

## **Wildfire Development Permit (WFDP) Area**

### **1.1.1 Category**

The Wildfire Development Permit (WFDP) Area is designated pursuant to Section 488(1)(b) of the *Local Government Act* for the protection of development from hazardous conditions.

### **1.1.2 Area**

The lands shown as Wildfire Development Permit Area on Schedule 'Y' are designated as a Wildfire Development Permit Area.

### **1.1.3 Justification**

To regulate development activities within wildfire areas in order to minimize the risk of wildfire on private property.

The objectives of the WFDP are to:

- Assess and manage the wildfire hazards in RDOS to maintain these risks within levels acceptable to the public;
- Direct growth away from areas most vulnerable to wildfire hazards towards more suitable, and less risky locations.
- Prevent personal injury and property loss;
- Protect structures from damage; and
- Provide stable and accessible building sites.

### **1.1.4 Background**

Significant areas within the RDOS are located within and adjacent to forestland that poses a risk from wildfire. Fire behaviour modelling, and the proximity of homes and businesses to the forest interface have been assessed as part of the Community Wildfire Protection Plan and additional professional analysis. As a result, the Wildfire Development Permit (WFDP) Area was approved by the RDOS Board.

### **1.1.5 Development Requiring a Permit**

A Wildfire Development Permit is required, except where exempt under Section 1.1.10 (Exemptions), for development on lands within the WFDP area. Where not exempted, development requiring a development permit includes:

- a) construction of new residential buildings; and
- b) subdivision on lands that results in a total of four or more parcels.

### 1.1.6 Guidelines

A Wildfire Development Permit shall be in accordance with the following guidelines:

- a) A Wildfire Hazard Assessment, prepared in accordance with the National Fire Protection Association's NFPA 299 latest edition and the requirements of the Regional District's Development Procedures Bylaw, must be submitted to the Regional District in respect of the proposed development by a qualified Registered Professional Forester, and shall include:

### 1.1.7 Information Gathering and Pre-Planning

It is important to integrate all known constraints and factors impacting the properties' risk from wildfire in order to develop meaningful recommendations and mitigation strategies. Therefore, the findings, recommendations from other studies and plans pertaining to the property shall include:

- a) Legal topographic survey prepared by a BC Land Surveyor showing property lines, covenants, easements, and constructed features such as roads, utilities, buildings etc. Natural features including trees > 20 cm DBH, watercourses, riparian zones etc. shall also be included.
- b) Development Plans are comprised of site plans, building elevations, details and renderings that illustrate the proposed development and structures in relation to existing features.
- c) Land use information for the property as defined by the Regional District's Zoning and Land Use Designation classification system, conservation and protected areas, sensitive ecological communities and species. Stratify land ownership of surrounding parcels into private, municipal, crown provincial, and federal (including Indian Reservations) designations.
- d) Refer to and include pertinent information from relevant consultant's reports such as environmental impact assessments, geotechnical, arborist covenants, easements, zoning, surrounding land ownership – private, municipal, crown provincial, federal including Indian Reservations)
- e) Identification of biogeoclimatic subzones and site units for the property as described in *Land Management Handbook 23 – A Guide to Site Identification and Interpretation for the Kamloops Forest Region (Province of British Columbia)*.
- f) Assessment of fire weather indices for the area as analyzed through the collection of fire weather data from the nearest fire weather station.

### 1.1.8 Wildfire Hazard Assessment

The aim of the wildfire hazard assessment is to identify the wildfire behaviour that impacts the property under review and shall include both on- and off- site factors. Conduct field assessments to meet the *Development Permit Guidelines for Hazardous Conditions - Wildfire* and other regulatory requirements. The assessment shall include:

- a) Wildland Urban Interface (WUI) Wildfire Threat Assessment worksheets based on the *2017 Wildfire Threat Assessment Guide and Worksheet* to provide a site level fuel assessment. It is the Forest Professional's judgement as to the number of Wildfire Threat Assessments that need to be completed per property; and / or whether to complete a *FireSmart Structure and Site Hazard Assessment Form*.
- b) Fuel types on the property. Discuss existing fuel types and their location on the subject property and those adjacent. For each major fuel type, describe in detail what exists on site and the relative coverage of fuel types. Outline the species found, canopy cover/crown closure, estimated age, and density of stems and coarse woody debris.
- c) Hazardous fuels on and adjacent to the property. Provide a description of hazardous fuels on and within 100 m of the property under review in order to develop and outline preliminary recommendations for building design and landscaping considerations.
- d) Identify and map the FireSmart fire priority zones around the footprint of proposed structures and building sites for each of:
- FireSmart Fire Priority Zone 1A (within 0-1.5m);
  - FireSmart Fire Priority Zone 1 (within 1.5 - 10m);
  - FireSmart Fire Priority Zone 2 (within 10-30m); and
  - FireSmart Fire Priority Zone 3 (within 30-100m).
- e) Identification of above and below-ground critical infrastructure servicing the community that may be vulnerable to damage from wildfire events. Critical infrastructure can include electrical distribution and transmission lines, utility poles and water servicing including water pump stations and reservoirs.
- f) Fire hydrant locations and proximity to existing and proposed structures and forested parks as this delineates suppression distance and water availability to the proposed development / subdivision.
- g) Access and roadway planning that demonstrates secondary routes to all parts of the subdivision to aid in emergency evacuation and fire suppression response.
- h) Identification of steep slopes and the siting of proposed structures in relation to the top of bank as wildfire travels more readily up slope and can increase in intensity. All developments should be set back a minimum of 10 m from the top of ridgelines, cliffs, or ravines. In addition, other relevant environmental setbacks (geotechnical, riparian, etc.) must be identified on site.

### **1.1.9 Assessment of Potential Risks;**

A mitigation plan and post development inspection including:

Fuel management strategies shall be prescribed in order to:

- reduce the ladder fuels in strategic areas;
- reduce understorey conifers which act as ladder fuels;
- raise the crown base height of retained trees;

- maximise retention of live, healthy deciduous and conifer trees to maintain a cool, dark, and moist understorey microclimate; and
- reduce surface fuel loading to reduce the risk of and behaviour of surface fire.

A Fuel management prescription is required - which is an operational document, prepared by a Registered Professional Forester, and suitable for implementation by a qualified contractor who has experience in wildfire hazard fuel management operational treatments.

Within 10 m of the proposed building footprints (Fire Priority Zone 1A and 1):

- a) Use non-combustible landscaping materials within the 1.5 m (Fire Priority Zone FireSmart Fire Priority Zone 1A), immediately adjacent to the building.
- b) Remove all coniferous and flammable vegetation, and all piled combustible debris (including building materials, compost piles and firewood) within 10m (FireSmart Fire Priority Zone 1).
- c) Separate vegetation from buildings. No trees or shrubs and their branches and foliage shall overhang roofs or grow underneath eaves. Branches of trees must have a minimum 5 m separation between the highest point of the roofline and the lowest hanging foliage.

