

Observation Well Network Review Okanagan Region

FINAL REPORT

Volume I of II

for

Water Stewardship Division
BC Ministry of Environment
Penticton, British Columbia

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EXECUTIVE SUMMARY

This report summarizes the results of a project that was completed for the Ministry of Environment to review and assess the existing observation wells in the Okanagan Region to insure the network meets the vision, mission and objectives for the Provincial Observation Well Network. The project was carried out in two phases. Phase 1 included identifying priority monitoring areas and developing a strategic monitoring plan for the region. Phase 2 involved a review of the existing network wells and preparation of recommendations for either retaining, rehabilitating or closing specific wells and also for establishing new wells in priority areas.

Separate draft reports were initially prepared and submitted for each phase of the project. These have been revised and combined in this final overview report (Volume I) while some of the larger Appendices are contained in Volume II. Overall results of the project are summarized as follows:

Under Phase 1, available baseline information on: topography and drainage, geology, classified aquifers, water supply systems, ground water quantity issues, and existing; climate stations, hydrometric and snow survey sites was compiled and summarized for the Okanagan Basin (including the Lumby and Enderby areas) and the Similkameen Basin. Ranking criteria were developed and applied to prioritize for monitoring:

- (i) all classified aquifers;
- (ii) all 1 : 20 000 BCGS (TRIM) areas having one or more classified aquifers, and;
- (iii) all third order watersheds with one or more classified bedrock aquifers.

The top priority aquifers, BCGS areas and third order watersheds were identified, compared and found to overlap. A strategic monitoring plan was subsequently outlined in which the establishment of eight (8) priority sub-networks was recommended. This was based on the examination of the baseline information, results of the ranking processes, reported quantity concerns, suggestions from stakeholders, existing monitoring objectives of the Ministry and relevant reports. For the Okanagan Basin, five (5) priority sub-networks would be centred in the : North Okanagan, Kelowna-Westbank, Okanagan Falls to Osoyoos, Lumby and the Penticton-Summerland areas. For the Similkameen Basin, three (3) priority sub-networks would be centred in the: Keremeos-Cawston, Hedley and Princeton areas. The monitoring focus of the sub-networks would be on long-term monitoring to assess ground water pumping, water sustainability and climate response in these areas. Increased partnerships with key agencies including local governments, communities, water users and other stakeholders would be required to establish the sub-networks within a ten-year time frame.

Under Phase 2, available information on 49 observation well sites in the Okanagan and Similkameen Basins was reviewed and assessed. Thirty-nine (39) or 80 percent of the sites were found to be located within the high priority aquifers and watersheds that were identified under Phase 1, indicating that the majority of observation wells in the Okanagan and Similkameen Basins are currently located in strategic areas for monitoring purposes. Four (4) wells were identified for possible rehabilitation and 14 wells were identified for well closure including redundant sites in priority areas.

Well closure of the 14 well sites will require contracting of qualified well drillers for the work to meet the requirements of the *Ground Water Protection Regulation* and will also need the approval of property owners. Although all of the proposed wells for closure belong to the crown, they are all located on private lands.

Sixteen (16) candidate priority aquifers and 16 watersheds, where observation currently do not exist, were identified for possible establishment of new observation wells. For future planning, consideration should be given to focusing establishment of new observation wells in one to two priority sub-networks, or two to four priority aquifers each year. Involvement of potential partners in the planning of specific sites in the priority sub-networks is recommended along with additional classification mapping in the Similkameen Basin and Wood Lake area of the Okanagan Basin. Aquifer classification mapping will assist in identifying potential sites for new observation wells.

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Available baseline information on: topography and drainage, geology, classified aquifers, water supply systems, ground water quantity issues, and existing; climate stations, hydrometric and snow survey sites was compiled and summarized for the Okanagan Basin (including the Lumby and Enderby areas) and the Similkameen Basin. Ranking criteria were developed and applied to prioritize for monitoring: all classified aquifers, 1 : 20 000 BCGS (TRIM) areas having one or more classified aquifers and all third order watersheds with one or more classified bedrock aquifers. The top priority aquifers, BCGS areas and third order watersheds were identified, compared and found to overlap.

A strategic monitoring plan was outlined in which the establishment of eight (8) priority sub-networks is recommended. This was based on the examination of the baseline information, results of the ranking processes, reported quantity concerns, suggestions from stakeholders, existing monitoring objectives of the Ministry and relevant reports. For the Okanagan Basin, five (5) priority sub-networks would be centred in the : North Okanagan, Kelowna-Westbank, Okanagan Falls to Osoyoos, Lumby and the Penticton- Summerland areas. For the Similkameen Basin, three (3) priority sub-networks would be centred in the: Keremeos-Cawston, Hedley and Princeton areas. The monitoring focus of the sub-networks would be on long-term monitoring to assess ground water pumping, water sustainability and climate response in these areas. Increased partnerships with key agencies including local governments, communities, water users and other stakeholders would be required to establish the sub-networks within a ten-year time frame.

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ACRONYMS

BCACS	British Columbia Aquifer Classification System
BCGS	British Columbia Geographic System
GAOB	Groundwater Assessment of the Okanagan Basin
GPS	Global Positioning System
DEM	Digital Elevation Model
DWIMP	Drinking Water Information Management Project
MOE	Ministry of Environment
MOFR	Ministry of Forests and Range
MWLAP	Ministry of Water, Land and Air Protection
NO	North Okanagan
NTS	National Topographic System
RDCO	Regional District of Central Okanagan
RDOS	Regional District of Okanagan-Similkameen
TRIM	Terrain Resource Information Management
WACC	Water, Air and Climate Change Branch
WAMR	Water and Air, Monitoring & Reporting Section
WSD	Water Stewardship Division

Observation Well Network Review - Okanagan Region

Phase 1

1. Background and Purpose

The Water Stewardship Division (WSD) of the Ministry of Environment (MOE) operates a network of observation wells in the Okanagan Region of British Columbia. This report summarizes the results of the Phase 1 part of a project carried out for MOE to review and assess the existing observation wells to insure that the network is effective and meets the MOE-WSD vision, mission and objectives for the Provincial Observation Well Network. Phase 1 included developing a strategic approach for monitoring and identifying priority areas. Phase 2, included an assessment of the existing observation wells and is the subject of a separate report. Funding for the project was provided by MOE under Contract CPNEN07037.

The study area as shown in Figure 1, included the Okanagan and Similkameen Basins situated in the Okanagan River Watershed, the Coldstream valley extending from east of Vernon to near Lumby and the valley between Armstrong and south of Enderby. Lumby and Enderby are situated in the South Thompson Watershed.

Phase 1 work included compiling and examining available baseline information on: topography and drainage, geology, classified aquifers in the region, water supply systems, ground water quantity issues, and existing; climate stations, hydrometric and snow survey sites. Ranking criteria were developed and applied to prioritize all classified aquifers for monitoring. Ranking criteria were also developed and applied to prioritize 1 : 20 000 BCGS (TRIM) areas and third order watersheds. The top priority aquifers, BCGS areas and third order watersheds were subsequently identified and compared. Recommendations were developed for a long-term monitoring plan compatible with the draft *Vision for British Columbia's Ministry of Environment's Groundwater Observation Network* (Ministry of Environment, 2006b) and the Ministry's Draft Water, Land and Air Quality Monitoring & Reporting Strategy (Air & Water Monitoring & Reporting Technical Committee, 2002).

2. Acknowledgements

Ministry staff with the Water Stewardship Division provided valuable information, comments and timely assistance for this project including: Des Anderson, Don McKee, Vicki Carmichael, Kevin Ronneseth, Rick Hardy, Carl Lee and Ben Kangasniemi. Valuable comments and suggestions on the observation well

network were received from a number of individuals involved in engineering /environmental consulting, water supply systems, local government, well drilling and applied research including: Diana Allen, Mike Stamhuis, John Watts, Bill Hodge, Doug Geller, Bruce Wilson, Panagiota Athanasopoulos and Jacqueline Foley.

3. Project Objectives, Scope of Work and Deliverables

The principle objectives for this project were:

- (a) to develop a strategic approach for ground water level monitoring in the Okanagan Region over the long-term (next 10 to 15 years);
- (b) to identify priority areas for monitoring ground water level conditions and set clear objectives and targets for these areas;
- (c) to complete a review of existing observation well sites in the priority areas and assess if they are effective and whether any new wells may be needed to meet the monitoring objectives;
- (d) to complete a review of existing observation well sites not in the priority areas and assess if they should be retained (based on other rationale, e.g. ambient ground water quality monitoring, partnership with or transfer to water purveyor) or closed, and;
- (e) develop a plan for establishing new monitor wells and carrying out the rehabilitation or closing of existing wells.

Scope of the project work included a number of specific tasks as outlined in Appendix A. All of the tasks for Phase 1 of the project were completed with the exception of mapping locations of Ministry of Transportation climate stations as these were found to be links to Environment Canada stations that were mapped.

Deliverables for Phase 1 of the project included an electronic copy of the Phase 1 draft report containing details on prioritized areas and strategic monitoring plan for establishing new wells. This report has been submitted to fulfill these requirements for Phase 1 of the project.

4. Methodology

Phase 1 of the project was carried out in a series of steps that are reflected in the project tasks. The main steps were as follows:

- (i) compiling and summarizing relevant and key baseline information for ranking potential areas for monitoring wells;
- (ii) identifying current and potential ground water quantity issues;

- (iii) selecting and weighting various factors or criteria based on (i) and (ii) for numerical ranking of classified aquifers, BCGS areas and watersheds for ground water quantity monitoring;
- (iv) developing templates to rank individual aquifers, BCGS areas and watersheds;
- (v) completing the ranking of aquifers, BCGS areas and watersheds;
- (vi) selecting the top-ranked; aquifers, areas and watersheds, and comparing the results;
- (vii) recommending a list of areas for monitoring based on results of (vi) and consideration of the overall objectives of the Provincial Observation Well Network, and;
- (viii) developing a strategic monitoring plan for establishing new wells for the priority areas.

An abbreviated schematic of the above process followed is depicted in Figure 2. Further details on aspects of the process are presented in the following sections of the report. A wide range of factors or criteria was considered in the ranking of various areas for monitoring. Since the factors of interest varied from specific site locations (e.g. climate and hydrometric stations) to area-based information (e.g. degree of mountain pine beetle infestation), priority area ranking was carried out in three different ways focused on:

- (a) classified aquifers;
- (b) 1 : 20 000 BCGS (TRIM) map areas, and;
- (c) third order watersheds.

Classified aquifers include those aquifers identified under the *British Columbia Aquifer Classification System* (BCACS) that was developed to identify and classify *developed aquifers* in the province to assist with management of groundwater (Berardinucci and Ronneseth, 2002). Ranking of BCGS areas enabled the use of a convenient grid the over study area and consideration of areas where groups of aquifers are concentrated and those areas where there may be wells and water supply systems but where no aquifers have been classified to date. Examination of third order watersheds was carried out to capture bedrock aquifers in the upland areas where there is likely a close relationship between ground water and stream flows. One important advantage of a watershed-based approach for selecting monitoring areas will be the ability to consider the level of surface water allocation and to evaluate the potential for future ground water development due to surface water shortage (pers. comm. Des Anderson, September, 2006). Other watersheds, significant in terms of containing important unconsolidated aquifers and/or clusters of wells where aquifers have not been classified, were also identified.

Results of the three ranking processes were compared to identify common areas of priority and a strategic monitoring plan was outlined for establishing new wells for the priority areas. The plan was developed to be compatible with the

objectives of the draft *Vision for British Columbia's Ministry of Environment's Groundwater Observation Network* (Ministry of Environment, 2006b) and *Ministry's Draft Water, Land and Air Quality Monitoring & Reporting Strategy* (Air & Water Monitoring & Reporting Technical Committee, 2002). While the second document is focused on water quality monitoring the principles outlined have relevancy to observation well monitoring. Copies of these two documents are provided in Appendices B and C respectively.

5. Baseline Information Examined

Various types of baseline information from a number of sources were obtained and compiled including the following:

- (a) major watershed and basin boundaries (Figure 1);
- (b) main drainage features (Figure 1);
- (c) topography (Figure 3);
- (d) bedrock geology;
- (e) unconsolidated Quaternary deposits (Figure 4);
- (f) classified aquifers (Figures 5, 6, 7, 8, 9 and Tables 1 and 2);
- (g) well locations and well density (Figures 10 and 11);
- (h) community watersheds (Figure 12);
- (i) active climate stations (Figures 13, 14 and Tables 3 and 4);
- (j) active snow courses and snow pillows (Figure 15);
- (k) active hydrometric stations (Figure 16 and Table 5);
- (l) locations of ground water supply system sources (Figures 17, 18, 19, 20 and Table 6);
- (m) third order watershed boundaries (Figure 21);
- (n) reported ground water quantity issues (Tables 7 and 8);
- (o) current or planned ground water research/planning projects (Table 9);
- (p) areas of Mountain Pine Beetle Infestation;
- (q) estimates of ground water use;
- (r) locations and number of reported irrigation wells;
- (s) estimates of population served by ground water, and;
- (t) reports of future land development.

A brief discussion of each of these information items, sources for the information and their significance where used as factors or criteria to the ranking processes are provided in Appendix D.

6. Criteria For Ranking Aquifers

A series of criteria were developed for ranking the classified aquifers for quantity monitoring based on the available baseline information compiled for the study

area. The *British Columbia Aquifer Classification System* (Appendix E) was utilized as the foundation criterion for aquifer ranking as the BCACS categorizes aquifers according to their level of groundwater development (use), vulnerability to contamination and ranking values that indicate the relative importance of an aquifer. This was augmented by other factors including:

- (a) aquifer area;
- (b) estimated current ground water use;
- (c) number of ground water supply systems;
- (d) number of reported irrigation wells;
- (e) well density;
- (f) number of water quantity issues/concerns reported;
- (g) estimated population served by groundwater, and;
- (h) other, e.g. future land development.

This ranking system is similar to the aquifer ranking system that was developed and implemented for the Cariboo Region of MOE in 2004 (Kohut, 2005). Table 10 shows the Excel[®] template developed for ranking the classified aquifers for quantity monitoring. Semi-quantitative measures that could be readily determined from existing information sources were developed to accompany the ranking factors. A point scale was also developed and weighting factors assigned. The 3 factors making up the BCACS were given a maximum total weighting of 20% and added factors were weighted at 10% each, except for the number of ground water supply systems that was given a maximum rating of 15% and “future land development” that was rated at 5%. It is recognized that these weightings are subjective and that other factors will also need to be considered to set priorities for aquifer monitoring based on discussions and consensus decision-making by those responsible for monitoring programs (Air & Water Monitoring & Reporting Technical Committee, 2002). Copies of the completed aquifer ranking forms are provided in Appendix G for unconsolidated aquifers and Appendix H for bedrock aquifers.

7. Criteria For Ranking BCGS Areas.

A series of criteria were developed for ranking 1 : 20 000 scale BCGS areas for quantity monitoring based on the available baseline information compiled for the study area that were appropriate to an area analysis, e.g. one or more aquifers in an area. BCGS areas selected included all those in the study area where a minimum of one classified aquifer was reported. The key factors assessed included:

- (a) number of classified aquifers;
- (b) number of reported wells;
- (c) number of ground water supply systems;
- (d) number of ground water well and spring sources;

- (e) number of water quantity issues/concerns reported;
- (f) number of research/water planning projects active and proposed;
- (g) degree of mountain pine beetle infestation;
- (h) number of active climate stations;
- (i) number of community watersheds;
- (j) number of active hydrometric sites and snow pillows/courses.

Table 11 shows the Excel® template developed for ranking BCGS areas for quantity monitoring. Semi-quantitative measures that could be readily determined from existing information sources were developed to accompany the ranking factors. A point scale was also developed and weighting factors assigned. The number of aquifers, number of reported wells and number of ground water supply systems were assigned maximum ratings of 15% each. The number of quantity issues was assigned a maximum rating of 20% and number of ground water sources was assigned a maximum of 10%. All other factors were assigned a maximum rating of 5% each. Again it is recognized that these weightings are subjective and that other factors will also need to be considered to set priorities for aquifer monitoring based on discussions and consensus decision-making by those responsible for monitoring programs (Air & Water Monitoring & Reporting Technical Committee, 2002). Copies of the completed BCGS area ranking forms are provided in Appendix I.

