

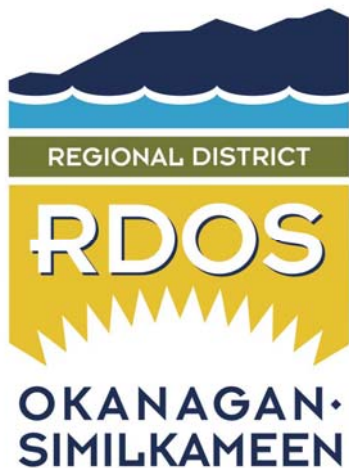
PROJECT PARTNERS

OKANAGAN NATION
ALLIANCE

COMMUNITY MAPPING
NETWORK (DFO)

OKANAGAN BASIN
WATERBOARD

SKAHA LAKE SHORELINE STUDY AND MANAGEMENT PLAN



COMMUNITY
MAPPING
NETWORK



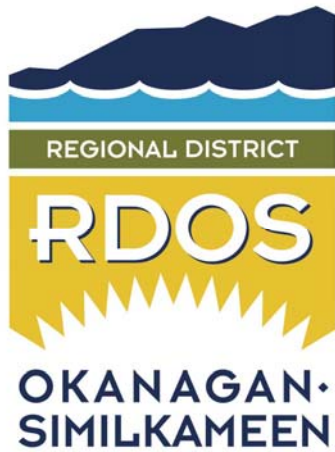
Okanagan Basin
WATER BOARD



Prepared For:
Regional District Okanagan Similkameen

Prepared By:
Ecoscape Environmental Consultants Ltd.

Ecoscape File No. 07-178
November 2008



SKAHA LAKE

*Shoreline Study
and
Management Plan*

Prepared For:

REGIONAL DISTRICT OKANAGAN-SIMILKAMEEN
101 Martin St.
Penticton, BC
V2A 5J9

Prepared By:

ECOSCAPE ENVIRONMENTAL CONSULTANTS LTD.
#102 – 450 Neave Court
Kelowna, BC
V1V 2M2

In Partnership With:

Insight Environmental Consulting Ltd.
and
Clarke Geoscience Ltd.

November 2008
Ecoscape File: 07-178



CLARKE GEOSCIENCE LTD.



Executive Summary

The Skaha Lake Shoreline Study was completed on behalf of the Regional District of Okanagan-Similkameen (RDOS). The primary objective of the study is to provide information to the RDOS such that a comprehensive plan for management of the Skaha Lake shoreline in Electoral Area D may be prepared.

The shoreline management plan is based on the Guiding Principles developed by the RDOS Shoreline Committee. The Committee is composed of eleven (11) members combined from Kaleden, Skaha Estates, and Okanagan Falls. The Guiding Principles for shoreline management produced by the Shoreline Committee include:

- Enhance connectivity;
- Limit noise, water and air pollution;
- Conserve the natural environment;
- Protect and expand recreation;
- Increase accessibility;
- Maintain opportunities for economic development;
- Enhance history, culture, and education;
- Protect and enhance the character and scenery; and,
- Consider legislation and regulations.

The Shoreline Study incorporates consultation with a variety of stakeholders, including conservation groups, First Nations, and the community.

Data collection for this study involved an extensive background review of the RDOS policy documents including parks strategies, Official Community Plans (OCP), bylaws, zoning designations, and biological reports. Coupled with the background review, field inventories were completed. Field inventories of the shoreline followed the Foreshore Inventory and Mapping (FIM) methodology, which is a standardized method to collect baseline information regarding the shores of Skaha Lake. This FIM methodology will allow the RDOS to track changes along the shoreline to help achieve the objectives of the guiding principles and management plan.

Study recommendations are summarized below. The link between the Guiding Principles and the recommendations is as follows:

Guiding Principle	Recommendations
Enhance connectivity	6-1, 6-2, 7-4, 7-7, 7-8
Limit noise, water, and air pollution	5-3, 6-2, 7-1
Conserve the natural environment	1-1 to 1-8, 2-1, 2-2
Protect and expand recreation	5-1, 5-2, 5-4, 5-5, 7-1 to 7-8
Increase accessibility	6-1, 6-2
Maintain opportunities for economic development	3-1 to 3-4
Enhance history, culture, and education	8-1, 8-2
Protect and enhance character and scenery	3-1 to 3-4, 4-1
Legislative considerations	1-3, 5-3

1. Environmental Land Use Planning

- 1-1: Develop a Terms of Reference for environmental reports.
- 1-2: Review Development Permit Areas in the Kaleden-Apex SW Sector OCP and the East Skaha, Vaseux OCP and ensure they include all environmentally sensitive areas identified in this study.
- 1-3: Develop good interagency dialogue and referral processes.
- 1-4: Establish an Environmental Advisory Commission, possibly by region or for the entire district.
- 1-5: Supplement and expand on the inventory work completed for this study.
- 1-6: Prepare an environmental data management program.
- 1-7: Identify Environmental Development Permit areas and set aside environmentally sensitive areas as early as possible in the application process.
- 1-8: Ensure the planning section of the RDOS website is kept up-to-date and relevant information is easily-accessible to developers and community members.

2. Natural Hazards

- 2-1: Conduct detailed terrain and terrain stability mapping to identify areas within the Kaleden-Apex SW Sector having a high hazard soil stability rating.
- 2-2: Include a Natural Hazards Development Permit Area in the Area D Official Community Plans.

3. Land Use Policy

- 3-1: Review and update the Official Community Plans for Electoral Area D.
- 3-2: Ensure growth management policies contained in the OCPs are strictly upheld when making decisions regarding new development.
- 3-3: Develop vacant parcels and redevelop existing parcels within serviced areas prior to considering the development of other areas.
- 3-4: Complete the South Okanagan Regional Growth Strategy and begin implementation as soon as possible.



4. Character and Scenery

- 4-1: Develop design guidelines for multi-family, commercial development, and large subdivisions.

5. Public and Private Amenities

- 5-1: Provide two well-constructed and well-maintained public boat launches in Electoral Area D and discourage the use of other boat launches along the shoreline, except for hand launching.
- 5-2: Improve day use moorage opportunities.
- 5-3: Consider pursuing a head lease on the foreshore and lake.
- 5-4: Improve signage for designated truck and trailer parking at Kaleden Pioneer Park and clearly identify overflow parking for the Main Street boat launch.
- 5-5: Conduct more research to determine the demand for and feasibility of a commercial moorage facility (i.e., a marina).

6. Shoreline Accessibility

- 6-1: Require public access as a condition of approval for shoreline developments.
- 6-2: Develop public access objectives and design guidelines for the shoreline.

7. Recreational Opportunities

- 7-1: Determine the recreational carrying capacity of Skaha Lake in conjunction with stakeholders.
- 7-2: Continue to support the Kaleden and Okanagan Falls Parks and Recreation Commissions.
- 7-3: Continue to pursue local ownership of Christie Memorial Park. If ownership is not feasible, pursue the take over of park maintenance from the private contractor.
- 7-4: Continue to work with the Province, private land owners, and the Penticton Indian Band to ensure the KVR Trail is accessible to the public.
- 7-5: Prepare a pamphlet that includes information about the KVR Trail and make available at the Tourism Centre, the RDOS website, and the Kaleden community website.
- 7-6: Conduct a feasibility study on the rental of non-motorized watercraft in Electoral Area D.
- 7-7: Work with the Ministry of Transportation to develop a long-term plan for Eastside Road that reflects the values of the community.
- 7-8: Prepare a feasibility study for the development of a pedestrian/cycling path along the south shore of the lake.

Historical, Cultural, and Educational Opportunities

- 8-1: Install interpretive signage along the KVR Trail between Okanagan Falls and Kaleden.
- 8-2: Obtain historical status for the Kaleden Hotel and install a sign that identifies the site and provides historical information.



Acknowledgements

The following parties carried out fieldwork for this assessment:

Jason Schleppe, M.Sc., R.P.Bio. (Ecoscape)
Jennifer Clarke M.Sc., P.Geo.(Clarke Geoscience)
Kellie Bunting, B.Sc., CCEP (Insight Environmental)
Jillian Tamblyn, B.Sc., Regional District Okanagan Similkameen
Brad Mason, M.R.M. Fisheries and Oceans Canada
Ryan Benson, B.Sc. Okanagan Nation Alliance
Alfred Snow Okanagan Nation Alliance

In conjunction with Ecoscape, the following governmental agencies contributed to database design for the Foreshore Inventory and Mapping component:

Brad Mason - Federal Department of Fisheries and Oceans Canada
Bob Harding - Federal Department of Fisheries and Oceans Canada
Brent Magnan - Regional District Central Okanagan
Todd Cashin - City of Kelowna
Peter Holmes – Provincial Ministry of Environment
Sarma Liepens – Provincial Ministry of Environment
Simone Runyan – Okanagan Collaborative Conservation Program

In kind donations or funding for this project were received from the following:

Okanagan Nation Alliance contributed the boat, fuel, and field staff for field work
Fisheries and Oceans Canada provided video equipment and staff for field work
Okanagan Basin Water Board provided funding for this project Water Conservation & Quality Improvement Grant Initiative

The authors of this report were:

Jason Schleppe, M.Sc., R.P.Bio. (Ecoscape)
Kellie Bunting, B.Sc., CCEP (Insight Environmental Solutions)
Jennifer Clarke, M.Sc., P.Geo (Clarke Geoscience)

Geographical Information Systems (GIS) mapping and analysis was prepared by:

Robert Wagner, B.Sc. (Ecoscape)

Recommended Citation:

Schleppe, J., K. Bunting, and J. Clarke. 2008. Skaha Lake Shoreline Study and Management Plan. Ecoscape Environmental Consultants Ltd.. Project File: 07-178. November, 2008. Prepared for the Regional District Okanagan Similkameen.



TABLE OF CONTENTS

Executive Summary	i
Acknowledgements.....	iv
1.0 Introduction.....	- 1 -
2.0 Background.....	- 1 -
3.0 Methodology.....	- 2 -
3.1 Inventory.....	- 2 -
3.1.1 <i>Review of Plans, Policies, and Legislation</i>	- 2 -
3.1.2 <i>Shoreline and Near-Shore Habitat and Land Use Characterization</i>	- 3 -
3.1.3 <i>Geologic Hazard Assessment</i>	- 5 -
3.2 Analysis and Synthesis of Inventory Data	- 6 -
3.3 Public Consultation.....	- 6 -
3.3.1 <i>Information Interviews</i>	- 6 -
3.3.2 <i>Public Open House and Presentations</i>	- 7 -
3.3.3 <i>Survey</i>	- 7 -
3.3.4 <i>Web Page</i>	- 8 -
4.0 Inventory.....	- 8 -
4.1 Plans, Policies, and Legislation.....	- 8 -
4.2 Shoreline and Near-Shore Habitat	- 9 -
4.2.1 <i>Fisheries</i>	- 9 -
4.2.2 <i>Wildlife</i>	- 10 -
4.2.3 <i>Ecosystems and Vegetation</i>	- 11 -
4.3 Natural Hazards	- 12 -
4.3.1 <i>Bedrock Geology of the Skaha Lake Area</i>	- 12 -
4.3.2 <i>Glacial History of the Skaha Lake Area</i>	- 13 -
4.4 Population, Demographics, and Housing Demand.....	- 14 -
4.4.1 <i>Population</i>	- 14 -
4.4.2 <i>Demographics</i>	- 15 -
4.4.3 <i>Housing Demand</i>	- 16 -
4.5 Land Use.....	- 19 -
4.6 Character and Scenery	- 22 -
4.7 Water Licences	- 23 -
4.8 Public and Private Amenities.....	- 23 -
4.8.1 <i>Boat Launches</i>	- 23 -
4.8.2 <i>Docks</i>	- 25 -
4.8.3 <i>Marinas</i>	- 26 -
4.8.4 <i>Moorage</i>	- 26 -
4.8.5 <i>Washroom Facilities, Garbage Bins</i>	- 27 -
4.8.6 <i>Parking</i>	- 27 -
4.9 Shoreline Accessibility.....	- 29 -
4.10 Recreational Opportunities.....	- 30 -
4.11 Historical, Cultural, and Educational Opportunities	- 32 -
5.0 Analysis and Synthesis.....	- 33 -
5.1 Plans, Policies, and Legislation.....	- 33 -
5.2 Shoreline and Near-Shore Habitat	- 35 -



5.2.1	<i>Fisheries</i>	- 35 -
5.2.2	<i>Wildlife</i>	- 36 -
5.3	Natural Hazards	- 37 -
5.3.1	<i>Overview Hazard Assessment</i>	- 37 -
5.3.2	<i>Implications for Development in Hazardous Areas</i>	- 40 -
5.3.3	<i>Skaha Lake Water Levels and Implications for Shoreline Development</i>	- 41 -
5.4	Land Use.....	- 41 -
5.4.1	<i>Land Ownership</i>	- 41 -
5.4.2	<i>Current Zoning Designations</i>	- 41 -
5.4.3	<i>Future Land Use</i>	- 49 -
5.5	Character and Scenery	- 53 -
5.6	Public and Private Amenities.....	- 55 -
5.6.1	<i>Boat Launches</i>	- 55 -
5.6.2	<i>Docks, Marinas, and Moorage</i>	- 55 -
5.6.3	<i>Parking</i>	- 56 -
5.7	Shoreline Accessibility.....	- 57 -
5.8	Recreational Opportunities.....	- 57 -
5.9	Historical, Cultural, and Educational Opportunities	- 58 -
6.0	Conclusions and Recommendations	- 58 -
6.1	Environmental Land Use Planning	- 59 -
6.2	Natural Hazards	- 61 -
6.3	Land Use Policy	- 62 -
6.4	Character and Scenery	- 63 -
6.5	Public and Private Amenities.....	- 63 -
6.6	Shoreline Accessibility.....	- 66 -
6.7	Recreational Opportunities.....	- 67 -
6.8	Historical, Cultural, and Educational Opportunities	- 70 -
7.0	Closure	- 71 -
8.0	Literature Cited	- 72 -

TABLES

Table 1	.....	Geologic Hazard Classification
Table 2	.....	Foreshore Inventory and Mapping Land Use Designation Definitions
Table 3	.....	Foreshore Inventory and Mapping Land Use Designations and Associated Zoning by Shore Segment
Table 4	.....	Inventory of Boat Launches along the Skaha Lake Shoreline
Table 5	.....	Inventory of Docks along the Skaha Lake Shoreline
Table 6	.....	Inventory of Parking Available for Public Amenities along the Skaha Lake Shoreline
Table 7	.....	Summary of Boat Survey Statistics
Table 8	.....	Development Permit Area Designations in Electoral Area D
Table 9	.....	Hazard Classification Results for Skaha Lake Shoreline
Table 10	.....	Top Ten Activities of Travelers Interviewed at Penticton Visitor Information Centre and Penticton Beaches
Table 11	.....	Shoreline Committee Guiding Principles and Corresponding Study Recommendations



FIGURES

Figure 1	Population in the RDOS between 1986 and 2007 and Projected Population for 2008 to 2036
Figure 2	Age of Population in 2006 in the RDOS Area D
Figure 3	Private Dwelling Characteristics in 2006 in the RDOS Area D
Figure 4	Number of Households in the RDOS, 1990 to 2035
Figure 5	Value of Building Permits (\$ 000) in the RDOS Unincorporated Areas, 1999 to 2007
Figure 6	Total Number of Units by Residential Type in the RDOS Unincorporated Areas, 1999 to 2007
Figure 7	Summary of Boat Usage on Daily Basis

FIGURE BINDERS

Figure Binder 1	Topographic and Zoning Mapping
Figure Binder 2	Environmental Sensitivity and Hazard Mapping

APPENDICES

Appendix A	Skaha Lake Shoreline Committee Guiding Principles
Appendix B	Foreshore Inventory and Mapping Data Dictionary
Appendix C	Summary of Public Input
Appendix D	Water Licence Information for Skaha Lake
Appendix E	Boat Usage Data
Appendix F	Overview of Plans, Policies, and Legislation



1.0 INTRODUCTION

The primary objective of the Skaha Lake Shoreline Study is to provide information to the Regional District Okanagan Similkameen to prepare a comprehensive plan for management of the Skaha Lake shoreline in Electoral Area D. The shoreline management plan is based on the Guiding Principles developed by the RDOS Shoreline Committee. The Committee is composed of eleven (11) members combined from Kaleden, Skaha Estates, and Okanagan Falls. The Guiding Principles for shoreline management produced by the Shoreline Committee include:

- Enhance connectivity;
- Limit noise, water and air pollution;
- Conserve the natural environment;
- Protect and expand recreation;
- Increase accessibility;
- Maintain opportunities for economic development;
- Enhance history, culture, and education;
- Protect and enhance the character and scenery; and,
- Consider legislation and regulations.

A more detailed description of the Guidelines Principles is included in Appendix A. The premise for development of these Guiding Principles was to allow the creation of a Shoreline Plan which incorporates requirements of all stakeholders, including developers, conservation groups, First Nations, and the community.

2.0 BACKGROUND

Skaha Lake is a freshwater lake of the Okanagan Valley, directly south of the City of Penticton and directly north of the community of Okanagan Falls. The community of Kaleden is situated on the west side of the lake, and smaller communities are located on the east side. The Skaha Lake shoreline lies primarily within the RDOS Electoral Area D, with smaller shoreline areas within the City of Penticton municipal boundary and Penticton Indian Band lands. Penticton and Okanagan Falls are linked by Highway 97 west of Skaha Lake and Lakeside Road and Eastside Road east of Skaha Lake.

The Okanagan River joins Skaha Lake with Okanagan Lake, to the north, and Vaseux Lake, to the south. Skaha Lake has a shoreline perimeter of approximately thirty (30) kilometres, a surface area of approximately twenty (20) square kilometres, and a maximum depth of fifty-five (55) metres. The lake was once known officially as "Dog Lake", which is a direct translation of Skaha Lake's name in Syilx'tsn, the Okanagan language.

The ecosystems of the south Okanagan Valley are unique. The dry grasslands and open pine forests are considered one of the four most endangered ecosystems in Canada. Numerous rare, endangered, threatened or vulnerable species live in the south Okanagan. Due to the dry, semi-arid climate, water bodies such as Skaha Lake are extremely important to many of the rare or



endangered flora and fauna that are found in the south Okanagan because the water/land interface creates extremely unique and diverse habitats.

The desire to live and recreate in the Okanagan Valley, combined with the positive economic climate in British Columbia and Alberta, is resulting in rapid population growth and development in the south Okanagan and Similkameen region. The tremendous growth has resulted in a regional population increase of 65% in 30 years; from 51,520 in 1976 to 84,914 in 2006 (Statistics Canada 2007). In perspective, the population of the RDOS Electoral Area D almost doubled in the same period, increasing from 3,422 in 1976 to 5,913 in 2006. Waterfront properties along Skaha Lake are now listed at over a million dollars and property prices are not anticipated to significantly decline in the near future. Large-scale commercial and residential developments, such as resorts, marinas, and condominium complexes are popping up along lakeshores throughout the Okanagan.

This rapid increase in population and development identifies a significant challenge to plan and/or manage future growth. During the initial public consultation process for the Kaleden-Apex Official Community Plan, residents expressed their desire to preserve the elements which form their natural environment, including directing development away from watercourses and critical habitat areas. Residents also expressed a desire to direct development away from hazard lands (e.g. slide areas, flood areas, steep slopes, and rock fall areas). Water quality and availability were also identified by the public as environmental issues of concern.

It is a complex relationship between development pressure, the natural environment, and social, economic and cultural values. To balance these various community values, a solid understanding of aquatic and riparian resource values, land use interests and concerns of local residents and the long-term planning objectives of the RDOS are important components. Further, a detailed understanding of the shoreline habitats increases understanding of the environmental resources present, allowing all stakeholders to understand how development may affect these habitat features. With this understanding, land use planning can incorporate and avoid features determined to be “critical habitat features” and direct development to appropriate areas for the needs of the community. The Skaha Lake Shoreline Study will provide a solid framework for the RDOS to utilize in future land use bylaws and policies.

3.0 METHODOLOGY

The Skaha Lake Shoreline Study consisted of three main parts 1) inventory, 2) analysis and synthesis of inventory data, and 3) recommendations and conclusions.

3.1 *Inventory*

3.1.1 *Review of Plans, Policies, and Legislation*

A review of relevant community plans and policies was conducted to learn more about land use in the Study Area. Government legislation and guidelines pertaining to the protection of Skaha Lake and its shoreline, endangered species and habitat, and the watershed; control on water licenses and



docking permits; and regulation of boat traffic on lakes were also reviewed and incorporated into the inventory.

Plans, legislation, and policies reviewed for the Study are listed in Section 4.1.

3.1.2 Shoreline and Near-Shore Habitat and Land Use Characterization

A broad inventory of shoreline and near-shore habitat and land use was conducted within Electoral Area 'D'. The inventory was completed using the most recent aerial photography of the study area (2004; 1:30,000 scale), existing maps and studies provided by the RDOS, and field confirmation.

Existing maps to be utilized for foreshore habitat characterization of Skaha Lake include:

- 1:20,000 scale TRIM mapping showing topography of upland areas only; and,
- 1:10,000 scale Lake Depth mapping showing bathymetry of Skaha Lake (Ministry of Environment, 1993).

With respect to existing fish and fish habitat studies, most reports available through the Ministry of Environment are rather dated. A more recently completed study relates to the reintroduction of sockeye salmon by the Okanagan Nation Alliance in 2003. Other sources of background information (e.g., internet, RDOS, Ministry of Environment, and First Nations) were also consulted. Other sources of information consulted include Sensitive Habitat and Inventory Information (SHIM). This mapping is a stream survey methodology currently being completed on many streams and low lying areas.

A more detailed field inventory program and detailed shoreline mapping, referred to as Foreshore Inventory and Mapping (FIM) was also completed for the Skaha Lake Shoreline Study. The detailed inventory provides a means of comparing and determining whether goals and objectives of the Shoreline Committee have been achieved and is a methodology accepted by the provincial Ministry of Environment and Department of Fisheries and Oceans.

In addition to the land use information collected by boat during the FIM, two team members also explored the west side of Skaha Lake by bicycle (on the KVR Trail) and the south and east side of the lake by car.

Finally, to investigate wildlife and ecosystem/vegetation information, the Sensitive Ecosystem Mapping data was reviewed.

Foreshore Inventory and Mapping

Foreshore Inventory Mapping (FIM) is a standardized methodology that includes a heavy emphasis on field data collection to provide a baseline inventory of current foreshore habitat conditions; a snapshot that may be used to determine whether Guiding Principles of the Committee are being met.



A similar sort of program was conducted by Regional District Central Okanagan (RDCO) for Okanagan Lake to aid in the development of land use policies, regulations and standards and to increase long-term environmental planning capabilities for the protection of aquatic and riparian habitat. During 2008, the northern shorelines of Okanagan Lake were also mapped and it is presumed that other major Okanagan valley watercourses (e.g., Kalamalka Lake) will be mapped in the future. Further, this mapping has also been used for compliance monitoring and review by provincial agencies (e.g., construction of retaining walls without associated permits).

The FIM methodology used for this study is compiled from several recognized and standardized approaches such as the Coastal Shoreline Inventory Methodology (CSIM) (Mason and Booth, 2004) and the Sensitive Habitat Inventory and Mapping (SHIM) methodology (Mason and Knight, 2001). The FIM methodology was developed in conjunction with RDCO, Community Mapping Network, City of Kelowna, Department of Fisheries and Oceans, BC Lake Stewardship Society, and District of Lake Country. FIM mapping has also been completed on Kooteney, Christina Lake, and Osoyoos Lake. For this study, additional work to standardize field data collected (i.e., data dictionary) were completed in consultation with Brad Mason, DFO, the Okanagan Collaborative Conservation Program (OCCP), and Jillian Tamblyn, RDOS. It is understood that in the near future a standardized methodology manual will be prepared to aid with future mapping exercises, possibly with mapping projects currently ongoing in the northern regions of Okanagan Lake.

In summary, the FIM methodology included the following tasks for this study:

1. Delineate preliminary segments (min. length 100 m) along the Skaha Lake shoreline¹ using orthophotos overlaid with cadastral mapping. The segments are linear sections of shore having similar characteristics including: land use designation adjacent to the foreshore, shore type, foreshore condition and modifications, and disturbance level.
2. Collect inventory data. For this study, use of a boat, crew and fuel were donated by the Okanagan Nation Alliance. The field crew, supervised by J. Schleppe, M.Sc., R.P.Bio., traversed the shoreline by boat on May 22-23, 2008, documenting foreshore habitat features on field cards, and recording conditions through the use of a digital camera, video, and GPS. Okanagan Nation Alliance fisheries staff provided many habitat details for the data dictionary that would have been difficult to collect without their help because of the early timing of the survey. Data was collected using a Trimble GeoXT GPS unit with the standardized FIM data dictionary (Data Dictionary in Appendix B). GPS units such as this provide a standardized means of collecting a large amount of data in a minimum amount of time.
3. Compile data in the FIM database. The data dictionary was modified and standardized for use in this, and other FIM projects in the province. The FIM data dictionary was also reviewed by Jillian Tamblyn (RDOS) after completion.
4. Complete report. Detailed compilation of inventory data is being completed by Jillian Tamblyn, RDOS. The Skaha Lake Foreshore Inventory, and Mapping

¹ Note that FIM was completed for the entire 31 km perimeter of Skaha Lake, which includes the following jurisdictions: City of Penticton, Penticton Indian Band, and Electoral Area D.



Report (RDOS, 2008) contains a summary of the results, including the GIS spatial data.

3.1.3 Geologic Hazard Assessment

An overview-level hazard assessment was completed for the slopes immediately above the shoreline perimeter of Skaha Lake. The objective of the assessment was to determine the relative likelihood, or probability of occurrence, of an upslope geologic hazard where it may affect the shore zone areas down slope. The shore zone area includes the foreshore at and below the high water mark as well as the area within 30 m (measure horizontally) of the Mean Annual High Water Mark.

Geologic hazards considered by the assessment refer to a slope modifying event such as rock fall, landslide, slump, or debris flow/flood. It should be noted that the level of hazard is based on current land use and that it may vary with changing land use activity.

The geologic hazard assessment included a review of pertinent background information to characterize the geology (Church, 2002; Matthews and Monger, 2005) and surficial geology (Nasmith, 1962) of the study area, and to review previous investigations of slope stability.

Previous investigations of slope stability in the Skaha Lake area include a study by Runka (1971). The study provides overview-level soil stability ratings for the south Okanagan area. The ratings, provided for areas delineated on 1:50,000 scale mapping, classify slopes into low, moderate, and high likelihood for slope failure, or impact from slope failure.

For the purposes of the Skaha Lake Shoreline study, the overview-level hazard assessment builds upon the Runka study to provide an assessment of geological processes affecting shoreline areas in particular. The assessment was completed by J. Clarke, M.Sc., P.Geo., using 2004 1:40,000 scale (approx.) air photos and supplemented with field observation.

For each segment identified for the Foreshore Inventory Mapping component of the project, a hazard rating was assigned. The hazard rating was derived from a combination of terrain type, hazard type, and connectivity to the shoreline. The rating, high, moderate, or low, provides a relative level of assessment of potential geologic hazard impact as indicated below, and is applicable to the 30 m Riparian Management Zone around the lake.

Table 1: Geologic Hazard Classification

Hazard Class	Definition
High	the likelihood of a damaging slope process originating from the slopes above the shoreline segment is considered to be high (i.e. the probability of impact is considered greater than 10% in 50 years, or 1 in 475 years).
Moderate	the likelihood of a damaging slope process originating from the slopes above is considered moderate (i.e. the probability of impact is considered less than 10% in 50 years but greater than 1% in 50 years, or 1 in 5000 years).
Low	the likelihood of a damaging slope process originating from the slopes above is considered low, or unlikely.

Note: the area of impact is considered to be within 30 m of the Mean Annual High Water Mark



3.2 Analysis and Synthesis of Inventory Data

For this task, the Project Team worked from the general inventory information (Task 1) to prepare specific recommendations and conclusions (Task 3). The results of Task 2 were recommendations regarding demand for expansion or improvement of services described in the Guiding Principles developed by the Shoreline Committee and needs to determine where demand exceeds the inventory documented in Task 1.

Using GIS, the Project Team established patterns and interactions between current and planned land uses, public amenities, critical habitat areas, and hazard lands. Future need for public amenities such as trails, boat moorage, beaches, and parking were extrapolated by comparing historical use and population, use by the existing population and tourism industry, and projected population, demographics, and tourism use. Using this information, the Project Team conducted a “needs assessment” to identify gaps and inconsistencies between existing policy and services and future demand.

3.3 Public Consultation

The purpose of the public consultation component of the Study was to:

1. **Achieve awareness.** Ensure residents and decision makers understand that rapid population growth in the South Okanagan has resulted in a need to create a comprehensive plan for management of the Skaha Lake shoreline in Electoral Area D. The plan will address issues such as zoning, land use, protection of habitat and water, and accessibility to the lake.
2. **Educate.** Provide residents and decision makers with the necessary information required to have an accurate understanding of the roles, uses, and values of Skaha Lake, and of potential threats to these roles, uses, and values, so that they can provide informed input.
3. **Seek input.** Enable residents and decision makers to provide early and ongoing input into the development of the Skaha Lake Shoreline Study. This input will help ensure that the final Skaha Lake Shoreline Study best meets the needs and desires of Area D residents.
4. **Obtain support.** If the Skaha Lake Shoreline Study is built on public input it should provide an accurate profile of public opinion and issue identification, and will have community support before it goes to the RDOS for review and implementation.

Public input was gathered using three methods: interviews with selected groups and individuals; a public Open House and two presentations; and a survey. A summary of the public input received through all three methods is included in Appendix C.

3.3.1 Information Interviews

Interviews were conducted with select individuals and organizations during the inventory phase of the project. Coupled with this, desk-top literature reviews were also complete to supplement the data and ensure a comprehensive understanding of the area and issues was achieved. These groups also received formal invitations to the public Open House and presentations (see Section 3.3.2).



Groups that were contacted included:

- Kaleden Parks and Recreation Commission (Kal Rec),
- Okanagan Falls Parks and Recreation Commission (OK Falls Rec),
- Rails to Trails and Parks Committee,
- Area D APC,
- The Nature Trust, and
- Regional Growth Strategy Steering Committee.

The Project Team and RDOS staff attempts to set up meetings with the Penticton Indian Band (PIB) and the Okanagan Nation Alliance (ONA) was not successful, but both PIB and ONA received formal invitations to the Open House and presentations.

3.3.2 Public Open House and Presentations

An Open House and two public presentations were held for the Project. The first Open House was held upon completion of analysis and synthesis of the inventory and the second Open House was completed upon completion of the draft recommendations and conclusions.

The first Open House was held on September 15, 2008 in Okanagan Falls. At the Open House, over 60 visitors had the opportunity to learn more about the study, ask questions, and share their ideas with the Project Team, RDOS staff, and members of the Shoreline Committee. Poster-size and smaller format maps and copies of the draft report were available for viewing. The survey was also available at the Open House.

The second Open House used formal presentations to convey draft recommendations and conclusions. These events were held on October 27, 2008 in Okanagan Falls and October 28, 2008 in Kaleden. The same presentation was held twice each night, for a total of four presentation times. The presentations were attended by a total of (approx.) 110 persons. Presentations were followed by a question and answer period and open viewing of wall maps of each community. Copies of the draft report were also available for viewing.

Advertising for the Open House and presentations included announcements posted on the RDOS website and at the RDOS office, paid advertising in the Penticton Western News and the Okanagan Falls Review, press releases and a media advisory sent to local radio, television, and print media in the South Okanagan. Formal invitations to the Open House were also be emailed to stakeholders. A flyer announcing the presentations was mailed out to residents of Electoral Area D and emailed to over seventy-five stakeholders, survey respondents, and attendees of the September Open House.

3.3.3 Survey

A written survey was prepared and posted electronically on the RDOS website. Hard copies of the survey were also made available at the Open House and at the RDOS office. The purpose of the survey was to obtain public input into the Shoreline Study in a more formal manner than verbal



discussions at the Open House and public presentations. The survey also gave people who were unable to attend the Open House or public presentations the opportunity to provide input. The survey began with questions designed to get an understanding of what the community values about Skaha Lake and of what activities are conducted on and around the lake, followed by questions designed to get a feel for public opinion on what recommendations should be included in the Shoreline Study.

3.3.4 Web Page

A link to a “Skaha Lake Shoreline Study” web page was placed on the RDOS planning department website. The web page contained a brief description of the study, digital versions of the draft reports as they were completed, information about the public events, and a link to the online survey.

4.0 INVENTORY

4.1 Plans, Policies, and Legislation

The plans, policies, and legislation that concern the lake and its foreshore include, but are not limited to the following:

- Fisheries Act
- Navigable Waters Protection Act
- Species at Risk Act
- Migratory Birds Convention Act and Regulations
- Water Act and Water Regulation
- Land Act
- Fish Protection Act and Riparian Areas Regulation
- Wildlife Amendment Act, 2004
- Environmental Management Act
- Local Government Act
- Best Management Practices for Recreational Activities in Grasslands in the Thompson and Okanagan Basins
- Best Management Practices for Small Boat Moorage on Lakes
- Best Management Practices for Boat Launch Construction and Maintenance on Lakes (Draft)
- Best Management Practices for the Installation and Maintenance of Water Line Intakes
- Develop With Care: Environmental Guidelines for Urban and Rural Land Development in British Columbia
- The Green Bylaws Toolkit
- On the Living Edge - Your Handbook to Waterfront Living
- Standards and Best Practices for Instream Works
- Water Management - A Users Guide to Working In and Around Water
- Okanagan-Shuswap Land and Resource Management Plan
- Kaleden-Apex Southwest Sector Zoning Bylaw No. 2457, 2008



- Kaleden-Apex Southwest Sector Official Community Plan Bylaw No. 2456, 2008
- East Skaha, Vaseux Zoning Bylaw No 2455, 2008
- East Skaha, Vaseux Official Community Plan Bylaw No. 2454, 2008
- South Okanagan Regional Growth Strategy Bylaw No. 2421, 2007 (under review)

Numerous other Best Management Practice documents are also available and should be referred to as required for a particular project. An analysis and synthesis of how the plans, policies, and legislation govern or guide lake and shoreline activities in Electoral Area D is included in Section 5.1.

4.2 *Shoreline and Near-Shore Habitat*

4.2.1 *Fisheries*

Skaha Lake is part of the Okanagan River system and the fish assemblage is similar to other lakes such as Osoyoos and Vaseux. Historical water diversions and channelization of the Okanagan river system have resulted in additional fish migration barriers that have fragmented populations, including those in Skaha Lake. Coupled with the habitat fragmentation, exotic introductions of species such as small mouth bass have also influence the fishery in Skaha Lake. The most recent information available regarding species presence/absence is fish wizard (www.fishwizard.com). Skaha Lake contains the following fish species:

Burbot, Carp, Chiselmouth (provincially blue listed), Kokanee, Lake Whitefish (introduced), Largescale Sucker, Mountain Whitefish, Northern Pikeminnow, Peamouth Chub, Prickly Sculpin, Rainbow Trout, Redside Shiner, Smallmouth Bass (introduced), Sockeye Salmon

Additional species that have possibly been introduced to Skaha Lake include Yellow Perch, Large Mouth Bass, and Black Crappie. The most up to date published species accounts are available in *The Freshwater Fish of British Columbia* (McPhail, 2007). Recent grey literature publications of species accounts may also be found in the *City of Kelowna Shore Zone Fisheries and Wildlife Assessment* (Schleppe and Arsenault, 2006), which contains recent data from Okanagan Lake.

Documented tributary streams on Skaha Lake include Skaha Creek, Felis Creek, Marron River (Rainbow Trout), McClean Creek (Kokanee and Rainbow Trout), Matheson Creek, Gillies Creek, and six unnamed tributaries. Sensitive Habitat Inventory and Mapping has been completed on some, but not all of the watercourses on the system. During FIM many of the stream mouths could not be assessed due to shallow waters adjacent to the stream mouths and further inventory of these areas is recommended to collect point features exactly where they discharge to the lake and any important habitat characteristics. Generally, any stream that provides sufficient flows to support spawning populations of fish is considered critical fish habitat. Stream mouth areas are important staging and migrating grounds, and rearing areas for fish.



4.2.2 Wildlife

The Conservation Data Center provides information regarding rare and endangered species that occur within the area. The BC Species and Ecosystem Explorer (<http://www.env.gov.bc.ca/atrisk/toolintro.html>) provides maps of occurrences of rare and endangered species. However, because of the sensitivity of this information, many occurrences are masked to protect the locations of where the species were documented. It is acknowledged that many occurrences are not reported and therefore, it is likely that there are more occurrences than those documented by the BC Species and Ecosystem Explorer. Additional information regarding potential species occurrences can be found in the Skaha Lake Foreshore Inventory and Mapping report prepared by the Regional District Okanagan Similkameen.

On the west side of Skaha Lake there is generally a very high habitat potential for many wildlife species in adjacent ecosystems because many adjoining upland sites are either natural or rural, with the exclusion of transportation corridors. On the north-west side of the lake (Hwy.97, Segments 5 – 10), the PIB lands are generally natural with the exception of impacts associated with the railway and Highway 97 construction. In the mid-west sections (Kaleden, Segments 11 - 21), development is generally rural in nature, with the exception of some single family residential areas, and still provides suitable wildlife habitat in more natural areas. In the south-west regions (Segments 22-29), there is a wide natural connection (~300 – 500 m) between riparian communities of the lake and dry upland sites.

Several shore marsh and wetland/riparian communities occur along the western shoreline and more detailed mapping of all these communities is recommended. It is important to note that surveys were conducted prior to the emergence of vegetation and therefore wetland/shore marsh boundaries require more accurate mapping (i.e., this report only provides a preliminary flagging tool). These communities are considered *extremely important habitat* for many species. Because the shoreline areas also have very good wildlife connection to drier grassland ecosystems upslope, they likely support a very diverse array of wildlife. Detailed inventories at key times of the year would be required to prepare complete species lists for the areas.

The southern sections of the lake contain more dense development (Okanagan Falls). Areas of highest wildlife value within Segments 30 to 32 occur in lakeside parks such as Lions Park, Christie Memorial, and Kenyon Park. It is acknowledged that these areas are considered Urban Parks and habitat values for wildlife are limited to those species more tolerant of development. Although no formal surveys were conducted, the island habitat adjacent to Segment 31 may provide important nesting habitat for birds.

Wildlife habitats in the mid-south to south-east side of the lake are more limited (Segments 33 to 41), but in more rural areas adequate connectivity and wildlife habitat exist. Several smaller riparian/stream corridors also occur in this area (Segment 34, 36/37, and 38). In the mid-south (Segments 40 – 42), only Lakeside Rd. occurs between the lake and natural upland areas. Upland areas here contain important wildlife habitat. Detailed inventories would be required in these areas to prepare species lists. Consideration for wildlife crossings is considered important if Lakeside Rd. improvements are undertaken because this area is the least developed along the eastern



shoreline. There are also some wetland and shore marsh habitats along these segments and detailed mapping is recommended.

4.2.3 Ecosystems and Vegetation

Natural ecosystem units were mapped around the lake using the Sensitive Ecosystem Inventory (SEI) database and GIS. The analysis was intended to select all non-anthropogenic communities as of the time data was collected. The intent of this detailed spatial analysis was to highlight areas around the lake where relatively natural conditions exist. The database analysis (i.e., computer script) used in this analysis is very similar to other local municipal governments who have determined terrestrial development permit areas for potential environmentally sensitive areas.

The communities around Skaha Lake contain two biogeoclimatic units including the Ponderosa Pine (PPxh1) and Bunchgrass Zones (BGxh1). Recent Terrestrial Ecosystem Mapping and SEI have described a total of 39 communities around the lake within approximately 1 km of the shoreline. Of these communities, 10 contain anthropogenic descriptions (e.g., road, rural, etc.) and these communities occur in and around Okanagan Falls.

There are a total of 19 natural communities occurring around the lake. Of these communities, 8 are known to be red-listed² and six of these red-listed communities occur in the BGxh1 zones. A total of 4 communities are known to be blue³-listed around the lake. The remainder of the natural communities around the lake have yet to be classified and it is probable that many will be added to either Red or Blue lists in the near future. Currently, efforts are ongoing at the provincial level to identify and classify these unknown ecosystems.

The interface zones of the PPxh1, BGxh1, and lakeshore of Skaha Lake provide a very diverse array of vegetation within these different communities. Of particular importance, are the interface areas of the shoreline, where there is a transition from riparian vegetation transition to drier grassland and coniferous forests upslope. No detailed vegetation inventories were completed for this project. Rather, a review of natural communities previously mapped was conducted.

More descriptions regarding ecosystems are available and updated mapping/ecosystem descriptions from 2007 have been prepared by Iverson and Haney (2007). These reports provide the locations of the ecosystems and their relationship to the shoreline of Skaha Lake.

² Includes any ecological community, and indigenous species and subspecies that is extirpated, endangered, or threatened in British Columbia.

³ Includes any ecological community, and indigenous species and subspecies considered to be of special concern (formerly vulnerable) in British Columbia.



4.3 Natural Hazards

4.3.1 Bedrock Geology of the Skaha Lake Area

Skaha Lake is one of several lakes strung in a north-south line within the Okanagan Valley; a major valley that generally follows the Okanagan Valley fault. The valley fault deviates to the east just north of Okanagan Falls. Bedrock geology on the east side of the fault is distinctly different from bedrock on the west side due to the differential movement along the fault.

The slopes on the east side of Skaha Lake represent an older sequence of metamorphosed (deformed) gneiss and granitic rocks that form the Okanagan Highlands of the Omineca Belt (Matthews and Monger, 2005). These rocks are relatively massive in structure and are fairly resistant to erosion (Photo 1). Where glaciation, moving in a north to south direction, has scoured the surface of the rock, a series of distinctive rounded, elongate hummocks are apparent. The landforms, called *roches moutonees*, characterize the eastern rock slopes above Skaha Lake. Instances of large-scale rock fall, or bedrock failure along the east side of the lake are absent.

Bedrock along the west and south side of Skaha Lake represents a thick sequence of relatively undeformed volcanic and sedimentary rocks of the Penticton Tertiary Outlier (Church, 2002). Based on the shallow dip of the Okanagan Valley Fault, these younger rocks are thought to have dropped almost 80 kilometres about 50 million years ago, during a time of increased seismic and volcanic activity. The volcanic and sedimentary rocks on the western side of Skaha Lake are visible in some of the rock cuts along the KVR trail (Photo 2). In places, the rock is highly fractured and jointed, resulting in frequent small rock fall. There is also some evidence of a large ancient rockslide north of Okanagan Falls on the west side of Skaha Lake (Segment 26) where large boulders are seen protruding from the lake surface adjacent to shore.

Mineral resources documented within the study area include the Dusty Mac mine, near Okanagan Falls, that produced 93 000 tonnes of gold and silver between 1975 and 1977. In addition, the Vault gold prospect occurs on the west side of Skaha Lake within the Penticton Tertiary Outlier rocks. (Church, 2002)



Photo 1: Deformed gneiss and granitic rocks of the Okanagan Highlands on the east side of Skaha Lake (Segment 40).



Photo 2: Undeformed volcanic and sedimentary rock on west side of Skaha Lake (Segment 29).

4.3.2 Glacial History of the Skaha Lake Area

The slopes surrounding Skaha Lake exhibit the history of sediment deposition and erosion during and subsequent to several sequences of glaciation; the last of which occurred approximately 12,000 years ago. Glacial and post-glacial landforms are identified by Nasmith (1962).

During the last glaciation, a large block of ice sat in the valley between Okanagan Falls and McIntyre bluff near Oliver. At this time there was an active ice front at the south end of Skaha Lake and sediment-laden glacial melt water flowed to the west into the Similkameen River basin along the Marron Creek Channel (Nasmith 1962). Sands and gravels were deposited at the south-west corner of Skaha Lake, forming an extensive outwash terrace. This raised terrace is visible between Highway 97 and the south end of Skaha Lake (Photo 3).

Melt water flowing along the western edge of the main ice lobe in the Okanagan Valley also built terraces north and west of Kaleden. As the ice melted, the Marron Creek Channel was abandoned and ponds formed on the surface of the stagnant ice, coalescing to form what is referred to as ancient glacial Lake Penticton (Nasmith 1962). At a time when the valley was flooded, or at least partly flooded, glacial silts were deposited. Remnants of discontinuous terraces constructed of glacial silts are visible along the perimeter of Skaha Lake. These deposits were subsequently down cut and incised by the river as it flowed south, draining the lake.

At the north end of Skaha Lake, at Penticton, beach and dune deposits flank more contemporary alluvial deposits of the Okanagan River. Outwash deposits and a small alluvial fan at the northwest corner of Skaha Lake is dissected by Skaha Creek, one of the few tributaries to Skaha Lake (Photo 4).

The south-east end of Skaha Lake, at Okanagan Falls, is largely comprised of alluvial sands and gravels of Shuttleworth Creek. Outwash terraces and associated gullies and stream channels form the slopes surrounding the south end of the lake.





Photo 3: Marron Creek outwash terrace at the south-west corner of Skaha Lake (Segment 29).



Photo 4: Outwash terraces associated with Skaha Creek at the northwest corner of the lake (Segment 5).

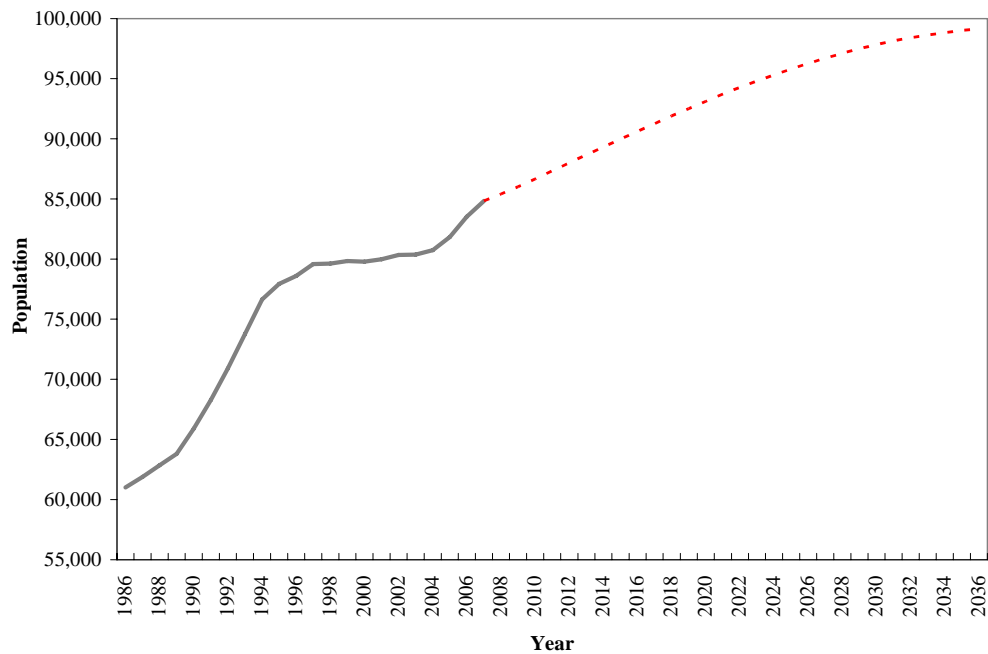
4.4 *Population, Demographics, and Housing Demand*

4.4.1 *Population*

Like the rest of the Okanagan, the south Okanagan and Similkameen region experienced tremendous growth between 1986 and 1998 (see Figure 1), largely due to high net migration inflows (BC Stats, 2008a). Relatively small net inflows led to minimal growth during the period from 1998 to 2004. However, higher migration levels between 2004 and 2007 resulted in growth levels not seen in this region since the mid 1990s. The population in the RDOS is expected to continue to grow by approximately 1% each year and reach 99,156 people by 2036 (BC Stats, 2008b).



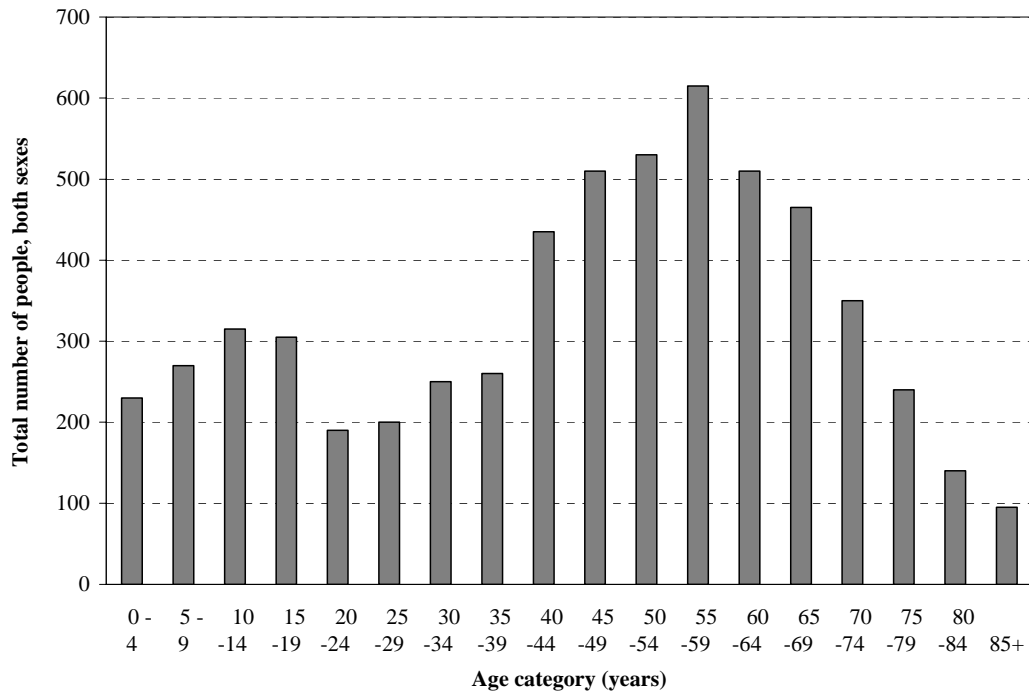
Figure 1: Population in the RDOS between 1986 and 2007 and Projected Population for 2008 to 2036 (BC Stats, 2008b)



4.4.2 Demographics

The pleasant climate and high quality of life makes the south Okanagan and Similkameen region a popular place to retire. In 2006, almost 30% of the population was between the ages of 50 and 65 (see Figure 2). The population was over 9 years older and the elderly dependency ratio (i.e., the ratio of those aged 65 and over to those aged 18 to 64) was over twice that of the province as a whole. The 65-plus population is projected to grow to comprise almost a third of the region's population by 2031.

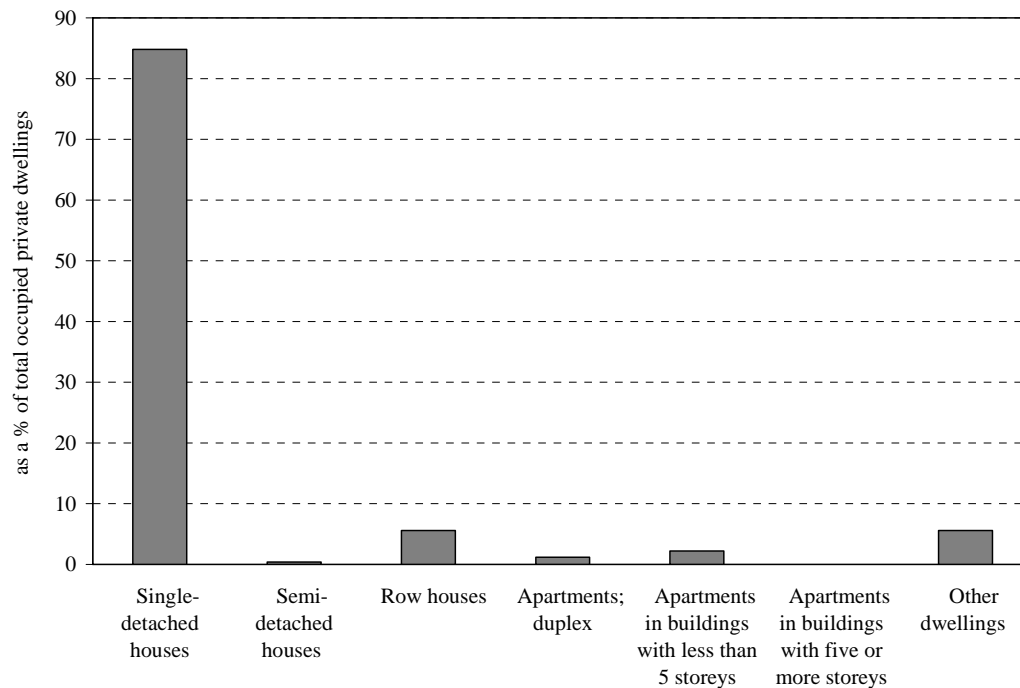


Figure 2: Age of Population in 2006 in the RDOS Area D (Statistics Canada, 2007)

4.4.3 Housing Demand

There were 2,385 households in Area D in 2001 and 2,505 households in 2006, an increase of 120 dwellings (Statistics Canada, 2007). The average value of a dwelling was \$198,548 in 2001 and \$393,084 in 2006. Figure 3 shows the characteristics of the dwellings in 2006. Single-detached housing is by far the most dominant dwelling type in Area D.



Figure 3: Private Dwelling Characteristics in 2006 in the RDOS Area D (Statistics Canada, 2007)

The number of households in the RDOS has increased steadily since 1990, and is projected to continue to increase to 2035 (see Figure 4). Due to the projected aging of the region's population, household size is expected to drop from 2.3 persons per household to 2.1 persons per household (The Real Estate Foundation and The Land Centre, 2003). As a result, the RDOS will experience a 45% increase in net occupancy demand for housing between 2001 and 2031. This suggests a demand increase of 16,024 dwelling units (an average of 443 units per year).

The number and value of building permits is often used as a leading indicator of building activity. Figure 5 shows the value of building permits in unincorporated areas of the RDOS from 1999 to 2007 for residential, commercial, and institutional and government buildings. Residential permits are those issued for new dwellings and alterations and improvements to existing dwellings. Industrial includes buildings used for manufacturing and processing; transportation, communication and other utilities; and agriculture, forestry, mine and mine mill buildings. Commercial includes stores, warehouses, garages, office buildings, theatres, hotels, funeral parlours, beauty salons and miscellaneous commercial installations. Institutional and Government includes expenditures made by the community, public and government for buildings and structures. Figure 6 breaks down the number of units by residential type – single dwelling, row housing, and apartment – for the unincorporated areas.



Figure 4: Number of Households in the RDOS, 1990 to 2035 (BC Stats, 2008c)

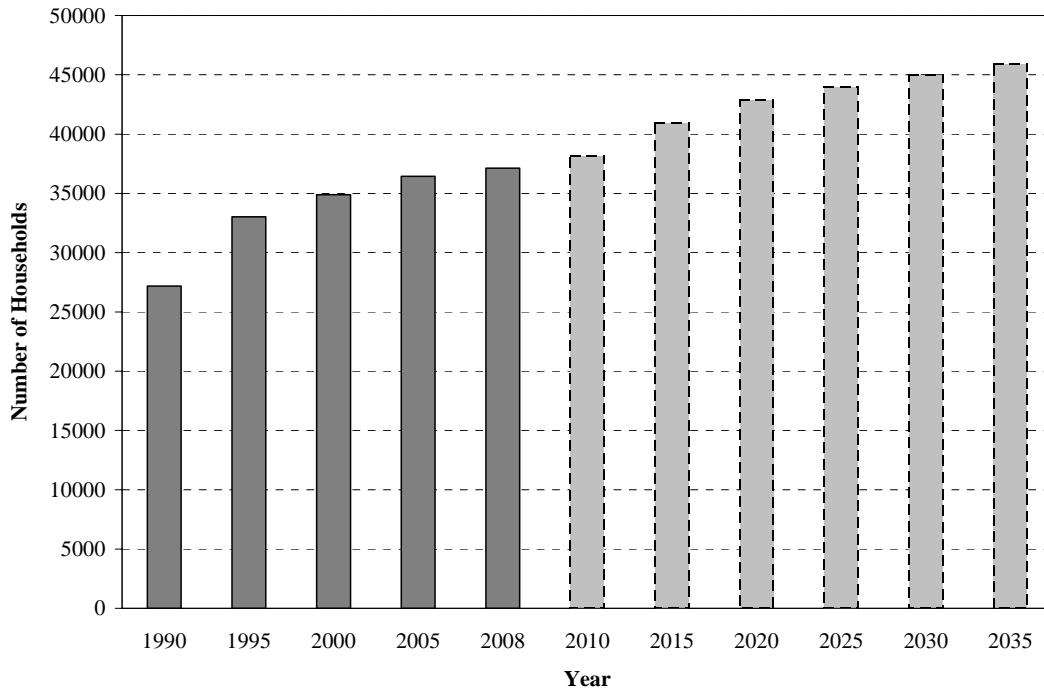


Figure 5: Value of Building Permits (\$ 000) in the RDOS Unincorporated Areas, 1999 to 2007 (BC Stats, 2008d)

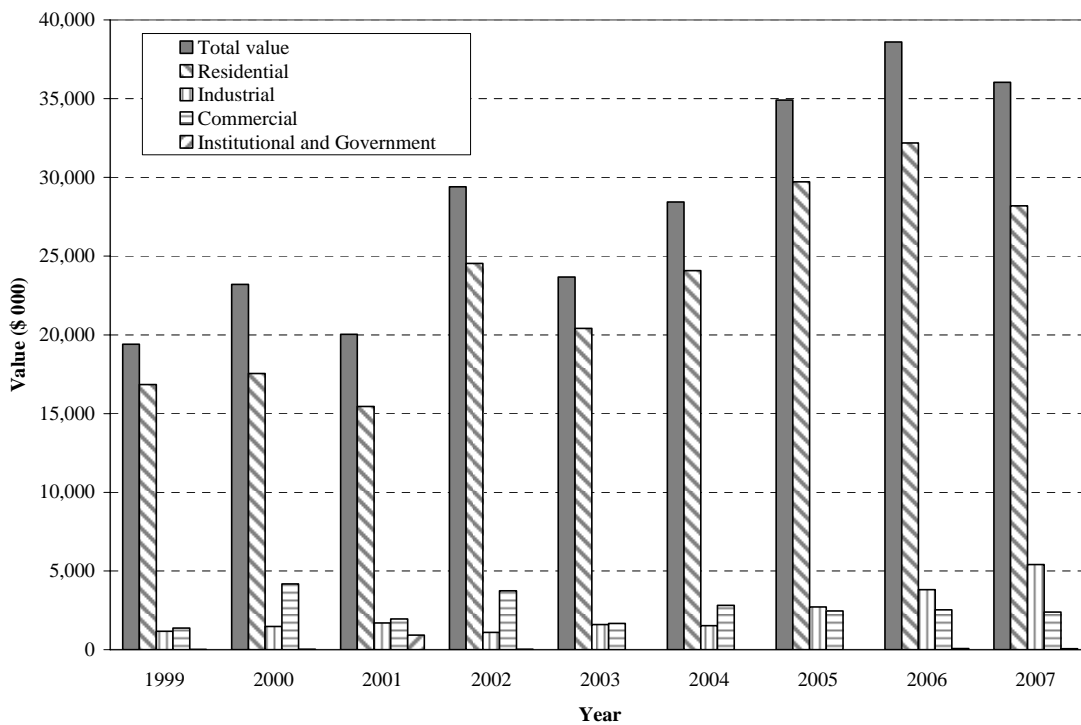
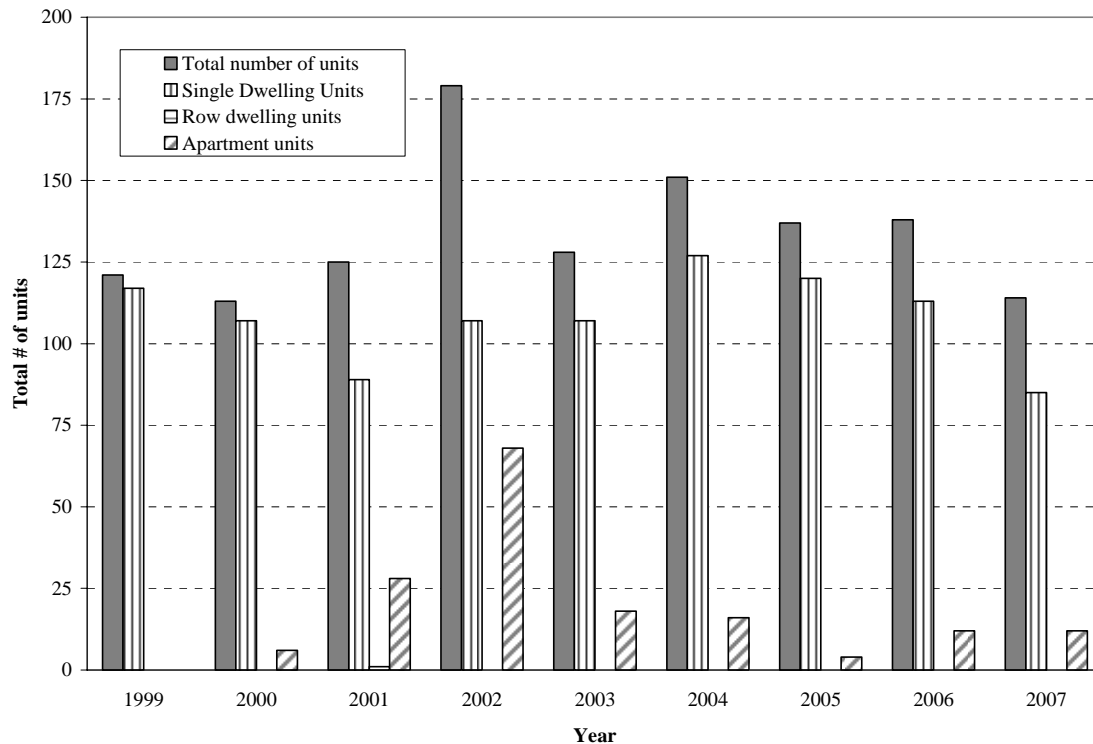


Figure 6: Total Number of Units by Residential Type in the RDOS Unincorporated Areas, 1999 to 2007 (BC Stats, 2008d)



Real estate listings in the South Okanagan are increasing but sales are decreasing. The South Okanagan Real Estate Board reports that MLS® sales decreased by 44% to 183 units sold in July 2008 compared to 324 sold during the same period in 2007 (South Okanagan Real Estate Board, 2008). Total active listings numbering 2,735 for July increased by 66% from last July's 1,812 active listings.

4.5 Land Use

Existing land use along the Skaha Lake shoreline in Electoral Area D was inventoried using the FIM designations in Table 2.



Table 2: Foreshore Inventory and Mapping Land Use Designations and Definitions

Land Use Designation	Definition
Commercial	To accommodate a mix of commercial, retail, recreation, and service uses.
Recreation	To accommodate tourist commercial type uses such as resorts and campgrounds.
Urban Park	To accommodate active recreation, community oriented cultural centres, and some associated uses.
Park	To accommodate more natural parks and recreation corridors
Single Family	To accommodate single family residential use with some associated uses.
Multi-family	To accommodate higher density development such as townhouses, condominiums etc with some associated uses.
Rural	To accommodate agricultural and rural uses on parcels that are 0.5 ha or greater and located outside the Agricultural Land Reserve.

To enable comparison between the FIM designations and local Zoning Bylaws, an inventory of zoning designations was also completed. Table 3 provides a summary of shoreline land uses, including the FIM designation, zoning bylaw designation, and description of land use. Photos 5 to 8 are representative of rural, single family, and multi family land uses.

Table 3: Foreshore Inventory and Mapping Land Use Designations and Associated Zoning by Shore Segment

Segment #	Predominant land use		Other land uses (Zoning bylaw designation)	Description of land use
	FIM designation	Zoning bylaw designation		
10	Park	Low Density Residential (RL2)	Park (P)	KVR Trail corridor at base of steep slope
11	Park	Agricultural (AG1)	Park (P)	KVR Trail corridor at base of steep slope
12	Park	Tourist Commercial (CT1)	Park (P)	Banbury Green Campground & RV Park KVR Trail corridor
13	Recreation	Tourist Commercial (CT1)	Park (P)	Banbury Green Campground & RV Park KVR Trail corridor
14	Park	Low Density Residential (RL2)	Park (P)	KVR Trail corridor at base of steep slope
15	Park	Low Density Residential (RL1, RL2)	Park (P)	KVR Trail corridor at base of slope
16	Single Family	Low Density Residential (RL1, RL2)	Park (P)	KVR Trail corridor Sickle Point
17	Single Family	Low Density Residential (RL1)	n/a	Waterfront single family homes
18	Park	Low Density Residential (RL1)	Tourist Commercial (CT2) Administrative, Culture, and Institutional (AC1) Park (P)	Single family homes 1912 Restaurant Water Treatment Plant Kaleden Hotel Park
19	Urban Park	Park (P)	n/a	Kaleden Pioneer Park



Segment #	Predominant land use		Other land uses (Zoning bylaw designation)	Description of land use
	FIM designation	Zoning bylaw designation		
20	Single Family	Low Density Residential (RL1)	n/a	Waterfront single family homes
21	Recreation	Tourist Commercial (CT2)	n/a	Ponderosa Point Resort
22	Park	Small Holdings (SH2)	Park (P)	One large lot home with vineyard and tennis court KVR Trail corridor
23	Park	Resource Area (RA)	Rural Small Holdings (SH2) Park (P)	KVR Trail corridor at base of steep slope
24	Park	Resource Area (RA)	Park (P)	KVR Trail corridor at base of steep slope
25	Park	Resource Area (RA)	Park (P)	KVR Trail corridor at base of steep slope
26	Park	Resource Area (RA)	Park (P)	Single family home on large lot KVR Trail corridor
27	Park	Small Holdings (SH2)	Park (P)	KVR Trail corridor at base of steep slope
28	Park	Small Holdings (SH1)	Parks and Recreation (PR)	Single family homes on large lots KVR Trail corridor
29	Park	Resource Area (RA)	Rural Small Holdings (SH1) Parks and Recreation (PR)	Single family home on large lot Lions Park
30	Urban Park	Park and Recreation (PR)	Tourist Commercial (CT3)	Lions Park Sun & Sand RV Park Kenyon Park
31	Urban Park	Park and Recreation (PR)	n/a	Christie Memorial Park
32	Single Family	Single Dwelling Residential (RS1)	Tourist Commercial (CT1) Multiple Dwelling (RM2)	Empty lot Two condo developments Single family homes
33	Rural	Large Holdings (LH)	n/a	Eastside Road directly adjacent to Skaha Lake
34	Rural	Small Holdings (SH1)	n/a	Single family homes on large lots
35	Single Family	Single Dwelling Residential (RS1)	Tourist Commercial (CT3) Small Holdings (SH1)	Sunny Bay Resort Single family homes
36	Rural	Single Dwelling Residential (RS1)	Small Holdings (SH1)	Single family homes (Skaha Estates)
37	Single Family	Parks and Recreation (PR)	Single Dwelling Residential (RS1)	Skaha Estates Park Single family homes
38	Single Family	Single Dwelling Residential (RS1)	n/a	Single family homes
39	Rural	Large Holdings (LH)	n/a	Eastside Road directly adjacent to Skaha Lake
40	Single Family	Single Dwelling Residential (RS1)	n/a	Eastside Road directly adjacent to Skaha Lake
41	Rural	Comprehensive Development (CD) Conservation Area (CA)	Large Holdings (LH)	Eastside Road directly adjacent to Skaha Lake



4.6 *Character and Scenery*

One of the Guiding Principles for shoreline management identified by the Shoreline Committee is to “protect and enhance the character and scenery” of RDOS Electoral Area ‘D’.

The character and scenery of properties in Electoral Area ‘D’ is generally described as rural residential with scattered small-scale agricultural surrounded by predominantly natural, undeveloped lands. Photos 5 and 6 illustrate typical views along the east and west slopes of Skaha Lake. At the south end of the lake, within Okanagan Falls, the character and scenery is mixed recreational (public and commercial), park, and higher density residential.



Photo 5: Residential Character along the east side of Skaha Lake (Segment 38).

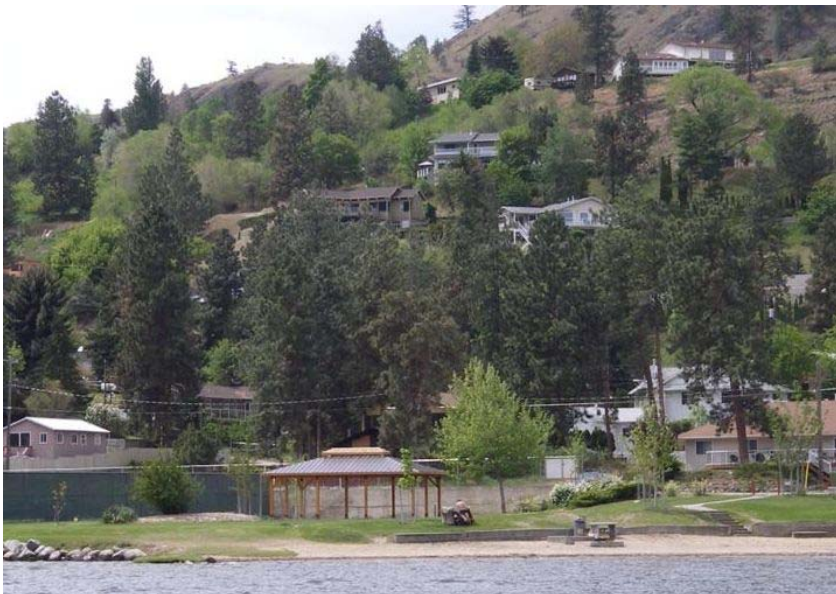


Photo 6: Residential Character along the west side of Skaha Lake (Segment 19).

Through casual observation, there is no one particular character or style associated with the development surrounding Skaha Lake. Many single-family residences have a “ranch or split-level” architecture⁴, with stucco exterior cladding painted with lighter colours and earth tones that blend into the surrounding landscape. Most residences take advantage of the lake views, or lake access, by incorporating patios, verandas, or ground-level entrances. Tree cover and vegetation is a dominant character of properties in the study area. Low-density residential development has allowed for the retention of existing native vegetation and the development of more mature landscaping.

4.7 Water Licences

Water licences are issued by the Ministry of Environment under the *Water Act*. There are 103 water licences issued for Skaha Lake for a variety of purposes, including irrigation (42), domestic (58), enterprise (3), and waterworks for a local authority (10)⁵. A table that includes licence number, point of diversion number, purpose, quantity, and licensee contact information is included in Appendix D.

4.8 Public and Private Amenities

4.8.1 Boat Launches

Table 4 provides an inventory of boat launches along the Skaha Lake shoreline in Electoral Area D and specifies whether they are private or public. The public boat launches are shown in Photos 7 to 11.

Table 4: Inventory of Boat Launches along the Skaha Lake Shoreline

Segment #	Location	Public or private?
13	Banbury Green RV Park and Campground	Private
19	Kaleden Pioneer Park	Public
21	Ponderosa Point Resort	Private
22	Private residence	Private
26	Private residence	Private
32	Main Street, Okanagan Falls	Public
35	Sovereign Road	Public
37	Laguna Lake Road	Public
38	Devon Drive	Public
41	<i>Unconfirmed.</i>	?

⁴ The ranch style is influenced by Spanish Colonial and Prairie and Craftsman-style homes, and is characterized by one-story, pitched-roof construction, built-in garage, wood or brick exterior walls, sliding and picture windows, and sliding doors leading to patios. Split-level styles incorporate two or more levels.

⁵ The number of purposes associated with the water licences equals 113 even though only 103 licences have been issued because 10 water licences allow a dual purpose.





Photo 7: Boat launch at Kaleden Pioneer Park (Segment 19).



Photo 8: Boat launch at the end of Main Street in Okanagan Falls (Segment 32).



Photo 9: Boat launch at the end of Sovereign Road in Skaha Estates (Segment 35).



Photo 10: Boat launch at end of Laguna Lane in Skaha Estates (Segment 37).



Photo 11: Boat launch off of Devon Drive in Skaha Estates (Segment 38).



4.8.2 Docks

Table 5 provides an inventory of larger dock structures along the Skaha Lake shoreline in Electoral Area D and specifies whether they are public or private. The two public docks are shown in Photos 16 and 17. Photos 12 to 17 provide a general idea of what the private docks along the shoreline look like.

Table 5: Inventory of Docks along the Skaha Lake Shoreline

Segment #	Location	Public or private?
13	Banbury Green RV Park and Campground	Private
17	Private residence	Private
19	Kaleden Pioneer Park	Public
20	Private residence	Private
21	Ponderosa Point Resort	Private
22	Private residence	Private
28	Private residence	Private
30	Sun and Sand RV Park	Private
32	Main Street, Okanagan Falls	Public
32	Condominium developments	Private
35	Sunny Bay Resort	Private
34-40	Several private residences	Private



Photo 12: Public dock near Kaleden Pioneer Park (Segment 19).



Photo 13: Public dock at the Okanagan Falls boat launch (Segment 32).



Photo 14: Private dock on west side of Skaha Lake (Segment 22).



Photo 15: Private dock on west side of Skaha Lake (Segment 28).



Photo 16: Private dock for condominium development on west side of the Main Street boat launch (Segment 32).



Photo 17: Private dock for condominium development on east side of the Main Street boat launch (Segment 32).

4.8.3 Marinas

There is currently no public marina on Skaha Lake within Electoral Area D. The only marina facility occurs within the City of Penticton on the north east side of the lake. The marina also includes a fuelling facility.

4.8.4 Moorage

Public moorage is limited to unorganized, off-shore moorage at buoys placed around the lake (Photos 18 to 20). Private moorage exists at private docks and based upon the inventory it is estimated that there is a total of 94 docks within Electoral Area D. It is unknown whether the docks all have appropriate moorage leases and permits.



Photo 18: Boats moored off shore at Kaleden (Segment 18).



Photo 19: Moorage buoys at Ponderosa Point Resort (Segment 21).



Photo 20: Moorage buoys off shore of the condominium development at Main Street in Okanagan Falls (Segment 32).

4.8.5 Washroom Facilities, Garbage Bins

Public washroom facilities are located at Kaleden Pioneer Park, Kenyon Park, and Christie Memorial Park. These parks also have garbage receptacles.

4.8.6 Parking

Table 6 provides a description of designated parking and the estimated number of vehicles accommodated by the parking area. Parking areas are shown in Photos 21 to 25.



Table 6: Inventory of Parking Available for Public Amenities along the Skaha Lake Shoreline

Location	Description of designated parking	Estimated # of vehicles accommodated
Kaleden Hotel Park	Shoulder of Lakehill Road or Ponderosa Road	20
Kaleden Pioneer Park and boat launch	Large gravel lots south and west of the Park	200
Lions Park	Gravel shoulder adjacent to Railway Lane	20
Kenyon Park	Gravel lot	30
Christie Memorial Park	Shoulder of 7 th Avenue	75
Okanagan Falls boat launch	Shoulder of Main Street	8



Photo 21: Lower parking lot at Kaleden Pioneer Park and boat launch (Segment 18).



Photo 22: Upper parking lot at Kaleden Pioneer Park and boat launch (Segment 18).



Photo 23: Parking for Lions Park adjacent to Railway Lane (Segment 30).



Photo 24: Parking lot at Kenyon Park (Segment 30).





Photo 25: Parking for Christie Memorial Park along 7th Street at Okanagan Falls (Segment 31).

4.9 Shoreline Accessibility

The shoreline is accessible on the west side of Skaha Lake by the KVR Trail and park land at Kaleden. Structures, such as those in Photos 26 and 27, have been built on the steep slopes to provide access to the shoreline from the residential neighbourhoods above. Skaha Lake is accessible on the south shore at the three parks and the boat launch on Main Street. Private access is also available for the condominium developments near the boat launch. On the southeast shore where the shoreline is not lined with houses that have private access, it is rugged and inaccessible (Segments 32 to 38). East Side Road is located directly adjacent to the lake between Segments 39 to 41, with very few places to stop and access the shoreline.



Photo 26: Tire stairway that provides access from a residential development to KVR Trail and Skaha Lake shoreline (Segment 22).



Photo 27: Stairway that provides access from a residential development to KVR Trail and Skaha Lake shoreline (Segment 22).

4.10 Recreational Opportunities

Outstanding natural features, favourable climate, well-distributed population, and good tourism potential give the Skaha Lake area exceptional year-round recreational opportunities.

Skaha Lake is known for its superb sandy beaches and warm water. Popular motorized activities on the lake include power boating and jet skiing. Non-motorized recreational activities include kite boarding (Photo 28), canoeing, kayaking, and swimming. Skaha Lake does have good opportunities for wind-based recreation and numerous emerging wind-based sports are commonly observed.



Photo 28: Kite boarding on Skaha Lake.

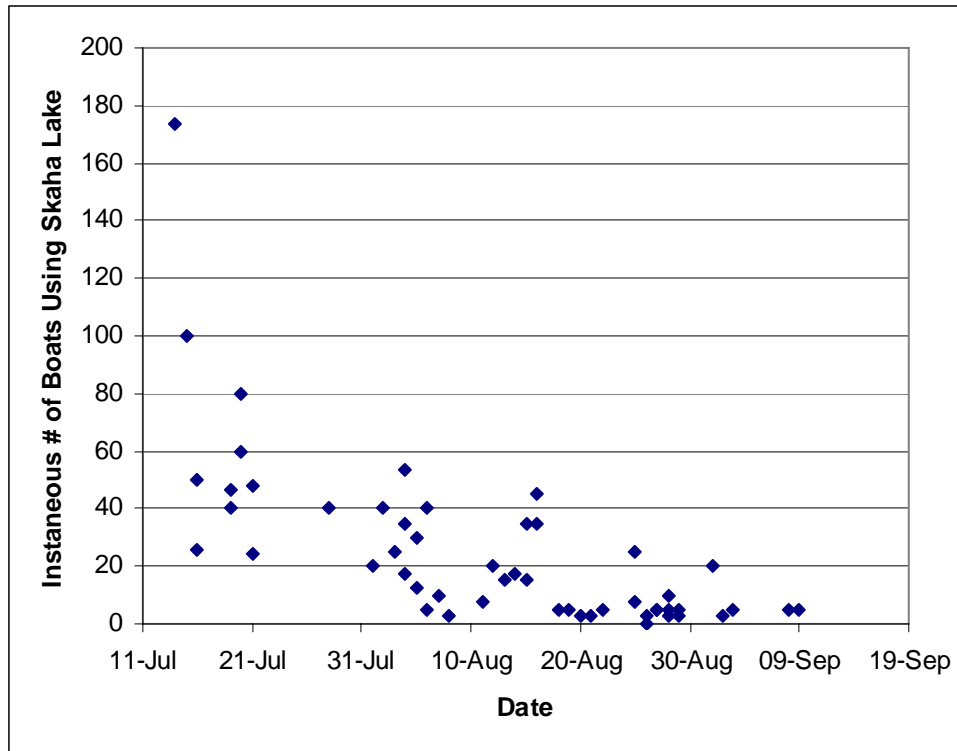
Boat survey data sheets were provided and Table 7 and Figure 7 contain a summary of the data collected. The summary table indicates that usage on the weekends is greatest, with an average of 41 boats using the lake at any given time. Usage during the week appears to be approximately ½, or 21 boats on average, of the weekend use, at any given time. Given that the data collected only represents “snap shots” in time, is based upon a rough estimation of the lake surveyed, and that the average is only based upon a small sample size, any interpretation should be cautious. Given this, it is possible that usage may be greater than the date presented herein.

Recent studies (GDH Solutions, 2008) on interior lakes to the north, such as Okanagan Lake, indicate that the recreational boating industry is an important component of the economy. The report discusses different governance models that may be considered throughout the valley. The Regional District Okanagan Similkameen should work jointly on recreational issues with other stakeholders. Comparison with other studies such as this recommended to more accurately determine the peak usage on the lake.

Table 7: Summary of Boat Survey Statistics

Sampling Time	Average Instantaneous # of Boats on Lake	Sample Size
Weekday	21	42
Weekend	41	10

Figure 7: Summary of Boat Usage on a Daily Basis



Over the past fifteen years interest and participation in walking, jogging, bicycling, and horseback riding has greatly increased in North America. The KVR Trail provides excellent opportunity for these activities. Hiking and rock climbing in the bluffs surrounding Skaha Lake are very common activities. Wildlife viewing and nature study are also popular activities in the Okanagan Similkameen region.



4.11 Historical, Cultural, and Educational Opportunities

Two historic buildings, the General Store (currently housing the 1912 Restaurant) and the neighboring Kaleden Hotel are found in Kaleden. Financial difficulties around the time of the First World War led to the closing of the hotel and subsequent salvage of all re-usable material. Only the concrete shell remains. Kal Rec has applied for historical designation for the Kaleden Hotel. The Kaleden Community website (<http://kalcc.org/>) contains interesting background information on the history of the Kaleden area and the early pioneers and their families.

The main historical attraction in Okanagan Falls is the Heritage House and Museum, located a few blocks from Skaha Lake on the east side of Main Street. The site features the Bassett House, named after the Bassett family who had a stagecoach and freight hauling business in the South Okanagan at the turn of the century. In 1906, the house components were shipped by rail, then by paddlewheel steamer down the lake to Okanagan Falls, then by horse-drawn wagons, to be assembled at a site not far from where the house sits now. The house is now packed with period furniture and personal effects. The museum is located in the yard behind the Bassett House.