#### **1.1.10 Post Development Inspection**

- a) Upon completion of construction, development, and site supervision activities for the proposed development, the Qualified Professional will complete a Wildfire Hazard Post Development Inspection to ensure that all criteria in the WHDP report including exterior building construction, landscaping and fuel management activities have been met.
- b) The Post Development Inspection checklist, (signed and sealed by the profession who completed the hazard assessment report), is the regulatory mechanism which concludes the Regional Districts oversight and returns the security to the applicant. Maintenance and monitoring of the development to ensure the property maintains its acceptable level of risk from wildfire is now the responsibility of the landowners. Furthermore, the conditions of the WFDP report may be written on title and will apply into the future irrespective of a change of property ownership.

#### **1.1.11 Building Construction Standards**

The construction of a new residential building within the WFDP Area shall be in accordance with the following guidelines:

- c) Roofing Materials
  - Unrated roofing materials are prohibited as a form of roof covering.
  - Roof coverings must conform to Class A or Class B fire resistance as referenced in the *BC Building Code*, as amended.



d) Exterior Cladding

- Any material used for exterior cladding must conform to Class A or Class B fire resistance as referenced in the BC Building Code, as amended.
- Manufactured homes must be skirted with a fire-resistant material that conforms to Class A or Class B fire resistance as referenced in the BC Building Code, as amended.

e) Decks, Balconies & Porches

- Structural components (post & beam) of decks, balconies and porches must be:
  - heavy timber construction as defined in the *BC Building Code*; or
  - clad with fire resistant material such as stucco, metal siding, brick, cement shingles, cement board, concrete block, poured concrete, hardie plank or rock.
- Balconies, decks and porches must be sheathed in (no exposed joists) and made of an ignition-resistant material (non-combustible or receiving a Class A fire rating). Acceptable materials include stone, tile, rated composites, and concrete.

f) Exterior Doors and Windows

- Exterior windows and glazing must be double paned or tempered.
- Exterior doors and garage doors shall be constructed of non-combustible materials (i.e. metal clad, solid core wood), or have a 20-minute fire protection rating and must meet the requirements of the North American Fenestration Standard (NAFS).

g) Eaves and Soffits

- Eaves and soffits must be closed (no exposed joists).
- Ventilation openings in exterior walls, roofs, eaves, and soffits shall be covered with non-combustible, corrosion-resistant wire mesh with openings no larger than 3 mm to prevent flame or ember penetration into the structure.
- Wall-mounted exterior vents are exempt from having wire mesh with 3mm openings if vents with mobile flaps are used (subject to venting requirements in the BC Building Code).

h) Chimneys

- All chimneys constructed for wood burning fireplaces must have spark arrestors made of 12 gauge (or better) welded or woven wire mesh, with openings not exceeding 12 mm.

**1.1.12 Guidelines – Landscaping**

The following apply to the area on a property within 10.0 metres (Fire Priority Zone 1) of the dwelling units located on the property:

- Avoid flammable native and ornamental landscaping materials such as conifer trees and shrubs (juniper, cedar hedging, pine), invasive plants (Scotch broom), and unmown grass.
- Ensure there are no trees, limbs or shrubs overhanging roofs or growing under the eaves of buildings. A 5-metre vertical separation between the lowest part of the overhanging branch and the highest point of the roof should be maintained.
- Space and maintain coniferous trees so that canopy spacing is a minimum of 3 metres. If planting or retaining hardwood trees, canopy spacing is not required.
- Remove ladder fuels by pruning coniferous trees so that there are no branches to a height of 2.5 metres (up to three whorls of live branches may be left on smaller trees <15cm dbh)

### **1.1.13 Guidelines – Subdivisions**

The subdivision of land within an WFDP Area shall be in accordance with the following guidelines:

- Subdivision design must provide firefighting access to adjacent forested areas by incorporating either an access road encircling the development (referred to as a ring road), or periodic road access to the forest edge combined with hydrants to provide water for suppressing wildfires. Firefighting access to adjacent forested areas must meet requirements as per the Subdivision and Development Control Bylaw.
- Require suitable access in areas of the community that are considered isolated and that have inadequate developed access for evacuation and fire control, preferably providing a minimum of two means of access points. Single access maybe considered where the development contributes to a future road network with multiple access points;
- Require, where forested lands abut new subdivisions, requiring roadways to be placed adjacent to those lands. These roads both improve access to the interface for emergency vehicles and provide a fuel break between the wildland and the subdivision;
- Ensure hydrant locations optimize ability to protect forested parks as per the Subdivision and Development Control Bylaw;
- Require that fire hazards on forested lands be mitigated to a level deemed acceptable by a qualified professional in a forest fire hazard assessment before they become the property of the Regional District;
- Occupied buildings shall be set back a minimum of 10 metres from the top of ridgelines, cliffs or ravines and from slopes exceeding 20% or greater for a minimum horizontal distance of 10 metres. Variation of the setback may be considered if a wildfire review conducted by a forest professional registered in BC can justify a change in the setback;

#### 1.1.14 Exemptions

A Wildfire development permit or a Professional Forester's Report is not required for in the WFDP area for:

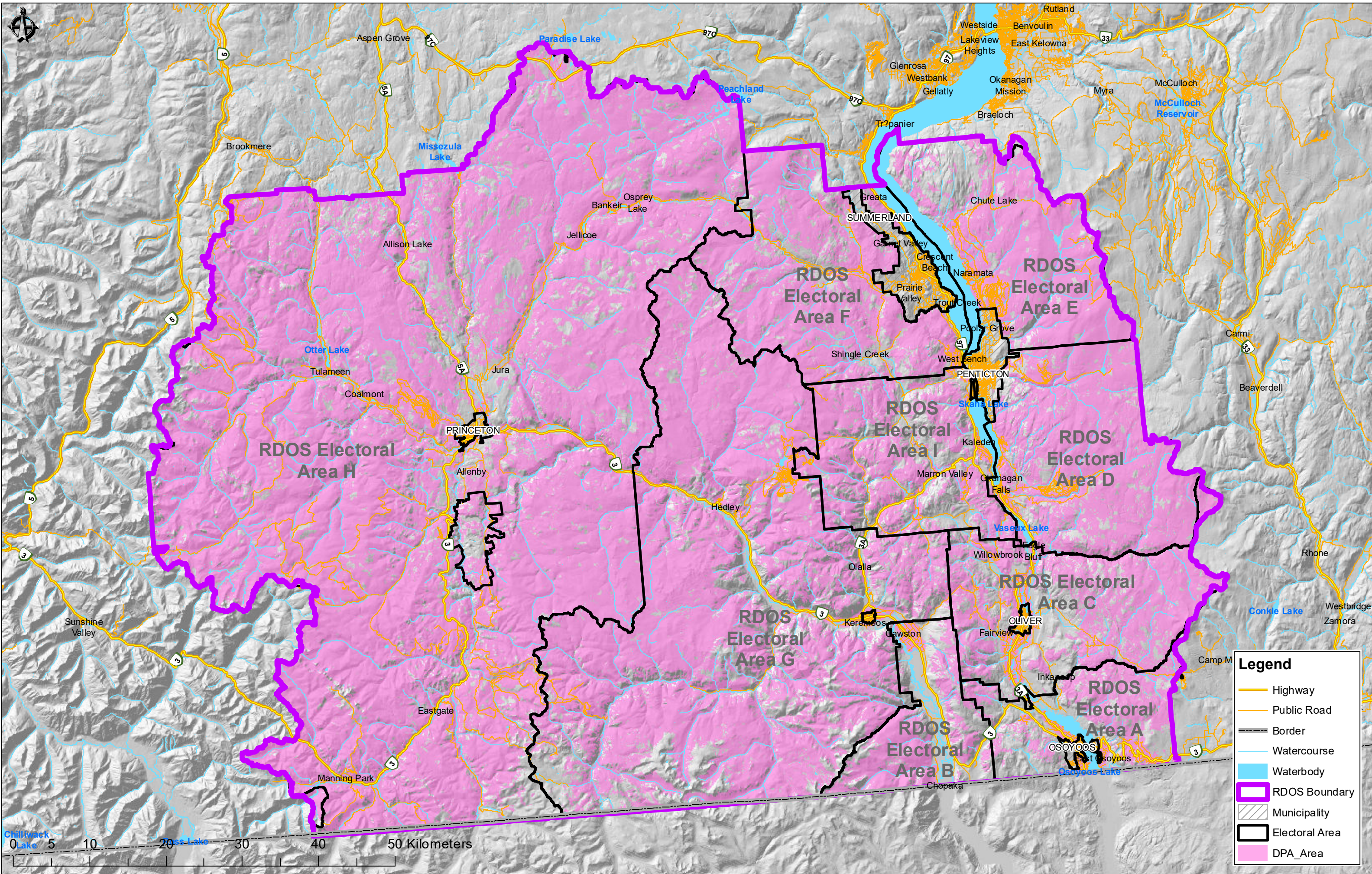
- Subdivision of lands that results in less than a total of four parcels.
  - Repair or renovations of existing residential buildings.
- 