8. Criteria For Ranking Third Order Watersheds

A series of criteria were developed for ranking the third order watersheds for quantity monitoring to capture bedrock aquifers in the upland areas where there is likely a close relationship between ground water and stream flows. Only those watersheds including one or more classified bedrock aquifers were ranked. Factors selected for assessment were similar to those used to rank the BCGS areas and included:

- (a) watershed area;
- (b) number of classified bedrock aquifers;
- (c) number of ground water supply systems;
- (d) number of ground water well and spring sources;
- (e) number of water quantity issues/concerns reported;
- (f) number of research/water planning projects active and proposed;
- (g) degree of mountain pine beetle infestation;
- (h) number of active climate stations;
- (i) number of community watersheds;
- (j) number of active hydrometric sites and snow pillows/courses.

Table 12 shows the Excel® template developed for ranking third order watersheds for quantity monitoring. Semi-quantitative measures that could be readily determined from existing information sources were developed to

accompany the ranking factors. A point scale was also developed and weighting factors assigned. The watershed area, number of aquifers and number of ground water supply systems were assigned maximum ratings of 15% each. The number of quantity issues was assigned a maximum rating of 20% and number of ground water sources was assigned a maximum of 10%. All other factors were assigned a maximum rating value of 5% each. Again it is recognized that these weightings are subjective and that other factors will also need to be considered to set priorities for aquifer monitoring based on discussions and consensus decision-making by those responsible for monitoring programs (Air & Water Monitoring & Reporting Technical Committee, 2002). Copies of the completed third order watershed ranking forms are provided in Appendix J.

9. Results of Ranking Process

Results of the three ranking approaches are summarized in Tables 13, 14 15 and 16. Figures 23, 24, 25 and 26 show the distribution of aquifers (unconsolidated and bedrock), BCGS areas and third order watersheds respectively. Table 17 compares the 12 top-rated BCGS areas and 12 top-rated aquifers for the Okanagan Basin including Lumby and Enderby areas and the 4 top-rated BCGS areas with 2 aquifers in the Similkameen Basin. Only 2 unconsolidated aquifers have been classified in the Similkameen Basin. Table 18 compares the 12 top-rated BCGS areas with the 12 top-rated aquifers and the 12 top-rated third order watersheds in the Okanagan Basin including Lumby and Enderby areas. There are no bedrock aquifers yet in the Similkameen Basin that have been classified.

Examination of Table 17, that compares top-rated BCGS areas and top-rated unconsolidated aquifers shows that similar ranking results were obtained. Common BCGS areas are highlighted green in Table 17 and these can be grouped into 4 sub-areas for the Okanagan Basin as follows:

Priority sub-areas for monitoring unconsolidated aquifers in Okanagan Basin:

1. Kelowna area;
2. Southern Okanagan, Okanagan Falls to Osoyoos;
3. North Okanagan, Vernon to Armstrong, and;
4. Lumby area.

For the Similkameen Basin, the top-rated areas are centered in 4 sub-areas as follows:

Priority sub-areas for monitoring unconsolidated aquifers in Similkameen Basin:

1. Keremeos;
2. Cawston;

3. Hedley, and;
4. Princeton.

Examination of Table 18, that compares top-rated BCGS areas, top-rated bedrock aquifers and top-rated third order watersheds shows that similar ranking results were also obtained . Common BCGS areas are highlighted green in Table 18 and common bedrock aquifers are highlighted in yellow. These can be grouped into 4 sub-areas as follows:

Priority sub-areas for monitoring bedrock aquifers in Okanagan Basin:

1. North Okanagan area, BX Creek and Fortune Creek Watersheds;
2. Kelowna-Westbank area, Brandt Creek, Daves Creek and McDougall Creek Watersheds;
3. Southern Okanagan area, Okanagan Falls to Osoyoos, McLean Creek, Horn Creek, Kearns Creek and Haynes Creek;
4. Penticton-Summerland area, Penticton Creek, Chute Creek and Dark Creek Watersheds.

In terms of the highest numerical ratings determined, results are as follows:

Highest rated unconsolidated aquifer - Aquifer 464 at Kelowna;

Highest rated bedrock aquifer - Aquifer 460 at Marron Valley, northwest of Okanagan Falls;

Highest rated BCGS area - 082E003 centered at Osoyoos and also 082L034 centered at Kelowna (both rated at 65.0 points each), and;

Highest rated third order watershed for bedrock monitoring - BX Creek watershed northeast of Vernon.

In addition to identifying the priority third order watersheds above it is also evident that the priority sub-areas include other watersheds that are significant in terms of containing important unconsolidated aquifers and/or clusters of wells where aquifers have not been classified. These additional priority watersheds are identified as follows for both the Okanagan and Similkameen Basins.

Additional significant watersheds within priority sub-areas for monitoring:

1. North Okanagan area, Deep Creek, Coldstream Creek and Vernon Creek (north of Kalamalka Lake) Watersheds;
2. Lumby area, Besette Creek Watershed;
3. Kelowna-Westbank area, Mission Creek, Kelowna Creek and Powers Creek Watersheds;
4. Southern Okanagan area, Shuttleworth Creek Watershed;

5. Penticton-Summerland area, Trout Creek Watershed.
6. Keremeos-Cawston area, Keremeos Creek Watershed;
7. Hedley area, Cahill Creek Watershed, and;
8. Princeton area, Allison Creek Watershed.

10. Quantity Issues and Monitoring Needs

It is evident from the reported ground water quantity issues (Table 8) and the number of current or planned ground water research/planning studies (Table 9), that there is a high level of interest among water purveyors, local governments, engineering consultants, planners and researchers for understanding and quantifying ground water availability in the Okanagan and Similkameen Basins. While water purveyors and local governments may not have a direct interest in the observation well network or specific monitoring wells, they often rely upon engineering consultants, research agencies and provincial government agencies for providing them with the analysis and interpretation of ground water information from available monitoring sites to assist in their water services planning initiatives.

Frequent quantity issues identified include concerns about the sustainability of ground water supplies, potential impacts of land development on water supplies, location of ground water recharge areas, surface water/ground water interactions, well interference, future water demand and conservation measures. There are also much wider, provincial and regional concerns with regard to the potential effects of the mountain pine beetle infestation and climate change on water supplies. Rivera et al (2004) report that the impacts of climate variability and change on ground water recharge are not well understood and this is a major deficiency in current ground water models.

As ground water level measurements from observation wells are a principal source of information for assessing the effects of hydrologic stresses acting on ground water systems (Rivera et al, 2004), the observation well network could play an important role for determining changes to the overall water balance and flow regimes in the Okanagan and Similkameen Basins. Ground water level measurements can be used to determine how these stresses affect ground water recharge, storage and discharge (Taylor and Alley, 2001). Rivera et al (2004) recommend that observation wells should be completed in both stressed and natural environments, and be tied into climate and stream flow (hydrometric) networks.

In 1999, the Office of the Auditor General of British Columbia recommended that the Province ensure regular monitoring of ground water usage and levels in all developed aquifers across the province. Given the large number (800+) of developed aquifers that have been identified in the province it will require more stewardship and partnership initiatives involving communities, water users and

other stakeholders to improve the current monitoring coverage of aquifers in the province.

Comments received from stakeholders that completed the observation well questionnaire in 2006 (Appendix F) included the following suggestions and notes:

- (a) expand the observation well network to manage our water supplies, very critical (water purveyor);
- (b) issues around geothermal use of wells and climate change will require more information (water purveyor);
- (c) observation wells are needed for North Kelowna and potential development areas in the Okanagan (water purveyor);
- (d) observation wells are needed for the Meadow Valley Aquifer and Summerland area (engineering/environmental consultant);
- (e) observation wells are needed for the Keddleston and Silver Star areas (purveyor, local government official);
- (f) the Willowbrook (Meyers Flat) area shows a sharp drop off in water levels seasonally (well driller);
- (g) observation wells are recommended for the Vaseux Creek watershed and Upper Penticton Creek watershed (researcher);
- (h) one observation well in a specific area especially in bedrock may give misleading results if affected directly by pumping (engineering/environmental consultant);
- (i) observation wells should be constructed in all IA aquifers (engineering/environmental consultant);
- (j) special attention must be given to observation well location (engineering/environmental consultant);
- (k) more bedrock observation wells are needed (engineering/environmental consultant);
- (l) broaden the geographic coverage of wells (engineering/environmental consultant);
- (m) too many wells in some areas, not enough in other areas (engineering/environmental consultant);
- (n) there is a limited number of observation wells in the Spallumcheen-Armstrong area (engineering/environmental consultant, researcher).

The draft *Vision for British Columbia's Ministry of Environment's Groundwater Observation Network* (Ministry of Environment, 2006b) outlined in Appendix B calls for monitoring priority aquifers and basins, supporting ground water studies such as the Groundwater Assessment of the Okanagan Basin (GAOB) and encouraging partnerships where beneficial. Specific monitoring objectives include:

1. Understand local and regional hydrogeological processes and characteristics including:
 - (a) Monitoring groundwater/surface relationships, recharge and discharge mechanisms/rates/timing in lowland and upland areas and impact of drought and flooding on groundwater;
 - (b) Fundamental aquifer or basin characteristics (e.g. groundwater levels, temporal trends, transmissivity values, hydraulic conductivity and storativity values, water chemistry, etc.);
 - (c) Monitoring impact of short and long term effects of climate and climate change on groundwater levels.

2. Support effective use of the resource and minimize groundwater conflicts between users by:
 - (a) Helping to assess the impact of groundwater withdrawals in specific areas to determine if further ground water development is possible without adversely affecting sustainability of the resource;
 - (b) Helping to resolve water use conflicts, such as interference between wells and ground water withdrawal near fully allocated lakes and streams;
 - (c) Assessing the long-term and short-term effects of human-induced factors such as pumping and construction of drainage works on ground water levels, both locally and regionally.

The Ministry's Draft Water, Land and Air Quality Monitoring & Reporting Strategy (Air & Water Monitoring & Reporting Technical Committee, 2002), encourages shared stewardship and partnerships with a focus on areas affected by human impacts. While these latter objectives are focused on quality monitoring activities they are also be relevant to quantity monitoring.

The U.S. Geological Survey (USGS), an agency that has collected water-level data for more than a hundred years (Taylor and Alley, 2001) suggests:

1. establishing stable, base networks of water-level monitoring wells;
2. carrying out long-term (years to decades), systematic measurements of water levels to provide essential data needed to evaluate changes in the resource over time, to develop and calibrate ground-water models and forecast trends, and to design, implement, and monitor the effectiveness of ground-water management and protection programs;
3. increasing the number of climate-response wells and long-term monitoring of naturally occurring fluctuations in ground water levels to develop more complete ongoing assessments of droughts and the cumulative effects of other climatic phenomena;

4. collecting data from areas that represent the full range in variation in topographic, hydrogeologic, climatic, and land-use environments;
5. monitoring aquifers substantially affected by ground water pumping, areas of future ground water development, surficial aquifers that serve as major areas of ground water recharge, and links with water quality and surface water monitoring;
6. evaluating networks periodically to ensure that adequate water-level data are being collected for present and anticipated future uses, and;
7. increasing interagency cooperation and coordination in constructing and maintaining observation well networks, collecting water level measurements, and sharing and disseminating data to address issues relevant to the participating agencies.

11. Recommended Monitoring Plan

Based on examination of the baseline information, results of the ranking processes, reported quantity concerns, suggestions from stakeholders, existing monitoring objectives of the Ministry and relevant reports, the following strategic monitoring plan is recommended for the Okanagan and Similkameen Basins:

11.1 Goals

1. Establish a stable base network of long-term (minimum of one decade) water level monitoring wells, comprised of a series of up to eight (8) priority sub-networks in key areas of the Okanagan Basin (including Lumby and Enderby) and the Similkameen Basin.
2. Involve key agencies including local government, communities, water users and other stakeholders in the establishment of the sub-networks over the next 3 years through a consultative process.
3. Make the sub-networks operational within ten years.

11.2 Priority Areas

Areas where observation well sub-networks, should be considered and potential agency partners suggested are:

Okanagan Basin, including Lumby and Enderby

(a) North Okanagan, north of Vernon to Enderby (Township of

- Spallumcheen, City of Armstrong, City of Enderby, Greater Vernon Services, Water Department, Silver Star Mountain Resort and North Okanagan);
- (b) Kelowna-Westbank, including upper Mission Creek (Kelowna Joint Water Committee, Westbank Irrigation District and RDOS);
 - (c) Okanagan Falls to Osoyoos (community of Okanagan Falls, Town of Oliver, local irrigation districts, Town of Osoyoos and RDOS);
 - (d) Lumby Area (Village of Lumby and North Okanagan);
 - (e) Penticton-Summerland area (District of Summerland, Ministry of Forests and Range and RDOS).

Similkameen Basin

- (a) Keremeos-Cawston area (Town of Keremeos, Keremeos and Cawston Irrigation Districts and RDOS);
- (b) Hedley area (Village of Hedley and RDOS);
- (c) Princeton area (Town of Princeton and RDOS).

11.3 Sub-Network Objectives and Targets

Proposed objectives and suggested targets for these 8 sub-network areas are provided in Table 19. These draft area objectives and targets could form the basis of initial discussions with potential partner agencies that may have an interest in moving aspects of the plan forward.

11.4 Plan Objectives

1. Focus the priority sub-networks on long-term-monitoring to assess ground water pumping, water sustainability and climate response.
2. Ensure observation well sites in each sub-network represent a range of topographic, hydrogeologic, and land-use settings.
3. Review and incorporate existing observation wells that are viable to continue long-term monitoring in the above priority areas.
4. Conduct periodic evaluations of the sub-networks and individual observation wells to ensure that adequate water-level data is being collected for current and future anticipated uses.

12. Establishing New Observation Well Sites and Potential Funding Sources

Due to the varied nature and relatively large amount of information available on the aquifers, water supply systems and water quantity issues that needed to be examined and linked for this project within a relatively short period of time, it was not possible to examine and recommend any specific monitoring sites at this time or set objectives for those specific sites.

Potential site/areas for consideration that were suggested by others and that also occur in the priority sub-network areas include:

- (a) Silver Star area;
- (b) Keddleston area;
- (c) Anarchist Mountain east of Osoyoos.
- (d) Upper Penticton Creek Watershed;
- (e) Meadow Valley Aquifer;
- (f) Vaseux Creek Watershed;
- (g) Joe Rich area, Mission Creek east of Kelowna.

More detailed investigations of these specific areas would be required to assess the hydrogeologic conditions, quantity issues, availability of existing wells that could be used for monitoring or the need for constructing one or more observation wells. Apart from the sub-networks and priority areas there may also be future needs for specific observation wells in other areas of the region where ground water issues develop.

With regard to funding required to establish and maintain new observation well sites this could be facilitated through cost-sharing arrangements among participating agencies. The possibility of grants being available for aspects of hydrologic monitoring such as the *Water Conservation and Quality Initiative Program Grants* administered by the Okanagan Basin Water Board could also be investigated.

13. Conclusions

The conclusions for the Phase 1 portion of the project are as follows:

- (a) Available baseline information on: topography and drainage, geology, classified aquifers, water supply systems, ground water quantity issues, and existing; climate stations, hydrometric and snow survey sites was compiled and summarized for the Okanagan Basin (including the Lumby and Enderby areas) and the Similkameen Basin. The information was assembled in a series of figures and tables covering the study area.