The Kettle Valley Railway (KVR) itself has significant historic interest because of its role in the development of the South Okanagan. Built during 1910-1915, the KVR “Kootenay to Coast Connection” provided mixed trains service (i.e., cargo of both passengers and freight). The rail service powered the pioneer fruit industry into world markets, brought ore from the Kootenay region, transported families on vacations and errands, and created employment. The prominence of the KVR started to decline in 1949 when Highway 3 (the Hope Princeton) opened. Freight was discontinued throughout the line in 1962, and the last passenger train operated in January 1964. In the early 1990s, the KVR became recognized as providing excellent opportunities for hiking and cycling and several community groups, in partnership with the Provincial government, began work on the abandoned rail line and its trestles and tunnels.

The only signage for the KVR Trail in Electoral Area D is that at Kenyon Park (see Photo 29). Information about the KVR Trail was not available at the Penticton Tourist Centre.



Photo 29: Signage at Kenyon Park with information about the KVR Trail.

The First Nations people of the south Okanagan have a rich history and culture. The Okanagans (Syilx) people lived in the area long before the arrival of the Europeans. The first contact between the European settlers and the Okanagans was probably made in the late 1700's through the Hudson's Bay Company. One of the first actual contact dates was recorded in 1805 at Fort Kamloops. Today, the Penticton Indian Band reserve lands are located on the west shore of Skaha Lake just south of Penticton. The Penticton Indian Band is a member of the Okanagan Nation Alliance along with six other bands: the Lower Similkameen Indian Band, Okanagan Indian Band, Osoyoos Indian Band, Upper Nicola Indian Band, Upper Similkameen Indian Band, and Westbank First Nation.

The South Okanagan Similkameen Conservation Program (SOSCP) is a partnership of government, non-government, First Nations, universities, and industry with shared interests in conserving the unique biodiversity and landscapes of the South Okanagan and Lower Similkameen areas of British Columbia (SOSCP, 2005). The SOSCP works with the tourism industry to ensure that visitors to the area are more knowledgeable and appreciative of their surroundings. The SOSCP also supports local educational authorities in developing conservation activities for students in the South Okanagan-Similkameen area. Several educational brochures and publications are available on the Program website (<http://www.soscp.org/>).

5.0 ANALYSIS AND SYNTHESIS

5.1 *Plans, Policies, and Legislation*

Land and water governance in British Columbia is a complex patchwork of responsibilities, mandates, and jurisdictions. Appendix F provides an analysis and synthesis of how plans, policies, and legislation govern or guide lake and shoreline activities in Electoral Area D.

The multi-jurisdictional nature of governance presents a great challenge to the RDOS and its community members when it comes to understanding which government agency is responsible for what activity. In most cases, project plans require approval from more than one provincial or federal agency. For example, ten (10) Acts administered by five (5) different agencies may govern the development of marinas, docks, or boat launches and triggers for referrals are not consistent between agencies. Each agency has its own authorization process and sometimes the requirements of one agency can conflict with the requirements of another. Identifying what authorizations or approvals a particular project requires is a lengthy, and often expensive, process.

The Official Community Plans pertaining to Electoral Area D outline Development Permit Areas. Through development permits, the local government may define the requirements necessary to address various development objectives. Unless otherwise specified, a development permit application must be approved by the Regional Board prior to any development or subdivision of land within a development permit area. Table 8 outlines the development permit area designations the currently exist within Electoral Area D.



Table 8: Development Permit Area Designations in Electoral Area D

Name of Development Permit Area	Primary Objective
<i>Kaleden-Apex SW Sector OCP:</i>	
<ul style="list-style-type: none"> • Protection of the Natural Environment 	Minimize the impact of development on the natural environment, which includes but is not limited to watercourses (e.g. streams and other natural corridors, ponds and wetlands), significant woodlands, wildlife habitat, and habitat of endangered or threatened species.
<ul style="list-style-type: none"> • Watercourse 	Regulate development activities in watercourses and their riparian areas so as to protect aquatic habitat; and to conserve, enhance and, where necessary, restore watercourses and their riparian areas.
<i>East Skaha Vaseaux OCP:</i>	
<ul style="list-style-type: none"> • Multiple Family General 	Ensure that multiple family residential development is attractive and compatible with existing neighbourhoods and the rural character of the surrounding area.
<ul style="list-style-type: none"> • Okanagan Falls Commercial 	Ensure that new commercial development and redevelopment enhances the character of the area and improves the commercial environment in Okanagan Falls.
<ul style="list-style-type: none"> • Environmentally Sensitive Areas 	Minimize the impact of development on these environmentally sensitive areas, which include but are not limited to streams and other natural corridors, ponds and wetlands, foreshore, significant woodlands, wildlife habitat, and habitat of endangered or threatened species.
<ul style="list-style-type: none"> • Watercourse 	Regulate development activities in watercourses and their riparian areas so as to protect aquatic habitat; and to conserve, enhance and, where necessary, restore watercourses and their riparian areas.

Zoning bylaws pertaining to Electoral Area D also contain floodplain regulations. The regulations define a Flood Construction Level for Skaha Lake as 339.24 metres G.S.C datum and designates land lower than that level as Floodplain. General floodplain management regulations are provided, as well as specific flood-proofing regulations for farm dwelling units, agricultural storage and closed-sided livestock housing units, and industrial development.

Applications for development on provincial Crown land are to be made through FrontCounter BC, a provincial agency under the Ministry of Agriculture and Lands that helps clients navigate - from start to finish - the maze of licenses, permits and registrations that may be required for their projects. More specifically, FrontCounter BC centre staff:

- guide clients through required authorizations,
- help clients complete strong application packages,
- interpret land information, maps, management plans,
- follow-up and track the status of applications filed,
- liaise between ministries, agencies, and governments,
- begin referral processes with First Nations, and
- help identify and market economic development opportunities.



It is important to note that all shoreline projects must also adhere to local government regulations (i.e., RDOS bylaws). Local requirements supersede any less restrictive provincial or federal government requirement.

Another issue with having a multi-jurisdictional governance system is it is often difficult to identify who is responsible for enforcement if a violation occurs (e.g., construction of a dock or a retaining wall without proper authorization). Violation reports from citizens or local governments are often met with “not my jurisdiction” responses and are directed to another agency, who may also be hesitant to take responsibility.

Beginning in the late 1990s, the emphasis in provincial government policy shifted away from command-and-control regulatory policies to “results-based regulation”, where “users” are responsible for self-monitoring and voluntary compliance. These changes reduce or eliminate much of the previous responsibilities of provincial environmental staff in conducting audits, inspections, and monitoring tasks. The Riparian Areas Regulation is an example of a results-based regulation. This regulation has been met with both confusion and frustration by many people, but the intent of the legislation is an important step forward in environmental planning and will help protect important lakeside areas.

The move to reduce legal requirements has been accompanied by funding and staff cuts in different provincial departments dealing with environmental management and protection. Few enforcement officers are now available to monitor water and watersheds, and local governments are expected to fill the gap. This downloading of responsibilities is often not accompanied by sufficient resources to implement programs effectively.

5.2 Shoreline and Near-Shore Habitat

5.2.1 Fisheries

Significant fisheries initiatives on the lake include works by the Okanagan Nation Alliance to re-introduce sockeye salmon populations to areas where they historically occurred (Wright and Smith, 2003). Ongoing research by the Okanagan Nation Alliance is considered important and will continue to provide more information on fisheries in the lake. Fish migration barriers and associated habitat loss are considered one of the most significant impacts to fisheries resources on the lake. This ongoing research will continue to provide information regarding the re-introduction program on Skaha Lake and data from the study may provide insight regarding other salmonid species in the lake.

The introduction of exotic fish species, such as bass, is likely of greatest recent concern to the fishery in the lake. It is not clear exactly which species have been able to establish populations in Skaha Lake and whether the lake contains the same exotic species as those to the south (e.g., Osoyoos). Bass species have been found to reduce abundance, alter habitat use, and extirpate many small bodied minnow species (MacRae and Jackson, 2001). Thus, it is presumable to assume that they can also influence populations of salmonids.



Moorage on lakes is a controversial topic. In many cases, determining impacts due to single docks or small marinas is difficult, if not impossible. Research has shown a variety of different impacts of overwater structures⁶ including but not limited to providing sites for ambush predators, reductions in large woody debris, prey refuge, and areas for periphyton growth (Kahler *et al.*, 2000; Carrasquero 2001). On Skaha Lake, moorage development did not appear to be as pronounced as other lakes (e.g., Okanagan Lake), but did tend to occur in association with other anthropogenic disturbances such as retaining walls. The scale of studies and the cumulative effects of these structures are important considerations when discussing overwater structures (Carrasquero, 2001) and generally there have been few studies investigating changes in fish communities or populations as a result of over structures on systems similar to Skaha Lake.

Other impacts of docks include changes in fish density due to a fish's general congregation around structure, but decreases fish diversity in these same areas (Lange, 1999). Coupled with this result, Lange also found that fish diversity and density were negatively correlated with increased density and diversity of shoreline development, meaning that increases in dock density may reduce fish abundance and diversity. Other salmonid species, such as Chinook salmon, tend to avoid areas of with increased overwater structures (e.g., docks) and riprap shorelines, and therefore, construction of these structures may affect juvenile migrating salmonids (Piaskowski and Tabor, 2000).

Although controversial, it presumed that fish communities are affected by overwater structures and shoreline development. The degree to which effects are observed is related to the intensity of the development, the scale of the change, the fish assemblage within the lake, and the life history requirements of fish species. Given that small-mouth bass are documented in the system, and these ambush predators are not typically as influenced by development as salmonids, increased densification of docks and marinas should be carefully considered in Skaha Lake. Until a better understanding of the impacts of these structures on salmonids is known, primary objectives to consider are preventing further introductions of other southern or eastern fish assemblages (e.g., bass, perch, and sunfish, etc.) and to carefully plan large scale overwater projects.

Water quality was not investigated as part of this study. The water quality in Skaha Lake was noted of significant concern by residents in the lake 1960's. The water quality was determined to be poor at this time due to sewage effluent, likely originating from the City of Penticton. In 1971, tertiary treatment of sewage effluent began in the City of Penticton, and water quality has subsequently improved since then.

5.2.2 Wildlife

Inventory projects have identified habitat suitability maps for many species of concern in the south Okanagan (http://wlapwww.gov.bc.ca/sir/fwh/wld/atlas/species/species_index.html). These suitability maps and species accounts provide important habitat information for many areas and many rare species. A discussion regarding particular species of significant concern is beyond the scope of this project, but it is safe to assume that many at risk or potentially at risk species use adjacent upland areas. Generally, as important areas of wildlife consideration are indentified, they should be added to environmental development permit areas to ensure that appropriate triggers are in place at the local government level.

⁶ An overwater structure includes any dock (pile supported or floating), marina, or other structure that occurs below the high water mark.



Areas of highest value generally occur in wetland/shore marsh/riparian communities, or in natural areas in drier upland sites. Good connectivity to between the shoreline and upland communities is an important consideration, as is conservation of upland communities of importance identified by the Sensitive Ecosystem Inventory.

5.3 Natural Hazards

5.3.1 Overview Hazard Assessment

The areas delineated and identified as high hazard by Runka (1971) include the over-steepened silt and fine sand deposits, silt and fine sand that experiences seepage from higher elevations, moderately sloped silt and fine sand where sinkholes have developed, slopes undercut by streams, and areas that have received slumped materials from slopes above. This study confirms that these areas are of potential concern for land development.

Hazard classification was completed for each segment defined for the foreshore inventory and the results are presented in Figure Binder 3 and are tabulated in Table 9. Note that the hazard classification refers to the shorezone area only and cannot necessarily be extended to the slopes above. In many cases, high hazard slopes are buffered from the shore zone area by the KVR trail or other features. Additionally, the hazard classification is applied to an entire segment and may not necessarily identify specific areas of concern.

Table 9: Hazard Classification Results for Skaha Lake Shoreline

Hazard Class	Shoreline Length, km (% of total)	Predominant Hazard Type and Terrain
High	10.4 km (33%)	Slides and slumps associated with fluvio-glacial silt terrace scarp slopes
Moderate	4.9 km (16%)	Rockfall and rockslide associated with unmetamorphosed rock on west slopes and smaller scale surface erosion
Low	16 km (51%)	Stable rock slopes and low gradient floodplain slopes

High Hazard Areas

Approximately 10.4 km of the Skaha Lake shoreline is characterized as having a high likelihood of a hazardous slope process. This represents a third of the entire shoreline length. However, only 3 km of this length is situated within the Electoral Area D study area. The high hazard segments in Electoral Area D are associated with the steep fluvio-glacial silt terrace bluffs situated along the west side of Skaha Lake in the Kaleden area (Segments 14 & 15), bluffs south of Kaleden (Segments 23 & 24), and bluffs along the east side of Skaha Lake within the City of Penticton (Segments 39-47).



The silt bluffs surrounding Skaha Lake are able to maintain near-vertical grades due to cohesion attributed to interparticle bonding. This high strength is attributed to a low degree of saturation and slight cementation of the soil particles. The strength is, therefore, dependant upon the degree of saturation and is adversely affected by water inputs such as excessive irrigation, breakage of irrigation lines, or the hydrological effects of urbanization.

Slope failures from the bluffs vary from blocky “silt falls” to slumps. Silt falls occur when blocks of silt, the geometry of which is controlled by joint sets, fall and break up upon impact, proceeding down slope as a dry avalanche of silt particles and blocks. Joint sets form in the silt as a result of stress release and develop following heavy rain or irrigation, suggesting that joint water pressures may play a contributing role in the failure. Slumps are most common in the study area and are typically fairly shallow. Some slumps exhibit retrogressive behaviour and may be associated with a zone of saturation, perched above a less permeable strata.

High hazard Segments 14 and 15 are located on the west side of Skaha Lake between Banbury Point and Sickie Point, north of Kaleden. Shallow slides and slumps are frequent along the silt bluff scarp slopes (Photo 30). Land use on the terrace above includes single-family residential and small-scale agricultural. Swimming pools and irrigated lands on the terrace are potential sources of water that have the potential to influence slope stability along the bluff. One example of a hazard mitigation measure along Segment 15 is the use of drain pipe to contain water across potentially unstable areas (Photo 31).



Photo 30: Shallow slides and slumps along steep silt bluffs along the west shore of Skaha Lake north of Kaleden (Segment 14).



Photo 31: Drain pipe contains water across potentially unstable slopes north of Kaleden (Segment 15).

Segments 23 and 24 are also high hazard segments within Electoral Area D, located south of Kaleden and Ponderosa Point. Slopes along these segments are short sections of fluvioglacial silt bluffs situated between bedrock exposures. These slopes are prone to shallow slumps, piping, and surface erosion (Photo 32). Land use above the bluffs in this area is negligible, limited to range use, a single residence, and an old road/trail along which there are elaborate rock fills visible from the KVR trail (Photo 33).



Photo 32: Silt bluffs south of Kaleden on the west shore showing piping activity (Segment 23).



Photo 33: Rock fill along old trail visible from KVR trail (Segment 24).

Moderate Hazard Areas

A total of 4.9 km, or 16% of the Skaha Lake shoreline was determined to have a moderate hazard associated with slope instability. Segments classified as having a moderate hazard include those subject to large, infrequent events such as rockslide, or landslide.

Within Segment 26 on the west side of Skaha Lake there is a relatively benign-looking section of rock slope, thinly mantled with till (Photo 34). Air photographs suggest the possible occurrence of an ancient rockslide and the presence of large rock blocks along the shoreline and in the water below the slopes, is a testament to the size and scale of a historical rockslide. The rockslide deposits, situated on the surface of other post-glacial sediments suggest that the event occurred within the last 10,000 years.



Photo 34: Possible site of ancient landslide – rock debris in lake not shown (Segment 26).

Low Hazard Areas

Approximately half (16 km or 51%) of the perimeter of Skaha Lake is considered to have a low geohazard where the likelihood of a damaging process is considered low to none. These segments include the contemporary floodplains of the Okanagan River, including the beach areas of Penticton and Okanagan Falls and the fan or point bar features scattered along the shoreline (i.e. Ponderosa Point, Sickie Point).

These areas are not subject to disturbance from slope processes because the shoreline areas are sufficiently removed, or setback from the adjacent slopes.

5.3.2 Implications for Development in Hazardous Areas

Residential development in hazardous areas of British Columbia is governed by several provincial statutes, which require landslide assessments by Qualified Professionals who are specialized in landslide and slope stability assessments in British Columbia. Regulatory statutes relevant to development in hazardous areas include:

- a) Land Title Act (Section 86) – Subdivision Approvals wherein the Approving Officer may require a report stating that “the land may be used safely for the use intended”.
- b) Local Government Act (Section 919.1 and 920) – Development Permits. The report by the professional engineer assists local government in determining which conditions or requirement it will impose in the permit. A development permit differs from a building permit.
- c) Community Charter (Section 56) – Building Permits. The Building Inspector may issue a building permit if the report by the qualified professional states that the land may be used safely for the use intended in accordance with conditions specified in the report, and there is a requested covenant restricting use of the land.

Areas with a “high hazard soil stability rating” are identified for the Kaleden area in the Kaleden-Apex Southwest Sector OCP Bylaw 1882, Map 4. These areas roughly correspond to the high hazard segments (14-15; 23-24) identified in this study. Development Permit areas for hazard lands are, however, not specifically defined by RDOS. Although dated and roughly-defined, the high hazard areas identified in the Runka study may be flagged for more detailed site-specific geotechnical investigation by the RDOS. Updates to the Runka mapping would provide better confidence that all hazard areas are identified, given that land use changes and associated development may have had a potential effect on soil stability. An update to the soil stability mapping for the Kaleden area is recommended. The results of the overview hazard assessment completed for this study confirm that more detailed site-specific geotechnical investigations would be required for many areas within Electoral Area D.

Landslide assessments, or site-specific assessments completed for hazard-prone lands, should conform to the Guidelines for Legislated Landslide Assessments for Proposed Residential Development in British Columbia issued by the Association of Professional Engineers and Geoscientists of British Columbia (APEGBC) (2006).



There is generally no accepted level of landslide safety in British Columbia, but the BC Ministry of Transportation commonly accepts an assessment of probability of landslide occurrence not greater than 10% in 50 years. This is equivalent to an annual probability of 1 in 475, or roughly a return period on average of 1 in 500 years (0.002 chance per annum). This refers to a landslide that can cause injury to persons or severe damage to the home.

5.3.3 Skaha Lake Water Levels and Implications for Shoreline Development

Skaha Lake water levels are dictated by flows in the Okanagan River and are managed at the Okanagan Falls dam, built in the 1950s. The outlet weir is operated and managed by the Ministry of Environment, Water Management Branch. Lake levels drop through the winter such that spring runoff is captured and detained in the reservoir. Minimum flows to the Okanagan River are maintained through the summer months.

The full pool elevation (high water mark) of Skaha Lake is 338.56 m. The flood construction level of Skaha Lake is 339.24 m.⁷ The Flood Construction Level (FCL) is the 200 year high water level plus 0.6 m freeboard (more in some cases). It should be noted that wave action and related erosion at high lake levels may present a special flood hazard depending on site specific conditions.

With respect to shoreline development, riparian setbacks for development are to be measured from the high water mark and all built structures are to be constructed above the flood construction level (FCL).

5.4 Land Use

5.4.1 Land Ownership

Most of the Skaha Lake shoreline in Electoral Area D is privately owned. The only land that is not private is the Kettle Valley Railway Trail right-of-way and Christie Memorial Park, owned by the Province of BC, and Lions Park, Kenyon Park, and Kaleden Pioneer Park, owned by the RDOS.

5.4.2 Current Zoning Designations

Zoning information for Electoral Area D is displayed in Figure Binder 1. In most cases, zoning reflects actual land use along the shoreline.

Zoning designations on the west shore of Skaha Lake include Rural Small Holdings (SH1 and SH2), Low Density Residential (RL1 and RL2), Tourist Commercial (CT1 and CT2), and Park (P). Zoning designations on the south shore include Parks and Recreation (PR), Tourist Commercial (CT1 and CT3), and Multiple Dwelling (RM2). Zoning designations of the shoreline on the east side of Skaha Lake include Single Dwelling Residential (RS1), Large Holdings (LH), Small Holdings (SH1), Comprehensive Development (CD), and Tourist Commercial (CT3).

⁷ Floodplain mapping is obtained from the Ministry of Environment, Water Management Branch at: <http://srmwww.gov.bc.ca/aib/fpm/regfpmin.html#fpmreg3>



Rural Holdings

Rural holdings zoning designated parcels are located on both the west shore (Segments 22, 23, 28, and 29) and east shore (Segments 33, 34, 36, 37, and 39) of Skaha Lake.

The Rural Small Holdings have minimum parcels of 0.8 hectares (SH2) to 2 hectares (SH1) in size and maximum densities of one dwelling per 2 hectares (SH1), one dwelling unit per hectare with no community water (SH2), and 1.25 dwelling units per hectare with community water (SH2). Rural Small Holdings are generally used for rural residential, acreages, hobby farms, limited agriculture, limited resource management, and home industries.

Large Holdings means large parcels of land generally used for forest management, ranching, grazing, general resource management, outdoor recreation, fish and wildlife habitat, undisturbed natural areas, and other uses that fit with the character of the area. Large Holdings areas are generally undeveloped except for limited utility and access corridors, as well as one principal single family dwelling per parcel. The minimum parcel size for subdivision is 20 hectares.



Photo 35: Example of land use in a Small Holdings zone (SH2) on the west shore of Skaha Lake (Segment 22).

Single Family Residential

Single family zoning is found in Kaleden (RL1) and on the east side of Skaha Lake in Segments 32, 34, and 36 (RS1). Photos 36 and 37 provide examples of single family land use.

The range of lot sizes for low density residential housing is from 505 m² with community water, sanitary sewer, 2,020 m² with community water, and one hectare with no community water (RL2 only). The maximum density in the RL1 and RL2 designations is 20 dwelling units per hectare for areas served by a community water, sanitary sewer, and storm sewer (RL1 and RL2), 5 units per hectare for areas served by community water (RL1 and RL2), and 1 unit per hectare for areas with no community water (RL2 only).





Photo 36: Example of single family land use in a Low Density Residential zone (RL1) on the shoreline in Kaleden (Segment 20).



Photo 37: Single family land use in a Single Dwelling Residential zone (RS1) on the east shore of Skaha Lake (Segment 32).

Multi-Family Residential

The only multi family zoning (RM2) on the shoreline is located at the southeast corner of the lake in Okanagan Falls (Segment 32). Condominiums have been built on the parcels either side of Main Street (Photos 38 and 39).

The minimum parcel size for development in RM2 zone is 1,010 m², 466 m² (for individual single detached dwelling lots on community water and community sewer) and 550 m² (for individual duplex dwelling unit lots on community water and community sewer). The maximum density is 60 dwellings per hectare (without density bonus), 21 single detached dwellings per hectare (for single-detached dwellings on community water and community sewer), and 36 per hectare (for duplex dwelling on community water and community sewer).





Photo 38: Multi family land use in a Multiple Dwelling zone (RM2) on the Skaha Lake shoreline in Okanagan Falls (Segment 32).



Photo 39: Multi family land use in a Multiple Dwelling zone (RM2) on the Skaha Lake shoreline in Okanagan Falls (Segment 32).

Comprehensive Development

A Comprehensive Development (CD) zone is located at segment 40 in the Skaha Estates area on the east side of the lake. CD zones are special zones specific to an individual development site, where different uses and regulations apply to different parts of the site. For example, part of the parcel could allow residential, while the other part could be retained in a natural state. The minimum parcel size for subdivision is 557 m². The maximum density is 18 dwellings per hectare without an approved density averaging agreement and 23 dwellings per hectare with an approved density averaging agreement.

Tourist Commercial Facilities - Campgrounds, RV Parks, and Resorts

Commercial development along the Skaha Lake shoreline is generally limited to tourist commercial facilities. Zoning designations include CT1 (designates “Campground Zone” in Kaleden-Apex SW Sector Bylaw and “Tourist Commercial Zone” in East Skaha-Vaseaux Zoning Bylaw), CT2 (Tourist Commercial Zone in Kaleden-Apex SW Sector Zoning Bylaw), and CT3 (Campground Zone in East Skaha-Vaseaux Zoning Bylaw). The purpose of these zones is to provide for short-term tourist accommodation and recreational facilities.

There are two public places to tent or park RVs on Skaha Lake: Banbury Green RV Park and Campground and Sun and Sand RV Park, and a total of 113 sites available. Banbury Green RV Park and Campground (Photo 40), located in north Kaleden (Segment 13) has 65 sites for tents or RVs. All sites have electricity and water. Sewer connections are only available to some of the upland sites; there are no sewer connections to the lakefront sites. Campfires are permitted, and all lakefront sites have fire pits. Other amenities at Banbury include showers, public pay phone, coin operated laundry facilities, grass area with net for volleyball or badminton, and a sani-dump. Banbury also offers pedal boat and canoe rentals. The Sun & Sand RV Park (Photos 41 and 42), located between Lions Park and Kenyon Park in Okanagan Falls (Segment 30), provides 48 family



oriented RV or tent spaces from April 15 to October 15. The facility features a private beach and dock, picnic tables, children's playground, washrooms and showers, and a fire pit.



Photo 40: Banbury Green RV Park and Campground at Kaleden (Segment 13).



Photo 41: Sun & Sand RV Park at Okanagan Falls (Segment 30).



Photo 42: Private beach at Sun & Sand RV Park (Segment 30).

Twenty-six privately-owned cabins at Ponderosa Point Resort (Photo 43), located in south Kaleden (Segment 21), are available for rental when not in use by the owners. On-site activities include a private beach, water skiing, swimming, tennis, large playground area, horseshoes, basketball, and volleyball.



Photo 43: Private beach at Ponderosa Point Resort (Segment 21).

Sunny Bay Resort Ltd. (Photo 44) is located on the east shore of Skaha Lake at Sovereign Road (Segment 35). Although the resort is zoned for a campground (CT3), the facility is not advertised, does not appear to have an office on site, and does not have signage indicating that it is a public campground. According to a member of the Shoreline Committee, people who were regularly staying at the resort over a number of years were given the option to leave their campers on the grounds year round for a fee. The same people come back to the resort every year so the resort does not advertise to the general public.



Photo 44: Sunny Bay Resort (Segment 35).

Parks and Trails

Park and recreational lands are designated as Parkland Zone (P), which is used only in the Kaleden-Apex SW Section Zoning Bylaw, or Park and Recreation Zone (PR), a designation used in both bylaws. The purpose of the Parkland Zone is to provide for the preservation and enhancement of lands for public park uses. The purpose of the Park and Recreation Zone is to provide for the enhancement of lands for park and recreation uses.



There are five public parks adjacent to Skaha Lake in Electoral Area D: Kaleden Hotel Park, Kaleden Pioneer Park, Lions Park, Kenyon Park, and Christie Memorial Park. The two parks in Kaleden are owned by the RDOS and managed in partnership with the Kaleden Parks and Recreation Commission (Kal Rec). Lions Park and Kenyon Park are also owned by the RDOS and managed in partnership with the Okanagan Falls Parks and Recreation Commission (OK Falls Rec). Christie Memorial Park is owned and managed by the Province of BC.

The RDOS parks provide a wide variety of amenities and activities. The Kaleden Hotel Park (Photo 45) contains a grassed area and the concrete shell of a former hotel. Kaleden Pioneer Park (Photos 46 and 47) is a large park with playground equipment, tennis courts, a basketball court, washrooms, a barbeque, a boat launch, picnic tables, and a sandy beach. Lions Park (Photo 48) has rolling hills, trees, a pond, benches, and picnic tables. Kenyon Park (Photo 49) contains a small beach, a tennis court, playground equipment, and washrooms. A kiosk with information about the Kettle Valley Rail Trail and the history of Okanagan Falls, as well as a corkboard to post community information, is also located at Kenyon Park.



Photo 45: Kaleden Hotel Park (Segment 18).



Photo 46: BBQ, washroom, and basketball facilities at Kaleden Pioneer Park (Segment 18).



Photo 47: Picnic area at Kaleden Pioneer Park (Segment 18).



Photo 48: Lions Park in Okanagan Falls (Segment 30).



Photo 49: Kenyon Park at Okanagan Falls (Segment 30).

A provincial park, Christie Memorial Park, is located along the shoreline at Segment 31 (Photo 50). The primary purpose of Christie Memorial Park is to provide lake-oriented day use recreation opportunities (Ministry of Environment, 2003). The park is a popular swimming and picnicking site for local residents and tourists. The entire park (3 hectares) is zoned Intensive Recreation. The beach area has picnic tables, pit toilets (flush toilets in the summer months), running water, and a change room building. Natural values are limited since most of the park has been altered with beach in-fill, grass, and non-native trees.



Photo 50: Christie Memorial Park at Okanagan Falls (Segment 31).

The Kettle Valley Rail Trail is designated as park in the FIM database and in the Kaleden-Apex SW Sector Zoning Bylaw. The KVR Trail follows the abandoned rail bed on the western shore of Skaha Lake between Okanagan Falls and Penticton. There is extensive public use of the trail. The KVR Trail provides biking, walking, and horseback riding opportunities. ATVs also use the entire section of the Trail between Kaleden and Penticton. The rail bed is in good to excellent condition with a restored trestle offering access across Skaha Lake outflow into the Okanagan River.



In 2006, the RDOS undertook a trail inventory of the KVR lands between Penticton and Okanagan Falls. The RDOS also prepared a Linear Park Strategy document that contains several letters of support for the RDOS to access funding to develop a comprehensive linear park strategy. The inventory and the Linear Park Strategy document were reviewed for this study. The KVR Trail is located on Crown land from Okanagan Falls to the south boundary of Ponderosa Point Resort, private land through Ponderosa Point Resort and Kaleden, and Crown land from Sickle Point to the Penticton Indian Band Reserve border. Much of the northern portion of the route is located within lands owned and administered by the Penticton Indian Band and any future consideration of this route as an uninterrupted trail corridor would require the support and cooperation of the Chief and Council and the community. The Trail is quite continuous, with the exception being a section north of Ponderosa Point Resort where the route is diverted to Ponderosa Avenue. Another barrier to continuity is a sign posted at the southern border of Ponderosa Point resort that states “private property”, “no motor bikes” and “pets must be leashed”. Photo 51 shows a typical section of the KVR Trail and Photo 52 shows the trestle at Okanagan Falls.



Photo 51: A typical section of the KVR Trail (Segment 10).



Photo 52: The KVR trestle at Okanagan Falls (Segment 29).

5.4.3 Future Land Use

Future land use in Electoral Area D should be dictated by Official Community Plan designations. In most cases, the OCP designations are the same as the current zoning designations.

The South Okanagan Regional Growth Strategy (RGS) will also provide overall direction in terms of growth and development. Although not yet approved by the Board, the RGS preparation is well underway and adoption appears to be on track. Okanagan Falls is identified as a primary growth area in the RGS. Kaleden and Skaha Estates are identified as existing developed areas.



Residential

Residential land use is directed to Kaleden, Okanagan Falls, and Skaha Estates in the OCPs.

Three properties along the Skaha Lake shoreline are currently either under development or up for sale to potential developers: Sickle Point in south Kaleden, the “CPR Property” west of Alder Road in Kaleden, and the Skaha Shores condominium development in Okanagan Falls.

Sickle Point is an undeveloped parcel of land north of Kaleden (Segment 16). The parcel is designated as Low Density Residential (LR) in the Zoning Bylaw and OCP. The property has been fenced and an access road constructed to the site. Sickle Point is shown in Photo 53.

Another property of particular interest to this Study is the “CPR property”, located just south of Sickle Point and adjacent to Alder Avenue, which is currently up for sale and subsequent development. The CPR property is bordered by steep bluffs on the west and Alder Avenue on the east and south. The north border of the property is just beyond the north end of Alder Avenue. The property includes two waterfront lots, located at the north and south end of the existing residential development. The KVR Trail runs through the middle of the property. Current zoning and OCP designation of the CPR property is Low Density Residential. The location of the CPR Property is shown in Photo 54.

A development proposal for multi-family residential (Skaha Shores condominium development) at a former hotel site (currently zoned as “Tourist Commercial”) has recently been approved (Segment 30). Photo 55 displays the lot currently proposed for development.



Photo 53: Sickle Point (Segment 16).



Photo 54: View of West Alder Road and adjacent residential development from the CPR property currently up for sale (Segment 17).



Photo 55: Notice of Development to allow multi-family residential development at a former hotel site.

According to the population and housing statistics presented in Section 4.4, demand for housing in Electoral Area D will continue to increase in the future. The population structure in the region suggests that there are proportionately more people over the age of 65 than the provincial average, and this could be an indication of both an aging resident population and the region's appeal as a retirement destination. Managing development on the Skaha Lake shoreline in a sustainable manner will continue to be a challenge for the Regional District in the years to come.

Tourist Commercial Facilities

The OCPs do not designate any undeveloped land along the shoreline as tourist commercial. Commercial designations apply to pre-existing campgrounds and RV Parks.

Parks and Trails

The East Skaha, Vaseaux OCP contains a policy to work towards establishing a continuous trail corridor along the shoreline of Skaha Lake, from the north end of Main Street, to Christie Memorial Park, Lions Park, and along the Okanagan River channel. Consultation with the Rails to Trails and Parks Committee Chair indicated that funding has not yet been put aside to create the continuous trail (Schwarz, pers. comm.).

A private park and beach is located in Skaha Estates (Photo 56), a residential development on the southeast side of Skaha Lake. The beach has picnic tables and a grassy area. The East Skaha, Vaseaux OCP designates a corridor of park (P) land along the shoreline of the Skaha Estates residential development.





Photo 56: Skaha Estates Park (Segment 37).

The Rails to Trails and Parks Committee, a sub-committee of the RDOS, works to secure tenure on the portions of the Kettle Valley Railway that are within the boundaries of the RDOS. Their mandate is to develop a comprehensive linear park strategy that provides links between the region's communities, parks, schools, shopping areas, and open spaces (RDOS, 2008). The OCP designates the KVR Trail corridor as parks and recreation (PR).

The Committee is currently looking to secure sections of the KVR Trail that run through privately owned land. The Committee has applied for gifting of the KVR Trail through the Canadian Pacific Railway (CPR) owned land west of Alder Road. The Committee is also working to obtain the section of the KVR Trail through land owned by Ponderosa Point Resort and the section through private land just south of Pioneer Park.

The Committee has been working with the Province to obtain sections of the KVR Trail on Crown lands. The negotiations met a road block when the Province realized that they were not authorized to give RDOS land tenure on the rail beds to use as a trail park. Instead, the Province is looking into ways to create a tripartite management system (i.e., RDOS, the Province, and local groups). This management system would require an agreement binding on all parties. Until the Committee receives word from the Province regarding the management system, they are unable to move forward.

The Purpose Statement and Zoning Plan prepared for Christie Memorial Park by the Ministry of Environment identifies the park as having little provincial park value, and recommends an investigation into the potential transfer of the park to a local interest. Consultation with the OK Falls Rec indicated that they are interested in acquiring the park; however, it would be very difficult to have the property ownership transferred from the Provincial Government to the RDOS due to First Nations land claims and other challenges (Daly, pers. comm.). But, the OK Falls Rec is presently discussing the feasibility of taking over the maintenance contract from the private contractor hired by BC Parks.



5.5 *Character and Scenery*

The character and scenery of properties within a community is defined by its overall design or layout, its views, its gathering places, and its historic and cultural resources, as well as by environmental characteristics such as wildlife habitat refuges. Protecting and enhancing character is important - not only for promoting economic development and attracting visitors, but also for protecting valuable living spaces and culturally significant areas.

Distinct features, such as the Skaha Lake shoreline, the KVR trail, and the surrounding natural hill slopes within Electoral Area 'D', contribute to its physical character. One of the guiding principles of the Shoreline Committee, is to protect and enhance the character and scenery. Although not specified by the Committee, character and scenery may include: appearance, natural resources, open spaces, recreation areas, scenic views, vegetation, architecture, and development patterns. Preserving these features should not prohibit development; however, character and scenery of properties should be considered to ensure that new development fits the existing community fabric.

In our opinion, features that would appear out of place, or that would disrupt the character and scenery of properties in the study area, include:

- Large retaining walls on the slope or along the shoreline;
- Unusually bright building or roof colours;
- Small-lot, high-density residential development, or large dwellings in an area where only smaller dwellings exist;
- Large-scale commercial and/or industrial development; and,
- Removal of mature vegetation.

Policies and review procedures may be used as tools to protect and/or enhance a community character. Preserving rural character is identified in the Kaleden-Apex SW Sector and the East Skaha Vaseaux Official Community Plans as being very important to residents and visitors. The Kaleden-Apex SW Sector and the East Skaha Vaseaux Zoning Bylaws designate rural zones and outline regulations for new development in these zones. The regulations include minimum parcel size, parcel width, and setbacks, and maximum density, number of accessory dwellings per parcel, height, floor area, and parcel coverage.

In the future, strengthening regulation regarding form and character would have to be done through Development Permit areas designated in the OCP. Development Permits for form and character (and other reasons) are justified in the Local Government Act for commercial and multi-family development, but not normally for single-family development unless it is a large intense residential development area.

Based on the results of the written survey, respondents indicate a strong desire for Local Government intervention in the protection of character and scenery. For example, over 85% of survey respondents feel that it is very important (67%) or important (20%) to protect view corridors up and down Skaha Lake. In addition, approximately 80% of survey respondents strongly agree (65%) or agree (16%) that Design Guidelines should be developed for multi-family and commercial development to protect forms and character. Design guidelines that affect the



form and character of development might include, for example, exterior design, materials, textures, colours, signs, lighting, fencing, and landscaping.

Through some form of an urban design review panel or committee, and potentially through the Planning Advisory Commission, local government may assess form and character. These forums would provide an independent and/or public review process that would help integrate new commercial buildings into the fabric of the existing community or else into a desired future vision that might include enhanced design and building compatibility.

In another manner, Zoning Bylaws could further dictate community character and avoid haphazard development by adopting some of the principles of “integrated conservation design”. This is a technique that considers site characteristics and layout in a larger context including the surrounding parcels. The technique includes clustering (exchange small lot size for permanently dedicated open space, with no net density increase). The resultant designs allow for the preservation of important and unique natural features such as open space, viewsheds, scenic corridors and wildlife habitat.

The Area D OCPs are due for renewal and update and, as such, recommendations for protecting scenery and character will be accommodated into the new plan. Additionally, to accommodate future growth and development, the Regional Growth Strategy, which will be completed in the near future, will provide more specific policies and guidelines for individual communities and unique geographical areas. The Strategy will direct where future growth should (and will) occur.

It should be noted that the subdivision approving authority is provincially mandated through the Ministry of Transportation (MOT). Although recommendations for subdivision layout form a part of the OCP guidelines, the Regional District is limited in its ability to control. Mechanisms to address this may be provided through the OCP, and Zoning and Subdivision Bylaws and also through the development of a formal consultation and referral process between the RDOS and MOT.

Where more intensive land uses are being considered, the District may wish to consider developing regulations to ensure that mitigation measures such as buffering, density transitions, landscaping, or increased setbacks are adopted to reduce the potential negative effects on community character. Although these mitigation strategies could be incorporated into the Official Community Plan, Zoning Bylaws, or Development Permits, Regulations are a more binding way to ensure compliance.



5.6 *Public and Private Amenities*

5.6.1 *Boat Launches*

Two main public boat launches service Electoral Area D: at Kaleden Pioneer Park and at Main Street in Okanagan Falls. The boat launch at Kaleden Pioneer Park is an old concrete cattle guard, which causes Kal Rec ongoing concern for public safety (Bland, pers. comm.). The Main Street boat launch may also need repairs or replacement according to a survey conducted by OK Falls Rec in July 2008 where 50% of respondents rated the quality of the current Main Street boat launch as poor to fair. 67% of the respondents to that survey described a boat launch as somewhat important to very important.

Three other informal boat launches are being used by the public along the east shoreline (see Section 4.8.1 for a description). These boat launches are small and unpaved.

The project team has been informed that the boat launch in Okanagan Falls was replaced in October of 2008 and this updated moorage has not been viewed.

5.6.2 *Docks, Marinas, and Moorage*

The greatest density of docks on Skaha Lake in Area D occurred in Segment 17 (18 docks/km, Alder Road area in Kaleden) and Segment 32 contained the most docks ((28 docks/km) Hody Dr. and Lakeside Rd. in Ok Falls). The average dock densities on Skaha Lake (4 docks/km) is substantially lower than the City of Kelowna (11.6 docks/km (Magnan and Cashin, 2005)).

Although there are several well-constructed docks along the Skaha Lake shoreline, all but two service private residences only. The two docks that are available for public use are short and appear to be in a state of disrepair. These docks do not provide good day use moorage for either manual or powered vessels.

There is a definite need for day use moorage along the Skaha Lake shoreline and it is believed that day use moorage should be directed to small, day use docks in parks (i.e., 2 to 4 slips or based upon more detailed demand estimates) rather than mooring on beaches because impacts are perceived to be less. Other considerations should be given to small day use moorages for non-motorize craft such as kayaks, Dragon Boats, canoes, etc., although the demand for such a facility is unknown.

Long term moorage facilities are absent in Area D and development of a larger facility may be considered in the future. The survey indicated that 67% of the residents are not in favour of a marina facility in Electoral Area D. Of the respondents that thought a marina facility was needed, 28.6% percent felt that Okanagan Falls was the most appropriate location for a facility. An overwhelming majority of respondents to the survey (94.3%) indicated that if new moorage facilities were to be constructed, they should be public facilities and not private facilities associated with multi family developments. With the boat usage data collected, it is difficult to determine the need for a new facility at this time.



Should the District choose to pursue a moorage facility, selection of a site is very important. Long term moorage should be directed to more serviced/commercial areas where site servicing is better and impacts associated with development are typically greatest (i.e., densely already disturbed areas). A public/private partnership may provide opportunity for more moorage development. Parking for a larger facility is a primary concern, as is what amenities should be included (i.e., # of public versus private versus day use boat slips, boat sizes, sani dump facilities, fuelling, lake bathymetry and hazards, etc.). Large facilities should also include some day use sites. The best potential for a large full service type marina is in the Okanagan Falls area⁸ and this location is preferred by residents. However, other opportunities may exist in the Kaleden area. Generally, it is preferred if most parks provide small, day-use moorage only. With the data collected thus far, it is recommended that no more than one other large, full service marina facility be constructed elsewhere on the lake because of the lake size and environmental impacts associated with these facilities. Skaha Lake likely only requires two commercial type facilities (i.e., large marinas with fuel and amenities) because it is not a large lake. Careful planning of the location is required so that all considerations can be assessed, such as those raised above and further studies regarding the sighting need to be completed that address the demand for a marina, environmental impacts, and other factors.

Private developments may also proposed larger, private moorage facilities and these moorages these types of facilities would likely occur as a result of multi family developments. Moorages for these developments should assess the environmental implications, and is preferable to avoid sites with significant wetland or riparian habitats. The District may wish to consider moorage development as part of a development application, as it is preferred from an environmental perspective to concentrate moorage so that habitat impacts are limited to one area. To address these concerns, it would be best to incorporate moorage considerations into Official Community Plans or Zoning Bylaws to address the uses associated within commercial or multi family development. Again, residents strongly expressed their desires that moorage remain public and not be associated with multi family developments.

5.6.3 Parking

The only parking available on the west shoreline is at Kaleden Pioneer Park. Cars are encouraged to park in the upper parking lot to keep the lower parking lot (i.e., next to the boat launch) for trucks and trailers. Parking at Kaleden Pioneer Park was extended this year and is generally adequate (Bland, pers. comm.). Parking for Lions Park is on the gravel shoulder adjacent to Railway Lane and for Christie Memorial Park is on the shoulder of 7th Avenue. Kenyon Park has a designated parking lot off the main road. Parking for the Okanagan Falls boat launch is on the shoulder of Main Street and on 7th Avenue. Overflow parking is also available a few blocks inland from the boat launch.

⁸ This area is recommended due to the proximity of servicing facilities. Boating hazards and bathymetry are also important and have not been considered in this recommendation.



5.7 Shoreline Accessibility

Accessibility to, and along, the shoreline is quite good on the west and south side of Skaha Lake due to the presence of the KVR Trail and park land at Kaleden and Okanagan Falls. There are numerous access points, although signage is somewhat lacking. The east shoreline is not very accessible. It is either lined with single family homes that have private access, is rugged and inaccessible, or has the busy Eastside Road directly adjacent to the shoreline. Some residents have expressed concerns regarding the expansion of Eastside Road, as it may have impacts on local flora and fauna. Other residents have expressed the desire to see expansion of Eastside Road to include a pedestrian/cycling path.

5.8 Recreational Opportunities

In 2002, Tourism BC conducted a study to profile travellers that use the Penticton Visitor Information Centre (VIC) in terms of traveler and trip characteristics. Travelers were interviewed at two locations, the Penticton VIC and a reference site (the Penticton Beaches). Table 10 displays the top ten primary activities of travelers interviewed.

Table 10: Top Ten Activities of Travelers Interviewed at Penticton Visitor Information Centre (VIC) and Penticton Beaches

Percentage of Responses		
Primary Activity* ¹	Penticton VIC (n=272)	Penticton Beaches (n=265)
Beach / Sunbathing / Swimming	22.4%	54.3%
Relaxing	14.7%	17.0%
Wine / Wineries	14.3%	0.0%
Sightseeing	10.7%	6.4%
Hiking / Walking	5.9%	4.5%
Water Sports / Activities	5.5%	2.6%
Biking / Cycling	5.1%	1.9%
Golfing	3.3%	1.5%
Outdoor Activities / Recreation	3.3%	0.8%
Sporting Events / Activities	2.9%	1.1%

* Indicates there are statistical differences at the p=0.05 level between the Penticton VIC and the Penticton Beaches.

1. Other activities included: Camping, Eating / Drinking, Enjoying Nature / Scenery, Visiting, Boating, Photography, Climbing, Fruit Picking, Shopping, Children / Family Activities, Car Show, Motor Biking, Dancing, Fishing, Hog Rally.

The survey shows that visiting the beach, sunbathing, and swimming is the number one activity that travelers visited the area for. With this in mind, it is important that the beaches in Kaleden and Okanagan Falls continue to be well maintained and accessible.

Currently, the KVR Trail route is not clearly identified by signage and a map of the KVR Trail between Penticton and Okanagan Falls was not readily available at the Penticton Tourism Centre or from the Internet.

There is currently no public non-motorized watercraft rental in Electoral Area D.



5.9 *Historical, Cultural, and Educational Opportunities*

The KVR Trail provides an excellent opportunity to use informative signage to identify biological, geological, archaeological, and other points of interest. Information about the history of the area, including the history of First Nations people, could also be presented along the Trail.

The Kaleden Hotel is a unique historical site. Kal Rec has already applied for historical designation for the hotel. The hotel would be an interesting stop for users of the KVR Trail and other tourists visiting Kaleden.

6.0 CONCLUSIONS AND RECOMMENDATIONS

The following sections provide specific considerations for policy development by the RDOS. As more and more responsibility is being placed on local governments, creation of good policy is crucial. Other recommendations are focused on specific items of concern or interest. Table 11 shows the link between the Guiding Principles developed by the Shoreline Committee and the recommendations of this study.

Table 11: Shoreline Committee Guiding Principles and Corresponding Study Recommendations

Guiding Principle	Recommendations
Enhance connectivity	6-1, 6-2, 7-4, 7-7, 7-8
Limit noise, water, and air pollution	5-3, 6-2, 7-1
Conserve the natural environment	1-1 to 1-8, 2-1, 2-2
Protect and expand recreation	5-1, 5-2, 5-4, 5-5, 7-1 to 7-8
Increase accessibility	6-1, 6-2
Maintain opportunities for economic development	3-1 to 3-4
Enhance history, culture, and education	8-1, 8-2
Protect and enhance character and scenery	3-1 to 3-4, 4-1
Legislative considerations	1-3, 5-3



6.1 Environmental Land Use Planning

Environmental land use planning is considered extremely important in the Okanagan due to the high incidences of rare and endangered species and ecosystems. The following are important policy considerations that may help improve conservation/preservation of environmental features and habitats:

Recommendation 1-1: Develop a Terms of Reference for environmental reports.

- RDOS staff are currently working with other applicable agencies to develop/update a Terms of Reference for environmental reports. Development and acceptance of a Terms of Reference is important and should be completed because it outlines professional requirements for assessments in the region and provides a list of considerations for environmental professionals preparing site specific assessments. The Terms of Reference when completed could be adopted as a policy and be applicable to issued on a case by case basis for each site or provided as a policy document to proponents. Site specific assessments are a critical component of a development permit application because most inventories carried do not specifically address site specific concerns. Development of this Terms of Reference will ensure that environmental studies adequately address site specific concerns.

Recommendation 1-2: Review Development Permit Areas in the Kaleden-Apex SW Sector OCP and the East Skaha, Vaseux OCP and ensure they include all environmentally sensitive areas identified in this study.

- Identification of Environmentally Sensitive Areas is extremely important. The City of Kelowna has just recently completed a review of environmental development permit areas (EDP's) and has added over 400 properties to an EDP list for a variety of reasons. As the example above portrays, keeping environmental development permit areas up to date is important. EDP's are most accurately determined by appropriate inventory work such as the FIM, SEI and SHIM. Many areas have already been flagged for EDP's by the current OCPs. It is recommended that areas that have been determined as environmentally sensitive be added to the Development Permit Areas within any policy documents applicable. It is important that addition of new inventory data be simple and easy to implement because the budgetary constraints for inventory often result in projects being completed over a series of years as data is collected.

Recommendation 1-3: Develop good interagency dialogue and referral processes.

- Interagency cooperation is important and collaboration on environmental issues is critical. Where appropriate, joint policy and cooperation between communities and agencies is encouraged because species do not respond to property lines but do respond to habitat loss. A good example of inter-agency cooperation would be to establish a referral process for applications with other agencies such as Front Counter BC, Ministry of Environment, and Ministry of Transportation (subdivision approval authority).



Recommendation 1-4: Establish an Environmental Advisory Commission.

- The Regional District of Central Okanagan has created an Environmental Advisory Commission, which functions similar to an Advisory Planning Commission. The commission is created based upon the belief that local residents should contribute to the stewardship of their natural resources. Establishment of such a commission in the RDOS may provide an avenue to address the environmental concerns of residents and as an advising committee to the Regional Board regarding environmental considerations and regional initiatives.

Recommendation 1-5: Supplement and expand on the inventory work completed for this study.

- The following is a list of recommended environmental inventories to supplement and expand upon the work completed for this study:
 - A Shoreline Sensitivity Analysis should be completed. On lakes in British Columbia, this process is typically completed following completion of Foreshore Inventory and Mapping. This analysis investigates many factors, such as fish species present, shore communities, habitats for wildlife, etc.;
 - Accurate mapping of all shore marshes and wetland areas around Skaha Lake;
 - Groundwater aquifer mapping;
 - Sensitive Habitat Inventory and Mapping of any watercourses or gullies that have not been completed yet;
 - A wetland inventory in adjacent upland areas should be completed. Many wetlands occur in isolated basins and good connectivity to Skaha Lake is extremely important for many species;
 - An inventory of important bird nesting areas along the shoreline should be completed. Due to the large number of wetlands observed, it is probable that many important nesting areas have not been identified.

Recommendation 1-6: Prepare an environmental data management program.

- An environmental data management program should be prepared to ensure that staff and *the public* have access to environmental information collected. This information is important for many agencies and non-profit groups to direct restoration and guide land use planning. As GIS is currently an accepted standard, maintenance of spatial data is an important component of habitat management. The data management program makes facilitating updates easier and also may help make decisions when they are required.



Recommendation 1-7: Identify Environmental Development Permit areas and set aside environmentally sensitive areas as early as possible in the application process.

- Environmental studies of areas identified as EDP areas should be completed for any land use or development permit applications. It is strongly encouraged that assessments set aside environmentally sensitive areas as early as possible (i.e., at zoning prior to subdivision if possible) using one of the following mechanisms (in order of preference):
 - Set aside or re-zone lands as natural areas parks lands;
 - Create a special Zoning for natural areas and re-zone lands as this. Advantages of creation of this type of zoning are that the RDOS can exercise their own enforcement through bylaw control, possibly eliminating some of the multi jurisdictional issues; or
 - Set aside land using a Section 2.19 Restrictive No Build/No disturb covenant.

Recommendation 1-8: Ensure the planning section of the RDOS website is kept up-to-date and relevant information is easily-accessible to developers and community members.

- The Environmental Planning section of the RDOS website contains valuable educational information to help property owners, developers, farmers and environmental professionals working and living around sensitive habitats. The RDOS should continue to update and promote this webpage.

6.2 Natural Hazards

Recommendation 2-1: Conduct detailed terrain and terrain stability mapping to identify areas within the Kaleden-Apex SW Sector having a high hazard soil stability rating.

- The hazard mapping completed as part of the shoreline study provides a general assessment of geologic hazard where it has the potential to affect shoreline areas. However, it does not extend to areas upslope of the shoreline. Currently, RDOS relies upon broad and outdated (~30 years old) mapping of soil stability and it is understood that site-specific geotechnical investigations are undertaken at the request of RDOS or the Ministry of Transportation on a rather haphazard basis. To improve the ability of Approving Officers to ensure safe development, it is recommended that the hazard mapping be reviewed and updated.

Recommendation 2-2: Include a Natural Hazards Development Permit Area in the Area D Official Community Plans.

- RDOS should limit or direct development and/or sub-division away from lands subject to natural hazards such as flooding, debris/mud flows, landslide, erosion, rock fall, or subsidence by developing Development Permit areas for hazard lands. Site-specific geotechnical assessments would be required for these areas. In some cases, RDOS might consider requiring a no-build/no-disturb covenant as part of the zoning or sub-division approval process. Currently, sub-division approvals are the authority of the Ministry of Transportation. It is recommended that RDOS develop a close working relationship with MOT, such that regular application reviews ensure District policies are considered.



6.3 Land Use Policy

Recommendation 3-1: Review and update the Official Community Plans for Electoral Area D.

- The Kaleden-Apex Southwest Sector OCP was adopted nine years ago (1999) and the East Skaha Vaseaux OCP twelve years ago (1996). An OCP should be reviewed every five years to ensure it is kept up-to-date. A thorough review and rewriting of the OCPs should be conducted as soon as feasible.

Recommendation 3-2: Ensure growth management policies contained in the OCPs are strictly upheld when making decisions regarding new development.

- 51% of survey respondents (47 respondents) do not want any shoreline development to occur and 38% (35 respondents) prefer a small amount of shoreline development. Residents value the rural lifestyle their communities provide and are also concerned about the impact of development on the natural environment. Growth management is a set of techniques used by government to ensure that as the population grows there are services available to meet their demands. Demands such as the protection of natural spaces, sufficient and affordable housing, delivery of utilities, preservation of buildings and places of historical value, and provision of sufficient places for the conduct of business should all be considered in growth management. The Kaleden-Apex SW Sector OCP (Chapter 3) and the East Skaha, Vaseaux OCP (Section 4) contain policies for growth management. These policies must be strictly upheld by RDOS planning staff in order to maintain the rural character of Area D that is so important to residents. During the review of the OCPs, more information should be added regarding the various growth management techniques available (e.g., open space/conservation design principles, limiting service provision, zoning for density and neighbourhood amenities, cluster development, urban and rural containment boundaries).

Recommendation 3-3: Develop vacant parcels and redevelop existing parcels within serviced areas prior to considering the development of other areas.

- New development should take the form of infill development and redevelopment of existing parcels prior to considering other areas. New development should be focused in settlement areas, including Kaleden, Okanagan Falls, and within existing developments on the east side of the lake.

Recommendation 3-4: Complete the South Okanagan Regional Growth Strategy and begin implementation as soon as possible.

- RDOS and its member municipalities are currently working on the development of a Regional Growth Strategy (RGS). The development and implementation of the RGS is very important to ensuring a long range, “big picture” approach to planning is taken in the South Okanagan. Completion of the RGS in a timely fashion should be a top priority for the RDOS.



6.4 Character and Scenery

Recommendation 4-1: Develop design guidelines for multi-family and commercial development.

- Because of their prominent size and location, multi-family residential developments can have a significant visual impact, particularly on the rural character of the area. Preserving rural character and form is identified in the Kaleden-Apex SW Sector and the East Skaha Vaseaux Official Community Plans as being very important to residents and visitors. The Kaleden-Apex SW Sector and the East Skaha Vaseaux Zoning Bylaws designate rural zones and outline regulations for new development in these zones. The regulations include minimum parcel size, parcel width, and setbacks, and maximum density, number of accessory dwellings per parcel, height, floor area, and parcel coverage.

In addition to these regulations for rural zones, the Regional District should develop design guidelines for multi-family and commercial developments. The Design Guidelines may include site planning, architectural design, landscaping, fencing, and lighting, among other factors. 80% of survey respondents strongly agree (64.5%) or agree (15.8%) with the development of design guidelines (a total of 76 people answered the question) for multi-family and commercial developments. The East Skaha, Vaseaux OCP contains a “Multiple Family General Development Permit Area” and an “Okanagan Falls Commercial Development Permit Area” that provides some guidelines on the required form and character of multi-family and commercial developments. There are no guidelines in the Kaleden-Apex SW Sector OCP.

6.5 Public and Private Amenities

Recommendation 5-1: Provide two well-constructed and well-maintained public boat launches in Electoral Area D and discourage the use of other boat launches along the shoreline, except for hand launching.

- The boat launch at Main Street was repaired in October 2008. The launch at Kaleden will also need to be repaired or replaced. The design team for the boat launch should consider newer technologies that lessen environmental impacts of the launch. Also, consideration should be given to the type of vessels that are appropriate for the launch. A well-constructed boat launch in an appropriate location is preferred to undeveloped launches that are commonly used and public should be directed to appropriate locations for boat launching. Also, signage regarding transfer of exotic plants and other marine species builds awareness and promotes boat inspections at the site of launch, which could reduce spread of various invasive species. Any boat launches proposed should be referred to Front Counter BC for review and comment by senior government agencies. Sufficient parking for boat launches is important and should be considered for any proposed boat launches.



Recommendation 5-2: Improve day use moorage opportunities.

- Day use moorage is noticeably absent and boats were observed moored on beaches during the FIM surveys. Day use moorage should be provided in appropriate locations (e.g., parks areas) to minimize impacts such as propwash. Environmental considerations should be reviewed when determining an appropriate location and design of the moorage. Other alternatives include installation of day use moorage buoys in these locations.

Recommendation 5-3: Consider pursuing a head lease on the foreshore and lake.

- A head lease, issued from the province would give the RDOS more control over the management of docks. District of Peachland has negotiated a head lease with the Province, which extends 183 meters out into the lake. This foreshore lease allows Peachland to make decisions on wharves, piers and buoys. The District also has a waterfront plan, complete with maps, to let boaters know what uses are permitted where and a series of bylaws that regulate pier and wharf construction and the placement of buoys. Planning staff at Peachland should be contacted to discuss the advantages and disadvantages of this approach. Studies should be completed to determine environmental considerations, applicable federal and provincial legislation (e.g., Navigable Waters), costs and benefits of the idea, and how management of the system would occur.

Recommendation 5-4: Improve signage for designated truck and trailer parking at Kaleden Pioneer Park and clearly identify overflow parking for the Main Street boat launch.

- In general, parking appears to be adequate for the current level of usage of the shoreline and lake. Kaleden Pioneer Park has an expanded parking lot to accommodate trucks and boat trailers. Improved signage and enforcement would ensure these large vehicles park in the designated location. Overflow parking for the Main Street boat launch should be clearly identified.



Recommendation 5-5: Conduct more research to determine the demand for and feasibility of a commercial moorage facility (i.e., a marina).

- Determining whether a commercial moorage facility is required in Electoral Area D is difficult due to data gaps in future and current boater demand and use. 67% of respondents to the study survey do not agree with large marina development. The concern is that a new marina will result in increased motorized boat traffic on the lake. The lake can likely facilitate one additional large, fully serviced facility and may provide economic growth. Locating the facility is important and the following are recommendations for locating a new commercial moorage facility when a decision is made regarding the necessity:
 - Detailed bathymetry of the candidate areas should be prepared. Bathymetric mapping will help determine areas suitable based upon the topography of the lake bottom. Preferred moorage locations occur in 2 to 3 m deep water in wide littoral areas that do not contain significant aquatic vegetation;
 - A detailed environmental overview of proposed locations should be prepared to assess impacts of the structure on fish species, wetlands, and any other important terrestrial habitats that may occur;
 - A demand analysis should be prepared to determine appropriate boat slip demands now and into the future.
 - Any moorage designs should be reviewed by a qualified environmental professional to address fisheries and wildlife concerns. All moorage designs should be referred to Front Counter BC to facilitate permitting with senior government agencies.
 - Candidate areas reviewed should consider future expansion of the marina/moorage, as it is preferred to keep moorage concentrated in one location. Thus, a small facility may only be required at this time and it is preferable to site the facility in an area where it can grow with demand; and,
 - Detailed mitigation plans for any fuelling and sani-disposal areas should be prepared. Spill management plans and resources must be located adjacent to these facilities in preparedness for when (not if) a spill will occur.

Based on existing public accessibility and existing services, previous development, lack of critical aquatic habitat and/or sensitive environmental features, the preferred location for a new marina, should it be considered in the future, is on the south side of Skaha Lake at Okanagan Falls. Completion of the above studies are critical to ensure that this recommendation is appropriate for development of a commercial moorage facility. Other, smaller destination facilities and day moorage are recommended for other lake areas.

RDOS may wish to review the recently issued Central Okanagan Major Lakes Recreational Marine Facilities Study (GDH Solutions, 2008), completed by the Regional District of Central Okanagan (October 2008). The study provides an assessment of lake recreation facilities for larger lakes in the Central Okanagan. The study indicated that boating recreation is important to the economy and good facilities are valuable assets. The report also highlights the importance of public private partnerships to address marine facilities and provides discussion on different governance models which could be considered. Due to the size of Skaha Lake, no more than two larger facilities seems appropriate as the total shoreline length is less than 30 km (i.e., there is a facility within approximately 15 km on either end of the lake).



6.6 Shoreline Accessibility

Recommendation 6-1: Require public access as a condition of approval for shoreline developments.

- Sections 10.4.3 and 13.3.11 in the East Skaha, Vaseux OCP contain policies on public access corridors. The policies call for a public access corridor, at least 7m wide (measured from the high water mark) or wider if necessary to ensure easy walking access, to be provided in front of tourist commercial development (10.4.3) and when subdivision and redevelopment occurs along Skaha Lake (13.3.11). The Kaleden-Apex SW Sector OCP does not contain policies on public access.

Both OCPs should contain explicit policies on public access that are strictly upheld by the RDOS. Every proposed shoreline development should provide maximum feasible public access, consistent with the proposed project.

Recommendation 6-2: Develop public access objectives and design guidelines for the shoreline.

- Public access objectives and design guidelines have been prepared for many shorelines in the United States. For example, seven public access objectives have been identified for San Francisco Bay and design guidelines prepared based on these.
 1. Make public access **public**
 2. Make public access **usable**
 3. Provide, maintain and enhance **visual access** to the Bay and shoreline
 4. Maintain and enhance the **visual quality** of the Bay, shoreline and adjacent developments
 5. Provide **connections** to and **continuity** along the shoreline
 6. Take advantage of the **Bay setting**
 7. Ensure that public access is **compatible with wildlife** through siting, design and management strategies

The design guidelines developed for the Bay provide suggestions for site planning as well as recommendations for designing and developing attractive and usable public access areas. The guidelines are not legally enforceable standards but are an advisory set of design principles aimed at enhancing Bay access while providing for the protection resources, regional livability, and local economic prosperity. Several other examples of public access objectives and design guidelines also exist.

It is important to note that shoreline accessibility for humans must be balanced with the need to protect natural shoreline habitat. Providing well-marked, easily-accessible access points in areas with low habitat value and discouraging access in areas with high habitat value is strongly encouraged. Access can be discouraged through the use of barriers and/or educational signage. The FIM data should be used to determine areas where public access should be discouraged.



6.7 Recreational Opportunities

Recommendation 7-1: Determine the recreational carrying capacity of Skaha Lake.

- Boating is a predominant recreational use on Skaha Lake. The recreational carrying capacity on lakes for boating can be defined as the threshold at which the number, type and manner of operating watercraft will adversely impact boater safety, user satisfaction, and ecologic sustainability of the lake. As the ecosystems around every lake are different and the boating uses are different, boating densities or the area per boat estimates, which estimate carrying capacity are difficult to predict. Published accepted boating densities (i.e., carrying capacity) in the United States range from 4 acres/boat to 40 acres/boat (summarized in Doshi, 2006). Assuming the lake is 20 km² and there is 80% available for boat use recreation, the current boat density during average peak use (estimated instantaneous use of boats on the lake on July 14, 2008), is 22.8 acres/boat⁹. This number appears to be the median of published carrying capacities but is likely an overestimate. On Skaha Lake, it is probable that the density ranges from 30 to 100 boats per acre during the “high season”, and therefore the lake may be approaching its carrying capacity on some occasions. Further data collection is considered critical to more accurately predict the capacity. Determination of boat usage estimates and available area for boating is critical. Since boats congregate in destination locations (e.g., parks areas), boat density in these regions could be much higher. Many factors likely reduce the boating area available, including the many shallow waters, environmentally sensitive features, swimming areas, etc. and the 80 % used in the calculation above assumes *extensive use of the entire lake* (i.e., 80% usable by craft >5 hp), which may not be desired by all residents or may result in environmental impacts. Determining the carrying capacity has been completed on numerous lakes in the United States and is based upon numerous different factors. Key information to determine the carrying capacity is an accurate understanding of the boat density, which is strongly influenced by the area available for boats to safely use. The RDOS should work with other agencies to determine carrying capacities for Skaha Lake as this process is a multi-jurisdictional matter.

The concept of carry capacity includes many other items also, such as camping facilities, moorages, boat numbers, activities, and locations (e.g., is there a maximum number of vessels the lake can safely facilitate use of), personal watercraft, cottages/single family dwellings, wildlife corridors and environmentally sensitive features. There are many areas adjacent to the lake that are considered environmentally sensitive for a variety of reasons, and a larger scale environmental land use plan (i.e., one that considers a larger scale) would help determining that carrying capacity. Ultimately, there is a point when the lake system will not be able to accommodate all of the desired uses in a sustainable manor. To develop a carrying capacity, it is recommended the items for which capacities are determined are prioritized: Immediate items to consider are the number of boats (personnel, powered, and manual) the lake can safely accommodate, and wildlife corridors and environmentally sensitive area planning. Based upon our review, these items appear to have the greatest pressure. Considerations for a carrying capacity could include, but are not limited to:

⁹ This calculation assumes even use across the lake. It also assumes that the only 80% of the entire surface area of the lake (~20 km² * 0.66 = 13.2 km²) is available for boating activity.



- Accepted level of boating activity/density on the lake that considers environmental, safety, and other considerations;
- Acceptable boat wakes that will ensure protection of sensitive habitats adjacent to the lake and reduce erosion of highly erodable soils;
- Minimum requirement for wildlife access and habitats critical for rare and endangered species;
- Maximum water available for withdrawal from the lake;
- Maximum tolerance for temperature related impacts associated with geothermal lake or adjacent ground loops; and
- Important groundwater zones around the lake.

Recommendation 7-2: Continue to support the Kaleden and Okanagan Falls Parks and Recreation Commissions.

- It is important that the beaches in Kaleden and Okanagan Falls continue to be well maintained and accessible. 66% of survey respondents indicated that they use the beaches and picnic areas. 80% of respondents rated the quality of public parks and beaches in Electoral Area D as excellent (39.4%) or good (40.4%). The RDOS should continue to support the good work that the Parks and Recreation Commissions are doing.

Recommendation 7-3: Continue to pursue local ownership of Christie Memorial Park. If ownership is not feasible, pursue the take over of park maintenance from the private contractor.

- The Province currently owns Christie Memorial Park in Okanagan Falls and a private contractor maintains the park. The OK Falls Parks and Recreation Commission should continue to pursue the take over of park maintenance of Christie Memorial Park from the Province. Ownership transfer of the park to the RDOS should also continue to be considered and discussed with the Province.

Recommendation 7-4: Continue to work with the Province, private land owners, and the Penticton Indian Band to ensure the KVR Trail is accessible to the public.

- The Kettle Valley Railway (KVR) is one of the more unique features of the shoreline. The decommissioned railway provides residents and tourists with a rare opportunity in the Okanagan to enjoy one of the longest lakefront promenades in a relatively natural setting. Ensuring that access to this recreational trail is maintained is considered extremely important. Over 95% of survey respondents strongly agree (72.6%) or agree (23.8%) that the KVR Trail should be preserved and enhanced. The Rails to Trails and Parks Committee should continue to work with the Province to obtain sections of the KVR Trail on Crown lands. The Committee should also work with private landowners to ensure the right-of-way through private land is accessible to the public.



Recommendation 7-5: Prepare a pamphlet that includes information about the KVR Trail and make available at the Tourism Centre, the RDOS website, and the Kaleden community website.

- Currently, the KVR Trail route is not clearly identified by signage and a map of the KVR Trail between Penticton and Okanagan Falls was not readily available at the Penticton Tourism Centre or from the Internet. A pamphlet that includes parking locations at each end of the trail, the trail route, points of interest along the trail, and general information about Penticton, Kaleden, and Okanagan Falls would be an excellent tool for promoting the KVR Trail to tourists.

Recommendation 7-6: Conduct a feasibility study on the rental of non-motorized watercraft in Electoral Area D.

- There is currently no non-motorized watercraft rental in Electoral Area D. In a July 2008 survey conducted by OK Falls Rec, 86% of the respondents felt that the community would benefit from the rental of non-motorized watercraft. Several respondents to the September survey conducted for this study also expressed a desire for more emphasis on non-motorized use of the lake. A feasibility study should be conducted to determine the demand for such an enterprise, identify the best location, consider potential operators, and identify useful partnerships.

Recommendation 7-7: Work with the Ministry of Transportation to develop a long-term plan for Eastside Road that reflects the values of the community.

- Eastside Road was identified by many survey respondents and by the Shoreline Committee as being unsafe for cyclists, joggers/walkers, and wildlife. 77% of respondents strongly agree (49.3%) or agree (28.0%) that a pedestrian/cycling path should be constructed along the east side of the lake. Challenges of constructing a path include the ruggedness of sections of the shoreline and the close proximity of Eastside Road to the lake. The path could be constructed beside the road in some areas, but may need to be located upslope from the road in other areas. A separate study needs to be prepared to determine the best option for improving Eastside Road. The RDOS should work closely with Ministry of Transportation and the community to develop a long-term plan for the road. Measures should be implemented as soon as possible to lower the speed limit and enforce weight restrictions on Eastside Road. Highway 97 should be considered the main traffic corridor and Eastside Road should be treated as a secondary route used for scenic driving.

Recommendation 7-8: Prepare a feasibility study for the development of a pedestrian/cycling path along the south shore of the lake.

- There is high public support for a path between the Main Street boat launch and the KVR Trail at Lions Park and the vision is included in East Skaha Vaseaux OCP (section 13.3.17). Constructing this path will be challenging due to current property ownership and costs, but it should be pursued as a high priority.



6.8 Historical, Cultural, and Educational Opportunities

Recommendation 8-1: Install interpretive signage along the KVR Trail between Okanagan Falls and Kaleden.

- The KVR Trail provides an excellent opportunity to use informative signage to identify biological, geological, archaeological, and other points of interest. Information about the history of the area, including the history of First Nations people, could also be presented along the Trail.

Recommendation 8-2: Obtain historical status for the Kaleden Hotel and install a sign that identifies the site and provides historical information.

- The Kaleden Hotel is a unique historical site. Kal Rec has already applied for historical designation for the hotel. The hotel would be an interesting stop for users of the KVR Trail and other tourists visiting Kaleden. Kal Rec should consider the placement of a large sign on the lake side of the hotel that provides the history of the site and some general history about Kaleden and the KVR Trail.



7.0 CLOSURE

This document has been prepared upon information provided to or collected by Ecoscape. The document is based upon our understanding of Skaha Lake and policies applicable to the lake. The report provides recommendations for continued policy development, which should be incorporated into appropriate Official Community Plans, bylaws, and policies. Ecoscape has prepared this report with the understanding that all available information on the Skaha Lake has been disclosed. The Regional District Okanagan Similkameen acknowledges that Ecoscape is relying upon full disclosure and accuracy of this information.

Respectfully Submitted,

ECOSCAPE ENVIRONMENTAL CONSULTANTS LTD.



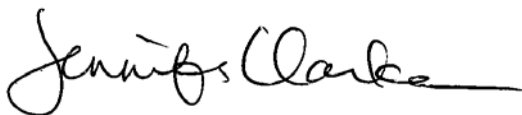
Jason Schleppe, M.Sc., R.P.Bio
Natural Resource Biologist
250 491-7337 x202

INSIGHT ENVIRONMENTAL CONSULTING LTD.



Kellie Bunting, B.Sc., CCEP
Environmental Consultant
250-448-4760

CLARKE GEOSCIENCE LTD.



Jennifer Clarke, M.Sc., P.Geo.
Geomorphologist and Environmental Scientist
250-826-4367



8.0 LITERATURE CITED

The following list contains texts specifically referenced during preparation of this document. A variety of other Best Management publications, grey literature reports, and documents has been referred to but are not specifically referenced.

- BC Stats. 2006. 2006 Census Profile, Okanagan-Similkameen D, RDA. Retrieved on August 26, 2008 from www.bcstats.gov.bc.ca/census.asp.
- BC Stats. 2008a. Quarterly Regional Statistics: Second Quarter 2008. Service BC, Ministry of Labour and Citizens' Services. Victoria, BC.
- BC Stats. 2008b. Sub-Provincial Population Projections (P.E.O.P.L.E. 33). Retrieved on August 26, 2008 from: <http://www.bcstats.gov.bc.ca/data/pop/pop/dynamic/PopulationStatistics/SelectRegionType.asp?category=Census>.
- BC Stats. 2008c. Housing Demand. Retrieved on August 26, 2008 from <http://www.bcstats.gov.bc.ca/data/pop/pop/dynamic/households.asp>.
- BC Stats. 2008d. British Columbia Building Permits for Development Regions, Regional Districts and Communities, by Type 1999 – 2007. Retrieved on August 26, 2008 from http://www.bcstats.gov.bc.ca/data/bus_stat/econ_stat.asp.
- BC Stats. 2008c. British Columbia Tourism Room Revenue by Region Annual 2007. Retrieved on September 3 from http://www.bcstats.gov.bc.ca/data/bus_stat/busind/tourism/trra2007.pdf.
- Carrasquero, J. 2001. Overwater Structures: Freshwater Issues. Prepared by: Herrera Environmental Consultants. Prepared for: Washington Department of Fish and Wildlife. April 12, 2001.
- Church, B.N. 2002. Geoscience Map 2002-5: Geology of the Penticton Tertiary Outlier, British Columbia. NTS 82E/5, 1:50,000 scale. Ministry of Energy, Mines and Petroleum Resources. Victoria, B.C.
- Doshi, S. 2006. Recreational Carrying Capacity in Lakes. How much is too much?. Water Column. Vol. 18, No. 2. Summer 2006.
- GDH Solutions, 2008. Major Lakes Recreational Marine Facilities Study. Prepared by GDH Solutions in association with The JF Group and Summit Environmental Consultants Ltd. Prepared for Regional District Central Okanagan.
- Government of Canada. 2008. Species at Risk Public Registry. Retrieved on August 15, 2008, from http://www.sararegistry.gc.ca/approach/strategy/background/purpose_e.cfm.
- Iverson, K. and A. Haney. Updated Ecosystem Mapping for the South Okanagan Valley. Prepared for Orville Dyer, Ministry of Water, Land and Air Protection.



- Kahler, T, M. Grassley, D. Beauchamp. 2000. A summary of the effects of bulkheads, piers, and other artificial structures and shore zone development on ESA-listed salmonids in Lakes. Prepared for: City of Bellevue, WA. Prepared by: Tom Kahler, The Watershed Company Kirkland, WA.
- Lange, M. 1999. Abundance and diversity of fish in relation to littoral and shoreline features. MSc. Thesis. University of Guelph, Ont. September 1999.
- McPhail, J.D. 2007. The Freshwater Fishes of British Columbia. The University of Alberta Press. Edmonton, AB.
- MacRae, P., and D. Jackson. 2001. The influence of small mouth bass (*Micropterus dolomieu*) predation and habitat complexity on the structure of littoral zone fish assemblages. Canadian J. of Fisheries and Aquatic Sciences. Vol. 58, pp. 342 – 351.
- Magnan, B. and T. Cashin. 2005. Okanagan, 2005. Okanagan Lake Foreshore Inventory and Mapping: Volume I. Kelowna, BC.
- Mathews, B. and J. Monger. 2005. Roadside Geology of Southern British Columbia. Mountain Press Publishing Company. Missoula, MO.
- Ministry of Environment. 2003. Christie Memorial Park Purpose Statement and Zoning Plan.
- Nasmith, H. 1962. Late Glacial History and Surficial Deposits of the Okanagan Valley, British Columbia. BC Department of Mines and Petroleum Resources. Bulletin No. 46. Victoria, BC.
- Piaskoski, R.M., and R.A. Tabor. 2001. Nocturnal habitat use by juvenile Chinook salmon in nearshore areas of southern Lake Washington. U.S. Fish and Wildlife Service. Lacey, Washington.
- Regional District Okanagan-Similkameen. 2008. Rails to Trails and Parks Committee. Retrieved on August 15, 2008, from <http://www.rdos.bc.ca/index.php?id=319>.
- Runka, G. 1971. Soil Stability Ratings for South Okanagan. Unpublished document prepared for the Okanagan Similkameen Regional District. Penticton, BC.
- South Okanagan and Similkameen Conservation Program. 2005. Strategic Plan 2005 to 2008.
- Schleppe, J. and D. Arsenault. 2006. The Kelowna Shore Zone Fisheries and Wildlife Habitat Assessment. EBA Consulting Engineers and Scientists. Project File: 0808-8840209. March 2006. Prepared for the City of Kelowna.
- South Okanagan Real Estate Board. 2008. Housing Statistics. Retrieved on August 27, 2008 from <http://www.soreb.org/Housing%20Stats.htm>
- Statistics Canada. 2007. 2006 Community Profiles. 2006 Census. Statistics Canada Catalogue no. 92-591-XWE. Ottawa. Released March 13 2007.
- The Real Estate Foundation and The Land Centre. 2003. Population and Housing Demand for the Okanagan Similkameen Regional District – 2001 to 2031.



Tourism British Columbia. 2007. Regional Profile Thompson Okanagan. Retrieved on September 4, 2008 from http://www.tourismbc.com/PDF/RegionalProfile_ThompsonOkanagan_2007.pdf.

Wright, Howie and Howard Smith. 2004. Management Plan for Experimental Reintroduction of Sockeye into Skaha Lake: Proposed Implementation, Monitoring, and Evaluation. Okanagan Nation Alliance Fisheries Department, Westbank, B.C.