#### 1.1.15 Hazards Policies

The Regional Board: Requires the Professional Forester engaged in the development of the hazard assessment to cooperate with a biologist to promote environmental stewardship. Where conflicts exist within the Fire Priority Zone 1 (10m immediate area around the structure), fire hazard reduction will take precedence over the requirements of a development permit designation enacted under Section 488(1)(a) of the Local Government Act for the protection of the natural environment, its ecosystems and biological diversity, provided there is no material harm to the environment outside of the Fire Priority Zone 1.

DRAFT

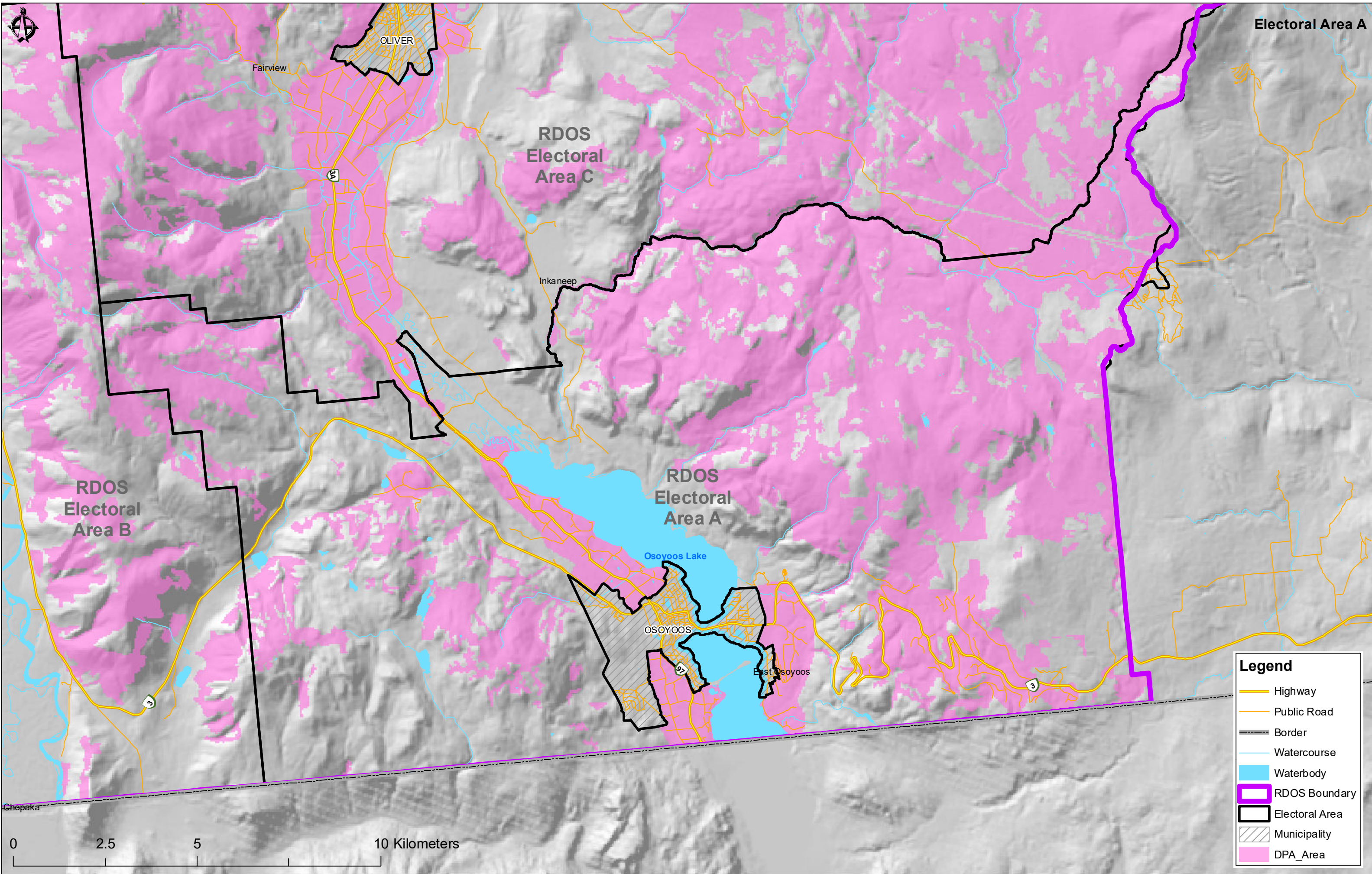




**Legend**

- Highway
- Public Road
- Border
- Watercourse
- Waterbody
- RDOS Boundary
- Municipality
- Electoral Area
- DPA\_Area