- (b) Ranking criteria were developed and applied to prioritize for monitoring: all classified aquifers, 1 : 20 000 BCGS (TRIM) areas having one or more classified aquifers and all third order watersheds with one or more classified bedrock aquifers.
- (c) The top priority aquifers, BCGS areas and third order watersheds were identified, compared and found to overlap.
- (d) A strategic monitoring plan was outlined in which the establishment of eight (8) priority sub-networks is recommended. This was based on the examination of the baseline information, results of the ranking processes, reported quantity concerns, suggestions from stakeholders, existing monitoring objectives of the Ministry and relevant reports.
- (e) Five (5) Priority sub-networks in the Okanagan Basin (including Lumby and Enderby) are recommended namely: North Okanagan, Kelowna-Westbank, Okanagan Falls to Osoyoos, Lumby and the Penticton-Summerland area.
- (f) Three (3) priority sub-networks in the Similkameen Basin are recommended including: Keremeos-Cawston, Hedley and Princeton areas.
- (g) The strategic monitoring plan recommends increased partnerships with key agencies including local government, communities, water users and other stakeholders to establish the sub-networks within a ten-year time frame.

14. Closure

This report was prepared in accordance with generally accepted engineering and consulting practices. The material contained in this report is intended only for sole use by the Ministry of Environment. This report is based on data and information available to the author from various sources at the time of its preparation and the findings of this report may therefore be subject to revision. Data and information supplied by others has not been independently confirmed or verified to be correct or accurate. Any errors, omissions or issues requiring clarification should be brought to the attention of the author. The author accepts no responsibility for damages suffered by any third party as a result of any unauthorized use of this report.

Respectfully submitted:

Alan P. Kohut, PEng
Hydrogeologist

Hy-Geo Consulting

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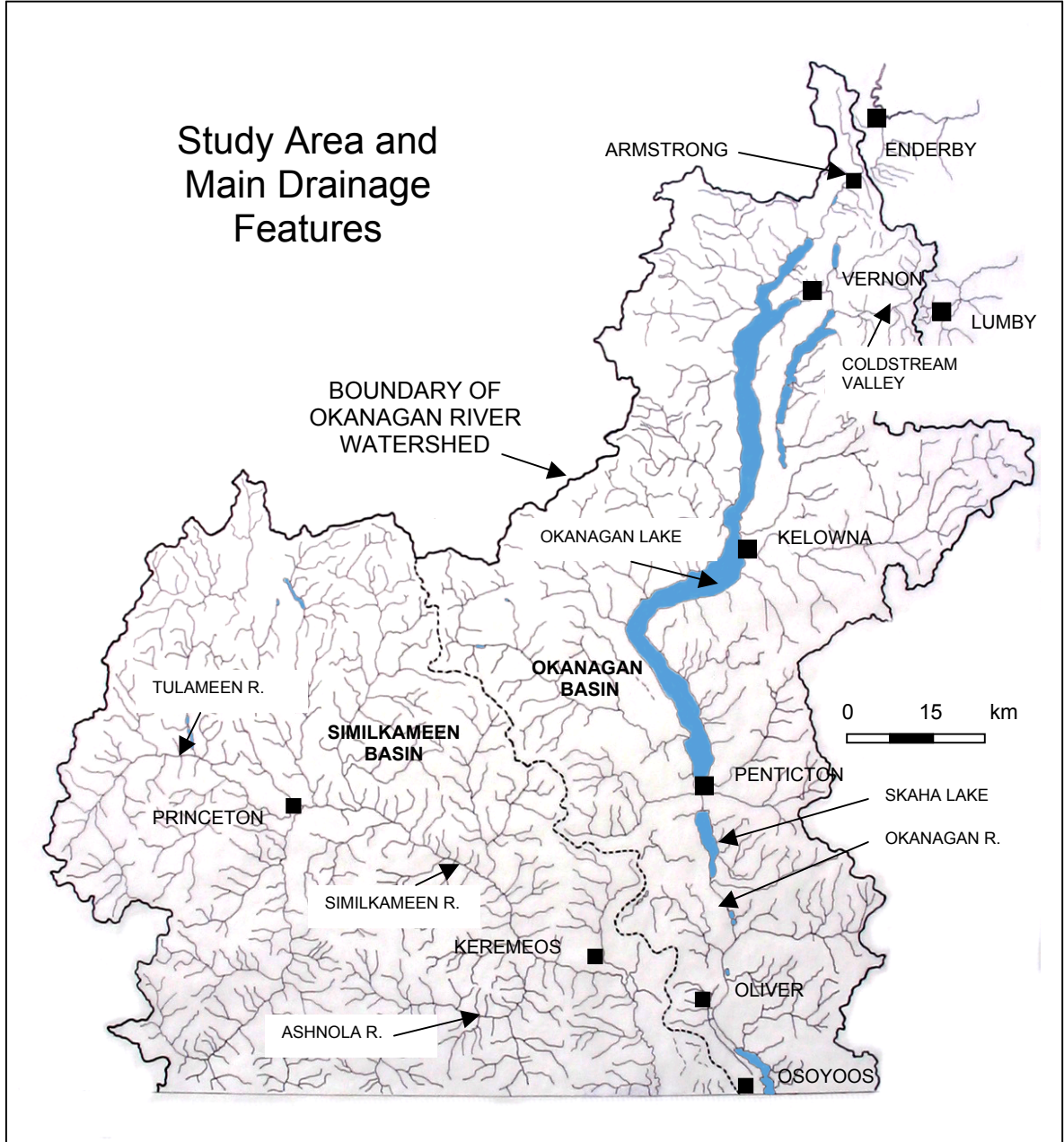


Figure 1. Study area and main drainage features. Base map adapted from *BC Water Resources Atlas* (Ministry of Environment, 2006a).

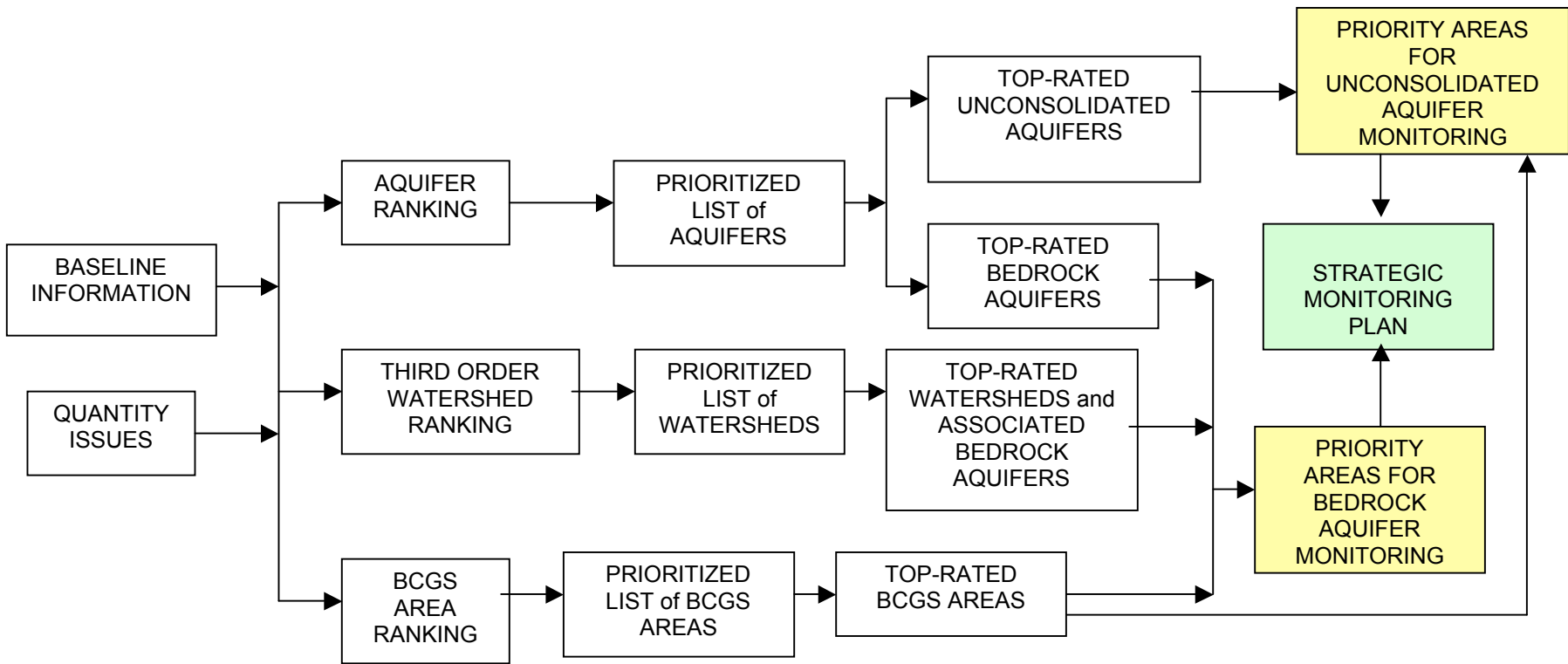


Figure 2. Schematic showing main steps and general process for completing Phase 1 of project.

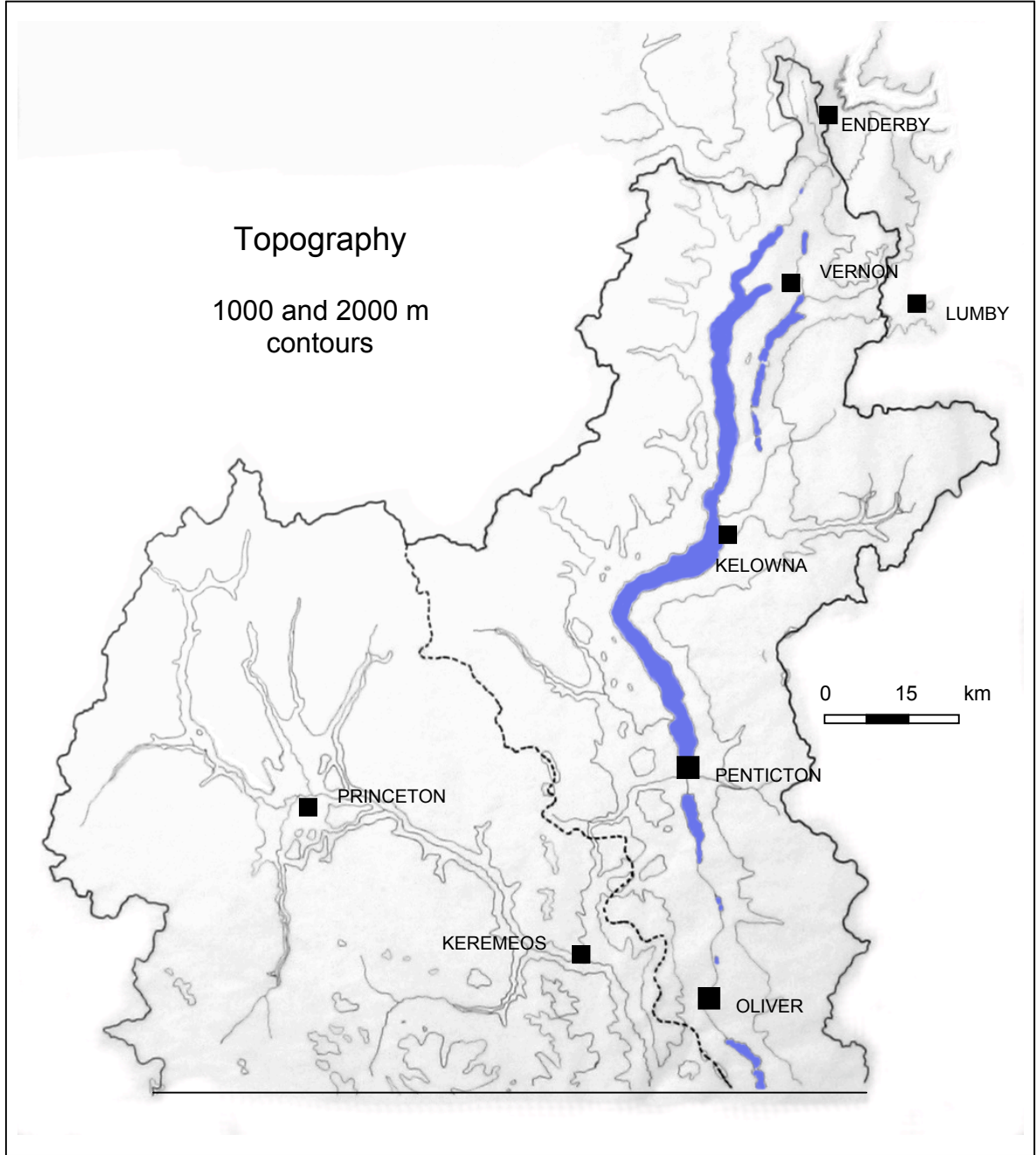


Figure 3. Extent of valley and upland areas in Okanagan and Similkameen Basins based on 1000 and 2000 m contours. Adapted from *BC Water Resources Atlas* (Ministry of Environment, 2006a).

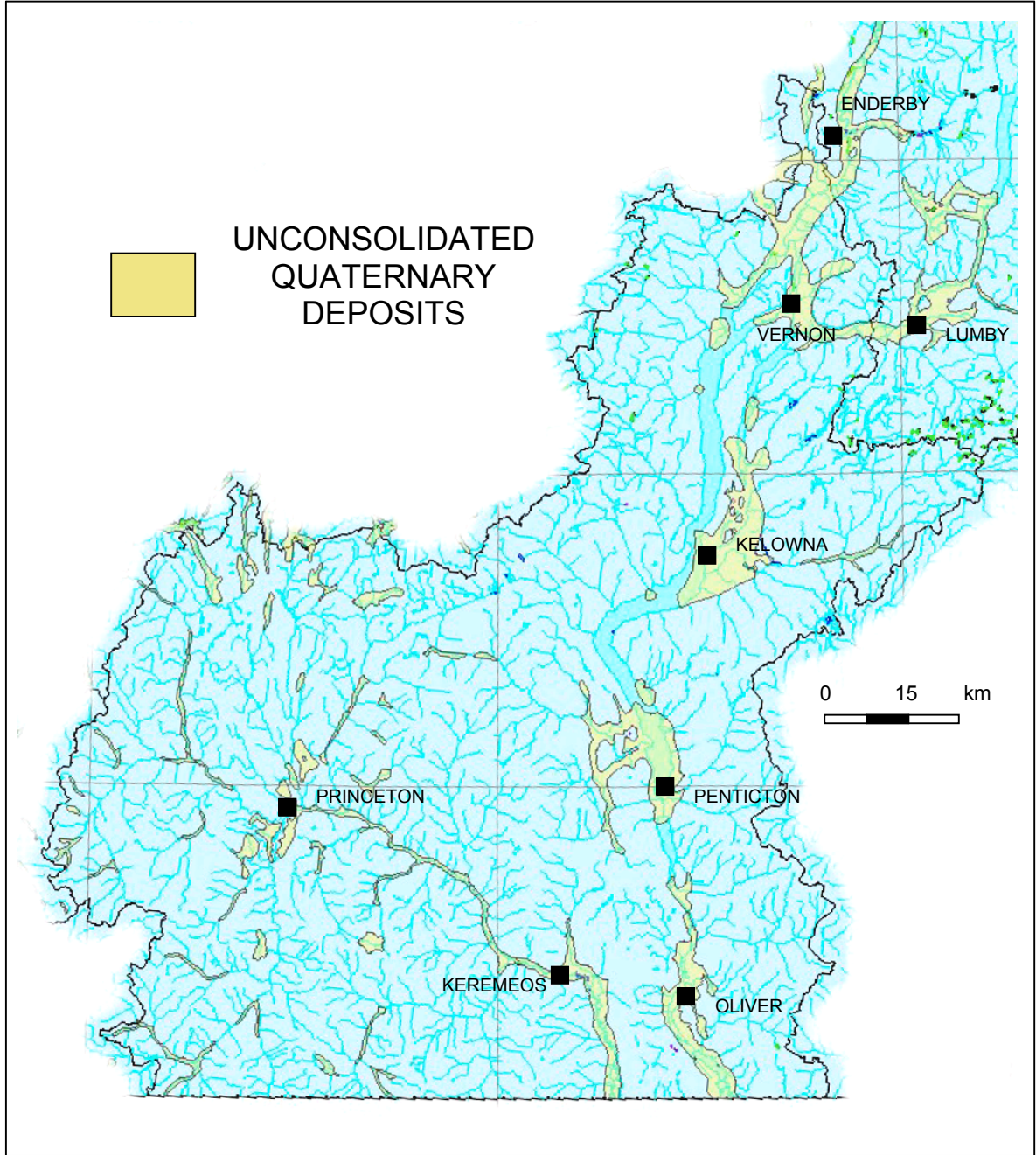


Figure 4. Distribution of unconsolidated Quaternary deposits in the study area. Adapted from *BC Water Resources Atlas* (Ministry of Environment, 2006a).