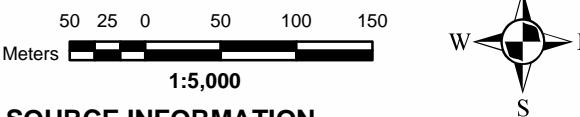
Figure Binder 1 – Topographic and Zoning Maps





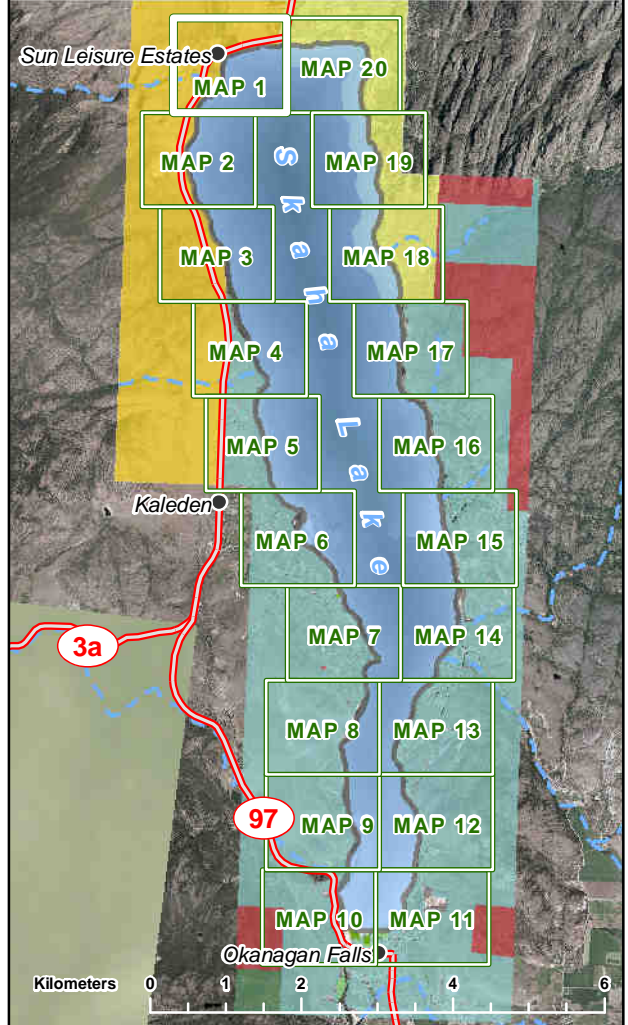
Skaha Lake Foreshore Inventory and Mapping - Topographic and Zoning Map 1

Project: Foreshore Inventory and Mapping
 Location: Regional District of Okanagan - Similkameen
 Project No.: 07-178
 Prepared for: Regional District of Okanagan - Similkameen
 Prepared by: Ecoscape Environmental Consultants Ltd.
 Drawn by: Robert Wagner
 Checked by: Jason Schleppe
 Projection: NAD83-UTM Zone 11
 Date: November 5, 2008



SOURCE INFORMATION

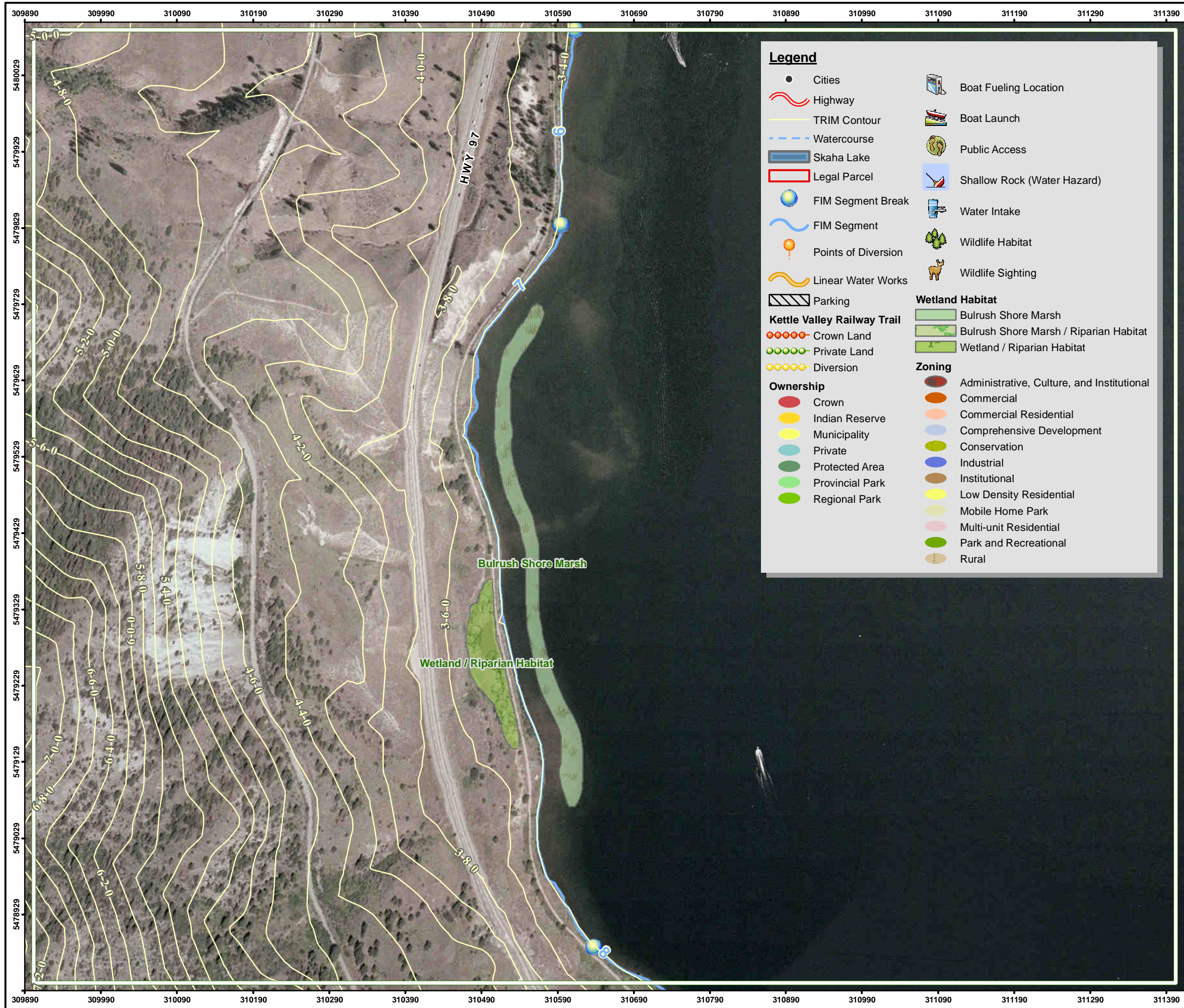
Base Map: 82E.042
 Orthophoto: Province of British Columbia
 Waterbody Information: Skaha Lake
 Location Information: Field, GPS (Trimble GeoXT)
 Feature Information: Airphoto and Topographic Estimate
 Field Inventory
 Date of Inventory: Spring, 2008
 Inventory Management: Jason Schleppe, R.P. Bio. / Robert Wagner



Legend

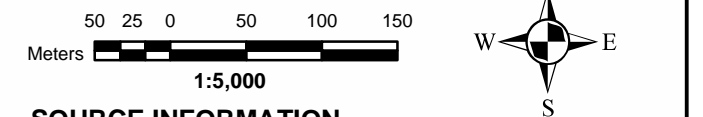
● Cities	Boat Fueling Location	Bulrush Shore Marsh
Highway	Boat Launch	Bulrush Shore Marsh / Riparian Habitat
TRIM Contour	Public Access	Wetland / Riparian Habitat
Watercourse	Shallow Rock (Water Hazard)	Zoning
Skaha Lake	Water Intake	Administrative, Culture, and Institutional
Legal Parcel	Wildlife Habitat	Commercial
FIM Segment Break	Wildlife Sighting	Commercial Residential
FIM Segment	Ownership	Comprehensive Development
Points of Diversion	Crown	Conservation
Linear Water Works	Indian Reserve	Industrial
Parking	Municipality	Institutional
Kettle Valley Railway Trail	Private	Low Density Residential
Crown Land	Protected Area	Mobile Home Park
Private Land	Provincial Park	Multi-unit Residential
Diversion	Regional Park	Park and Recreational
		Rural

Contributing Partners:
 Okanagan Nation Alliance
 Community Mapping Network (DFO)
 Okanagan Basin Water Board



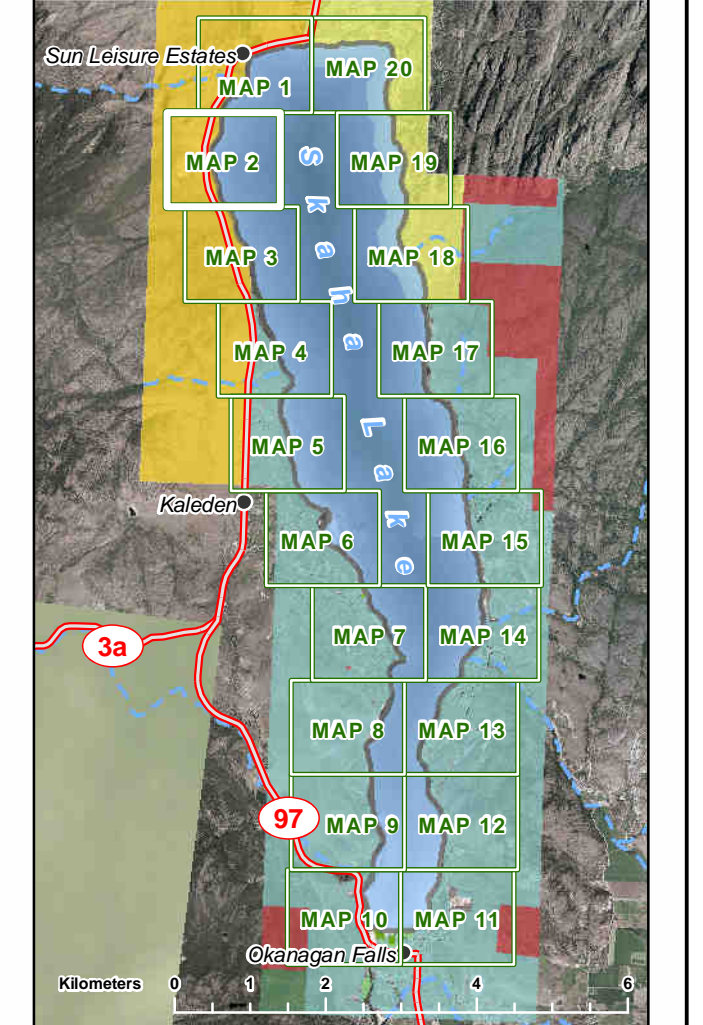
Skaha Lake Foreshore Inventory and Mapping - Topographic and Zoning Map 2

Project: Foreshore Inventory and Mapping
 Location: Regional District of Okanagan - Similkameen
 Project No.: 07-178
 Prepared for: Regional District of Okanagan - Similkameen
 Prepared by: Ecoscape Environmental Consultants Ltd.
 Drawn by: Robert Wagner
 Checked by: Jason Schleppe
 Projection: NAD83-UTM Zone 11
 Date: November 5, 2008

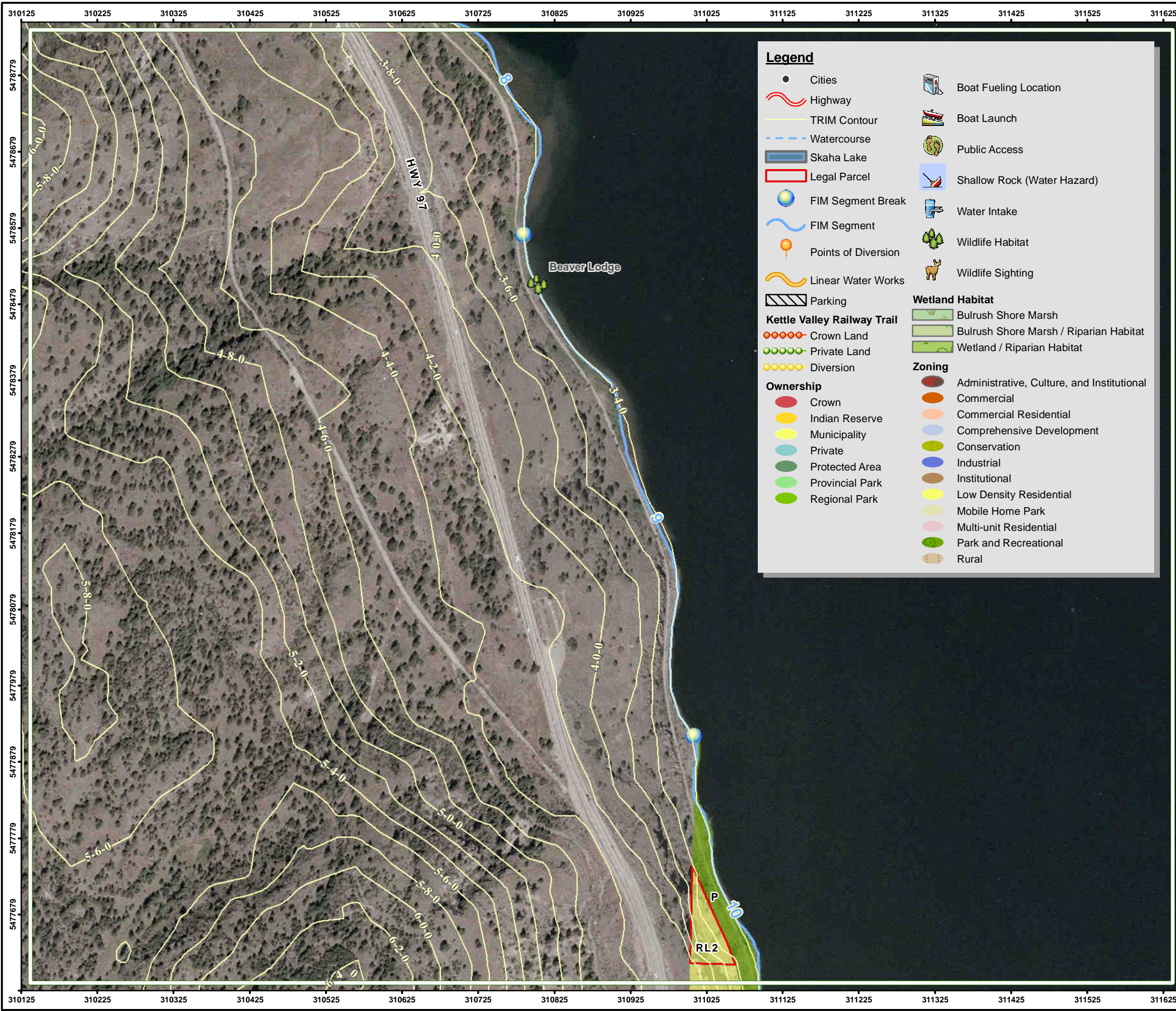


SOURCE INFORMATION

Base Map: 82E.042
 Orthophoto: Province of British Columbia
 Waterbody Information: Skaha Lake
 Location Information: Field, GPS (Trimble GeoXT)
 Feature Information: Airphoto and Topographic Estimate
 Field Inventory
 Date of Inventory: Spring, 2008
 Inventory Management: Jason Schleppe, R.P. Bio. / Robert Wagner

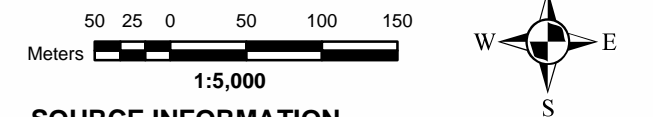


Contributing Partners:
 Okanagan Nation Alliance
 Community Mapping Network (DFO)
 Okanagan Basin Water Board



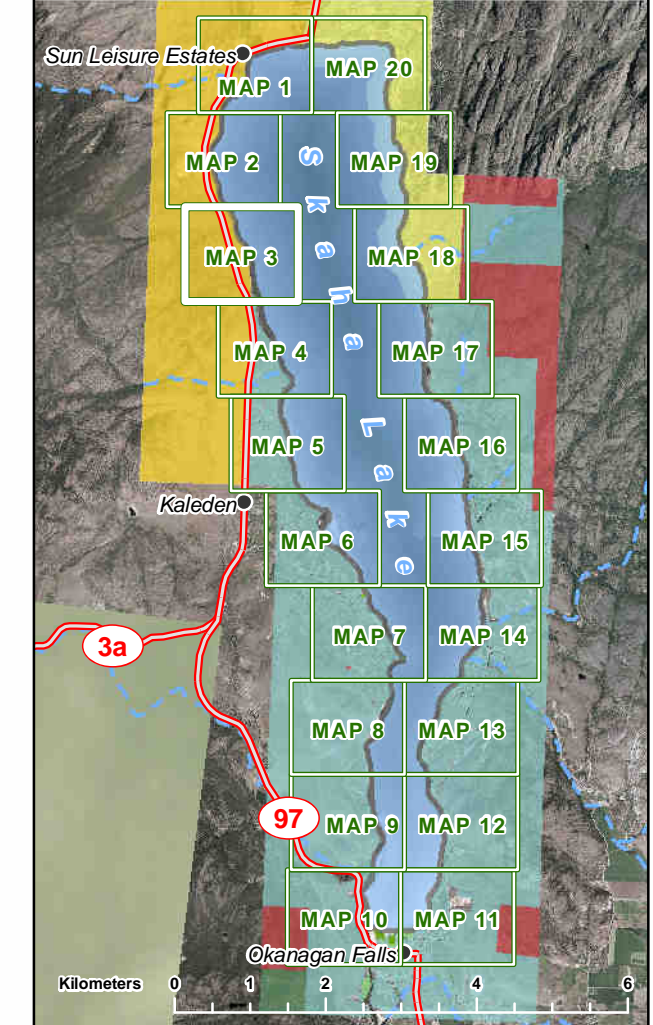
Skaha Lake Foreshore Inventory and Mapping - Topographic and Zoning Map 3

Project: Foreshore Inventory and Mapping
 Location: Regional District of Okanagan - Similkameen
 Project No.: 07-178
 Prepared for: Regional District of Okanagan - Similkameen
 Prepared by: Ecoscape Environmental Consultants Ltd.
 Drawn by: Robert Wagner
 Checked by: Jason Schleppe
 Projection: NAD83-UTM Zone 11
 Date: November 5, 2008

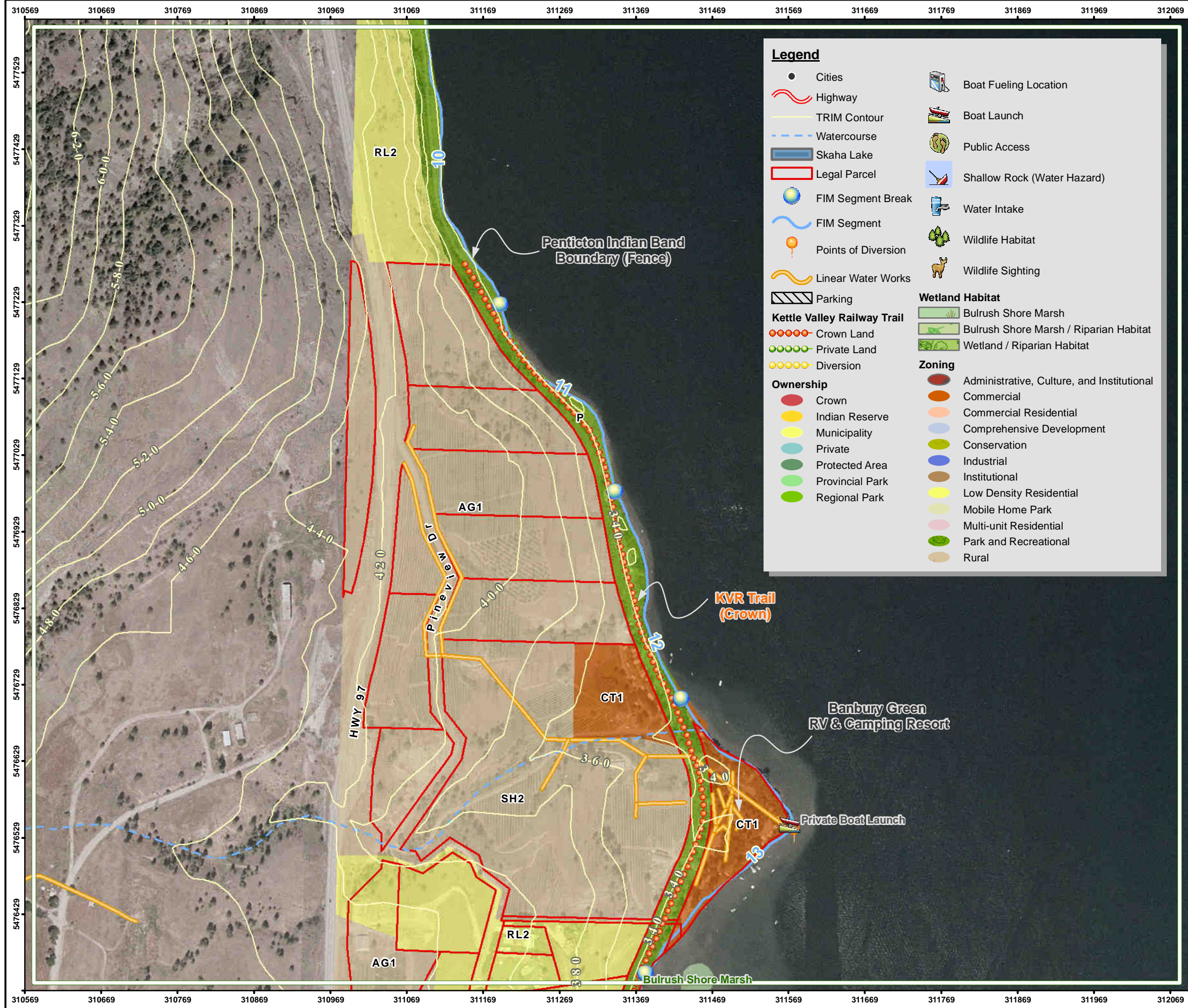


SOURCE INFORMATION

Base Map: 82E.042
 Orthophoto: Province of British Columbia
 Waterbody Information: Skaha Lake
 Location Information: Field, GPS (Trimble GeoXT)
 Feature Information: Airphoto and Topographic Estimate
 Field Inventory
 Date of Inventory: Spring, 2008
 Inventory Management: Jason Schleppe, R.P. Bio. / Robert Wagner



Contributing Partners:
 Okanagan Nation Alliance
 Community Mapping Network (DFO)
 Okanagan Basin Water Board

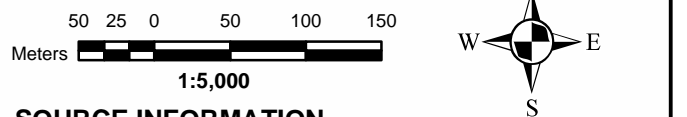


Legend

● Cities	Boat Fueling Location
~ Highway	Boat Launch
--- TRIM Contour	Public Access
--- Watercourse	Shallow Rock (Water Hazard)
Skaha Lake	Water Intake
Legal Parcel	Wildlife Habitat
FIM Segment Break	Wildlife Sighting
FIM Segment	
Points of Diversion	
Linear Water Works	
Parking	
Kettle Valley Railway Trail	Wetland Habitat
●●●●● Crown Land	■ Bulrush Shore Marsh
●●●●● Private Land	■ Bulrush Shore Marsh / Riparian Habitat
●●●●● Diversion	■ Wetland / Riparian Habitat
Ownership	Zoning
● Crown	● Administrative, Culture, and Institutional
● Indian Reserve	● Commercial
● Municipality	● Commercial Residential
● Private	● Comprehensive Development
● Protected Area	● Conservation
● Provincial Park	● Industrial
● Regional Park	● Institutional
	● Low Density Residential
	● Mobile Home Park
	● Multi-unit Residential
	● Park and Recreational
	● Rural

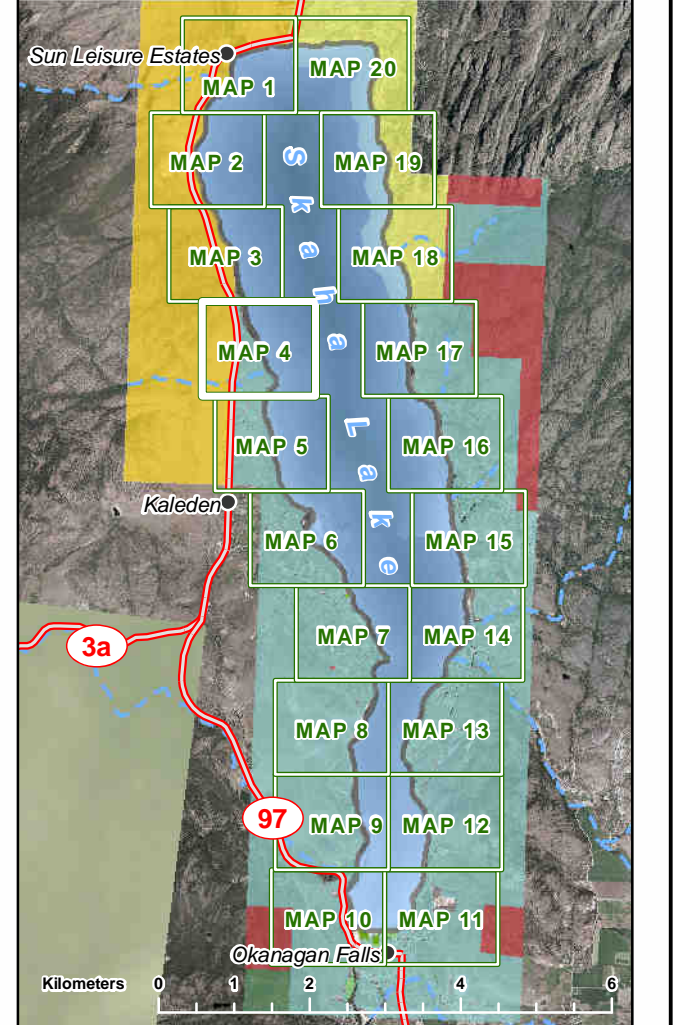
Skaha Lake Foreshore Inventory and Mapping - Topographic and Zoning Map 4

Project: Foreshore Inventory and Mapping
 Location: Regional District of Okanagan - Similkameen
 Project No.: 07-178
 Prepared for: Regional District of Okanagan - Similkameen
 Prepared by: Ecoscape Environmental Consultants Ltd.
 Drawn by: Robert Wagner
 Checked by: Jason Schleppe
 Projection: NAD83-UTM Zone 11
 Date: November 5, 2008

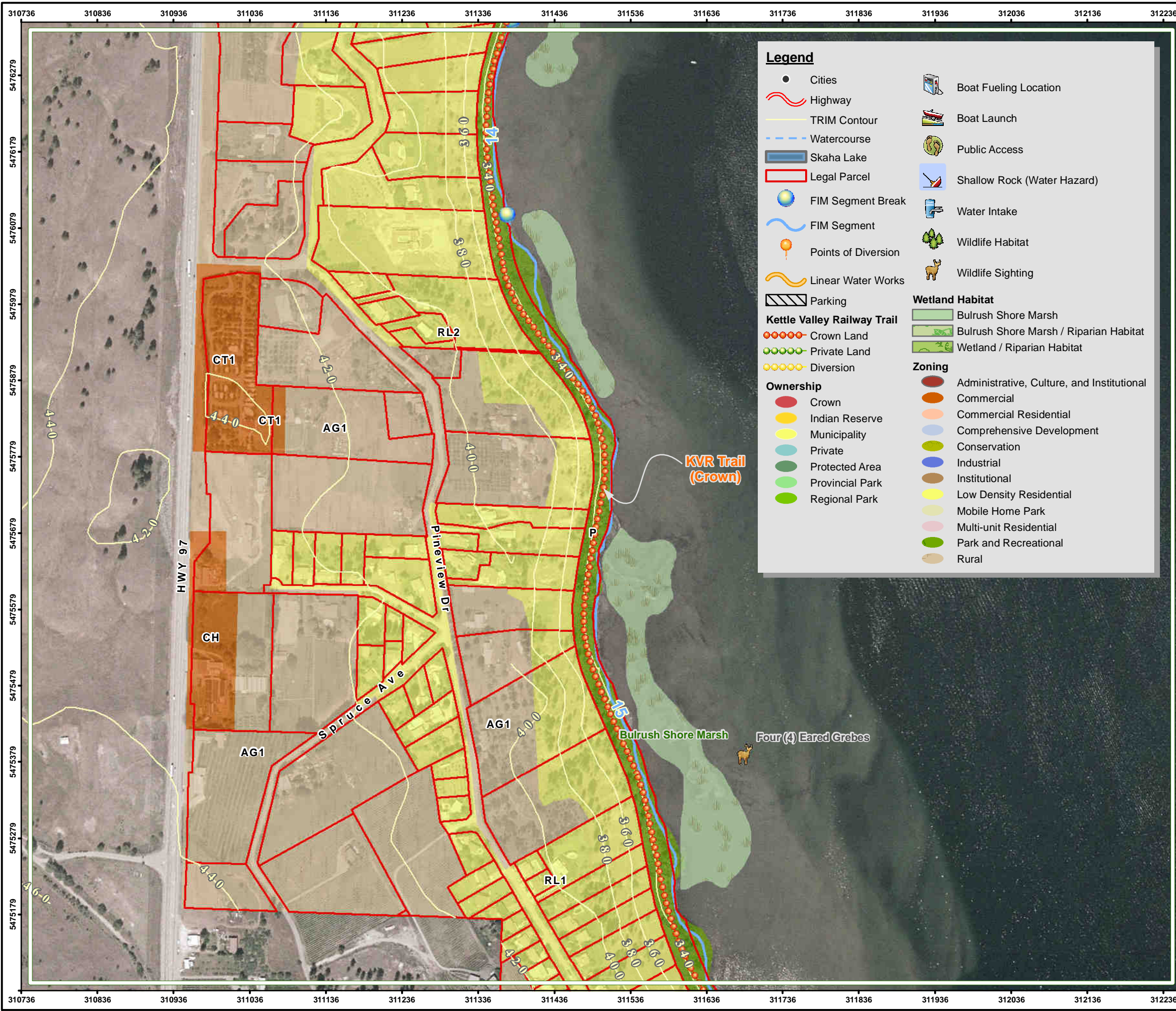


SOURCE INFORMATION

Base Map: 82E.042
 Orthophoto: Province of British Columbia
 Waterbody Information: Skaha Lake
 Location Information: Field, GPS (Trimble GeoXT)
 Feature Information: Airphoto and Topographic Estimate
 Field Inventory
 Date of Inventory: Spring, 2008
 Inventory Management: Jason Schleppe, R.P. Bio. / Robert Wagner



Contributing Partners:
 Okanagan Nation Alliance
 Community Mapping Network (DFO)
 Okanagan Basin Water Board



Legend

● Cities	Boat Fueling Location
Highway	Boat Launch
TRIM Contour	Public Access
Watercourse	Shallow Rock (Water Hazard)
Skaha Lake	Water Intake
Legal Parcel	Wildlife Habitat
FIM Segment Break	Wildlife Sighting
FIM Segment	
Points of Diversion	
Linear Water Works	
Parking	

Kettle Valley Railway Trail

- Crown Land
- Private Land
- Diversion

Ownership

- Crown
- Indian Reserve
- Municipality
- Private
- Protected Area
- Provincial Park
- Regional Park

Wetland Habitat

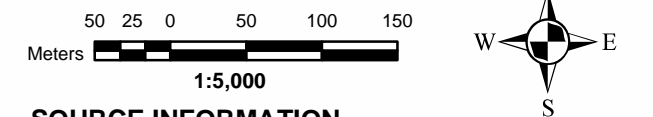
- Bulrush Shore Marsh
- Bulrush Shore Marsh / Riparian Habitat
- Wetland / Riparian Habitat

Zoning

- Administrative, Culture, and Institutional
- Commercial
- Commercial Residential
- Comprehensive Development
- Conservation
- Industrial
- Institutional
- Low Density Residential
- Mobile Home Park
- Multi-unit Residential
- Park and Recreational
- Rural

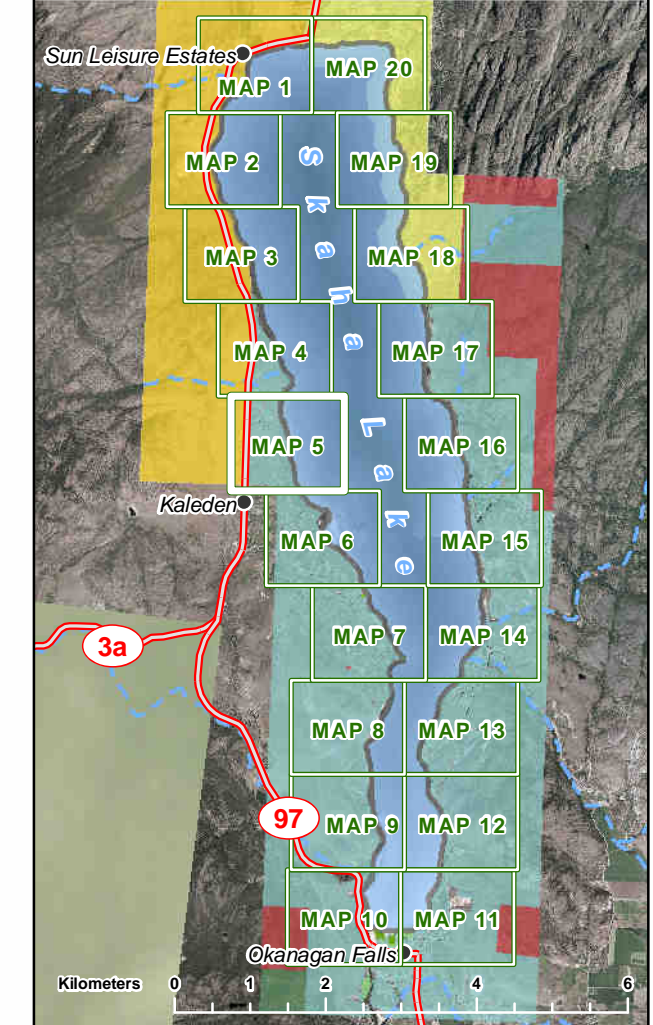
Skaha Lake Foreshore Inventory and Mapping - Topographic and Zoning Map 5

Project: Foreshore Inventory and Mapping
 Location: Regional District of Okanagan - Similkameen
 Project No.: 07-178
 Prepared for: Regional District of Okanagan - Similkameen
 Prepared by: Ecoscape Environmental Consultants Ltd.
 Drawn by: Robert Wagner
 Checked by: Jason Schleppe
 Projection: NAD83-UTM Zone 11
 Date: November 5, 2008

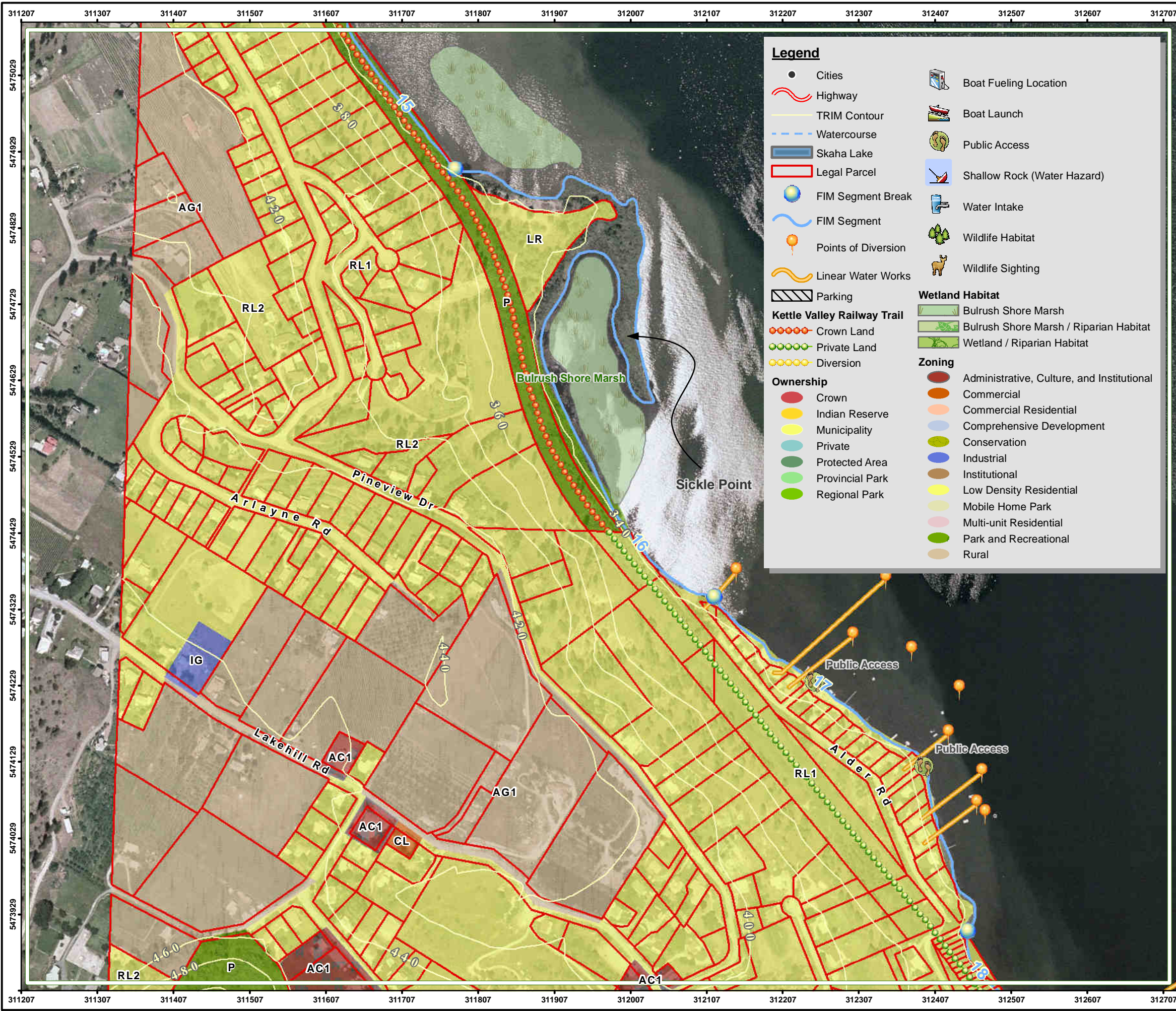


SOURCE INFORMATION

Base Map: 82E.042
 Orthophoto: Province of British Columbia
 Waterbody Information: Skaha Lake
 Location Information: Field, GPS (Trimble GeoXT)
 Feature Information: Airphoto and Topographic Estimate
 Field Inventory
 Date of Inventory: Spring, 2008
 Inventory Management: Jason Schleppe, R.P. Bio. / Robert Wagner

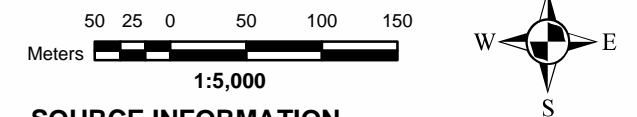


Contributing Partners:
 Okanagan Nation Alliance
 Community Mapping Network (DFO)
 Okanagan Basin Water Board



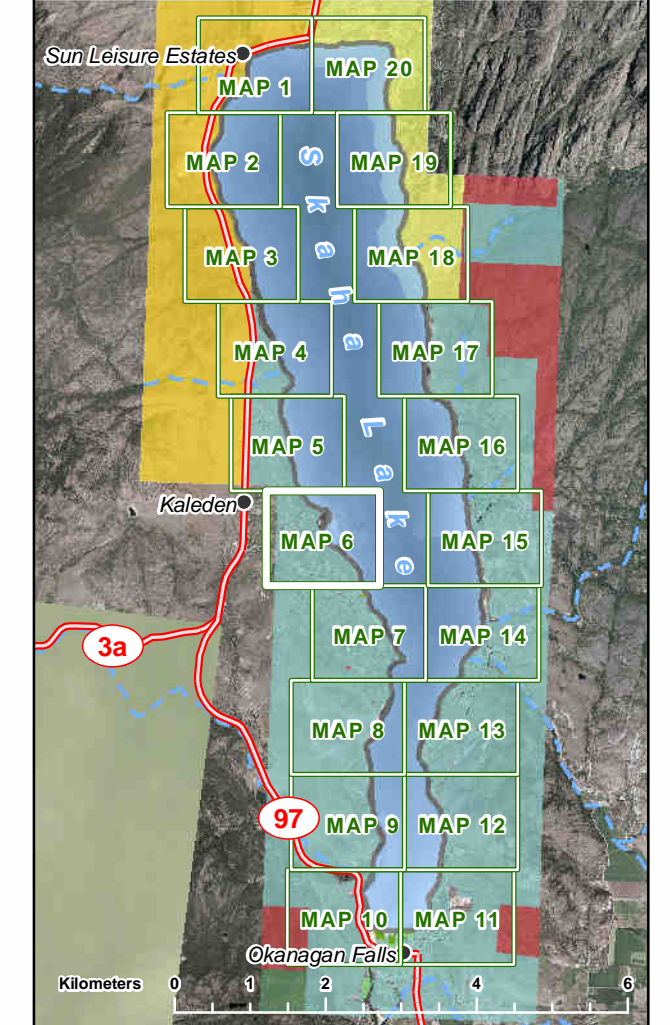
Skaha Lake Foreshore Inventory and Mapping - Topographic and Zoning Map 6

Project: Foreshore Inventory and Mapping
 Location: Regional District of Okanagan - Similkameen
 Project No.: 07-178
 Prepared for: Regional District of Okanagan - Similkameen
 Prepared by: Ecoscape Environmental Consultants Ltd.
 Drawn by: Robert Wagner
 Checked by: Jason Schleppe
 Projection: NAD83-UTM Zone 11
 Date: November 5, 2008



SOURCE INFORMATION

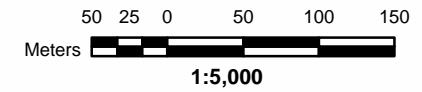
Base Map: 82E.033/82E.042
 Orthophoto: Province of British Columbia
 Waterbody Information: Skaha Lake
 Location Information: Field, GPS (Trimble GeoXT)
 Feature Information: Airphoto and Topographic Estimate
 Field Inventory
 Date of Inventory: Spring, 2008
 Inventory Management: Jason Schleppe, R.P. Bio. / Robert Wagner



Contributing Partners:
 Okanagan Nation Alliance
 Community Mapping Network (DFO)
 Okanagan Basin Water Board

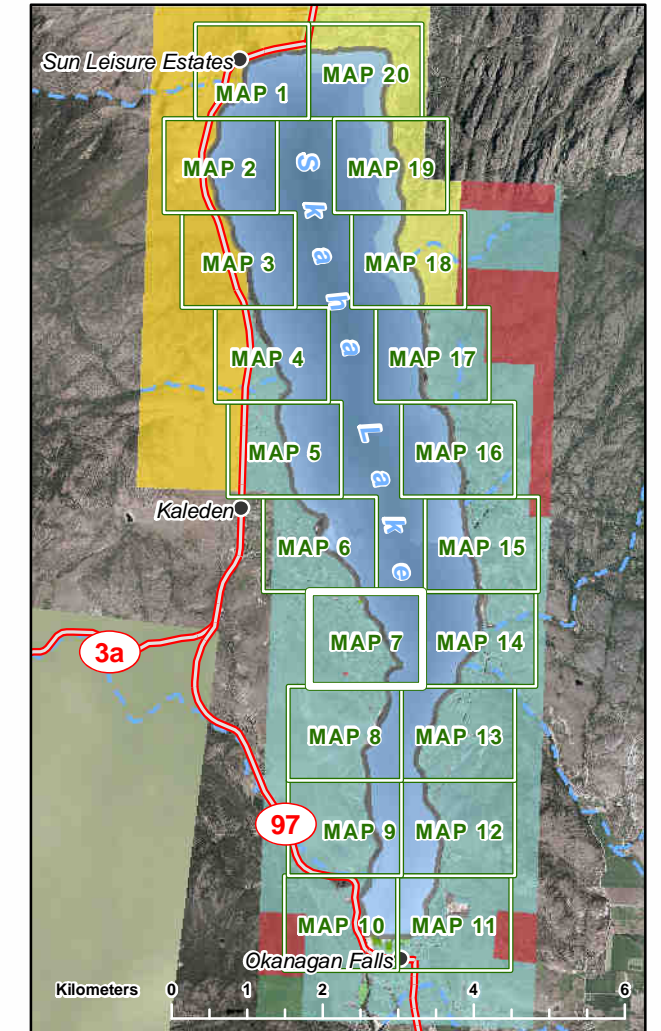
Skaha Lake Foreshore Inventory and Mapping - Topographic and Zoning Map 7

Project: Foreshore Inventory and Mapping
 Location: Regional District of Okanagan - Similkameen
 Project No.: 07-178
 Prepared for: Regional District of Okanagan - Similkameen
 Prepared by: Ecoscape Environmental Consultants Ltd.
 Drawn by: Robert Wagner
 Checked by: Jason Schleppe
 Projection: NAD83-UTM Zone 11
 Date: November 5, 2008



SOURCE INFORMATION

Base Map: 82E.033
 Orthophoto: Province of British Columbia
 Waterbody Information: Skaha Lake
 Location Information: Field, GPS (Trimble GeoXT)
 Feature Information: Airphoto and Topographic Estimate
 Field Inventory
 Date of Inventory: Spring, 2008
 Inventory Management: Jason Schleppe, R.P. Bio. / Robert Wagner

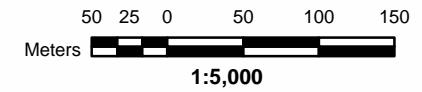


Contributing Partners:
 Okanagan Nation Alliance
 Community Mapping Network (DFO)
 Okanagan Basin Water Board



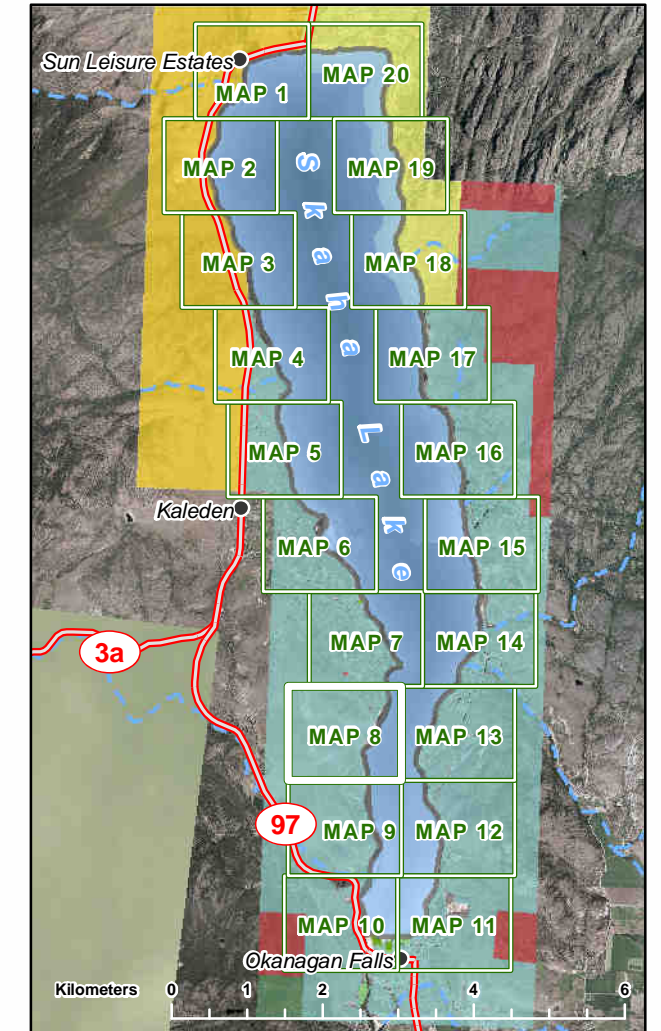
Skaha Lake Foreshore Inventory and Mapping - Topographic and Zoning Map 8

Project: Foreshore Inventory and Mapping
 Location: Regional District of Okanagan - Similkameen
 Project No.: 07-178
 Prepared for: Regional District of Okanagan - Similkameen
 Prepared by: Ecoscape Environmental Consultants Ltd.
 Drawn by: Robert Wagner
 Checked by: Jason Schleppe
 Projection: NAD83-UTM Zone 11
 Date: November 5, 2008

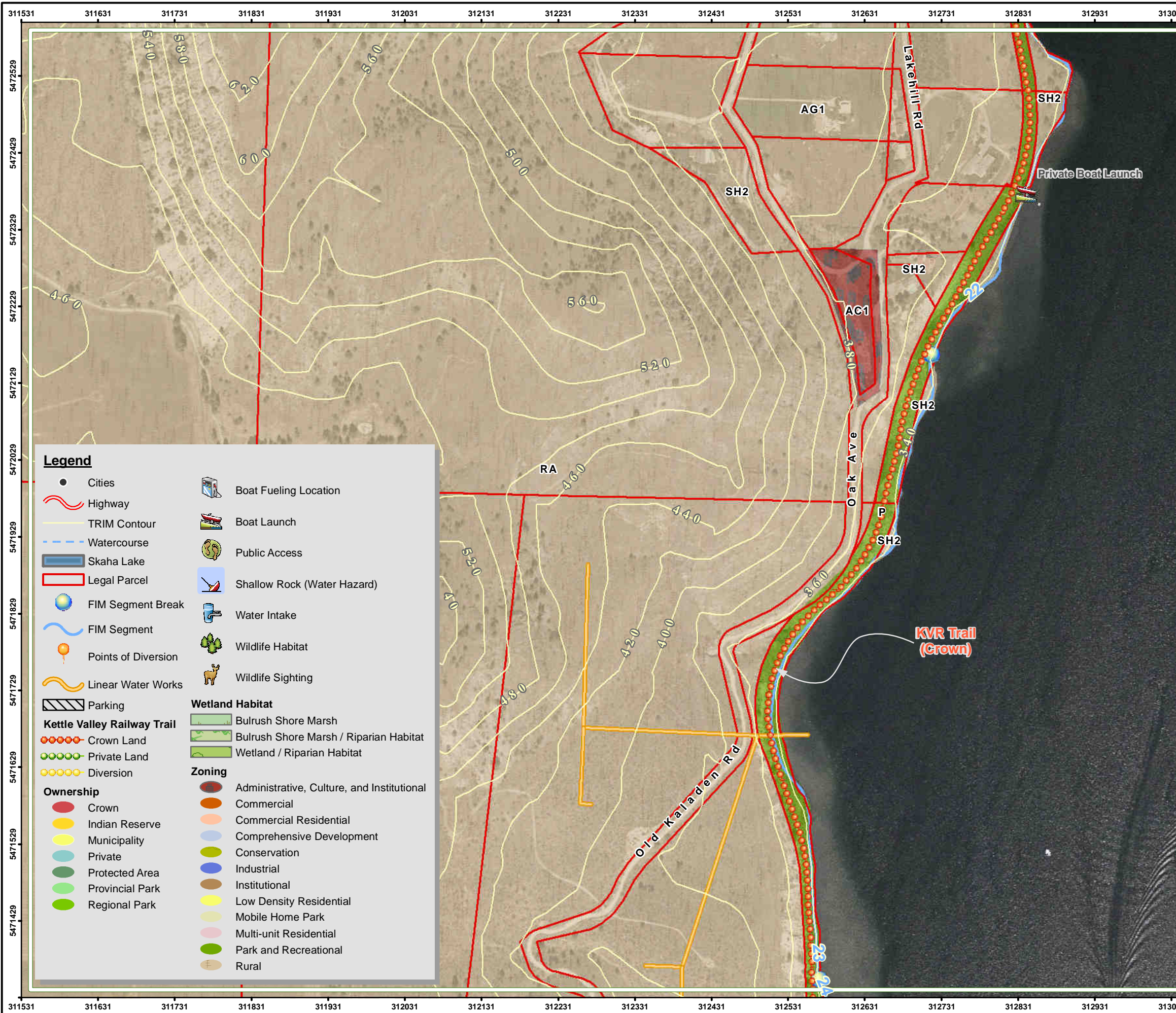


SOURCE INFORMATION

Base Map: 82E.033
 Orthophoto: Province of British Columbia
 Waterbody Information: Skaha Lake
 Location Information: Field, GPS (Trimble GeoXT)
 Feature Information: Airphoto and Topographic Estimate
 Field Inventory
 Date of Inventory: Spring, 2008
 Inventory Management: Jason Schleppe, R.P. Bio. / Robert Wagner



Contributing Partners:
 Okanagan Nation Alliance
 Community Mapping Network (DFO)
 Okanagan Basin Water Board

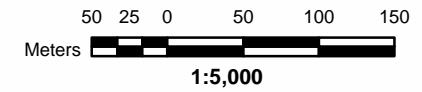


Legend

● Cities	Boat Fueling Location
Highway	Boat Launch
TRIM Contour	Public Access
Watercourse	Shallow Rock (Water Hazard)
Skaha Lake	Water Intake
Legal Parcel	Wildlife Habitat
FIM Segment Break	Wildlife Sighting
FIM Segment	
Points of Diversion	
Linear Water Works	
Parking	
Kettle Valley Railway Trail	Wetland Habitat
○ Crown Land	Bulrush Shore Marsh
○ Private Land	Bulrush Shore Marsh / Riparian Habitat
○ Diversion	Wetland / Riparian Habitat
Ownership	Zoning
○ Crown	Administrative, Culture, and Institutional
○ Indian Reserve	Commercial
○ Municipality	Commercial Residential
○ Private	Comprehensive Development
○ Protected Area	Conservation
○ Provincial Park	Industrial
○ Regional Park	Institutional
	Low Density Residential
	Mobile Home Park
	Multi-unit Residential
	Park and Recreational
	Rural

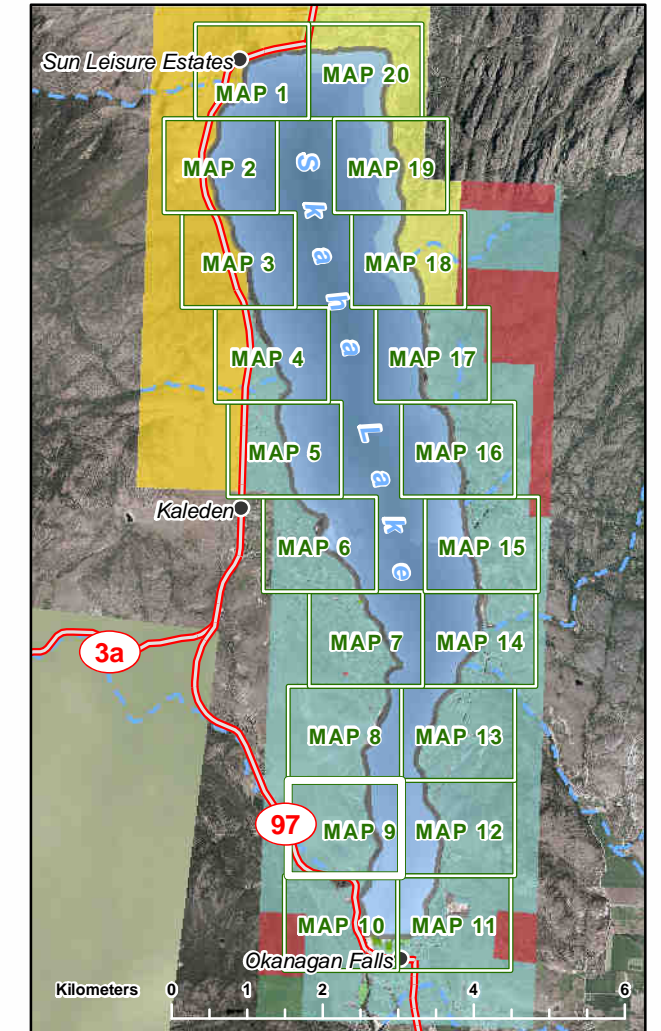
Skaha Lake Foreshore Inventory and Mapping - Topographic and Zoning Map 9

Project: Foreshore Inventory and Mapping
 Location: Regional District of Okanagan - Similkameen
 Project No.: 07-178
 Prepared for: Regional District of Okanagan - Similkameen
 Prepared by: Ecoscape Environmental Consultants Ltd.
 Drawn by: Robert Wagner
 Checked by: Jason Schleppe
 Projection: NAD83-UTM Zone 11
 Date: September 2, 2008

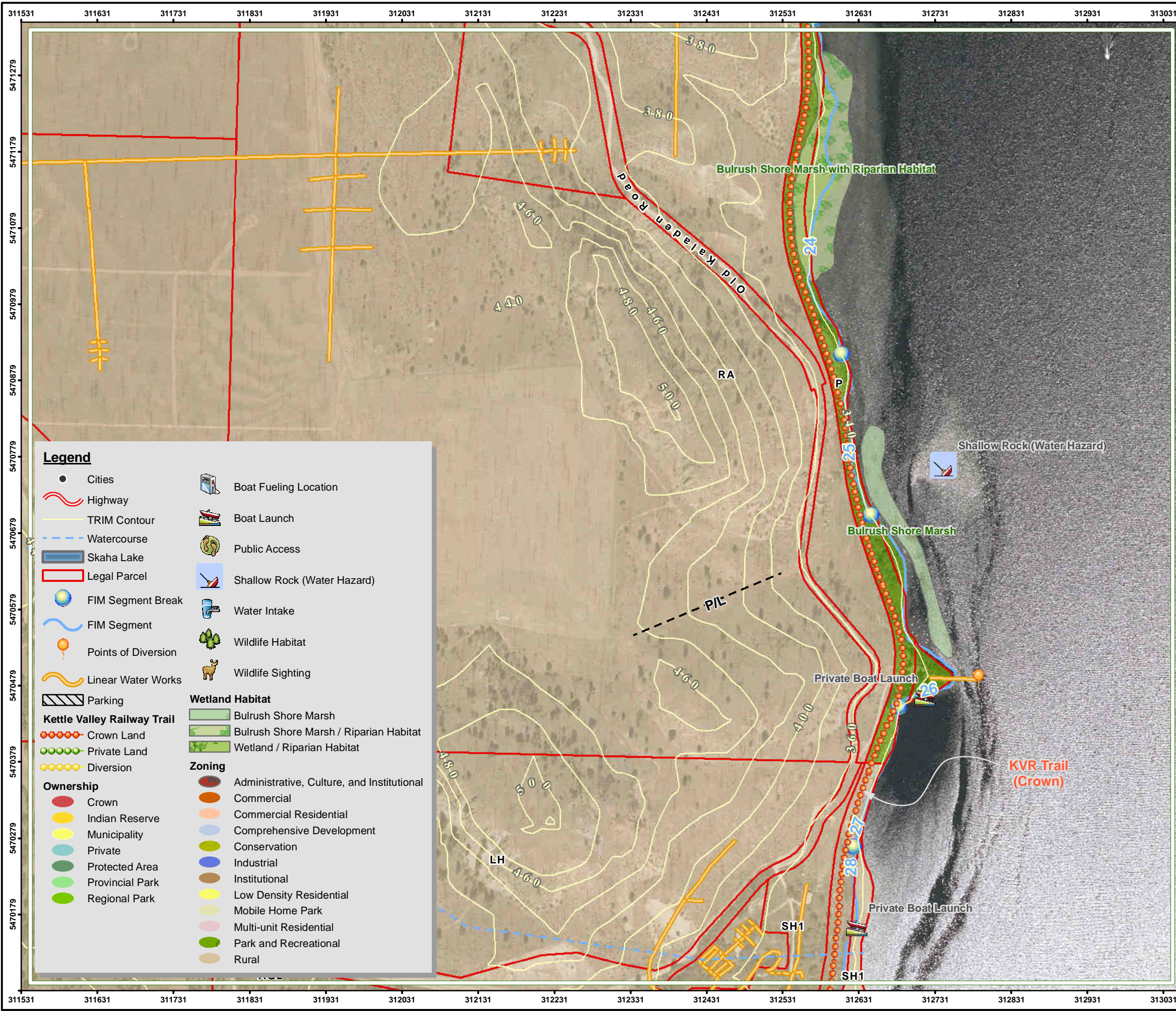


SOURCE INFORMATION

Base Map: 82E.033
 Orthophoto: Province of British Columbia
 Waterbody Information: Skaha Lake
 Location Information: Field, GPS (Trimble GeoXT)
 Feature Information: Airphoto and Topographic Estimate
 Field Inventory
 Date of Inventory: Spring, 2008
 Inventory Management: Jason Schleppe, R.P. Bio. / Robert Wagner



Contributing Partners:
 Okanagan Nation Alliance
 Community Mapping Network (DFO)
 Okanagan Basin Water Board

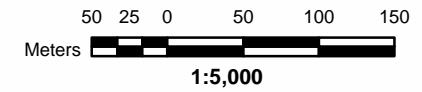


Legend

● Cities	Boat Fueling Location
Highway	Boat Launch
TRIM Contour	Public Access
Watercourse	Shallow Rock (Water Hazard)
Skaha Lake	Water Intake
Legal Parcel	Wildlife Habitat
FIM Segment Break	Wildlife Sighting
FIM Segment	
Points of Diversion	
Linear Water Works	
Parking	
Kettle Valley Railway Trail	Wetland Habitat
○ Crown Land	■ Bulrush Shore Marsh
○ Private Land	■ Bulrush Shore Marsh / Riparian Habitat
○ Diversion	■ Wetland / Riparian Habitat
Ownership	Zoning
● Crown	● Administrative, Culture, and Institutional
● Indian Reserve	● Commercial
● Municipality	● Commercial Residential
● Private	● Comprehensive Development
● Protected Area	● Conservation
● Provincial Park	● Industrial
● Regional Park	● Institutional
	● Low Density Residential
	● Mobile Home Park
	● Multi-unit Residential
	● Park and Recreational
	● Rural

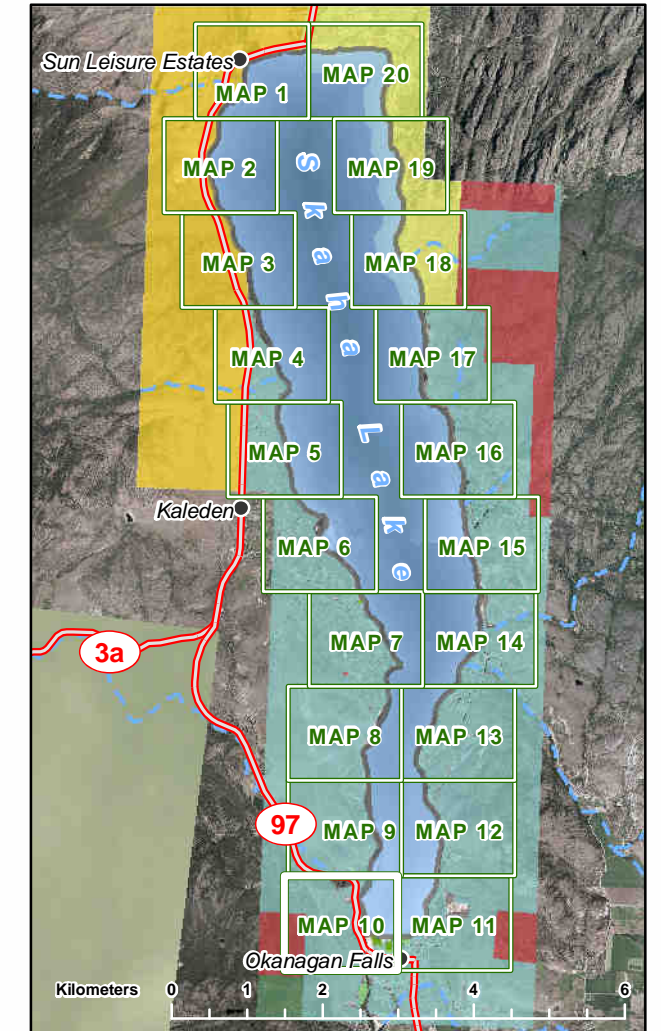
Skaha Lake Foreshore Inventory and Mapping - Topographic and Zoning Map 10

Project: Foreshore Inventory and Mapping
 Location: Regional District of Okanagan - Similkameen
 Project No.: 07-178
 Prepared for: Regional District of Okanagan - Similkameen
 Prepared by: Ecoscape Environmental Consultants Ltd.
 Drawn by: Robert Wagner
 Checked by: Jason Schleppe
 Projection: NAD83-UTM Zone 11
 Date: November 5, 2008

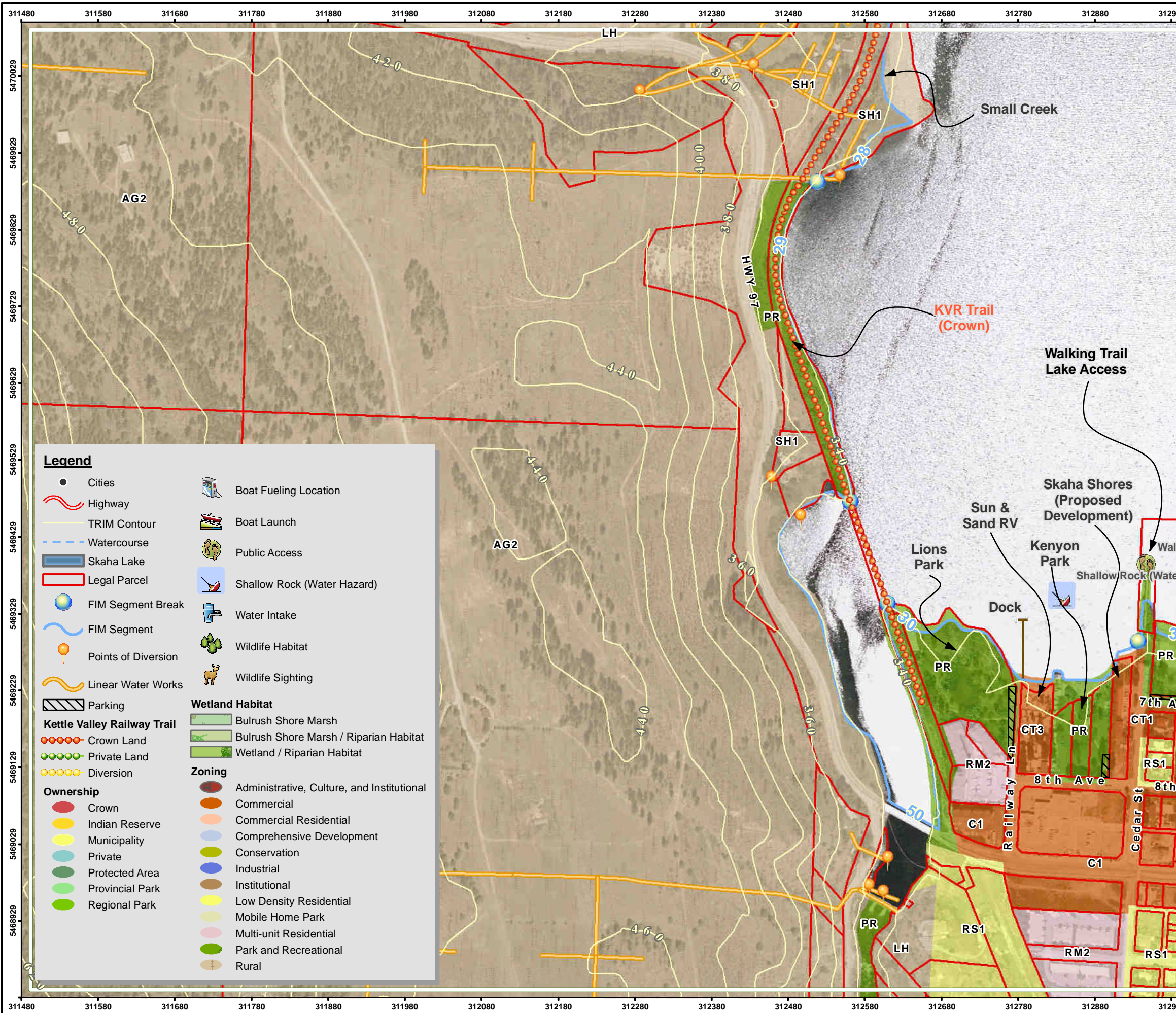


SOURCE INFORMATION

Base Map: 82E.033
 Orthophoto: Province of British Columbia
 Waterbody Information: Skaha Lake
 Location Information: Field, GPS (Trimble GeoXT)
 Feature Information: Airphoto and Topographic Estimate
 Field Inventory
 Date of Inventory: Spring, 2008
 Inventory Management: Jason Schleppe, R.P. Bio. / Robert Wagner

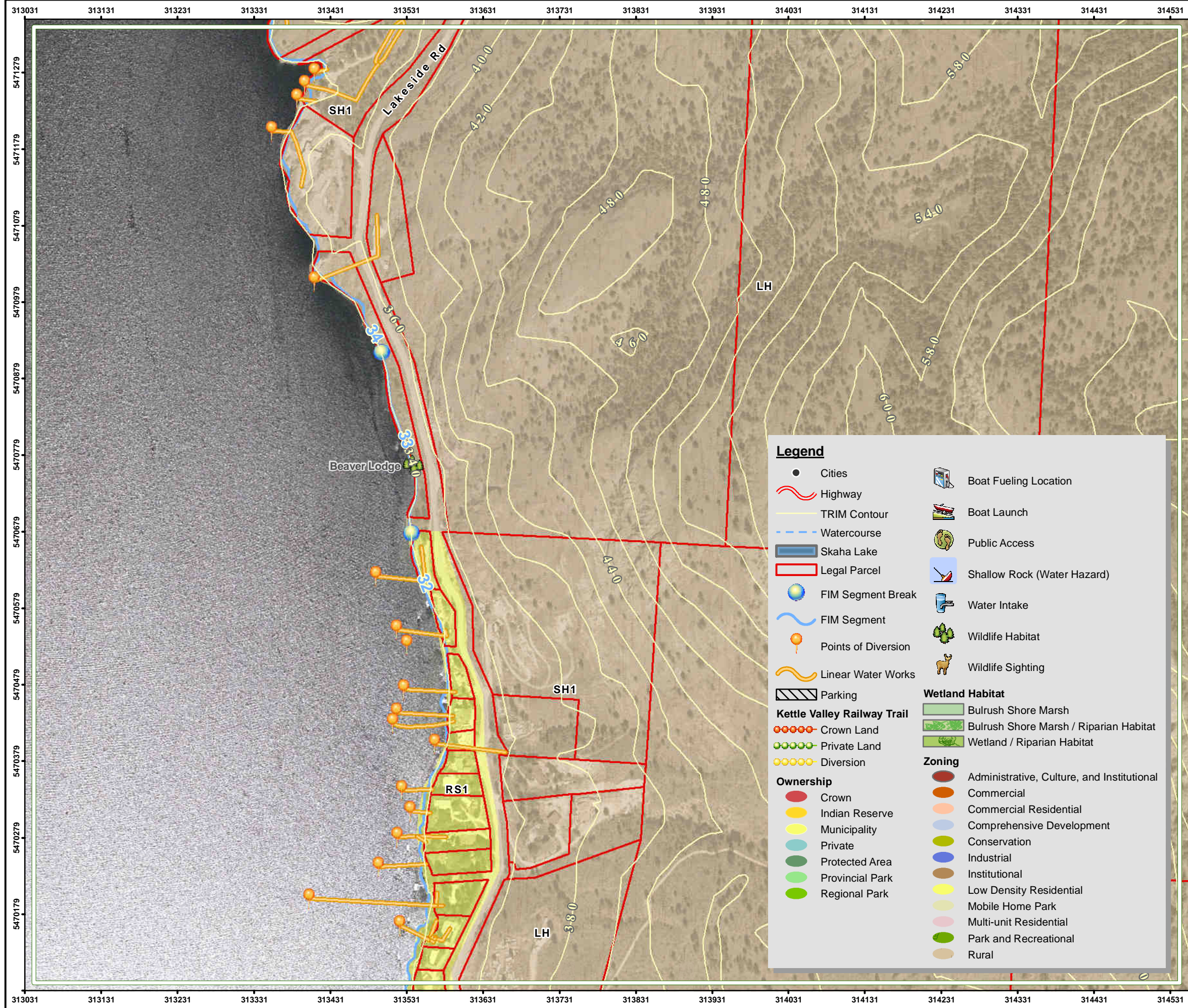


Contributing Partners:
 Okanagan Nation Alliance
 Community Mapping Network (DFO)
 Okanagan Basin Water Board



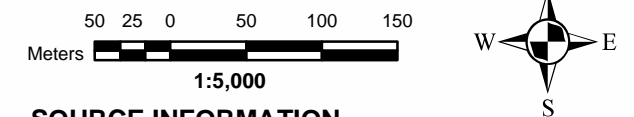
Legend

- | | |
|------------------------------------|--|
| ● Cities | Boat Fueling Location |
| Highway | Boat Launch |
| TRIM Contour | Public Access |
| Watercourse | Shallow Rock (Water Hazard) |
| Skaha Lake | Water Intake |
| Legal Parcel | Wildlife Habitat |
| FIM Segment Break | Wildlife Sighting |
| FIM Segment | |
| Points of Diversion | |
| Linear Water Works | |
| Parking | |
| Kettle Valley Railway Trail | Wetland Habitat |
| ○ Crown Land | Bulrush Shore Marsh |
| ○ Private Land | Bulrush Shore Marsh / Riparian Habitat |
| ○ Diversion | Wetland / Riparian Habitat |
| Ownership | Zoning |
| ● Crown | Administrative, Culture, and Institutional |
| ● Indian Reserve | Commercial |
| ● Municipality | Commercial Residential |
| ● Private | Comprehensive Development |
| ● Protected Area | Conservation |
| ● Provincial Park | Industrial |
| ● Regional Park | Institutional |
| | Low Density Residential |
| | Mobile Home Park |
| | Multi-unit Residential |
| | Park and Recreational |
| | Rural |



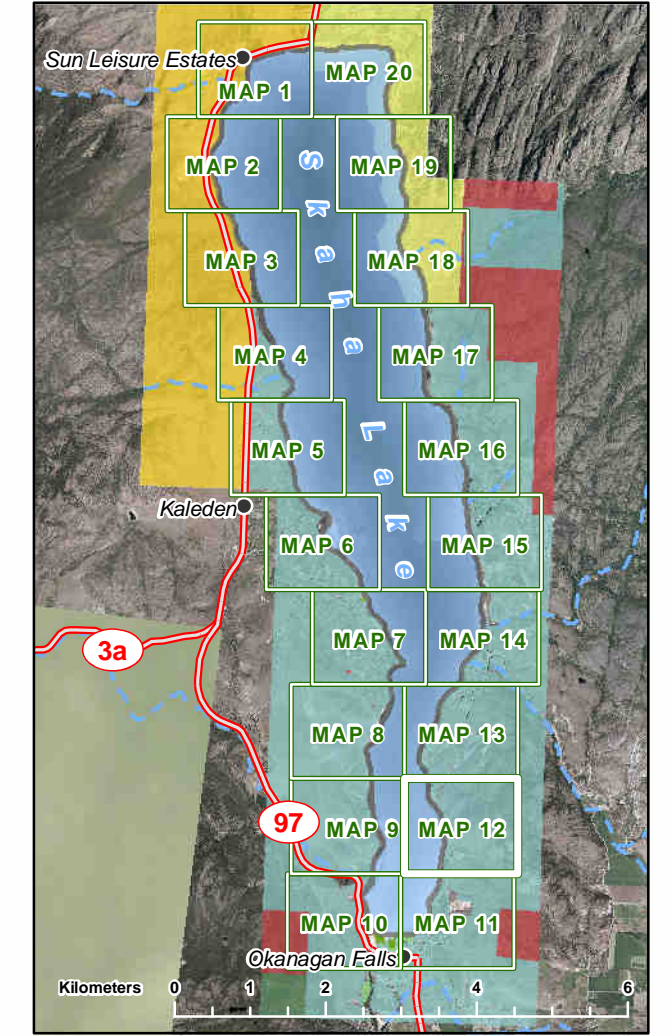
Skaha Lake Foreshore Inventory and Mapping - Topographic and Zoning Map 12

Project: Foreshore Inventory and Mapping
 Location: Regional District of Okanagan - Similkameen
 Project No.: 07-178
 Prepared for: Regional District of Okanagan - Similkameen
 Prepared by: Ecoscape Environmental Consultants Ltd.
 Drawn by: Robert Wagner
 Checked by: Jason Schleppe
 Projection: NAD83-UTM Zone 11
 Date: November 5, 2008

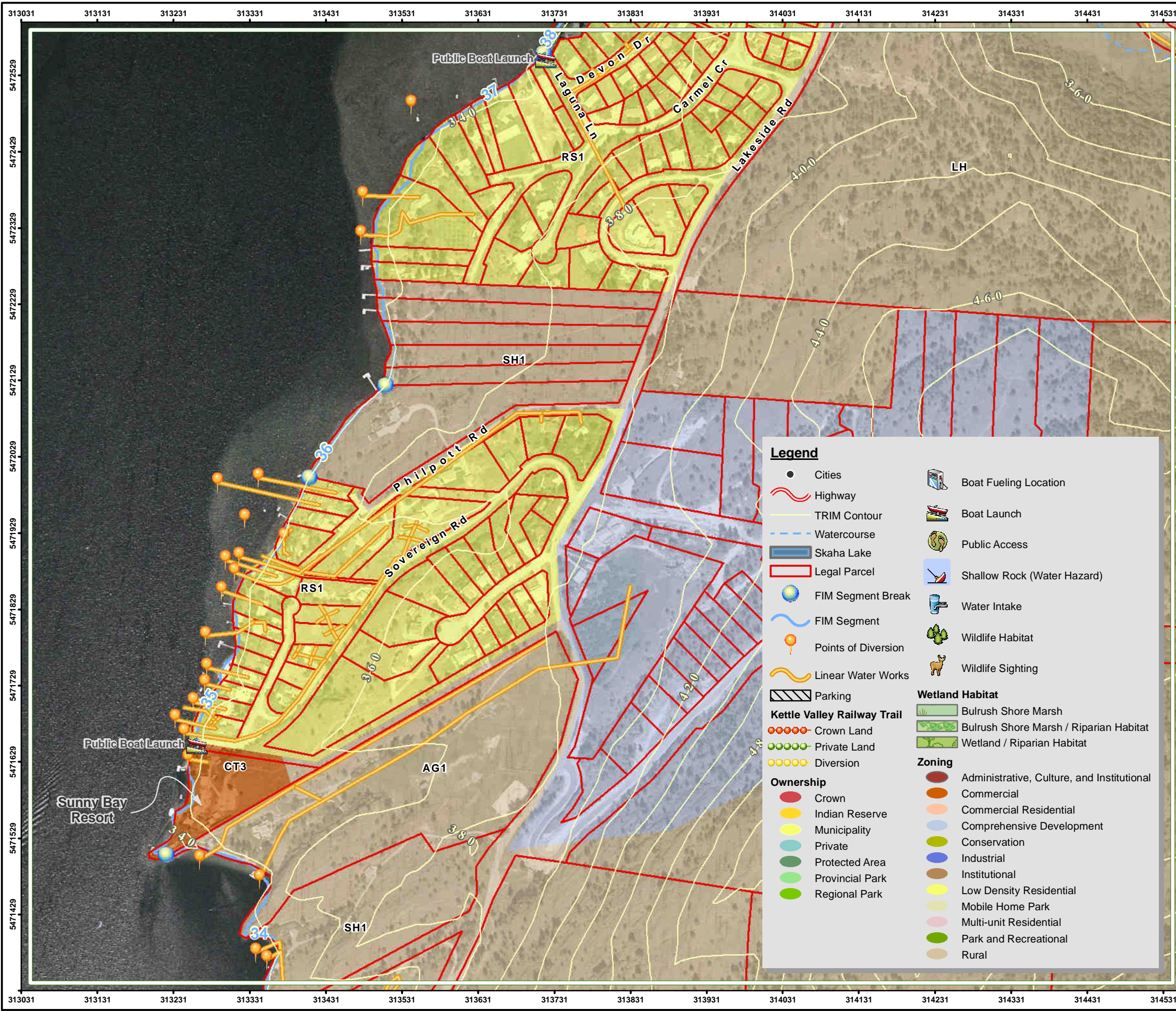


SOURCE INFORMATION

Base Map: 82E.033
 Orthophoto: Province of British Columbia
 Waterbody Information: Skaha Lake
 Location Information: Field, GPS (Trimble GeoXT)
 Feature Information: Airphoto and Topographic Estimate
 Field Inventory
 Date of Inventory: Spring, 2008
 Inventory Management: Jason Schleppe, R.P. Bio. / Robert Wagner

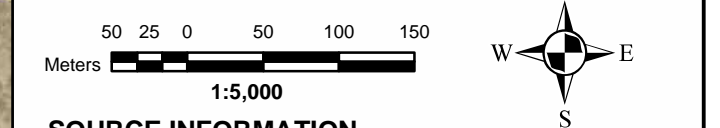


Contributing Partners:
 Okanagan Nation Alliance
 Community Mapping Network (DFO)
 Okanagan Basin Water Board



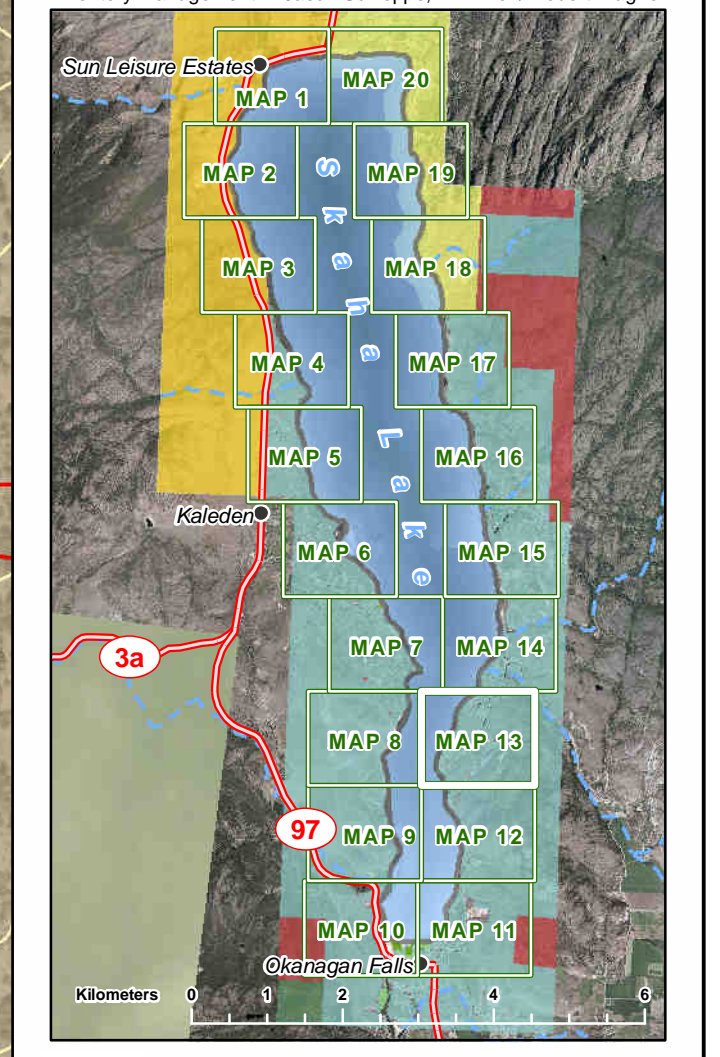
Skaha Lake Foreshore Inventory and Mapping - Topographic and Zoning Map 13

Project: Foreshore Inventory and Mapping
 Location: Regional District of Okanagan - Similkameen
 Project No.: 07-178
 Prepared for: Regional District of Okanagan - Similkameen
 Prepared by: Ecoscape Environmental Consultants Ltd.
 Drawn by: Robert Wagner
 Checked by: Jason Schleppe
 Projection: NAD83-UTM Zone 11
 Date: November 5, 2008



SOURCE INFORMATION

Base Map: 82E.033
 Orthophoto: Province of British Columbia
 Waterbody Information: Skaha Lake
 Location Information: Field, GPS (Trimble GeoXT)
 Feature Information: Airphoto and Topographic Estimate
 Field Inventory
 Date of Inventory: Spring, 2008
 Inventory Management: Jason Schleppe, R.P. Bio. / Robert Wagner