Electoral Area A

OLIVER

Fairview

RDOS  
Electoral  
Area C

Inkaneep

RDOS  
Electoral  
Area B

RDOS  
Electoral  
Area A

Osoyoos Lake

OSOYOOS

East Osoyoos

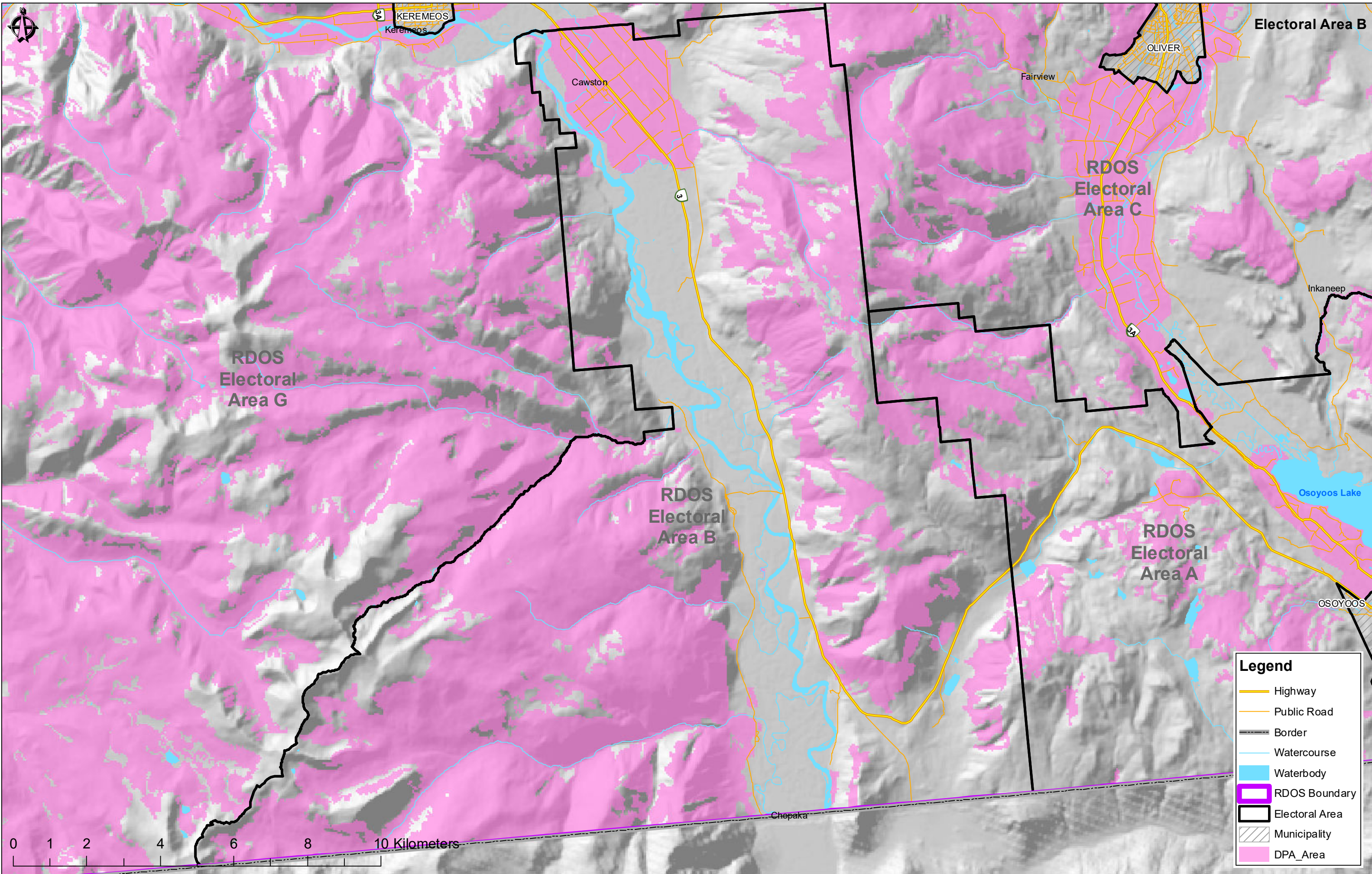
Chopaka

**Legend**

- Highway
- Public Road
- Border
- Watercourse
- Waterbody
- RDOS Boundary
- Electoral Area
- Municipality
- DPA\_Area