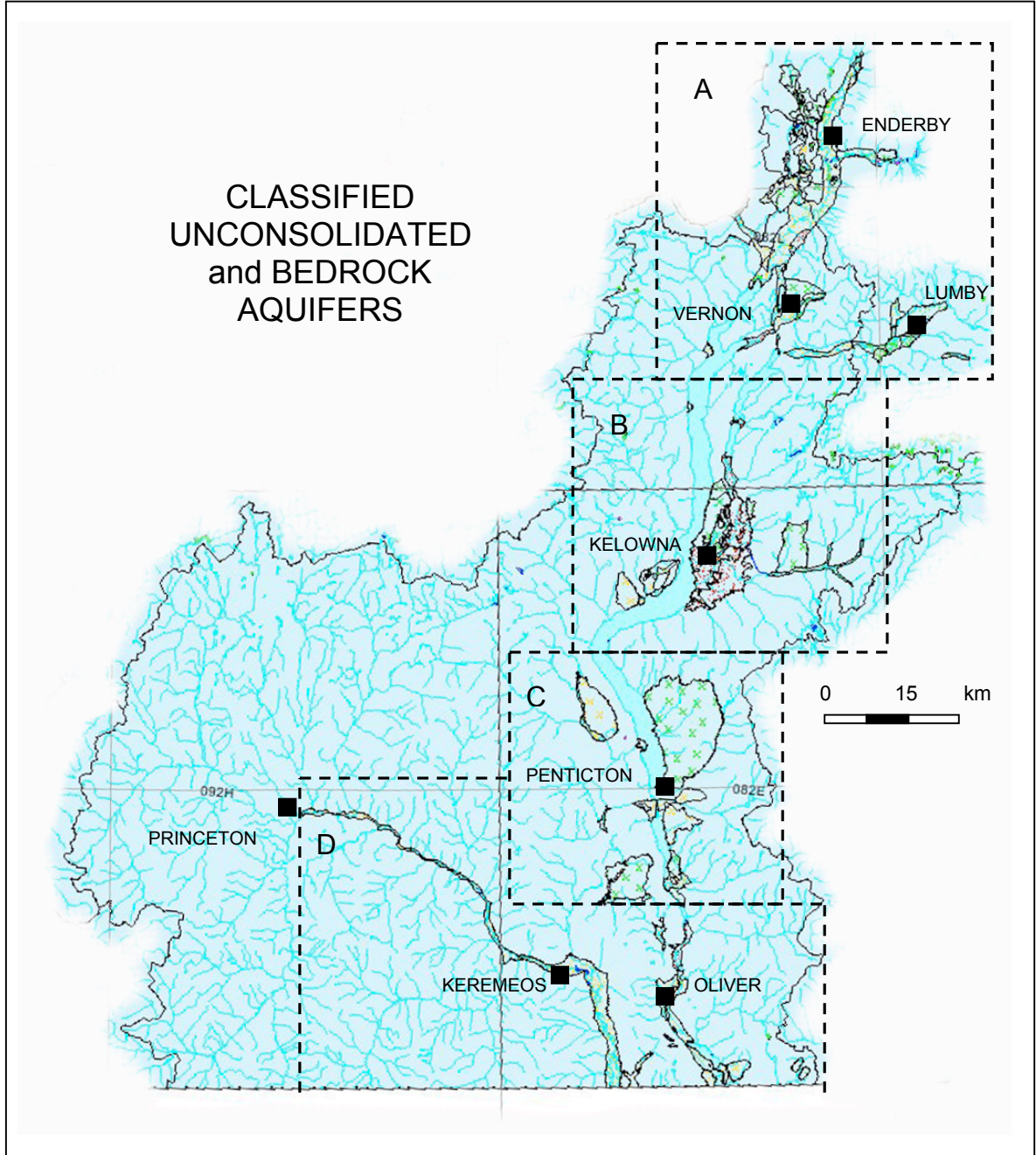


Figure 5. Distribution of classified unconsolidated and bedrock aquifers in the study area. Adapted from *BC Water Resources Atlas* (Ministry of Environment, 2006a).

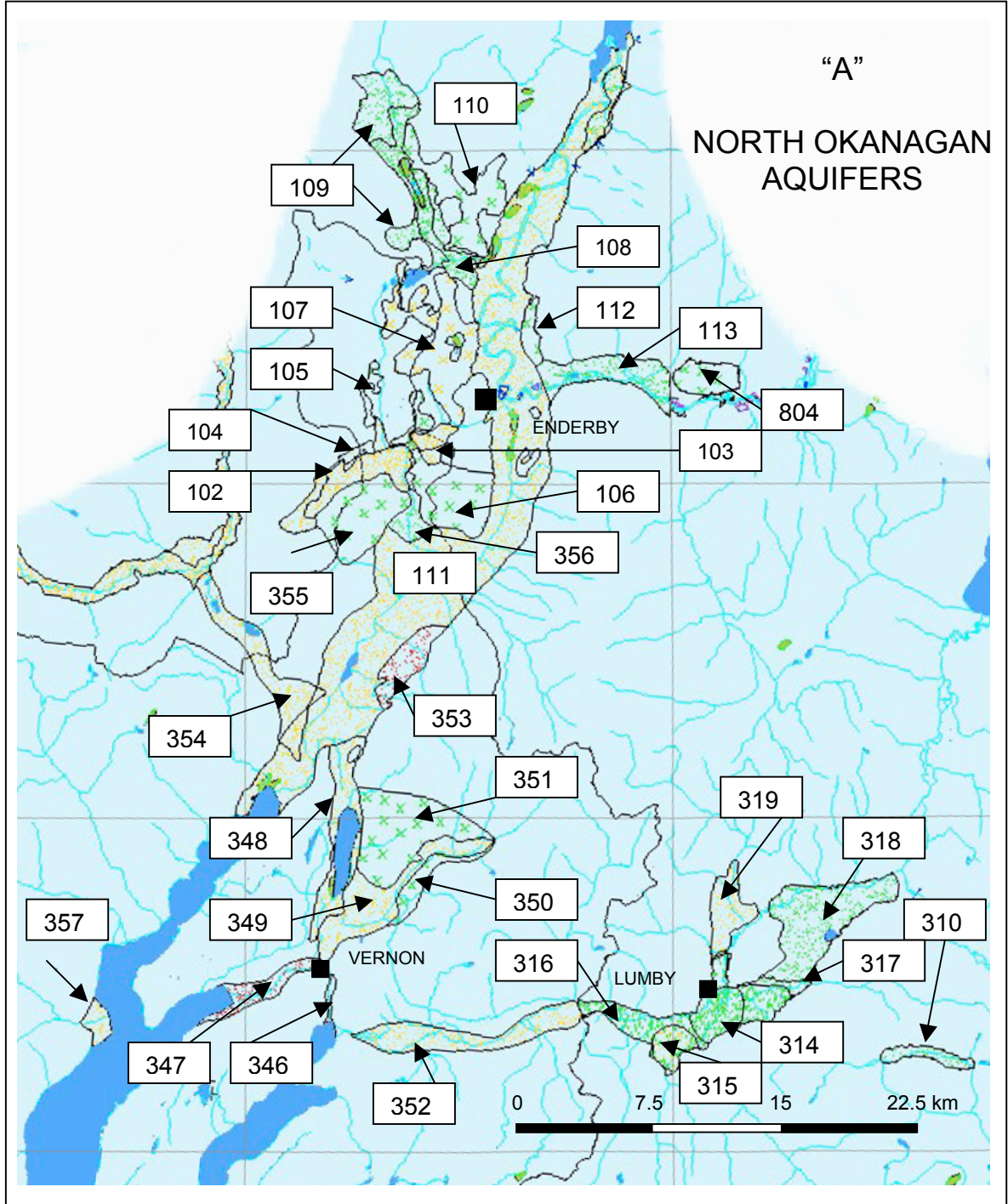


Figure 6. Unconsolidated and bedrock aquifers in the North Okanagan area including Enderby and Lumby sub-areas. Aquifer identification numbers shown are cross-referenced to Tables 1 and 2. Base map adapted from *BC Water Resources Atlas* (Ministry of Environment, 2006a).

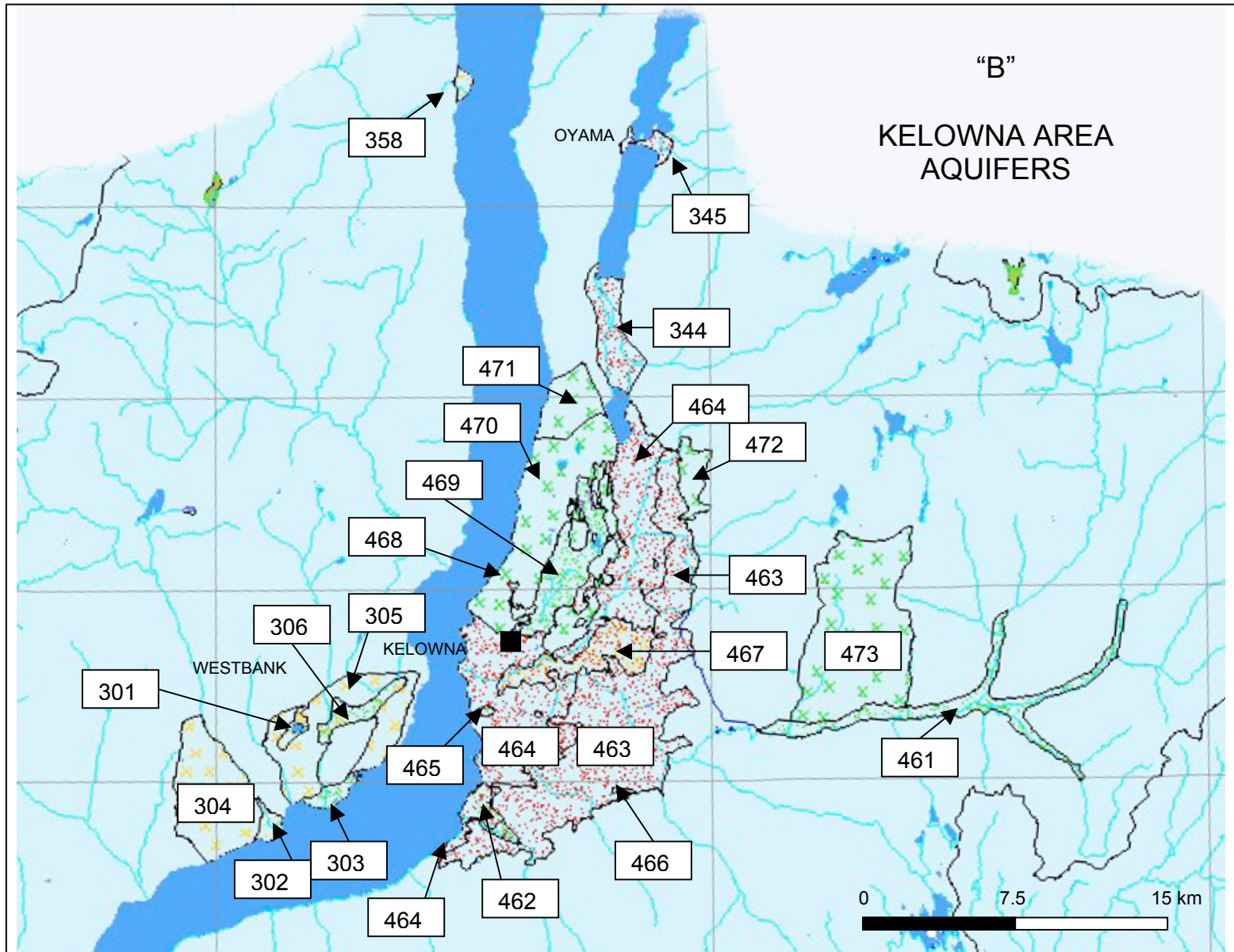


Figure 7. Unconsolidated and bedrock aquifers in the Kelowna area. Aquifer identification numbers shown are cross-referenced in Tables 1 and 2. Base map adapted from *BC Water Resources Atlas* (Ministry of Environment, 2006a).

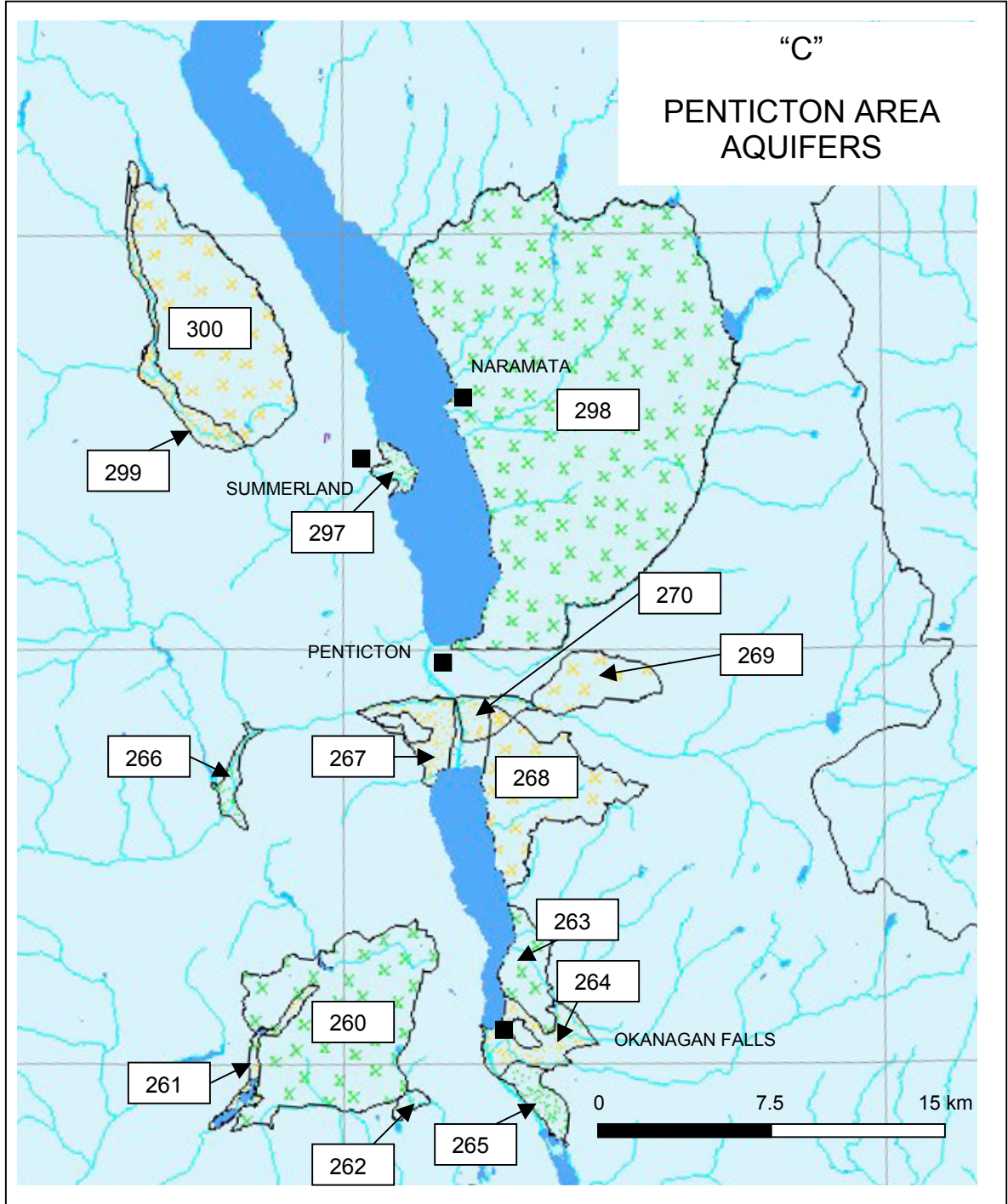


Figure 8. Unconsolidated and bedrock aquifers in the Penticton area. Aquifer identification numbers shown are cross-referenced in Tables 1 and 2. Base map adapted from *BC Water Resources Atlas* (Ministry of Environment, 2006a).

