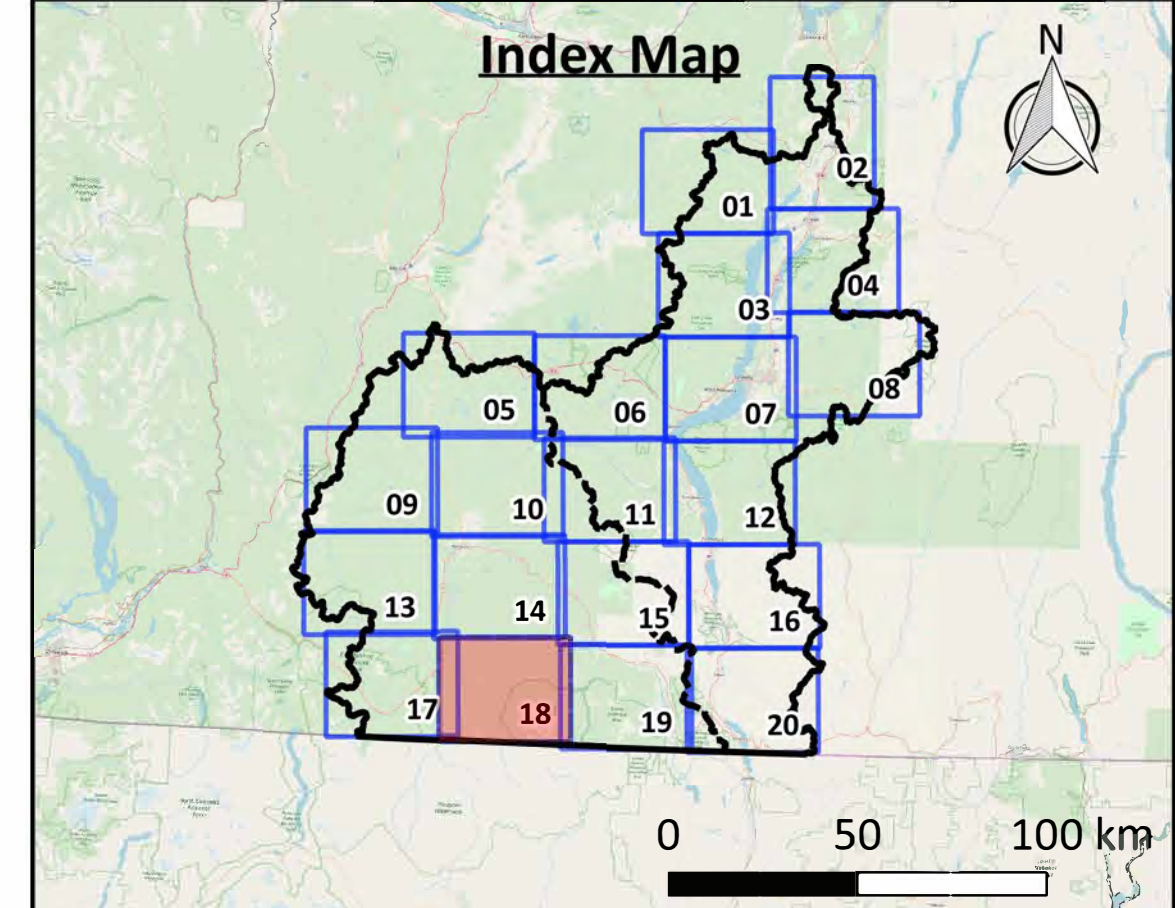
Date: 31 December 2019  
 Produced by: Ebbwater Consulting Inc.