0 2.5 5 10 Kilometers





KEREMEOS  
Keremeos

Cawston

Fairview

OLIVER

Electoral Area B

RDOS  
Electoral  
Area C

RDOS  
Electoral  
Area G

RDOS  
Electoral  
Area B

RDOS  
Electoral  
Area A

Osoyoos Lake

OSOYOOS

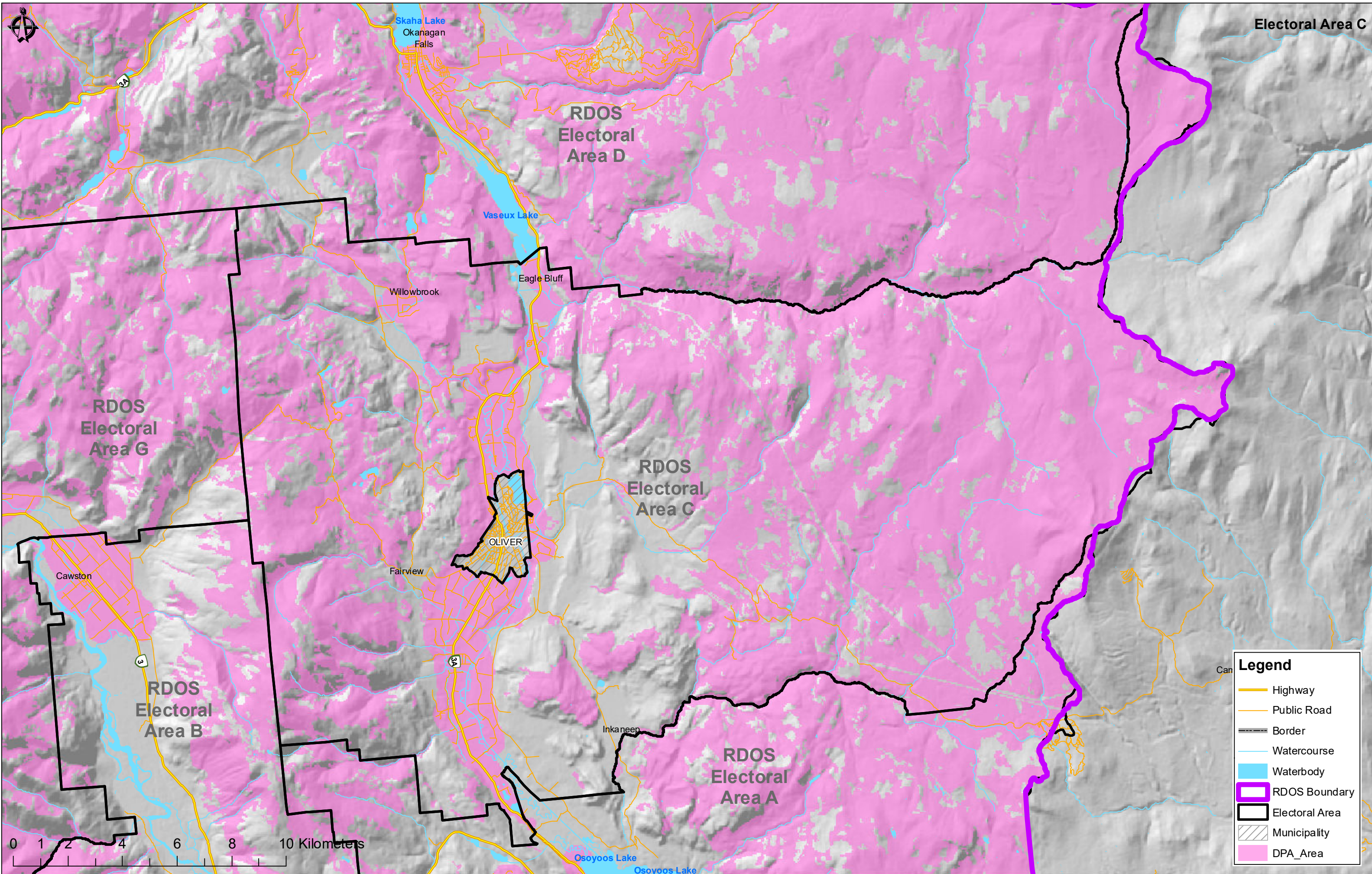
Chepaka

**Legend**

- Highway
- Public Road
- Border
- Watercourse
- Waterbody
- RDOS Boundary
- Electoral Area
- Municipality
- DPA\_Area