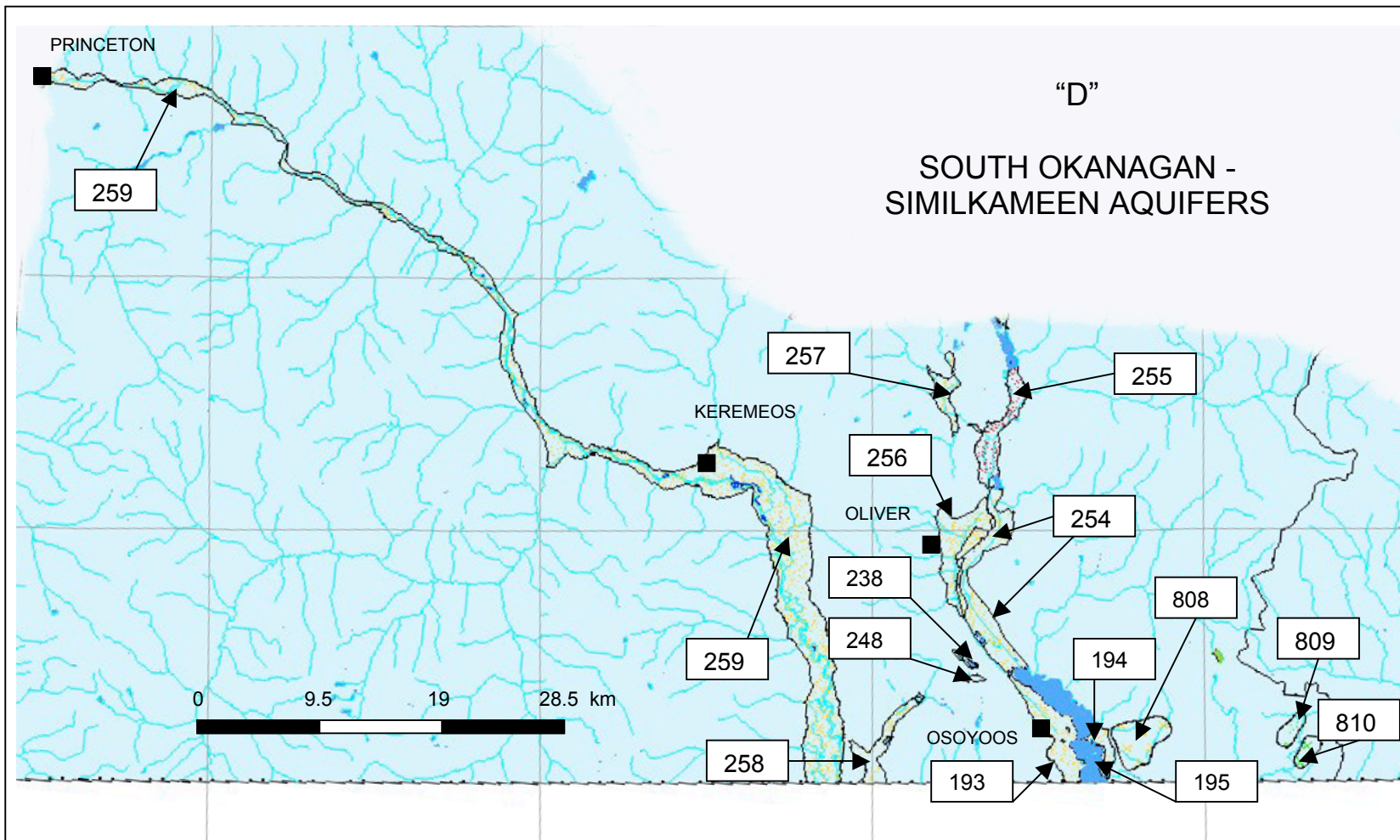


Figure 9. Unconsolidated and bedrock aquifers in the South Okanagan and Similkameen areas. Aquifer identification numbers shown are cross-referenced in Tables 1 and 2. Base map adapted from *BC Water Resources Atlas* (Ministry of Environment, 2006a).

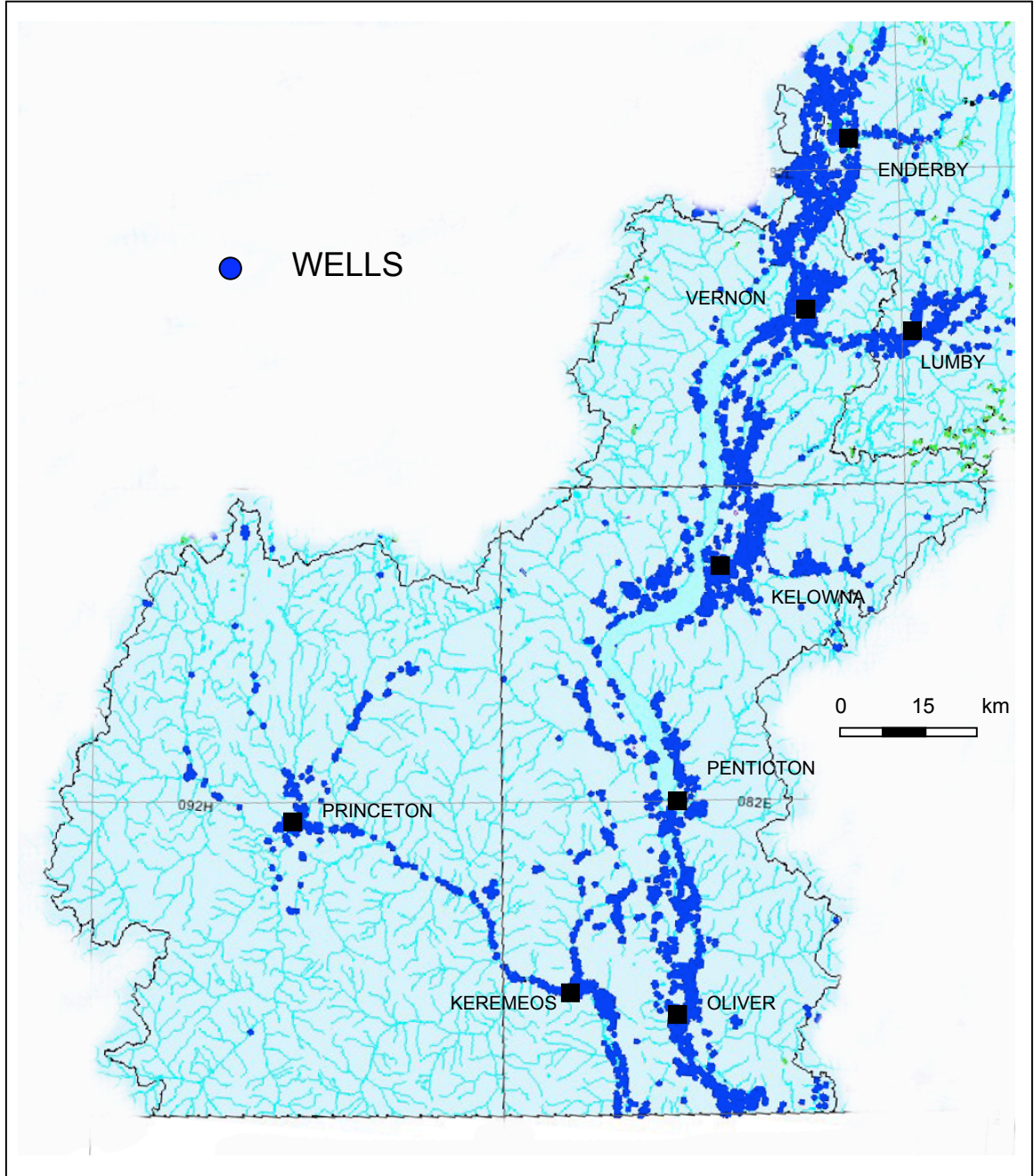


Figure 10. Distribution of reported wells. Adapted from *BC Water Resources Atlas* (Ministry of Environment, 2006a).

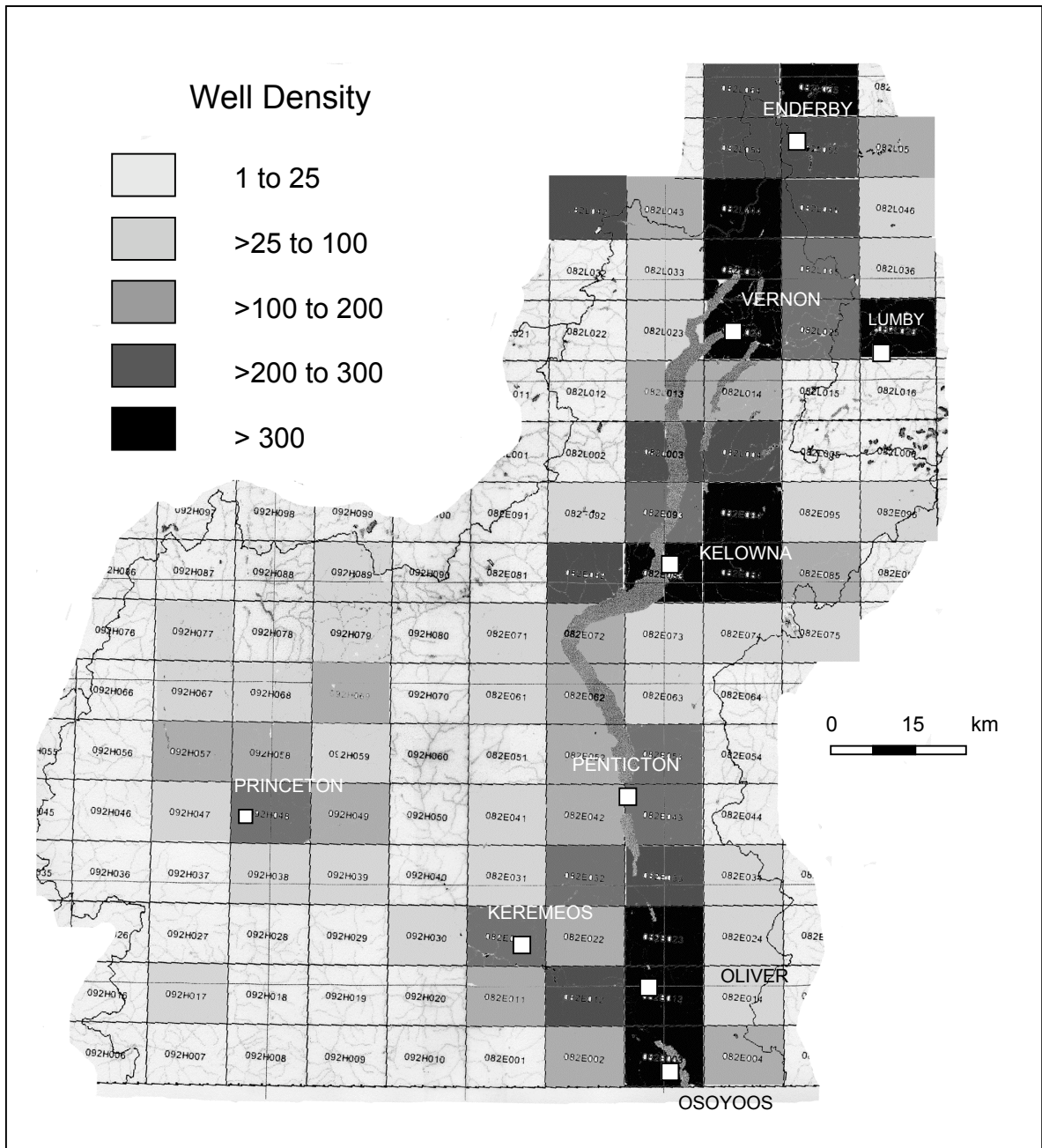


Figure 11. Well density for 1 : 20 000 BCGS mapsheets. Basemap adapted from *BC Water Resources Atlas* (Ministry of Environment, 2006a).

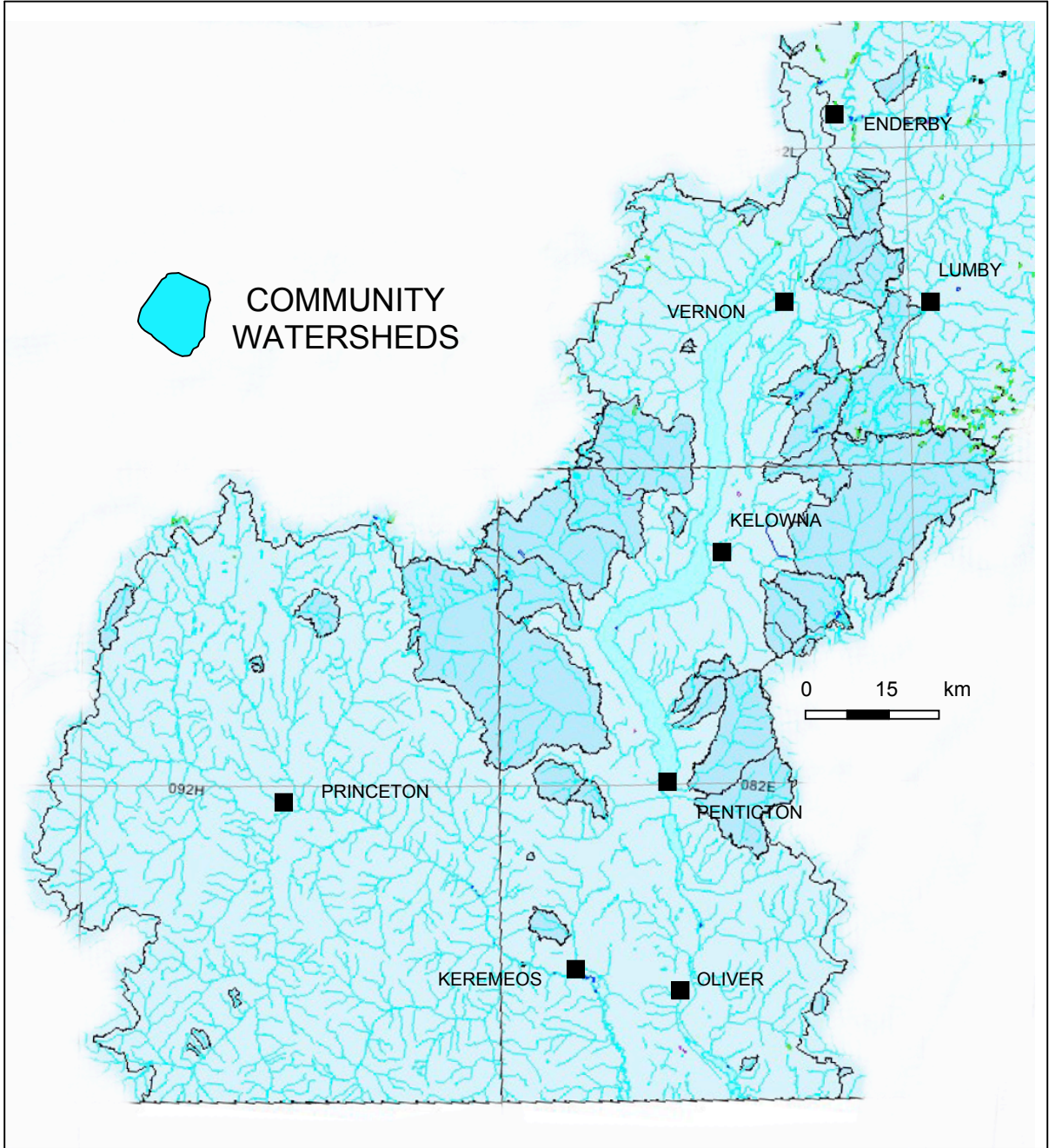


Figure 12. Distribution of community watersheds. Adapted from *BC Water Resources Atlas* (Ministry of Environment, 2006a).