**Sylix (Okanagan) Flood and Debris Flow Risk Assessment Project**  
**Debris Flow - Affected People**  
**Map Tile 17 of 20**

ANSI D - Map No. P-D-003-017



# Zoom-In Map



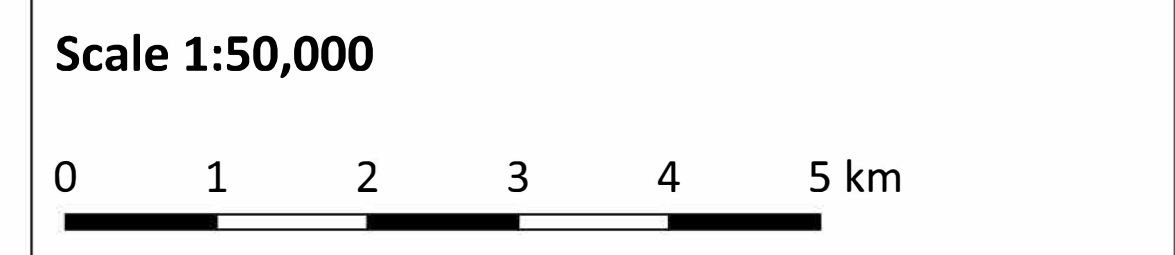
Click above map tile for Zoom-In map  
[Click here to return to Project Area map](#)  
[Click here to return to Okanagan map](#)  
[Click here to return to Similkameen map](#)

**Map Notes**

- Map produced by Ebbwater Consulting Inc.
- Population density is based on census dissemination areas within the project area boundary. Population density is not shown for areas with a population density of less than 1 person per square km.
- The population density (exposure) layer was clipped to the debris flow hazard area. The hazard layer is shown in the hazard maps, and was produced by Palmer Environmental Consulting Group Inc. The method used to produce the hazard layer is described in the Quantitative Study.

**Data Sources**

- Lakes and Watercourses, Roads and Trails, and Reserves: BC Data Catalogue.
- Population: Statistics Canada 2016 Census.
- Building Footprints: Regional districts, municipalities, WFN and hand digitized using Bing Satellite Imagery.
- Sylix Place Names: Okanagan Nation Alliance.
- Base Layer: OpenStreetMap data – openstreetmap.org (© OpenStreetMap contributors; cartography licence CC BY-SA) and hill shade created using CDEM and USGM GMTED2010.