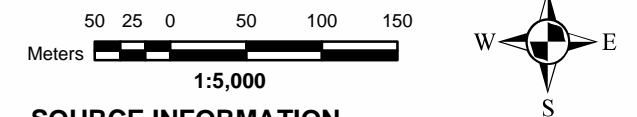
Contributing Partners:

Okanagan Nation Alliance
 Community Mapping Network (DFO)
 Okanagan Basin Water Board



Skaha Lake Foreshore Inventory and Mapping - Topographic and Zoning Map 14

Project: Foreshore Inventory and Mapping
 Location: Regional District of Okanagan - Similkameen
 Project No.: 07-178
 Prepared for: Regional District of Okanagan - Similkameen
 Prepared by: Ecoscape Environmental Consultants Ltd.
 Drawn by: Robert Wagner
 Checked by: Jason Schleppe
 Projection: NAD83-UTM Zone 11
 Date: November 5, 2008

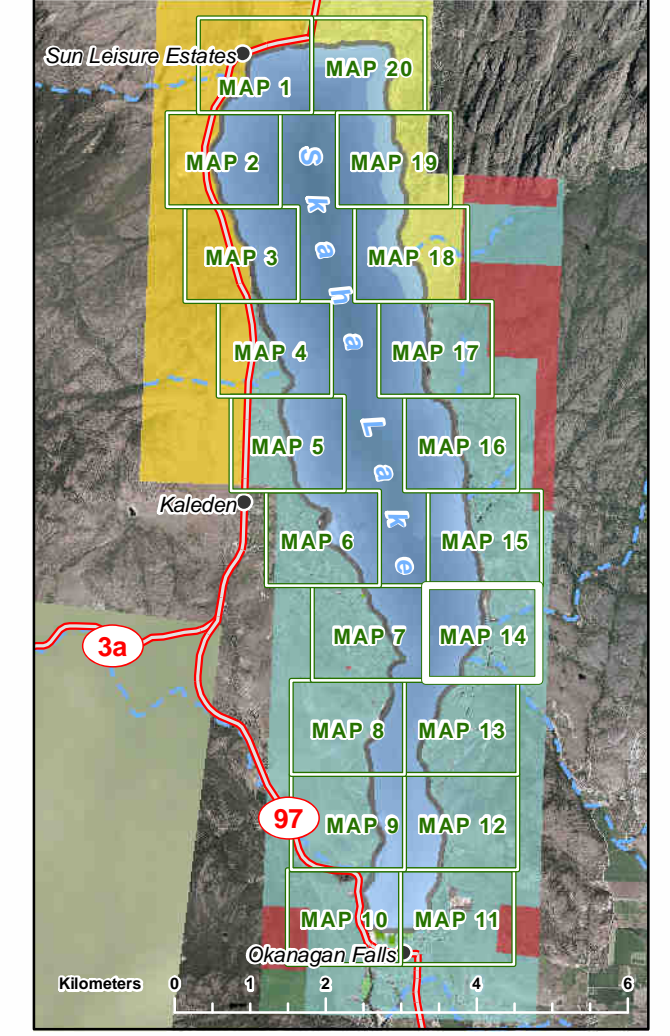



SOURCE INFORMATION


Base Map: 82E.033
 Orthophoto: Province of British Columbia
 Waterbody Information: Skaha Lake
 Location Information: Field, GPS (Trimble GeoXT)
 Feature Information: Airphoto and Topographic Estimate
 Field Inventory
 Date of Inventory: Spring, 2008
 Inventory Management: Jason Schleppe, R.P. Bio. / Robert Wagner

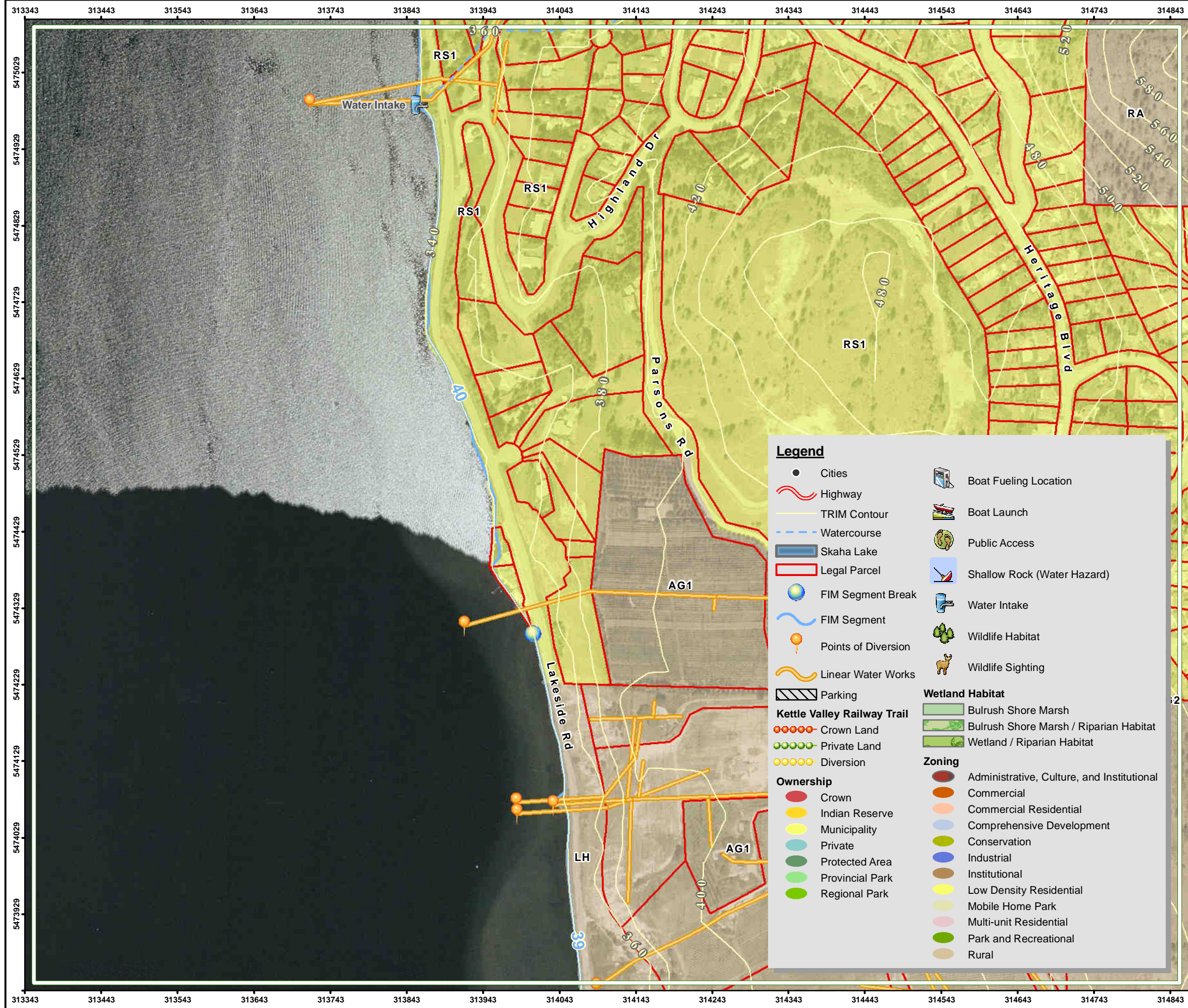
Legend

● Cities	Boat Fueling Location
Highway	Boat Launch
TRIM Contour	Public Access
Watercourse	Shallow Rock (Water Hazard)
Skaha Lake	Water Intake
Legal Parcel	Wildlife Habitat
FIM Segment Break	Wildlife Sighting
FIM Segment	
Points of Diversion	
Linear Water Works	
Parking	
Kettle Valley Railway Trail	Wetland Habitat
● Crown Land	Bulrush Shore Marsh
● Private Land	Bulrush Shore Marsh / Riparian Habitat
● Diversion	Wetland / Riparian Habitat
Ownership	Zoning
● Crown	Administrative, Culture, and Institutional
● Indian Reserve	Commercial
● Municipality	Commercial Residential
● Private	Comprehensive Development
● Protected Area	Conservation
● Provincial Park	Industrial
● Regional Park	Institutional
	Low Density Residential
	Mobile Home Park
	Multi-unit Residential
	Park and Recreational
	Rural



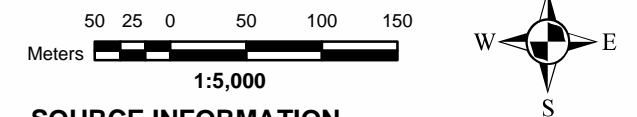

Contributing Partners:
 Okanagan Nation Alliance
 Community Mapping Network (DFO)
 Okanagan Basin Water Board





Skaha Lake Foreshore Inventory and Mapping - Topographic and Zoning Map 15

Project: Foreshore Inventory and Mapping
 Location: Regional District of Okanagan - Similkameen
 Project No.: 07-178
 Prepared for: Regional District of Okanagan - Similkameen
 Prepared by: Ecoscape Environmental Consultants Ltd.
 Drawn by: Robert Wagner
 Checked by: Jason Schleppe
 Projection: NAD83-UTM Zone 11
 Date: November 5, 2008

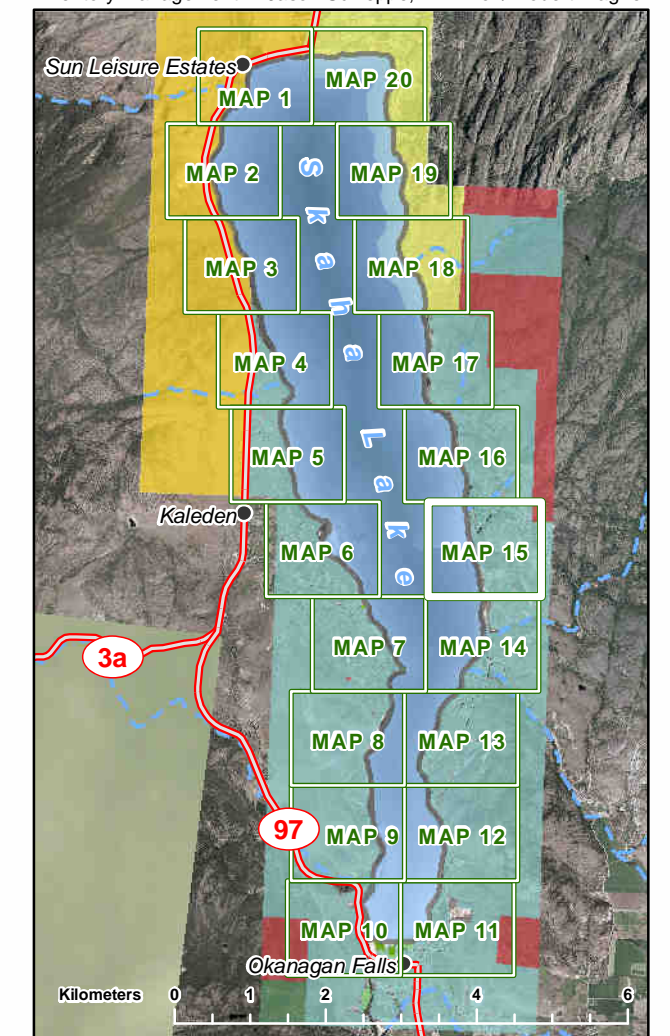


SOURCE INFORMATION

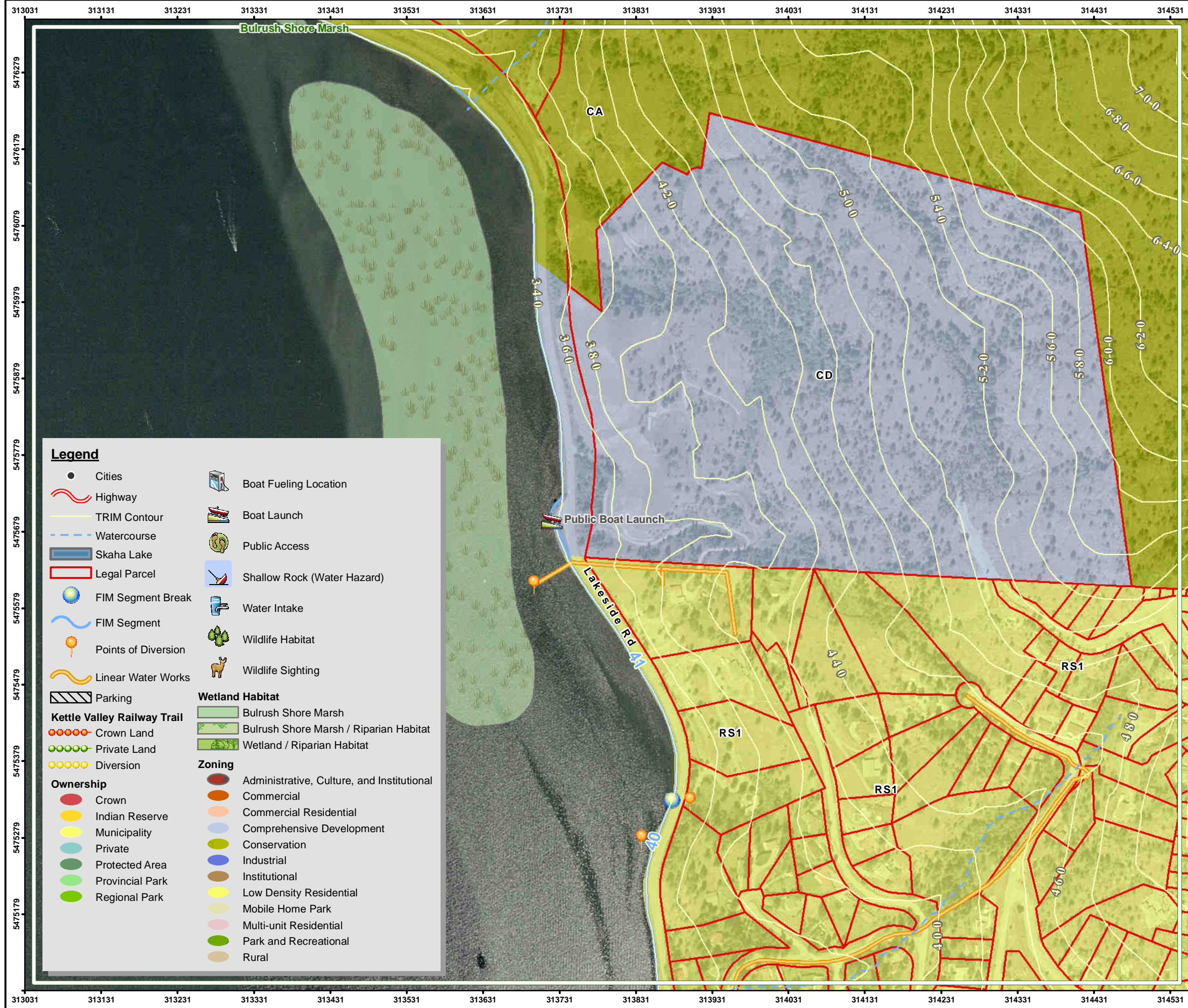
Base Map: 82E.033/82E.043
 Orthophoto: Province of British Columbia
 Waterbody Information: Skaha Lake
 Location Information: Field, GPS (Trimble GeoXT)
 Feature Information: Airphoto and Topographic Estimate
 Field Inventory
 Date of Inventory: Spring, 2008
 Inventory Management: Jason Schleppe, R.P. Bio. / Robert Wagner

Legend

● Cities	Boat Fueling Location
Highway	Boat Launch
TRIM Contour	Public Access
Watercourse	Shallow Rock (Water Hazard)
Skaha Lake	Water Intake
Legal Parcel	Wildlife Habitat
FIM Segment Break	Wildlife Sighting
FIM Segment	
Points of Diversion	
Linear Water Works	
Parking	
Kettle Valley Railway Trail	Wetland Habitat
● Crown Land	Bulrush Shore Marsh
● Private Land	Bulrush Shore Marsh / Riparian Habitat
● Diversion	Wetland / Riparian Habitat
Ownership	Zoning
● Crown	Administrative, Culture, and Institutional
● Indian Reserve	Commercial
● Municipality	Commercial Residential
● Private	Comprehensive Development
● Protected Area	Conservation
● Provincial Park	Industrial
● Regional Park	Institutional
	Low Density Residential
	Mobile Home Park
	Multi-unit Residential
	Park and Recreational
	Rural



Contributing Partners:
 Okanagan Nation Alliance
 Community Mapping Network (DFO)
 Okanagan Basin Water Board

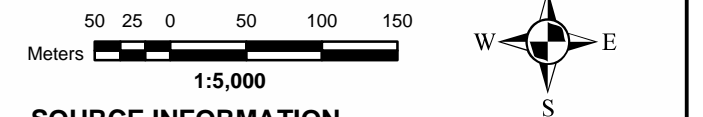


Legend

- | | |
|------------------------------------|--|
| ● Cities | Boat Fueling Location |
| Highway | Boat Launch |
| TRIM Contour | Public Access |
| Watercourse | Shallow Rock (Water Hazard) |
| Skaha Lake | Water Intake |
| Legal Parcel | Wildlife Habitat |
| FIM Segment Break | Wildlife Sighting |
| FIM Segment | |
| Points of Diversion | |
| Linear Water Works | |
| Parking | |
| Kettle Valley Railway Trail | Wetland Habitat |
| ●●●●● Crown Land | ■ Bulrush Shore Marsh |
| ●●●●● Private Land | ■ Bulrush Shore Marsh / Riparian Habitat |
| ●●●●● Diversion | ■ Wetland / Riparian Habitat |
| Ownership | Zoning |
| ● Crown | ● Administrative, Culture, and Institutional |
| ● Indian Reserve | ● Commercial |
| ● Municipality | ● Commercial Residential |
| ● Private | ● Comprehensive Development |
| ● Protected Area | ● Conservation |
| ● Provincial Park | ● Industrial |
| ● Regional Park | ● Institutional |
| | ● Low Density Residential |
| | ● Mobile Home Park |
| | ● Multi-unit Residential |
| | ● Park and Recreational |
| | ● Rural |

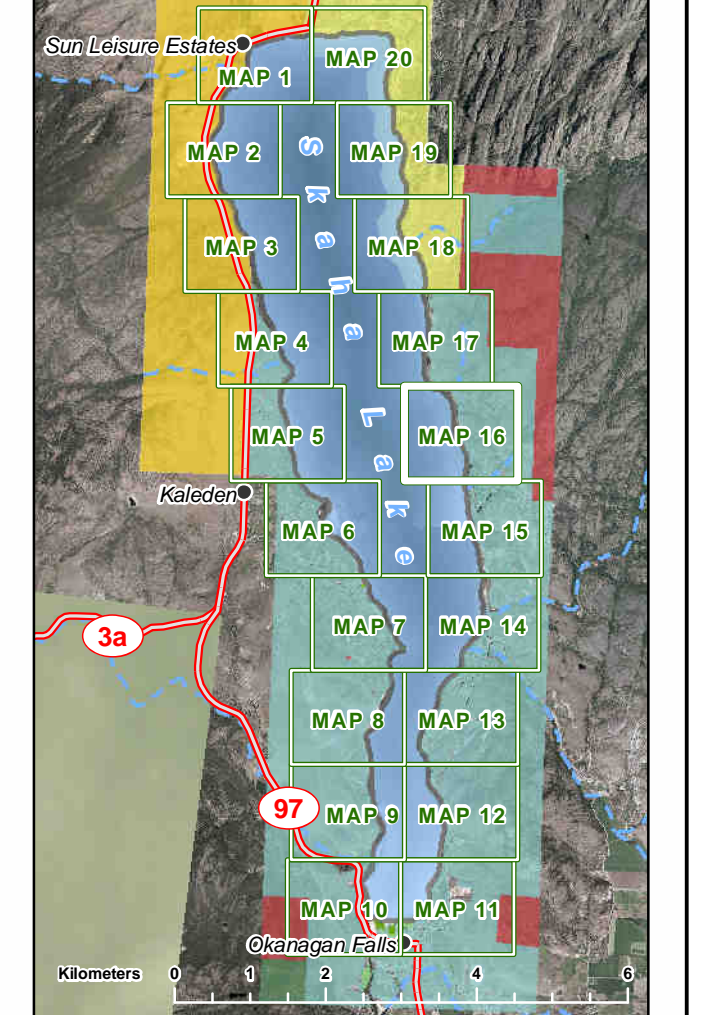
Skaha Lake Foreshore Inventory and Mapping - Topographic and Zoning Map 16

Project: Foreshore Inventory and Mapping
 Location: Regional District of Okanagan - Similkameen
 Project No.: 07-178
 Prepared for: Regional District of Okanagan - Similkameen
 Prepared by: Ecoscape Environmental Consultants Ltd.
 Drawn by: Robert Wagner
 Checked by: Jason Schleppe
 Projection: NAD83-UTM Zone 11
 Date: November 5, 2008

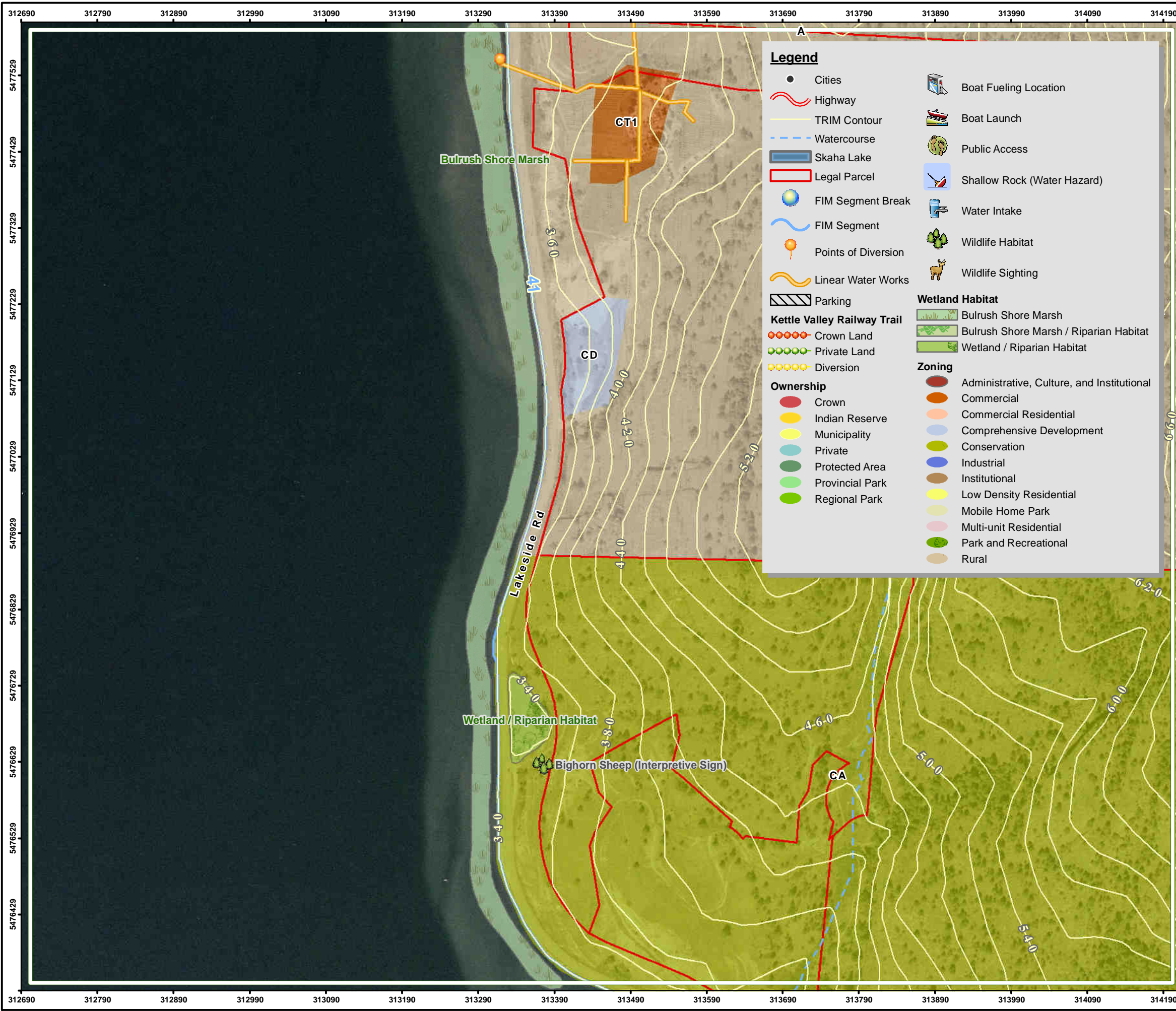


SOURCE INFORMATION

Base Map: 82E.043
 Orthophoto: Province of British Columbia
 Waterbody Information: Skaha Lake
 Location Information: Field, GPS (Trimble GeoXT)
 Feature Information: Airphoto and Topographic Estimate
 Field Inventory
 Date of Inventory: Spring, 2008
 Inventory Management: Jason Schleppe, R.P. Bio. / Robert Wagner



Contributing Partners:
 Okanagan Nation Alliance
 Community Mapping Network (DFO)
 Okanagan Basin Water Board



Legend

● Cities	Boat Fueling Location
Highway	Boat Launch
TRIM Contour	Public Access
Watercourse	Shallow Rock (Water Hazard)
Skaha Lake	Water Intake
Legal Parcel	Wildlife Habitat
FIM Segment Break	Wildlife Sighting
FIM Segment	
Points of Diversion	
Linear Water Works	
Parking	

Wetland Habitat

Bulrush Shore Marsh
Bulrush Shore Marsh / Riparian Habitat
Wetland / Riparian Habitat

Zoning

Administrative, Culture, and Institutional
Commercial
Commercial Residential
Comprehensive Development
Conservation
Industrial
Institutional
Low Density Residential
Mobile Home Park
Multi-unit Residential
Park and Recreational
Rural

Ownership

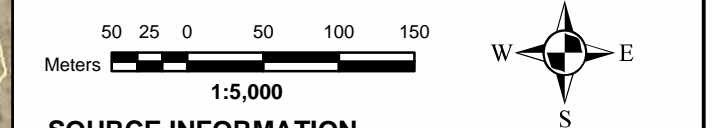
Crown
Indian Reserve
Municipality
Private
Protected Area
Provincial Park
Regional Park

Kettle Valley Railway Trail

Crown Land
Private Land
Diversion

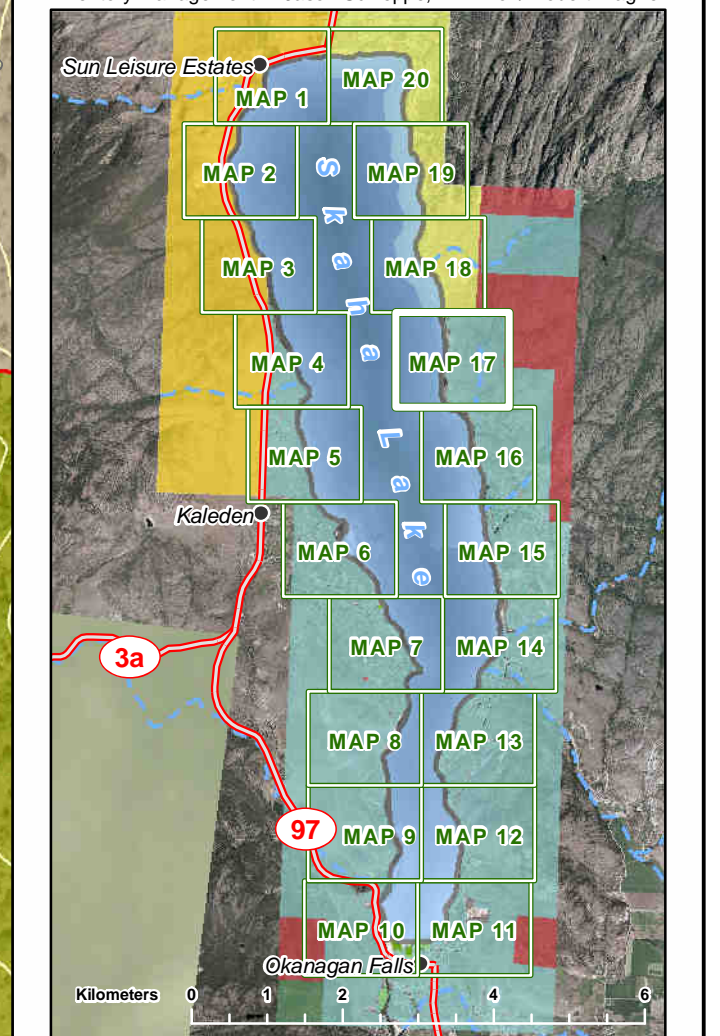
Skaha Lake Foreshore Inventory and Mapping - Topographic and Zoning Map 17

Project: Foreshore Inventory and Mapping
 Location: Regional District of Okanagan - Similkameen
 Project No.: 07-178
 Prepared for: Regional District of Okanagan - Similkameen
 Prepared by: Ecoscape Environmental Consultants Ltd.
 Drawn by: Robert Wagner
 Checked by: Jason Schleppe
 Projection: NAD83-UTM Zone 11
 Date: November 5, 2008

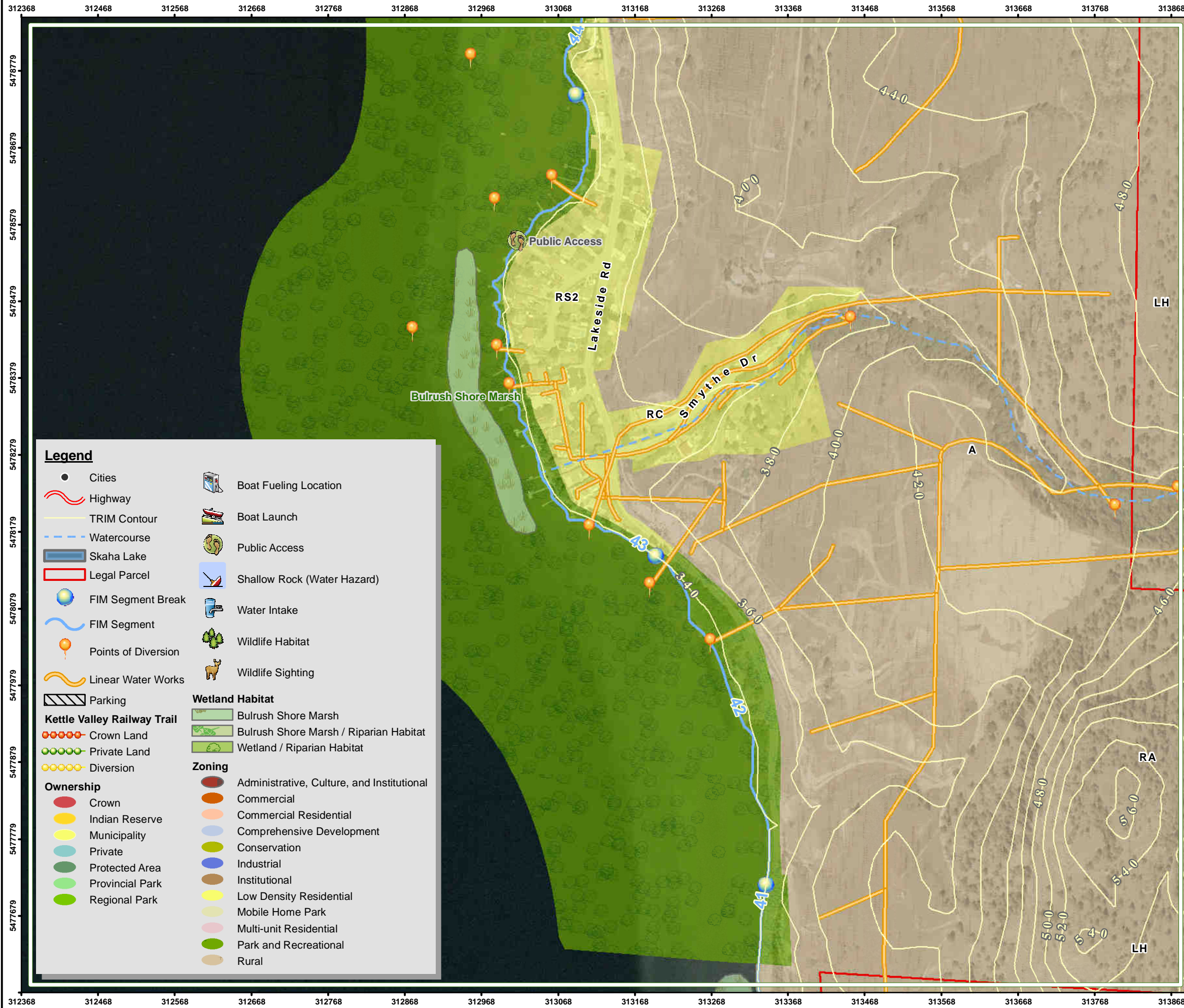


SOURCE INFORMATION

Base Map: 82E.043
 Orthophoto: Province of British Columbia
 Waterbody Information: Skaha Lake
 Location Information: Field, GPS (Trimble GeoXT)
 Feature Information: Airphoto and Topographic Estimate
 Field Inventory
 Date of Inventory: Spring, 2008
 Inventory Management: Jason Schleppe, R.P. Bio. / Robert Wagner



Contributing Partners:
 Okanagan Nation Alliance
 Community Mapping Network (DFO)
 Okanagan Basin Water Board

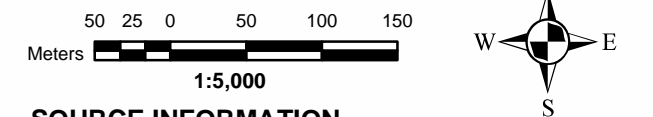


Legend

● Cities	Boat Fueling Location
Highway	Boat Launch
TRIM Contour	Public Access
Watercourse	Shallow Rock (Water Hazard)
Skaha Lake	Water Intake
Legal Parcel	Wildlife Habitat
FIM Segment Break	Wildlife Sighting
FIM Segment	
Points of Diversion	
Linear Water Works	
Parking	
Kettle Valley Railway Trail	Wetland Habitat
●●●●● Crown Land	Bulrush Shore Marsh
●●●●● Private Land	Bulrush Shore Marsh / Riparian Habitat
●●●●● Diversion	Wetland / Riparian Habitat
Ownership	Zoning
● Crown	● Administrative, Culture, and Institutional
● Indian Reserve	● Commercial
● Municipality	● Commercial Residential
● Private	● Comprehensive Development
● Protected Area	● Conservation
● Provincial Park	● Industrial
● Regional Park	● Institutional
	● Low Density Residential
	● Mobile Home Park
	● Multi-unit Residential
	● Park and Recreational
	● Rural

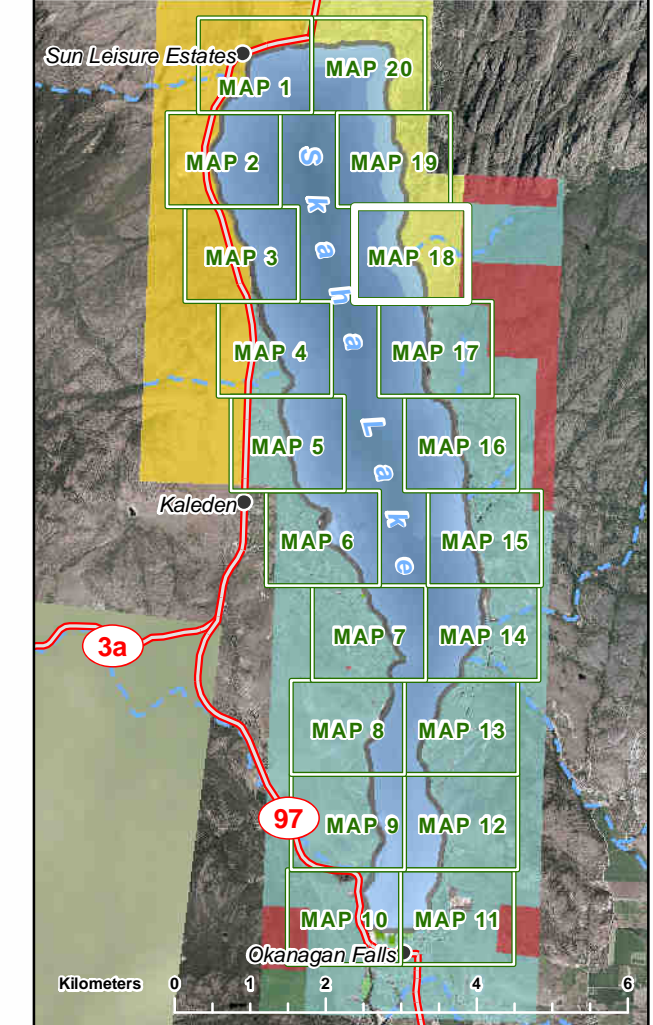
Skaha Lake Foreshore Inventory and Mapping - Topographic and Zoning Map 18

Project: Foreshore Inventory and Mapping
 Location: Regional District of Okanagan - Similkameen
 Project No.: 07-178
 Prepared for: Regional District of Okanagan - Similkameen
 Prepared by: Ecoscape Environmental Consultants Ltd.
 Drawn by: Robert Wagner
 Checked by: Jason Schleppe
 Projection: NAD83-UTM Zone 11
 Date: November 5, 2008

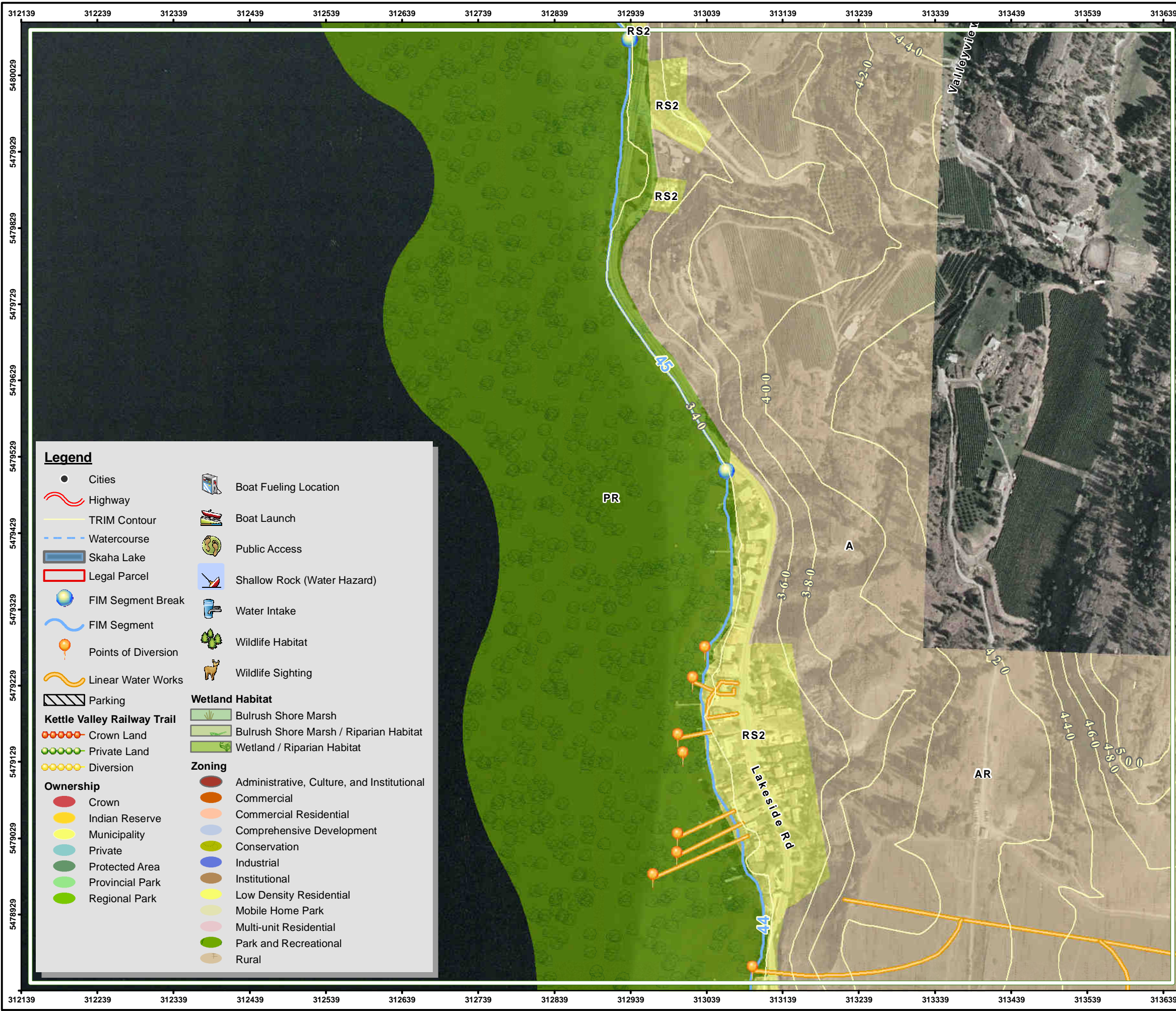


SOURCE INFORMATION

Base Map: 82E.043
 Orthophoto: Province of British Columbia
 Waterbody Information: Skaha Lake
 Location Information: Field, GPS (Trimble GeoXT)
 Feature Information: Airphoto and Topographic Estimate
 Field Inventory
 Date of Inventory: Spring, 2008
 Inventory Management: Jason Schleppe, R.P. Bio. / Robert Wagner

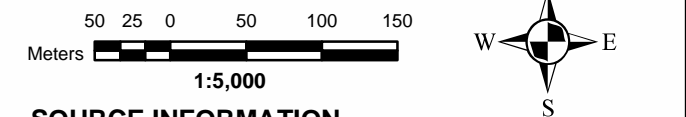


Contributing Partners:
 Okanagan Nation Alliance
 Community Mapping Network (DFO)
 Okanagan Basin Water Board

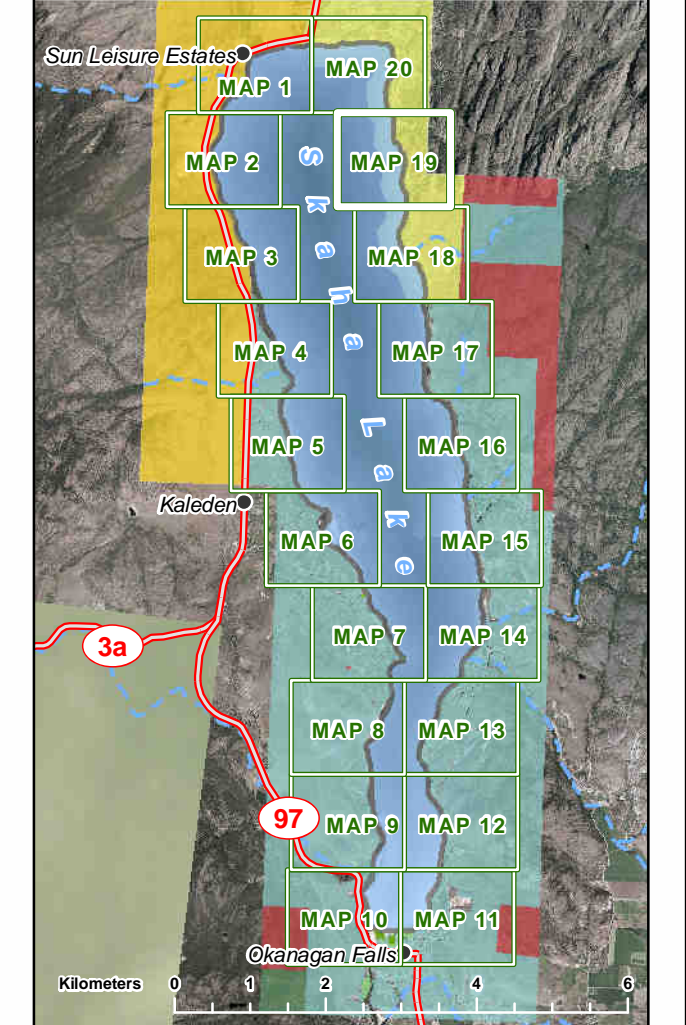


Skaha Lake Foreshore Inventory and Mapping - Topographic and Zoning Map 19

Project: Foreshore Inventory and Mapping
 Location: Regional District of Okanagan - Similkameen
 Project No.: 07-178
 Prepared for: Regional District of Okanagan - Similkameen
 Prepared by: Ecoscape Environmental Consultants Ltd.
 Drawn by: Robert Wagner
 Checked by: Jason Schleppe
 Projection: NAD83-UTM Zone 11
 Date: November 5, 2008



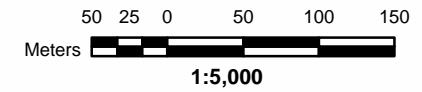
SOURCE INFORMATION
 Base Map: 82E.043
 Orthophoto: Province of British Columbia
 Waterbody Information: Skaha Lake
 Location Information: Field, GPS (Trimble GeoXT)
 Feature Information: Airphoto and Topographic Estimate
 Field Inventory
 Date of Inventory: Spring, 2008
 Inventory Management: Jason Schleppe, R.P. Bio. / Robert Wagner



Contributing Partners:
 Okanagan Nation Alliance
 Community Mapping Network (DFO)
 Okanagan Basin Water Board

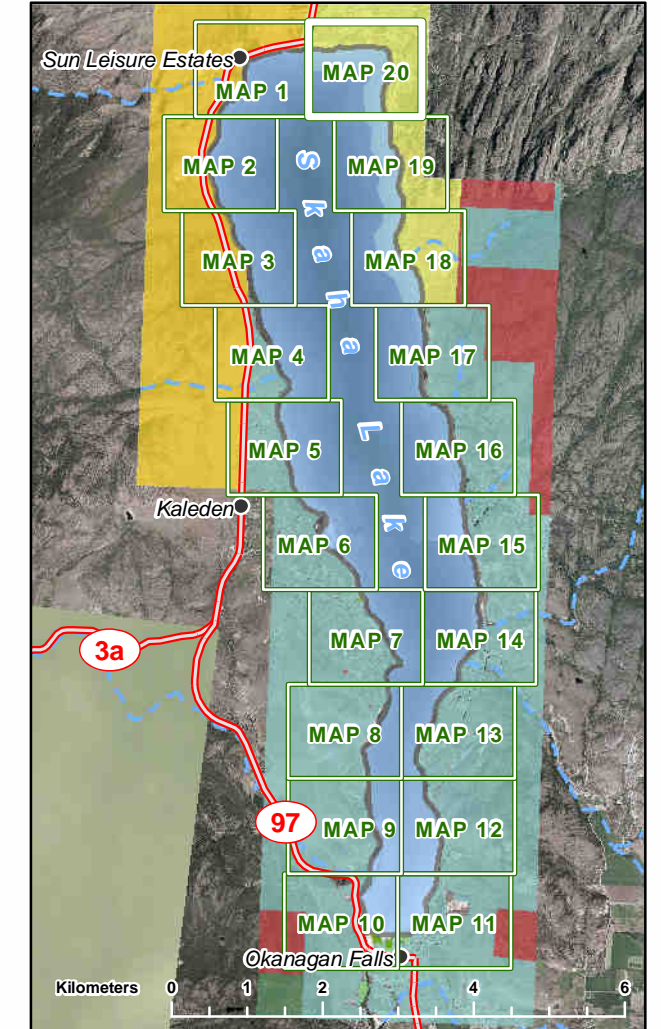
Skaha Lake Foreshore Inventory and Mapping - Topographic and Zoning Map 20

Project: Foreshore Inventory and Mapping
 Location: Regional District of Okanagan - Similkameen
 Project No.: 07-178
 Prepared for: Regional District of Okanagan - Similkameen
 Prepared by: Ecoscape Environmental Consultants Ltd.
 Drawn by: Robert Wagner
 Checked by: Jason Schleppe
 Projection: NAD83-UTM Zone 11
 Date: November 5, 2008

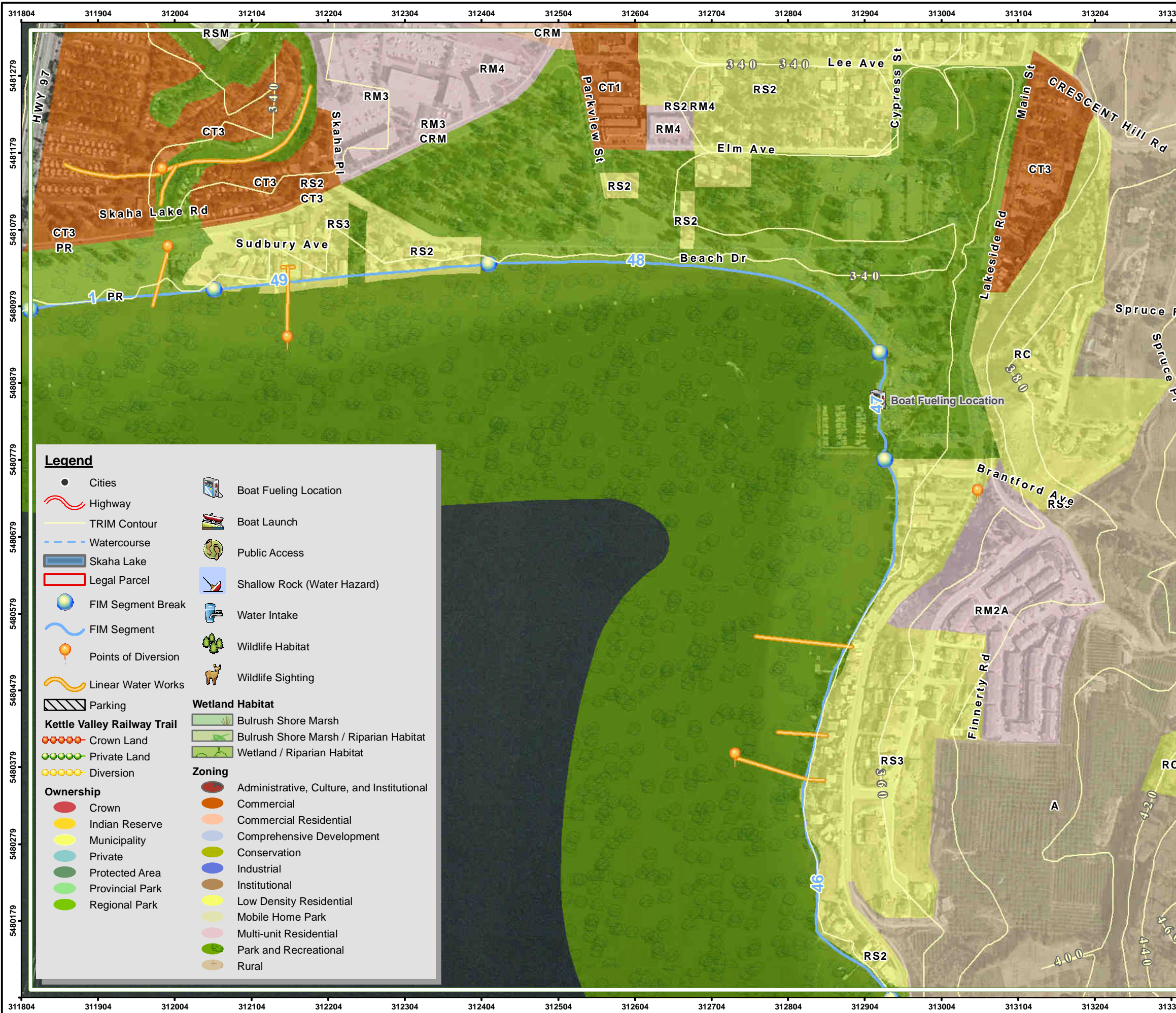


SOURCE INFORMATION

Base Map: 82E.043
 Orthophoto: Province of British Columbia
 Waterbody Information: Skaha Lake
 Location Information: Field, GPS (Trimble GeoXT)
 Feature Information: Airphoto and Topographic Estimate
 Field Inventory
 Date of Inventory: Spring, 2008
 Inventory Management: Jason Schleppe, R.P. Bio. / Robert Wagner



Contributing Partners:
 Okanagan Nation Alliance
 Community Mapping Network (DFO)
 Okanagan Basin Water Board



Legend

● Cities	Boat Fueling Location
Highway	Boat Launch
TRIM Contour	Public Access
Watercourse	Shallow Rock (Water Hazard)
Skaha Lake	Water Intake
Legal Parcel	Wildlife Habitat
FIM Segment Break	Wildlife Sighting
FIM Segment	Wetland Habitat
Points of Diversion	Bulrush Shore Marsh
Linear Water Works	Bulrush Shore Marsh / Riparian Habitat
Parking	Wetland / Riparian Habitat
Kettle Valley Railway Trail	Zoning
Crown Land	Administrative, Culture, and Institutional
Private Land	Commercial
Diversion	Commercial Residential
Ownership	Comprehensive Development
Crown	Conservation
Indian Reserve	Industrial
Municipality	Institutional
Private	Low Density Residential
Protected Area	Mobile Home Park
Provincial Park	Multi-unit Residential
Regional Park	Park and Recreational
	Rural

Figure Binder 2 – Environment and Hazard Maps





Table 1: Geologic Hazard Classification

Hazard Class	Definition
High	the likelihood of a damaging slope process originating from the slopes above the shoreline segment is considered to be high (i.e. the probability of impact is considered greater than 10% in 50 years, or 1 in 475 years).
Moderate	the likelihood of a damaging slope process originating from the slopes above is considered moderate (i.e. the probability of impact is considered less than 10% in 50 years but greater than 1% in 50 years, or 1 in 5000 years).
Low	the likelihood of a damaging slope process originating from the slopes above is considered low, or unlikely.

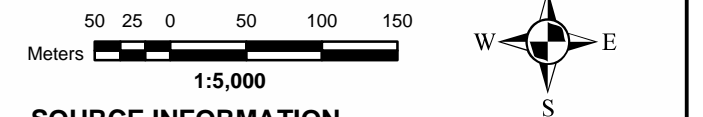
Note: the area of impact is considered to be within 30 m of the Mean Annual High Water Mark

Legend

- Cities
- Major Highway
- Watercourse
- Skaha Lake
- Legal Parcel
- FIM Segment Break
- FIM Segment
- Ownership
 - Crown
 - Indian Reserve
 - Municipality
 - Private
 - Protected Area
 - Provincial Park
 - Regional Park
- Geologic Hazard Class
 - High
 - Moderate
 - Low
- Kettle Valley Railway Trail
 - Crown Land
 - Private Land
 - Diversion
- Boat Fueling Location
- Boat Launch
- Public Access
- Shallow Rock (Water Hazard)
- Water Intake
- Wildlife Habitat
- Wildlife Sighting
- Sensitive Ecosystem Inventory (SEI) Polygon
- Environmentally Sensitive DP Review Area
- Wetland Habitat
 - Bulrush Shore Marsh
 - Bulrush Shore Marsh / Riparian Habitat
 - Wetland / Riparian Habitat

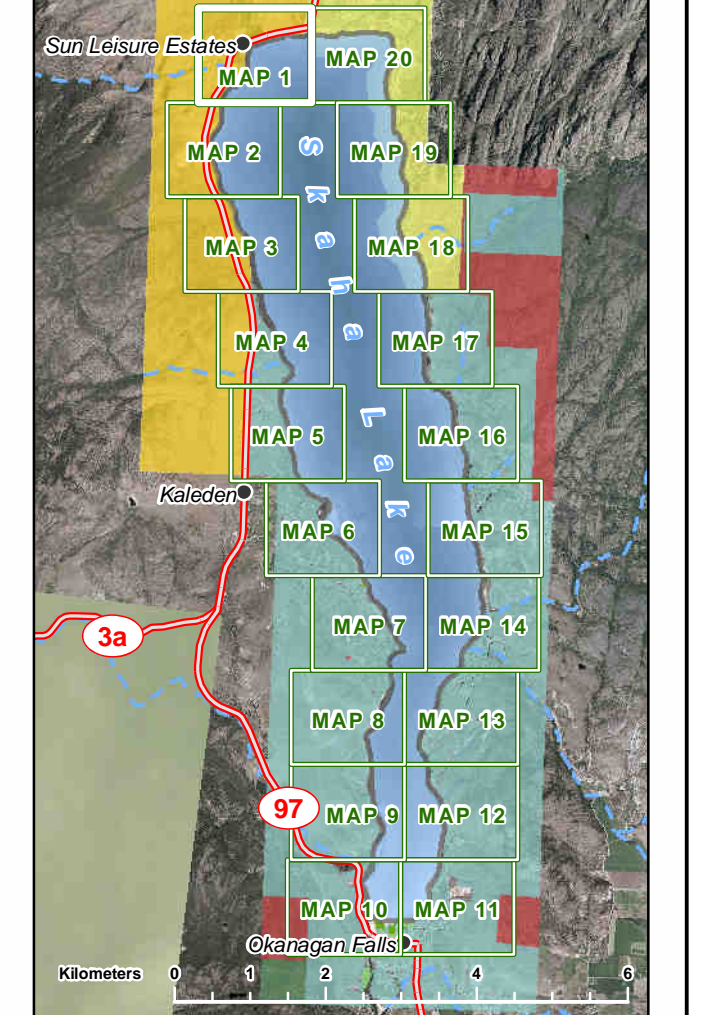
Skaha Lake Foreshore Inventory and Mapping - Environmental and Hazard Map 1

Project: Foreshore Inventory and Mapping
 Location: Regional District of Okanagan - Similkameen
 Project No.: 07-178
 Prepared for: Regional District of Okanagan - Similkameen
 Prepared by: Ecoscape Environmental Consultants Ltd.
 Drawn by: Robert Wagner
 Checked by: Jason Schleppe
 Projection: NAD83-UTM Zone 11
 Date: November 5, 2008



SOURCE INFORMATION

Base Map: 82E.042
 Orthophoto: Province of British Columbia
 Waterbody Information: Skaha Lake
 Location Information: Field, GPS (Trimble GeoXT)
 Feature Information: Airphoto and Topographic Estimate
 Field Inventory
 Date of Inventory: Spring, 2008
 Inventory Management: Jason Schleppe, R.P. Bio. / Robert Wagner



Contributing Partners:
 Okanagan Nation Alliance
 Community Mapping Network (DFO)
 Okanagan Basin Water Board

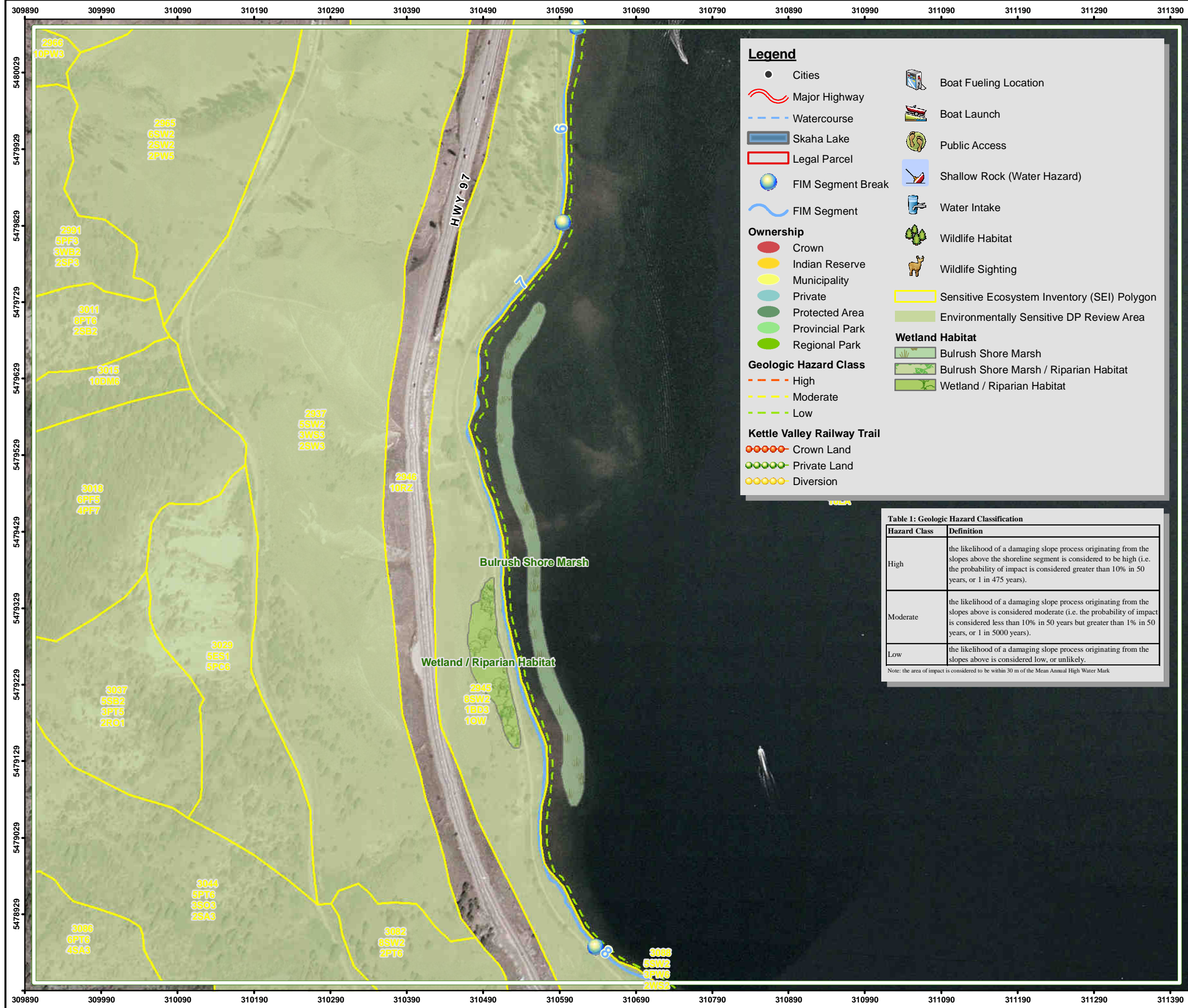


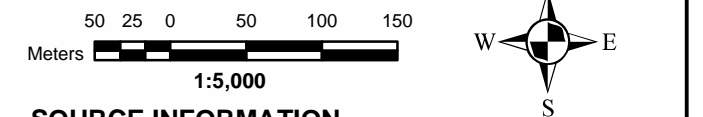
Table 1: Geologic Hazard Classification

Hazard Class	Definition
High	the likelihood of a damaging slope process originating from the slopes above the shoreline segment is considered to be high (i.e. the probability of impact is considered greater than 10% in 50 years, or 1 in 475 years).
Moderate	the likelihood of a damaging slope process originating from the slopes above is considered moderate (i.e. the probability of impact is considered less than 10% in 50 years but greater than 1% in 50 years, or 1 in 5000 years).
Low	the likelihood of a damaging slope process originating from the slopes above is considered low, or unlikely.

Note: the area of impact is considered to be within 30 m of the Mean Annual High Water Mark

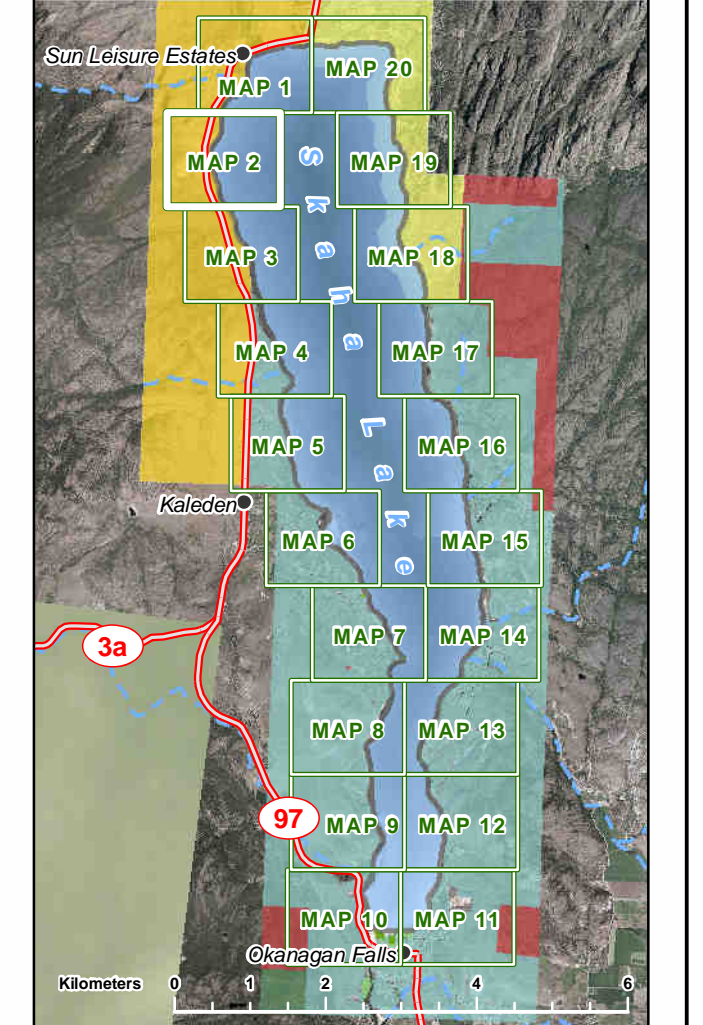
Skaha Lake Foreshore Inventory and Mapping - Environmental and Hazard Map 2

Project: Foreshore Inventory and Mapping
 Location: Regional District of Okanagan - Similkameen
 Project No.: 07-178
 Prepared for: Regional District of Okanagan - Similkameen
 Prepared by: Ecoscape Environmental Consultants Ltd.
 Drawn by: Robert Wagner
 Checked by: Jason Schleppe
 Projection: NAD83-UTM Zone 11
 Date: November 5, 2008



SOURCE INFORMATION

Base Map: 82E.042
 Orthophoto: Province of British Columbia
 Waterbody Information: Skaha Lake
 Location Information: Field, GPS (Trimble GeoXT)
 Feature Information: Airphoto and Topographic Estimate
 Field Inventory
 Date of Inventory: Spring, 2008
 Inventory Management: Jason Schleppe, R.P. Bio. / Robert Wagner



Contributing Partners:
 Okanagan Nation Alliance
 Community Mapping Network (DFO)
 Okanagan Basin Water Board



Legend

- Cities
- Major Highway
- Watercourse
- Skaha Lake
- Legal Parcel
- FIM Segment Break
- FIM Segment
- Ownership
 - Crown
 - Indian Reserve
 - Municipality
 - Private
 - Protected Area
 - Provincial Park
 - Regional Park
- Geologic Hazard Class
 - High
 - Moderate
 - Low
- Kettle Valley Railway Trail
 - Crown Land
 - Private Land
 - Diversion
- Boat Fueling Location
- Boat Launch
- Public Access
- Shallow Rock (Water Hazard)
- Water Intake
- Wildlife Habitat
- Wildlife Sighting
- Sensitive Ecosystem Inventory (SEI) Polygon
- Environmentally Sensitive DP Review Area
- Wetland Habitat
 - Bulrush Shore Marsh
 - Bulrush Shore Marsh / Riparian Habitat
 - Wetland / Riparian Habitat

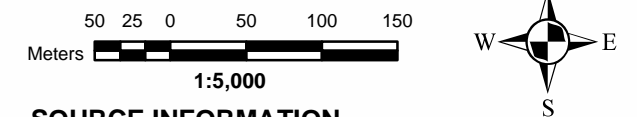
Table 1: Geologic Hazard Classification

Hazard Class	Definition
High	the likelihood of a damaging slope process originating from the slopes above the shoreline segment is considered to be high (i.e. the probability of impact is considered greater than 10% in 50 years, or 1 in 475 years).
Moderate	the likelihood of a damaging slope process originating from the slopes above is considered moderate (i.e. the probability of impact is considered less than 10% in 50 years but greater than 1% in 5000 years).
Low	the likelihood of a damaging slope process originating from the slopes above is considered low, or unlikely.

Note: the area of impact is considered to be within 30 m of the Mean Annual High Water Mark

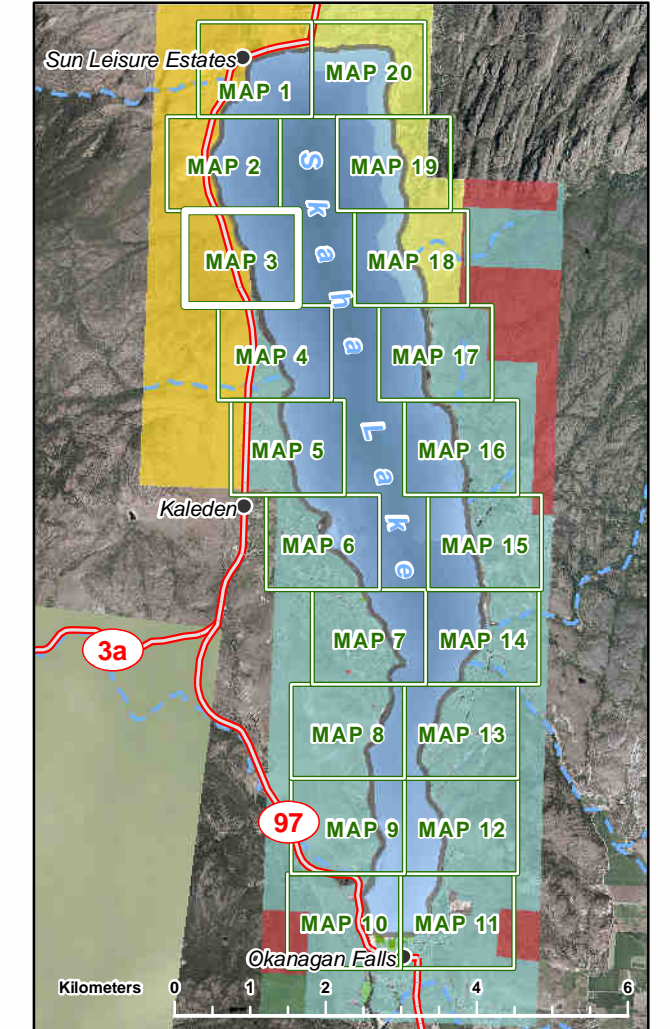
Skaha Lake Foreshore Inventory and Mapping - Environmental and Hazard Map 3

Project: Foreshore Inventory and Mapping
 Location: Regional District of Okanagan - Similkameen
 Project No.: 07-178
 Prepared for: Regional District of Okanagan - Similkameen
 Prepared by: Ecoscape Environmental Consultants Ltd.
 Drawn by: Robert Wagner
 Checked by: Jason Schleppe
 Projection: NAD83-UTM Zone 11
 Date: November 5, 2008

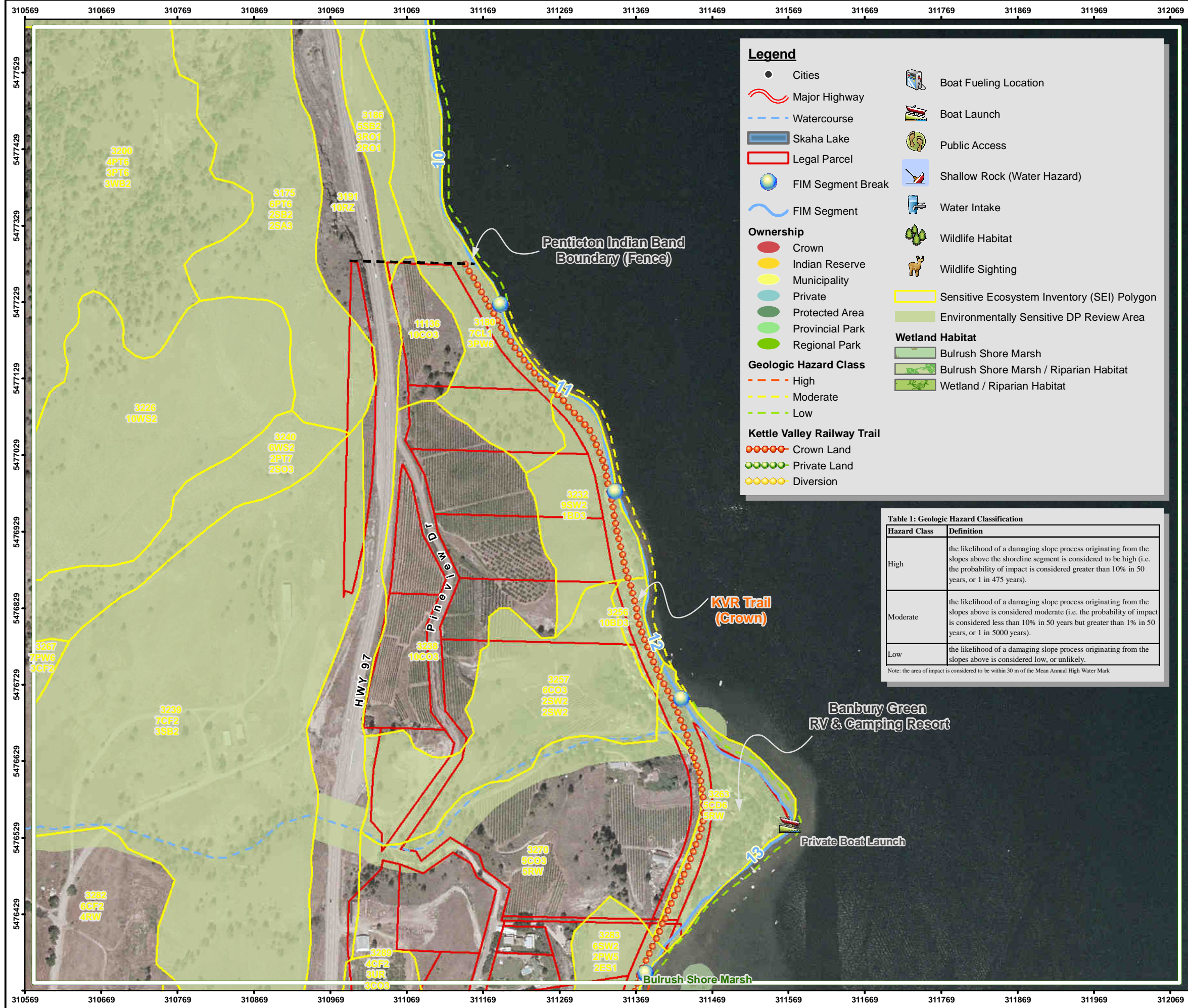


SOURCE INFORMATION

Base Map: 82E.042
 Orthophoto: Province of British Columbia
 Waterbody Information: Skaha Lake
 Location Information: Field, GPS (Trimble GeoXT)
 Feature Information: Airphoto and Topographic Estimate
 Field Inventory
 Date of Inventory: Spring, 2008
 Inventory Management: Jason Schleppe, R.P. Bio. / Robert Wagner

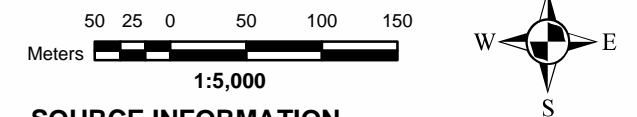


Contributing Partners:
 Okanagan Nation Alliance
 Community Mapping Network (DFO)
 Okanagan Basin Water Board



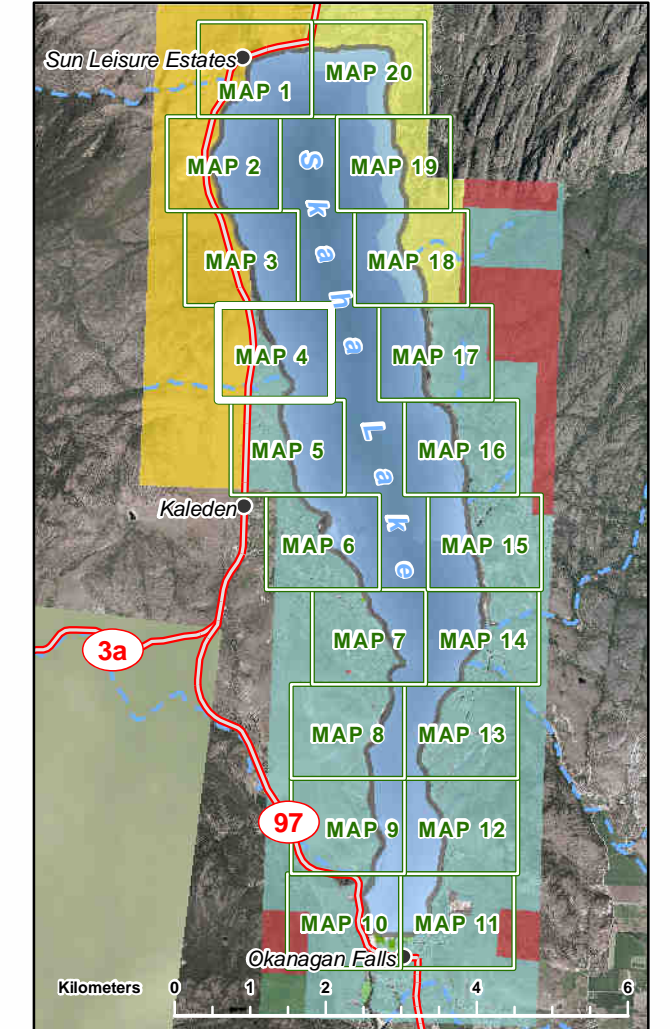
Skaha Lake Foreshore Inventory and Mapping - Environmental and Hazard Map 4

Project: Foreshore Inventory and Mapping
 Location: Regional District of Okanagan - Similkameen
 Project No.: 07-178
 Prepared for: Regional District of Okanagan - Similkameen
 Prepared by: Ecoscape Environmental Consultants Ltd.
 Drawn by: Robert Wagner
 Checked by: Jason Schleppe
 Projection: NAD83-UTM Zone 11
 Date: November 5, 2008

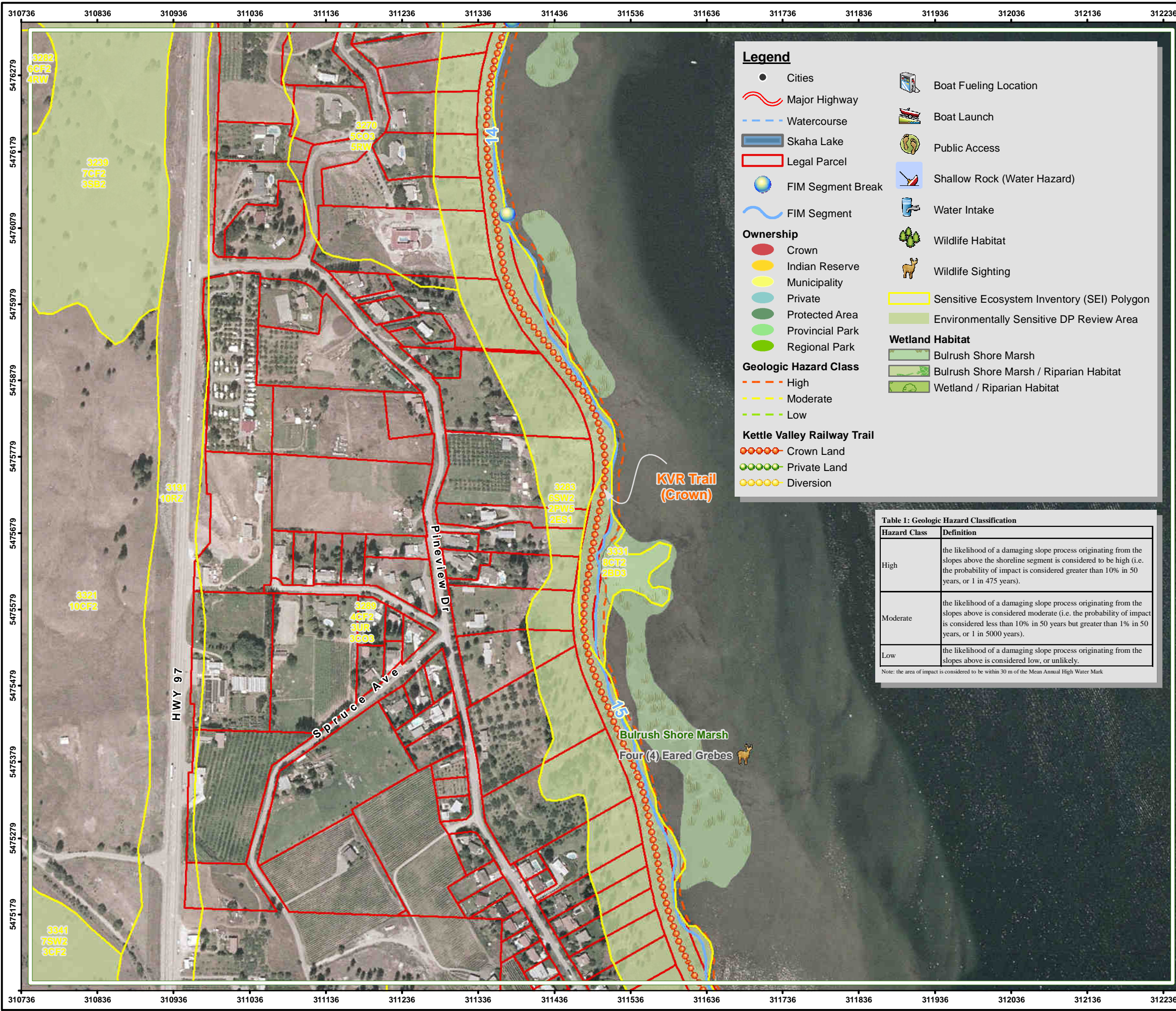


SOURCE INFORMATION

Base Map: 82E.042
 Orthophoto: Province of British Columbia
 Waterbody Information: Skaha Lake
 Location Information: Field, GPS (Trimble GeoXT)
 Feature Information: Airphoto and Topographic Estimate
 Field Inventory
 Date of Inventory: Spring, 2008
 Inventory Management: Jason Schleppe, R.P. Bio. / Robert Wagner

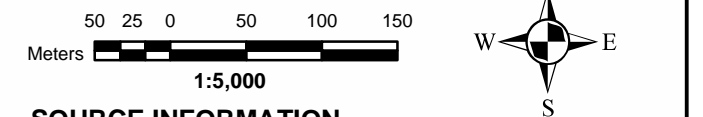


Contributing Partners:
 Okanagan Nation Alliance
 Community Mapping Network (DFO)
 Okanagan Basin Water Board



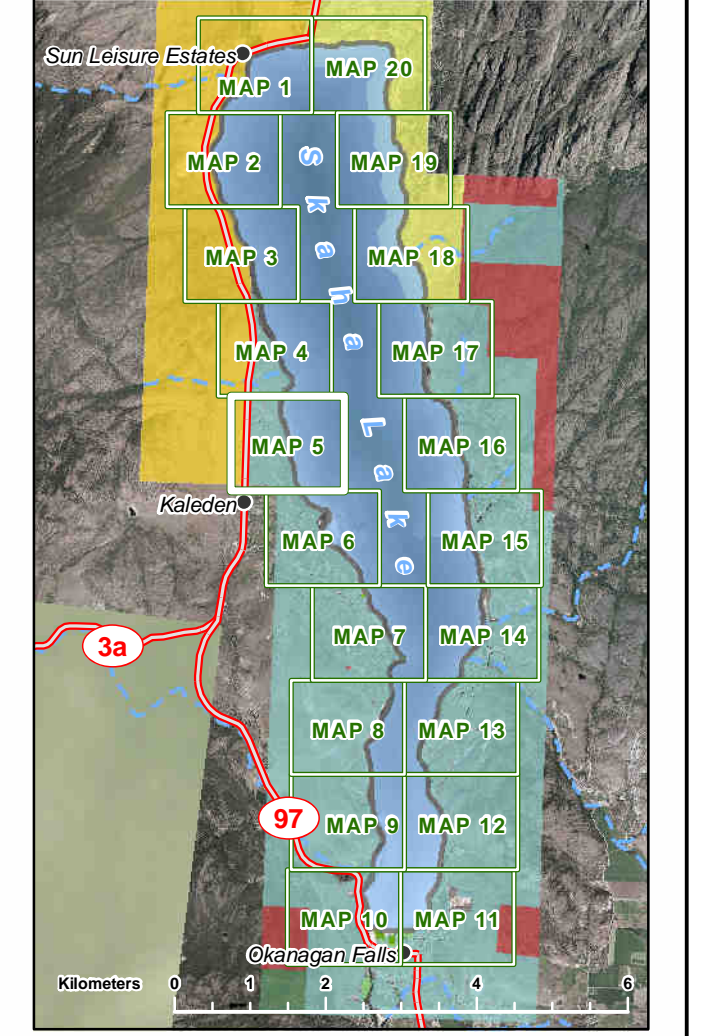
Skaha Lake Foreshore Inventory and Mapping - Environmental and Hazard Map 5

Project: Foreshore Inventory and Mapping
 Location: Regional District of Okanagan - Similkameen
 Project No.: 07-178
 Prepared for: Regional District of Okanagan - Similkameen
 Prepared by: Ecoscape Environmental Consultants Ltd.
 Drawn by: Robert Wagner
 Checked by: Jason Schleppe
 Projection: NAD83-UTM Zone 11
 Date: November 5, 2008



SOURCE INFORMATION

Base Map: 82E.042
 Orthophoto: Province of British Columbia
 Waterbody Information: Skaha Lake
 Location Information: Field, GPS (Trimble GeoXT)
 Feature Information: Airphoto and Topographic Estimate
 Field Inventory
 Date of Inventory: Spring, 2008
 Inventory Management: Jason Schleppe, R.P. Bio. / Robert Wagner



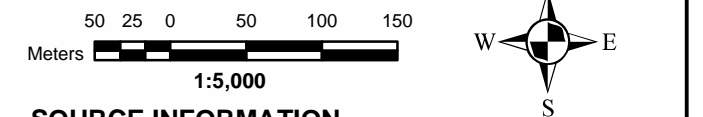
Contributing Partners:
 Okanagan Nation Alliance
 Community Mapping Network (DFO)
 Okanagan Basin Water Board

311203 311303 311403 311503 311603 311703 311803 311903 312003 312103 312203 312303 312403 312503 312603 312703



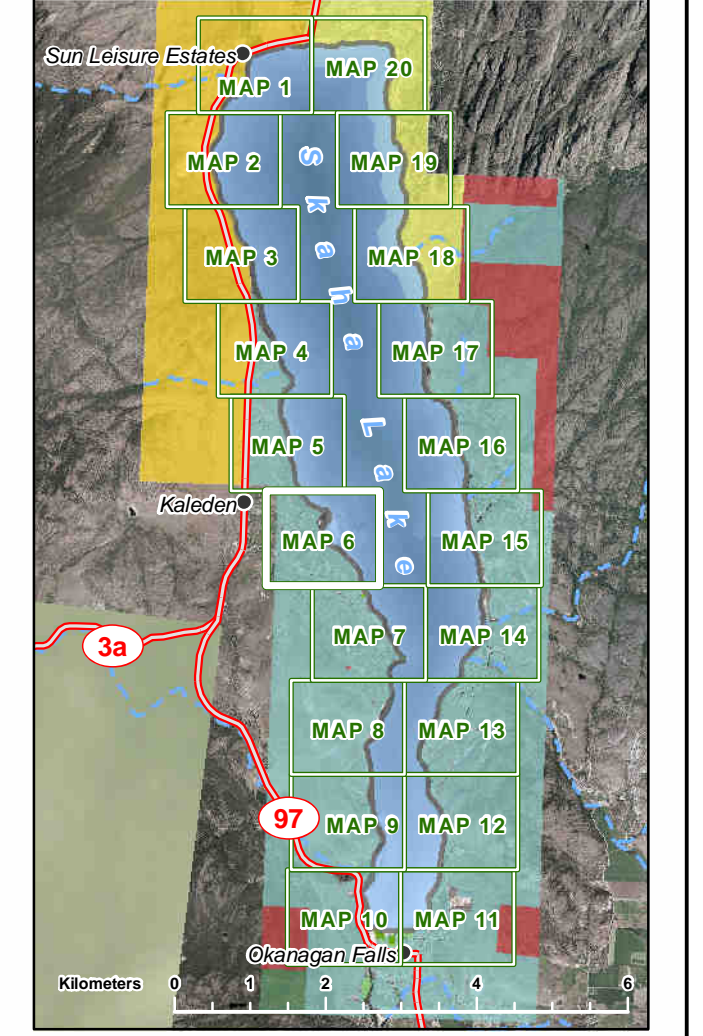
Skaha Lake Foreshore Inventory and Mapping - Environmental and Hazard Map 6

Project: Foreshore Inventory and Mapping
 Location: Regional District of Okanagan - Similkameen
 Project No.: 07-178
 Prepared for: Regional District of Okanagan - Similkameen
 Prepared by: Ecoscape Environmental Consultants Ltd.
 Drawn by: Robert Wagner
 Checked by: Jason Schleppe
 Projection: NAD83-UTM Zone 11
 Date: November 5, 2008



SOURCE INFORMATION

Base Map: 82E.033/82E.042
 Orthophoto: Province of British Columbia
 Waterbody Information: Skaha Lake
 Location Information: Field, GPS (Trimble GeoXT)
 Feature Information: Airphoto and Topographic Estimate
 Field Inventory
 Date of Inventory: Spring, 2008
 Inventory Management: Jason Schleppe, R.P. Bio. / Robert Wagner



Contributing Partners:
 Okanagan Nation Alliance
 Community Mapping Network (DFO)
 Okanagan Basin Water Board

311203 311303 311403 311503 311603 311703 311803 311903 312003 312103 312203 312303 312403 312503 312603 312703



Table 1: Geologic Hazard Classification

Hazard Class	Definition
High	the likelihood of a damaging slope process originating from the slopes above the shoreline segment is considered to be high (i.e. the probability of impact is considered greater than 10% in 50 years, or 1 in 475 years).
Moderate	the likelihood of a damaging slope process originating from the slopes above is considered moderate (i.e. the probability of impact is considered less than 10% in 50 years but greater than 1% in 50 years, or 1 in 5000 years).
Low	the likelihood of a damaging slope process originating from the slopes above is considered low, or unlikely.