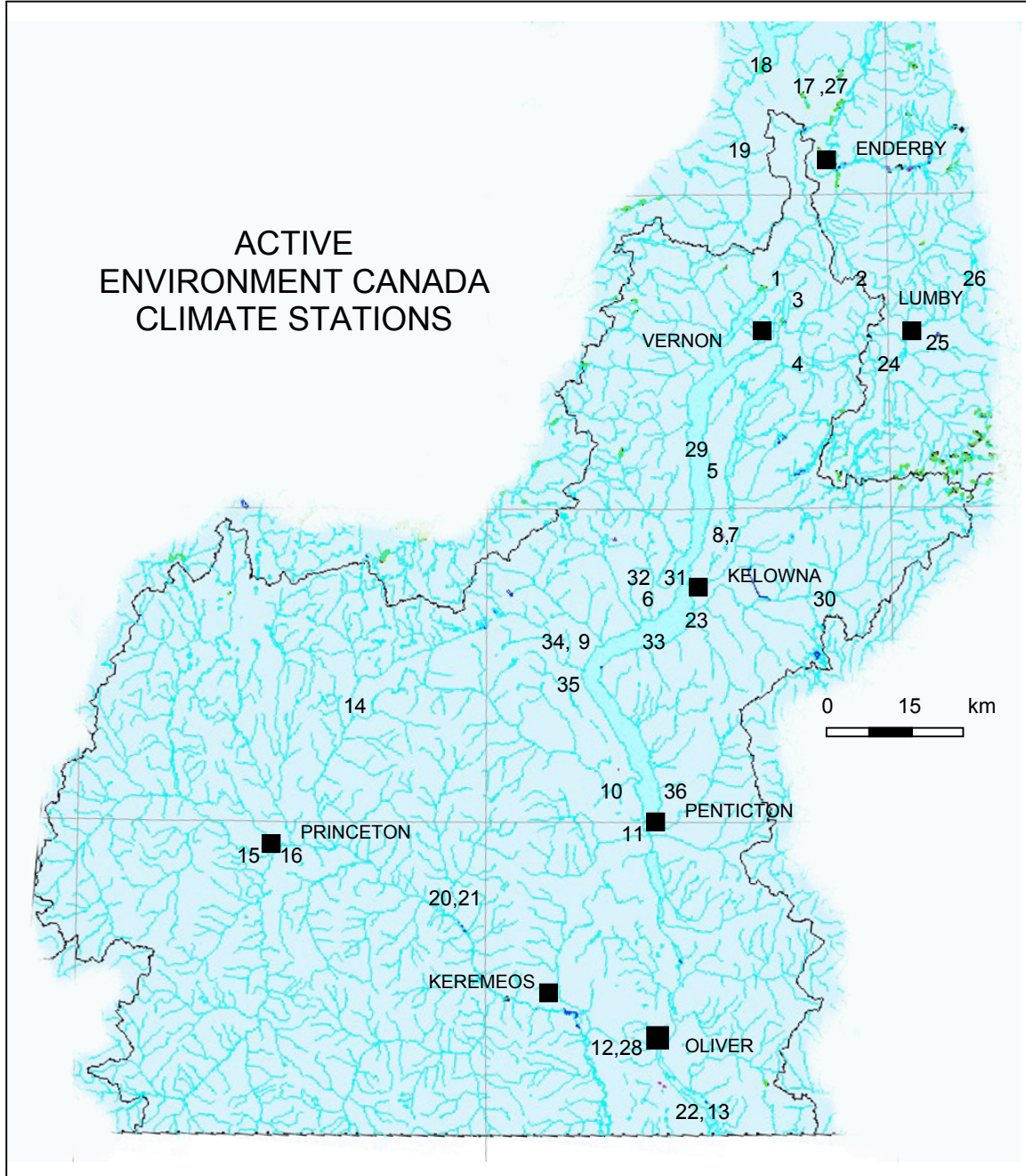


Figure 13. Location of active (2006) Environment Canada climate stations. Site numbers are cross-referenced in Table 3. Base map adapted from *BC Water Resources Atlas* (Ministry of Environment, 2006a). Note site locations are approximate.

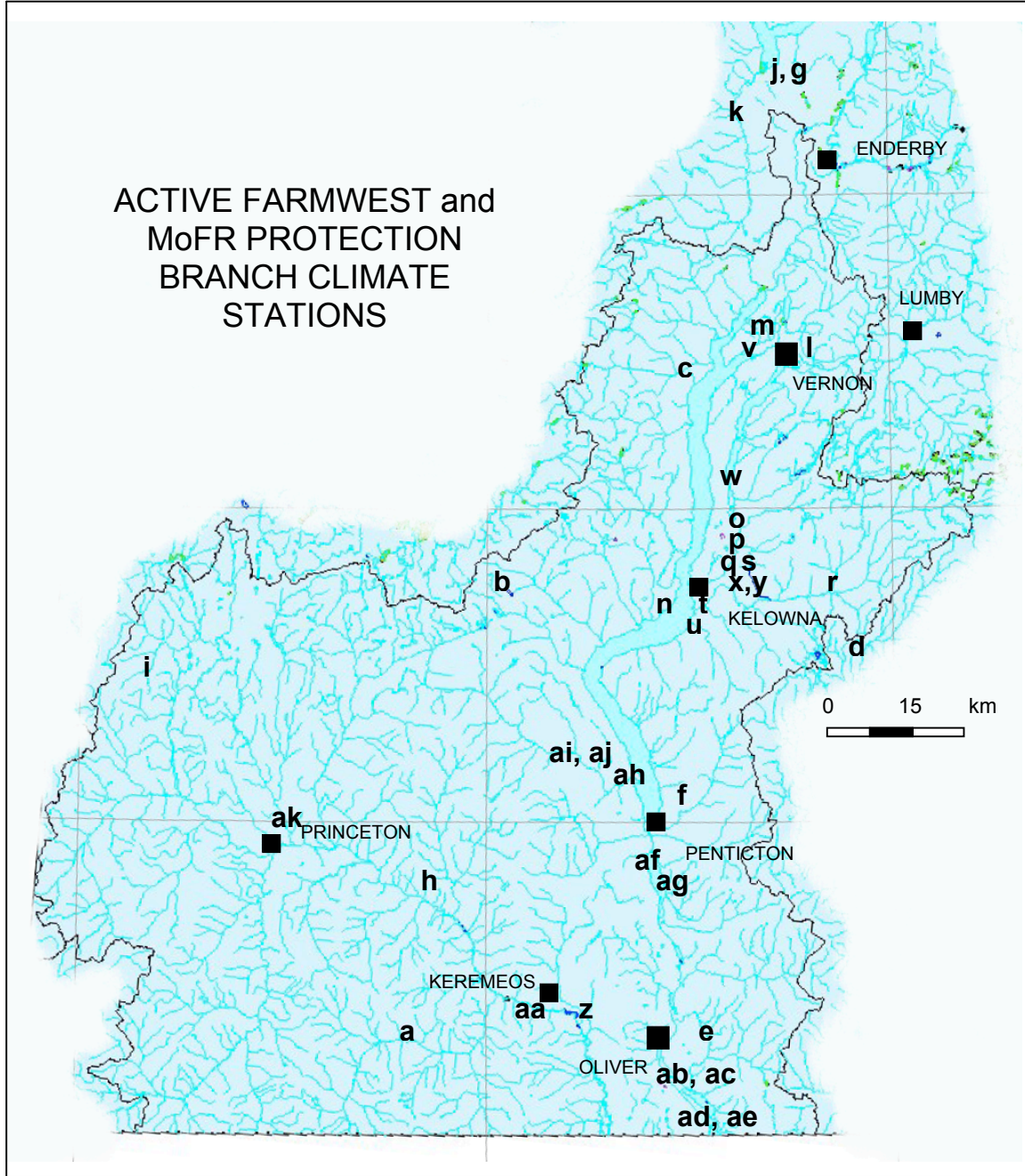


Figure 14. Location of active (2006) Farmwest and Ministry of Forests and Range, Protection Branch climate stations. Note site locations are approximate. Stations are cross-referenced in Table 4. Base map adapted from *BC Water Resources Atlas* (Ministry of Environment, 2006a).

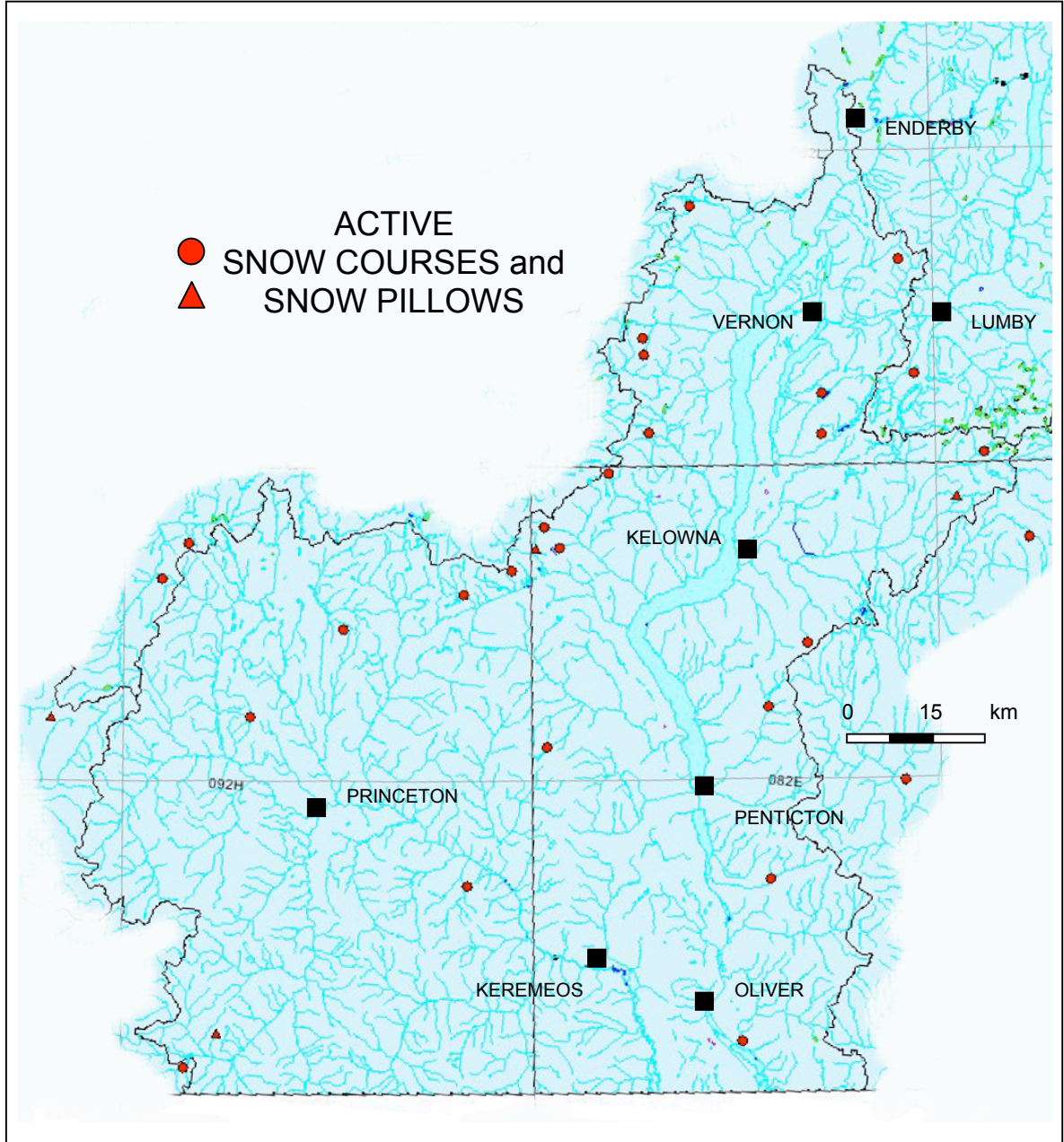


Figure 15. Distribution of active (2006) snow courses and snow pillows.
 Adapted from *BC Water Resources Atlas* (Ministry of Environment, 2006a).

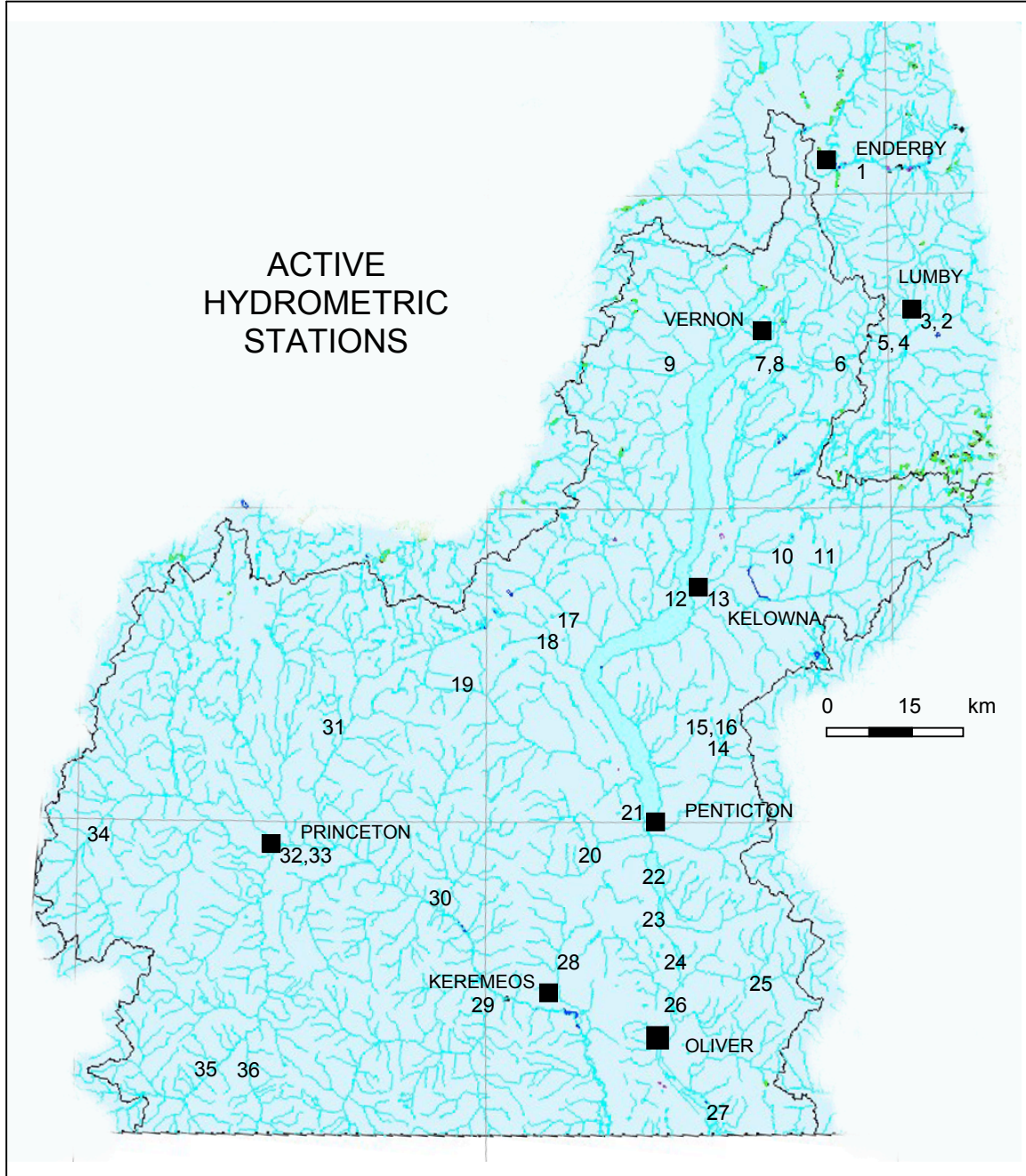


Figure 16. Location of active (2006) British Columbia-Environment Canada hydrometric stations. Sites numbers shown are cross-referenced in Table 5. Base map adapted from *BC Water Resources Atlas* (Ministry of Environment, 2006a).