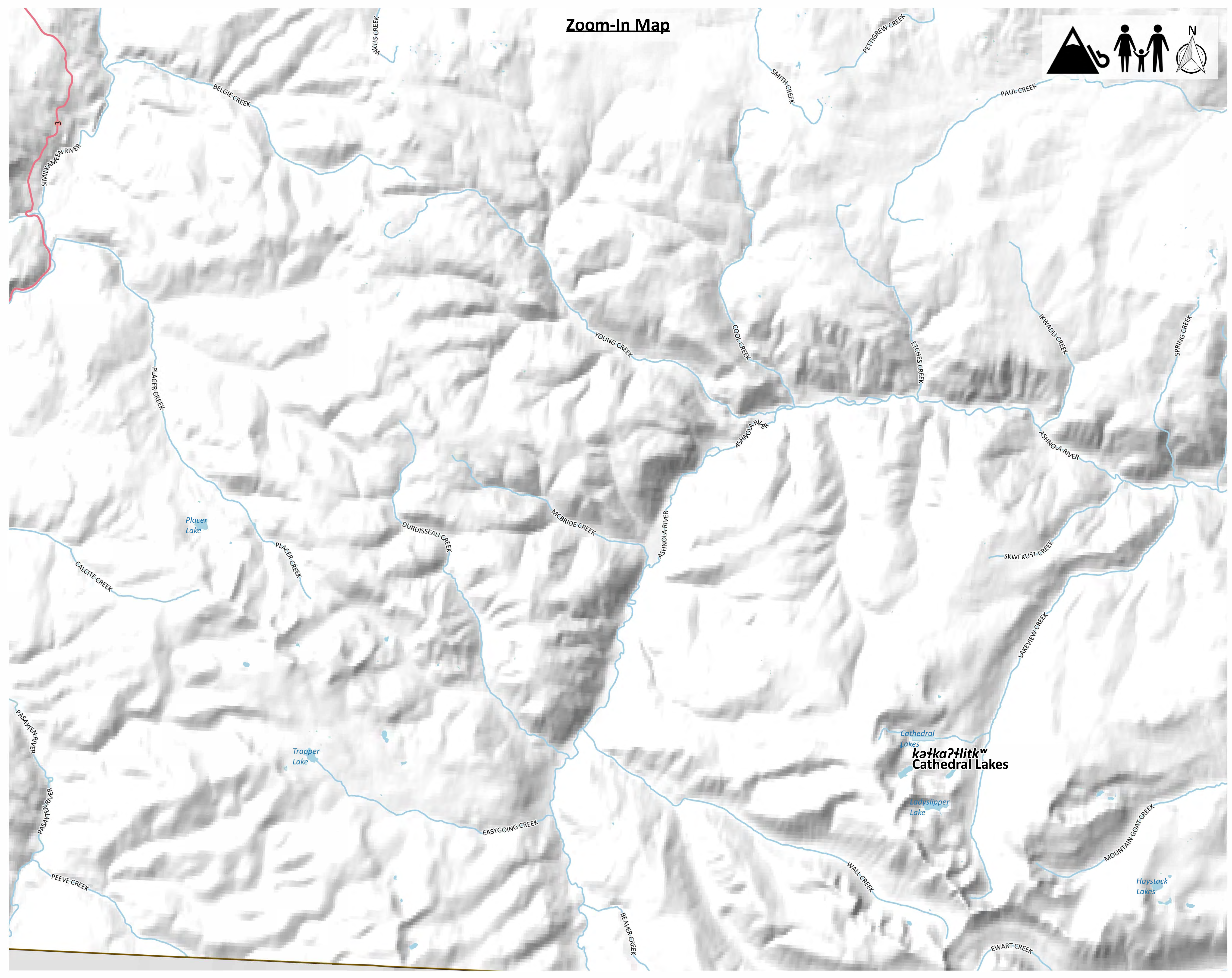
**Legend**

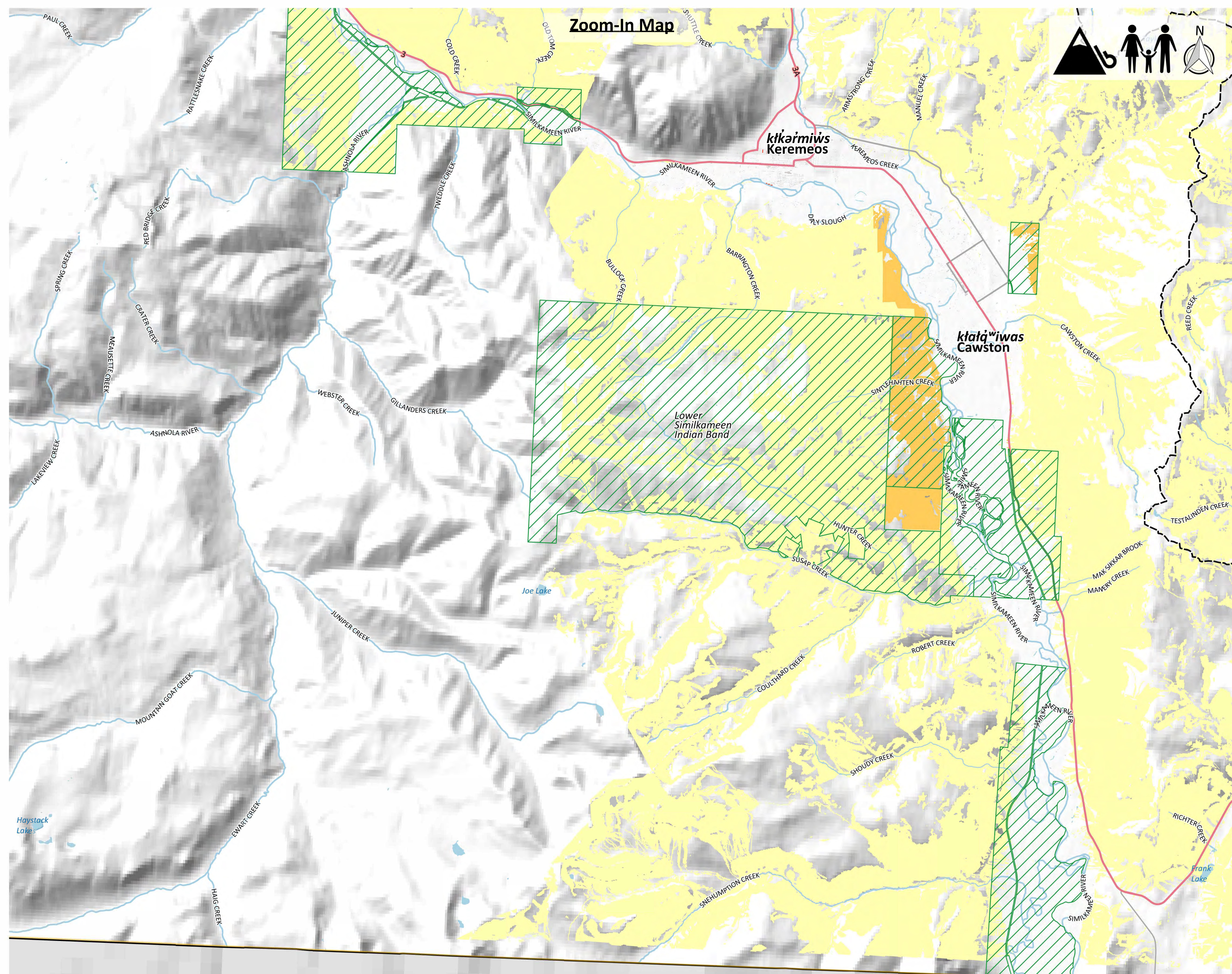
|                                   |  |
|-----------------------------------|--|
| <b>Background</b>                 | <b>Affected Assets</b>                           |
| — Watershed Boundary              | <b>Population Density (people per square km)</b> |
| - - Okanagan-Similkameen Boundary | 1 - 10   |
| — Canada - US Border              | 10 - 100   |
| ▭ Reserves                        | 100 - 500  |
| ▭ Lakes                           | 500 - 1000                                       |
| — Watercourses                    | 1000 +   |
| — Highway                         |  |
| — Major Road                      |  |
| ▭ Building Footprints             |  |