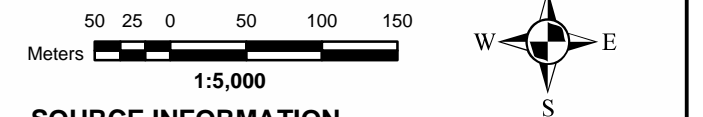
Note: the area of impact is considered to be within 30 m of the Mean Annual High Water Mark

Legend

- Cities
- Major Highway
- Watercourse
- Skaha Lake
- Legal Parcel
- FIM Segment Break
- FIM Segment
- Ownership**
 - Crown
 - Indian Reserve
 - Municipality
 - Private
 - Protected Area
 - Provincial Park
 - Regional Park
- Geologic Hazard Class**
 - High
 - Moderate
 - Low
- Kettle Valley Railway Trail**
 - Crown Land
 - Private Land
 - Diversion
- Boat Fueling Location
- Boat Launch
- Public Access
- Shallow Rock (Water Hazard)
- Water Intake
- Wildlife Habitat
- Wildlife Sighting
- Sensitive Ecosystem Inventory (SEI) Polygon
- Environmentally Sensitive DP Review Area
- Wetland Habitat**
 - Bulrush Shore Marsh
 - Bulrush Shore Marsh / Riparian Habitat
 - Wetland / Riparian Habitat

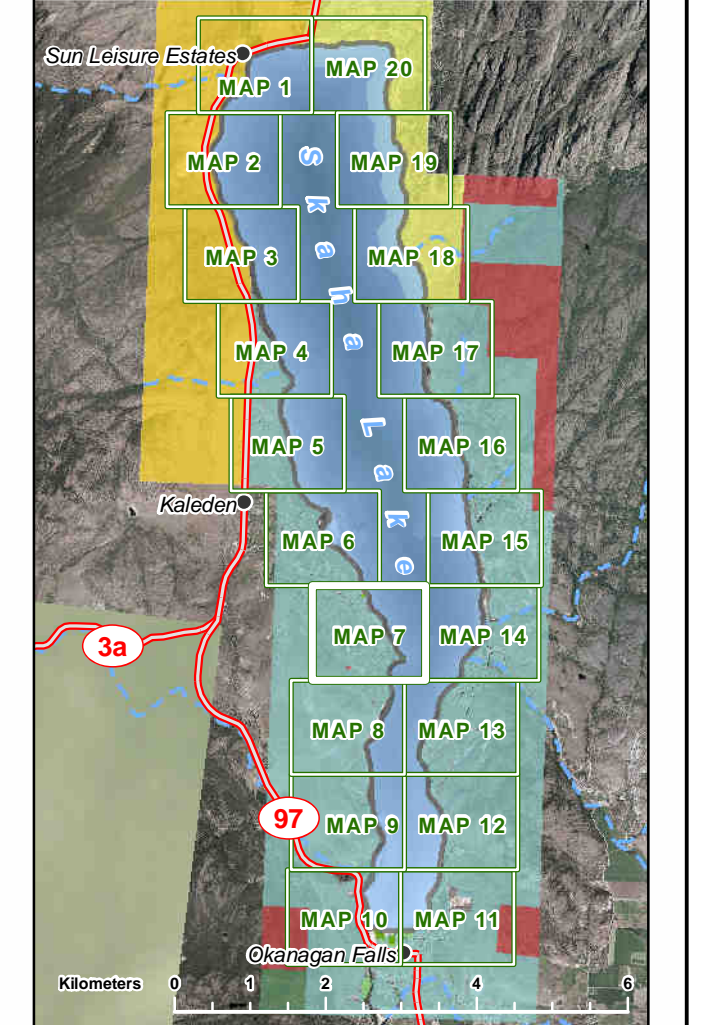
Skaha Lake Foreshore Inventory and Mapping - Environmental and Hazard Map 7

Project: Foreshore Inventory and Mapping
 Location: Regional District of Okanagan - Similkameen
 Project No.: 07-178
 Prepared for: Regional District of Okanagan - Similkameen
 Prepared by: Ecoscape Environmental Consultants Ltd.
 Drawn by: Robert Wagner
 Checked by: Jason Schleppe
 Projection: NAD83-UTM Zone 11
 Date: November 5, 2008



SOURCE INFORMATION

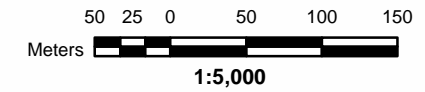
Base Map: 82E.033
 Orthophoto: Province of British Columbia
 Waterbody Information: Skaha Lake
 Location Information: Field, GPS (Trimble GeoXT)
 Feature Information: Airphoto and Topographic Estimate
 Field Inventory
 Date of Inventory: Spring, 2008
 Inventory Management: Jason Schleppe, R.P. Bio. / Robert Wagner



Contributing Partners:
 Okanagan Nation Alliance
 Community Mapping Network (DFO)
 Okanagan Basin Water Board

Skaha Lake Foreshore Inventory and Mapping - Environmental and Hazard Map 8

Project: Foreshore Inventory and Mapping
 Location: Regional District of Okanagan - Similkameen
 Project No.: 07-178
 Prepared for: Regional District of Okanagan - Similkameen
 Prepared by: Ecoscape Environmental Consultants Ltd.
 Drawn by: Robert Wagner
 Checked by: Jason Schleppe
 Projection: NAD83-UTM Zone 11
 Date: November 5, 2008



SOURCE INFORMATION

Base Map: 82E.033
 Orthophoto: Province of British Columbia
 Waterbody Information: Skaha Lake
 Location Information: Field, GPS (Trimble GeoXT)
 Feature Information: Airphoto and Topographic Estimate
 Field Inventory
 Date of Inventory: Spring, 2008
 Inventory Management: Jason Schleppe, R.P. Bio. / Robert Wagner

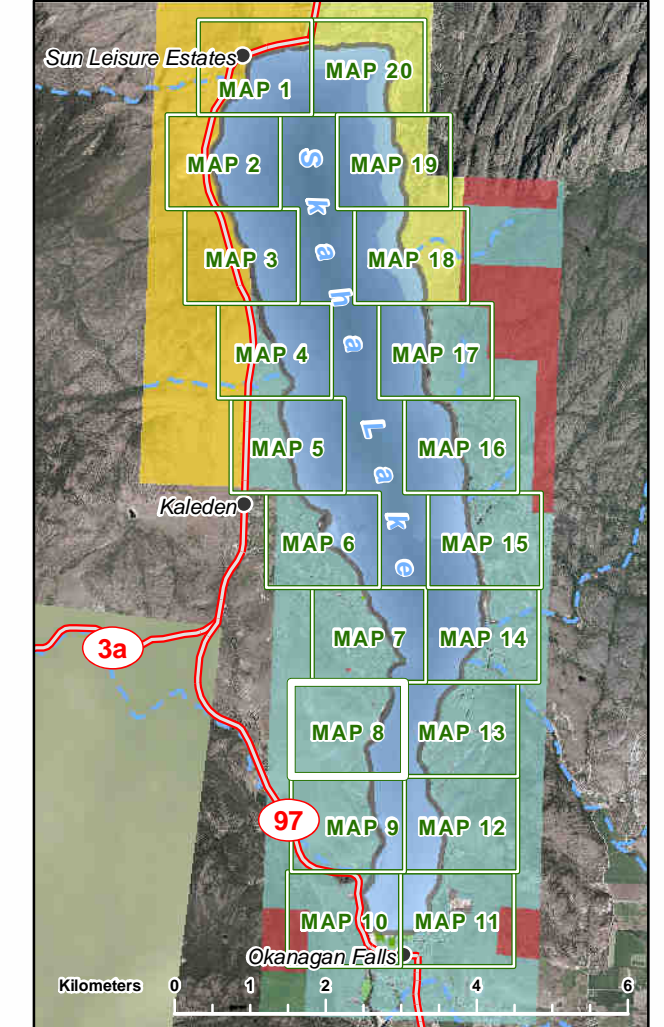


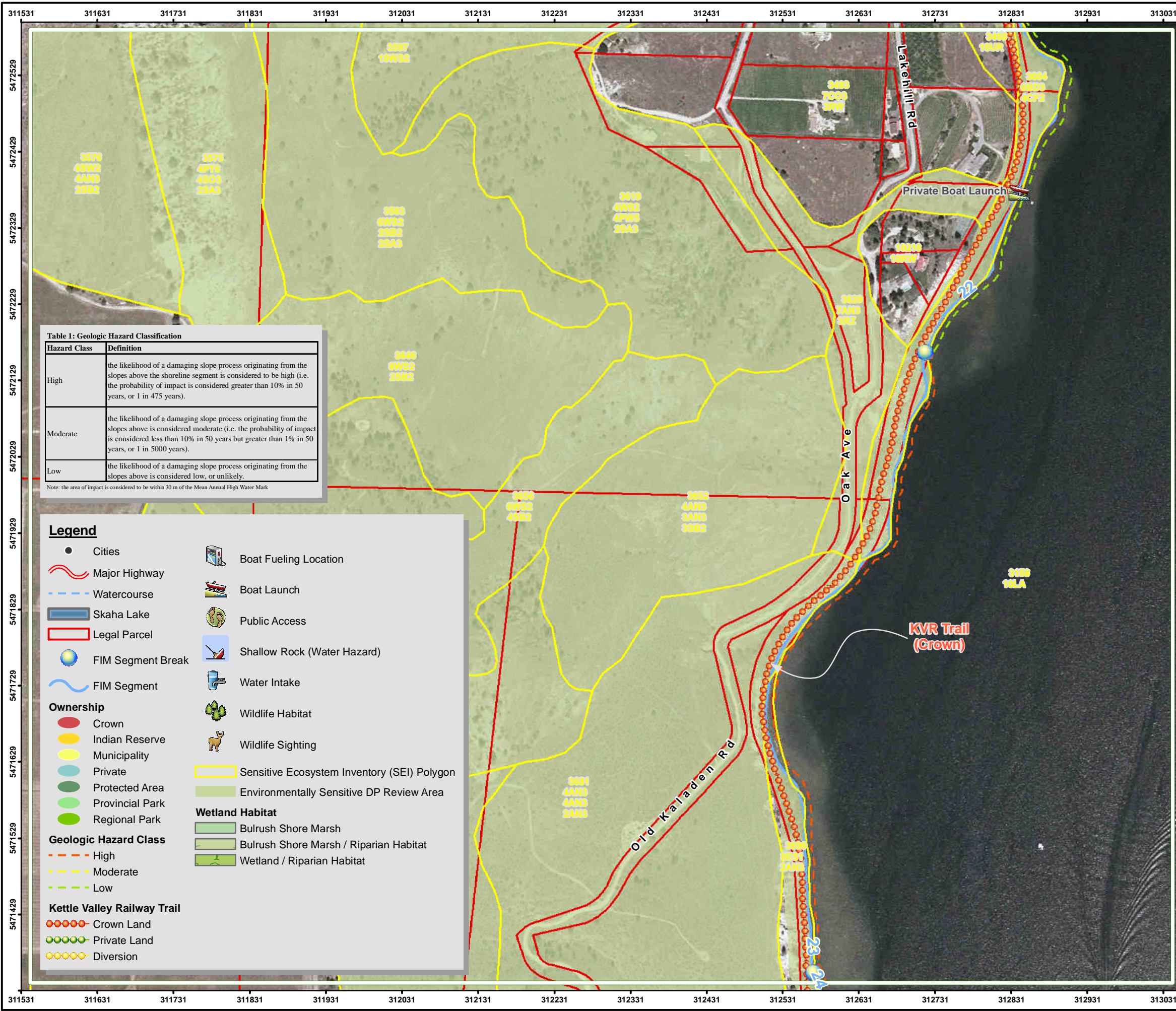
Table 1: Geologic Hazard Classification

Hazard Class	Definition
High	the likelihood of a damaging slope process originating from the slopes above the shoreline segment is considered to be high (i.e. the probability of impact is considered greater than 10% in 50 years, or 1 in 475 years).
Moderate	the likelihood of a damaging slope process originating from the slopes above is considered moderate (i.e. the probability of impact is considered less than 10% in 50 years but greater than 1% in 50 years, or 1 in 5000 years).
Low	the likelihood of a damaging slope process originating from the slopes above is considered low, or unlikely.

Note: the area of impact is considered to be within 30 m of the Mean Annual High Water Mark

Legend

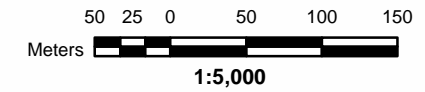
- Cities
- Major Highway
- Watercourse
- Skaha Lake
- Legal Parcel
- FIM Segment Break
- FIM Segment
- Ownership
 - Crown
 - Indian Reserve
 - Municipality
 - Private
 - Protected Area
 - Provincial Park
 - Regional Park
- Geologic Hazard Class
 - High
 - Moderate
 - Low
- Kettle Valley Railway Trail
 - Crown Land
 - Private Land
 - Diversion
- Boat Fueling Location
- Boat Launch
- Public Access
- Shallow Rock (Water Hazard)
- Water Intake
- Wildlife Habitat
- Wildlife Sighting
- Sensitive Ecosystem Inventory (SEI) Polygon
- Environmentally Sensitive DP Review Area
- Wetland Habitat
 - Bulrush Shore Marsh
 - Bulrush Shore Marsh / Riparian Habitat
 - Wetland / Riparian Habitat



Contributing Partners:
 Okanagan Nation Alliance
 Community Mapping Network (DFO)
 Okanagan Basin Water Board

Skaha Lake Foreshore Inventory and Mapping - Environmental and Hazard Map 9

Project: Foreshore Inventory and Mapping
 Location: Regional District of Okanagan - Similkameen
 Project No.: 07-178
 Prepared for: Regional District of Okanagan - Similkameen
 Prepared by: Ecoscape Environmental Consultants Ltd.
 Drawn by: Robert Wagner
 Checked by: Jason Schleppe
 Projection: NAD83-UTM Zone 11
 Date: November 5, 2008



SOURCE INFORMATION

Base Map: 82E.033
 Orthophoto: Province of British Columbia
 Waterbody Information: Skaha Lake
 Location Information: Field, GPS (Trimble GeoXT)
 Feature Information: Airphoto and Topographic Estimate
 Field Inventory
 Date of Inventory: Spring, 2008
 Inventory Management: Jason Schleppe, R.P. Bio. / Robert Wagner

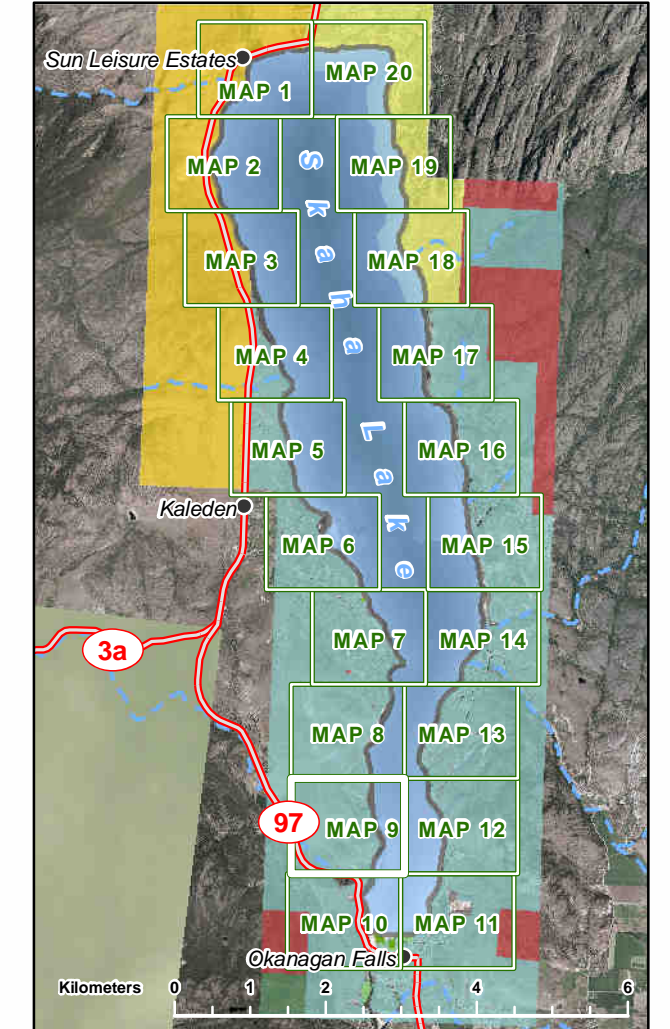
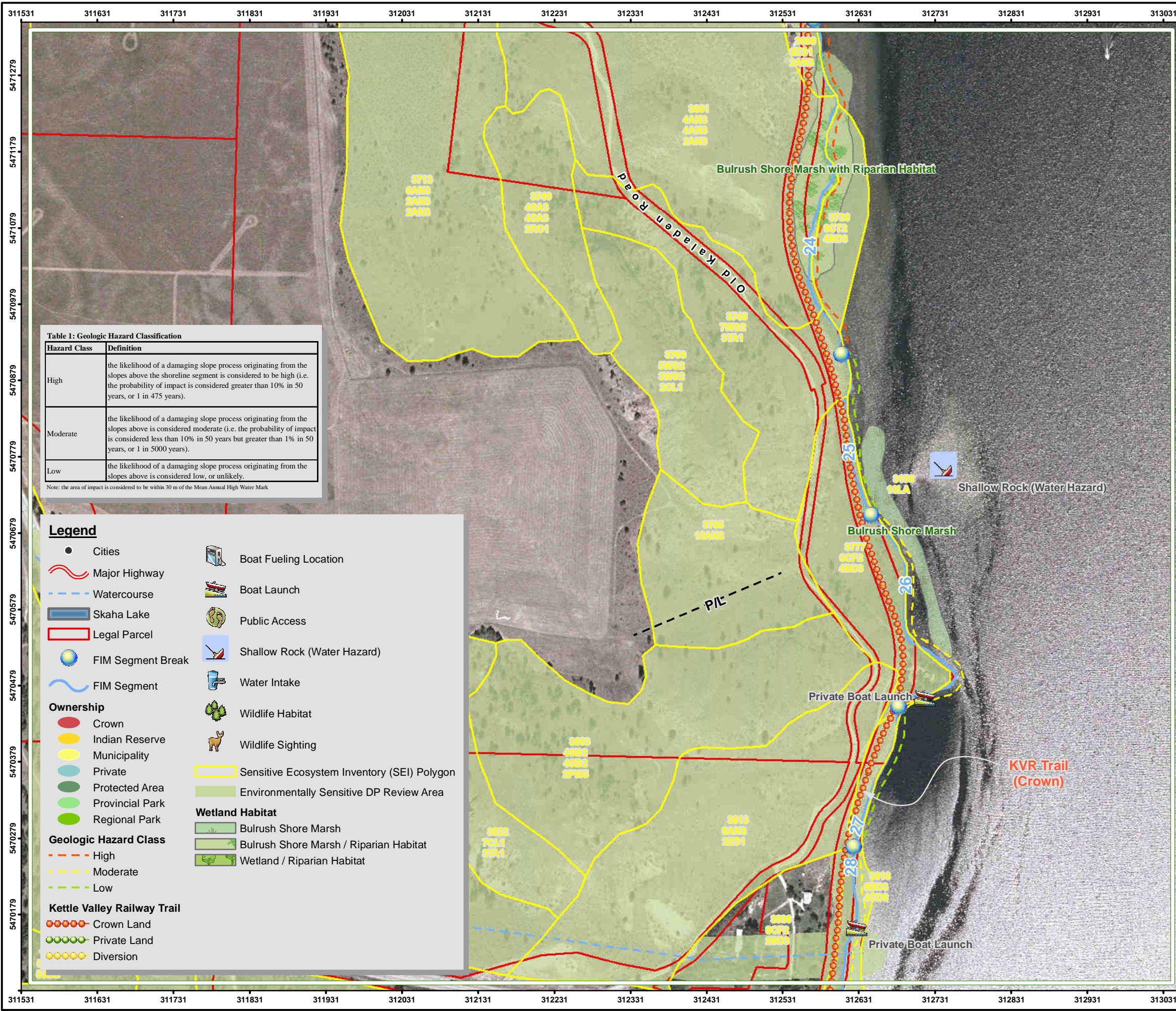
Table 1: Geologic Hazard Classification

Hazard Class	Definition
High	the likelihood of a damaging slope process originating from the slopes above the shoreline segment is considered to be high (i.e. the probability of impact is considered greater than 10% in 50 years, or 1 in 475 years).
Moderate	the likelihood of a damaging slope process originating from the slopes above is considered moderate (i.e. the probability of impact is considered less than 10% in 50 years but greater than 1% in 50 years, or 1 in 5000 years).
Low	the likelihood of a damaging slope process originating from the slopes above is considered low, or unlikely.

Note: the area of impact is considered to be within 30 m of the Mean Annual High Water Mark

Legend

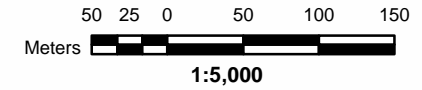
- Cities
- Major Highway
- Watercourse
- Skaha Lake
- Legal Parcel
- FIM Segment Break
- FIM Segment
- Ownership**
 - Crown
 - Indian Reserve
 - Municipality
 - Private
 - Protected Area
 - Provincial Park
 - Regional Park
- Geologic Hazard Class**
 - High
 - Moderate
 - Low
- Kettle Valley Railway Trail**
 - Crown Land
 - Private Land
 - Diversion
- Boat Fueling Location
- Boat Launch
- Public Access
- Shallow Rock (Water Hazard)
- Water Intake
- Wildlife Habitat
- Wildlife Sighting
- Sensitive Ecosystem Inventory (SEI) Polygon
- Environmentally Sensitive DP Review Area
- Wetland Habitat**
 - Bulrush Shore Marsh
 - Bulrush Shore Marsh / Riparian Habitat
 - Wetland / Riparian Habitat



Contributing Partners:
 Okanagan Nation Alliance
 Community Mapping Network (DFO)
 Okanagan Basin Water Board

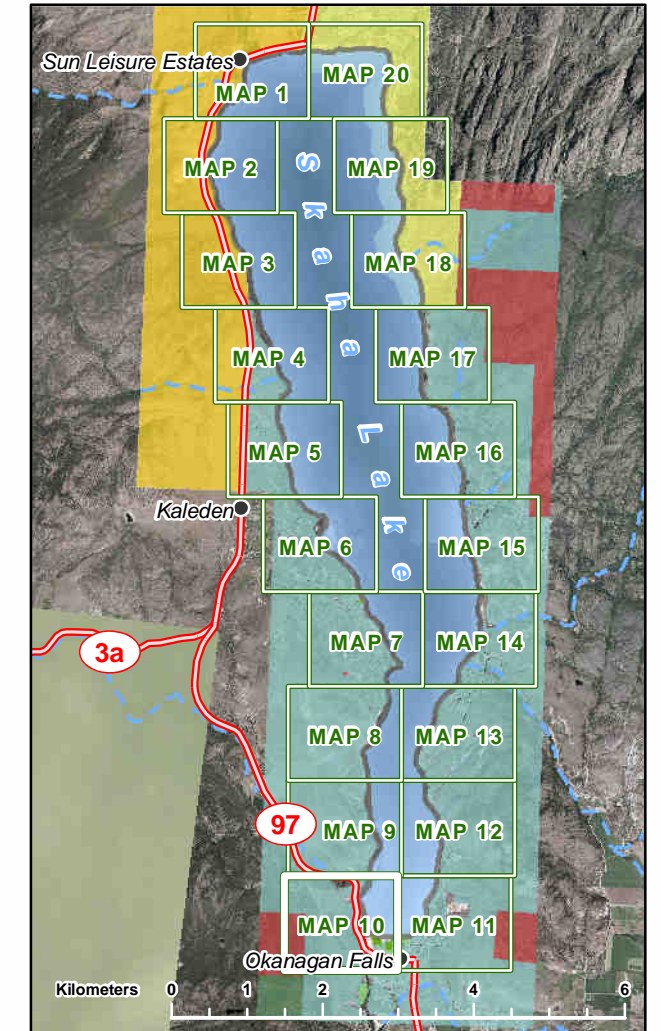
Skaha Lake Foreshore Inventory and Mapping - Environmental and Hazard Map 10

Project: Foreshore Inventory and Mapping
 Location: Regional District of Okanagan - Similkameen
 Project No.: 07-178
 Prepared for: Regional District of Okanagan - Similkameen
 Prepared by: Ecoscape Environmental Consultants Ltd.
 Drawn by: Robert Wagner
 Checked by: Jason Schleppe
 Projection: NAD83-UTM Zone 11
 Date: November 5, 2008



SOURCE INFORMATION

Base Map: 82E.033
 Orthophoto: Province of British Columbia
 Waterbody Information: Skaha Lake
 Location Information: Field, GPS (Trimble GeoXT)
 Feature Information: Airphoto and Topographic Estimate
 Field Inventory
 Date of Inventory: Spring, 2008
 Inventory Management: Jason Schleppe, R.P. Bio. / Robert Wagner



Contributing Partners:
 Okanagan Nation Alliance
 Community Mapping Network (DFO)
 Okanagan Basin Water Board

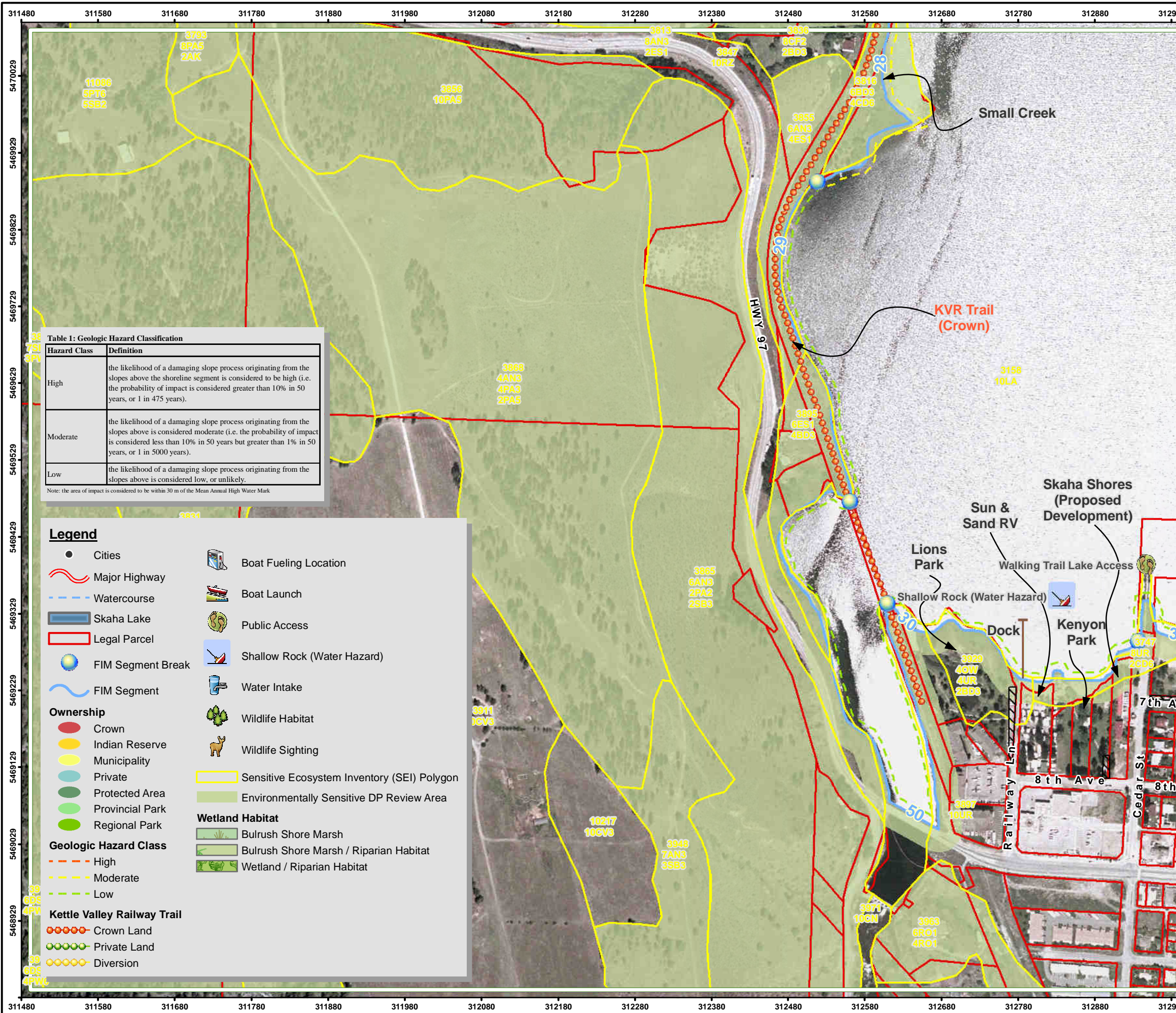


Table 1: Geologic Hazard Classification

Hazard Class	Definition
High	the likelihood of a damaging slope process originating from the slopes above the shoreline segment is considered to be high (i.e. the probability of impact is considered greater than 10% in 50 years, or 1 in 475 years).
Moderate	the likelihood of a damaging slope process originating from the slopes above is considered moderate (i.e. the probability of impact is considered less than 10% in 50 years but greater than 1% in 50 years, or 1 in 5000 years).
Low	the likelihood of a damaging slope process originating from the slopes above is considered low, or unlikely.

Note: the area of impact is considered to be within 30 m of the Mean Annual High Water Mark

Legend

- Cities
- Major Highway
- Watercourse
- Skaha Lake
- Legal Parcel
- FIM Segment Break
- FIM Segment
- Ownership
 - Crown
 - Indian Reserve
 - Municipality
 - Private
 - Protected Area
 - Provincial Park
 - Regional Park
- Geologic Hazard Class
 - High
 - Moderate
 - Low
- Kettle Valley Railway Trail
 - Crown Land
 - Private Land
 - Diversion
- Boat Fueling Location
- Boat Launch
- Public Access
- Shallow Rock (Water Hazard)
- Water Intake
- Wildlife Habitat
- Wildlife Sighting
- Sensitive Ecosystem Inventory (SEI) Polygon
- Environmentally Sensitive DP Review Area
- Wetland Habitat
 - Bulrush Shore Marsh
 - Bulrush Shore Marsh / Riparian Habitat
 - Wetland / Riparian Habitat



Legend

- Cities
- Major Highway
- Watercourse
- Skaha Lake
- Legal Parcel
- FIM Segment Break
- FIM Segment
- Ownership
 - Crown
 - Indian Reserve
 - Municipality
 - Private
 - Protected Area
 - Provincial Park
 - Regional Park
- Geologic Hazard Class
 - High
 - Moderate
 - Low
- Kettle Valley Railway Trail
 - Crown Land
 - Private Land
 - Diversion
- Boat Fueling Location
- Boat Launch
- Public Access
- Shallow Rock (Water Hazard)
- Water Intake
- Wildlife Habitat
- Wildlife Sighting
- Sensitive Ecosystem Inventory (SEI) Polygon
- Environmentally Sensitive DP Review Area
- Wetland Habitat
 - Bulrush Shore Marsh
 - Bulrush Shore Marsh / Riparian Habitat
 - Wetland / Riparian Habitat

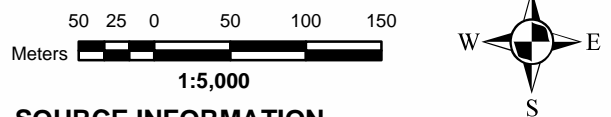
Table 1: Geologic Hazard Classification

Hazard Class	Definition
High	the likelihood of a damaging slope process originating from the slopes above the shoreline segment is considered to be high (i.e. the probability of impact is considered greater than 10% in 50 years, or 1 in 475 years).
Moderate	the likelihood of a damaging slope process originating from the slopes above is considered moderate (i.e. the probability of impact is considered less than 10% in 50 years but greater than 1% in 50 years, or 1 in 5000 years).
Low	the likelihood of a damaging slope process originating from the slopes above is considered low, or unlikely.

Note: the area of impact is considered to be within 30 m of the Mean Annual High Water Mark

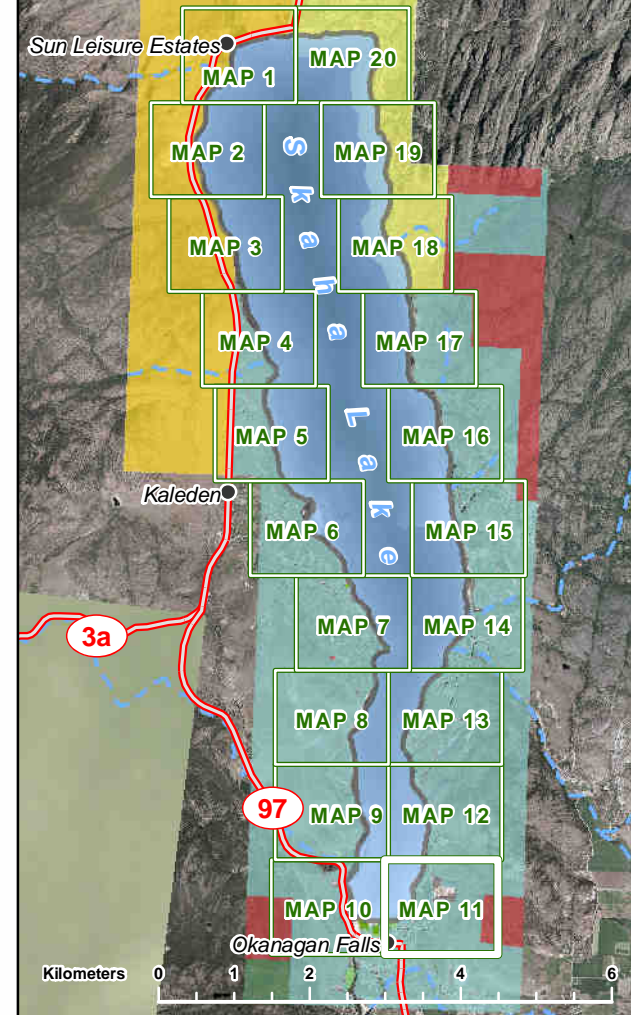
Skaha Lake Foreshore Inventory and Mapping - Environmental and Hazard Map 11

Project: Foreshore Inventory and Mapping
 Location: Regional District of Okanagan - Similkameen
 Project No.: 07-178
 Prepared for: Regional District of Okanagan - Similkameen
 Prepared by: Ecoscape Environmental Consultants Ltd.
 Drawn by: Robert Wagner
 Checked by: Jason Schleppe
 Projection: NAD83-UTM Zone 11
 Date: November 5, 2008



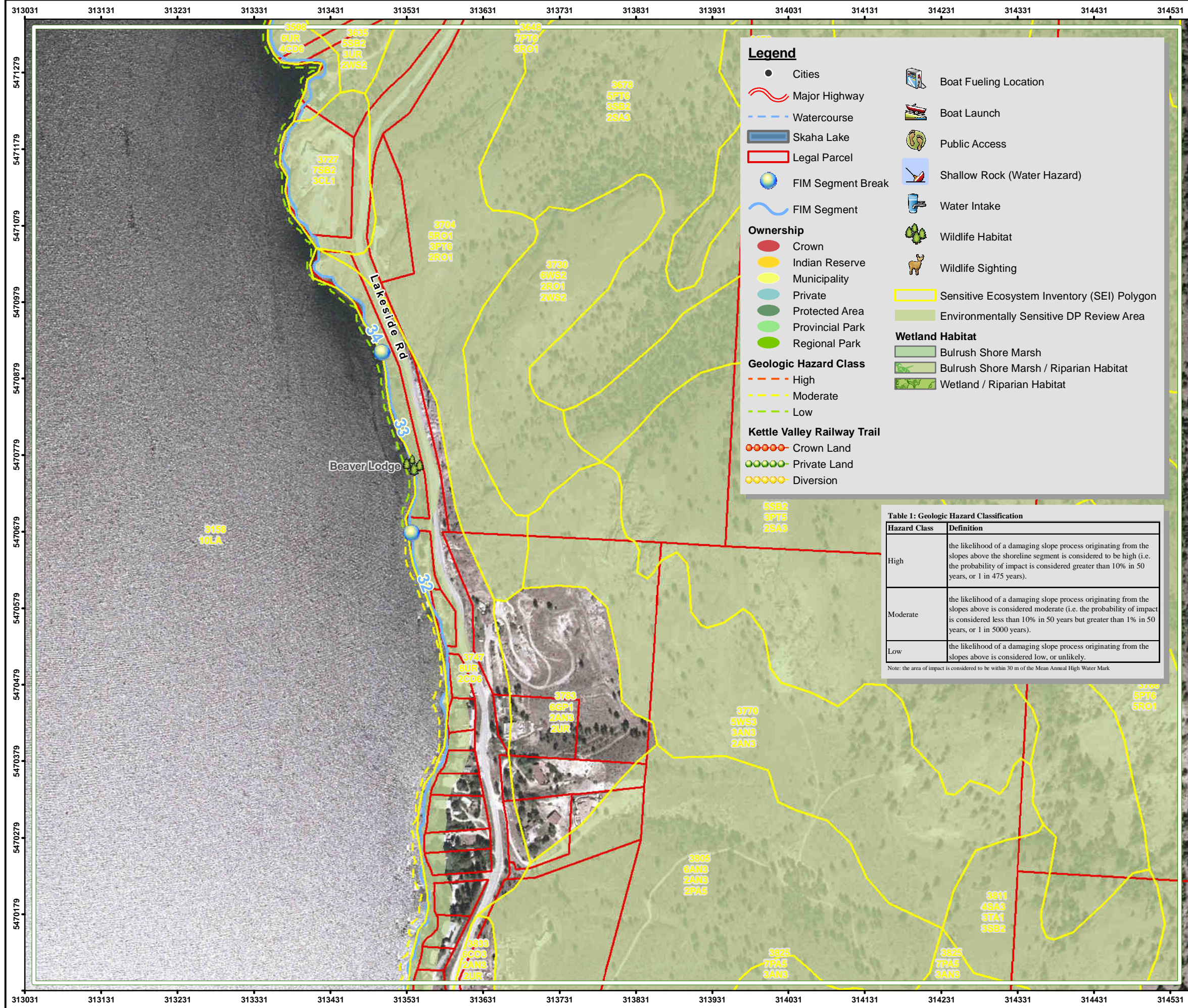
SOURCE INFORMATION

Base Map: 82E.033
 Orthophoto: Province of British Columbia
 Waterbody Information: Skaha Lake
 Location Information: Field, GPS (Trimble GeoXT)
 Feature Information: Airphoto and Topographic Estimate Field Inventory
 Date of Inventory: Spring, 2008
 Inventory Management: Jason Schleppe, R.P. Bio. / Robert Wagner



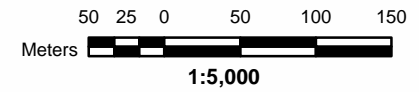
Contributing Partners:

- Okanagan Nation Alliance
- Community Mapping Network (DFO)
- Okanagan Basin Water Board



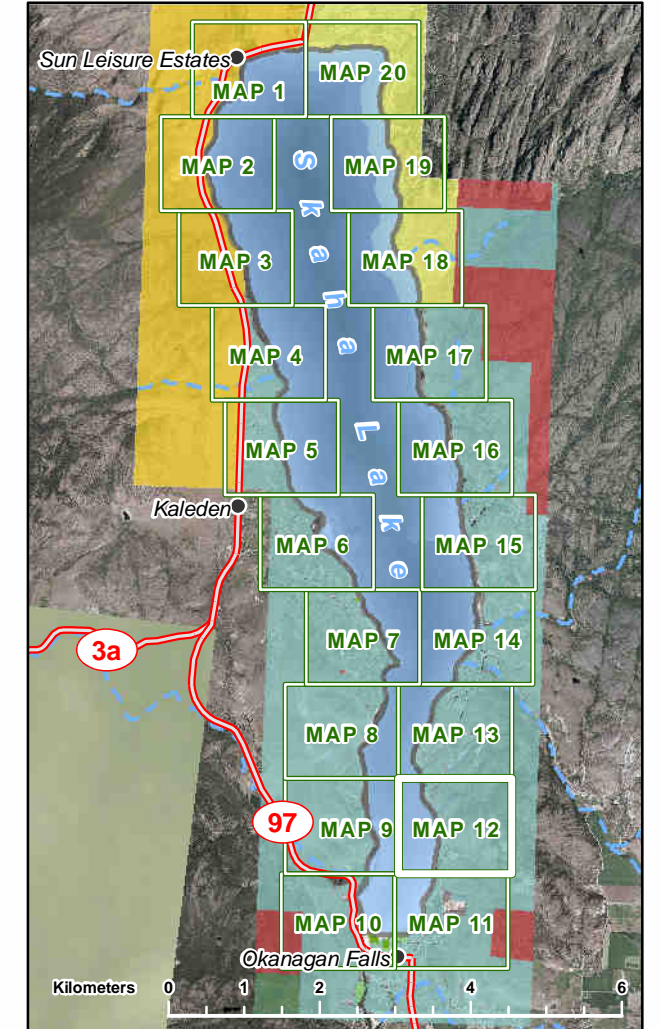
Skaha Lake Foreshore Inventory and Mapping - Environmental and Hazard Map 12

Project: Foreshore Inventory and Mapping
 Location: Regional District of Okanagan - Similkameen
 Project No.: 07-178
 Prepared for: Regional District of Okanagan - Similkameen
 Prepared by: Ecoscape Environmental Consultants Ltd.
 Drawn by: Robert Wagner
 Checked by: Jason Schleppe
 Projection: NAD83-UTM Zone 11
 Date: November 5, 2008

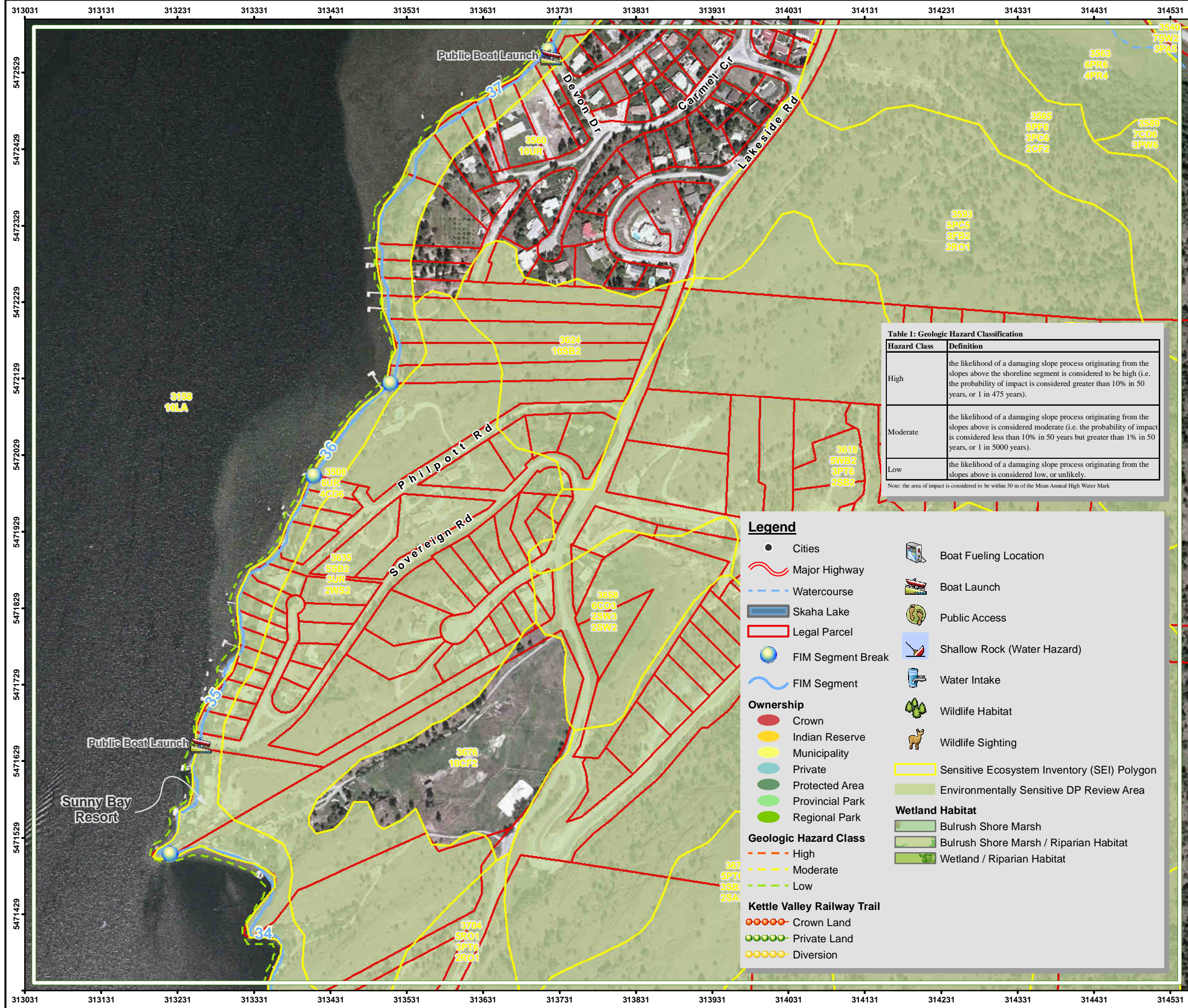


SOURCE INFORMATION

Base Map: 82E.033
 Orthophoto: Province of British Columbia
 Waterbody Information: Skaha Lake
 Location Information: Field, GPS (Trimble GeoXT)
 Feature Information: Airphoto and Topographic Estimate
 Field Inventory
 Date of Inventory: Spring, 2008
 Inventory Management: Jason Schleppe, R.P. Bio. / Robert Wagner

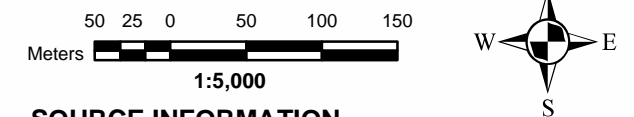


Contributing Partners:
 Okanagan Nation Alliance
 Community Mapping Network (DFO)
 Okanagan Basin Water Board



Skaha Lake Foreshore Inventory and Mapping - Environmental and Hazard Map 13

Project: Foreshore Inventory and Mapping
 Location: Regional District of Okanagan - Similkameen
 Project No.: 07-178
 Prepared for: Regional District of Okanagan - Similkameen
 Prepared by: Ecoscape Environmental Consultants Ltd.
 Drawn by: Robert Wagner
 Checked by: Jason Schleppe
 Projection: NAD83-UTM Zone 11
 Date: November 5, 2008



SOURCE INFORMATION

Base Map: 82E.033
 Orthophoto: Province of British Columbia
 Waterbody Information: Skaha Lake
 Location Information: Field, GPS (Trimble GeoXT)
 Feature Information: Airphoto and Topographic Estimate
 Field Inventory
 Date of Inventory: Spring, 2008
 Inventory Management: Jason Schleppe, R.P. Bio. / Robert Wagner

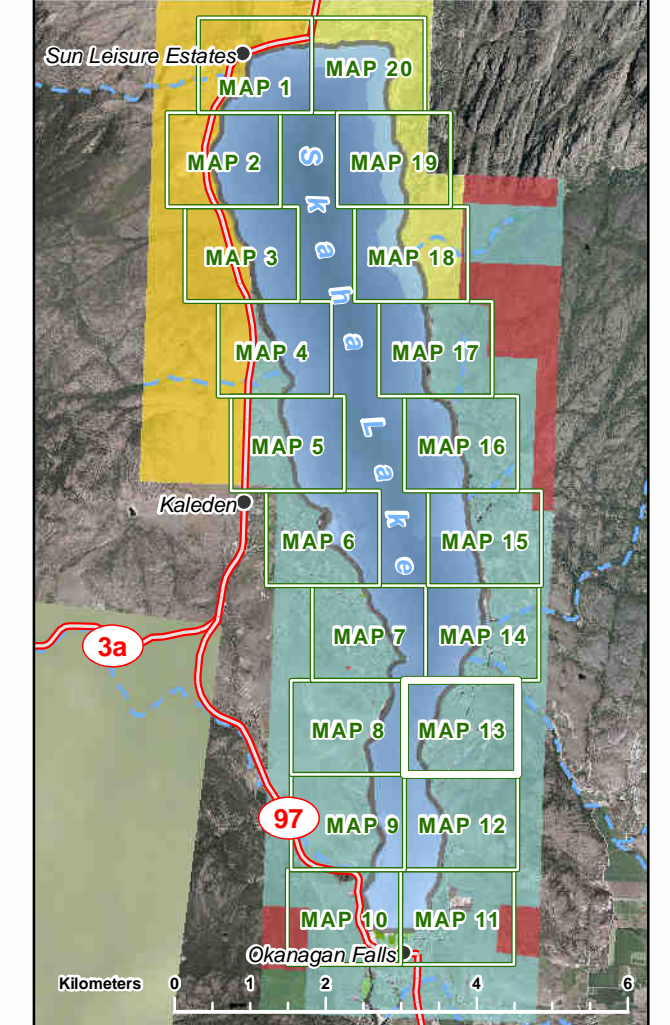
Table 1: Geologic Hazard Classification

Hazard Class	Definition
High	the likelihood of a damaging slope process originating from the slopes above the shoreline segment is considered to be high (i.e. the probability of impact is considered greater than 10% in 50 years, or 1 in 475 years).
Moderate	the likelihood of a damaging slope process originating from the slopes above is considered moderate (i.e. the probability of impact is considered less than 10% in 50 years but greater than 1% in 50 years, or 1 in 5000 years).
Low	the likelihood of a damaging slope process originating from the slopes above is considered low, or unlikely.

Note: the area of impact is considered to be within 30 m of the Mean Annual High Water Mark.

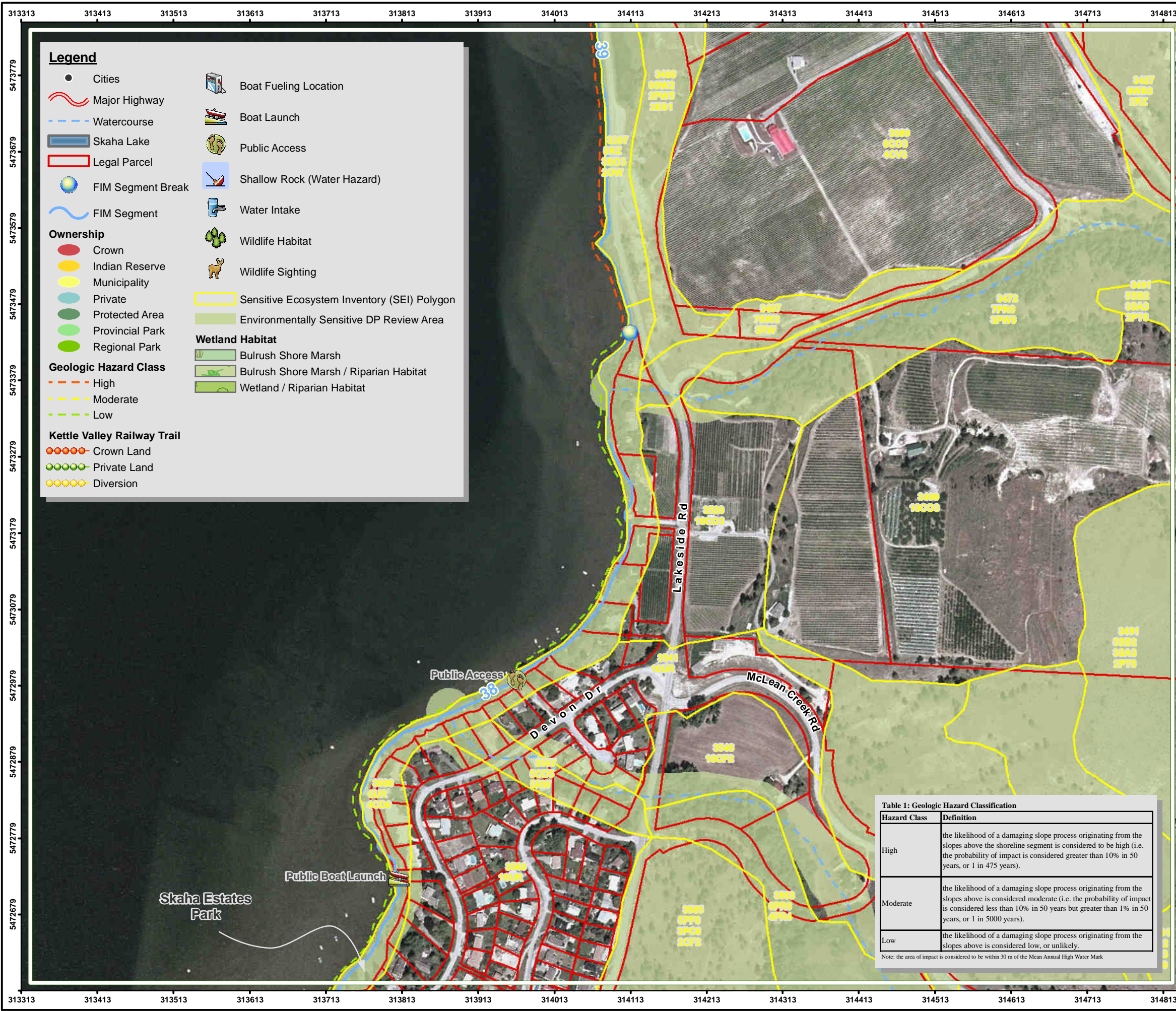
Legend

- Cities
- Major Highway
- Watercourse
- Skaha Lake
- Legal Parcel
- FIM Segment Break
- FIM Segment
- Ownership
 - Crown
 - Indian Reserve
 - Municipality
 - Private
 - Protected Area
 - Provincial Park
 - Regional Park
- Geologic Hazard Class
 - High
 - Moderate
 - Low
- Kettle Valley Railway Trail
 - Crown Land
 - Private Land
 - Diversion
- Boat Fueling Location
- Boat Launch
- Public Access
- Shallow Rock (Water Hazard)
- Water Intake
- Wildlife Habitat
- Wildlife Sighting
- Sensitive Ecosystem Inventory (SEI) Polygon
- Environmentally Sensitive DP Review Area
- Wetland Habitat
 - Bulrush Shore Marsh
 - Bulrush Shore Marsh / Riparian Habitat
 - Wetland / Riparian Habitat



Contributing Partners:

- Okanagan Nation Alliance
- Community Mapping Network (DFO)
- Okanagan Basin Water Board



Legend

- Cities
- Major Highway
- Watercourse
- Skaha Lake
- Legal Parcel
- FIM Segment Break
- FIM Segment
- Ownership
 - Crown
 - Indian Reserve
 - Municipality
 - Private
 - Protected Area
 - Provincial Park
 - Regional Park
- Geologic Hazard Class
 - High
 - Moderate
 - Low
- Kettle Valley Railway Trail
 - Crown Land
 - Private Land
 - Diversion
- Boat Fueling Location
- Boat Launch
- Public Access
- Shallow Rock (Water Hazard)
- Water Intake
- Wildlife Habitat
- Wildlife Sighting
- Sensitive Ecosystem Inventory (SEI) Polygon
- Environmentally Sensitive DP Review Area
- Wetland Habitat
 - Bulrush Shore Marsh
 - Bulrush Shore Marsh / Riparian Habitat
 - Wetland / Riparian Habitat

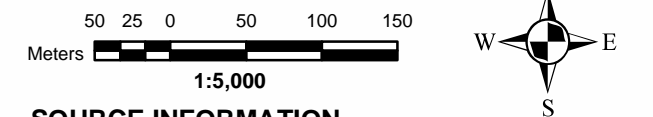
Table 1: Geologic Hazard Classification

Hazard Class	Definition
High	the likelihood of a damaging slope process originating from the slopes above the shoreline segment is considered to be high (i.e. the probability of impact is considered greater than 10% in 50 years, or 1 in 475 years).
Moderate	the likelihood of a damaging slope process originating from the slopes above is considered moderate (i.e. the probability of impact is considered less than 10% in 50 years but greater than 1% in 50 years, or 1 in 5000 years).
Low	the likelihood of a damaging slope process originating from the slopes above is considered low, or unlikely.

Note: the area of impact is considered to be within 30 m of the Mean Annual High Water Mark

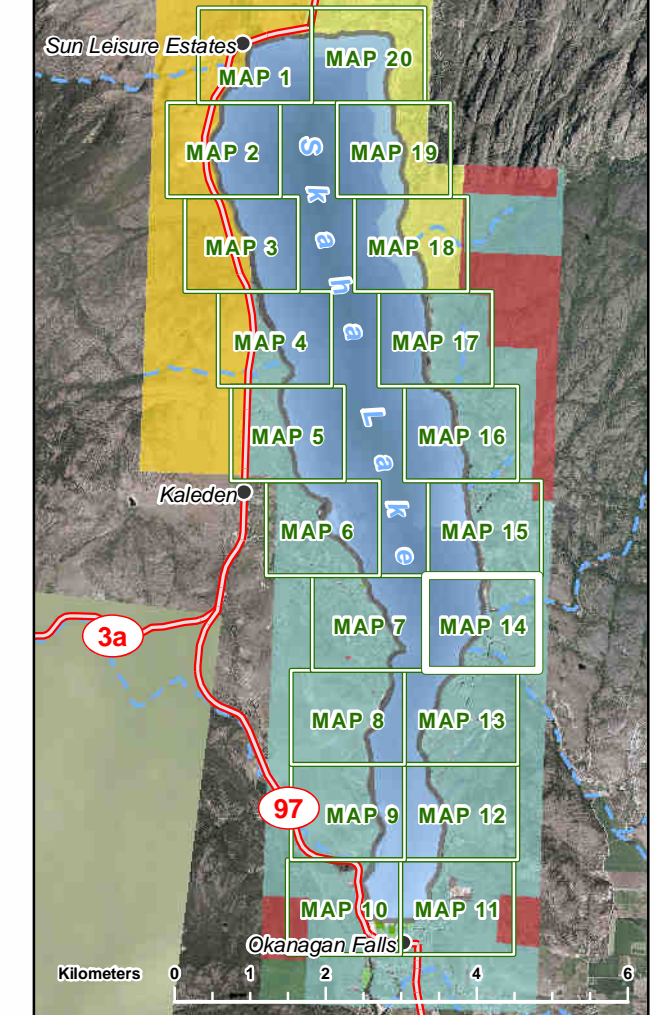
Skaha Lake Foreshore Inventory and Mapping - Environmental and Hazard Map 14

Project: Foreshore Inventory and Mapping
 Location: Regional District of Okanagan - Similkameen
 Project No.: 07-178
 Prepared for: Regional District of Okanagan - Similkameen
 Prepared by: Ecoscape Environmental Consultants Ltd.
 Drawn by: Robert Wagner
 Checked by: Jason Schleppe
 Projection: NAD83-UTM Zone 11
 Date: November 5, 2008



SOURCE INFORMATION

Base Map: 82E.033
 Orthophoto: Province of British Columbia
 Waterbody Information: Skaha Lake
 Location Information: Field, GPS (Trimble GeoXT)
 Feature Information: Airphoto and Topographic Estimate
 Field Inventory
 Date of Inventory: Spring, 2008
 Inventory Management: Jason Schleppe, R.P. Bio. / Robert Wagner



Contributing Partners:
 Okanagan Nation Alliance
 Community Mapping Network (DFO)
 Okanagan Basin Water Board



Legend

- Cities
- Major Highway
- - - Watercourse
- Skaha Lake
- Legal Parcel
- FIM Segment Break
- FIM Segment
- Ownership**
- Crown
- Indian Reserve
- Municipality
- Private
- Protected Area
- Provincial Park
- Regional Park
- Geologic Hazard Class**
- - - High
- - - Moderate
- - - Low
- Kettle Valley Railway Trail**
- Crown Land
- Private Land
- Diversion
- Boat Fueling Location
- Boat Launch
- Public Access
- Shallow Rock (Water Hazard)
- Water Intake
- Wildlife Habitat
- Wildlife Sighting
- Sensitive Ecosystem Inventory (SEI) Polygon
- Environmentally Sensitive DP Review Area
- Wetland Habitat**
- Bulrush Shore Marsh
- Bulrush Shore Marsh / Riparian Habitat
- Wetland / Riparian Habitat

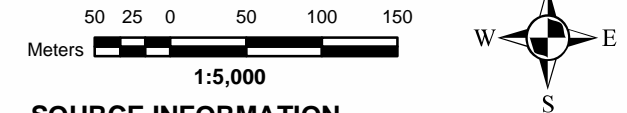
Table 1: Geologic Hazard Classification

Hazard Class	Definition
High	the likelihood of a damaging slope process originating from the slopes above the shoreline segment is considered to be high (i.e. the probability of impact is considered greater than 10% in 50 years, or 1 in 475 years).
Moderate	the likelihood of a damaging slope process originating from the slopes above is considered moderate (i.e. the probability of impact is considered less than 10% in 50 years but greater than 1% in 50 years, or 1 in 5000 years).
Low	the likelihood of a damaging slope process originating from the slopes above is considered low, or unlikely.

Note: the area of impact is considered to be within 30 m of the Mean Annual High Water Mark.

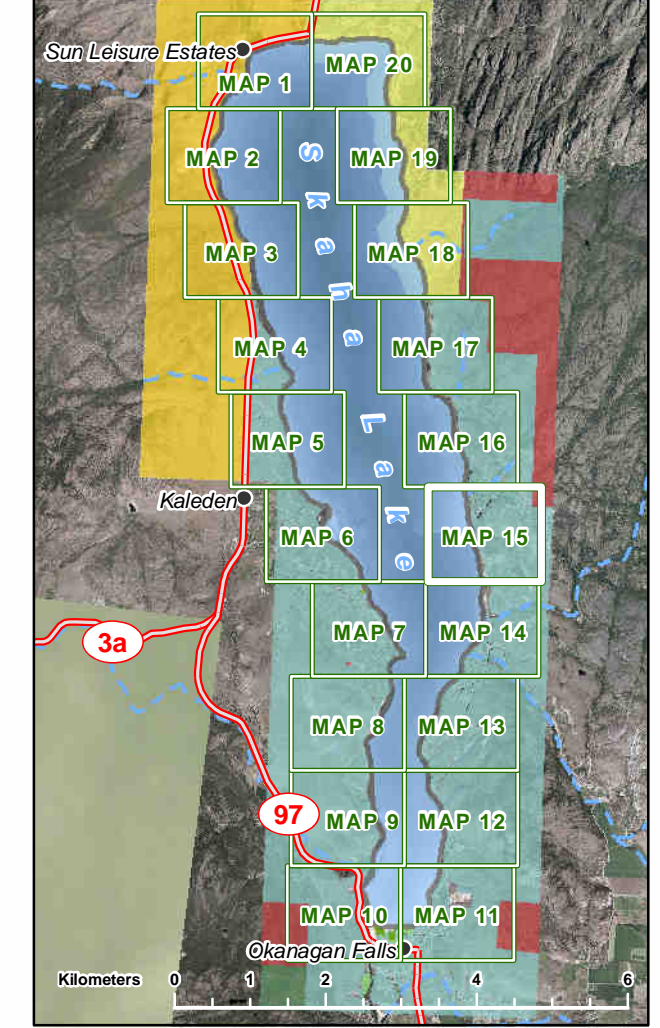
Skaha Lake Foreshore Inventory and Mapping - Environmental and Hazard Map 15

Project: Foreshore Inventory and Mapping
 Location: Regional District of Okanagan - Similkameen
 Project No.: 07-178
 Prepared for: Regional District of Okanagan - Similkameen
 Prepared by: Ecoscape Environmental Consultants Ltd.
 Drawn by: Robert Wagner
 Checked by: Jason Schleppe
 Projection: NAD83-UTM Zone 11
 Date: November 5, 2008



SOURCE INFORMATION

Base Map: 82E.033/82E.043
 Orthophoto: Province of British Columbia
 Waterbody Information: Skaha Lake
 Location Information: Field, GPS (Trimble GeoXT)
 Feature Information: Airphoto and Topographic Estimate
 Field Inventory
 Date of Inventory: Spring, 2008
 Inventory Management: Jason Schleppe, R.P. Bio. / Robert Wagner



Contributing Partners:
 Okanagan Nation Alliance
 Community Mapping Network (DFO)
 Okanagan Basin Water Board

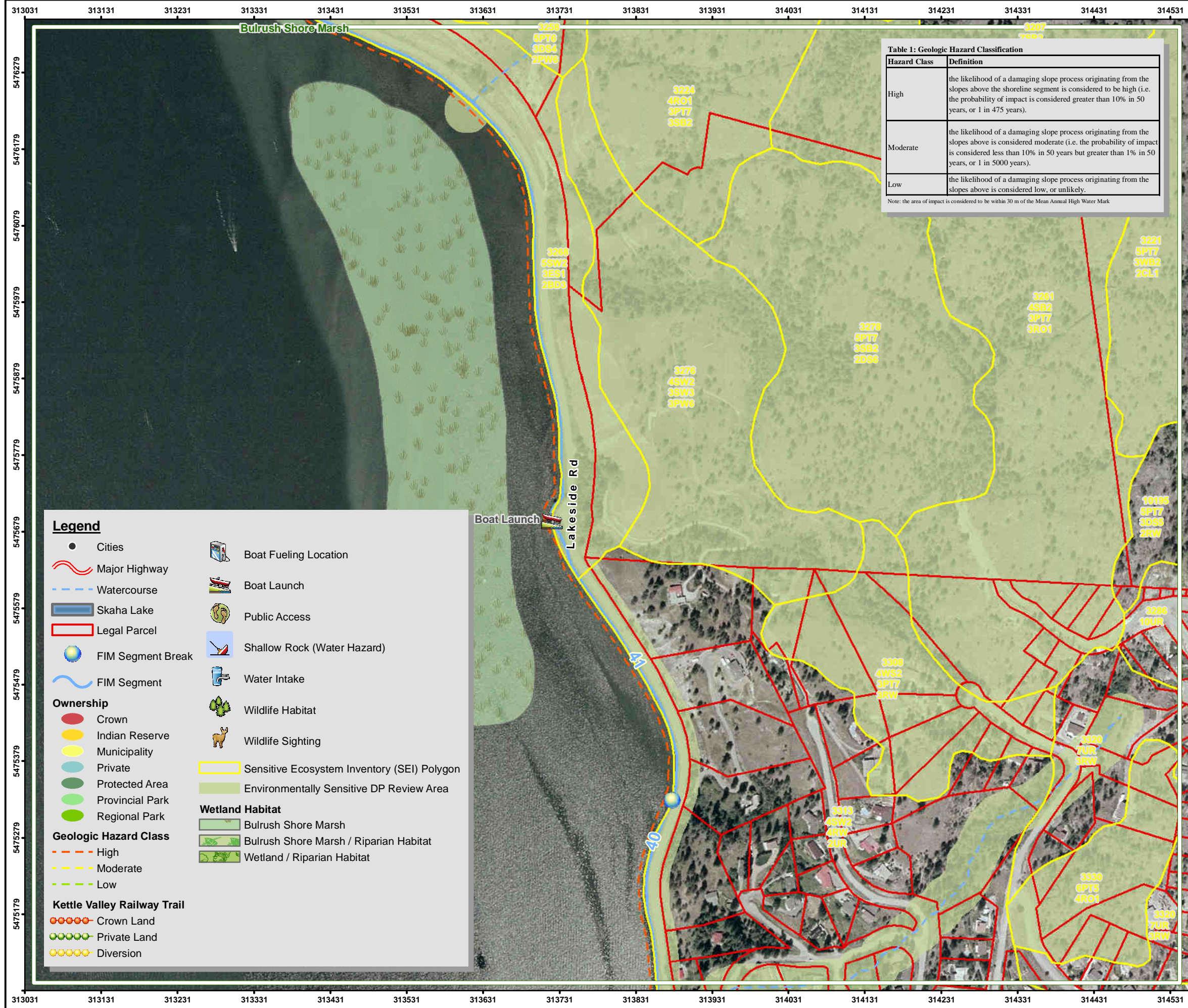


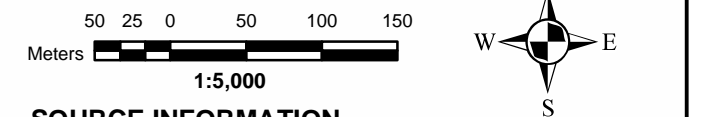
Table 1: Geologic Hazard Classification

Hazard Class	Definition
High	the likelihood of a damaging slope process originating from the slopes above the shoreline segment is considered to be high (i.e. the probability of impact is considered greater than 10% in 50 years, or 1 in 475 years).
Moderate	the likelihood of a damaging slope process originating from the slopes above is considered moderate (i.e. the probability of impact is considered less than 10% in 50 years but greater than 1% in 500 years).
Low	the likelihood of a damaging slope process originating from the slopes above is considered low, or unlikely.