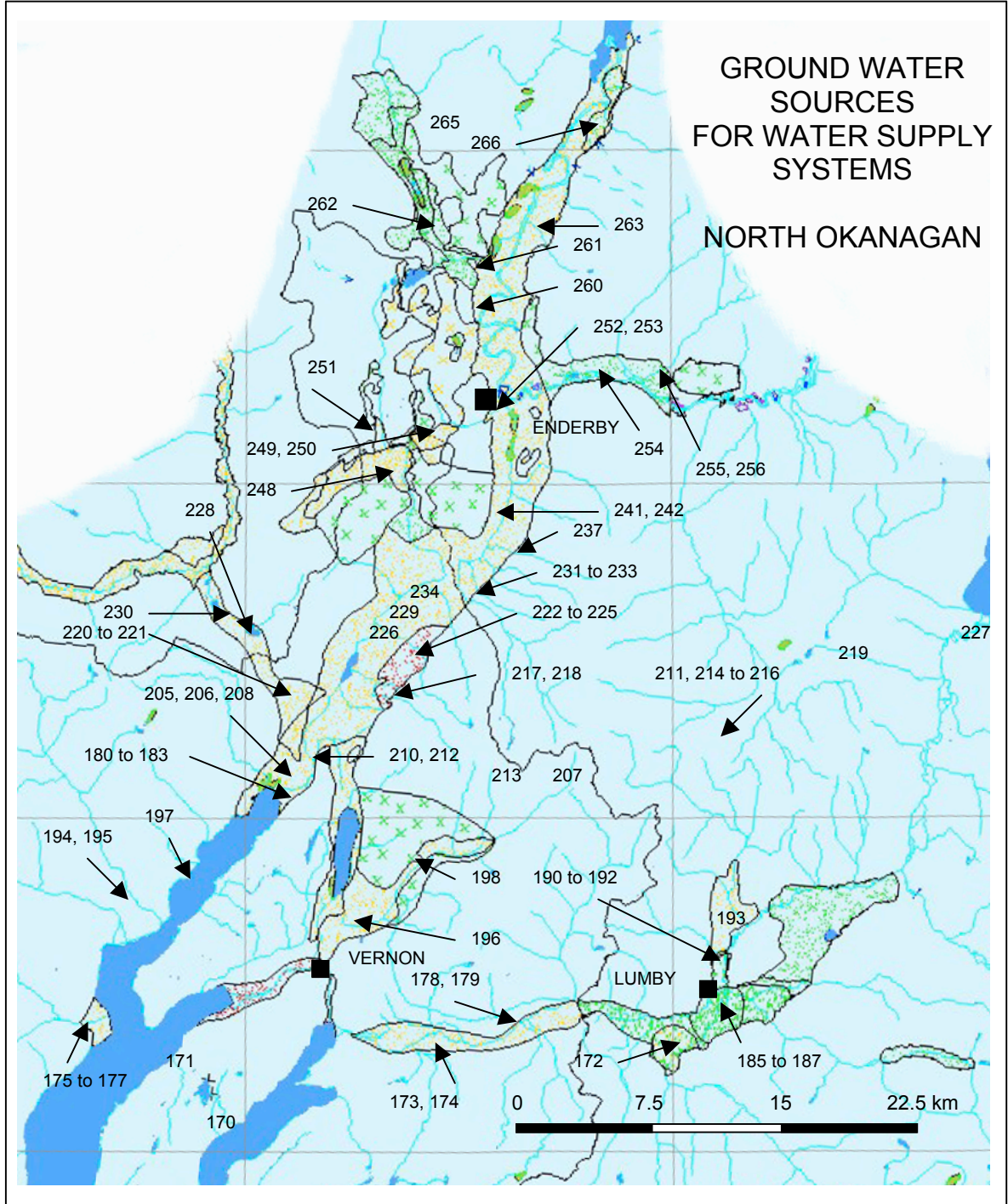


Figure 17. Distribution of ground water sources (wells and springs) for water supply systems in the North Okanagan area including Enderby and Lumby sub-areas. Site numbers are cross-referenced in Table 6. Base map adapted from *BC Water Resources Atlas* (Ministry of Environment, 2006a).

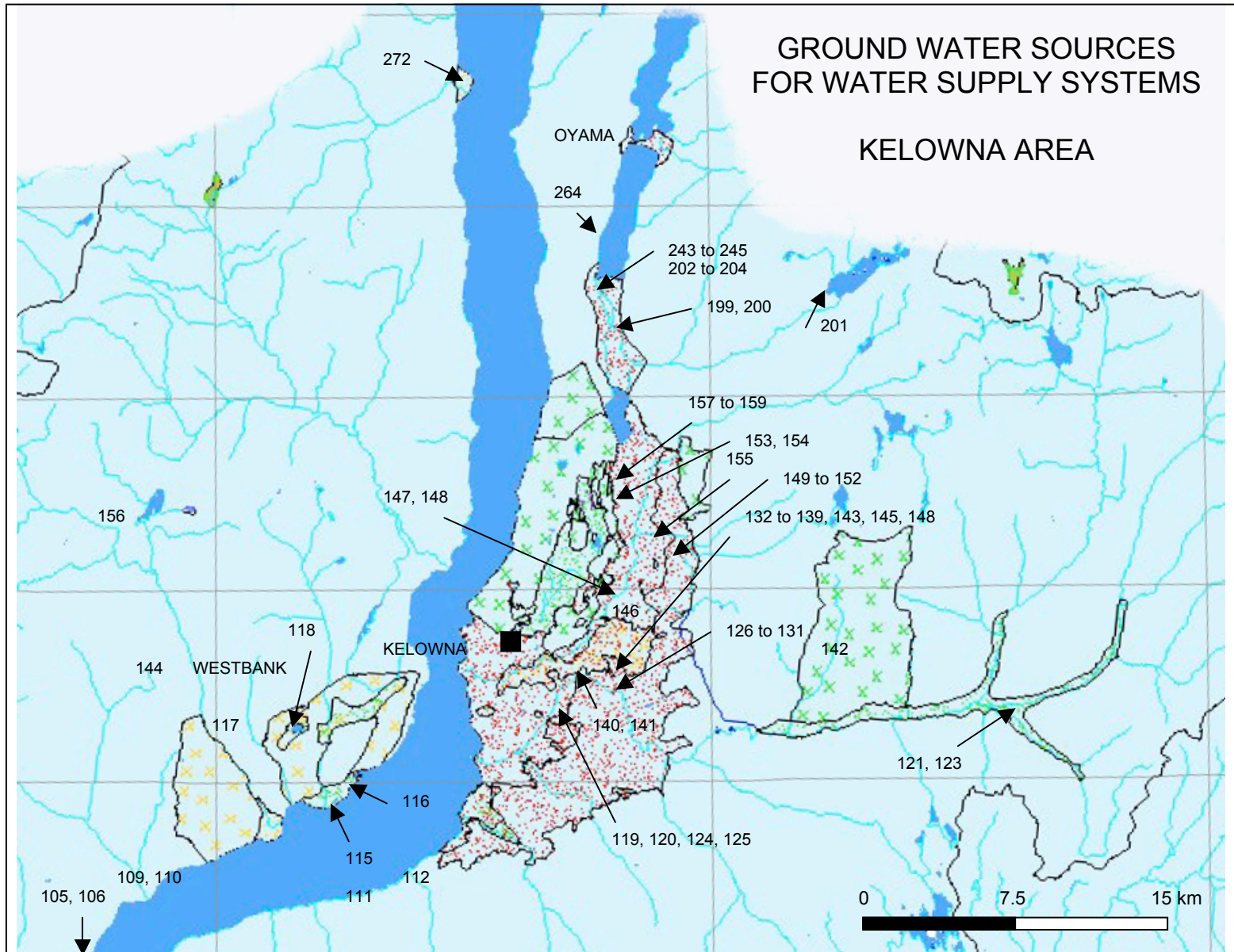


Figure 18. Distribution of ground water sources (wells and springs) for water supply systems in the Kelowna area. Site numbers are cross-referenced in Table 6. Base map adapted from *BC Water Resources Atlas* (Ministry of Environment, 2006a).

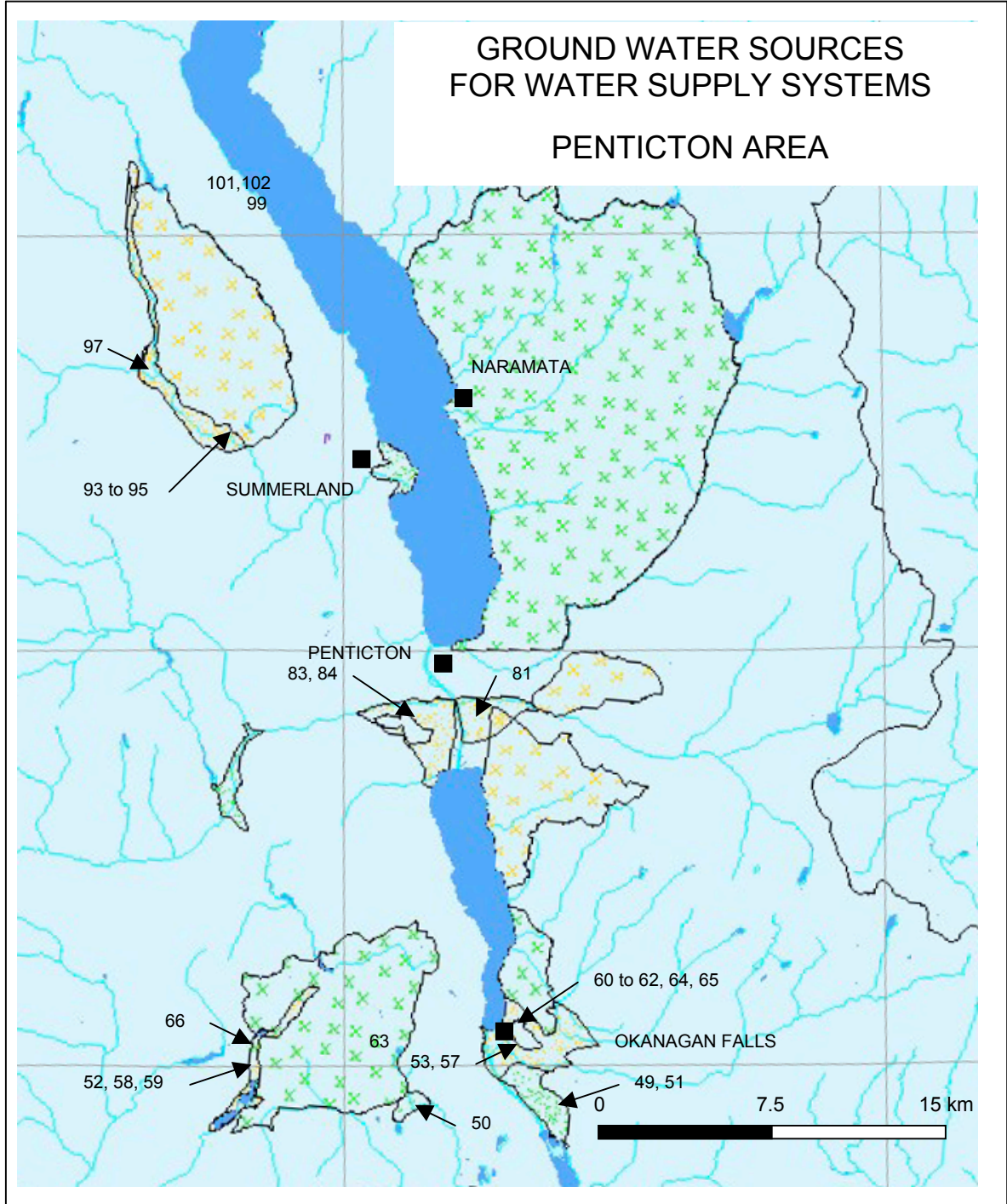


Figure 19. Distribution of ground water sources (wells and springs) for water supply systems in the Penticton area. Site numbers are cross-referenced in Table 6. Base map adapted from *BC Water Resources Atlas* (Ministry of Environment, 2006a).

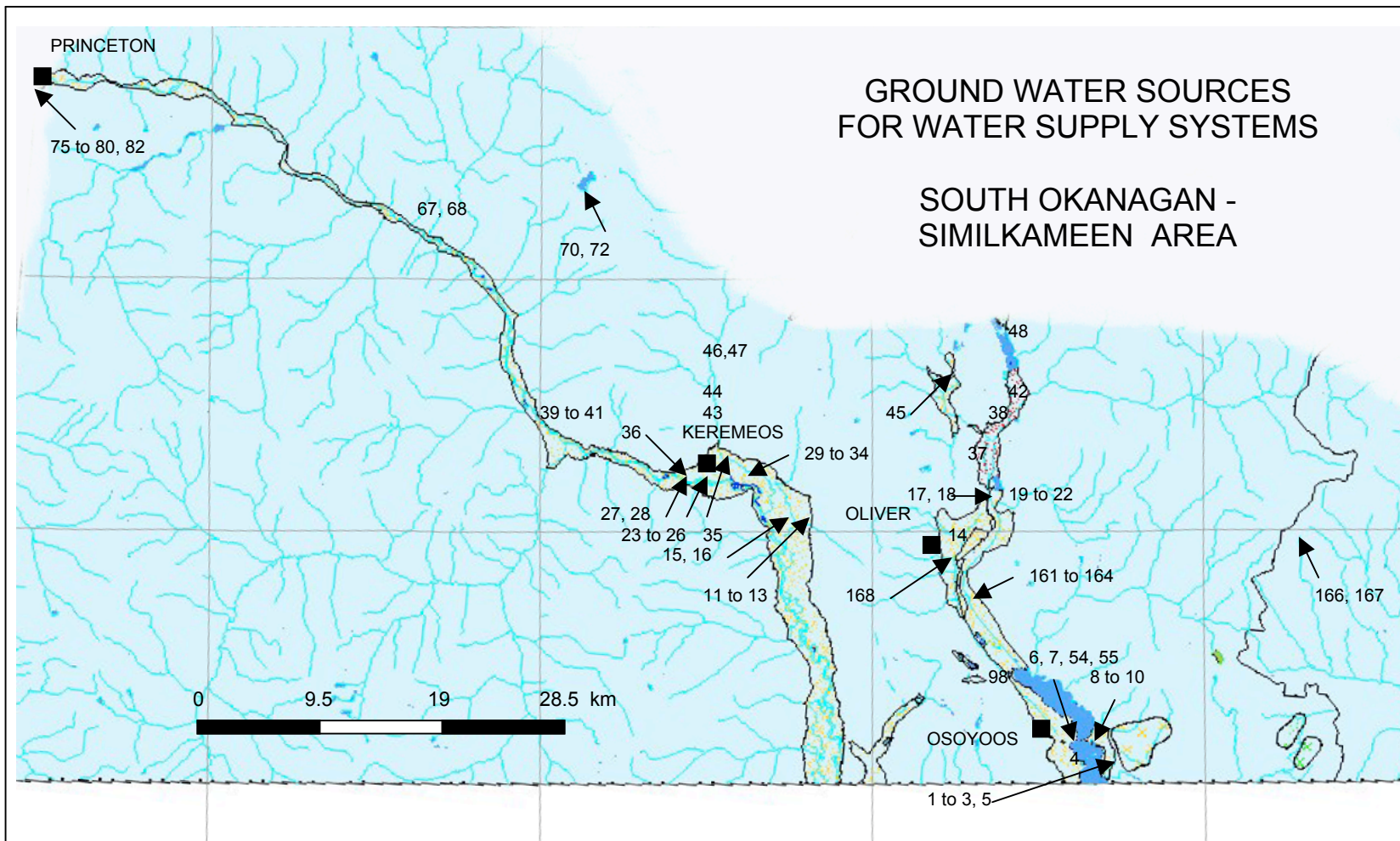


Figure 20. Distribution of ground water sources (wells and springs) for water supply systems in the South Okanagan and Similkameen areas. Site numbers are cross-referenced in Table 6. Base map adapted from *BC Water Resources Atlas* (Ministry of Environment, 2006a).