**Date:** 31 December 2019  
**Produced by:** Ebbwater Consulting Inc.

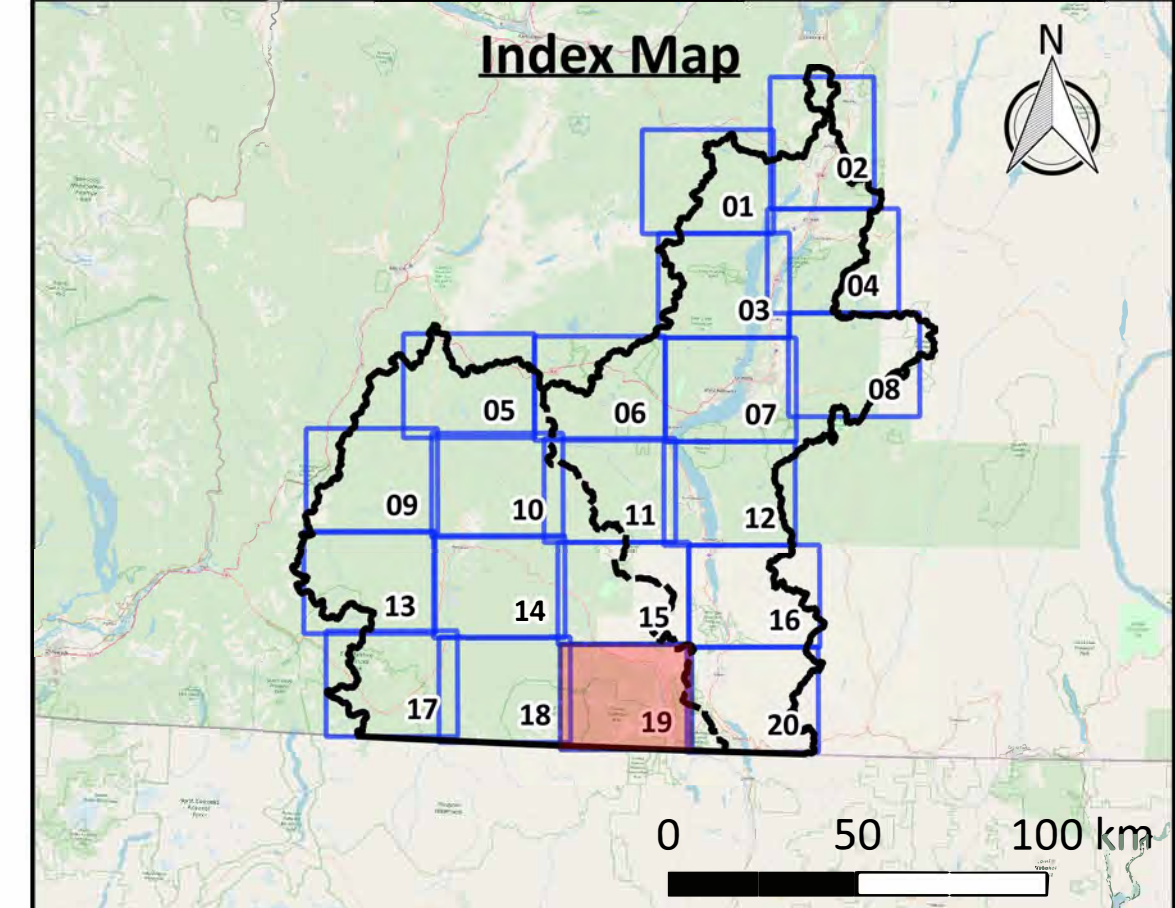
**Sylix (Okanagan) Flood and Debris Flow Risk Assessment Project**  
**Debris Flow - Affected People**  
**Map Tile 18 of 20**

ANSI D - Map No. P-D-003-018





**Zoom-In Map**



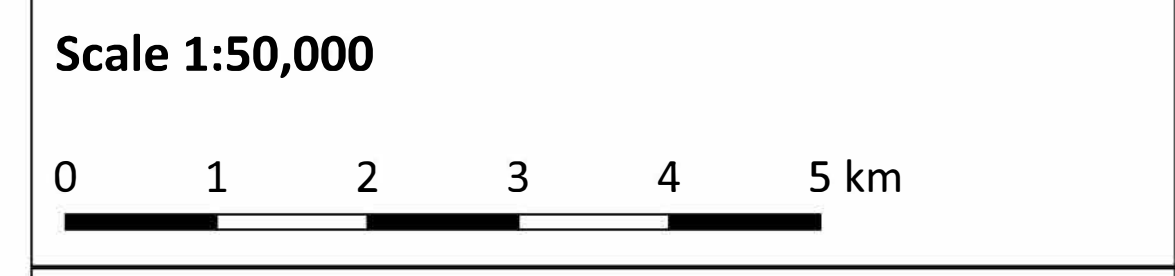
Click above map tile for Zoom-In map  
[Click here to return to Project Area map](#)  
[Click here to return to Okanagan map](#)  
[Click here to return to Similkameen map](#)

**Map Notes**

1. Map produced by Ebbwater Consulting Inc.
2. Population density is based on census dissemination areas within the project area boundary. Population density is not shown for areas with a population density of less than 1 person per square km.
3. The population density (exposure) layer was clipped to the debris flow hazard area. The hazard layer is shown in the hazard maps, and was produced by Palmer Environmental Consulting Group Inc. The method used to produce the hazard layer is described in the Quantitative Study.