0 1 2 4 6 8 10 Kilometers

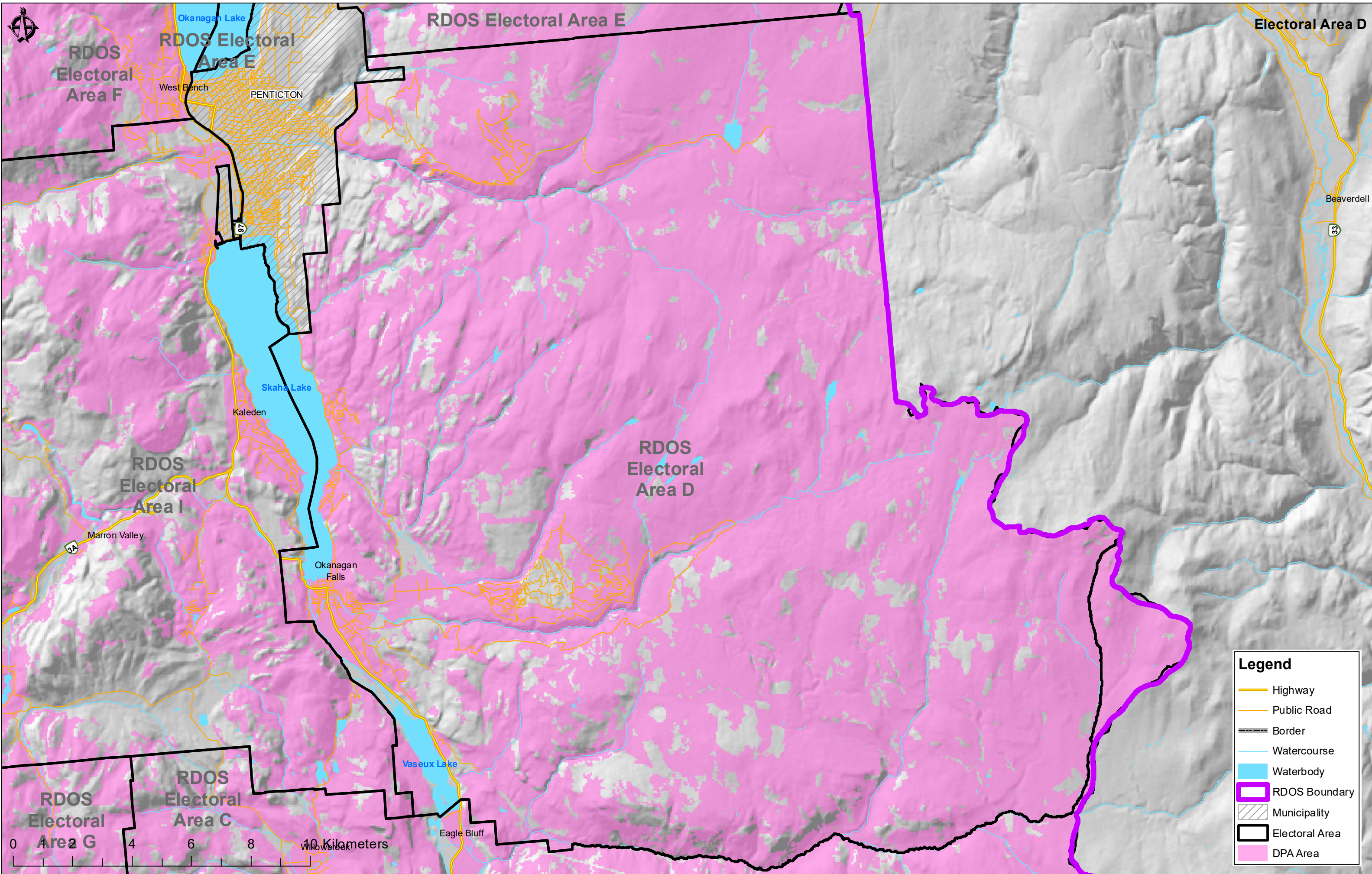




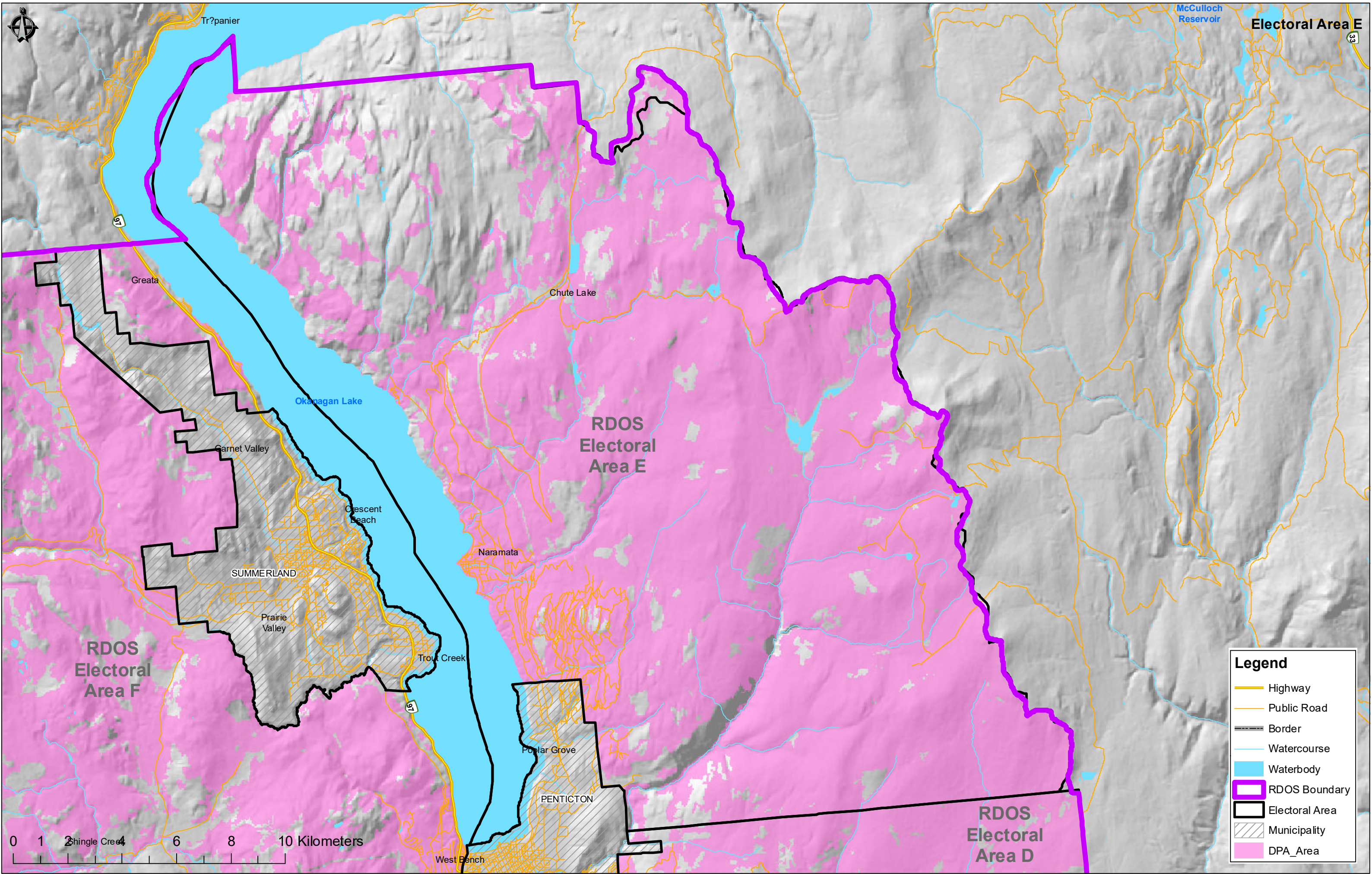
**Legend**

- Highway
- Public Road
- Border
- Watercourse
- Waterbody
- RDOS Boundary
- Electoral Area
- Municipality
- DPA\_Area









McCulloch Reservoir

Electoral Area E

Tr?panier

12

Greata

Chute Lake

Okanagan Lake

RDOS Electoral Area E

Garnet Valley

Crescent Beach

SUMMERLAND

Prairie Valley

Naramata

97

Trout Creek

Popular Grove

PENTICTON

West Bench

RDOS Electoral Area D

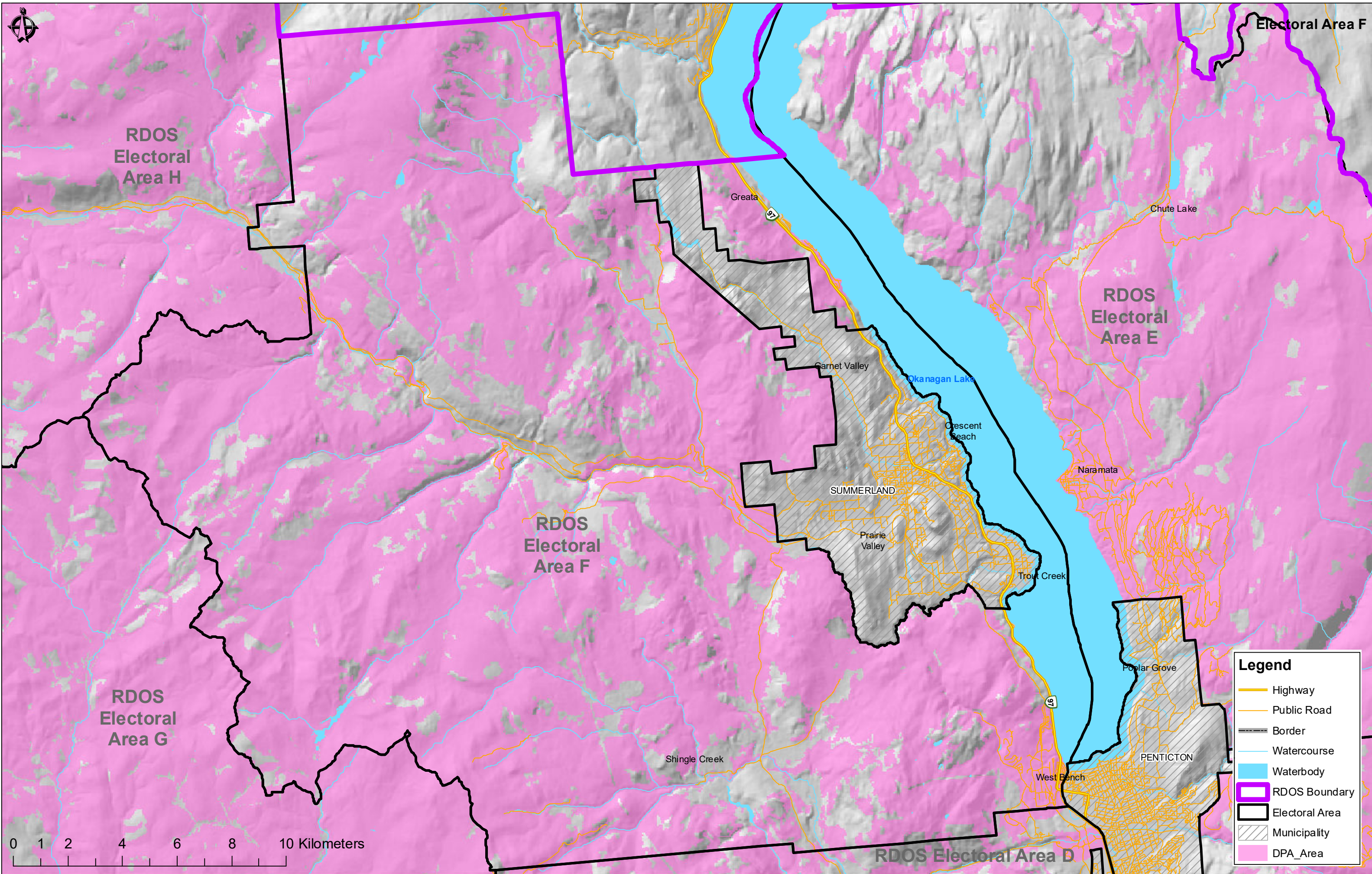
**Legend**

- Highway
- Public Road
- Border
- Watercourse
- Waterbody
- RDOS Boundary
- Electoral Area
- Municipality
- DPA\_Area