Note: the area of impact is considered to be within 30 m of the Mean Annual High Water Mark

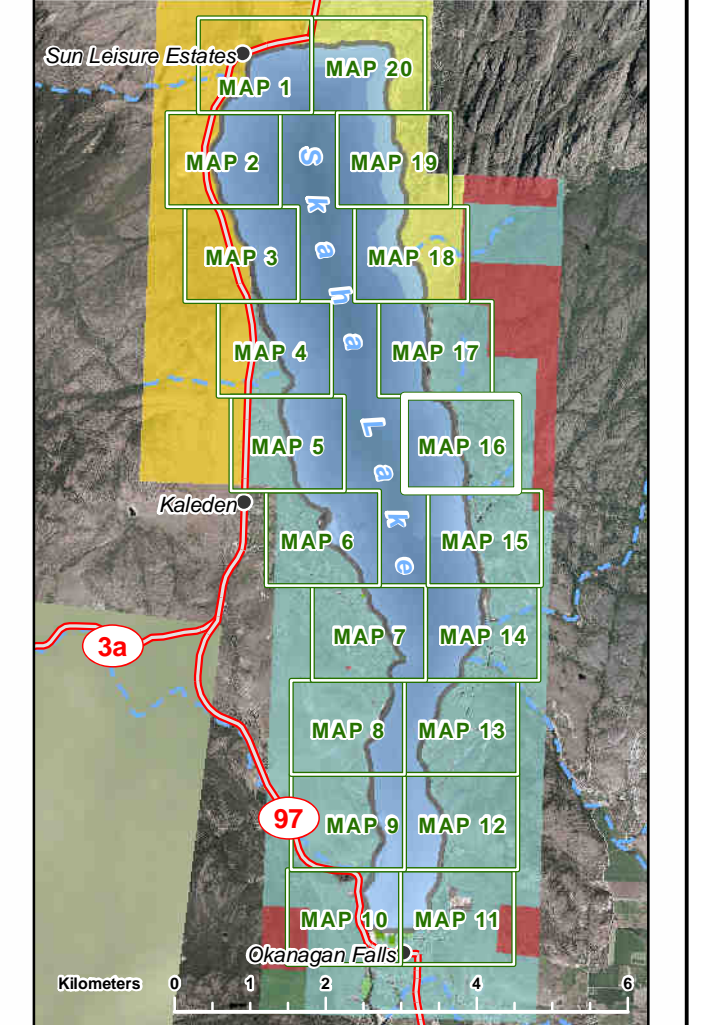
Skaha Lake Foreshore Inventory and Mapping - Environmental and Hazard Map 16

Project: Foreshore Inventory and Mapping
 Location: Regional District of Okanagan - Similkameen
 Project No.: 07-178
 Prepared for: Regional District of Okanagan - Similkameen
 Prepared by: Ecoscape Environmental Consultants Ltd.
 Drawn by: Robert Wagner
 Checked by: Jason Schleppe
 Projection: NAD83-UTM Zone 11
 Date: November 5, 2008

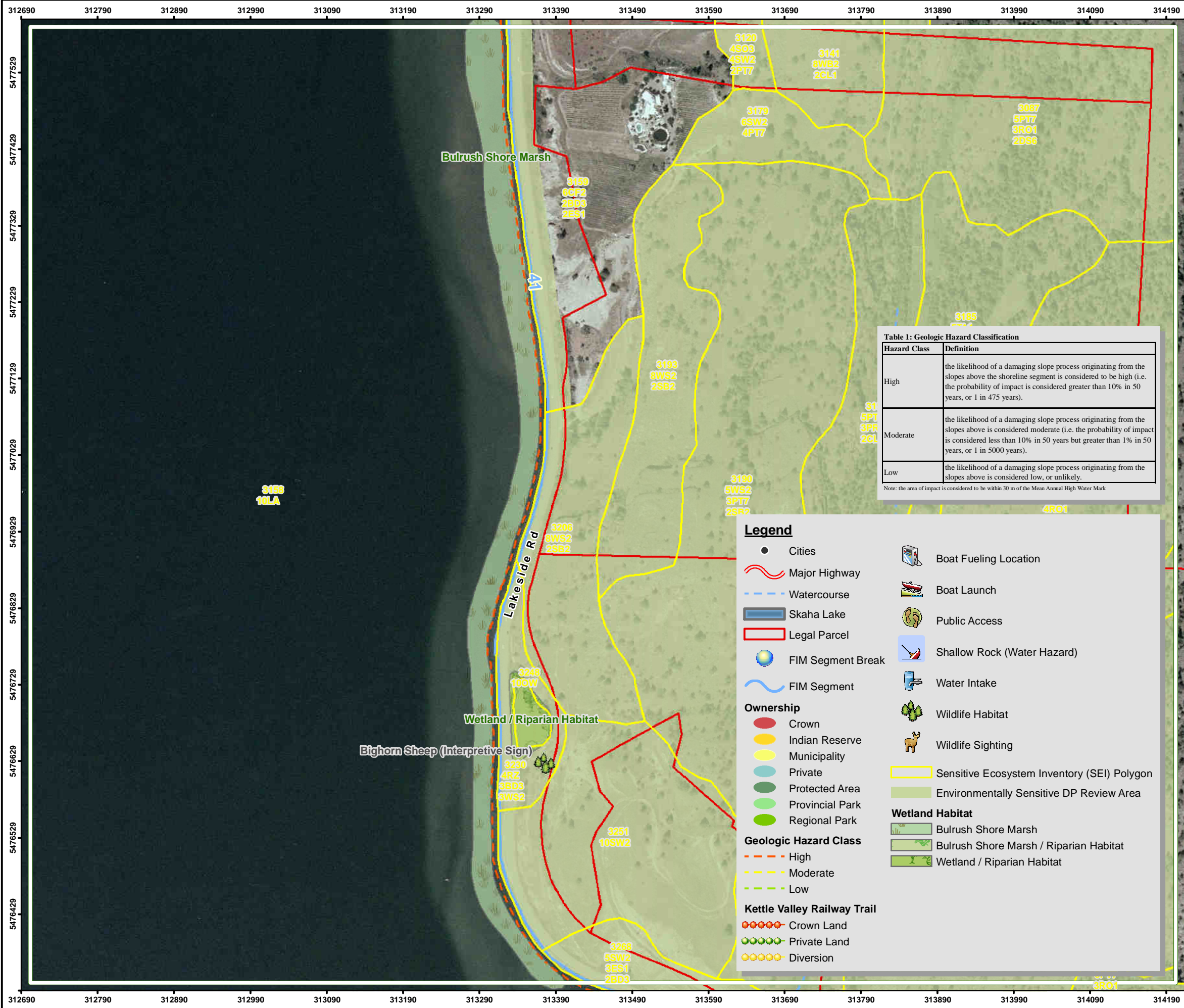


SOURCE INFORMATION

Base Map: 82E.043
 Orthophoto: Province of British Columbia
 Waterbody Information: Skaha Lake
 Location Information: Field, GPS (Trimble GeoXT)
 Feature Information: Airphoto and Topographic Estimate
 Field Inventory
 Date of Inventory: Spring, 2008
 Inventory Management: Jason Schleppe, R.P. Bio. / Robert Wagner

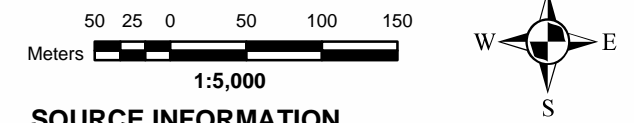


Contributing Partners:
 Okanagan Nation Alliance
 Community Mapping Network (DFO)
 Okanagan Basin Water Board



Skaha Lake Foreshore Inventory and Mapping - Environmental and Hazard Map 17

Project: Foreshore Inventory and Mapping
 Location: Regional District of Okanagan - Similkameen
 Project No.: 07-178
 Prepared for: Regional District of Okanagan - Similkameen
 Prepared by: Ecoscape Environmental Consultants Ltd.
 Drawn by: Robert Wagner
 Checked by: Jason Schleppe
 Projection: NAD83-UTM Zone 11
 Date: November 5, 2008



SOURCE INFORMATION

Base Map: 82E.043
 Orthophoto: Province of British Columbia
 Waterbody Information: Skaha Lake
 Location Information: Field, GPS (Trimble GeoXT)
 Feature Information: Airphoto and Topographic Estimate
 Field Inventory
 Date of Inventory: Spring, 2008
 Inventory Management: Jason Schleppe, R.P. Bio. / Robert Wagner

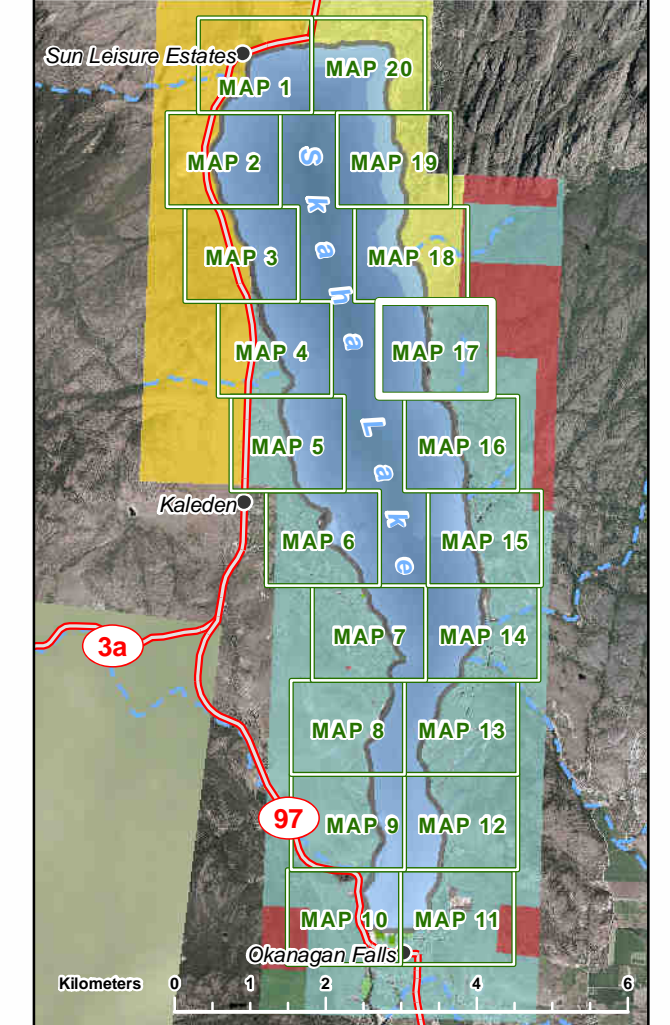
Table 1: Geologic Hazard Classification

Hazard Class	Definition
High	the likelihood of a damaging slope process originating from the slopes above the shoreline segment is considered to be high (i.e. the probability of impact is considered greater than 10% in 50 years, or 1 in 475 years).
Moderate	the likelihood of a damaging slope process originating from the slopes above is considered moderate (i.e. the probability of impact is considered less than 10% in 50 years but greater than 1% in 50 years, or 1 in 5000 years).
Low	the likelihood of a damaging slope process originating from the slopes above is considered low, or unlikely.

Note: the area of impact is considered to be within 30 m of the Mean Annual High Water Mark

Legend

- Cities
- Major Highway
- - - Watercourse
- Skaha Lake
- Legal Parcel
- FIM Segment Break
- FIM Segment
- Ownership**
 - Crown
 - Indian Reserve
 - Municipality
 - Private
 - Protected Area
 - Provincial Park
 - Regional Park
- Geologic Hazard Class**
 - High
 - Moderate
 - Low
- Kettle Valley Railway Trail**
 - Crown Land
 - Private Land
 - Diversion
- Boat Fueling Location
- Boat Launch
- Public Access
- Shallow Rock (Water Hazard)
- Water Intake
- Wildlife Habitat
- Wildlife Sighting
- Sensitive Ecosystem Inventory (SEI) Polygon
- Environmentally Sensitive DP Review Area
- Wetland Habitat**
 - Bulrush Shore Marsh
 - Bulrush Shore Marsh / Riparian Habitat
 - Wetland / Riparian Habitat



Contributing Partners:
 Okanagan Nation Alliance
 Community Mapping Network (DFO)
 Okanagan Basin Water Board

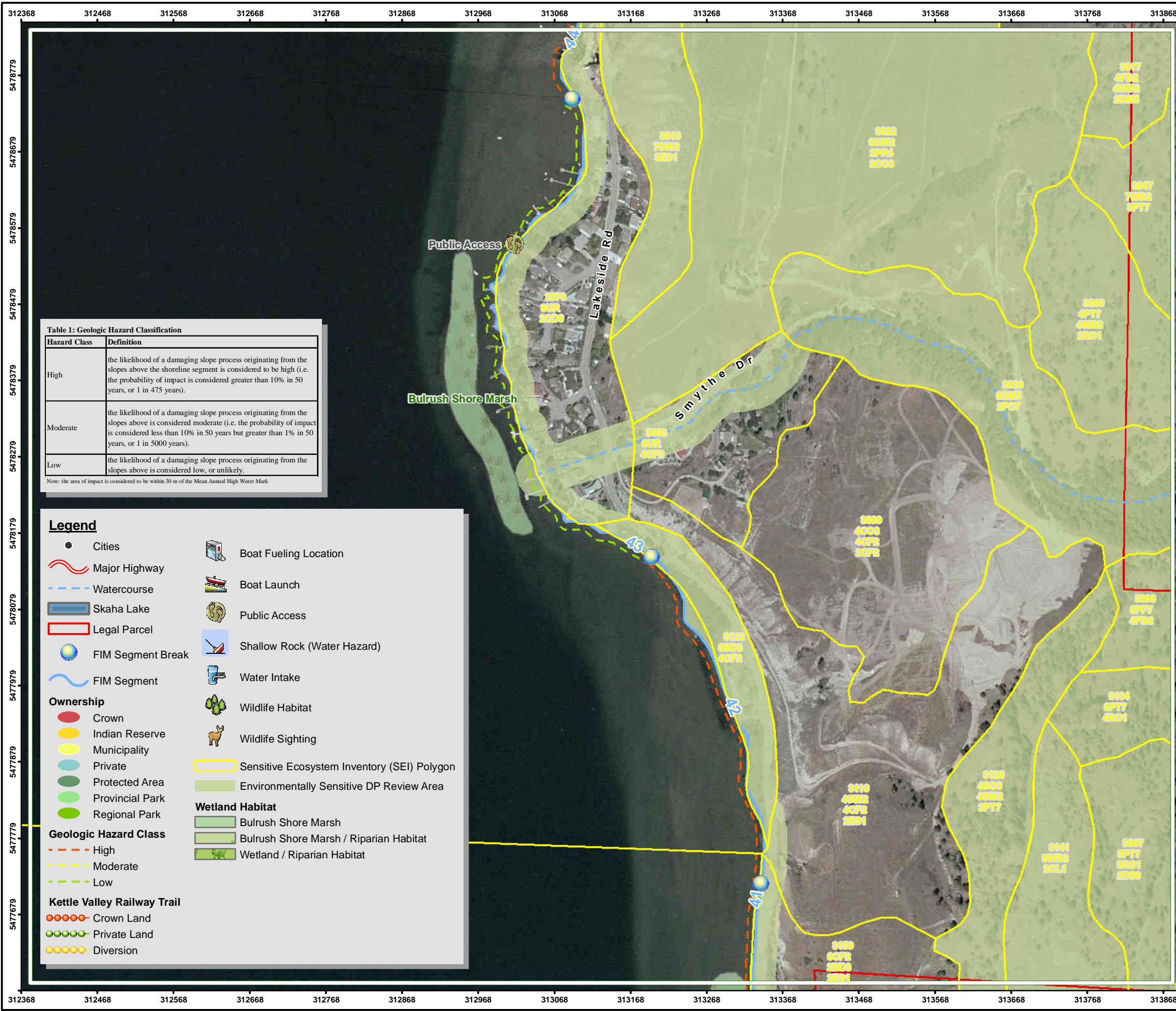


Table 1: Geologic Hazard Classification

Hazard Class	Definition
High	the likelihood of a damaging slope process originating from the slopes above the shoreline segment is considered to be high (i.e. the probability of impact is considered greater than 10% in 50 years, or 1 in 475 years).
Moderate	the likelihood of a damaging slope process originating from the slopes above is considered moderate (i.e. the probability of impact is considered less than 10% in 50 years but greater than 1% in 50 years, or 1 in 5000 years).
Low	the likelihood of a damaging slope process originating from the slopes above is considered low, or unlikely.

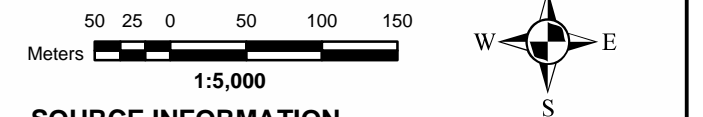
Note: the area of impact is considered to be within 30 m of the Mean Annual High Water Mark

Legend

- Cities
- Major Highway
- Watercourse
- Skaha Lake
- Legal Parcel
- FIM Segment Break
- FIM Segment
- Ownership
 - Crown
 - Indian Reserve
 - Municipality
 - Private
 - Protected Area
 - Provincial Park
 - Regional Park
- Geologic Hazard Class
 - High
 - Moderate
 - Low
- Kettle Valley Railway Trail
 - Crown Land
 - Private Land
 - Diversion
- Boat Fueling Location
- Boat Launch
- Public Access
- Shallow Rock (Water Hazard)
- Water Intake
- Wildlife Habitat
- Wildlife Sighting
- Sensitive Ecosystem Inventory (SEI) Polygon
- Environmentally Sensitive DP Review Area
- Wetland Habitat
 - Bulrush Shore Marsh
 - Bulrush Shore Marsh / Riparian Habitat
 - Wetland / Riparian Habitat

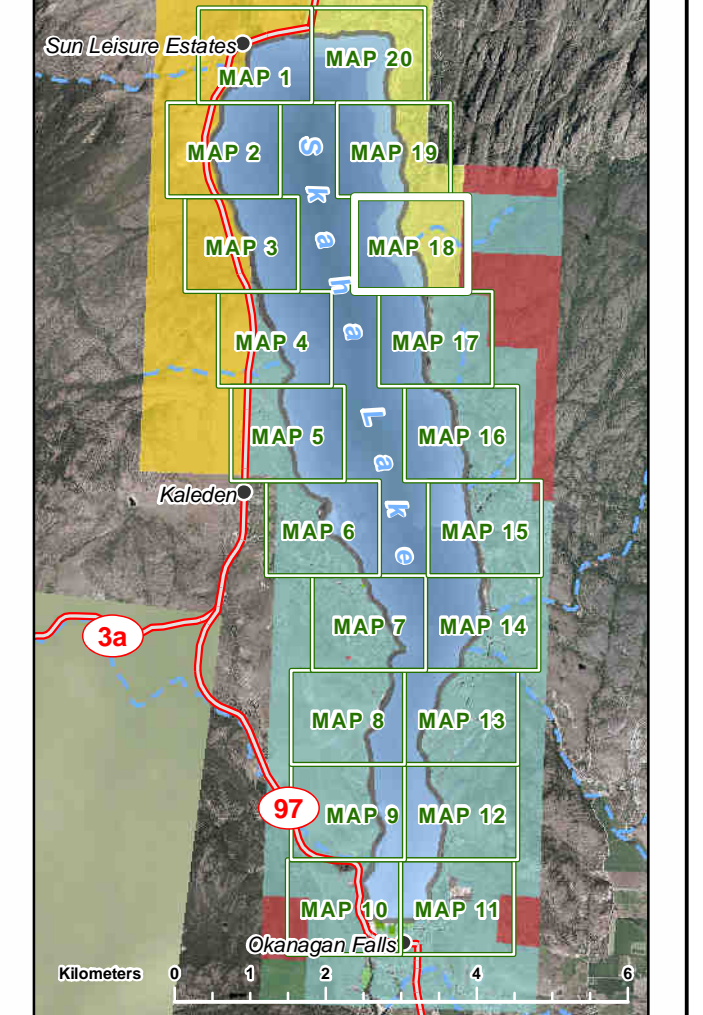
Skaha Lake Foreshore Inventory and Mapping - Environmental and Hazard Map 18

Project: Foreshore Inventory and Mapping
 Location: Regional District of Okanagan - Similkameen
 Project No.: 07-178
 Prepared for: Regional District of Okanagan - Similkameen
 Prepared by: Ecoscape Environmental Consultants Ltd.
 Drawn by: Robert Wagner
 Checked by: Jason Schleppe
 Projection: NAD83-UTM Zone 11
 Date: November 5, 2008



SOURCE INFORMATION

Base Map: 82E.043
 Orthophoto: Province of British Columbia
 Waterbody Information: Skaha Lake
 Location Information: Field, GPS (Trimble GeoXT)
 Feature Information: Airphoto and Topographic Estimate
 Field Inventory
 Date of Inventory: Spring, 2008
 Inventory Management: Jason Schleppe, R.P. Bio. / Robert Wagner



Contributing Partners:

- Okanagan Nation Alliance
- Community Mapping Network (DFO)
- Okanagan Basin Water Board

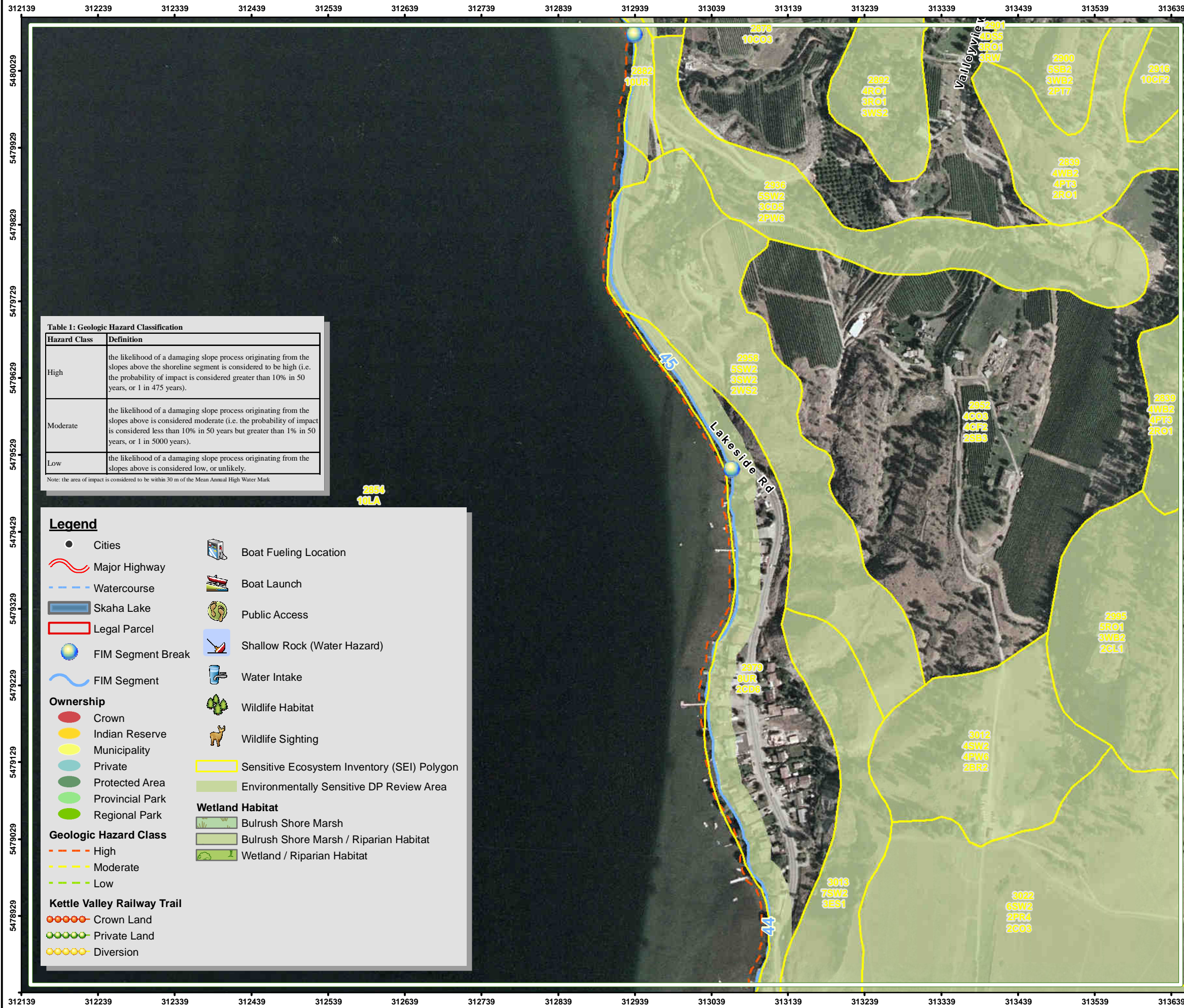


Table 1: Geologic Hazard Classification

Hazard Class	Definition
High	the likelihood of a damaging slope process originating from the slopes above the shoreline segment is considered to be high (i.e. the probability of impact is considered greater than 10% in 50 years, or 1 in 475 years).
Moderate	the likelihood of a damaging slope process originating from the slopes above is considered moderate (i.e. the probability of impact is considered less than 10% in 50 years but greater than 1% in 50 years, or 1 in 5000 years).
Low	the likelihood of a damaging slope process originating from the slopes above is considered low, or unlikely.

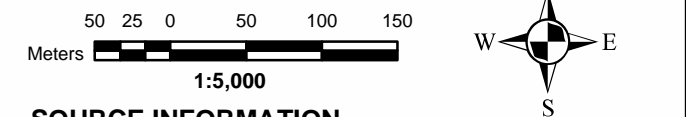
Note: the area of impact is considered to be within 30 m of the Mean Annual High Water Mark

Legend

- Cities
- Major Highway
- Watercourse
- Skaha Lake
- Legal Parcel
- FIM Segment Break
- FIM Segment
- Ownership**
 - Crown
 - Indian Reserve
 - Municipality
 - Private
 - Protected Area
 - Provincial Park
 - Regional Park
- Geologic Hazard Class**
 - High
 - Moderate
 - Low
- Kettle Valley Railway Trail**
 - Crown Land
 - Private Land
 - Diversion
- Boat Fueling Location
- Boat Launch
- Public Access
- Shallow Rock (Water Hazard)
- Water Intake
- Wildlife Habitat
- Wildlife Sighting
- Sensitive Ecosystem Inventory (SEI) Polygon
- Environmentally Sensitive DP Review Area
- Wetland Habitat**
 - Bulrush Shore Marsh
 - Bulrush Shore Marsh / Riparian Habitat
 - Wetland / Riparian Habitat

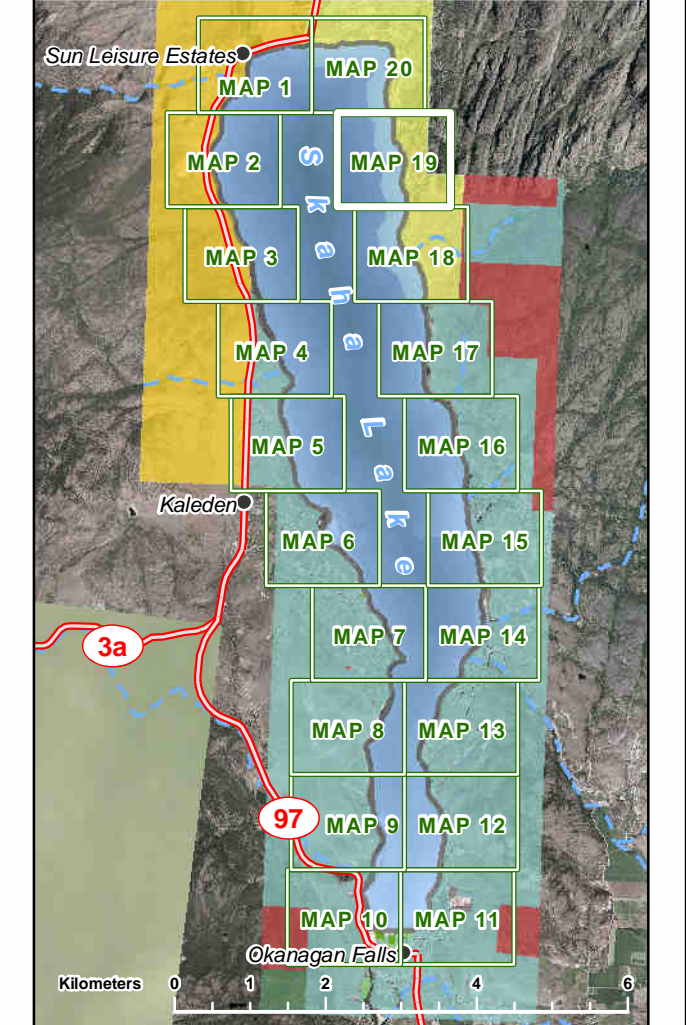
Skaha Lake Foreshore Inventory and Mapping - Environmental and Hazard Map 19

Project: Foreshore Inventory and Mapping
 Location: Regional District of Okanagan - Similkameen
 Project No.: 07-178
 Prepared for: Regional District of Okanagan - Similkameen
 Prepared by: Ecoscape Environmental Consultants Ltd.
 Drawn by: Robert Wagner
 Checked by: Jason Schleppe
 Projection: NAD83-UTM Zone 11
 Date: November 5, 2008



SOURCE INFORMATION

Base Map: 82E.043
 Orthophoto: Province of British Columbia
 Waterbody Information: Skaha Lake
 Location Information: Field, GPS (Trimble GeoXT)
 Feature Information: Airphoto and Topographic Estimate
 Field Inventory
 Date of Inventory: Spring, 2008
 Inventory Management: Jason Schleppe, R.P. Bio. / Robert Wagner

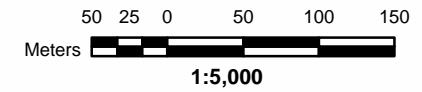


Contributing Partners:

- Okanagan Nation Alliance
- Community Mapping Network (DFO)
- Okanagan Basin Water Board

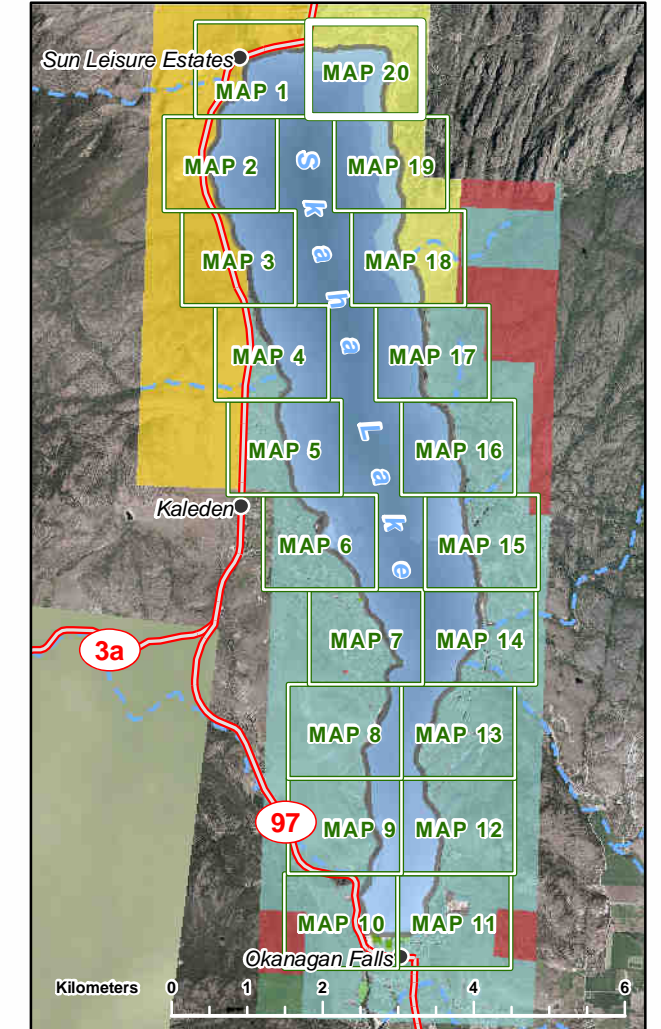
Skaha Lake Foreshore Inventory and Mapping - Environmental and Hazard Map 20

Project: Foreshore Inventory and Mapping
 Location: Regional District of Okanagan - Similkameen
 Project No.: 07-178
 Prepared for: Regional District of Okanagan - Similkameen
 Prepared by: Ecoscape Environmental Consultants Ltd.
 Drawn by: Robert Wagner
 Checked by: Jason Schleppe
 Projection: NAD83-UTM Zone 11
 Date: November 5, 2008



SOURCE INFORMATION

Base Map: 82E.043
 Orthophoto: Province of British Columbia
 Waterbody Information: Skaha Lake
 Location Information: Field, GPS (Trimble GeoXT)
 Feature Information: Airphoto and Topographic Estimate
 Field Inventory
 Date of Inventory: Spring, 2008
 Inventory Management: Jason Schleppe, R.P. Bio. / Robert Wagner



Legend

- Cities
- Major Highway
- Watercourse
- Skaha Lake
- Legal Parcel
- FIM Segment Break
- FIM Segment
- Ownership**
 - Crown
 - Indian Reserve
 - Municipality
 - Private
 - Protected Area
 - Provincial Park
 - Regional Park
- Geologic Hazard Class**
 - High
 - Moderate
 - Low
- Kettle Valley Railway Trail**
 - Crown Land
 - Private Land
 - Diversion
- Boat Fueling Location
- Boat Launch
- Public Access
- Shallow Rock (Water Hazard)
- Water Intake
- Wildlife Habitat
- Wildlife Sighting
- Sensitive Ecosystem Inventory (SEI) Polygon
- Environmentally Sensitive DP Review Area
- Wetland Habitat**
 - Bulrush Shore Marsh
 - Bulrush Shore Marsh / Riparian Habitat
 - Wetland / Riparian Habitat

Table 1: Geologic Hazard Classification

Hazard Class	Definition
High	the likelihood of a damaging slope process originating from the slopes above the shoreline segment is considered to be high (i.e. the probability of impact is considered greater than 10% in 50 years, or 1 in 475 years).
Moderate	the likelihood of a damaging slope process originating from the slopes above is considered moderate (i.e. the probability of impact is considered less than 10% in 50 years but greater than 1% in 50 years, or 1 in 5000 years).
Low	the likelihood of a damaging slope process originating from the slopes above is considered low, or unlikely.

Note: the area of impact is considered to be within 30 m of the Mean Annual High Water Mark

Contributing Partners:
 Okanagan Nation Alliance
 Community Mapping Network (DFO)
 Okanagan Basin Water Board

Appendix A – Guiding Principles



APPENDIX A

SKAHA LAKE SHORELINE COMMITTEE

GUIDING PRINCIPLES

ENHANCE CONNECTIVITY

- Determine, assessed against established criteria, if a public shoreline trail system along the lake is appropriate.
- Inventory locations for a public trail along the lake, and identify gaps in the system.
- Establish guidelines for use, signage and acquisition to establish connectivity in the public shoreline trail system and a phased acquisition and sign program.
- Develop a linear trail system as a greenway belt encouraging loop systems wherever possible.
- Ensure connectivity between the shoreline trail and other trails.

LIMIT NOISE, WATER AND AIR POLLUTION

- To reduce the amount of noise, water and air pollution on the lake and shoreline by limiting the trail system to non-motorized (except for maintenance vehicles, emergency vehicles, motorized scooters, wheelchairs, etc.). Mechanisms of limiting use of motorized watercraft on all or parts of the lake should be investigated.

CONSERVE THE NATURAL ENVIRONMENT

- Inventory shoreline and lake habitat.
- Enhance, restore, and preserve the natural environment by maintaining the trail in a natural state and ensuring that private and public docks as well as moorage respect the natural environment through implementation of best management practices (ie. the provincial 'Best Management Practices for Boat Launch Construction & Maintenance on Lakes' and 'Best Management Practices for Small Boat Moorage on Lakes'). Current and future demand for docks should be investigated and an appropriate amount of public docks should be planned in order to reduce the need for additional private docks in the future.
- Protect wildlife and protect and restore habitat by ensuring no net loss of the land area or functional values of shoreline habitat in the short term and by increasing the land area and functional values of shoreline habitat in the long term.
- Future construction and maintenance of marinas, moorages and boat launches must be respectful of the natural environment.
- Protect the natural environment from pollution resulting from boats (i.e. oil and gas).

PROTECT AND EXPAND RECREATION

- Determine, assessed against established criteria, if public amenities such as marinas, docks, beaches, camping or other, in addition to and in association with a Shoreline trail system and access, are appropriate, desirable and feasible.
- Protect the existing trail as a recreational corridor for public use and designate it as a community trail with no user fees.
- Distinguish the trail and other recreation along the shoreline with signage for trailheads, parking, and other pertinent information.
- Acquire land for parks and trails along the shoreline as part of redevelopment or through purchase (where feasible).
- Require the developer to be responsible for providing public mobility along the shoreline, where increased waterfront density is proposed.
- Ensure that the trail and recreational areas are well maintained.
- Keep the trail system free of future commercial development.

- Ensure that the current supply of existing marinas is sufficient and plan for expansion to serve future needs of residents and visitors.
- Investigate the feasibility of a new full-service marina in South Skaha taking into account the social, environmental, and economic impact that a marina would have.
- Ensure that public boat launches are maintained within Area 'D', and adequate parking is available.
- Investigate how the RDOS may get jurisdiction over provincial boat launches.
- Examine boat launches, docks, moorages and similar facilities on the lake and establish guidelines and bylaws to limit and control these facilities.
- Ensure adequate public amenities (ie. washrooms, garbage disposal, doggy bags, etc.) are available at reasonable intervals along the shoreline.
- Accommodate tourism (including parking spaces at trail heads).
- Investigate the possibility of improving the quality and swimming conditions of existing public beaches.

INCREASE ACCESSIBILITY

- Ensure that trails and public access to recreation along the shoreline are accessible to people with disabilities.
- Restrict accessibility to the shoreline to non-motorized (except for maintenance vehicles, emergency vehicles, motorized scooters, wheelchairs, etc.).

MAINTAIN OPPORTUNITIES FOR ECONOMIC DEVELOPMENT

- Encourage development of land where designated by the Official Community Plan and where protection of the natural environment and public access to the trail and other recreation facilities will not be compromised. Ensure that development of land enhances the quality of life of existing and future residents in the area.
- Encourage economic opportunities within the shoreline region.

ENHANCE HISTORY, CULTURE, AND EDUCATION

- Identify, protect, preserve and restore sites and areas having historical, cultural, archaeological, educational and scientific values.
- Provide opportunities for public education in the form of interpretative signage along various points of the shoreline.
- Provide public education programs regarding the goals, objectives, policies and regulations developed by the shoreline study.

PROTECT AND ENHANCE THE CHARACTER AND SCENERY

- Ensure that the character and scenic value of the area is maintained.
- Protect existing views of the lake.

LEGISLATIVE CONSIDERATIONS

- Review the existing legislation (provincial, federal, and local) regulations and identify jurisdictions, enforcement mechanisms and gaps relating to these goals, objectives, policies and regulations.
- Recommend regulations and bylaws to support the objectives and policies. Recommend enforcement, education, and public awareness mechanisms to encourage compliance.

NOTE: Goals, then Objectives, then Policies, then Regulations

Appendix B – Foreshore Inventory and Mapping Data



OBJECTID	SEGMENT_ID	LAKE_NAME	LAKE_LEVEL	SECHI_DEPT	ORGANIZATI	DATE_	TIME_	CREW	WEATHER	AIR_TEMP_	WATER_TEMP	JURISDICTI	COMMENTS	SEGMNT_NUM	SHORE_TYPE	SHORE_MODI	SLOPE	LAND_USE
40	1	Skaha Lake	337.9	0.0	Ecospa/DFO/RDOS/ONA	5/22/2008	14:00:00am	JS/JT/BM/AS	Over Cast	15.0	0.0	City of Penticton		1.0	Sand	Road	Low (0-5)	Urban Park
42	2	Skaha Lake	337.9	0.0	Ecospa/DFO/RDOS/ONA	5/22/2008	14:10:00am	JS/JT/BM/AS	Over Cast	15.0	0.0	City of Penticton		2.0	Stream Mouth	Bridge	Low (0-5)	Urban Park
43	3	Skaha Lake	337.9	0.0	Ecospa/DFO/RDOS/ONA	5/22/2008	14:20:00am	JS/JT/BM/AS	Over Cast	15.0	0.0	City of Penticton		3.0	Sand	Road	Low (0-5)	Urban Park
39	4	Skaha Lake	337.9	0.0	Ecospa/DFO/RDOS/ONA	5/22/2008	14:30:00am	JS/JT/BM/AS	Over Cast	15.0	0.0	Penticton Indian Band		4.0	Sand	Road	Low (0-5)	Recreation
38	5	Skaha Lake	337.9	0.0	Ecospa/DFO/RDOS/ONA	5/22/2008	14:40:00am	JS/JT/BM/AS	Over Cast	15.0	0.0	Penticton Indian Band		5.0	Cliff/Bluff	Railway	Very Steep (60+)	Rural
45	6	Skaha Lake	337.9	0.0	Ecospa/DFO/RDOS/ONA	5/22/2008	14:50:00am	JS/JT/BM/AS	Over Cast	15.0	0.0	Penticton Indian Band		6.0	Rocky Shore	Railway	Bench	Rural
44	7	Skaha Lake	337.9	0.0	Ecospa/DFO/RDOS/ONA	5/22/2008	15:10:00am	JS/JT/BM/AS	Over Cast	15.0	0.0	Penticton Indian Band		7.0	Rocky Shore	Railway	Steep (20 - 60%)	Rural
37	8	Skaha Lake	337.9	0.0	Ecospa/RDOS/ONA	5/23/2008	09:05:38am	JS/JT/JC/RB/AS	Over Cast	15.0	0.0	Penticton Indian Band		8.0	Rocky Shore	Railway	Bench	Rural
36	9	Skaha Lake	337.9	0.0	Ecospa/RDOS/ONA	5/23/2008	09:26:03am	JS/JT/JC/RB/AS	Over Cast	15.0	0.0	Penticton Indian Band		9.0	Rocky Shore	Railway	Steep (20 - 60%)	Rural
35	10	Skaha Lake	337.9	0.0	Ecospa/RDOS/ONA	5/23/2008	09:36:37am	JS/JT/JC/RB/AS	Over Cast	15.0	0.0	Regional District Okanagan Similkameen		10.0	Cliff/Bluff	Railway	Very Steep (60+)	Park
34	11	Skaha Lake	337.9	0.0	Ecospa/RDOS/ONA	5/23/2008	09:52:37am	JS/JT/JC/RB/AS	Light Rain	15.0	0.0	Regional District Okanagan Similkameen		11.0	Rocky Shore	Railway	Steep (20 - 60%)	Park
33	12	Skaha Lake	337.9	0.0	Ecospa/RDOS/ONA	5/23/2008	09:59:36am	JS/JT/JC/RB/AS	Light Rain	15.0	0.0	Regional District Okanagan Similkameen		12.0	Gravel	Road	Low (0-5)	Park
32	13	Skaha Lake	337.9	0.0	Ecospa/RDOS/ONA	5/23/2008	10:12:07am	JS/JT/JC/RB/AS	Light Rain	15.0	0.0	Regional District Okanagan Similkameen		13.0	Gravel	None	Low (0-5)	Recreation
31	14	Skaha Lake	337.9	0.0	Ecospa/RDOS/ONA	5/23/2008	10:29:55am	JS/JT/JC/RB/AS	Light Rain	15.0	0.0	Regional District Okanagan Similkameen		14.0	Cliff/Bluff	Railway	Steep (20 - 60%)	Park
30	15	Skaha Lake	337.9	0.0	Ecospa/RDOS/ONA	5/23/2008	10:38:40am	JS/JT/JC/RB/AS	Over Cast	15.0	0.0	Regional District Okanagan Similkameen		15.0	Wetland	Railway	Steep (20 - 60%)	Park
29	16	Skaha Lake	337.9	0.0	Ecospa/RDOS/ONA	5/23/2008	10:57:26am	JS/JT/JC/RB/AS	Over Cast	15.0	0.0	Regional District Okanagan Similkameen		16.0	Wetland	Railway	Low (0-5)	Single Family
28	17	Skaha Lake	337.9	0.0	Ecospa/RDOS/ONA	5/23/2008	11:11:39am	JS/JT/JC/RB/AS	Over Cast	15.0	0.0	Regional District Okanagan Similkameen		17.0	Gravel		Low (0-5)	Single Family
27	18	Skaha Lake	337.9	0.0	Ecospa/RDOS/ONA	5/23/2008	11:33:51am	JS/JT/JC/RB/AS	Over Cast	15.0	0.0	Regional District Okanagan Similkameen		18.0	Gravel	Railway	Low (0-5)	Park
46	19	Skaha Lake	337.9	0.0	Ecospa/RDOS/ONA	5/23/2008	11:41:35am	JS/JT/JC/RB/AS	Over Cast	15.0	0.0	Regional District Okanagan Similkameen		19.0	Sand		Low (0-5)	Urban Park
26	20	Skaha Lake	337.9	0.0	Ecospa/RDOS/ONA	5/23/2008	11:58:48am	JS/JT/JC/RB/AS	Over Cast	15.0	0.0	Regional District Okanagan Similkameen		20.0	Gravel		Low (0-5)	Single Family
25	21	Skaha Lake	337.9	0.0	Ecospa/RDOS/ONA	5/23/2008	12:07:56pm	JS/JT/JC/RB/AS	Over Cast	15.0	0.0	Regional District Okanagan Similkameen		21.0	Gravel		Low (0-5)	Recreation
24	22	Skaha Lake	337.9	0.0	Ecospa/RDOS/ONA	5/23/2008	12:23:10pm	JS/JT/JC/RB/AS	Over Cast	15.0	0.0	Regional District Okanagan Similkameen		22.0	Gravel	Railway	Low (0-5)	Park
23	23	Skaha Lake	337.9	0.0	Ecospa/RDOS/ONA	5/23/2008	12:29:42pm	JS/JT/JC/RB/AS	Over Cast	15.0	0.0	Regional District Okanagan Similkameen		23.0	Rocky Shore	Railway	Steep (20 - 60%)	Park
22	24	Skaha Lake	337.9	0.0	Ecospa/RDOS/ONA	5/23/2008	12:37:55pm	JS/JT/JC/RB/AS	Over Cast	15.0	0.0	Regional District Okanagan Similkameen		24.0	Wetland	Railway	Low (0-5)	Park
21	25	Skaha Lake	337.9	0.0	Ecospa/RDOS/ONA	5/23/2008	12:48:34pm	JS/JT/JC/RB/AS	Over Cast	15.0	0.0	Regional District Okanagan Similkameen	Possible location for hazard buoys	25.0	Rocky Shore	Railway	Steep (20 - 60%)	Park
20	26	Skaha Lake	337.9	0.0	Ecospa/RDOS/ONA	5/23/2008	12:55:16pm	JS/JT/JC/RB/AS	Over Cast	15.0	0.0	Regional District Okanagan Similkameen	Possible location for hazard buoys	26.0	Gravel	Railway	Bench	Park
19	27	Skaha Lake	337.9	0.0	Ecospa/RDOS/ONA	5/23/2008	01:04:24pm	JS/JT/JC/RB/AS	Over Cast	15.0	0.0	Regional District Okanagan Similkameen		27.0	Rocky Shore	Railway	Steep (20 - 60%)	Park
18	28	Skaha Lake	337.9	0.0	Ecospa/RDOS/ONA	5/23/2008	01:07:23pm	JS/JT/JC/RB/AS	Over Cast	15.0	0.0	Regional District Okanagan Similkameen		28.0	Gravel	Railway	Bench	Park
50	29	Skaha Lake	337.9	0.0	Ecospa/RDOS/ONA	5/23/2008	01:13:03pm	JS/JT/JC/RB/AS	Over Cast	15.0	0.0	Regional District Okanagan Similkameen		29.0	Rocky Shore	Railway	Steep (20 - 60%)	Park
41	30	Skaha Lake	337.9	0.0	Ecospa/RDOS/ONA	5/23/2008	01:20:20pm	JS/JT/JC/RB/AS	Over Cast	15.0	0.0	Regional District Okanagan Similkameen		30.0	Sand		Low (0-5)	Urban Park
16	31	Skaha Lake	337.9	0.0	Ecospa/RDOS/ONA	5/23/2008	12:29:39pm	JS/JT/JC/RB/AS	Over Cast	15.0	0.0	Regional District Okanagan Similkameen		31.0	Sand		Low (0-5)	Urban Park

SEGMENT_ID	LEV_OF_IMP	LIVEST_ACC	DISTURBED	NATURAL_	PHOTONUM	TAPE_NUMB	VIDEO_TIME	CMMNT_CLAS	CLIFF_BLUF	ROCKY	GRAVEL2	SAND2	STREAM_MOU	WETLAND	OTHER	STYPE_COMM	Agricultur	Commercial	Conservati	Forestry	Industrial	Institutio
1	High (>40%)	No	100	0			16:59:20		0	0	0	100	0	0	0	Groomed Sand Beach	0	0	0	0	0	0
2	High (>40%)	No	100	0			17:00:00		0	0	0	0	100	0	0	stream confluence w/ bridge, large groin	0	0	0	0	0	0
3	High (>40%)	No	100	0	IMGP2988		17:02:05		0	0	0	100	0	0	0	groomed beach mouth with large groin	0	0	0	0	0	0
4	High (>40%)	No	100	0	IMGP2989		17:03:30		0	0	0	100	0	0	0	Rec. site with sand beach	0	0	0	0	0	0
5	High (>40%)	No	80	20	IMGP2990		17:05:15		100	0	0	0	0	0	0	Railway fill below silt bluff	0	0	0	0	0	0
6	Medium (10-40%)	No	80	20	IMGP2991		17:06:53		20	80	0	0	0	0	0	Rocky railway fill bench below cliff/bluff	0	0	0	0	0	0
7	Medium (10-40%)	No	80	20	IIMGP2992; IMGP2993; IMGP2994; IMGP2995;		17:07:40		20	80	0	0	0	0	0	Rocky railway fill bench below silt bluff w/ wetland pocket	0	0	0	0	0	0
8	Medium (10-40%)	No	80	20	IIMGP2996; IMGP2997;		17:13:05		0	100	0	0	0	0	0	Rocky railway fill bench below pine hillside	0	0	0	0	0	0
9	Medium (10-40%)	No	80	20	IIMGP2998; IMGP2999; IMGP2300;		17:14:28		10	90	0	0	0	0	0	Rocky railway fill bench below steep rocky hillside	0	0	0	0	0	0
10	Medium (10-40%)	No	80	20	IIMGP3001; IMGP3002; IMGP2303;		17:16:44		90	10	0	0	0	0	0	Rocky railway fill below rock cliff	0	0	0	0	0	0
11	Medium (10-40%)	No	80	20	IIMGP3004; IIMGP3005;		17:18:32		20	80	0	0	0	0	0	Rocky railway fill below bluff	0	0	0	0	0	0
12	High (>40%)	No	100	0	IMGP3006; IIMGP3007;		17:19:31		0	45	55	0	0	0	0		0	0	0	0	0	0
13	High (>40%)	No	100	0	IMGP3008; IMGP3009; IMGP3010; IMGP3011; IMGP3012;		17:20:28		0	0	100	0	0	0	0		0	0	0	0	0	0
14	Medium (10-40%)	No	80	20	IMGP3013; IMGP3014;		17:22:56		50	40	0	0	0	10	0	rocky railway bench with silt bluff behind	0	0	0	0	0	0
15	Medium (10-40%)	No	40	60	IMGP3015; IMGP3016; IMGP3017;		17:25:39		0	40	0	0	0	60	0	bullrush/cattail marsh bench at base of bluff	0	0	0	0	0	0
16	Medium (10-40%)	No	50	50	IMGP3018; IMGP3019;		17:35:23		0	0	20	0	0	80	0	bullrush/cattail marsh bench at base of bluff	0	0	0	0	0	0
17	High (>40%)	No	100	0	IMGP3020; IMGP3021; IMGP3022;		17:39:20		0	0	100	0	0	0	0		0	0	0	0	0	0
18	High (>40%)	No	100	0	IMGP3023; IMGP3024; IMGP3025;		17:41:45		0	0	80	0	0	20	0	gravel beach with cattail marsh at north end	0	0	0	0	0	0
19	High (>40%)	No	100	0	IMGP3026; IMGP3027; IMGP3028;		17:44:25		0	0	20	80	0	0	0	sand beach at north, gravel beach on south	0	0	0	0	0	0
20	High (>40%)	No	100	0	IMGP3029; IMGP3030;		17:45:51		0	0	60	30	0	10	0	sand beach at north, gravel beach on south	0	0	0	0	0	0
21	High (>40%)	No	100	0	IMGP3031; IMGP3032; IMGP3033; IMGP3034; IMGP3035;		17:47:00		0	0	60	30	0	10	0	sand beach at south gravel beach on north	0	0	0	0	0	0
22	Medium (10-40%)	No	60	40	IMGP3036; IMGP3037; IMGP3038;		17:51:01		0	0	85	0	0	15	0	disturbed steep gravel beach on north, established riparian shore south	0	0	0	0	0	0
23	Medium (10-40%)	No	80	20	IMGP3039; IMGP3040;		17:54:22		0	100	0	0	0	0	0	steep rock shoreline with railway cut	0	0	0	0	0	0
24	Medium (10-40%)	No	90	10	IMGP3041; IMGP3042;		17:59:21		0	60	0	0	0	40	0	railway cut below silt bluff north, wetland south	0	0	0	0	0	0
25	Medium (10-40%)	No	90	10	IMGP3043; IMGP3044;		18:01:50		0	100	0	0	0	0	0	railway cut below steep rock hillside	0	0	0	0	0	0
26	Medium (10-40%)	No	90	10	IMGP3045; IMGP3046; IMGP3047; IMGP3048;		18:03:30		0	30	70	0	0	0	0	railway cut below steep rock hillside with riparian point	0	0	0	0	0	0
27	High (>40%)	No	100	0	IMGP3049;		18:05:36		0	100	0	0	0	0	0	railway cut below steep rock hillside	0	0	0	0	0	0
28	Medium (10-40%)	No	80	20	IMGP3050; IMGP3051;		18:06:37		0	0	60	0	0	40	0	railway cut, cattail marsh in south	0	0	0	0	0	0
29	High (>40%)	No	100	0	IMGP3052; IMGP3053; IMGP3054;		18:09:02		0	100	0	0	0	0	0	railway bridge / highway	0	0	0	0	0	0
30	High (>40%)	No	100	0	IMGP3055; IMGP3056; IMGP3057;		18:11:37		0	20	0	80	0	0	0		0	0	0	0	0	0
31	High (>40%)	No	100	0	IMGP3058;		18:14:32		0	0	0	100	0	0	0		0	0	0	0	0	0

SEGMENT_ID	Multi_Fam	Natural_Ar	Park	Recreation	Rural	Single_Fam	Urban_Park	LANDU_COMM	MARL	MUD	ORGANIC	FINES	SAND	GRAVEL	GRAVEL_FIN	GRAVEL_COA	COBBLE	COBBLE_FIN	COBBLE_COA	BOULDER	BEDROCK	EMBEDDEDNE	SHAPE_1	COMMNT_SUB
1	0	0	0	0	0	0	100	Urban Park w/ intense recreational	0	0	0	0	100	0	0	0	0	0	0	0	0	None		Sandy beach w/ grooming
2	0	0	0	0	0	0	100	Urban Park w/ recreation	0	10	10	10	40	0	0	0	0	0	0	30	0	None		large rock groyne
3	0	0	0	0	0	0	100	Urban Park w/ recreation	0	0	0	10	90	0	0	0	0	0	0	0	0	None		sandy shoreline, finer littoral
4	0	0	0	90	0	0	10	RV/Camp Site/ beach	0	0	0	10	50	30	0	0	10	0	0	0	0	Medium (25+75%)	smooth	course sand beach w/ groyne
5	0	0	0	0	100	0	0	recreational corridor	0	10	0	30	10	40	0	0	10	0	0	0	0	Medium (25+75%)		course railway fill, fine littoral
6	0	0	0	0	100	0	0	recreational corridor	0	0	0	15	10	25	0	0	20	0	0	30	0	Medium (25+75%)	angular	course railway fill, fine littoral
7	0	0	0	0	100	0	0	recreational corridor	0	0	0	25	5	25	0	0	40	0	0	5	0	Medium (25+75%)		course railway fill, fine littoral
8	0	0	0	0	100	0	0	recreational corridor	0	0	0	15	5	20	0	0	55	0	0	5	0	Medium (25+75%)	angular	course angular railway fill south, fine littoral
9	0	0	0	0	100	0	0	recreational corridor	0	0	0	5	5	20	0	0	60	0	0	10	0	Medium (25+75%)	angular	course angular railway fill, fine littoral
10	0	0	100	0	0	0	0	recreational corridor	0	0	0	5	0	15	0	0	50	0	0	30	0	Medium (25+75%)	blast rock	blast rock railway fill, fine littoral
11	0	0	100	0	0	0	0	recreational corridor	0	0	0	10	0	20	0	0	40	0	0	30	0	Medium (25+75%)	blast rock	blast rock railway fill, fine littoral
12	0	0	100	0	0	0	0	RV/Camp Site	0	0	0	25	5	50	0	0	10	0	0	10	0	Medium (25+75%)	blast rock	some blast rock fill
13	0	0	0	100	0	0	0	RV/Camp Site	0	0	0	30	10	45	0	0	5	0	0	10	0	Medium (25+75%)	smooth	
14	0	0	100	0	0	0	0	recreational corridor	0	0	0	30	0	40	0	0	25	0	0	5	0	Medium (25+75%)	smooth	
15	0	0	100	0	0	0	0	recreational corridor / road	0	10	5	35	10	30	0	0	10	0	0	0	0	Medium (25+75%)	smooth	larger substrates associated with rail fill at HWL, finer substrates in littoral zone
16	0	0	0	0	0	100	0	recreational corridor	0	10	5	35	10	30	0	0	10	0	0	0	0	Medium (25+75%)	smooth	larger substrates associated with rail fill at HWL, finer substrates in littoral zone
17	0	0	0	0	0	100	0	Beachfront homes	0	10	5	35	10	30	0	0	10	0	0	0	0	None	smooth	beach grooming, imported sand?
18	0	0	50	15	0	35	0		0	10	5	35	10	30	0	0	5	0	0	5	0	None	smooth	
19	0	0	0	0	0	0	100		0	10	5	10	50	15	0	0	5	0	0	5	0	None	smooth	beach grooming, imported sand??
20	0	0	0	0	0	100	0	south end of segment more natural	0	10	2	13	45	30	0	0	0	0	0	0	0	None	smooth	
21	0	0	0	100	0	0	0	north end of segment more natural	0	10	2	13	45	30	0	0	0	0	0	0	0	None	smooth	
22	0	0	60	0	40	0	0	south end of segment more natural	0	2	3	15	30	50	0	0	0	0	0	0	0	None	smooth	some railway fill
23	0	0	95	0	0	5	0		0	0	0	2	8	20	0	0	20	0	0	45	5	Low (0-25%)	blast rock	some railway fill
24	0	0	100	0	0	0	0	recreational corridor	0	0	0	5	25	60	0	0	10	0	0	0	0	None	smooth	some railway fill
25	0	0	100	0	0	0	0	recreational corridor	0	0	0	2	3	40	0	0	40	0	0	15	0	Medium (25+75%)	smooth	rocky railway fill
26	0	0	50	0	0	50	0	recreational corridor/house	0	0	0	10	10	40	0	0	40	0	0	0	0	Medium (25+75%)	smooth	
27	0	0	100	0	0	0	0	recreational corridor	0	0	0	10	10	35	0	0	40	0	0	5	0	Medium (25+75%)	smooth	exposed soil
28	0	0	60	0	40	0	0	recreational corridor	0	0	0	10	10	40	0	0	40	0	0	0	0	Medium (25+75%)	smooth	
29	0	0	100	0	0	0	0	recreational corridor	0	0	0	10	5	40	0	0	40	0	0	5	0	Medium (25+75%)	smooth	exposed soil
30	0	0	0	30	0	0	70		0	0	0	20	60	10	0	0	0	0	0	0	10	None	smooth	rocky outcrop
31	0	0	0	0	0	0	100		0	10	0	10	70	10	0	0	0	0	0	0	0	None	smooth	beach grooming, imported sand???

SEGMENT_ID	B1_CLASS	B1_STAGE	B1SHRUB_CO	B1TREE_COV	B1_DISTRIB	B1_BANDWI	B1_OVERHAN	AQUATIC_VE	SUBMERGENT	SUBMERG_VE	EMERGENT_V	EMERGED_VE	FLOATING_V	FLOATING_1	AVEG_CMT	B1_COMMNT	B2_CLASS
1	Unvegetated	Sparse	Sparse (<10%)	Sparse (<10%)	Patchy	3	0	0	100	Yes	0	No	0	No	Mechanical milfoil control possibly (unconfirmed)	Manicured Park with sandy beach	Coniferous forest
2	Unvegetated	Sparse	Sparse (<10%)	Sparse (<10%)	Patchy	15	0	15	100	Yes	0	No	0	No	Mechanical milfoil control possibly	Sand beach around river mouth	Shrubs
3	Unvegetated	Sparse	Sparse (<10%)	Sparse (<10%)	Patchy	25	0	30	100	Yes	0	No	0	No	Mechanical milfoil control possibly	Sand beach to highway	None
4	Landscaped	Landscaped	Sparse (<10%)	Moderate (10-50%)	Continuous	10	0	30	100	Yes	0	No	0	No	Mechanical milfoil control possibly	Deciduous trees with turf/beach understory	Landscaped
5	Herbs/grasses	Sparse	Sparse (<10%)	Sparse (<10%)	Patchy	5	0	30	0	No	30	No	0	No		sparsely vegetated fill	Herbs/grasses
6	Shrubs	low shrub <2m	Sparse (<10%)	Sparse (<10%)	Patchy	5	0	10	50	Yes	50	Yes	0	No	blurush beds with some milfoil	sparsely vegetated fill with some shrubs	Coniferous forest
7	Herbs/grasses	Grammanoid	Sparse (<10%)	Sparse (<10%)	Patchy	5	0	70	0	No	100	Yes	0	No	blurush beds	sparsely vegetated fill with some shrubs	Coniferous forest
8	Shrubs	low shrub <2m	Moderate (10-50%)	Sparse (<10%)	Patchy	8	0	0	0	No	0	No	0	No		sparsely vegetated fill with some shrubs	Coniferous forest
9	Herbs/grasses	Herbs/Grasses	Sparse (<10%)	Sparse (<10%)	Patchy	8	0	0	0	No	0	No	0	No		vegetated fill with some shrubs	Coniferous forest
10	Unvegetated	Sparse	Sparse (<10%)	Sparse (<10%)	Patchy	5	0	0	0	No	0	No	0	No		rock fill with few shrubs	Herbs/grasses
11	Unvegetated	Sparse	Sparse (<10%)	Sparse (<10%)	Patchy	5	0	0	0	No	0	No	0	No		rock fill with few shrubs	Coniferous forest
12	Landscaped	Sapling > 10 m	Sparse (<10%)	Moderate (10-50%)	Continuous	8	0	0	0	No	0	No	0	No		landscaped deciduous trees with turf understory	Landscaped
13	Landscaped	Sapling > 10 m	Sparse (<10%)	Moderate (10-50%)	Continuous	8	0	50	30	Yes	80	Yes	0	No		landscaped deciduous trees with turf understory	Landscaped
14	Herbs/grasses	Herbs/Grasses	Sparse (<10%)	Sparse (<10%)	Patchy	5	0	100	30	Yes	75	Yes	0	No		narrow riparian on railway fill	Herbs/grasses
15	Disturbed Wetland	tall shrub 2- 10 m	Abundant (<50%)	Sparse (<10%)	Continuous	25	20	100	50	Yes	100	Yes	0	No		emergent shore marsh of cattail/bulrush, railway fill, patchy riparian	Coniferous forest
16	Disturbed Wetland	tall shrub 2- 10 m	Abundant (<50%)	Sparse (<10%)	Continuous	25	20	100	50	Yes	100	Yes	0	No		emergent shore marsh of cattail/bulrush, railway fill, continuous tall shrub riparian	Coniferous forest
17	Landscaped	Herbs/Grasses	Sparse (<10%)	Sparse (<10%)	Patchy	20	0	40	100	Yes	0	No	0	No		turf/landscaping amongsts single family residential	Unvegetated
18	Herbs/grasses	Herbs/Grasses	Sparse (<10%)	Sparse (<10%)	Patchy	10	0	40	40	Yes	20	Yes	0	No	Cattail marsh north end	patch riparian on disturbed shoreline	Unvegetated
19	Herbs/grasses	Lawn	Sparse (<10%)	Sparse (<10%)	Patchy	10	0	20	100	Yes	0	No	0	No		limited riparian, manicured lawn	Landscaped
20	Landscaped	Herbs/Grasses	Sparse (<10%)	Sparse (<10%)	Patchy	15	0	20	100	Yes	0	No	0	No		limited riparian, patchy reed canary grass	Landscaped
21	Shrubs	low shrub <2m	Sparse (<10%)	Sparse (<10%)	Patchy	3	10	20	100	Yes	0	No	0	No		narrow riparian, patchy reed canary grass north, sand beach south	Coniferous forest
22	Shrubs	tall shrub 2- 10 m	Moderate (10-50%)	Sparse (<10%)	Patchy	10	20	30	50	Yes	50	Yes	0	No		established riparian, patchy emergent vegetation	Herbs/grasses
23	Unvegetated	Sparse	Sparse (<10%)	None	Patchy	8	0	0	0	No	0	No	0	No		rocky shoreline with little vegetation cover	Herbs/grasses
24	Shrubs	tall shrub 2- 10 m	Moderate (10-50%)	Sparse (<10%)	Patchy	15	25	100	50	Yes	100	Yes	0	No	established cattail marsh in south	rocky shore transition to established cattail shore marsh	Shrubs
25	Shrubs	low shrub <2m	Sparse (<10%)	Sparse (<10%)	Patchy	3	0	80	50	Yes	50	Yes	0	No		rocky shoreline with little vegetation cover	Shrubs
26	Shrubs	tall shrub 2- 10 m	Moderate (10-50%)	Sparse (<10%)	Patchy	10	30	20	50	Yes	50	Yes	0	No	patchy	esatblished riparian in north	Herbs/grasses
27	Unvegetated	Sparse	Moderate (10-50%)	Sparse (<10%)	Continuous	5	0	20	50	Yes	50	Yes	0	No	patchy	railway fill slope with exposed soil	Herbs/grasses
28	Shrubs	tall shrub 2- 10 m	Moderate (10-50%)	Sparse (<10%)	Patchy	10	0	60	50	Yes	50	Yes	0	No	cattail marsh south end	patchy riparian and landscaped	Landscaped
29	Unvegetated	Sparse	Sparse (<10%)	Sparse (<10%)	Patchy	8	0	60	0	No	100	Yes	0	No		railway fill slope with exposed soil	Unvegetated
30	Landscaped	Sparse	Sparse (<10%)	Sparse (<10%)	Patchy	5	0	15	100	Yes	0	No	0	No	patchy reed canary grass		Landscaped
31	Lawn	Grammanoid	Sparse (<10%)	Sparse (<10%)	Patchy	5	0	0	0	No	0	No	0	No			Landscaped

SEGMENT_ID	B2_STAGE	B2SHRUB_CO	B2TREE_COV	B2_DISTRIB	B2_BANDWID	B2_COMMNT	LITTORAL_Z	LWD	LWD_NUMBER	WIDTH_LITT	COMMNT_LIT	RETAIN_WAL	PERRETAIN_	RETAIN_MAT
1	Mature Forest	Sparse (<10%)	Sparse (<10%)	Patchy	20	Veteran Pines	Wide (>50 m)	No	0	160	Wide sandy littoral zone	0	0	
2	tall shrubs 2 - 10 m	Sparse (<10%)	Sparse (<10%)	Patchy	10		Wide (>50 m)	No	0	100		0	0	
3		Sparse (<10%)		Patchy	0		Wide (>50 m)	No	0	60		0	0	
4		Sparse (<10%)	Sparse (<10%)	Patchy	25	Landscaped, turf, impervious	Wide (>50 m)	No	0	60		1	5	Rock
5	Graimmanoid	Sparse (<10%)	Sparse (<10%)	Patchy	30	Grass/sage hillside	Wide (>50 m)	No	0	50		0	0	
6	Mature Forest	Moderate (10-50%)	Moderate (10-50%)	Patchy	30	Pine forest riparian zone isolated by railway	Moderate (10-50 m)	No	0	35		0	0	
7	Mature Forest	Moderate (10-50%)	Moderate (10-50%)	Patchy	30	Pine forest wetland zone isolated by railway	Wide (>50 m)	No	0	50		0	0	
8	Mature Forest	Sparse (<10%)	Moderate (10-50%)	Continuous	40	Pine/bunchgrass forest w/ patchy roadfill	Wide (>50 m)	No	0	25		0	0	
9	Mature Forest	Sparse (<10%)	Moderate (10-50%)	Continuous	50	Pine/bunchgrass forest, denser to south	Narrow (<10m)	No	0	3		0	0	
10	Herbs/grasses	Sparse (<10%)	Sparse (<10%)	Patchy	50	rocky cliffs with bunchgrass/sage and patchy pine	Narrow (<10m)	<5	0	3		0	0	
11	Mature Forest	Sparse (<10%)	Moderate (10-50%)	Patchy	50	open coniferous forest with bunchgrass understorey	Narrow (<10m)	<5	0	3		0	0	
12	Mature Forest	Sparse (<10%)	Moderate (10-50%)	Patchy	50	landscaped coniferous forest in campground with bunchgrass on drier hillsides	Moderate (10-50 m)	<5	0	10		0	0	
13	Mature Forest	Sparse (<10%)	Moderate (10-50%)	Patchy	30	mostly landscaped with deciduous, few large pines	Moderate (10-50 m)	No	0	40		3	13	Mixed
14	Herbs/grasses	Sparse (<10%)	Moderate (10-50%)	Patchy	30	silty hillside with open pine/bunchgrass	Wide (>50 m)	No	0	120	patchy emergent bullrush marsh	0	0	
15	Mature Forest	Sparse (<10%)	Abundant (>50%)	Continuous	50	pine/bunchgrass open forest	Wide (>50 m)	5-25	0	200	continuous emergent bullrush/cattail marsh	0	0	
16	Mature Forest	Sparse (<10%)	Moderate (10-50%)	Continuous	30	pine/bunchgrass open forest	Wide (>50 m)	5-25	0	150	continuous emergent bullrush/cattail marsh	0	0	
17		Sparse (<10%)	Sparse (<10%)	Continuous	20	single family residential homes with landscaping	Moderate (10-50 m)	No	0	30		12	75	Mixed
18		Sparse (<10%)	Sparse (<10%)	Continuous	20	urban road/residential	Moderate (10-50 m)	No	0	50		1	15	Stonework
19	Herbs/grasses	Sparse (<10%)	Sparse (<10%)	Patchy	20	park facilities, mature trees on south end	Moderate (10-50 m)	No	0	50		2	25	Stonework
20	Herbs/grasses	Sparse (<10%)	Sparse (<10%)	Patchy	20	single family residential homes with landscaping	Moderate (10-50 m)	No	0	25		2	15	Mixed
21	Herbs/grasses	Sparse (<10%)	Moderate (10-50%)	Continuous	30	treed recreational cabins amongst landscape understory	Moderate (10-50 m)	No	0	30		1	15	Wood
22	Herbs/grasses	Moderate (10-50%)	Sparse (<10%)	Patchy	30	dry grass hillside with patchy ponderosa and vineyar	Moderate (10-50 m)	No	0	30		0	0	
23	Herbs/grasses	Moderate (10-50%)	Sparse (<10%)	Continuous	150	dry grass hillside with rock outcrops	Narrow (<10m)	No	0	10		0	0	
24	low shrub <2m	Moderate (10-50%)	Sparse (<10%)	Continuous	150	dry grass with sagebrush/antelope brush community	Moderate (10-50 m)	5 - 25	0	40		0	0	
25	low shrub <2m	Moderate (10-50%)	Sparse (<10%)	Continuous	150	bunchgrass / sagebrush community	Moderate (10-50 m)	No	0	40		0	0	
26	Herbs/grasses	Sparse (<10%)	Sparse (<10%)	Continuous	150	bunchgrass / sagebrush community	Moderate (10-50 m)	<5	0	20		0	0	
27	Herbs/grasses	Sparse (<10%)	Sparse (<10%)	Continuous	150	bunchgrass / sagebrush community	Narrow (<10m)	<5	0	5		0	0	
28	Young Forest	Moderate (10-50%)	Sparse (<10%)	Patchy	50	rural area with lanscaping	Moderate (10-50 m)	No	0	20		0	0	
29		Sparse (<10%)	Sparse (<10%)	Patchy	30	rocky outcrops w/ grasses to highway	Moderate (10-50 m)	No	0	15		0	0	
30		Sparse (<10%)	Sparse (<10%)	Patchy	30	proposed parks and condos	Wide (>50 m)	No	0	150		0	0	
31	tall shrubs 2 - 10 m	Moderate (10-50%)	Sparse (<10%)	Patchy	30	beachfront park	Wide (>50 m)	No	0	150		0	0	

SEGMENT_ID	DOCKS	DOCKS_KM	BOAT_HOUSE	GROYNES	GROYNES_KM	BOAT_LAUNC	PERRAIL_MO	PERROAD_MO	MARIN_RAIL	MARINAS	SUB_MODIFI	PERSUB_MOD	COMMMT_MOD	VETERANS	SNAGS	CMMNT_FLRA	CMMNT_FAUN	MAX_PDOP	CORR_TYPE	RCVR_TYPE	GPS_DATE
1	0	0	0	0	0	0	0	100	0	0	Yes	100	Groomed Beach	5 - 25	No			6.9	Uncorrected	GeoXM	6/20/2008
2	0	0	0	1	4	0	0	100	0	0	Yes	100	Groomed Beach, large groine with dock	<5	No			6.9	Uncorrected	GeoXM	6/20/2008
3	0	0	0	1	3	0	0	100	0	0	Yes	100	Groomed Beach	No	No			6.9	Uncorrected	GeoXM	6/20/2008
4	1	2	0	7	11	0	0	100	0	0	Yes	100	Groynes w/ groomed beach	No	No			6.9	Uncorrected	GeoXM	6/20/2008
5	1	2	0	0	0	0	100	15	0	0	Yes	100	railway fill	No	No			6.9	Uncorrected	GeoXM	6/20/2008
6	0	0	0	0	0	0	100	0	0	0	Yes	100	railway fill	5 - 25	No	relatively natural upland		6.9	Uncorrected	GeoXM	6/20/2008
7	0	0	0	0	0	0	100	30	0	0	Yes	100	railway fill	5 - 25	No	relatively natural upland		6.9	Uncorrected	GeoXM	6/20/2008
8	0	0	0	0	0	0	100	30	0	0	Yes	15	railway fill on shore, road fill on hillside	5 - 25	No	relatively natural upland	Red Necked Grebe/Osprey	6.9	Uncorrected	GeoXM	6/20/2008
9	0	0	0	0	0	0	100	0	0	0	Yes	100	rocky railway fill on shore	5 - 25	No	relatively natural upland		4.1	Postprocessed Code	GeoXT	5/23/2008
10	0	0	0	0	0	0	100	0	0	0	Yes	100	blast rock railway fill on shore	5 - 25	No	relatively natural upland		6.3	Postprocessed Code	GeoXT	5/23/2008
11	0	0	0	0	0	0	100	0	0	0	Yes	100	blast rock railway fill on shore	5 - 25	No	relatively natural upland		6.3	Postprocessed Code	GeoXT	5/23/2008
12	0	0	0	0	0	0	0	100	0	0	Yes	45	some rocky fill, campsite roadways, 2 concrete stairways, KVR used as road	<5	No	natural areas on hillsides, manicured in RV site		5.4	Postprocessed Code	GeoXT	5/23/2008
13	3	6	0	0	0	1	0	25	0	0	Yes	15	2 floating docks, 1 pile dock, 2 concrete ret. wall, 1 wood ret. wall	<5	No	manicured in RV site, few mature pines		3.7	Postprocessed Code	GeoXT	5/23/2008
14	0	0	0	0	0	0	100	0	0	0	Yes	100	railway fill	<5	No			4.6	Postprocessed Code	GeoXT	5/23/2008
15	0	0	0	0	0	0	100	0	0	0	Yes	100	railway fill	5 - 25	<5	diverse wetland/marsh shoreline	2 red necked grebes, diverse habitat	4.9	Postprocessed Code	GeoXT	5/23/2008
16	0	0	0	0	0	0	15	30	0	0	Yes	40	riparian recently cleared, roadway influence south end	5 - 25	<5	diverse wetland/marsh shoreline	diverse habitat	3.0	Postprocessed Code	GeoXT	5/23/2008
17	11	18	0	2	3	0	0	0	2	0	Yes	50	8 elevated docks, 2 floating docks, rock/concrete ret. Wall	No	No	limited natural vegetation	hillside habitat in pine forest	6.8	Postprocessed Code	GeoXT	5/23/2008
18	2	4	0	0	0	0	0	0	0	0	Yes	20	cleared riparian, fill slopes	No	No	limited natural vegetation		4.2	Postprocessed Code	GeoXT	5/23/2008
19	0	0	0	2	7	1	0	0	0	0	Yes	20	beach grooming, boat launch needs repair	No	No	limited natural vegetation		4.2	Postprocessed Code	GeoXT	5/23/2008
20	3	11	0	0	0	0	0	0	1	0	Yes	20	beach grooming, 2 floating&1 permanent dock, 1wood&1 stonework ret. Wall	No	No	limited natural vegetation		4.2	Postprocessed Code	GeoXT	5/23/2008
21	2	3	0	1	2	1	0	0	1	0	Yes	40	fueling, imported sand??, lawn,	5 - 25	No	limited natural vegetation		4.8	Postprocessed Code	GeoXT	5/23/2008
22	2	3	0	1	1	1	60	0	1	0	Yes	40	patchy natural areas south	<5	No			3.9	Postprocessed Code	GeoXT	5/23/2008
23	0	0	0	0	0	0	100	50	0	0	Yes	80	railway fill	No	No			4.0	Postprocessed Code	GeoXT	5/23/2008
24	0	0	0	0	0	0	60	0	0	0	Yes	80	railway fill	No	No	antelope/sage brush with patchy wetland shoreline on south	7 red necked grebes?	6.2	Postprocessed Code	GeoXT	5/23/2008
25	0	0	0	0	0	0	100	0	0	0	Yes	100	railway fill	No	No	sage brush / bunchgrass community with rock outcrops / talus		4.5	Postprocessed Code	GeoXT	5/23/2008
26	1	3	0	0	0	1	10	0	0	0	Yes	30		<5	No	established riparian in north		4.9	Postprocessed Code	GeoXT	5/23/2008
27	0	0	0	0	0	0	100	0	0	0	Yes	100	railway fill with exposed soil	No	No			6.2	Postprocessed Code	GeoXT	5/23/2008
28	1	2	0	0	0	0	50	0	0	0	No	0		No	No			6.8	Postprocessed Code	GeoXT	5/23/2008
29	0	0	0	0	0	0	100	50	0	0	Yes	100	railway fill	No	No		Red Necked Grebe	2.8	Postprocessed Code	GeoXT	5/23/2008
30	1	2	0	1	2	0	0	0	0	0	Yes	50	beach grooming	No	No			3.2	Postprocessed Code	GeoXT	5/23/2008
31	0	0	0	0	0	0	0	0	0	0	Yes	50	beach grooming	No	No			7.8	Postprocessed Code	GeoXM	5/23/2008

SEGMENT_ID	GPS_TIME	DATAFILE	UNFILT_POS	FILT_POS	DATA_DICTI	AVG_HORZ_P	WORST_HORZ	Shape_len
1	09:01:53am	FIM.SSF	20	20	SHIM Lake 2008 v	7.1	7.7	241.22528924600
2	09:01:53am	FIM.SSF	20	20	SHIM Lake 2008 v	7.1	7.7	231.53062828600
3	09:01:53am	FIM.SSF	20	20	SHIM Lake 2008 v	7.1	7.7	371.84552634400
4	09:01:53am	FIM.SSF	20	20	SHIM Lake 2008 v	7.1	7.7	643.32815408700
5	09:01:53am	FIM.SSF	20	20	SHIM Lake 2008 v	7.1	7.7	542.16425628300
6	09:01:53am	FIM.SSF	20	20	SHIM Lake 2008 v	7.1	7.7	258.15164946100
7	09:01:53am	FIM.SSF	20	20	SHIM Lake 2008 v	7.1	7.7	1032.19755654000
8	09:01:53am	FIM.SSF	20	20	SHIM Lake 2008 v	7.1	7.7	395.52525783200
9	09:26:06am	RDOS_XT_Skaka_May23_	112	112	SHIM Lake 2008b	1.5	2.1	720.88738889200
10	09:36:41am	RDOS_XT_Skaka_May23_	163	163	SHIM Lake 2008b	1.5	4.1	735.48796163300
11	09:36:41am	RDOS_XT_Skaka_May23_	163	163	SHIM Lake 2008b	1.5	4.1	302.92425210900
12	09:59:38am	RDOS_XT_Skaka_May23_	133	133	SHIM Lake 2008b	1.3	2.2	291.13121624200
13	10:12:10am	RDOS_XT_Skaka_May23_	201	201	SHIM Lake 2008b	1.8	2.5	504.92490811900
14	10:29:58am	RDOS_XT_Skaka_May23_	85	85	SHIM Lake 2008b	2.0	3.4	261.95712014100
15	10:38:43am	RDOS_XT_Skaka_May23_	218	218	SHIM Lake 2008b	2.2	4.6	1329.19399737000
16	10:57:28am	RDOS_XT_Skaka_May23_	166	166	SHIM Lake 2008b	1.8	4.0	1364.30850421000
17	11:11:41am	RDOS_XT_Skaka_May23_	235	235	SHIM Lake 2008b	2.0	4.3	602.01400156900
18	11:33:53am	RDOS_XT_Skaka_May23_	81	81	SHIM Lake 2008b	2.1	2.4	452.44970539300
19	11:33:53am	RDOS_XT_Skaka_May23_	81	81	SHIM Lake 2008b	2.1	2.4	297.48702290800
20	12:04:06pm	RDOS_XT_Skaka_May23_	24	24	SHIM Lake 2008b	1.3	1.4	279.27118642700
21	12:07:58pm	RDOS_XT_Skaka_May23_	68	68	SHIM Lake 2008b	2.0	3.7	627.01248842100
22	12:23:13pm	RDOS_XT_Skaka_May23_	75	75	SHIM Lake 2008b	1.3	2.6	690.76856913900
23	12:29:45pm	RDOS_XT_Skaka_May23_	97	97	SHIM Lake 2008b	1.2	2.4	904.05886077400
24	12:37:57pm	RDOS_XT_Skaka_May23_	122	122	SHIM Lake 2008b	1.3	3.0	471.11962561800
25	12:48:37pm	RDOS_XT_Skaka_May23_	79	79	SHIM Lake 2008b	1.4	2.3	222.14043930100
26	12:55:18pm	RDOS_XT_Skaka_May23_	102	102	SHIM Lake 2008b	1.5	2.2	349.17678662600
27	01:04:27pm	RDOS_XT_Skaka_May23_	24	24	SHIM Lake 2008b	2.1	2.4	194.84849391800
28	01:07:26pm	RDOS_XT_Skaka_May23_	62	62	SHIM Lake 2008b	1.8	3.8	479.47091806700
29	01:13:06pm	RDOS_XT_Skaka_May23_	67	67	SHIM Lake 2008b	1.5	1.6	450.71093850900
30	01:20:23pm	RDOS_XT_Skaka_May23_	81	81	SHIM Lake 2008b	1.5	2.3	429.69840448300
31	01:29:50pm	ECO_XT_SKAHA2-B.cor	271	271	SHIM Lake 2008 v	2.4	3.9	293.07582754300