**Data Sources**

1. Lakes and Watercourses, Roads and Trails, and Reserves: BC Data Catalogue.
2. Population: Statistics Canada 2016 Census.
3. Building Footprints: Regional districts, municipalities, WFN and hand digitized using Bing Satellite Imagery.
4. Sylix Place Names: Okanagan Nation Alliance.
5. Base Layer: OpenStreetMap data – openstreetmap.org (© OpenStreetMap contributors; cartography licence CC BY-SA) and hill shade created using CDEM and USGM GMTED2010.



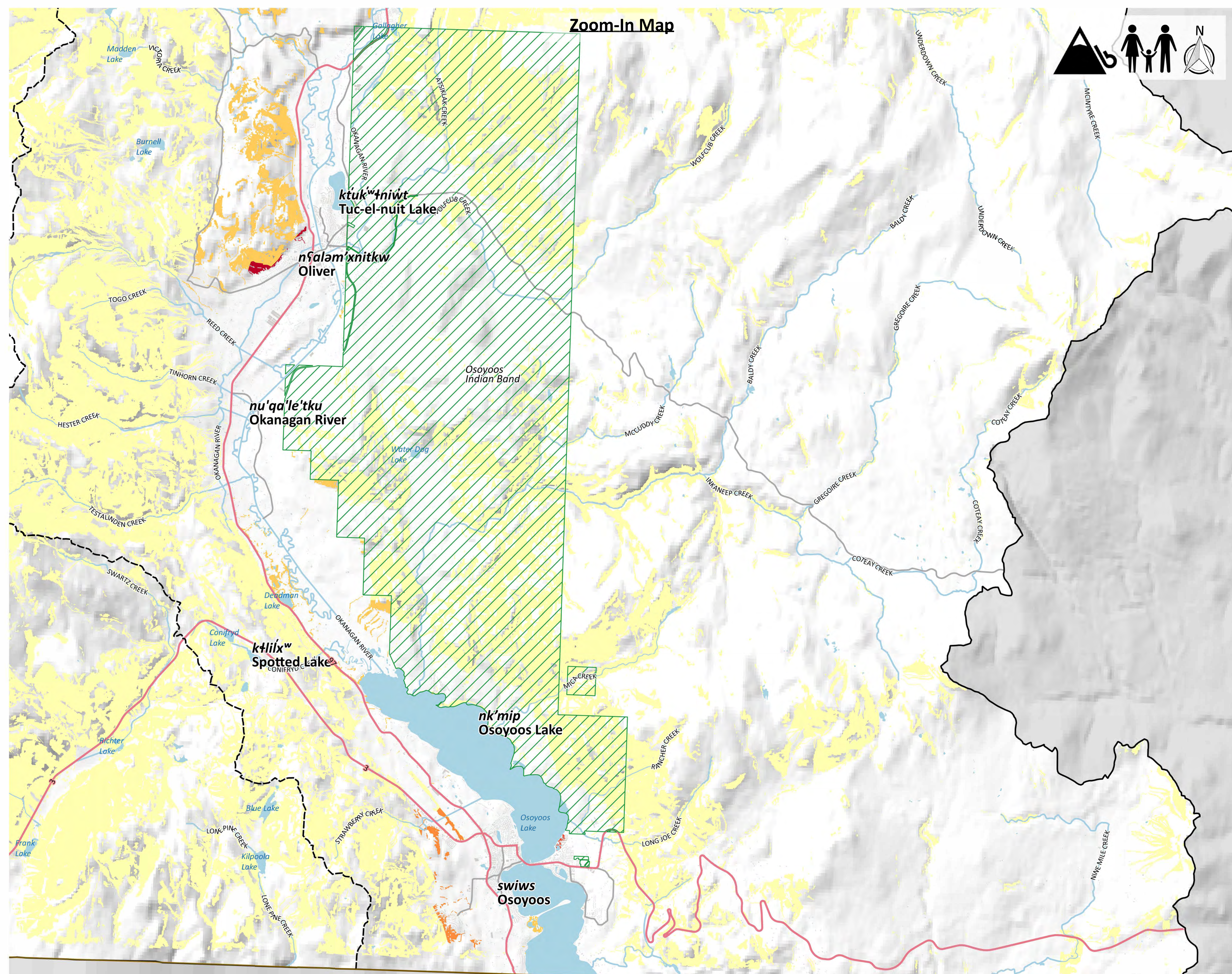
**Legend**

|                                   |                               |
|-----------------------------------|-------------------------------|
| <b>Background</b>                 | <b>Affected Assets</b>        |