0 1 2 4 6 8 10 Kilometers

Shingle Creek





RDOS  
Electoral  
Area H

Electoral Area F

Greata

Chute Lake

RDOS  
Electoral  
Area E

Garnet Valley

Okanagan Lake

Crescent  
Beach

Naramata

RDOS  
Electoral  
Area F

SUMMERLAND

Prairie  
Valley

Troun Creek

RDOS  
Electoral  
Area G

Shingle Creek










Poplar Grove

PENTICTON

West Bench

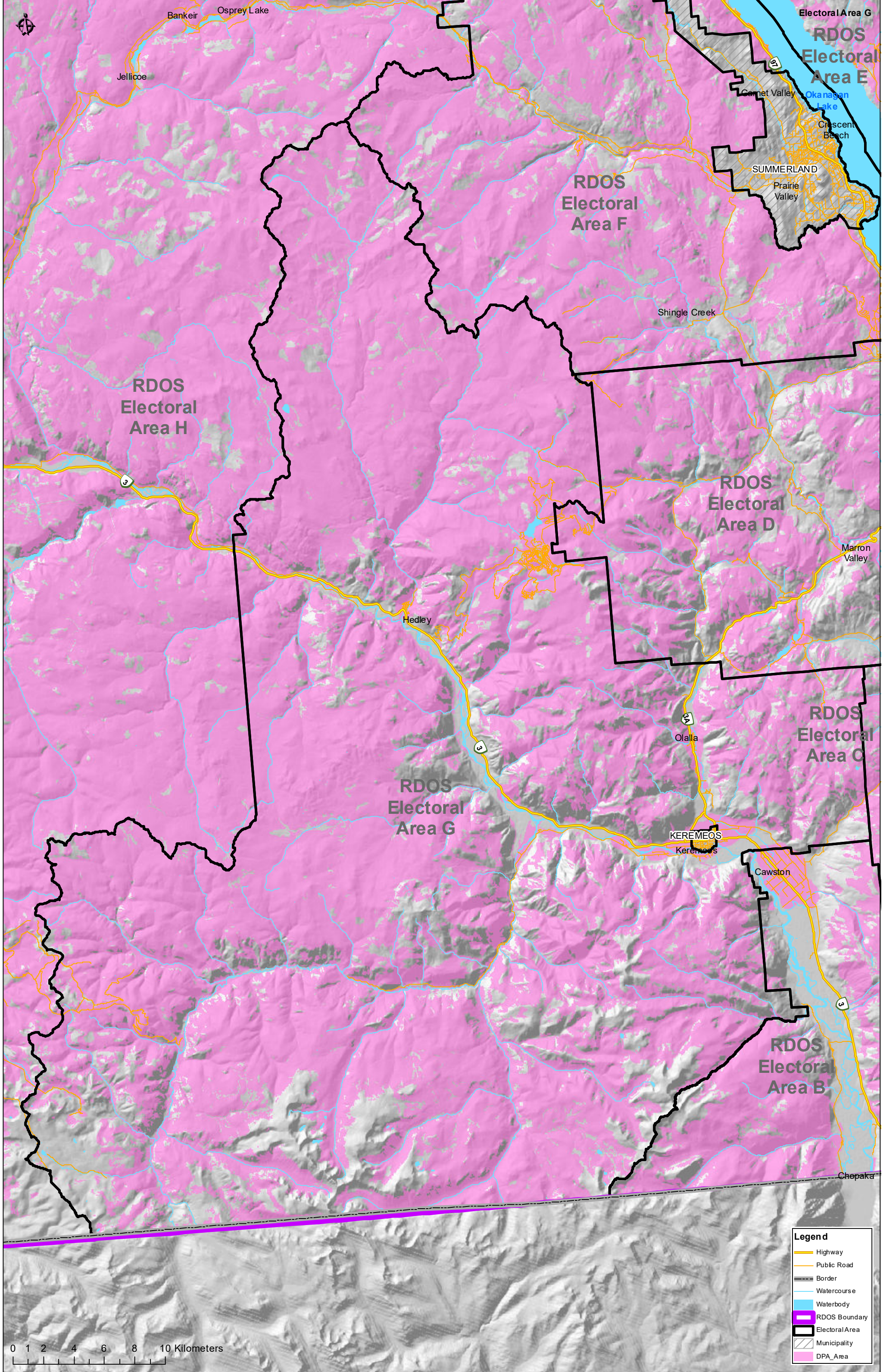
RDOS Electoral Area D

**Legend**

-  Highway
-  Public Road
-  Border
-  Watercourse
-  Waterbody
-  RDOS Boundary
-  Electoral Area
-  Municipality
-  DPA\_Area