OBJECTID	SEGMENT_ID	LAKE_NAME	LAKE_LEVEL	SECHI_DEPT	ORGANIZATI	DATE_	TIME_	CREW	WEATHER	AIR_TEMP_	WATER_TEMP	JURISDICTI	COMMENTS	SEGMNT_NUM	SHORE_TYPE	SHORE_MODI	SLOPE	LAND_USE
15	32	Skaha Lake	337.9	0.0	Ecoscape/RDOS/ONA	5/23/2008	12:34:43pm	JS/JT/JC/RB/AS	Over Cast	15.0	0.0	Regional District Okanagan Similkameen		32.0	Gravel		Low (0-5)	Single Family
14	33	Skaha Lake	337.9	0.0	Ecoscape/RDOS/ONA	5/23/2008	12:56:14pm	JS/JT/JC/RB/AS	Over Cast	15.0	0.0	Regional District Okanagan Similkameen		33.0	Rocky Shore	Road	Steep (20 - 60%)	Rural
13	34	Skaha Lake	337.9	0.0	Ecoscape/RDOS/ONA	5/23/2008	01:02:17pm	JS/JT/JC/RB/AS	Over Cast	15.0	0.0	Regional District Okanagan Similkameen		34.0	Cliff/Bluff		Cliff (60+)	Rural
12	35	Skaha Lake	337.9	0.0	Ecoscape/RDOS/ONA	5/23/2008	01:15:42pm	JS/JT/JC/RB/AS	Over Cast	15.0	0.0	Regional District Okanagan Similkameen		35.0	Gravel		Low (0-5)	Single Family
47	36	Skaha Lake	337.9	0.0	Ecoscape/RDOS/ONA	5/23/2008	01:23:35pm	JS/JT/JC/RB/AS	Over Cast	15.0	0.0	Regional District Okanagan Similkameen		36.0	Rocky Shore		Moderate (5-20%)	Rural
11	37	Skaha Lake	337.9	0.0	Ecoscape/RDOS/ONA	5/23/2008	01:29:59pm	JS/JT/JC/RB/AS	Over Cast	15.0	0.0	Regional District Okanagan Similkameen		37.0	Gravel		Low (0-5)	Single Family
10	38	Skaha Lake	337.9	0.0	Ecoscape/RDOS/ONA	5/23/2008	02:03:40pm	JS/JT/JC/RB/AS	Over Cast	15.0	0.0	Regional District Okanagan Similkameen		38.0	Gravel		Low (0-5)	Single Family
9	39	Skaha Lake	337.9	0.0	Ecoscape/RDOS/ONA	5/23/2008	02:13:14pm	JS/JT/JC/RB/AS	Over Cast	15.0	0.0	Regional District Okanagan Similkameen		39.0	Rocky Shore	Road	Steep (20 - 60%)	Rural
8	40	Skaha Lake	337.9	0.0	Ecoscape/RDOS/ONA	5/23/2008	02:24:42pm	JS/JT/JC/RB/AS	Over Cast	15.0	0.0	Regional District Okanagan Similkameen		40.0	Rocky Shore	Road	Moderate (5-20%)	Single Family
48	41	Skaha Lake	337.9	0.0	Ecoscape/RDOS/ONA	5/23/2008	02:31:08pm	JS/JT/JC/RB/AS	Over Cast	15.0	0.0	Regional District Okanagan Similkameen	Segment is 90% RDOS/10% Penticton	41.0	Rocky Shore	Road	Steep (20 - 60%)	Rural
7	42	Skaha Lake	337.9	0.0	Ecoscape/RDOS/ONA	5/23/2008	02:43:33pm	JS/JT/JC/RB/AS	Over Cast	15.0	0.0	City of Penticton		42.0	Wetland	Road	Low (0-5)	Agriculture
6	43	Skaha Lake	337.9	0.0	Ecoscape/RDOS/ONA	5/23/2008	02:49:45pm	JS/JT/JC/RB/AS	Over Cast	15.0	0.0	City of Penticton		43.0	Rocky Shore		Low (0-5)	Single Family
49	44	Skaha Lake	337.9	0.0	Ecoscape/RDOS/ONA	5/23/2008	03:02:54pm	JS/JT/JC/RB/AS	Over Cast	15.0	0.0	City of Penticton		44.0	Gravel		Low (0-5)	Single Family
5	45	Skaha Lake	337.9	0.0	Ecoscape/RDOS/ONA	5/23/2008	03:15:34pm	JS/JT/JC/RB/AS	Over Cast	15.0	0.0	City of Penticton		45.0	Rocky Shore	Road	Steep (20 - 60%)	Agriculture
4	46	Skaha Lake	337.9	0.0	Ecoscape/RDOS/ONA	5/23/2008	03:24:11pm	JS/JT/JC/RB/AS	Over Cast	15.0	0.0	City of Penticton		46.0	Gravel		Moderate (5-20%)	Single Family
3	47	Skaha Lake	337.9	0.0	Ecoscape/RDOS/ONA	5/23/2008	03:36:52pm	JS/JT/JC/RB/AS	Over Cast	15.0	0.0	City of Penticton		47.0	Gravel	Marina_large (20+)	Low (0-5)	Recreation
2	48	Skaha Lake	337.9	0.0	Ecoscape/RDOS/ONA	5/23/2008	03:43:49pm	JS/JT/JC/RB/AS	Over Cast	15.0	0.0	City of Penticton		48.0	Sand		Low (0-5)	Urban Park
1	49	Skaha Lake	337.9	0.0	Ecoscape/RDOS/ONA	5/23/2008	03:51:22pm	JS/JT/JC/RB/AS	Over Cast	15.0	0.0	City of Penticton		49.0	Sand		Low (0-5)	Single Family
17	50	Skaha Lake	337.9	0.0	Ecoscape/RDOS/ONA	5/23/2008	03:51:22pm	JS/JT/JC/RB/AS	Over Cast	15.0	0.0	Regional District Okanagan Similkameen	No data collected due to access	50.0	Stream Mouth		Low (0-5)	Rural

SEGMENT_ID	LEV_OF_IMP	LIVEST_ACC	DISTURBED	NATURAL_	PHOTONUM	TAPE_NUMB	VIDEO_TIME	CMMNT_CLAS	CLIFF_BLUF	ROCKY	GRAVEL2	SAND2	STREAM_MOU	WETLAND	OTHER	STYPE_COMM	Agricultur	Commercial	Conservati	Forestry	Industrial	Institutio
32	High (>40%)	No	100	0	IMGP3059; IMGP3060; IMGP3061; IMGP3062; IMGP3063;		18:18:04		0	0	100	0	0	0	0		0	0	0	0	0	0
33	High (>40%)	No	100	0	IMGP3064; IMGP3065;		18:30:17		0	100	0	0	0	0	0	steep rocky slope with road fill	0	0	0	0	0	0
34	High (>40%)	No	80	20	IMGP3066; IMGP3067; IMGP3068;		18:32:33		60	20	20	0	0	0	0	Cliff/bedrock slopes with gravel beaches in between	0	0	0	0	0	0
35	High (>40%)	No	100	0	IMGP3069; IMGP3070; IMGP3071;		18:37:00		0	0	70	20	0	0	0		0	0	0	0	0	0
36	Low (0-10%)	No	15	85	IMGP3072; IMGP3073;		18:40:35		80	0	20	0	0	0	0		0	0	0	0	0	0
37	Medium (10-40%)	No	60	40	IMGP3074; IMGP3075; IMGP3076; IMGP3077;		18:41:54		0	0	100	0	0	0	0		0	0	0	0	0	0
38	High (>40%)	No	80	20	IMGP3078; IMGP3079; IMGP3080;		18:45:01		0	0	100	0	0	0	0		0	0	0	0	0	0
39	High (>40%)	No	100	0	IMGP3080; IMGP3081;		18:52:27		40	60	0	0	0	0	0	rocky fill shore below silt bluff	0	0	0	0	0	0
40	High (>40%)	No	100	0	IMGP3083; IMGP3084;		18:56:20		0	100	0	0	0	0	0	rocky road fill	0	0	0	0	0	0
41	High (>40%)	No	100	0	IMGP3085; IMGP3086;		19:00:57	cliff/bluff in middle of segment	20	80	0	0	0	0	0	rocky road fill	0	0	30	0	0	0
42	High (>40%)	No	100	0	IMGP3087; IMGP3088;		19:12:50		0	0	0	0	0	100	0	rocky road fill behind wetland	100	0	0	0	0	0
43	High (>40%)	No	100	0	IMGP3089; IMGP3090;		19:14:14		0	0	80	20	0	0	0		0	0	0	0	0	0
44	High (>40%)	No	100	0	IMGP3091; IMGP3092;		19:16:51		0	0	80	20	0	0	0		0	0	0	0	0	0
45	High (>40%)	No	100	0	IMGP3093; IMGP3094;		19:20:50		30	70	0	0	0	0	0	low rocky shore because of roadway fill	90	0	0	0	0	0
46	High (>40%)	No	100	0	IMGP3095; IMGP3096;		19:23:21		0	20	40	20	0	0	0		0	0	0	0	0	0
47	High (>40%)	No	100	0	IMGP3097; IMGP3098;		19:26:45		0	0	100	0	0	0	0	large rip rap groin in front of marina	0	0	0	0	0	0
48	High (>40%)	No	100	0	IMGP3099; IMGP3100;		19:27:05		0	0	0	100	0	0	0		0	0	0	0	0	0
49	High (>40%)	No	100	0	IMGP3101; IMGP3102;		19:28:50		0	0	0	100	0	0	0		0	0	0	0	0	0
50	High (>40%)	No	100	0				No Data Collected due to boat access	0	0	0	0	100	0	0		0	0	0	0	0	0

SEGMENT_ID	Multi_Fami	Natural_Ar	Park	Recreation	Rural	Single_Fam	Urban_Park	LANDU_COMM	MARL	MUD	ORGANIC	FINES	SAND	GRAVEL	GRAVEL_FIN	GRAVEL_COA	COBBLE	COBBLE_FIN	COBBLE_COA	BOULDER	BEDROCK	EMBEDDEDNE	SHAPE_1	COMMNT_SUB
32	10	0	0	0	0	90	0	Mostly single family, some condos	0	0	0	5	20	60	0	0	10	0	0	5	0	None	smooth	beach grooming, imported sand???
33	0	0	0	0	100	0	0	steep roadside	0	0	0	0	10	40	0	0	40	0	0	10	0	None	smooth	some road fill to high water
34	0	0	0	0	100	0	0	single family residential in gravel beach areas and cliff tops	0	0	0	0	5	20	0	0	20	0	0	5	50	None	smooth	
35	0	0	0	25	0	75	0	single family residential	0	0	0	5	15	60	0	0	20	0	0	0	0	None	smooth	
36	0	0	0	0	100	0	0	single family rural residential	0	0	0	0	5	20	0	0	30	0	0	5	40	None	smooth	
37	0	0	0	0	0	100	0	single family residential	0	0	0	10	10	40	0	0	40	0	0	0	0	None	smooth	
38	0	0	0	0	0	90	10	single family residential on south, rural on north	0	0	0	10	10	40	0	0	40	0	0	0	0	None	smooth	
39	0	0	0	0	100	0	0	roadway along shore	0	0	0	5	5	20	0	0	50	0	0	20	0	None	blast rock	
40	0	0	0	0	0	100	0	roadway along shore	0	0	0	5	5	20	0	0	50	0	0	20	0	None	blast rock	
41	0	0	0	0	70	0	0	roadway along shore	0	0	0	5	5	20	0	0	50	0	0	20	0	None	blast rock	
42	0	0	0	0	0	0	0	roadway behind shore marsh	0	20	10	30	20	20	0	0	0	0	0	0	0	None	blast rock	
43	0	0	0	0	0	100	0	single family residential	0	10	0	25	25	30	0	0	10	0	0	0	0	None	smooth	
44	0	0	0	0	0	100	0	single family residential	0	15	0	25	25	30	0	0	5	0	0	0	0	None	smooth	
45	0	0	0	0	0	10	0	roadway along shore	0	5	0	25	20	30	0	0	10	0	0	10	0	None	blast rock	
46	0	0	0	0	0	100	0	single family residential	0	10	0	20	15	30	0	0	10	0	0	0	15	None	smooth	
47	0	0	0	100	0	0	0	large marina in front of rip rap groyne	0	10	0	5	25	30	0	0	10	0	0	20	0	None	blast rock	boulders associated with rip rap groyne
48	0	0	0	0	0	0	100		0	10	0	30	60	0	0	0	0	0	0	0	0	None	smooth	imported sand?
49	0	0	0	0	0	100	0	single family residential	0	10	0	30	60	0	0	0	0	0	0	0	0	None	smooth	imported sand?
50	0	0	0	0	90	10	0	crown and single family, boats beached at shore	0	0	0	0	0	0	0	0	0	0	0	0	0	None	smooth	

SEGMENT_ID	B1_CLASS	B1_STAGE	B1SHRUB_CO	B1TREE_COV	B1_DISTRIB	B1_BANDWI	B1_OVERHAN	AQUATIC_VE	SUBMERGENT	SUBMERG_VE	EMERGENT_V	EMERGED_VE	FLOATING_V	FLOATING_1	AVEG_CMT	B1_COMMNT	B2_CLASS
32	Landscaped	Sparse	Moderate (10-50%)	Moderate (10-50%)	Patchy	10	0	20	100	Yes	0	No	0	No		middle portion of segment less disturbed	Landscaped
33	Shrubs	low shrub <2m	Moderate (10-50%)	Sparse (<10%)	Patchy	4	0	0	0	No	0	No	0	No			Unvegetated
34	Unvegetated	Sparse	Sparse (<10%)	Sparse (<10%)	Patchy	10	0	0	0	No	0	No	0	No		rocky outcrops with landscaped gravel beaches	Coniferous forest
35	Landscaped	Young Forest	Sparse (<10%)	Sparse (<10%)	Patchy	10	0	0	0	No	0	No	0	No			Coniferous forest
36	Shrubs	tall shrub 2- 10 m	Sparse (<10%)	Sparse (<10%)	Patchy	5	0	0	0	No	0	No	0	No		natural gravel/riparian amongts rock outcrops	Herbs/grasses
37	Coniferous Forest	mature forest	Sparse (<10%)	Moderate (10-50%)	Patchy	15	0	0	0	No	0	No	0	No			Coniferous forest
38	Landscaped	mature forest	Sparse (<10%)	Moderate (10-50%)	Patchy	8	0	0	0	No	0	No	0	No		landscape residential area with patchy pine	Coniferous forest
39	Unvegetated	Sparse	Sparse (<10%)	Sparse (<10%)	Continuous	3	0	15	0	No	100	Yes	0	No	patchy reed canary grass	poorly vegetated roadway fill	Herbs/grasses
40	Unvegetated	Sparse	Sparse (<10%)	Sparse (<10%)	Continuous	8	0	15	0	No	100	Yes	0	No	patchy bulrush	poorly vegetated roadway fill	Coniferous forest
41	Unvegetated	Sparse	Sparse (<10%)	Sparse (<10%)	Continuous	3	0	40	0	No	100	Yes	0	No	patchy bulrush	poorly vegetated roadway fill	Herbs/grasses
42	Disturbed Wetland	tall shrub 2- 10 m	Moderate (10-50%)	Sparse (<10%)	Continuous	15	10	100	0	No	100	Yes	0	No	bulrush/cattail beds	tall shrub cattail/bulrush marsh	Herbs/grasses
43	Landscaped	tall shrub 2- 10 m	Sparse (<10%)	Sparse (<10%)	Continuous	10	0	40	0	No	100	Yes	0	No	patchy bulrush beds		Herbs/grasses
44	Landscaped	tall shrub 2- 10 m	Sparse (<10%)	Sparse (<10%)	Continuous	10	0	40	0	No	100	Yes	0	No	patchy bulrush beds		Herbs/grasses
45	Shrubs	tall shrub 2- 10 m	Sparse (<10%)	Sparse (<10%)	Patchy	5	0	40	0	No	100	Yes	0	No	patchy bulrush beds		Herbs/grasses
46	Landscaped	tall shrub 2- 10 m	Sparse (<10%)	Sparse (<10%)	Patchy	10	0	60	0	No	100	Yes	0	No	patchy bulrush beds		Herbs/grasses
47	Unvegetated	Sparse	Sparse (<10%)	Sparse (<10%)	Patchy	5	0	0	0	No	0	No	0	No			Unvegetated
48	Shrubs	tall shrub 2- 10 m	Sparse (<10%)	Sparse (<10%)	Patchy	5	0	100	100	Yes	0	No	0	No	miloil	narrow band of planted deciduous shrubs	Coniferous forest
49	Landscaped	Sparse	Sparse (<10%)	Sparse (<10%)	Patchy	5	0	100	100	Yes	0	No	0	No	miloil	narrow band of planted deciduous shrubs	Landscaped
50						0	0	0	0	No	0	No	0	No	No Data Collected		

SEGMENT_ID	B2_STAGE	B2SHRUB_CO	B2TREE_COV	B2_DISTRIB	B2_BANDWID	B2_COMMNT	LITTORAL_Z	LWD	LWD_NUMBER	WIDTH_LITT	COMMNT_LIT	RETAIN_WAL	PERRETAIN_	RETAIN_MAT
32		Moderate (10-50%)	Sparse (<10%)	Patchy	30	residential area with landscaping, patchy pondrosa pine	Moderate (10-50 m)	No	0	15		32	75	Mixed
33		None	None	Continuous	20	road fill slope and roadway below rock outcrops/cliff	Narrow (<10m)	No	0	10		0	0	
34	Mature Forest	Sparse (<10%)	Sparse (<10%)	Patchy	30	rocky outcrops w/ patches of pine intermixed w/ landscaping	Narrow (<10m)	No	0	5		5	15	Mixed
35	Mature Forest	Sparse (<10%)	Sparse (<10%)	Patchy	30	patches of pine between residential	Moderate (10-50 m)	No	0	15		11	30	Mixed
36	Herbs/grasses	Sparse (<10%)	Sparse (<10%)	Patchy	50	patches of pine amongsts rock outcrops	Narrow (<10m)	No	0	10		0	0	
37	Mature Forest	Sparse (<10%)	Moderate (10-50%)	Patchy	30	well established pine amongsts residences	Wide (>50 m)	No	0	150		7	15	Mixed
38	Mature Forest	Sparse (<10%)	Sparse (<10%)	Patchy	30	poorly established pine amongsts residences	Wide (>50 m)	<5	0	150		9	15	Mixed
39	Herbs/grasses	Sparse (<10%)	Sparse (<10%)	Patchy	50	sage/bunchgrass silt bluff	Moderate (10-50 m)	No	0	50		0	0	
40	Mature Forest	Sparse (<10%)	Moderate (10-50%)	Patchy	15	Pine forest	Wide (>50 m)	No	0	80		2	5	Concrete
41	Herbs/grasses	Sparse (<10%)	Sparse (<10%)	Continuous	50	bunchgrass / sage on silt, sparsly vegetated on cliffs	Wide (>50 m)	<5	0	80		0	0	
42	Herbs/grasses	Sparse (<10%)	Sparse (<10%)	Continuous	50	bunchgrass / sage on silt	Wide (>50 m)	5 - 25	0	80		0	0	
43	Herbs/grasses	Sparse (<10%)	Sparse (<10%)	Continuous	50	bunchgrass / sage on silt	Wide (>50 m)	<5	0	80		23	80	Mixed
44	Herbs/grasses	Sparse (<10%)	Sparse (<10%)	Continuous	50	bunchgrass / sage on silt	Wide (>50 m)	No	0	80		21	85	Mixed
45	Herbs/grasses	Sparse (<10%)	Sparse (<10%)	Continuous	50	bunchgrass / sage on silt	Moderate (10-50 m)	<5	0	15	whitefish spawn on rip rap	0	0	
46	Herbs/grasses	Sparse (<10%)	Sparse (<10%)	Continuous	50	bunchgrass / sage on silt	Moderate (10-50 m)	<5	0	15		26	95	Mixed
47		Sparse (<10%)	Sparse (<10%)	Continuous	30	Marina complex	Wide (>50 m)	No	0	50	whitefish spawn on rip rap	1	100	Metal
48	Mature Forest	Sparse (<10%)	Moderate (10-50%)	Continuous	30	Manicured pine forest with turf understorey	Wide (>50 m)	No	0	100		1	100	Concrete
49	Mature Forest	Sparse (<10%)	Sparse (<10%)	Continuous	30	Manicured residential with patchy pines	Wide (>50 m)	No	0	100		14	95	Mixed
50					0	No Data Collected		No	0	0	No Data Collected	0	0	

SEGMENT_ID	DOCKS	DOCKS_KM	BOAT_HOUSE	GROYNES	GROYNES_KM	BOAT_LAUNC	PERRAIL_MO	PERROAD_MO	MARIN_RAIL	MARINAS	SUB_MODIFI	PERSUB_MOD	COMMNT_MOD	VETERANS	SNAGS	CMMNT_FLRA	CMMNT_FAUN	MAX_PDOP	CORR_TYPE	RCVR_TYPE	GPS_DATE
32	28	17	0	3	2	1	0	0	16	0	Yes	40	beach grooming	No	No		Red Necked Grebe	6.6	Postprocessed Code	GeoXM	5/23/2008
33	0	0	0	0	0	0	0	100	0	0	Yes	60	road fill slope	No	No			5.0	Postprocessed Code	GeoXM	5/23/2008
34	6	7	0	0	0	0	0	0	0	0	Yes	15	rocky fill/ ret. Walls with some beach grooming	No	No			4.3	Postprocessed Code	GeoXM	5/23/2008
35	9	15	1	1	2	1	0	0	4	0	Yes	15	imported sand?	No	No			3.7	Postprocessed Code	GeoXM	5/23/2008
36	2	13	2	1	6	0	0	0	0	0	No	0		5 - 25	5 - 25			3.9	Postprocessed Code	GeoXM	5/23/2008
37	9	16	0	0	0	1	0	0	4	0	No	0		5 - 25	<5			2.7	Postprocessed Code	GeoXM	5/23/2008
38	6	5	0	0	0	2	0	0	3	0	Yes	15	imported sand?	5 - 25	<5			3.0	Postprocessed Code	GeoXM	5/23/2008
39	5	6	0	0	0	0	0	100	0	0	Yes	100	roadway fill slope	No	No			3.0	Postprocessed Code	GeoXM	5/23/2008
40	3	3	0	0	0	0	0	100	0	0	Yes	100	roadway fill slope	5 - 25	No			2.8	Postprocessed Code	GeoXM	5/23/2008
41	0	0	0	0	0	1	0	100	0	0	Yes	100	roadway fill slope	No	No			6.5	Postprocessed Code	GeoXM	5/23/2008
42	1	2	0	0	0	0	0	100	0	0	Yes	100	roadway fill slope	No	No		Two Red Necked Grebes	8.0	Postprocessed Code	GeoXM	5/23/2008
43	11	14	0	9	11	0	0	0	8	0	Yes	20	imported sand?	No	No			7.7	Postprocessed Code	GeoXM	5/23/2008
44	15	19	0	1	1	0	0	0	9	0	Yes	20	imported sand?	No	No			5.2	Postprocessed Code	GeoXM	5/23/2008
45	0	0	0	1	2	0	0	100	0	0	Yes	100	roadway fill slope	No	No		whitefish spawn on rip rap	3.7	Postprocessed Code	GeoXM	5/23/2008
46	20	26	0	1	1	0	0	0	3	1	Yes	40	imported sand?	No	No			4.4	Postprocessed Code	GeoXM	5/23/2008
47	1	7	0	1	7	1	0	100	0	0	Yes	100	large two ramp boat launch	No	No		whitefish spawn on rip rap	5.1	Postprocessed Code	GeoXM	5/23/2008
48	0	0	0	0	0	1	0	0	0	0	Yes	100	imported sand?	No	No			5.8	Postprocessed Code	GeoXM	5/23/2008
49	2	6	0	1	3	1	0	0	2	0	Yes	60	imported sand?	No	No			5.4	Postprocessed Code	GeoXM	5/23/2008
50	0	0	0	0	0	0	0	100	0	0	Yes	0	No Data Collected	No	No			0.0			

SEGMENT_ID	GPS_TIME	DATAFILE	UNFILT_POS	FILT_POS	DATA_DICTI	AVG_HORZ_P	WORST_HORZ	Shape_len
32	01:34:54pm	ECO_XT_SKAHA2-B.cor	1273	1273	SHIM Lake 2008 v	2.4	3.5	1694.56334693000
33	01:56:26pm	ECO_XT_SKAHA2-B.cor	274	274	SHIM Lake 2008 v	2.3	2.6	244.83227058400
34	02:02:28pm	ECO_XT_SKAHA2-B.cor	582	582	SHIM Lake 2008 v	1.5	2.3	893.34950936700
35	02:15:54pm	ECO_XT_SKAHA2-B.cor	449	449	SHIM Lake 2008 v	1.7	2.0	592.51520631000
36	02:23:46pm	ECO_XT_SKAHA2-B.cor	352	352	SHIM Lake 2008 v	1.2	1.9	157.18309036100
37	02:30:12pm	ECO_XT_SKAHA2-B.cor	902	902	SHIM Lake 2008 v	1.1	1.5	548.81610201000
38	03:03:52pm	ECO_XT_SKAHA2-B.cor	497	497	SHIM Lake 2008 v	1.2	2.3	1142.51838094000
39	03:13:24pm	ECO_XT_SKAHA2-B.cor	584	584	SHIM Lake 2008 v	1.1	1.8	884.45934930200
40	03:24:55pm	ECO_XT_SKAHA2-B.cor	339	339	SHIM Lake 2008 v	1.2	1.5	1087.62339836000
41	03:31:19pm	ECO_XT_SKAHA2-B.cor	596	596	SHIM Lake 2008 v	1.7	4.3	2637.83065251000
42	03:43:43pm	ECO_XT_SKAHA2-B.cor	168	168	SHIM Lake 2008 v	1.8	4.9	472.55226920300
43	03:49:57pm	ECO_XT_SKAHA2-B.cor	609	609	SHIM Lake 2008 v	2.1	4.6	795.85544055300
44	04:03:07pm	ECO_XT_SKAHA2-B.cor	714	714	SHIM Lake 2008 v	1.5	2.8	809.92070567400
45	04:15:51pm	ECO_XT_SKAHA2-B.cor	428	428	SHIM Lake 2008 v	1.5	2.4	616.05208776300
46	04:24:32pm	ECO_XT_SKAHA2-B.cor	737	737	SHIM Lake 2008 v	1.8	3.1	779.62515532300
47	04:37:16pm	ECO_XT_SKAHA2-B.cor	384	384	SHIM Lake 2008 v	1.7	2.9	149.30840830200
48	04:44:12pm	ECO_XT_SKAHA2-B.cor	395	395	SHIM Lake 2008 v	1.9	3.8	547.67742934700
49	04:51:50pm	ECO_XT_SKAHA2-B.cor	378	378	SHIM Lake 2008 v	1.9	4.7	359.69530784200
50			0	0		0.0	0.0	891.59590126700

Appendix C – Summary of Public Input



APPENDIX C SUMMARY OF PUBLIC INPUT

Stakeholder Contact

The following are summaries of consultation with stakeholder groups for the Skaha Lake Shoreline Study.

KALEDEN PARKS AND RECREATION COMMISSION July 15, 2008

1) Are there any recreation-related projects underway or planned for the area?

In 2006 Kal Rec struck a long term planning committee made up of community volunteers of all ages. The purpose of the committee was “to identify new or additional facilities and improvements or changes to Pioneer Park, to reflect the growing need of our diverse community”. We prioritized the suggestions based on a number of issues and obstacles. We are using the committee recommendations to inform our projects for park improvements. In the last two years we have: removed potentially dangerous trees and shrubs and planted trees that meet riparian standards; built a covered picnic area/gazebo; the tennis courts have been resurfaced; applied for historical designation for the old Kaleden Hotel; put up basketball hoops, improved parking, made access changes to the washrooms and many other cosmetic changes. We need to replace the boat launch, as the current one is dangerous. Kal Rec is working with the Area D Directors/RDOS to develop an appropriate design for a new boat launch.

2) Are there any particular areas along the shoreline that the commission would like to see preserved for recreational purposes that are not already designated as such?

Sickle Point has recently been purchased and there are plans to build on the site. However, the lagoon area on the South side of Sickle Point was not part of the purchase. This is a prime nesting area and would benefit students and birdwatchers. The whole KVR trail, from Bambury Green to Okanagan Falls should also be protected as prime riparian land.

The area between the hotel and Pioneer Park is not developed and is clearly riparian; the KVR trail runs through this area. Would it be possible to have this section considered a natural linear park to protect the area and the trail?

Boats are currently moored in the area between the hotel and the park. Who has jurisdiction over the lake and lakeshore in this area? Is it considered part of the foreshore contract between Kal Rec and the RDOS?

3) What types of recreational activities does the commission promote and support?

Park: Tennis, for adults and children
Basketball
Volleyball

Water activities, swimming, boating etc.

Playground for young children

The park is easily accessed for people with support needs and seniors.

(There have been requests for an exercise circuit within the park boundaries including the area next to the North beach along the trail.)

Hall: Playschool
 Men's hockey
 Adult volleyball
 Seasonal celebrations

4) What does the commission see as the largest gap in recreational infrastructure?

The boat launch is an old concrete cattle guard, which causes Kal Rec ongoing concern for public safety.

5) Is there any other information the commission would like the study team to be aware of and potentially include in our final report?

We suggest that you work closely with the KVR trail committee, chaired by Area D Director Bill Schwarz, to ensure that the jurisdictional issues can be resolved in a way that protects our riparian treasure.

Could you please consider the road, which was poured INTO the lake in 1992 to give access to Sickle Point, but was never used. The road had been reclaimed by nature until Mel Reeves, the new owner of Sickle Point bulldozed it again. This road goes right through the bird nesting area.

The Kaleden Fire Dept. has major concerns about the potential for fire sweeping up the dry grass banks between Bambury Green and Lakehill Rd. Kal Rec has requested that a post gate be installed so that vehicles could not drive down the KVR. Party people light bonfires along the lake very close to the steep banks. There is jurisdictional confusion regarding the right to gate the trail. This issue is sitting with the KVR committee. Kal Rec has received many complaints from walkers and cyclists about motorized vehicles using the KVR trail. This also has implication for the shoreline.

Collier Real Estate Co. has listed the former Marathon Realty/ CPR property located West of Alder. This very large property includes two pieces of waterfront, which is being advertised as beach access for the property. The real estate agent has suggested that there are plans to use the South beach property as a private marina for the development. At this point the zoning requires 16, ½ acre lots. However, if a sewer system was put through the area, high-density housing could be a possibility.

From: Kellie Bunting

Sent: Thursday, August 21, 2008 2:45 PM

To: 'Jane and Mike Bland'

Subject: RE: Kaleden Parks and Recreation Commission survey response

Hello Jane

I have another question for you re: the Skaha Lake Shoreline Study. Do you feel that parking (both for cars and trucks with trailers) is adequate along the Kaleden shoreline? If not, what can be done and where to improve the situation?

Thanks again.
Kellie

From: Jane and Mike Bland [mailto:jmbland@shaw.ca]
Sent: Thursday, August 21, 2008 4:52 PM
To: Kellie Bunting
Subject: Re: Kaleden Parks and Recreation Commission survey response

Hi Kellie

Kal Rec extended the parking at Pioneer Park this year, so I think it is pretty good. We have been trying to encourage people in cars to park behind the Park and leave the area at the South end of the Park for trucks and trailers because it's next to the boat launch. Certainly there are lots of vehicles parked there on a sunny day in the summer. The only parking along our whole shoreline is at the Park.

OK FALLS PARKS AND REC COMMISSION
July 29, 2008

1) Are there any recreation-related projects underway or planned for the area?

Rec-related projects underway or planned: lakeside swim lessons; non-motorized boat rentals (kayaks, canoes, row boats)

2) Are there any particular areas along the shoreline that the commission would like to see preserved for recreational purposes that are not already designated as such?

Any land along KVR that is not private

3) What types of recreational activities does the commission promote and support?

Summer Kids Camp at Kenyon Park Beach; Adult Fitness using Kenyon Park, Lions Park, KVR

4) What does the commission see as the largest gap in recreational infrastructure?

Need for continuous trail from boat launch (end of Main St.) to KVR trestle; need for marina; non-motorized boat use/rentals; need for organized boat moorage. There is a great deal of ad-hoc moorage with buoys along the waterfront and boats from the Railway condominiums tied up along river shore.

OK Falls Parks and Rec Commission also provided a copy of the latest Parks and Rec Survey, conducted in July 2008.

From: Kellie Bunting
To: Bob Daly
Sent: Tuesday, July 29, 2008 12:56 PM
Subject: RE: OK Falls Parks and Rec response

Hello again Bob

I have a couple more specific questions that you may be able to answer:

- 1) In the Purpose Statement for Christie Memorial Park (attached) it states "investigate potential transfer of park to local interest" (p.2). Is this happening or going to happen?
- 2) In the East Skaha-Vaseux OCP there is a corridor along the entire Skaha Estates shoreline designated as "P" (see attached map). When I was out in the field I saw a small private park for Skaha Estates residents in this area but that was it. Will this designated parkland be private or public? Will it be a trail or a linear park or a combination of both?

Thank you.
Kellie

From: Bob Daly [mailto:bandsdaly@shaw.ca]
Sent: Wednesday, July 30, 2008 8:28 AM
To: Kellie Bunting
Subject: Re: OK Falls Parks and Rec response

Hi Kelly,

Re Christie Park: OK Falls Parks and Rec is truly interested in acquiring the park, however, it would be extremely difficult to have it transferred from the Provincial Govt to the RDOS. There are Native land claims issues among other hurdles, so it is unlikely that a transfer will happen. The Parks and Rec Commission, however is interested in taking on the management of the park. Presently, the maintenance is done by a private contractor, and we would like to take on that job if it is financially feasible. It is still under discussion.

Re: Skaha Estates, I have no knowledge about the park being public or private. Bill Schwarz may have some info on that. Bob Daly

RAILS TO TRAILS AND PARKS COMMITTEE
July 31, 2008

1) What is the status of the linear park strategy to be developed by the Committee?

We are in a holding pattern at present. The Provincial Government realized they could not give us Land Tenure on the property (rail beds) to use as a trail park. Thus they are looking at ways to create a tripartite management (RDOS, Government and Local Area groups). This will require an agreement binding on all parties.

2) Are there any Committee projects underway or planned for the Skaha Lake shoreline?

Until we get the go ahead from the Province we are unable to move ahead with the rail bed trails

3) Are there any particular areas along the shoreline that the Committee is looking to secure for Rails to Trails and/or Parks?

We are looking to secure the Provincial lands identified as KVR/CPR rail bed along the West side of Skaha Lake. – the PIB owns the portion of land north of Banberry, there is a short piece around Sickle Point owned by the CPR of which we have applied for gifting for the trail and there is a portion of the rail bed running south of Pioneer park that was sold some years ago. The portion owned by Ponderosa Point should be resolved in our favour due to some land acquisition they want from Highways.

4) What does the Committee see as being the largest gap(s) in Rails to Trails and Parks infrastructure in the area?

- i. The First nation lands at the north end of the lake
- ii. The East Side Road (Highways would need to upgrade to create a hike bicycle path along that road. They indicate they have future plans however there is neither budget nor any commitment to creating such a trail.
- iii. The CPR lands on the west side of the lake need to be secured.

5) Where would the Committee like to see trail and park signage?

- i. Yes there should be signage along the trail that would indicate:
 - a. The trail route
 - b. Important attractions/opportunities along the trail including naturalist and archeological points of interest

6) Is there any other information the Committee would like the study team to be aware of and potentially include in our final report?

- i. As indicated in the overall trail management plan it is noted this trail, when completed will start at Chute Lake north of Naramata, follow down through Penticton and south through Oliver to Orville, Wa. Thence west on the rail beds in that state coming back into Canada at Blackhawk to follow on to Princeton then turn back on the rail bed from Princeton to Summerland and then to Penticton. The overall trail will be a major feature once resolved.
- ii. We are meeting the Province on 7 August to get an update on this process.

From: Kellie Bunting
Sent: Monday, August 18, 2008 4:33 PM

To: Bill Schwarz
Subject: RE: Skaha Lake Shoreline Study - Input from Rails to Trails & Parks Committee

Hello Bill

In the East Skaha-Vaseux OCP there is a corridor along the entire Skaha Estates shoreline designated as "P" (see attached map). When I was out in the field I saw a small private park for Skaha Estates residents in this area but that was it. Do you know if this designated parkland will be private or public? Will it be a trail or a linear park or a combination of both?

The OCP also calls for a continuous trail along the shoreline from the boat launch (end of Main St.) to the KVR trestle. Do you know the status of planning for this trail?

Thanks for your help.

Kind regards,
Kellie

From: Bill Schwarz
Sent: Monday, August 18, 2008 4:45 PM
To: Kellie Bunting
Subject: RE: Skaha Lake Shoreline Study - Input from Rails to Trails & Parks Committee

Kellie

I will start with the last question. The community has not put aside funding to create the trail. There are conditions in the zoning for the condo along the lake for the condo east of Christie Park that the public must have access to the shore line as well as on the other sides. I do not know the status of any foreshore agreements or accretion agreements with the provincial government. Yes it is still in the works to create this walk way however it will depend on funding. We want to make certain that is enunciated in the study.

As for the Estates, I am not certain as to the status of that land along the lake. Don Albright phone 250 4975688 is the chair of the Skaha Estates Irrigation District and he should know the status of those lands. I understand there may be some resistance in that area to make lands public. I will be interested in the outcome of your investigation.

Thanks.
William (Bill) Schwarz
Electoral Area Director, Area "D"

From: Diane Vaykovich
Sent: Monday, August 11, 2008 11:20 AM
To: Kellie Bunting
Subject: RE: Skaha Lake Shoreline Study - Input from Rails to Trails and Parks Committee

Hi Kellie, John Hawkings provided an update to the Rails to Trails & Parks Committee on August 7. No specific announcement was made at this meeting, however he anticipates the RDOS and the Province should be in a position to enter into a management agreement for the 2010 Trail this Winter/Spring. The 2010 trail does not include trails south of Penticton; it is recognized that these trails have tremendous potential yet they are the most encumbered. Because of these encumbrances the Province chose not to include this portion in the 2010 Trail system at this time.

**AREA D APC, Judy Brock - telephone
August 18, 2008**

1) Is there any development along the shoreline that is in the review process or recently approved?

Sickle Point – controversial development
Skaha Shores – stalled

2) Are there any areas of concern for the APC?

Eastside Road is an area of concern. It should be designated as a scenic route with a slow speed limit. It should not be widened. There should also be a weight control on the road. The road is very dangerous for walkers/cyclists and for wildlife. Look to Washington for examples of scenic designated roadways. Include signage and points of interest.

3) What other concerns does the APC have?

Variances are given in good faith to developers and then the developer sells the property (i.e., Skaha Shores) with the variances attached
Noise concerns. Boat motors and loud stereo systems.

**THE NATURE TRUST
August 21, 2008**

- Own a property on Eastside Road – Big Horn Sheep sanctuary
- Important property because it is the only piece of private land that connects to Crown land and goes down to the water.
- Pond on the upland side of highway is an important watering hole.
- Do not encourage access to property but allow it.
- Problems with loose dogs chasing the sheep.
- Problems with motorized traffic, dirt bikers enter from Heritage Hills using the power line ROW.
- Barriers are used – co-managed by BC Parks.
- No plans to acquire property in the near future due to prices, competition, lack of funding.
- Heritage Hills approvals – out of place, made the sanctuary more accessible to humans.

Survey

Ninety-eight people completed the survey. Survey results are summarized below. Each question includes:

- 1) brief description of the results,
- 2) graph (where applicable),
- 3) table showing response percent and response count for each answer option, number of people who answered the question, and number of people who skipped the question, and
- 4) details or comments provided by respondents.

1. Which of the following best describes who you are?		
<p>Most respondents were residents of Electoral Area D (Kaleden, Skaha Estates, Eastside Road, and Okanagan Falls). Respondents were also from Penticton, Kelowna, Summerland, and Naramata. Twenty-four respondents are waterfront property owners. Five respondents are from government, including BC Ministry of Environment, Department of Fisheries and Oceans Canada, Regional District Okanagan-Similkameen. Eighteen respondents are members of local organizations, including Ducks Unlimited, Penticton Rotary, South Okanagan Naturalists Conservation Committee, Parks and Rec Commissions, and Penticton Outdoors Club. There were several respondents who participate in canoe clubs or on dragon boat teams.</p> <p><i>Please note: several respondents chose more than one option to describe themselves, resulting in a greater than 100% response percent and a count of more than 97.</i></p>		
Answer Options	Response Percent	Response Count
Resident	72.2%	70
Waterfront property owner	24.7%	24
Government	5.2%	5
Member of a local organization	18.6%	18
Other	9.3%	9
Details		90
<i>answered question</i>		97
<i>skipped question</i>		1

Details
Kaleden
Kaleden (St Andrews by the Lake)
single family home
visitor (live in Kelowna)
BC Ministry of Environment, Water Stewardship Division
I live on the West Bench and have been in the area for 18 years. I am an active member of the local naturalists and environmental communities and Coordinator of Parks and Protected Areas for BC Nature, the Provincial naturalists organization.
single family home
single family home
single family home
Penticton
DFO
Kaleden
Kaleden

East Side Rd
Penticton
Thompson-Okanagan Regional Biologist for Ducks Unlimited Canada
Skaha Estates
Single family home on Hody Drive, OK Falls
Ministry of the Environment
Penticton Racing Canoe Club
Penticton
Kaleden
Penticton
Penticton Racing Canoe Club member - live in Penticton downtown area
member of a local canoe paddling/racing club
Penticton Racing Canoe Club
Penticton
Penticton
Summerland resident but regular user of Skaha Lake
Dragon Boat team
Dragon Boating
From Summerland use Skaha as Dragonboater
PENTICTON, BC
a member of the local paddling club on Skaha
Person who paddles on Skaha Lake
Survivorship Dragon Boat Team
Kaleden
Penticton
Paddler/cyclist/walker who frequently uses the lake for recreation. I live in Penticton.
Okanagan Falls
Penticton
Kaleden
Kaleden
Kaleden, single family home; Kal Rec, Penticton Rotary
Husula Highlands; South Okanagan Naturalists Conservation Committee
condo
Okanagan Falls, condo
Penticton; Hiking, radio & astronomy clubs
Penticton, Penticton Outdoors Club
Kaleden, single family home
Kaleden
Kaleden, residents since 1923
Okanagan Falls
Penticton
Old Kaleden Road, Okanagan Falls: sold part of my property to fisheries
Husula Highlands
Kaleden
26 Eastside Road, single family home
Skaha Estates, single family home
Skaha Estates, single family home
Kaleden

Single family home
Kaleden
Eastside Road, OK Falls
OK Falls, Cedar Street and 7th Ave
Kaleden, single family home
OK Falls, Parks & Rec Commission, APC
OK Falls
OK Falls, Single family home, RDOS
single family, Okanagan Falls
Bighorn Mt. Estates in Oct
Bighorn Estate in October
Kaleden
Kaleden
OK Falls, single family home
Ok Falls, single family home
Okanagan Falls, single family home
Kaleden, Kaleden Parks and Rec Commission
Okanagan Falls
Single family
Parks & Rec Commission
Skaha Estates
White Lake Road, Kaleden
Okanagan Falls, staff OK Falls Rec
Kaleden, Director, OBWB/Water Stewardship Council
Naramata
Kaleden
Penticton
Kaleden, business owner
single family

2. What best describes your use of Skaha Lake and its shoreline? (please check all activities you participate in)

Skaha Lake is very well used by respondents. Six of the ten activities listed were chosen by more than 50% of respondents as activities they participate in. The most popular activity is identified as walking, jogging, or biking the KVR Trail. Only 17% of respondents chose power boating or jet skiing as an activity they engage in.

Please note: respondents were asked to identify all activities that applied to them; therefore the response percents is greater than 100 and the response count is greater than 94.

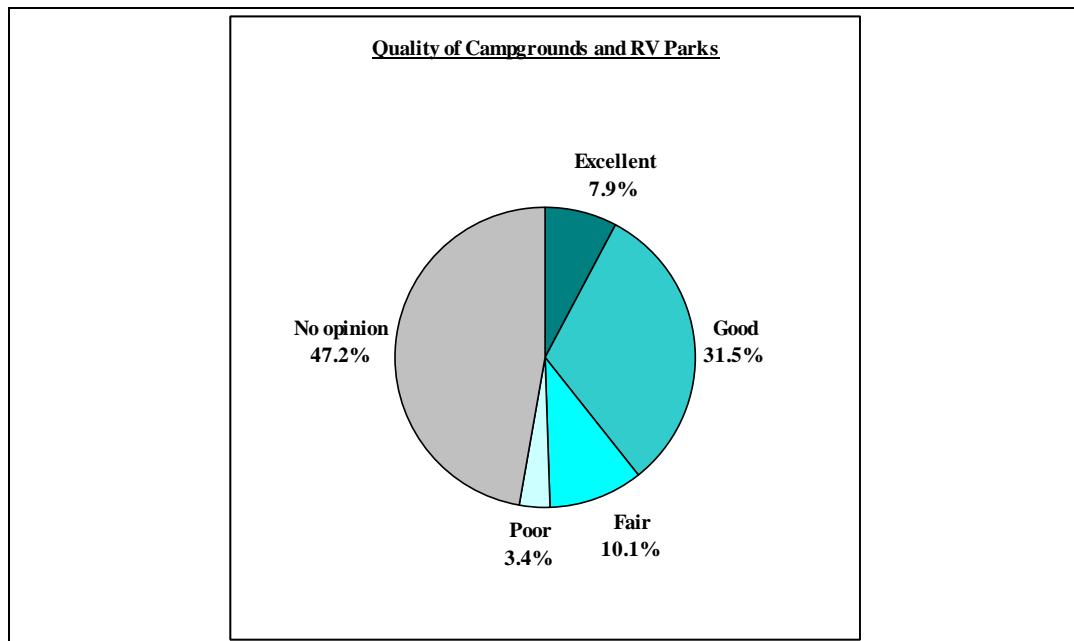
Answer Options	Response Percent	Response Count
Walking, jogging, or biking the KVR Trail	77.7%	73
Walking, jogging, or biking on Eastside Road	40.4%	38
Driving along Eastside Road	60.6%	57
Engaging in First Nations cultural activities	9.6%	9
Wildlife and scenery viewing	59.6%	56
Using the beaches and picnic areas	66.0%	62
Fishing	19.1%	18
Power boating or jet skiing	17.0%	16

Canoeing, kayaking, sailing, or windsurfing	59.6%	56	
Swimming	71.3%	67	
	Other (please specify)	26	
	<i>answered question</i>		94
	<i>skipped question</i>		4

Other (please specify)			
Operation of Okanagan Lake Regulation System including Skaha Lake Dam			
waterfowl, reptile and amphibian enjoyment			
waste management; water quality assessment			
Meditating and yoga by the water			
kiteboarding instructor			
Preservation and enhancement of wildlife habitat and water quality			
Heavy use of Eastside Road for running and biking			
dragon boating			
Training for International Competition (winner Bronze Medals (3) 2008 World Champs/Gold Medalist 2005 World Masters Games			
Dragon Boating			
Dragonboat-Survivorship			
DRAGONBOATING			
Dragon Boating			
Dragon boating			
Outrigging and Dragon Boating			
Dragon Boating			
Dog swimming activities			
Dragon Boating			
dragon boating			
dragonboating			
My view of the lake and the opposite shore and mountains is very important to me			
Scuba diving			
Help to maintain path mowing and weed pulling			
Relaxing. Living.			
Dragon boat, outriggers			
Birding			

3. Campgrounds and RV Parks

Since most of the respondents are residents, 47.2% did not have an opinion about the quality of campgrounds and RV Parks. Of the 47 people who provided an opinion, most think the quality is excellent or good (7 people or 7.9% and 28 people or 31.5%, respectively).



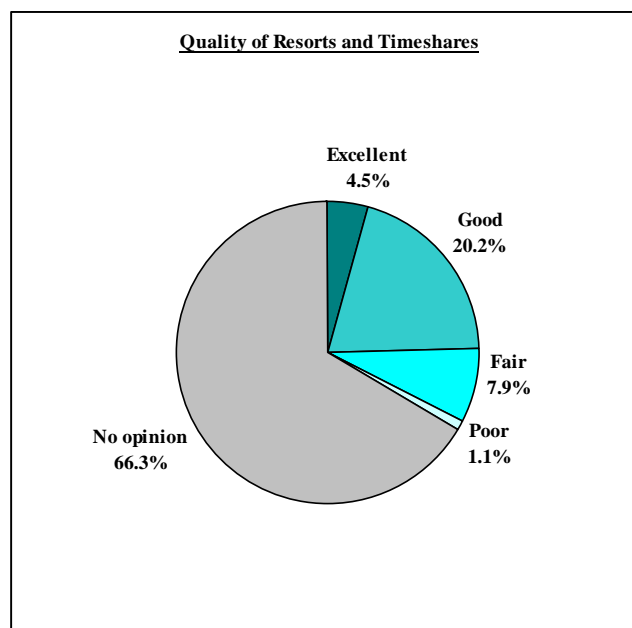
Answer Options	Response Percent	Response Count
Excellent	7.9%	7
Good	31.5%	28
Fair	10.1%	9
Poor	3.4%	3
No opinion	47.2%	42
	Comments	25
	<i>answered question</i>	89
	<i>skipped question</i>	9

Comments
Need more
I have never used them, but have heard from out-of-town visitors that they seem fine; they also appear to be well-maintained. I find it most unfortunate, however, that none of them appears to have any regard for the natural features of the shoreline and the wildlife that does, or in most cases did, use these. This is only one example of a massive disregard for the natural world around us.
Nice facilities but often crowded
Banbury Green and Ponderosa Point are both beautiful, though have only seen them from the water.
As a resident of the south Okanagan I don't camp here.
only one place left to camp or bring an rv
Over crowded
Have not used them, only seen them from Hwy
Have not used them, but they appear to be in good condition, though some look better than others, especially in Penticton.
No expansion needed
Never used one
There may be a need for toilet facility between OK Falls and Kaleden
We need to keep the existing RV Parks!
Better garbage collection/lots of floating debris/bottles/firewood, etc. from campgrounds.
Campaling and Banbury are first rate.

Not enough camping spaces or affordable lodging for average families
low cost, family oriented camping (e.g. tenting) needed
Need more - well maintained campgrounds and RV Parks to draw nature loving visitors
I gather we have enough campgrounds because there were a lot of vacancies this year.
lack of in OK Falls; Kaleden has excellent campgrounds
not much public camping left on shoreline
I don't use them so have no comment
Any further campgrounds/RV Parks should not be utilizing the shoreline
very crowded but lovely locations

4. Resorts and Timeshares

Since most of the respondents are residents, 66.3% did not have an opinion about the quality of resorts and timeshares. Of the 30 people who provided an opinion, most think the quality is excellent or good (4 people or 4.5% and 18 people or 20.2%, respectively).



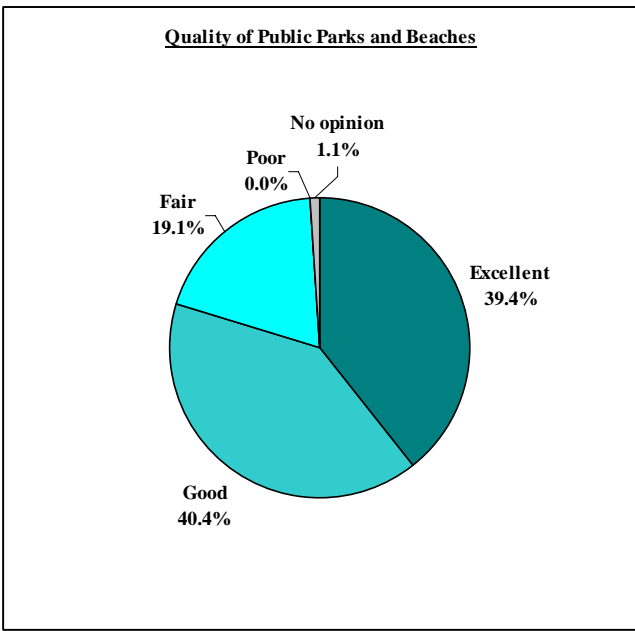
Answer Options	Response Percent	Response Count
Excellent	4.5%	4
Good	20.2%	18
Fair	7.9%	7
Poor	1.1%	1
No opinion	66.3%	59
	Comments	14
	<i>answered question</i>	89
	<i>skipped question</i>	9

Comments
too many
Don't stay in or own one.
Have not used them, but their appear to be a lot of them

Not sure what you mean here but would like the shoreline protected. Do not want it like Trout Creek where the huge houses are along the shoreline and the public does not have access.
No expansion needed
All appear well maintained; appreciate the bike access through Banbury Point Campground.
Never used one
Perhaps a slowdown as these are very "part time" use - need to make sure balanced with full time housing.
Ponderosa Point is a beautiful spot. It works well in Kaleden. It's quiet and doesn't interfere with daily life.
No comment
No legal ones in OK Falls. Hotel space badly needed.
But they have "privatized" areas of the shoreline, for summer use only - such as Banbury, Ponderosa, & Red Roofs/OK Falls, which has reduced public access to beachfront uses.
Resorts are run down - Skaha Lake deserves 1st class resorts
I don't use them so have no comment

5. Public Parks and Beaches

Eighty percent of respondents rated the quality of public parks and beaches as excellent (39.4%) or good (40.4%). 19.1% of respondents rated the quality as fair. Several respondents provided suggestions for improvements (see comments below).

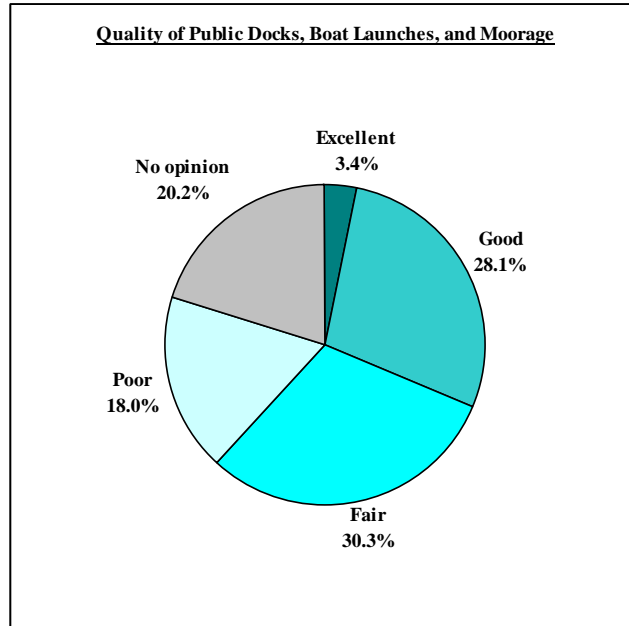


Answer Options	Response Percent	Response Count
Excellent	39.4%	37
Good	40.4%	38
Fair	19.1%	18
Poor	0.0%	0
No opinion	1.1%	1
Comments		29
<i>answered question</i>		94
<i>skipped question</i>		4

Comments
need more public access
My views are mostly from simply seeing these places as I do not go to public parks or beaches. I have the same comment as regards shoreline campgrounds, etc, that there is no regard for the natural world and the parks and beaches are simply imposed upon what was there before, including removing native trees and shrubs that are extremely important for wildlife.
more development of pocket community beach access needed in Kaleden area (fire accesses, road ends, along KVR trail) The loss of Sickie Point community access should be replaced by adjacent KVR access to the Bay at Sickie Point
There needs to be more garbage cans -- beside the parks -- and doggy bags -- Where the shoreline Motel used to be -- be beach area weeds should be cleaned up -- and there should be garbage cans placed there. Also, the Provincial park needs to be cleaned earlier -- It is wonderful that part of the beach is for dogs. The area beside the Provincial beach on the West side should be mowed to keep the weeds down and garbage cans placed there and a doggy bag container walking their dogs
there should be more areas open to the public
Infra structure needs upgrade (washrooms in Ok Falls & Kaleden) Too much emphasis on motor boats. No good launch sites for non motorized vessels (canoes/kayaks) No easy access for handicapped and non-motorized vehicles (bicycles) and parking for transport for canoes/kayaks
The public seems to really have a good time at the beach. I have used the park a few times and I think it is beautiful.
PARKING IS PROBLEMATIC DURING FESTIVALS AND BASEBALL TOURNAMENTS WHILE ALSO INCLUDING PUBLIC USE - NOT ENOUGH FOR EVERYONE.
The main beach at OK Falls is not maintained very well. The washroom is well maintained, as is the park area behind IGA.
There are not nearly enough public beaches along the lake shore, and it seems more and more waterfront land is being lost to private development every year.
Kenyon Park, OK Falls, is well maintained, as is the Skaha Beach in Penticton
Some "private" areas shouldn't be allowed. - ie campgrounds restricting public access to "their" beach. Public access should be allowed to high water mark.
Kaleden public beach is well maintained; great family beach. Kal-Rec does a fantastic job!
We don't want any more development adjacent to these, beaches should be available for all to enjoy.
Maintenance has varied over the years at some parks.
The quality of the existing is generally very good. However, more public foreshore and park areas are needed to be identified and reserved for the future.
Kaleden Park, tennis court, beach is beautifully kept up and a wonderful place to spend time. KalRec does a great job overseeing it.
well maintained by the Parks & Rec commission
Public beach at OK Falls is often a mess, weeds, fallen tree debris, etc.
Would be good to have Christie connected by trail to KVR, also bathrooms at Lions Park.
Kaleden community beach well maintained but not used by Kaleden rural people due to a feeling that it is for Kaleden people only
Kaleden Park is very well used by local residents, Penticton people and a few tourists.
Quality has improved tremendously in the past 4 years. They are now a source of pride for local community.
Well kept even though they seem under utilized by the public.
Christie needs better maintenance. Rec Comm's do a great job of their parks!
But have been "hemmed in" and marginalized by interspersed private developments, especially along OK Falls shoreline.
There are (to my knowledge) only two public beaches in Area D on Skaha Lake - they are okay but not first class. The one in Kaleden is definitely being improved recently.
Could use a wetland conservation area - boardwalk
Well-maintained. Something for everyone. the sign at Kenyon Park is very unwelcoming (the "rules" sign)

6. Public Docks, Boat Launches, and Moorage

Opinions regarding the quality of public docks, boat launches, and moorage are varied. 20.2% of respondents have no opinion. Only 3.4% of respondents rate the quality as excellent and 28.1% rate the quality as good. Most of the respondents (30.3%) rate the quality as fair. 18% think the quality of public docks, boat launches, and moorage is poor. Several comments were made regarding the state of disrepair of existing boat launches in Kaleden and Okanagan Falls.



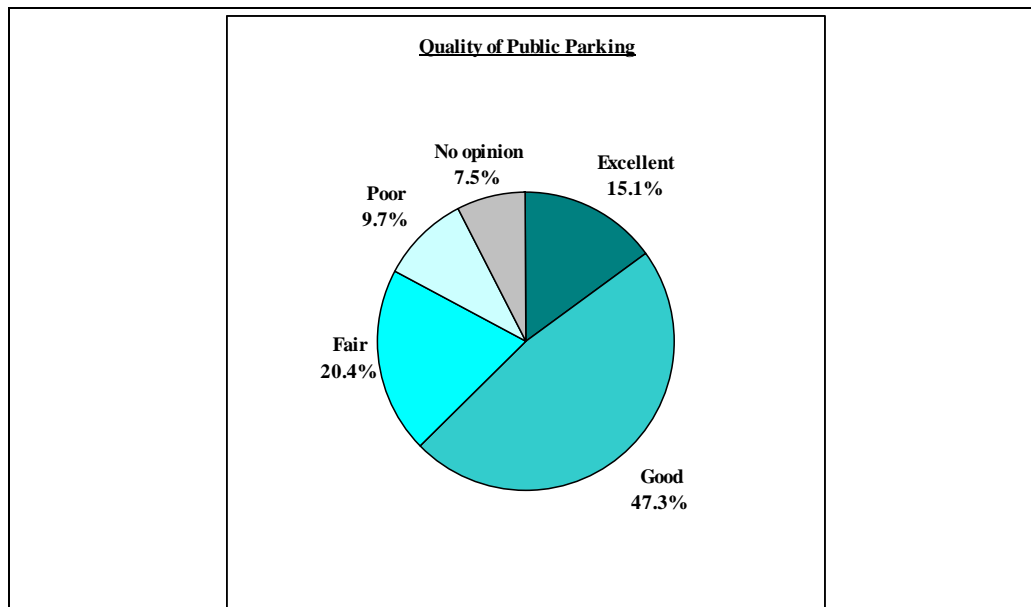
Answer Options	Response Percent	Response Count
Excellent	3.4%	3
Good	28.1%	25
Fair	30.3%	27
Poor	18.0%	16
No opinion	20.2%	18
	Comments	38
	<i>answered question</i>	89
	<i>skipped question</i>	9

Comments

adequate facilities
Really only use the facilities in the north east corner of lake
The fewer of these on the lake, and the more concentrated in a very few places, the better.
Kaleden boat access needs to be replaced as the concrete ramp has failed. You need 4 wheel drive to launch a boat.
The public dock and boat launch in Okanagan Falls is in a state of disrepair. It needs to be replaced.
Limited on Skaha Lake but not necessarily a bad thing.
One is enough -- this is small lake and we don't need to encourage any more power boats or jet skis! The amount of drinking and boating is already out of hand.
There is a good boat launch in Penticton
Need more docks

I can only speak as a Dragonboater and it works well for us. There is now a cement ramp to roll the dolly and dragonboat down to the water.
WHAT PUBLIC DOCK. THE PUBLIC DOCK IN VERNON, BC @ KALAMALKA LAKE IS A GOOD TEMPLATE. BOAT LAUNCHES & MOOREAGE ARE FAIR FOR THE SIZE OF THE LAKE.
An upgrade to the docks and Boat House will be needed soon I think, from what I see.
There must be plenty of these given the power boat traffic on the lake in the summer.
Private unlicensed moorages should be closed and removed. Good public facilities needed.
Each community has its own boat launch, consider public dock in Penticton
Have launched power boats on ramps at marina, Kaleden, and OK Falls
not in favour of a public dock in OK Falls. Would like to see no motorized boats allowed on Skaha Lake.
I'm not in favour of a public dock or boat launch in OK Falls. I would prefer to see Skaha Lake restricted to non-motorized boats.
Never used one
Could use toilet facility along bike trail and East side
Signage at launches for noise and use consideration - e.g. distance fro shore; nesting areas.
It's good that there is one in each community so that not everyone goes to one boat launch.
Kaleden boat launch is currently unusable by most vehicles - not familiar with others.
Very poor boat launch all broken up and no parking. Condo guests use up all the truck and trailer parking. you are not able to turn around by the dock so you must back down from 7th Ave.
I understand OK Falls boat launch is up for repair. Much more wharf space needed to avoid hap hazard moorings. Need designated mooring bay.
Public dock at OK Falls is in need of repair
Fortunately, help is on the way.
would not use
boat launch in Kaleden is a hazard and must be improved, replaced or removed
The Kaleden and OK Falls boat launches are dangerous to the public
the storm destroyed what we had - need proper moorage so people won't moor on buoys in swimming areas
Existing boat launches not well maintained
Need better and more
Need access to free launching in OK Falls.
There are no significant marinas, except for Skaha Beach North Marina & breakwater. There are no such facilities of any quality, except a few boat launch easements, on the southern part of the lake.
My use is canoeing. Beaches are good for canoe usage.
There is a good dispersal of areas to launch around the lake. What about bricks that allow grass to grow through at the unpaved launches?

7. Public Parking
The quality of public parking is considered to be excellent to good by 62.4% of survey respondents (15.1% and 47.3%, respectively). 20.4% of respondents consider parking to be fair and 10% consider it to be poor.



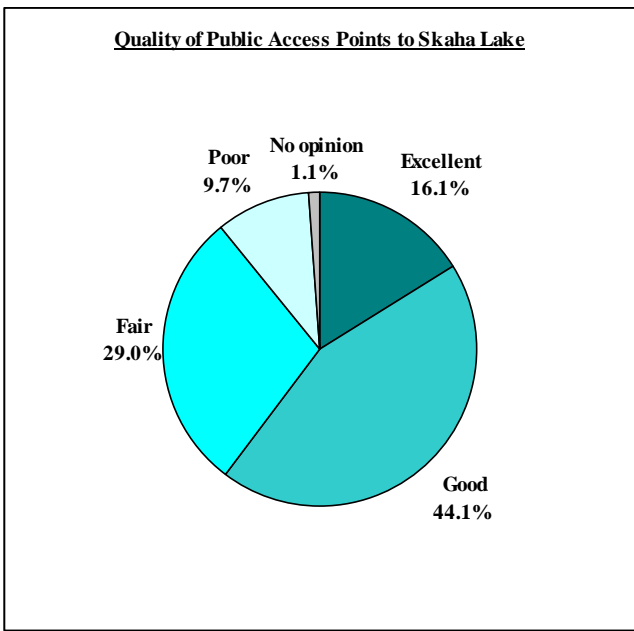
Answer Options	Response Percent	Response Count
Excellent	15.1%	14
Good	47.3%	44
Fair	20.4%	19
Poor	9.7%	9
No opinion	7.5%	7
Comments		24
<i>answered question</i>		93
<i>skipped question</i>		5

Comments
Good in park areas in Penticton and Ok Falls but fair at best elsewhere around the foreshore.
The main Kaleden beach parking area is sufficient in area, but needs grading and eventual surfacing. There needs to be more parking access developed at other access points. Adjacent owners have encroached along Alder. Two road access points have been completely blocked by adjacent owners at the north and south ends.
It is difficult to launch a boat at the OK Falls launch with parking the way it is.
Lots on the Penticton and Okanagan Falls ends of the lake
I don't drive so I don't worry about parking
good at park but parking for use of lake farther down along Hwy is minimal
It does get busy at times, I have always found a space. The Summerland group tries to carpool when possible.
AS MENTIONED ABOVE. DURING FESTIVALS AND COMMUNITY EVENTS, THE BOAT LAUNCH PARKING AREA SHOULD HAVE AN OVERFLOW PARKING AREA (THERE IS SUBSTANTIAL PARKING THERE) - THAT WILL NOT ISSUE FINES.
There are very few good parking spots anywhere on the Lake.
Probably enough
in park areas
Adequate.
Kaleden has good parking at the park for cars and boat trailers.
no comment, do not use
Need for designated over-flow parking. A number of businesses (e.g. Sun and Sand) take advantage of parks parking and road allowances by having too many vehicles for on-site parking!

parking is inadequate at times especially when boaters come with trailers from outside the community
limited but where can you expand? questionable
Need control of residential dominating
Mostly on-street parking, inadequate for summertime boat trailers, motor homes, etc.
Some at Kaleden beach and boat launch but otherwise pretty limited access to KVR
Needs to be more 'park and ride' options
Better signage
Seems adequate now. Future problem? Bike racks?

8. Public Access Points to Skaha Lake

The quality of public access to Skaha Lake is considered to be excellent to good by 60.2% of survey respondents (16.1% and 44.1%, respectively). 29.0% of respondents consider access to be fair and 9.7% consider it to be poor.



Answer Options	Response Percent	Response Count
Excellent	16.1%	15
Good	44.1%	41
Fair	29.0%	27
Poor	9.7%	9
No opinion	1.1%	1
	Comments	33
	<i>answered question</i>	93
	<i>skipped question</i>	5

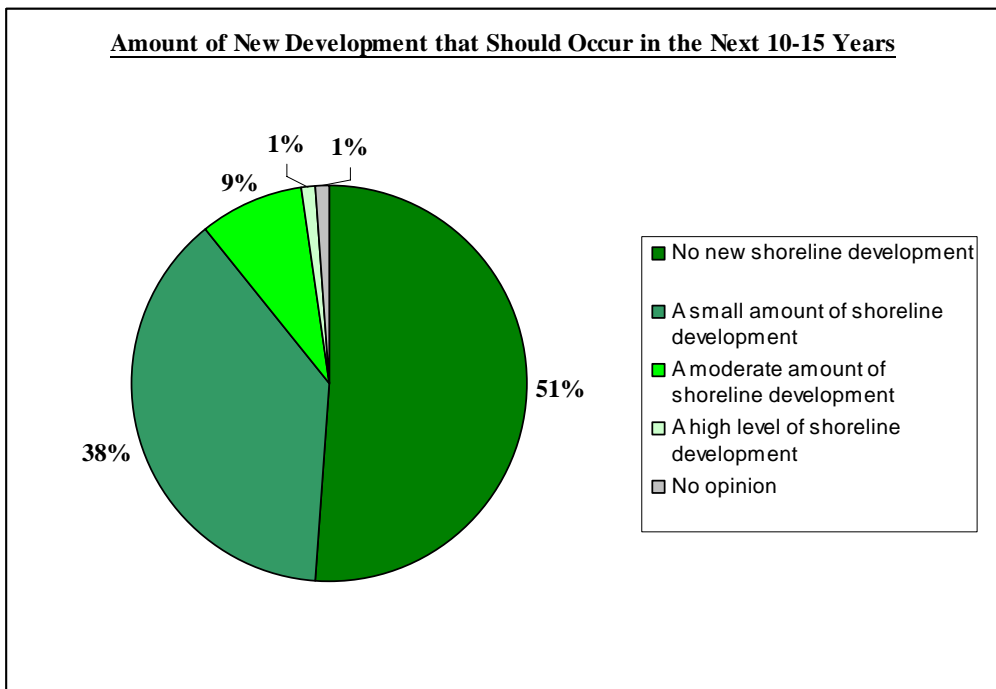
Comments
need more public access
As in 7., good to excellent in some areas, poor in others
As with the boat launch areas, I feel that the number of access points should be kept low and mainly in Ok. Falls, Kaleden, and Skaha Estates. Increasing access points inevitably means destruction of the few remaining riparian thickets and other wildlife habitat left along the lakeshore.

Some areas of eastside rd could be better set up for access ie pullouts
The public beach at Kaleden gets crowded during the summer and will only get moreso with more development in the area. More "pocket park beach access" needs to be developed wherever there is an opportunity. As stated above, there needs to be more opportunities for access developed so it is inviting for the public such as: -north and south road ends at Alder in Kaleden which have been totally encroached upon by adjacent property owners -Ponderosa Point resort has made the KVR trail look like it is private, where they have a covenant with the province to provide the KVR trail access. This makes it uninviting for hikers/bikers to travel south beyond Ponderosa on the trail. More beach access points need to be developed between Ponderosa Point and OK Falls to invite swimming and more use of the trail. -two fire lane access points on Alder are not inviting for public use -a public access to the bay at Sickle Point needs to be developed with perhaps a pier with steps down into the Bay and create a small beach area. The bay in this area is the best public swimming area on Skaha Lake with shallow water and sandy bottom. I would rate this as the highest benefit area for Kaleden for future public use development. I use this area on a daily basis when the wind blows for kiteboarding lessons as the water is shallow and the most "foot friendly" having no rocks and no muddy bottom (perhaps from lack of upstream septic tanks?). -I would like to see a beach area developed on the east side of Skaha Lake by Lakeshore highlands/Heritage Hills for public recreational access. Right now there is only a very poor undeveloped access by a pumphouse. This would be of high value to the growing kiteboarding community and to residents of Lakeshore Highlands/Heritage Hills. -Dog beach (even though this is in Penticton, outside of Area D), needs to be reopened to the public. This has also reduced the available access points to Skaha Lake. This was a great safe access point for kiteboarding students and people practicing kiteboarding on southerly winds. There are now no reasonable access points for people learning to kiteboard on southerly winds.
Would be good if along KVR there was more access to the water -- some areas one can walk down but there is lots of poison ivy.
Good access along Eastside Road and for those willing to walk or bike lots of access from the KVR
There are a lot of areas privatized and access to the water is limited.
The park is used by many groups so I would say the public access must be good.
POOR OR NO SIGNS OR DIRECTION SIGNS. ACCESS TO BOAT LAUNCH & BACK OUT TO ROADWAY IS EXTREMELY HAZARDOUS DURING TOURIST SEASON. DOES SOMEONE HAVE TO DIE TO GET THAT CHANGED?
Some of them don't even have garbage cans (with pick-up). So the garbage is dumped on the ground, no excuse for that but it's what people do.
There needs to be more public access and places the public can come and enjoy the lake shore in its natural state.
in main centres
More public access points are desirable
No more are needed
Not clearly signed
Well marked with parking safe and neat
Keep as much of the lakeshore accessible to the public as possible. West side should all be kept accessible to the public use for walking, hiking, biking (non-motorized)
Many accesses - again these are places where good interpretive signage would be an asset - et. fish program; native species present (at ponds too), weed control, etc.
More are required.
There are 3 great beaches - one in each community which is fabulous.
other than south end not well marked
no signage - no "celebration" of this amenity, low profile
OK Falls, Kaleden, & Penticton all have lge access
Need more
More access off Eastside Road would be nice.
No properly developed boat launch ramps with washrooms, paved parking, etc.

Okay access at Kaleden Beach & in OK Falls but virtually non-existent elsewhere.
Good especially at north end and Kaleden
Just lack of signage
The park at Skaha Estates was brilliant foresight, Kaleden has lots of public access, as does OK Falls

9. How much new development (e.g., residences, marinas, campgrounds, resorts) should occur on the Skaha Lake shoreline in Electoral Area D in the next 10-15 years?

Almost 90% of respondents would like to see no new development (51%) or a small amount of development (38%) in the next 10-15 years.



Answer Options	Response Percent	Response Count
No new shoreline development	51.1%	47
A small amount of shoreline development	38.0%	35
A moderate amount of shoreline development	8.7%	8
A high level of shoreline development	1.1%	1
No opinion	1.1%	1
Comments		32
<i>answered question</i>		92
<i>skipped question</i>		6

Comments
Shoreline should be about "nature" and "public use".
I think the key is to maximize the public access to the shoreline and the beneficial use of these areas through parks and other open spaces, and preventing the alienation of any public lands around the shoreline. At the same time you need to respect private property rights around the lake.
Since over 3/4 of the shoreline is now developed (i.e. destroyed for wildlife habitat), the remaining should be left as it is or, preferably in some areas, restored as habitat.

campgrounds and other family oriented developments would be my preference
We need to preserve all available shoreline for future generations. All development restricts public access.
I would like to see development restricted to a very slow level of growth. The amount of development proposals in the last 5 years has been excessive and I am glad to see developments such as the Skaha Tent and Trailer Resort Hotel project die but I am concerned with the hotel developments proposed in Okanagan Falls across the street from Christie Memorial Prov Park
What is left undeveloped as shoreline and immediately upland should remain the same. Concentrate development and growth in town centres and away from sensitive habitat.
I appreciate the open spaces around the lake.
IT'S A SMALL LAKE.
There needs to be major development to maintain the lake.
We seem to be losing our campgrounds and RV parks to development - perhaps more could be done to ensure that both Penticton and OK Falls have adequate camping spaces.
Natural shorelines have all but disappeared from the Okanagan. It is very important to retain the remainder.
well managed, in areas that are not useful for other uses or in areas already developed
The ecosystems around this shoreline are so important, and this is on of the last areas in the Okanagan where this amount of birds and wildlife exists. Let's preserve it!
Too disruptive to natural ecosystem.
Provided this can be enforced and prevented from escalating by end runs around zoning, etc.
The lake needs to be left as it is now or there won't be any undeveloped areas left
Keep it simple, no high-rises
The lake is small and it's getting congested. Outsiders come in and destroy the place and then leave with ??? money
Development infilling before changing zoning
It is fully developed.
I think we should always be open to ideas but it really depends on what and where. There may be some obvious areas that would be fine for houses or campground, etc. There doesn't seem to be in Kaleden but maybe there is in OK Falls.
We must keep what we have, very limited development
the spit needs to be cleaned up
Development should allow public access. e.g. marina, docks, "shoreline development" should not occur directly on shoreline to maintain public access
No marina on south end, too small an area.
shoreline should be for public use
the shoreline should be maintained in natural state with access for all
Sickle Pt. is an example of the devastation of sensitive riparian by a careless developer.
Development should be restricted to upgrading of existing resorts and houses
New parks and enhancement of existing parks & trails should be allowed but no residential-commercial development.
Keep the shoreline for wildlife/public access.

10. In general, what types of new shoreline development would be acceptable to you? Please check all responses that apply.

Public docks are the most acceptable type of shoreline development for respondents (32.6%). Low density residential, campgrounds and RV Parks, and marina facilities are acceptable to 20.9%, 18.6%, and 17.4% of respondents, respectively.

Please note: several respondents chose more than one option, resulting in a greater than 100% response percent and a count of more than 86.

Answer Options	Response Percent	Response Count
Low density residential (e.g., single family homes)	20.9%	18
High density residential (e.g., condominiums)	7.0%	6
Campgrounds and RV Parks	18.6%	16
Resorts (e.g., cabins, hotels)	9.3%	8
Marina facilities	17.4%	15
Private docks	10.5%	9
Public docks	32.6%	28
Do not agree with future development	45.3%	39
Other (please specify)		15
<i>answered question</i>		86
<i>skipped question</i>		12

Other (please specify)
Private development of residential and resort type developments should be limited to existing private property. Individual docks should be avoided and a focus given to common facilities.
I would like to see very slow residential growth over the next 20 years but confined to certain areas. I do not want to see the lake shore ringed with homes.
This is a small lake, already too much boat traffic and restricted public access to water as well as impacts to shore spawning salmon, water quality/quantity.
IMPROVED PARKING
high density and public docks - depends on location
Not sure - It depends on where; wildlife park
NO RV Parks, Yes to Hotels
No RV Parks
revitalize what is there
Only to ensure boats have a place to moor vs. restaurant, etc.
Develop areas that all can enjoy not just for a small elite group of homeowners!
No development to block access to the lake
One public marina needed for southern half of the lake
Upgrading of existing single family homes and resort properties

11. If you agree with allowing future residential development along the shoreline in Electoral Area D, where do you think it should be focused?

Of the small number of respondents that agree with residential development (only 24 people), most think it should be focused on land that is already developed in Kaleden (11.8%), Okanagan Falls (13.2%), and the east shore of the lake (21.1%). 52 respondents (68.4%) do not agree with future residential development and 22 skipped the question.

Answer Options	Response Percent	Response Count
West shore of the lake in Kaleden	11.8%	9
West shore of the lake between Kaleden and OK Falls	6.6%	5
South shore of the lake in Okanagan Falls	13.2%	10
East shore of the lake within or adjacent to existing developments	21.1%	16
East shore of the lake on undeveloped land	9.2%	7
Do not agree with future residential development	68.4%	52
Other (please specify)		11

<i>answered question</i>	76
<i>skipped question</i>	22

Other (please specify)
Again only on existing private property with suitable building sites which allow development with reasonable setbacks from the lake. Ideally this would be a minimum of 10 m or more from the natural boundary. High density developments should have a minimum setback of 20 m or more.
Prefer to keep future developments within existing developed areas
Allow limited development where it already exists.
If you are going to develop, keep it to already developed areas. Don't take away more lake shore than we have already lost!
OK Falls community needs some uplifting
Develop areas around and close by the lake that have such zoning already before working at more development
There is no room for development
If some area "must" be allowed it should be here.
Not sure - it depends on where
Should not be focused on any one area. limited to available land and low density
Only on existing residential property

12. If you agree with allowing future commercial development (e.g., campgrounds, hotels, resorts, restaurants, etc.) along the shoreline in Electoral Area D, where do you think it should be focused?		
Of the small number of respondents that agree with commercial development (only 25 people), most think it should be focused in Okanagan Falls (24.1%). Some respondents also think that commercial development would be suitable on the west shore of the lake between Kaleden and Okanagan Falls (15.2%) and in Kaleden (10.1%). 54 of the respondents (68.4%) do not agree with commercial development and 19 skipped the question.		
Answer Options	Response Percent	Response Count
West shore of the lake in Kaleden	10.1%	8
West shore of the lake between Kaleden and Okanagan Falls	15.2%	12
South shore of the lake in Okanagan Falls	24.1%	19
East shore of the lake within or adjacent to existing developments	7.6%	6
East shore of the lake on undeveloped land	5.1%	4
Do not agree with future commercial development	68.4%	54
Other (please specify)		7
<i>answered question</i>		79
<i>skipped question</i>		19

Other (please specify)
If you are going to develop, keep it to already developed areas. Don't take away more lake shore than we have already lost!
Develop areas as zoned before working at more development
shoreline is precious and what is left should be unaltered for future generations to enjoy
Campground only
Only upgrading of existing resorts to first class hotels and restaurants
except possible some services in parks - e.g. food kiosk, canoe rental
Utilize existing zoning (1912 example)

13. If you think a marina is needed on Skaha Lake in Electoral Area D, where is the best location?

Of the 32 respondents that think a marina is needed, 28.6% think it should be located on the south shore of the lake in Okanagan Falls and 9.5% think it should be located on the west shore of the lake in Kaleden. 56 of the respondents do not agree with a marina development and 14 skipped the question.

Answer Options	Response Percent	Response Count
West shore of the lake in Kaleden	9.5%	8
South shore of the lake in Okanagan Falls	28.6%	24
Do not agree with a marina development	66.7%	56
Other (please specify)		17
	<i>answered question</i>	84
	<i>skipped question</i>	14

Other (please specify)

If a marina is to be constructed this is the location I would like to see it built

One good marina already exists.

Currently most boats on Skaha Lake are trailered to the lake and I would like to see it stay that way.

too many powered boats already

The last thing we need is more power boats on the lake and more engines spilling pollutants into the water.

A marina would ruin it for everyone wildlife and people included. We moved from Okanagan Lake for the quiet & wildlife in this area. Where else can you see muskrat and beaver in such numbers?

Very opposed!

Power boats should not be allowed on Skaha Lake

Don't like power boats on lake. Should be like Vaseux area.

Skaha is a relatively small lake and needs to be protected as such.

A marina might be a good idea and could possibly help OK Falls financially. It's also on the Hwy. I don't think Kaleden would be a good choice as it's too far off the Hwy.

possibly a couple of larger public docks - OK Falls, Kaleden

this is a relatively small lake, some thought should be given to restrictions on power boats and seadoos

I understand that CPR land which is for sale in Kaleden is being advertised as marina potential

The lagoon beside the bridge at OK Falls

Skaha should be a "no motorized boats" area

I think nonmotorized watercraft should be encouraged, with designated tenting areas along the lake (N. of Kaleden, S. of Kaleden, N. of OK Falls, limited sites)

14. Do you support private marinas associated with multi family development or do you prefer that large moorages are publicly owned?

Many respondents either skipped this question or chose "publicly owned marina" (94.3%) but stated in the "Other" field that they do not support any type of marina on Skaha Lake.