| — Watershed Boundary              | <b>Population Density</b>     |
| - - Okanagan-Similkameen Boundary | <b>(people per square km)</b> |
| — Canada - US Border              | 1 - 10                        |
| ▨ Reserves                        | 10 - 100                      |
| ▭ Lakes                           | 100 - 500                     |
| — Watercourses                    | 500 - 1000                    |
| — Highway                         | 1000 +                        |
| — Major Road                      |                               |
| ▭ Building Footprints             |                               |

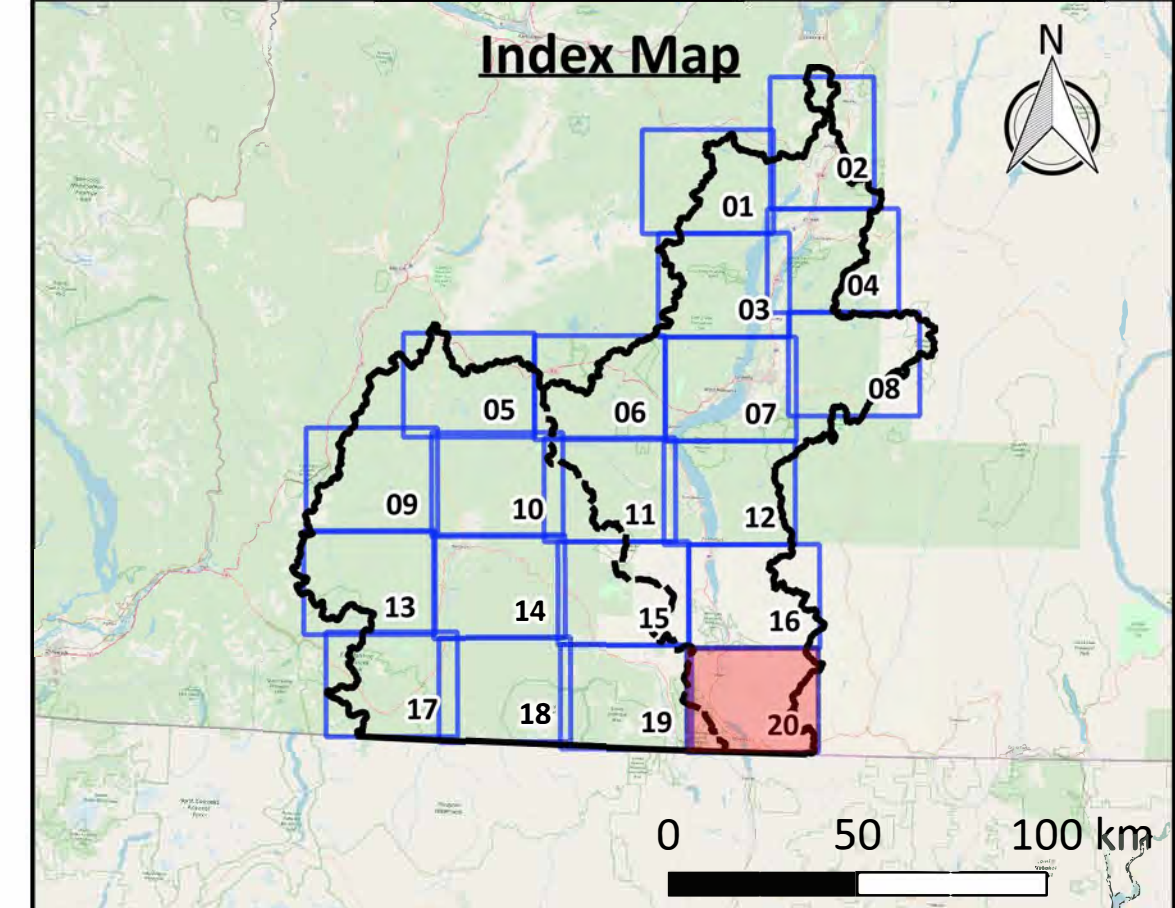
Date: 31 December 2019  
 Produced by: Ebbwater Consulting Inc.