Bankeir Osprey Lake

Jellicoe

Electoral Area G

RDOS Electoral Area E

Okanagan Lake

Carnet Valley Crescent Beach

SUMMERLAND

Prairie Valley

RDOS Electoral Area F

Shingle Creek

RDOS Electoral Area H

3

RDOS Electoral Area D

Marron Valley

Hedley

RDOS Electoral Area C

32

Olalla

RDOS Electoral Area G

KEREMEOS









Keremeos

Cawston

RDOS Electoral Area B

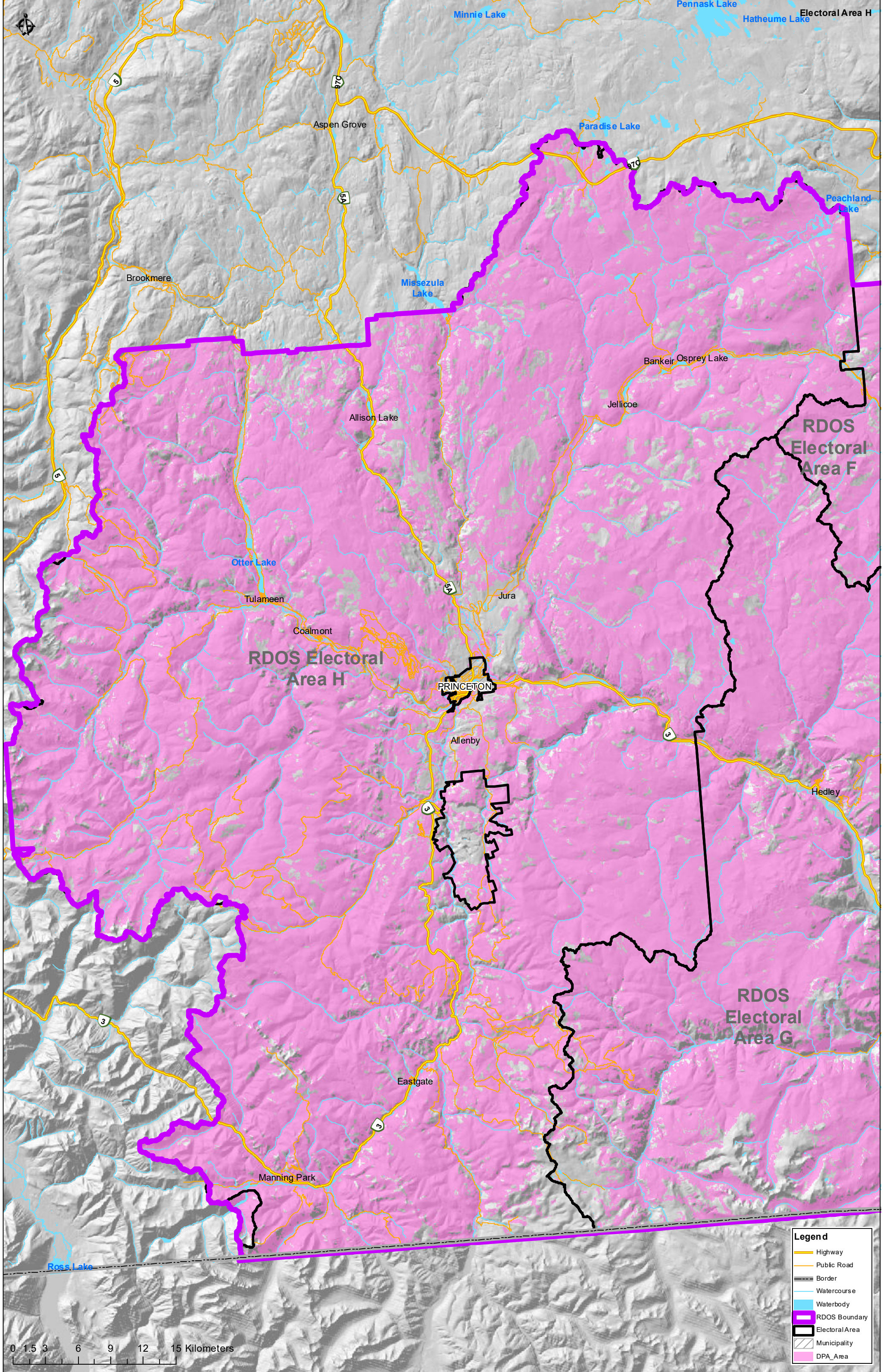
Chopaka

**Legend**

-  Highway
-  Public Road
-  Border
-  Watercourse
-  Waterbody
-  RDOS Boundary
-  Electoral Area
-  Municipality
-  DPA\_Area

0 1 2 4 6 8 10 Kilometers





Electoral Area H  
Hatheume Lake

Minnie Lake

Pennask Lake

Paradise Lake

Peachland Lake

Aspen Grove

Brookmere

Missezula Lake

Bankeir Osprey Lake

Allison Lake

RDOS Electoral Area F

Otter Lake

Tulameen

Jura

Coalmont

RDOS Electoral Area H

PRINCETON

Allenby

Hedley

RDOS Electoral Area G

Eastgate

Manning Park

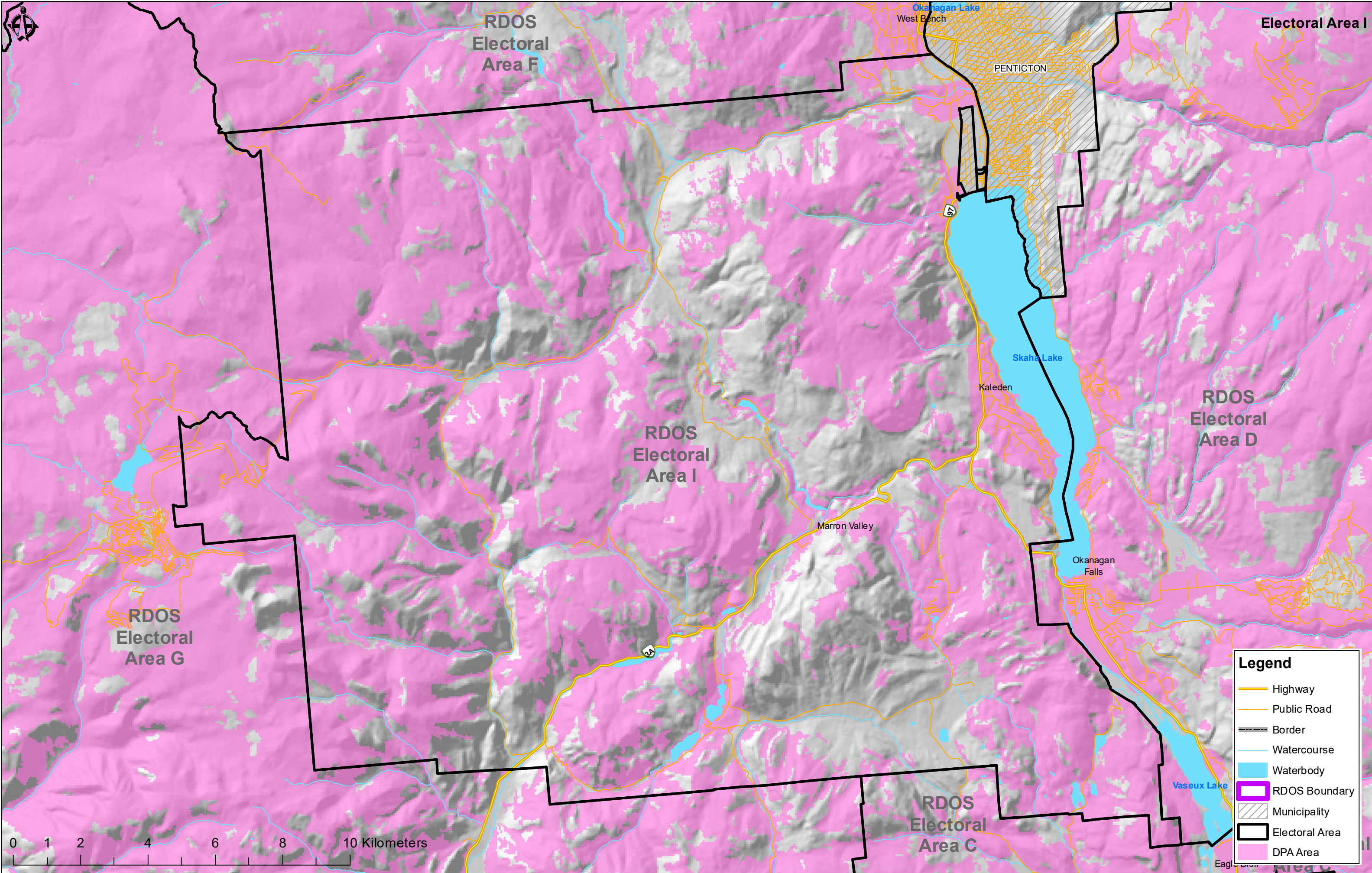
Ross Lake

**Legend**

- Highway
- Public Road
- Border
- Watercourse
- Waterbody
- RDOS Boundary
- Electoral Area
- Municipality
- DPA\_Area

0 1.5 3 6 9 12 15 Kilometers





**RDOS  
Electoral  
Area F**

**Electoral Area I**

PENTICTON

**RDOS  
Electoral  
Area I**

**RDOS  
Electoral  
Area D**

**RDOS  
Electoral  
Area G**

Marron Valley

Kaleden

Okanagan Falls

**RDOS  
Electoral  
Area C**

Vaseux Lake

**Legend**

- Highway
- Public Road
- Border
- Watercourse
- Waterbody
- RDOS Boundary
- Municipality
- Electoral Area
- DPA Area

0 1 2 4 6 8 10 Kilometers