Answer Options	Response Percent	Response Count
Privately owned marinas	7.5%	4
Publicly owned marinas	94.3%	50
Other (please specify)		26
	<i>answered question</i>	53
	<i>skipped question</i>	45

Other (please specify)
I can support either provided they adequately consider the environmental footprint and the impacts on nearby properties.
Do not agree, however, that another such facility should be built on this already over-used (by humans) lakeshore
Let's keep our lakes healthy by keeping motorized aquatic devices out!
Marinas should be public facilities otherwise the public gets gouged and public use therefore becomes restricted.
Neither
We prefer no marinas on the shore line of Skaha Lake
Current marina is poorly located as conflicts with public use - swimming/non-motorized use. If the District were committed to funding and staffing sufficient monitoring of motorized use to prevent drunken and rowdy operators of motor boats (also under age operators) then further marina development might be reasonable
no marina development
I don't support large marinas being developed in the first place.
Do not agree with increasing power boat traffic through such developments
No marinas!
No further marina development
None- except non-powered boating
No marinas. They encourage noisy (loud music/engines) boats
None of the above
There are too many already
See above, emphasis on non-motor or small motor use on lake
the lake is small & marinas, boats do not mix well with size of lake and fish
If you mean just dock, private or public okay; I assume you mean dock, gas, commercial.
no marinas, no more boats, small sail boats only
Private marinas cut off a prime public asset, granting exclusive access to only a privileged few
No marina needed.
Skaha Lake cannot support further boat usage
Not sure

15. What shoreline area(s) do you feel should be preserved for the natural environment and why?	
Answer Options	Response Count
	74
<i>answered question</i>	74
<i>skipped question</i>	24

Response Text
Westshore, and anywhere that there is no development currently.
I think that natural areas should be preserved. Where these are should be based on the quality or potential quality of the habitat which is being preserved and the opportunities which might be available. I don't believe that they should be limited to any specific areas although it would be desirable to set a goal for preservation in terms of an overall percentage (say 15-20%). High density developments, marinas, etc might be charged a development cost for securing these lands in public hands elsewhere on the lake or be required to put aside a percentage of their lakefront in a natural state.
Whatever is left that has not been destroyed by human encroachment. There are still some good riparian thickets and a very few wetlands (excepting, now, Sickle Pt. which is a whole other issue) left which are both habitats critical to a very high percentage of birds, mammals, amphibians, and reptiles in our area and which are in extremely low supply having mostly been destroyed in the past 50+ years. Most of it is along the KVR right-of-way and on the PIB lands and should be viewed as inviolable.

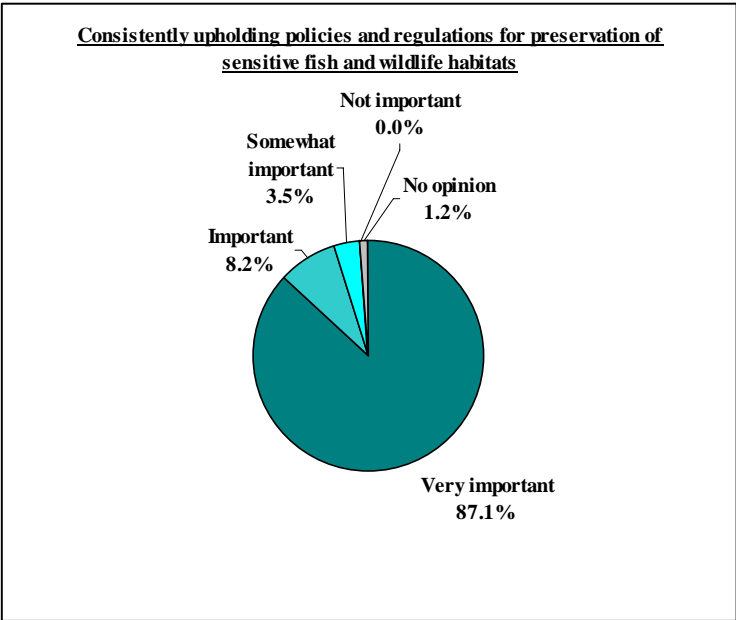
All existing undeveloped shoreline should be preserved for the natural environment, current development is already out of hand and encroaching on sensitive habitat, more development will forever destroy what natural beauty we have remaining.
Almost no wet lands left. Sickle Point should be protected. This is a major fly route for wildlife and they need wetlands.
areas that are currently in natural state (KVR trail on west side) as part of a natural corridor for low impact recreation
All of this. This is for the future of our children, nature and the planet. We need these areas maintained for foot and pedal traffic or non motorized aquatic devices. We are only as healthy as our environment. If it becomes clogged and glutted with man made garbage so do we.
Sickle point should have been preserved as it is the best beach area on Skaha Lake for public enjoyment, plus it is a great bird habitat. This area is likely lost as the local Area D director didn't act appropriately to save it by holding a community referendum. If an opportunity arises that the developer puts it up for sale due to access issues, the community and province should get their act together to buy it. All areas of shoreline should be preserved for future public use and environmental conservation.
PIB lands; already untouched should leave as is. KVR along the west side
All existing areas -- 1) undeveloped portions of east side of lake with shallow nearshore profiles 2) western shore between Kaleden and OK Falls. This approach would help retain undeveloped areas in a natural state, and shallow waters tend to be more biologically productive (and rare) in the large Okanagan lakes.
As much as possible to provide habitat for the birds and wildlife and fish.
The West side of Skaha Lake seems to be the most appropriate shoreline area for the natural environment because there is very little land space for development.
Sickle Point...although it has recently been ruined. The West Side of Skaha Lk along the KVR trail.
Sickle Point is a huge loss in my opinion. I would have liked to have seen this unique area protected. I would like to see all the area along the KVR protected with a buffer of at least 100 m from the railbed especially between Kaleden and Okanagan Falls.
whatever's left
All of them. These are important areas for birds and wildlife.
All non developed areas to preserve for the next generation.
All the shore line.
between Banbury and Penticton
All shoreline that is currently intact and undeveloped (both aquatic and terrestrial components) should remain so. Highest priority to aquatic areas that are known or suitable for shorespawning or rearing habitat; all terrestrial riparian areas are important because of the loss of habitat (85% in the South Ok/Similkameen).
Preservation of natural habitat is important to ensure that wild life has reasonable habitat and to ensure that there are places for quiet enjoyment on the Lake
All shorelines that are currently undeveloped are already being used by wildlife and should remain.
the fresh water wetlands and marshes to help filter the lake and for the birds
East side of the lake, there are small ponds along the road. Kaleden to the airport along the KVR
All the existing waterfront, which is not currently developed, should be preserved
There should be substantial areas for the wildlife etc.
Anything that's not already developed should be preserved, including stopping the development at Sickle Point. There is already too much development on the lake shore. This is a riparian habitat important not just for wildlife, but also for the cleanliness of the water we humans depend on. Once developed, it's lost forever, and they aren't making any more waterfront.
I feel that all the current areas of shoreline that are undeveloped should be preserved
The KVR hike and bike trail, and the available shoreline off Eastside Road.

<p>The greatest joy of living near Skaha Lake is to be in the midst of an abundance of wild birds and wildlife in a clean, fairly healthy ecosystem. Preservation of habitat for wildlife is the key to preserving what we have today. Farsighted preservation decisions today will allow citizens today and future generations to enjoy something which is the right of all-the beauty of a healthy natural environment. Ideally I would like to see all areas of undeveloped shoreline be preserved in a natural state (and this includes Sickle Point which is situated in critical waterfowl habitat). In addition I would like to see private waterfront landowners be encouraged to restore wildlife habitat through planting locally occurring riparian species. The Regional District could assist in this process by education and making plants available and by promoting local native plant nurseries.</p>
<p>West side - KVR Trail - the remainder is already compromised. Sickle Point should be a park. Development there is an abomination!</p>
<p>Sickle Point and all other unalienated shorelines</p>
<p>The areas along the KVR trail between Penticton and OK Falls - to attract birds, keep plants local, provide easy view areas of lakeshore, superb walking, biking trail. Eastside of lake is more developed already so keep development there.</p>
<p>Riparian areas and west shoreline</p>
<p>Sickle Point in Kaleden should have been preserved</p>
<p>All of the existing ones should be preserved - in other words, anything that hasn't already be developed shouldn't be! In the future an area where nature has been considered first will be a rare and precious commodity and good for all concerned.</p>
<p>All that presently exists, which on the east side is not a great deal</p>
<p>Both west and east - for the preservation of what little nature and wildlife is left along those shores</p>
<p>We should keep shoreline free there are enough docks and development as is. Nice to enjoy the nature and free of settlement areas on the lake.</p>
<p>Sickle Point because it has unique character</p>
<p>Any that are not developed already. Developers always promise to enhance shorelines etc. but it's never the same</p>
<p>All. Too much shoreline is already being used privately that is publicly owned.</p>
<p>OK Falls to Kaleden. Birds, beavers, etc.</p>
<p>All wetlands and associated riparian vegetation as there is only 15% at most of the original wetland habitat left in the south Okanagan. Preserve Sickle Point. Preserve/enhance all natural habitat along the west side hiking/biking trail to preserve biodiversity and allow people to experience a remnant of what Okanagan shoreline used to be like. Preserve natural vegetation in all other areas where possible. Shoreline vegetation helps stabilize soils, prevents erosion and helps maintain a healthy balance of natural flora and fauna.</p>
<p>All the shallow water areas, at least along the west side and the south end. All valuable as waterfowl habitat and fish nursery areas.</p>
<p>As much as possible. This is a beautiful lake, more development will ruin it.</p>
<p>We need to do our best to keep as much shoreline as possible in a natural state - for the health of all species including us</p>
<p>These few that are left should be preserved if possible.</p>
<p>88% of the foreshore area is already developed or disturbed. The BC provincial goal is to reserve 10 to 12% of the province for parks and natural areas. Therefore ALL remaining natural areas, which are now only 12% of the total, should be preserved. This is important. We only have the opportunity to make this wise decision once and it is now. If not reserved, it is lost forever to future generations.</p>
<p>As much as possible in areas that are not easily built on, e.g. all along the KVR Trail, and all along East Side road where the road is close to the lake. All housing, resorts, condos owners should be encouraged to move toward more natural plants/etc. by looking at riparian ideas.</p>
<p>west side of Skaha Lake, primarily due to access (KVR Trail) and range of scenery, wildlife habitats</p>
<p>The KVR Trail</p>
<p>All natural areas should at kept for future generations.</p>
<p>KVR Trail - usable for largest variety of population for all ages</p>
<p>All existing with the exceptions mentioned above and allow construction of bike path on Eastside Road - north of Skaha Estates to Penticton</p>
<p>Natural areas anywhere on the lake. Esp west side along KVR. There are very delicate ecosystems that need to be preserved.</p>

The west side along the KVR because it is already preserved through the KVR rideaway
All remaining shoreline should be preserved - we are on an important fly away for migratory birds that need sanctuary
As much as possible - Sickle Point is a shameful disaster
Parks, KVR
All of the available shoreline should be protected.
Preserve as much as possible of the undeveloped land on lakeshore. Once it is developed, it's lost to the majority of people to enjoy for future generations. It also destroys habitat permanently!
There is a lot of use on Skaha at existing level of development so protecting the shoreline is important
All shoreline - any development denies access
Areas where bullrushes and natural marshes exist. Develop areas that have been disturbed by the railway and Hwy. 97
All of it - people who can't afford lakeshore properties need access
West shore between OK Falls and Kaleden. South of Kaleden.
West side of Skaha Lake and all natural foreshore areas from Ponderosa/Pioneer Park area in Kaleden all the way North to Penticton. This includes foreshore lands which Penticton Indian Band controls, North of Kaleden!
RDOS has a statutory obligation under the federal Fisheries Act to preserve all remaining natural areas along the shoreline so that sockeye salmon can be reintroduced to Skaha Lake in accordance with international agreements
The most important areas are from the PIB lands south to Kaleden and on the east shore opposite Kaleden - these area have riparian and wetland habitats important to birdlife and fishes.
Anything that remains intact
All of the remaining, ecosystem is already starting to break down due to human encroachment
All existing. We all know why.

16. How important do you think it is for local government to consistently uphold policies and regulations for preservation of sensitive wildlife and fish habitats adjacent to or within new developments?

Over 95% of respondents think it is very important (87.1%) or important (8.2%) for the local government to uphold regulations for preservation of sensitive wildlife and fish habitats adjacent to or within new developments.

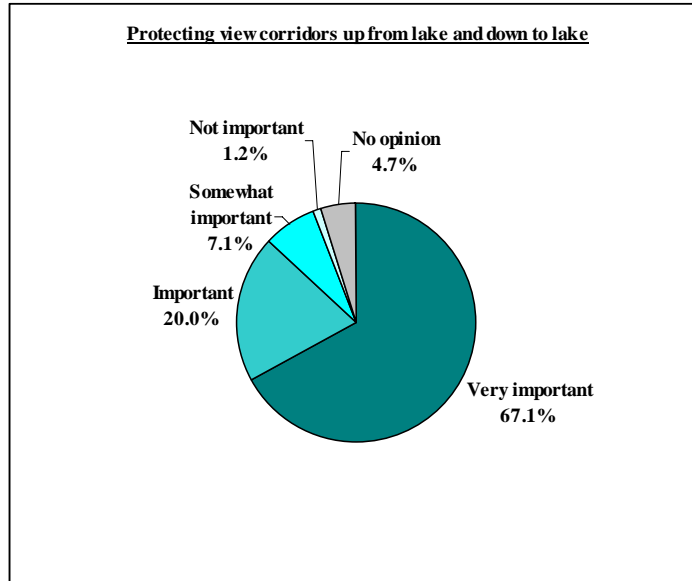


Answer Options	Response Percent	Response Count
Very important	87.1%	74
Important	8.2%	7
Somewhat important	3.5%	3
Not important	0.0%	0
No opinion	1.2%	1
Comments		21
<i>answered question</i>		85
<i>skipped question</i>		13

Comments
This is an amazing question to have in a survey! There should be no question about local, or any, government upholding the policies and regulations of whatever kind that it and others have passed into law! Unfortunately, we who are concerned about wildlife habitat destruction find is that very, very often, the few regulations that exist are not upheld or if so, it's usually a case of too little, too late, as in the case of the Sickle Pt. property.
It should be a major role for local government.
Not just for new development, but also should be in place or enforced for current development
The RDOS does not seem to uphold the Riparian Act. Mel Reeves destroyed Sickle Point without any permits and the RDOS and the Ministry of the Environment has done nothing at all. Mr. Reeves does what he wants because he knows that level of government will challenge him. We have now lost this precious lakefront nesting area.
In fact I believe that policies and regulations should NOT allow new development adjacent to sensitive wildlife and fish habitats. Development causes irreparable harm to habitats in which animals can feed and reproduce undisturbed. Development should only be permitted in non critical areas far removed from sensitive habitats. This includes regulation of incursion of human activities such as driving power boats into waterfowl feeding areas.
RDOS has not enforced high water regs., particularly at Sickle Point, and has allowed road construction there as well, inches from the water
Update/change powers of enforcement
We must preserve what little is left and guard it strictly- for future generations
Keep it simple, keep it natural, keep it safe
One of our most important responsibilities as residents - health of the environment very much connected to health of the community.
I think we have to always look at moving toward preservation. We need to educate and encourage and I don't think we should be unreasonable. In other words, always inc. making things better, more green, etc.
Government needs to make it easier for residents/visitors to know what regs. there are
For some reason it is difficult for governments to act on current laws and regulations, more severe penalty is also needed.
Providing local government actually follows through with their regulations & policies (see Sickle Point for a negative outcome)
Need continued existing policies to be enforced
Get tough!
This is a statutory obligation - not an option to be chosen by public opinion
If policies and regulations aren't consistently enforced soon no one will pay any attention to any policies!
Government should prioritize preservation regardless of how is in power
When our economy is "booming" from lots of fancy development, even then, we won't be able to buy back our wildlife.

17. How important do you feel it is to protect view corridors up from the lake and down to the lake?

Over 85% of respondents think it is very important (67.1%) or important (20%) to protect view corridors.



Answer Options	Response Percent	Response Count
Very important	67.1%	57
Important	20.0%	17
Somewhat important	7.1%	6
Not important	1.2%	1
No opinion	4.7%	4
	Comment	10
	<i>answered question</i>	85
	<i>skipped question</i>	13

Comment
View corridors are not the point; humans already have taken over most of the shoreline and lake for our uses to the detriment of most other inhabitants. Protecting habitat is infinitely more important than whether people can easily see the lake.
The views from along the roads around Skaha Lake are truly stunning. Surely the lakeshore SHOULD belong to everyone. Building all along the lakeshore destroys the values that people come to the Okanagan to enjoy as tourists and residents. Please preserve the views we have today into the future, for all.
Not clear of the meaning.
It is very hard to regulate view
This is something of a new consideration in many areas - it would be good to have some public education and discussion about what it means.
the view is what we offer to tourists
having large (high) development close to the lake is ugly and ruins it for other behind
Viewscapes are important to everyone - homeowners, recreational users -i.e. bikes and passersby
any development should occur away from the lakeshore
It is such a narrow valley already! It is one of the reasons people are attracted to this area. (Maybe we could build big stuff so nobody wants to live here...problems solved!!)

18. Where are the view corridors that should be protected?

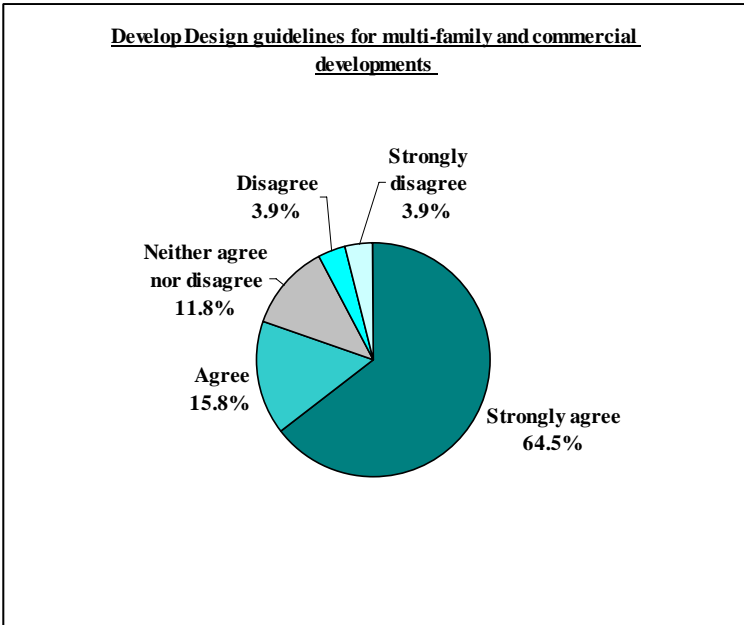
Answer Options	Response Count
	49
<i>answered question</i>	49
<i>skipped question</i>	49

Response Text
through areas that are not well populated and direct wildlife away from residential and commercial development and transportation corridors.
This needs to be site specific. I think one of the keys to doing this is to ensure adequate setbacks from the lake as well as between properties
East West North South!
Okanagan Falls, south end, no high rises should be allowed close to lake
from KVR trail on westside, OK Falls main street and beach, narrow parts of eastside road (areas too narrow to develop)
All
all along Skaha Lake
Ones that exist where everyone can view the beauty of the lake from the highways.
On the East side of Skaha Lake looking towards both the North and the South.
OK Falls to the North Kaleden to East
All undeveloped area's
KVR across to east side road, upland of KVR. East shore up to Derenzy.
The whole Lake should be accessible to all, both visually and physically. Amenities such as dog parks and sight lines should be preserved. There definitely should be height restrictions re building at or near the lake.
Between Kaleden and Penticton up on the benches. Along Hwy 97 across from the airport
The east side of the lake.
All around the lake
All the areas where there are currently residences.
The views from the lakeshore and adjacent areas as well as the views from the water. All of them.
The shoreline area in OK Falls
From the roads that circle Skaha Lake-East to west, west to east, north to south, south to north.
All. No further residential or commercial development should be allowed
North and south ends of lake which are low elevation and could be blocked easily. Hills on east and west less easily obscured
Kaleden to OK Falls
All KVR Trail especially Kaleden to OK Falls
Wherever they exist now.
Preserve existing areas
As many areas as possible. There isn't much left out to enjoy.
To circle the lake with specified walking and bicycle trails
All along east and west shorelines
By this I assume you refer to a large building, none should be allowed. This is a rural area and should remain as such
View corridors which represent the grassland habitat need to be protected for animal corridors as well as view - these corridors are becoming increasingly disrupted
All remaining areas.
Heritage Hills, Finnerty Road area and to the south

KVR Trail and Eastside Road
All around skaha lake including the Old Kaleden Road
OK Falls north toward Penticton virtually every direction around the lake. The views are spectacular!
Where they exist now
all including mountains and hillsides
North-South
All around the lake
Whenever homes are built on shoreline they should not be permitted to build so high that blocks the view of the homes above. The lake shoreline and view should be for ALL to enjoy and appreciate.
N from OK Falls no high rises close to the water homes along the waters edge should not be too high (blocking views for those behind them)
Looking north-east and west
Not knowledgeable on that.
Everywhere
Views from the benchlands should not be blocked or clutter by higher unsightly buildings such as high density condo developments, or greater than 2-story houses along the shoreline!
Along Skaha Beach, north end
All, if no further shoreline development is approved, there shouldn't be an issue
Peach Cliff, bluffs on either side of the lake

19. The Regional District should develop Design Guidelines (which may include exterior design, landscaping, site design, fencing, and lighting guidelines) for multi-family and commercial developments in order to protect the form and character of the Skaha Lake shoreline.

Eighty percent of respondents strongly agree (64.5%) or agree (15.8%) that Design Guidelines should be developed. Several people restated their opposition to development in the comments section.

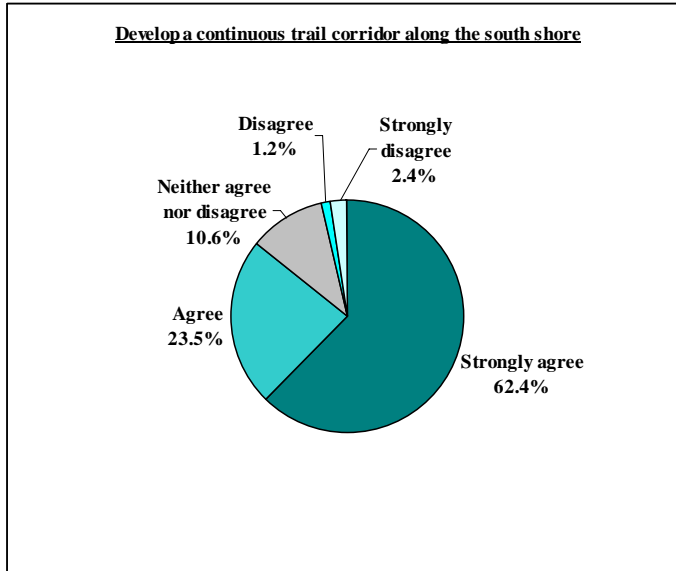


Answer Options	Response Percent	Response Count
Strongly agree	64.5%	49
Agree	15.8%	12
Neither agree nor disagree	11.8%	9
Disagree	3.9%	3
Strongly disagree	3.9%	3
Comments		24
<i>answered question</i>		76
<i>skipped question</i>		22

Comments
Multifamily and commercial developments should be forced to maintain public access to ALL shoreline within their development.
Should be more for a given portions of the lake rather than the lake overall.
Don't develop!
I strongly agree for Okanagan Falls, which is a development mess and will continue to be so until the RDOS takes some control, or this area incorporates as its own municipality which it should do so (excluding Kaleden and Skaha Estates -we don't want anything to do with the Okanagan Falls mess or governance)
I feel strongly that there should be no further development
Lakeside landowners should be encouraged/obliged to conserve natural vegetation e.g. sedges and reed beds to protect habitat, and to plant local native species and retain trees. Large, dense lakeside developments should be prohibited and any new building should adhere strictly to code restrictions determining set backs, height above lake level etc. Private ownership should not be a licence for destruction of natural undeveloped shoreline.
No new development
No new developments!
Although I disagree with anymore dev. along the shorelines, if there is to be some, there needs to be definite guidelines which have been well thought out
No developments along the shoreline (except Skaha Beach in Penticton and possibly Kaleden & OK Falls)
conditions are too all encompassing
Keep it simple
But I don't agree with having these developments on the shoreline. However, if development were to proceed, such guidelines would be essential.
The shorelines should be kept open and undeveloped and free access to the public. Develop only away from the lake shore.
Only if this is unfortunately allowed to happen
Hmmm, maybe suggestions/ideas especially with landscaping and lighting.
We do not agree on large multi-family and commercial developments
Don't want multi-family or commercial development
No new development should cut off or alter the KVR trail. Xeriscaping should be mandatory for all new developments - no new development should have private shoreline.
Kaleden residents strongly agree on least lighting possible
controls needed
Yes, but I would allow development only on an extremely restricted basis
Any development should contain native, low water use gardens
Should be no further development

20. Working towards the development of a continuous trail corridor along the south shore of Skaha Lake should be a high priority for the Regional District.

Over 85% of respondents strongly agree (62.4%) or agree (23.5%) that the RDOS should work towards the development of a continuous trail corridor along the south shore of the lake.



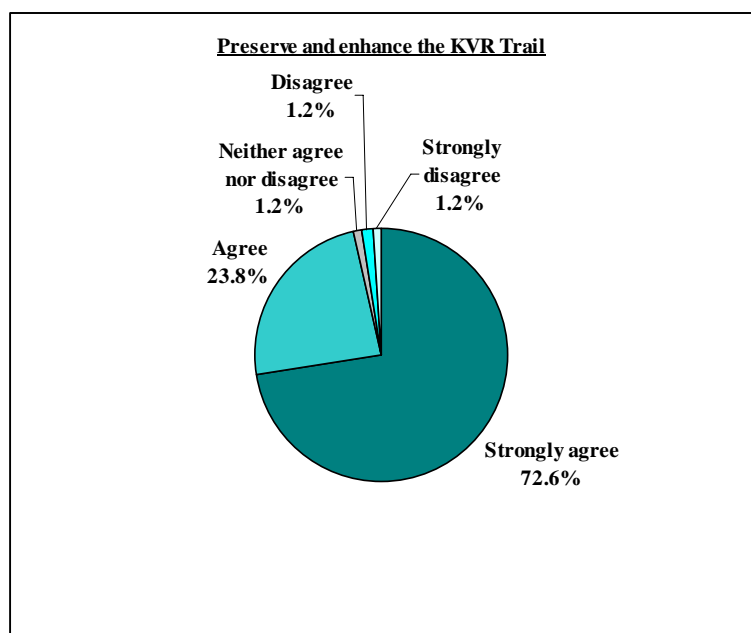
Answer Options	Response Percent	Response Count
Strongly agree	63.9%	53
Agree	24.1%	20
Neither agree nor disagree	10.8%	9
Disagree	1.2%	1
Strongly disagree	2.4%	2
	Comments	19
	<i>answered question</i>	83
	<i>skipped question</i>	15

Comments
I believe public access along the lake is very desirable. The community might look to Penticton or Peachland as good examples of maintaining continuous public access to key lake front. These examples are in contrast to what has occurred in Summerland or parts of Kelowna.
The more people who use the area, the more disturbance there will be of the already small and fragile habitat and the wildlife that use it. Keep it ad hoc.
KVR should be first priority
And then a 'bike lane' on Eastside Road
This is the least disruptive of development and would benefit people who come here for the natural aspects of the area.
Continue KVR to Osoyoos.
The entire south shore should/must be accessible
Your questions contains the answer and states the need
That would be great.
As our population increase, public access to trails becomes more important
The south shore??? do you mean a walking trail through OK Falls? We would like to see safe bike-walking trails for families.

It would be a tourist attraction.
not critical but would enhance OK Falls
cost to whom? depending
Protect the KVR Trail along the west shore of Skaha and make it off-limits to motorized traffic!
If we lose the chance to preserve and enhance the KVR trail (and add to it) future generations will not hold us in high esteem!
If it is hike and cycle only. There needs to be car free zones.
Like to see a circle around Skaha
A concern would be nesting habitat/bird habitat between the trestle on the KVR and Kenyon Park. (Not sure if the proposed four for the trail so can't really comment.)

21. The Kettle Valley Rail Trail on the west side of the lake should be preserved and enhance with trailhead signage, interpretive signage along the trail, and trailhead parking.

Over 95% of respondents strongly agree (72.6%) or agree (23.8%) that the KVR Trail should be preserved and enhanced.



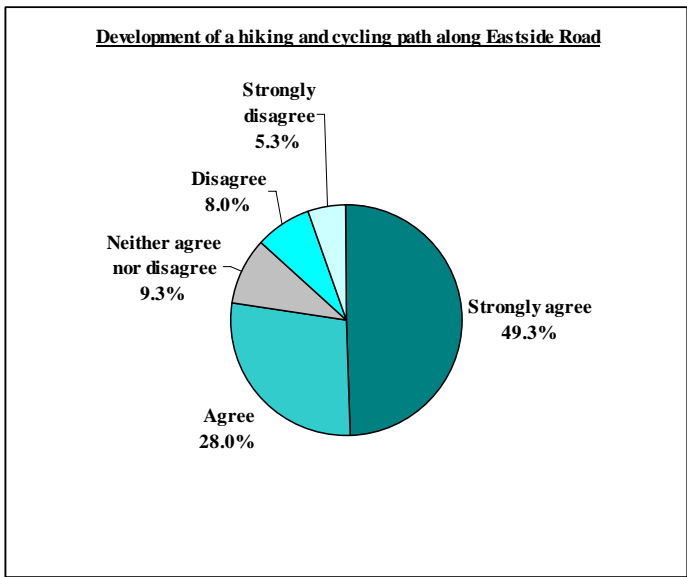
Answer Options	Response Percent	Response Count
Strongly agree	72.6%	61
Agree	23.8%	20
Neither agree nor disagree	1.2%	1
Disagree	1.2%	1
Strongly disagree	1.2%	1
Comments		26
<i>answered question</i>		84
<i>skipped question</i>		14

Comments
... kind of takes away from the rustic, nature.
AND MORE DEVELOPED LAKE ACCESS POINTS
The KVR is unique and provides great access to the whole west side of the lake. I would love to see it fully protected. I do not think signs or parking are necessary at this time.

Trailhead parking as long as it doesn't impact habitat.
And pave it, or at least maintain it a lot better than it currently is.
This remnant of relatively unspoiled lakeshore has important natural values for this area and is heavily used by the residents of OK Falls, Kaleden and Penticton as well as tourists to this area. The trail could use some improvement in the way of weed control which could be done as a volunteer project. Unfortunately some sections are threatened by development eg Sickle Point, and the exquisitely beautiful Aspen grove near Aspen Ave.
Need access (legal) thru campground(s)
This would enhance the ride for tourists in particular
Fantastic potential here!
It is a wonderful area. It would be such a nice place if fix up a bit.
1) Is there an issue to be resolved with the Penticton Band? If so, this should be attended to and a solution worked out. 2) No more alienation of the row to private interests.
This is a great asset, a lot of good work has been done. Well done!
This trail offers incredible educational opportunities.
A continuous unbroken corridor including through the Penticton Indian Band area is vitally important. "Prettying" it up is not as important as preservation and restoration.
Having signage would be important for those who don't know the trail
we also need portable toilets and waste baskets like vedder river walkway
The KVR Trail is potentially a major tourist attraction.
surface should be soft not paved
It is a treasure for all to enjoy
provide good recreation
Other communities all across Canada are rapidly moving ahead with "Rails to Trails" while we dither.
Preservation of habitat is most important but signage helps educate visitors and locals.
Interpretive signage, 1 more garbage can, dog poop pick-up signs!
I am a frequent user of the trail from OK Falls. I find parking at Lions Park has always been adequate regardless of the season. Trailhead - yes, Interpretive - yes, Signs with rules - no.

22. Working towards the development of a hiking and cycling path along Eastside Road should be a high priority for the Regional District.

Over 75% of respondents strongly agree (49.3%) or agree (28.0%) that the RDOS should work towards developing a hiking and cycling path along Eastside Road. Many respondents stated safety concerns with the current situation.



Answer Options	Response Percent	Response Count
Strongly agree	49.3%	37
Agree	28.0%	21
Neither agree nor disagree	9.3%	7
Disagree	8.0%	6
Strongly disagree	5.3%	4
	Comments	44
	<i>answered question</i>	75
	<i>skipped question</i>	23

Comments
I feel this is very important not only from a recreational perspective but also from a user safety perspective. This will likely involve encroachment into the foreshore which will need to be mitigated. The current situation is not acceptable in the longer term.
This would be an excellent place for such a facility, where habitat will not be wrecked and wildlife disturbed. It would also be a great deal safer than it is at present.
this could be done as part of the road i.e. bike lanes as Ironman and many riders use the road
MoT should take this lead.
Apparently, Ministry of Transportation has funding -- Maybe Ministry of Environment would partner as they are promoting a reduction of PM 2.5 in the BC Air Action Plan. Also, maybe Iron Man would sponsor money as many of their competitors use East Side Rd for training -- and road traffic has increased over the past two years
Eastside road has high cycling traffic which should warrant a cycling path along side of the road to prevent serious accidents with motorists which are bound to happen as many motorists pass cyclists even though there is oncoming traffic.
I would love to see the road shoulder repaired to allow cyclist and runners a greater measure of safety. I do not see the need for an additional trail system if the road shoulder was rebuilt.
There just isn't enough room unless we impact aquatic habitat (infill the lake) or destroy habitat on the east side of the road (wetlands/grasslands/rugged terrain).
Eastside Road is a narrow road, but is so well used by cyclists and runners that the need for a special path should be a real priority. Ironman brings in a lot of economic benefits to our areas and giving people a place to practice is vital, as well as having a safe path for locals to enjoy.
This is a fantastic idea. The views from Eastside Road are stunning and it would be wonderful to enjoy the lakeside on foot or by bicycle from a safe cycling path with some pullouts where one could have the choice to do part of the trail.
West side should be priority
This would create a great circle route around the lake
If energy and money is put into the KVR Trail this is not necessary
We have the KVR trail, so eastside trail is unnecessary
Would be nice to have also, but can we afford it?
It is already in use by cyclist and sometimes very dangerous for them.
Response not valid as cannot determine whether or not it was affected by the mistake in answer ordering.
Efforts for preservation and/or development should be put into the KVR trail.
Response not valid as cannot determine whether or not it was affected by the mistake in answer ordering.
Response not valid as cannot determine whether or not it was affected by the mistake in answer ordering.
This would likely be a much longer-term project.
Where? There is already too much private housing.
This would need to be done very courteously - don't need to turn eastside into a speedway - need to have it become another scenic road designation
This is a difficult and costly project to do, but is important in the long term. So, start and do the long range planning now.

That would be great too!
Eastside Road is narrow and windy - currently quite dangerous for cyclists and pedestrians.
We would like to see Eastside Rd. kept as recreational scenic. We would like speed limits kept low.
too costly the KVR trail is adjacent to Eastside Road
It would be a major tourist attraction.
I don't think this is practical given the nature of the terrain. Try to improve cycling lane on road.
Response not valid as cannot determine whether or not it was affected by the mistake in answer ordering.
This is where safety is a huge issue for both recreational users and motorists.
I would rather efforts were focused on preserving existing trails and environment
a great opportunity for improving health, well-being of residents and wonderful tourist attraction for young people & "baby boomers"
Please for safety sake, for an incredible ride, for promoting cycling/walking
particularly with the Iron Man event the East side is getting dangerous
Response not valid as cannot determine whether or not it was affected by the mistake in answer ordering.
Response not valid as cannot determine whether or not it was affected by the mistake in answer ordering.
Response not valid as cannot determine whether or not it was affected by the mistake in answer ordering.
Cycling path in particular as the road is extremely dangerous as it is now for motorists and cyclists alike - unsafe!
Too costly - only need some improvement/maintenance for Ironman
This is necessary if the Penticton Iron Man event is to continue
This will not be as easy as on the west side but that should not stop the effort from being made.
A separate cycle route set apart from vehicular traffic would increase cycling popularity and decrease risk.

23. Do you have any other comments for us to consider in preparing this Study?	
Answer Options	Response Count
	44
<i>answered question</i>	44
<i>skipped question</i>	54

Response Text
One frequently hears the comment that human use and wildlife protection must be 'balanced'. Since at present, it's about 98% for human use and the tiny rest for wildlife, I'd be delighted to have a balance more like at the least 50-50! The small amount of Skaha Lake shoreline left in a semi-wild or wild state should be protected as such. As well, I am disappointed and mystified that the excellent book "On the Living Edge; your Handbook for Waterfront Living" by Sarah Kipp and Clive Calloway is not mentioned in the Survey or its list of references. I understand that copies of this were given to RDOS staff working on the survey well before the report came out; its exclusion does not give me much faith that habitat and wildlife protection is of any great concern to those who conducted the survey and wrote the report, nor, perhaps to RDOS in general. I hope I'm wrong.
I truly believe that the current and if must be, further shoreline development attain a natural buffer of grasses, trees, reeds, rocks etc., between structural development and into water. Examples of undesirable waterfront development being concrete retaining walls, extended docks, boat houses, storage sheds, structural buildings of any kind. The landscape must remain natural to encourage habitat for waterfowl, spawning fish and the like. In the summer one looks out onto Skaha lake at personal floating rafts, sometimes 3 boats anchored at each home and other odd sorts of visual lake clutter. In the fall all this human clutter disappears and the waterfowl, beaver etc. return. Each property should have restrictions on the # of floating objects allowed in front of their homes. My opinion is one float per home, not 4.
Some of the questions combined responses that were not what I would have intended eg combining cabins and condo-hotels in one category. I would agree with cabins in an area but not a large resort. Needs to be more specific.

Let's keep this area open and beautiful for everyone - those living in nature included. We only have one chance to do this. Once it is developed it is ruined.
Please take into account that kiteboarding is a sport that is growing in leaps and bounds on Skaha Lake. There are now at least 50 local kites and 7 locally certified instructors (International Kiteboarding Organization) and this will grow exponentially in the future. I am seeing more and more kiting tourists each year in the area. Fairly large access and exit points are needed by students practicing kiting, as they will enter at one spot and then exit at some point downwind. Access points need to be secured on both sides of the lake. Please contact me if you want to discuss further.
Will this study consider the effect on kokanee with the added sockeye rearing sharing the same food supply?
Restrict development to single family homes within established residential areas. I am not in favor of large resort developments or marinas on this relatively small lake.
the lake is on the verge of being loved to death. there are way too many large, fast boats out there already. there are far too many jet skis. I'm not a bird-watching type, but you can see the lake change as soon as summer is over - more birds, more fish, more quiet! It happens quickly, but I'm afraid if we keep allowing more and more noise and boats and people the lake may get to a point where it doesn't recover.
Thank you for asking the public and users their opinion - Skaha is such a beautiful lake to paddle in - and we are on the brink of too many boats/docks/homes/developments already. Please consider this resource carefully - it is more than a view - it is habitat, regulates our mild climate, is a water resource, a playground for all of us and for future generations.
The shoreline of a lake can never be reclaimed once it has been developed so we need to be pro active when looking into development to ensure the preservation of our environment.
I really like open spaces around lakes and I hope that the Regional District will work towards keeping open spaces around Skaha. I realize there is lots of pressure to develop but we are losing places for our fish and water birds. Also in agreement that trails should be developed. It is becoming harder to find places to hike as areas around Penticton are becoming inaccessible.
If rules and regulations are put in place be sure that they are enforceable
I would like to be informed of the results of the study
Critical to stop further lakeshore commercial or residential development. Should work with the Land Conservancy and Heritage Trust orgs. to acquire and preserve what is left.
It has to be ascertained if there is enough water supply to handle future development
Please, no marinas! We have seen crazy development that has happened around Kelowna and the central Okanagan. Please do not allow that here.
Do not let Skaha Lake become developed like Kelowna has allowed development along its shoreline. Ensure the general public has plenty of access to the lake and not only the lake front property owners. Do not permit large commercial development on the lakeshore.
I would like to see a continuous trail from Penticton - to connect with the already paved portion where highway 97 crosses the Okanagan River. I hiked from OK Falls to that point, and other than building a bridge at the south end of Vaseaux Lake, there exists the former rail embankment in excellent condition. (There is also a small bridge further down, crossing the Okanagan River again.) Absolutely tremendous potential here!
Just remember that we don't have much free waterfront left for the public to enjoy. It should not be given to a few and taken away from the majority of people.
Projects to eliminate septic fields
We live directly above the KVR Trail (west side of the lake and just north of Okanagan Falls). This a very well loved and much used trail by many people including disabled plus lots of dogs. It is fabulous to be able to watch this (all year long) and to especially see dogs be able to run free. I feel Skaha Lake is still a semi unspoiled gem in the fast developing and filling up Okanagan. Lets keep it that way which means no more development - esp. on the shoreline. Encourage people to access the lake by the existing places - including boats. They are getting louder (esp increase music) all the time and this impacts everyone.
Public property below the high water mark should be clearly mapped and designated on the ground
Any Belecate bird nesting areas and wildlife access to the lake is important. Could be marked with some information and seasonal caution and information. We have encouraged the fisheries use and development. Of special facilities and protection of valuable water sources - Eg. Bourassa Spring
We now have a rare opportunity to develop a beautiful trail along the west side of the lake. Please keep it!! To enjoy the serene setting it would be nice if motorized vehicles would not be allowed.

<p>The road (Eastside) is in a state of disrepair. Currently the road is too narrow. It is only a matter of time before more cyclists are killed. Many children and seniors walk down the road, they too are at risk. I personally try and avoid jogging/cycling on Eastside Road, it is extremely stressful. The main traffic corridor is and should remain the hwy. Eastside Road has the potential to be a huge asset for the area, why not have proper pullouts with benches etc., a cycle/walking path, etc. The edge of Eastside Road need to be cleaned up and made more "eco-friendly" before individuals are hounded for minor infractions. "The pot shouldn't call the kettle black". It is currently a disaster.</p>
<p>We have an incredibly rich asset in Skaha Lake - we need to show we value it through our actions - signage that speaks to its history/its residents (human and other) and enforcement of important environmental and noise bylaws. The eastside road cuts many species off from their water supply - we need better signage and enforced speed to inform people of this and to note traditional crossing areas that have become "high kill" areas - designating eastside road as the "scenic route" it is could be helpful.</p>
<p>I know it may be considered "extreme and unreasonable" by some to say "No new development" along what is left of the remaining natural foreshore areas. However, my response is summed up in the comments on Question #15. There is already only a small portion of the total that is still in a natural state. Therefore, all of this remaining small portion should be preserved while we still can.</p>
<p>Ecotours of different places around the lake where there are examples of vegetation, etc. that other home owners could learn from. Rebates/financial incentives for replacing vegetation/bullrushes/local vegetation etc. Encouragement rather than policing unless someone is really abusing the land.</p>
<p>We would like to see this hiking, cycling path developed with areas for sitting or picnicking - but without turning Eastside Road into a highway. We do not want the road straightened. Maintain the beauty. Leave the commuters and trucks to Hwy 97.</p>
<p>Comments difficult to read.</p>
<p>The lake needs to be family and age accessible</p>
<p>It would be useful to have a mechanism for providing additional information & corrections to the project team (having the draft docs online is excellent!) Advertising for the open house was not widely seen (hardly anyone reads the OK Falls Review these days) For future open houses posters in key community areas might help.</p>
<p>Housing should be on non agriculture land. Shoreline development should be restricted and have strict guidelines. Tourism should be encouraged.</p>
<p>Thank you for your commitment to the study.</p>
<p>I'm impressed that the study gives high priority to environmental impact. Good job!</p>
<p>There are current policies in place on all aspects of this survey which if enforced would address multiple aspects</p>
<p>Thank you for considering public input, but I feel the government officials and their biologists etc. have a better grasp on the issues than most of the public. Perhaps a blend of both is the best.</p>
<p>Consider the south end of the lake (OK Falls) for non-motorized watercraft promotion of sailing, kayaking, etc.</p>
<p>Stop Mel Reeves further development at Sickle Point. He does not have legal access and none should be granted!</p>
<p>Skaha Lake shoreline is an excellent site for a much needed natural shoreline park of substantial size. This could be new or an expansions of an existing park (perhaps Sickle Point?). Such a park should be a major focus of RDOS and project team activity.</p>
<p>The mess being made at Sickle Point, apparently without any permits, show what is going to happen to the lake. If the RDOS cannot (or will not) control this one developer, is there any point to this whole study?</p>
<p>I strongly disagree with any development of the foreshore. Restoration and preservation of wildlife corridors and shoreline should be an enforced priority of local, provincial, and federal governments.</p>
<p>Purchase of Sickle Point to preserve that important migratory resting spot.</p>
<p>Put tough policies into effect so that Electoral Area D 1) delivers a quality product to its visitors and residents, 2) preserves our flora and fauna. Together these will ultimately provide a sustainable economy. The environment and the economy are compatible. Thank you everyone for your dedication to this. Coming from Calgary I realize how important it is to not let bad design and planning happen. Calgary forgot that "land must not be measured just in acres and dollars, but in love and respect" poet and farmer Wendell Berry!*very much against the expansion of Eastside Road. I do support bike lanes. We need to discourage speeders by better enforcement of the speed limit. Photo radar - perfect solution - cost effective and effective.</p>

Appendix D – Water Licence Information



APPENDIX D
WATER LICENCE INFORMATION FOR SKAHA LAKE

Licence No	WR Map/ Point Code	Purpose	Quantity	Units	Licensee
C028542	82.E.033.3.3 T (PD55081)	Waterworks Local Auth	10950000	GY	SKAHA ESTATES IMPROVEMENT DISTRICT PO BOX 455 OKANAGAN FALLS BC V0H1R0
C028636	82.E.033.3.1 D (PD55066)	Domestic	500	GD	KOSTIUK DENNIS M & JOAN T 24 REFLECTION COVE CALGARY AB T3Z2Z6
C028637	82.E.033.3.1 Q (PD55052)	Domestic	500	GD	RATHJEN PHILIP S & JOAN L RR1 COMP 10 SITE 47 OKANAGAN FALLS BC V0H1R0
C028713	1552A-1 D5 (PD54786)	Domestic	500	GD	ELLIOTT COLIN FRANK RR 1 SITE 49 COMP 20 OKANAGAN FALLS BC V0H1R0
C029395	82.E.033.3.1 R (PD55050)	Domestic	500	GD	MCCLELLAND WILLIAM & KAREN RR 2 FLYING SHOT LAKE GRANDE PRAIRIE AB T8V2Z9
C032577	82.E.043.1.3 Q (PD55168)	Domestic	500	GD	FAUVEL OWEN T & RUTH 4735 LAKESIDE RD PENTICTON BC V2A8W6
C032706	82.E.033.3.3 T (PD55081)	Waterworks Local Auth	13870000	GY	SKAHA ESTATES IMPROVEMENT DISTRICT PO BOX 455 OKANAGAN FALLS BC V0H1R0
C036958	1552A-1 A5 (PD54765)	Domestic	1000	GD	HALL MARINA BOX 104 OKANAGAN FALLS BC V0H1R0
C036963	1552A-1 A5 (PD54765)	Domestic	500	GD	LISTER WILFRED A & ELIZABETH A SITE 51 COMP 9 RR 1 OKANAGAN FALLS BC V0H1R0
C036965	1552A-1 A5 (PD54765)	Domestic	500	GD	COVERT GEORGE E PO BOX 249 OLIVER BC V0H1T0
C039065	82.E.033.3.1 F (PD55062)	Domestic	1500	GD	DOIRON ELIZABETH J 101 1695 AUGUSTA AVE BURNABY BC V5A4S8
C039849	82.E.033.3.1 D (PD55066)	Domestic	500	GD	EADIE JOHN A K & CARMEN N RR 1 COMP 10 SITE 46 OKANAGAN FALLS BC V0H1R0
C039894	82.E.033.3.1 T (PD55048)	Enterprise	2000	GD	SUNNY BAY RESORT LTD SITE 47 COMP 20 RR1 OKANAGAN FALLS BC V0H1R0
C041804	82.E.043.1.3 U (PD55161)	Domestic	500	GD	TATEBE RODNEY Y 150 DERENZY PL PENTICTON BC V2A8W7
C041969	82.E.043.1.3 CC (PD55154)	Irrigation	15	AF	YOUNG LEIGHTON F 10046 WICKERSHAM ST HOUSTON TX 77042 USA
C045323	82.E.043.1.1 A (PD55146)	Irrigation	8.16	AF	OKANAGAN RADIO LIMITED 33 CARMi AVE PENTICTON B C V2A3G4

Licence No	WR Map/ Point Code	Purpose	Quantity	Units	Licensee
C045325	82.E.043.1.1 A (PD55146)	Irrigation	39.84	AF	TO BE DETERMINED C/O WATER REVENUE UNIT PO BOX 9340 STN PROV GOVT VICTORIA BC V8W9M1
C045922	82.E.033.3.1 CC (PD55030)	Domestic	500	GD	CLEARVIEW HOLDINGS LTD 4019 HASTINGS ST BURNABY BC V5C2J1
C046839	82.E.043.1.1 B (PD55144)	Domestic	1000	GD	L'HOIR CHARLES J & DOREEN M 4915 EASTSIDE RD PENTICTON BC V2A6J7
"	"	Irrigation	12	AF	L'HOIR CHARLES J & DOREEN M 4915 EASTSIDE RD PENTICTON BC V2A6J7
C047163	82.E.033.3.3 A (PD55109)	Waterworks Local Auth	9307500	GY	LAKESHORE WATERWORKS LTD C/O WHITE KENNEDY CA ATTN IAN KENNEDY 201 99 PADMORE AVE E PENTICTON BC V2A7H7
C047246	82.E.033.3.1 S (PD55049)	Domestic	500	GD	THURSTON ROBERT G & STELLA E RR 1 COMP 15 SITE 47 OKANAGAN FALLS BC V0H1R0
C048923	82.E.033.3.3 D (PD55090)	Irrigation	15.75	AF	BLASTED CHURCH VINEYARD INC 378 PARSONS RD RR 1 SITE 32 COMP 67 OKANAGAN FALLS BC V0H1R0
C052658	82.E.033.3.1 U (PD55047)	Irrigation	21.5	AF	KENYON K A RR 1 SITE 46 COMP 12 OKANAGAN FALLS BC V0H1R0
C055209	82.E.033.3.3 M (PD55086)	Irrigation	60	AF	SLOAN DAVID M & ARLENE G RR 1 COMP 12 SITE 30 OKANAGAN FALLS BC V0H1R0
C057148	82.E.033.3.3 B (PD55099)	Irrigation	71.82	AF	ERDMAN SANDRA A SITE 32 COMP 10 RR 1 OKANAGAN FALLS BC V0H1R0
C057149	82.E.033.3.3 B (PD55099)	Irrigation	44.61	AF	MELENKA EDWARD J & DENISE E 300 PARSONS ROAD RR 1 SITE 32 COMP 63 OKANAGAN FALLS BC V0H1R0
C057150	82.E.043.1.3 N (PD55172)	Irrigation	114.35	AF	DUNLOP HUGH 4650 LAKESIDE RD PENTICTON BC V2A8W5
C060410	82.E.033.1.3 DD (PD54272)	Irrigation	170	AF	SCHWERDTFEGER HORST E & ULRIKE H PO BOX 111 KALEDEN BC V0H1K0
C060448	82.E.033.3.3 A (PD55109)	Waterworks Local Auth	1642500	GY	LAKESHORE WATERWORKS LTD C/O WHITE KENNEDY CA ATTN IAN KENNEDY 201 99 PADMORE AVE E PENTICTON BC V2A7H7
C060500	82.E.043.1.3 BB (PD55152)	Irrigation	165	AF	0694013 BC LTD 980 SHERWOOD LANE W VANCOUVER BC V7V3X9
C062850	82.E.033.3.1 DD (PD55024)	Irrigation	75	AF	SCHWERDTFEGER HORST E & ULRIKE H PO BOX 111 KALEDEN BC V0H1K0
C064945	82.E.033.3.3 E (PD55096)	Irrigation	5	AF	SIGURDSON FRANKLIN T & MARGARET S RR 1 SITE 32 COMP 84 OKANAGAN FALLS BC V0H1R0
C064946	82.E.033.3.3 E	Irrigation	23.5	AF	MCMANAMAN TERRANCE J

Licence No	WR Map/ Point Code	Purpose	Quantity	Units	Licensee
	(PD55096)				199 CRANWELL CLOSE SE CALGARY AB T3M1A9
C064947	82.E.033.3.3 E (PD55096)	Irrigation	19.6	AF	MCMANAMAN TERRANCE J 199 CRANWELL CLOSE SE CALGARY AB T3M1A9
C064948	82.E.033.3.3 E (PD55096)	Irrigation	9.5	AF	JOST HELMUT K & MARGARET R SITE 32 COMP 20 RR 1 OKANAGAN FALLS BC V0H1R0
C064949	82.E.033.3.3 E (PD55096)	Irrigation	7.7	AF	JOST HELMUT K & MARGARET R SITE 32 COMP 20 RR 1 OKANAGAN FALLS BC V0H1R0
C066268	82.E.043.1.3 BB (PD55152)	Domestic	500	GD	0694013 BC LTD 980 SHERWOOD LANE W VANCOUVER BC V7V3X9
C070218	82.E.033.3.3 HH (PD55084)	Domestic	500	GD	WEYMARK MARJORIE L 2084 WESTDEAN CRES WEST VANCOUVER BC V7V3Z9
C070454	82.E.033.3.1 GG (PD61366)	Domestic	500	GD	SIME MICHAEL O & CAROLE A SITE 46 COMP 20 PHILPOTT RD OKANAGAN BC V0H1R0
C070469	82.E.033.3.3 B (PD55099)	Domestic	500	GD	ERDMAN SANDRA A SITE 32 COMP 10 RR 1 OKANAGAN FALLS BC V0H1R0
C070728	82.E.033.3.1 H (PD55060)	Irrigation	1.65	AF	MCGIVERIN HAROLD M & BRENDA L RR 1 COMP 18 SITE 46 OKANAGAN FALLS BC V0H1R0
C070729	82.E.033.3.1 H (PD55060)	Irrigation	.85	AF	CHALMERS GERALD B & PATRICIA K 483 PHILPOT RD OKANAGAN FALLS BC V0H1R0
C072102	82.E.033.3.1 K (PD55068)	Irrigation	1.77	AF	CLARKE MARJORIE J 5962 TRAFALGAR ST VANCOUVER BC V6N1C4
C072103	82.E.033.3.1 S (PD55049)	Irrigation	.48	AF	THURSTON ROBERT G & STELLA E RR 1 COMP 15 SITE 47 OKANAGAN FALLS BC V0H1R0
C072105	82.E.033.3.1 K (PD55068)	Irrigation	.66	AF	SOMERVILLE ROBERT C & TERESA M RR 1 COMP 14 SITE 47 OKANAGAN FALLS BC V0H1R0
C105244	82.E.033.3.1 HH (PD66379)	Domestic	500	GD	SCHWERDTFEGER HORST E & ULRIKE H PO BOX 111 KALEDEN BC V0H1K0
C105487	82.E.033.3.3 A (PD55109)	Waterworks Local Auth	8395000	GY	LAKESHORE WATERWORKS LTD C/O WHITE KENNEDY CA ATTN IAN KENNEDY 201 99 PADMORE AVE E PENTICTON BC V2A7H7
C106073	1552A-1 E6 (PD67271)	Domestic	500	GD	SWITZER DAVID & DAPHNE 4019 HASTINGS ST BURNABY BC V5C2J1
C107476	82.E.033.3.3 A (PD55109)	Waterworks Local Auth	8030000	GY	LAKESHORE WATERWORKS LTD C/O WHITE KENNEDY CA ATTN IAN KENNEDY 201 99 PADMORE AVE E PENTICTON BC V2A7H7
C108524	1552A-1 F6 (PD69856)	Domestic	500	GD	HARRINGTON LAURIE D RR1 SITE 49 COMP 21 OKANAGAN FALLS BC V0H1R0

Licence No	WR Map/ Point Code	Purpose	Quantity	Units	Licensee
C110102	82.E.033.3.1 JJ (PD71306)	Domestic	500	GD	JOHN CAROL E RR 1 SITE 47 COMP 18 OKANAGAN FALLS BC V0H1R0
C110826	82.E.043.1.3 Y (PD55156)	Irrigation	28.65	AF	BAZEN WAYNE E & GAIL D PO BOX 24039 PENTICTON BC V2A8L9
C110827	82.E.042.4.2 A (PD55615)	Waterworks (Other)	5000	GD	LIONELLO DANIELLE P ET AL RR 2 SITE 40 COMP 4 PENTICTON BC V2A6J7
C112165	82.E.042.2.4 C (PD65704)	Domestic	500	GD	LIONELLO DANIELLE P ET AL RR 2 SITE 40 COMP 4 PENTICTON BC V2A6J7
"	"	Enterprise	7200	GD	LIONELLO DANIELLE P ET AL RR 2 SITE 40 COMP 4 PENTICTON BC V2A6J7
C113680	1552A-1 (PD74090)	Irrigation	3	AF	D'ESTIMAUVILLE MICHEL JOSEPH RR 1 SITE 49 COMP 8 OKANAGAN FALLS BC V0H1R0
C113986	82.E.033.3.3 F (PD55091)	Irrigation	14.5	AF	DORIS TAN HOLDINGS LTD 13148 102 AVENUE EDMONTON AB T5N0M9
C113987	82.E.033.3.3 F (PD55091)	Irrigation	4.1	AF	BURGERS MARIANNE R 2668 HAYWOOD AVE W VANCOUVER BC V7V1Y6
C115486	82.E.033.3.3 T (PD55081)	Waterworks Local Auth	16790000	GY	SKAHA ESTATES IMPROVEMENT DISTRICT PO BOX 455 OKANAGAN FALLS BC V0H1R0
C115678	82.E.033.3.1 N (PD55055)	Domestic	500	GD	FELT MELVIN & MINA RR 1 SITE 47 COMP 3 SOVEREIGN RD OKANAGAN FALLS BC V0H1R0
C116853	1552A-1 V3 (PD54788)	Domestic	500	GD	COOPER JAMES A & OPAL RR 1 SITE 49 COMP 10 OKANAGAN FALLS BC V0H1R0
C116981	82.E.033.3.3 (PD76586)	Domestic	500	GD	BELL RONALD J & DEBORAH D RR 1 SITE 30 COMP 19 OKANAGAN FALLS BC V0H1R0
"	"	Irrigation	21.25	AF	BELL RONALD J & DEBORAH D RR 1 SITE 30 COMP 19 OKANAGAN FALLS BC V0H1R0
C117063	82.E.033.3.3 A (PD55109)	Waterworks Local Auth	43617500	GY	LAKESHORE WATERWORKS LTD C/O WHITE KENNEDY CA ATTN IAN KENNEDY 201 99 PADMORE AVE E PENTICTON BC V2A7H7
C117292	82.E.033.3.3 P (PD55088)	Irrigation	60	AF	DANNINGER CHRISTOPH RR1 COMP 11 SITE 30 OKANAGAN FALLS BC V0H1R0
C117293	82.E.033.3.3 P (PD55088)	Irrigation	30	AF	DANNINGER CHRISTOPH RR1 COMP 11 SITE 30 OKANAGAN FALLS BC V0H1R0
C118872	82.E.033.3.1 H (PD55060)	Irrigation	3.12	AF	WECKEL WALTER & HELGA SITE 48 COMP 1 RR 1 OKANAGAN FALLS BC V0H1R0
C119915	1552A-1 U3 (PD54771)	Domestic	500	GD	STEVENSON DONALD A & BARBARA E SITE 52 COMP 5 RR 1 OKANAGAN FALLS BC V0H1R0

Licence No	WR Map/ Point Code	Purpose	Quantity	Units	Licensee
C119962	1552A-1 H5 (PD54770)	Domestic	500	GD	CARROLL JENNIFER L & PHILLIP J PO BOX 81154 RPO LAKE BONIVISTA CALGARY AB T2J7C9
C119974	82.E.042.2.4 A (PD55610)	Enterprise	10000	GD	WRIGHTS BEACH CAMP LTD C/O PAUL LIONELLO RR 2 SITE 40 COMP 4 PENTICTON BC V2A6J7
C119992	1552A-1 D6 (PD54792)	Domestic	1000	GD	LAFLEUR CAROL 2770 CHELSEA CLOSE W VANCOUVER BC V7S3E9
C119993	1552 a1 (PD78704)	Domestic	500	GD	ANDERSON HAROLD B & BEATRICE H 11920 4TH AVE RICHMOND BC V7C3X1
C120453	1552A-1 PP (PD54764)	Irrigation	94.8	AF	HALL MARINA BOX 104 OKANAGAN FALLS BC V0H1R0
C120928	82.E.043.1.3 F (PD55197)	Irrigation	.75	AF	GIBBONS SHARON M 2859 216 STREET LANGLEY BC V2Z2E6
C120929	82.E.043.1.3 (PD79210)	Irrigation	.75	AF	SPENCER SHARON ELAINE 4553 LAKESIDE ROAD PENTICTON BC V2A8W4
C122208	82.E.033.3.3 (PD80187)	Irrigation Local Auth	2000	AF	KALEDEN IRRIGATION DISTRICT PO BOX 107 KALEDEN BC V0H1K0
"	"	Waterworks Local Auth	219000000	GY	KALEDEN IRRIGATION DISTRICT PO BOX 107 KALEDEN BC V0H1K0
F014566	82.E.043.1.1 D (PD55145)	Irrigation	98.4	AF	DEWAR DOUGLAS A SITE 2 COMP 15 RR 1 KALEDEN BC V0H1K0
F015328	1552A-1 W3 (PD54762)	Domestic	1000	GD	CORBISHLEY DOUGLAS SITE 51 COMP 10 RR 1 OKANAGAN FALLS BC V0H1R0
F015643	82.E.033.1.3 B (PD54273)	Domestic	500	GD	DEMIDOFF DAVID A & MARY D PO BOX 217 OKANAGAN FALLS BC V0H1R0
F016567	1552A-1 T3 (PD54784)	Domestic	1000	GD	CREIGHTON GEORGE L & ALICE L EASTSIDE RD SITE 49 COMP 9 RR 1 OKANAGAN FALLS BC V0H1R0
F017053	82.E.043.3.1.1 E (PD55211)	Domestic	1000	GD	MARTIN EARL C & SHIRLEY C 336 SUDBURY AVE PENTICTON BC V2A3W5
F017054	82.E.043.3.1.1 E (PD55211)	Domestic	1000	GD	KORT SHIRLEY M & KORT BEVERLEY 2776-31 STREET W VANCOUVER BC V6L2A1
F017754	1552A-1 V4 (PD54781)	Domestic	1000	GD	JOHNS JILL SITE 49 COMP 17 OKANAGAN FALLS BC V0H1R0
F017767	82.E.033.3.1 L (PD55059)	Domestic	1000	GD	DE VALL KENNETH R SITE 47 COMP 16 RR 1 OKANAGAN FALLS BC V0H1R0
"	82.E.033.3.1 M (PD55058)	Domestic	1000	GD	DE VALL KENNETH R SITE 47 COMP 16 RR 1 OKANAGAN FALLS BC V0H1R0

Licence No	WR Map/ Point Code	Purpose	Quantity	Units	Licensee
F018226	82.E.043.1.3 L (PD55175)	Domestic	1000	GD	GOERTZ CLIFFORD & VERNA 4583 LAKESIDE RD PENTICTON BC V2A8W4
F018723	82.E.033.3.3 D (PD55090)	Irrigation	41.8	AF	BLASTED CHURCH VINEYARD INC 378 PARSONS RD RR 1 SITE 32 COMP 67 OKANAGAN FALLS BC V0H1R0
"	82.E.033.3.3 E (PD55096)	Irrigation	41.8	AF	BLASTED CHURCH VINEYARD INC 378 PARSONS RD RR 1 SITE 32 COMP 67 OKANAGAN FALLS BC V0H1R0
F019575	1552A-1 R4 (PD54774)	Irrigation	2	AF	OLAFSON LENARD RR 1 SITE 49 COMP 12 OKANAGAN FALLS BC V0H1R0
F019641	82.E.043.1.3 G (PD55184)	Domestic	500	GD	THOMAS KRISTIE E 4557 LAKESIDE RD PENTICTON BC V2A8W4
F020046	82.E.033.3.1 W (PD55042)	Domestic	500	GD	KENYON BRENDA J P & LARRY D RR 1 SITE 48 COMP 8 OKANAGAN FALLS BC V0H1R0
"	82.E.033.3.1 X (PD55044)	Domestic	500	GD	KENYON BRENDA J P & LARRY D RR 1 SITE 48 COMP 8 OKANAGAN FALLS BC V0H1R0
F020115	82.E.033.3.3 V (PD55078)	Domestic	1000	GD	BROCK ALAN & JUDITH D BOX 438 OKANAGAN FALLS BC V0H1R0
"	82.E.033.3.3 W (PD55075)	Irrigation	9	AF	BROCK ALAN & JUDITH D BOX 438 OKANAGAN FALLS BC V0H1R0
F020551	1552A-1 W5 (PD54778)	Domestic	1000	GD	LETKEMAN SUSAN E 247 QUEENS RD E NORTH VANCOUVER BC V7N4N7
F020649	82.E.033.3.1 V (PD55046)	Irrigation	10.33	AF	CZUCZOR EUGENE & MAGDOLNA C/O WILLIAM W. OLIVER 409 ELLIS ST PENTICTON BC V2A4M1
F046283	1552A-1 C6 (PD54783)	Domestic	500	GD	TOPOROWSKI STEPHANIE 2414 BELLEVUE AVE WEST VANCOUVER BC V7V1E2
F046285	82.E.033.3.3 Y (PD55107)	Domestic	500	GD	CLYNCH PROSTHETIC & ORTHOTIC LAB LTD 3 4703 BOWNESS RD NW CALGARY AB T3B0B5
F046286	82.E.033.3.3 BB (PD55102)	Domestic	500	GD	HOBBS KATHRYN S 1083 PROSPECT AVE N VANCOUVER BC V7R2M6
F046745	82.E.033.3.3 CC (PD55101)	Domestic	500	GD	KELLY THOMAS WILLIAM & SUSAN BOX 9 KALEDEN BC V0H1K0
F046746	82.E.033.3.3 X (PD55108)	Domestic	500	GD	MEADE KELLY C & SOLFRID 15-3354 HORN ST ABBOTSFORD BC V2S7L3
F047572	82.E.033.3.1 AA (PD55032)	Domestic	1000	GD	MCCLELLAND WILLIAM & KAREN RR 2 FLYING SHOT LAKE GRANDE PRAIRIE AB T8V2Z9
"	82.E.033.3.1 Y (PD55039)	Domestic	1000	GD	MCCLELLAND WILLIAM & KAREN RR 2 FLYING SHOT LAKE GRANDE PRAIRIE AB T8V2Z9

Licence No	WR Map/ Point Code	Purpose	Quantity	Units	Licensee
"	82.E.033.3.1 Z (PD55034)	Irrigation	5.28	AF	MCCLELLAND WILLIAM & KAREN RR 2 FLYING SHOT LAKE GRANDE PRAIRIE AB T8V2Z9
F049688	82.E.043.1.3 J (PD55181)	Domestic	500	GD	FARRAUTO ED C 4573 LAKESIDE RD PENTICTON BC V2A8W4
F051421	82.E.043.1.3 D (PD55200)	Domestic	500	GD	BOWMAN JONATHAN R & TANYA L 9809 GOULD AVE RR 8 SUMMERLAND BC V0H1Z8
F053835	82.E.043.1.3 K (PD55177)	Domestic	500	GD	FARRAUTO ED C 4573 LAKESIDE RD PENTICTON BC V2A8W4
F062196	82.E.033.3.1 J (PD55057)	Domestic	1000	GD	CLARKE MARJORIE J 5962 TRAFALGAR ST VANCOUVER BC V6N1C4
F062286	82.E.033.3.3 G (PD55097)	Domestic	500	GD	WEEKS DAVID T & MARGARET H 4354 ERWIN DR WEST VANCOUVER BC V7V1H6
F114902	82.E.033.3.1 BB (PD55031)	Domestic	500	GD	ODEGARD GEORGE D & MARILYN A SITE 49 COMP 5 RR 1 OKANAGAN FALLS BC V0H1R0
F114985	1552A-1 Z5 (PD54777)	Domestic	1000	GD	FRASER DOUG & MARY SITE 49 COMP 6 OKANAGAN FALLS BC V0H1R0

Appendix E – Boat Usage Data



Date	Weather	Time	Location	# of Motorized Boats	# of Non - Motorized Boats (Sail Boats)	# of Manual Powered Craft (canoes / kayaks)	Approximate Area of Survey (% of Lake)	Estimated Total # of Boats on Skaha Lake	Area per Boat on 80% of Lake (in acres/boat)	Comments	Weekday
July 28, 2008	Sunny	13:45	438 Eastside Rd.	2	0	4	15	40	99		Yes
July 21, 2008	Sunny and hot	12:30	Hwy. 97 Lookout	18	0	0	75	24	165		Yes
July 21, 2008	Sunny and hot	12:15	Pioneer Park	12	0	0	25	48	82		Yes
July 20, 2008	Sunny and hot	17:15	Hwy. 97 Lookout	45	0	0	75	60	66		No
July 20, 2008	Sunny and hot	15:00	Christie Memorial Park	12	0	0	15	80	49		No
July 19, 2008	Sunny w/ light wind	15:00	438 Eastside Rd.	5	2	0	15	47	85		No
July 19, 2008	Light Wind	13:00	438 Eastside Rd.	4	1	1	15	40	99		No
July 16, 2008	Sunny w/ few clouds	13:00	Ok Falls	10	0	0	20	50	79	7 boats were moored	Yes
July 16, 2008	Sunny w/ few clouds	13:15	Hwy. 97 Lookout	17	1	0	70	26	154		Yes
July 15, 2008	Sunny w/ light wind	19:00	Skaha Beach	9	0	6	15	100	40	5 dragon boats	Yes
July 14, 2008	Sunny/Clear	14:30	Skaha Beach	25	1	0	15	173	23	10 on shore by marina	Yes
September 1, 2008	Sunny	14:00	174 Alder Ave	4	0	0	20	20	198		No
August 29, 2008	Sunny	12:00	174 Alder Ave	1	0	0	20	5	790		Yes
August 28, 2008	Cloudy	13:30	174 Alder Ave	1	0	0	20	5	790		Yes
August 28, 2008	Cloudy	19:00	174 Alder Ave	2	0	0	20	10	395		Yes
August 27, 2008	Cloudy	9:00	174 Alder Ave	1	0	0	20	5	790		Yes
August 26, 2008	Cloudy	18:00	174 Alder Ave	0	0	0	20	0			Yes
August 25, 2008	Sunny w few clouds	14:00	174 Alder Ave	3	2	0	20	25	158		Yes
August 16, 2008	Sunny	13:30	174 Alder Ave	8	1	0	20	45	88		No
August 16, 2008	Sunny	18:00	174 Alder Ave	7	0	0	20	35	113		No
August 15, 2008	Sunny	20:00	174 Alder Ave	7	0	0	20	35	113		Yes
August 6, 2008	Sunny	12:00	174 Alder Ave	7	0	1	20	40	99		Yes

Date	Weather	Time	Location	# of Motorized Boats	# of Non - Motorized Boats (Sail Boats)	# of Manual Powered Craft (canoes / kayaks)	Approximate Area of Survey (% of Lake)	Estimated Total # of Boats on Skaha Lake	Area per Boat on 80% of Lake (in acres/boat)	Comments	Weekday
August 5, 2008	Sunny	12:00	174 Alder Ave	6	0	0	20	30	132		Yes
August 4, 2008	Sunny	15:00	174 Alder Ave	7	0	0	20	35	113		Yes
August 3, 2008	Sunny	12:00	174 Alder Ave	2	1	2	20	25	158		No
August 2, 2008	Sunny	12:05	174 Alder Ave	8	0	0	20	40	99		No
August 1, 2008	Cloudy	13:15	174 Alder Ave	4	0	0	20	20	198		No
August 7, 2008	Sunny	9:30	Kenyon Park	3	0	1	40	10	395		Yes
August 6, 2008	Sunny	14:00	Kenyon Park	2	0	0	40	5	790		Yes
August 5, 2008	Sunny/Clear	14:00	Kenyon Park	3	0	2	40	13	316		Yes
August 4, 2008	Sunny and hot	14:30	438 Eastside Rd.	7	0	1	15	53	74		Yes
August 4, 2008	Sunny/Clear	14:00	Kenyon Park	4	1	2	40	18	226		Yes
August 8, 2008	Cloudy	1:30	Kenyon Park	1	0	0	40	3	1581		Yes
August 11, 2008	Cloudy	1:30	Kenyon Park	2	1	0	40	7.5	527		Yes
August 12, 2008	Cloudy	1:30	Kenyon Park	5	2	1	40	20	198		Yes
August 13, 2008	Sunny	1:30	Kenyon Park	4	1	1	40	15	263		Yes
August 14, 2008	Sunny	12:30	Kenyon Park	5	0	2	40	17.5	226		Yes
August 15, 2008	Sunny	14:00	Kenyon Park	4	1	1	40	15	263		Yes
August 18, 2008	Cloudy	14:00	Kenyon Park	2	0	0	40	5	790		Yes
August 19, 2008	Cloudy	14:00	Kenyon Park	2	0	0	40	5	790		Yes
August 20, 2008	Cloudy	14:00	Kenyon Park	1	0	0	40	2.5	1581		Yes
August 21, 2008	Rainy	14:00	Kenyon Park	1	0	0	40	2.5	1581		Yes
August 22, 2008	Cloudy	14:00	Kenyon Park	2	0	0	40	5	790		Yes
August 25, 2008	Sunny	13:00	Kenyon Park	2	1	0	40	7.5	527		Yes
August 26, 2008	Cloudy	14:00	Kenyon Park	1	0	0	40	2.5	1581		Yes
August 27, 2008	Cloudy	14:00	Kenyon Park	2	0	0	40	5	790		Yes
August 28, 2008	Cloudy	14:00	Kenyon Park	1	0	0	40	2.5	1581		Yes
August 29, 2008	Cloudy	14:00	Kenyon Park	1	0	0	40	2.5	1581		Yes
September 2, 2008	Cloudy	14:00	Kenyon Park	1	0	0	40	2.5	1581		Yes
September 3, 2008	Cloudy	14:00	Kenyon Park	2	0	0	40	5	790		Yes
September 8, 2008	Sunny	14:00	Kenyon Park	2	0	0	40	5	790		Yes
September 9, 2008	Sunny	14:00	Kenyon Park	2	0	0	40	5	790		Yes

Appendix F – Overview of Plans, Policies, and Legislation



Appendix F

Summary of the plans, policies, and legislation govern or guide lake and shoreline activities.

Activity	Name and Jurisdiction	How the Plan, Policy, or Legislation Applies to the Activity
Land use	Kaleden-Apex Southwest Sector Official Community Plan Bylaw No. 1882, 1999 Kaleden-Apex Southwest Sector Zoning Bylaw No. 1883, 1999 <ul style="list-style-type: none"> • Regional District of Okanagan Similkameen 	<ul style="list-style-type: none"> • Includes the west shoreline of Skaha Lake. • An OCP is a statement of objectives and policies to guide decisions on planning and land use management within the area covered by the plan. • A Zoning Bylaw implements the OCP and provides for its day-to-day administration. • Zoning bylaws contain specific, legal regulations - for example, what uses are permitted, how high buildings can be built, the maximum number of residential units allowed, and the amount of off-street parking required.
	East Skaha, Vaseux Official Community Plan Bylaw No. 2421, 2007 East Skaha, Vaseux Zoning Bylaw No 1801, 1998 <ul style="list-style-type: none"> • Regional District of Okanagan Similkameen 	<ul style="list-style-type: none"> • Includes the south and east shoreline of Skaha Lake. • See above for application.
	South Okanagan Regional Growth Strategy Bylaw No. 2421, 2007 <ul style="list-style-type: none"> • Regional District of Okanagan Similkameen 	<ul style="list-style-type: none"> • Provides a general guide as to how the region will grow, change, and develop over a 20-year period. • Was developed between 2004 and 2007, and is not yet officially adopted as a bylaw.
Crown land use	Okanagan Shuswap Land and Resource Management Plan <ul style="list-style-type: none"> • BC Ministry of Agriculture and Lands – Integrated Land Management Bureau 	<ul style="list-style-type: none"> • Provides direction for Crown land management in the Okanagan Shuswap area.
	BC Land Act <ul style="list-style-type: none"> • BC Ministry of Agriculture and Lands 	<ul style="list-style-type: none"> • Individuals cannot build on or develop Crown land without the Province’s authorization.
	Several other ministries and Acts govern Crown land use, depending upon the use (i.e., forestry, mining, ranching agriculture)	<ul style="list-style-type: none"> • n/a
Residential/ Commercial / Public/ Institutional development along shoreline	Fisheries Protection Act and Riparian Areas Regulation <ul style="list-style-type: none"> • BC Ministry of Environment 	<ul style="list-style-type: none"> • Requires local governments to protect riparian areas during residential, commercial, and industrial development through a scientific assessment of the proposed activities by a Qualified Environmental Professional (QEP).

Activity	Name and Jurisdiction	How the Plan, Policy, or Legislation Applies to the Activity
	Fisheries Act <ul style="list-style-type: none"> Fisheries and Oceans Canada 	<ul style="list-style-type: none"> Gives Fisheries and Oceans Canada the authority to protect fish habitat (any areas on which fish depend, directly or indirectly, in order to carry out their life processes). Applies to all lands: public, private and aboriginal. Includes a requirement that a person obtain approval from Fisheries and Oceans Canada before taking any action that alters or destroys fish habitat (Section 35) and a rule against dumping anything that can harm fish into waters that contain fish (Section 36).
	Species at Risk Act (SARA) <ul style="list-style-type: none"> Environment Canada - Canadian Wildlife Service 	<ul style="list-style-type: none"> Prohibits the killing, harming, harassing, capturing, or taking of species officially listed as threatened, endangered or extirpated, and the destruction of their residences or critical habitats. SARA covers birds, plants, fish, mammals, invertebrates, amphibians, and reptiles. Applies to all federal lands in Canada; all wildlife species listed under the Act as being at risk; and their critical habitat.
	Canadian Environmental Assessment Act <ul style="list-style-type: none"> Environment Canada 	<ul style="list-style-type: none"> Certain projects trigger an Canadian Environmental Assessment Act review. Requirements dependant upon activity proposed
	British Columbia Environmental Assessment Act <ul style="list-style-type: none"> Environment Canada 	<ul style="list-style-type: none"> Certain projects trigger and Canadian Environmental Assessment Act review. Requirements dependant upon activity proposed
	Migratory Birds Convention Act and Regulation <ul style="list-style-type: none"> Environment Canada - Canadian Wildlife Service 	<ul style="list-style-type: none"> Prohibits pollution (defined as the deposit of oil, oil wastes or any other substance harmful to migratory birds) in any waters or any area frequented by migratory birds.
	Environmental Management Act <ul style="list-style-type: none"> BC Ministry of Environment 	Authority under the Act includes the following: <ul style="list-style-type: none"> Require any person doing anything that may have a negative environmental impact to conduct an environmental impact assessment. Declare that any persons actions will have a detrimental impact on the environment, and then make any appropriate interim order restricting or preventing the person from carrying out those actions or requiring them to do anything the minister orders in respect of that activity. Ask the provincial cabinet to make an interim order permanent or to make an equivalent order to deal with the detrimental impact on the environment. Declare an environmental emergency and make such orders as are necessary to address it. Hold public inquiries into environmental matters as the Minister sees fit.
Water diversion from lake	Water Act <ul style="list-style-type: none"> BC Ministry of Environment 	<ul style="list-style-type: none"> Authority to divert and use surface water in BC is obtained by licence or approval in accordance with the <i>Water Act</i>.

Activity	Name and Jurisdiction	How the Plan, Policy, or Legislation Applies to the Activity
Marina development, boat launch construction, dock construction, and moorage	Water Act <ul style="list-style-type: none"> BC Ministry of Environment 	<ul style="list-style-type: none"> Works in or about a stream, ravine or active floodplain of a stream or its riparian or streamside area must be authorized under Section 9. Construction will likely require approval through the Water Act Approval process managed by Front Counter BC.
	BC Land Act <ul style="list-style-type: none"> BC Ministry of Agriculture and Lands 	<ul style="list-style-type: none"> Individuals cannot build on or develop aquatic Crown land without the Province's authorization, even if they own adjacent property or upland. Construction may require a licence of occupation or lease from Front Counter BC.
	Canadian Environmental Assessment Act <ul style="list-style-type: none"> Environment Canada 	<ul style="list-style-type: none"> Certain projects trigger and Canadian Environmental Assessment Act review. Requirements dependant upon activity proposed
	Wildlife Amendment Act <ul style="list-style-type: none"> BC Ministry of Environment 	<ul style="list-style-type: none"> Prohibits the killing, harming, harassment, capture, or taking of species at risk and the damage or destruction of a residence of a species at risk except as authorized by regulation, permit, or agreement.
	Fisheries Protection Act and Riparian Areas Regulation <ul style="list-style-type: none"> BC Ministry of Environment 	<ul style="list-style-type: none"> See above for application.
	Local Government Act <ul style="list-style-type: none"> BC Ministry of Community Development 	<ul style="list-style-type: none"> Local governments may enact their own bylaws for such matters as sediment control, erosion protection, wastewater discharge, watercourse protection, drainage, and tree retention. Local bylaws may amplify federal or provincial legislation for working in or near water.
	Fisheries Act <ul style="list-style-type: none"> Fisheries and Oceans Canada 	<ul style="list-style-type: none"> See above for application.
	Species at Risk Act (SARA) <ul style="list-style-type: none"> Environment Canada - Canadian Wildlife Service 	<ul style="list-style-type: none"> See above for application
	Navigable Waters Protection Act <ul style="list-style-type: none"> Transport Canada 	<ul style="list-style-type: none"> Authorization under this Act is required for new and replacement stream crossing works on navigable waters, as well as for works on navigable waters that would occur below the high-water mark, such as dredging, channel maintenance, and streambank protection.
	Environmental Management Act <ul style="list-style-type: none"> BC Ministry of Environment 	<ul style="list-style-type: none"> See above for application.
Boat traffic and boater safety	Navigable Waters Protection Act <ul style="list-style-type: none"> Transport Canada 	Authorization under this Act is required for vessel registration, crew safety training requirements, and other details for public/private operators or marine vessels on navigable waters