**Sylix (Okanagan) Flood and Debris Flow Risk Assessment Project**  
**Debris Flow - Affected People**  
 Map Tile 19 of 20

ANSI D - Map No. P-D-003-019



**Zoom-In Map**



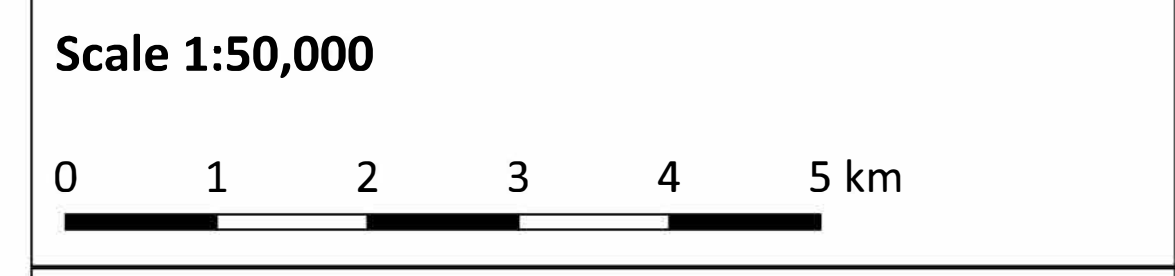
Click above map tile for Zoom-In map  
[Click here to return to Project Area map](#)  
[Click here to return to Okanagan map](#)  
[Click here to return to Similkameen map](#)

**Map Notes**

1. Map produced by Ebbwater Consulting Inc.
2. Population density is based on census dissemination areas within the project area boundary. Population density is not shown for areas with a population density of less than 1 person per square km.
3. The population density (exposure) layer was clipped to the debris flow hazard area. The hazard layer is shown in the hazard maps, and was produced by Palmer Environmental Consulting Group Inc. The method used to produce the hazard layer is described in the Quantitative Study.

**Data Sources**

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2. Population: Statistics Canada 2016 Census.3. Building Footprints: Regional districts, municipalities, WFN and hand digitized using Bing Satellite Imagery.
4. Sylix Place Names: Okanagan Nation Alliance.
5. Base Layer: OpenStreetMap data – openstreetmap.org (© OpenStreetMap contributors; cartography licence CC BY-SA) and hill shade created using CDEM and USGM GMTED2010.



**Legend**

|                                   |  |
|-----------------------------------|--|
| <b>Background</b>                 | <b>Affected Assets</b>                           |
| — Watershed Boundary              | <b>Population Density (people per square km)</b> |
| - - Okanagan-Similkameen Boundary | 1 - 10   |
| — Canada - US Border              | 10 - 100   |
| ▨ Reserves                        | 100 - 500  |
| ■ Lakes                           | 500 - 1000                                       |
| — Watercourses                    | 1000 +   |
| — Highway                         |  |
| — Major Road                      |  |
| ■ Building Footprints             |  |

Date: 31 December 2019  
 Produced by: Ebbwater Consulting Inc.

**Sylix (Okanagan) Flood and Debris Flow Risk Assessment Project**  
**Debris Flow - Affected People**  
**Map Tile 20 of 20**