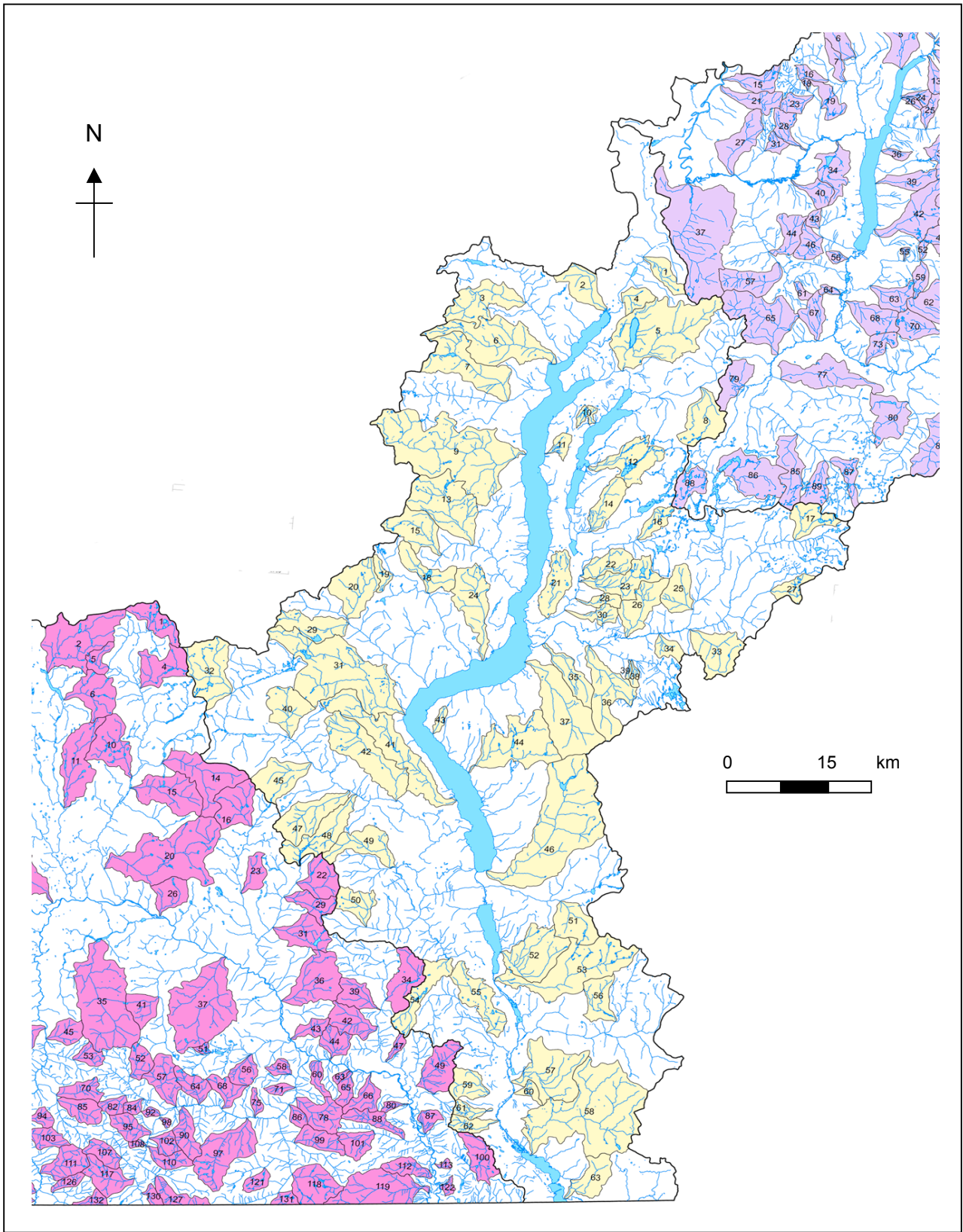


Figure 21. Location of third order watersheds in Okanagan Basin (yellow) and adjacent portions of Similkameen Basin (magenta) and South Thompson Watershed (purple). Base map from Ministry of Environment (2006c).

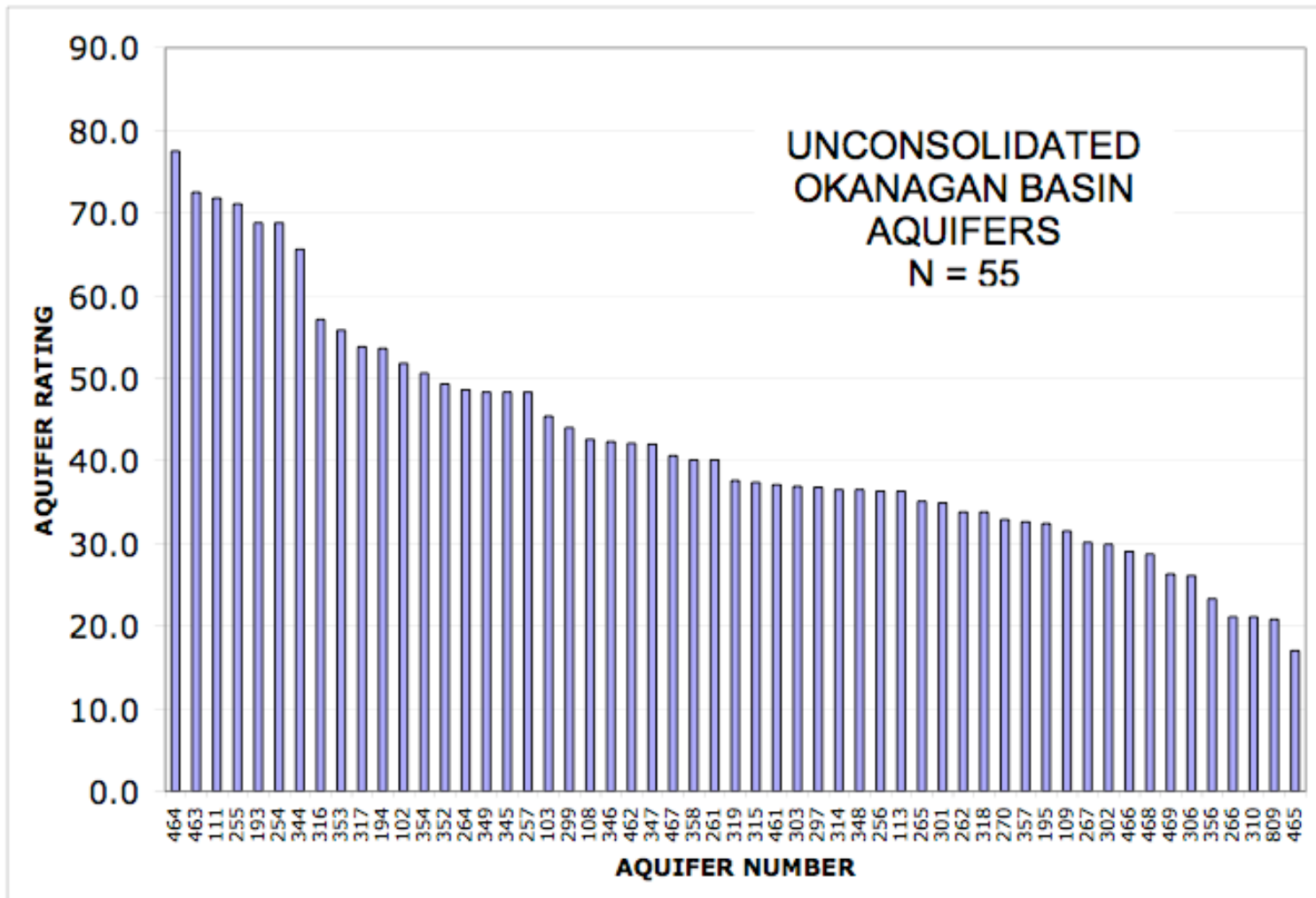


Figure 22. Distribution of aquifer ratings for unconsolidated Okanagan Basin aquifers.

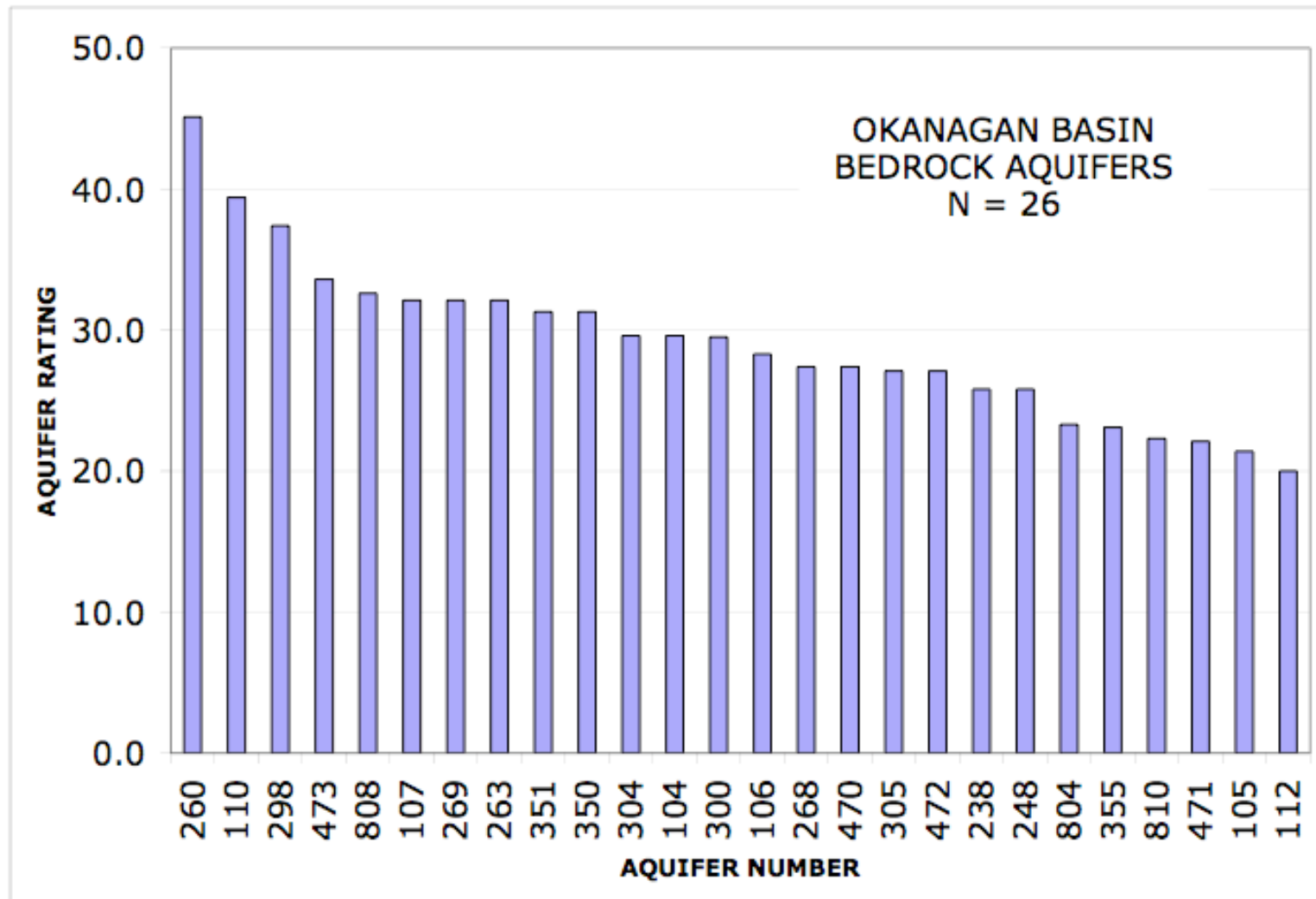


Figure 23. Distribution of aquifer ratings for bedrock Okanagan Basin aquifers.

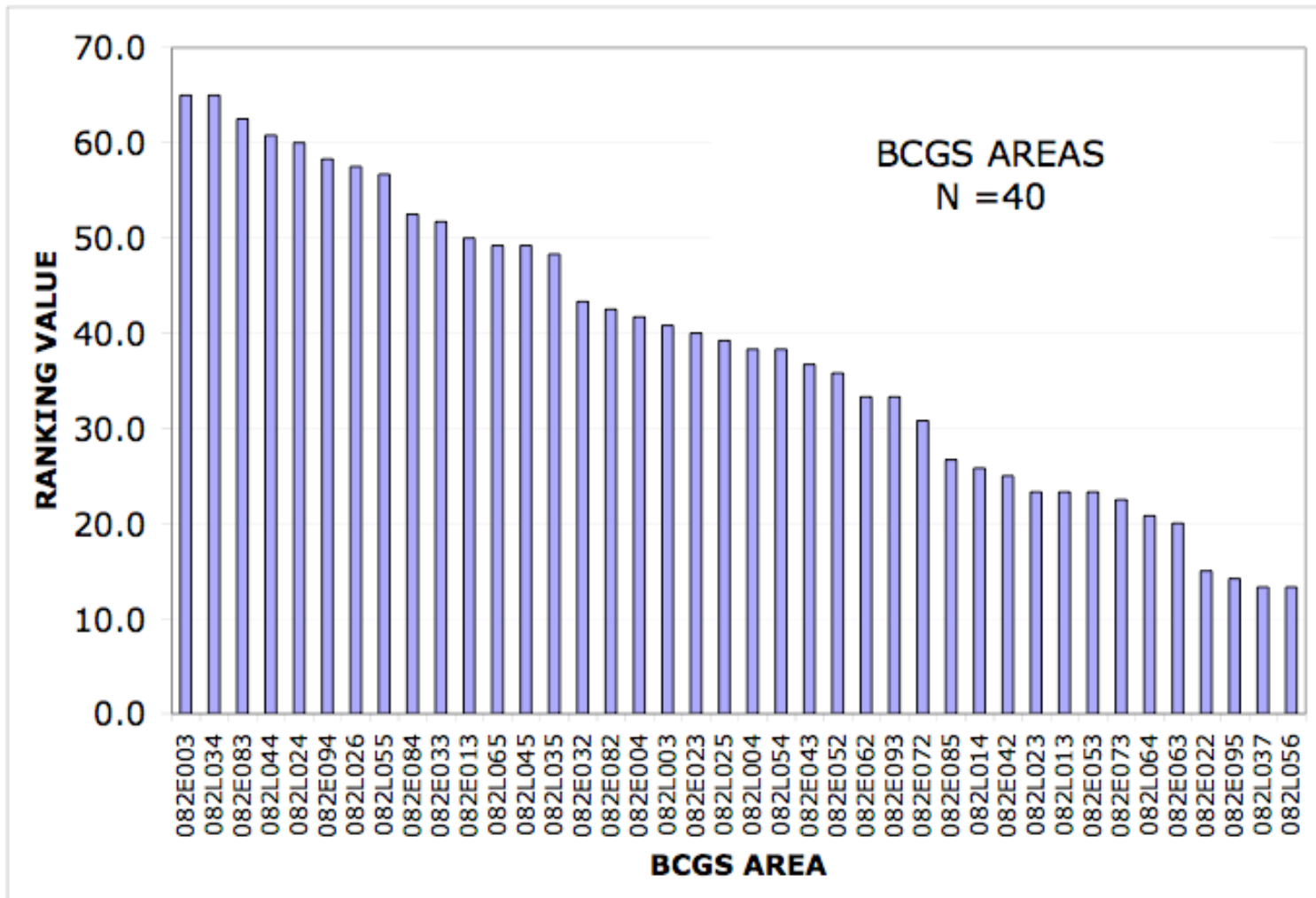


Figure 24. Distribution of BCGS area ratings.

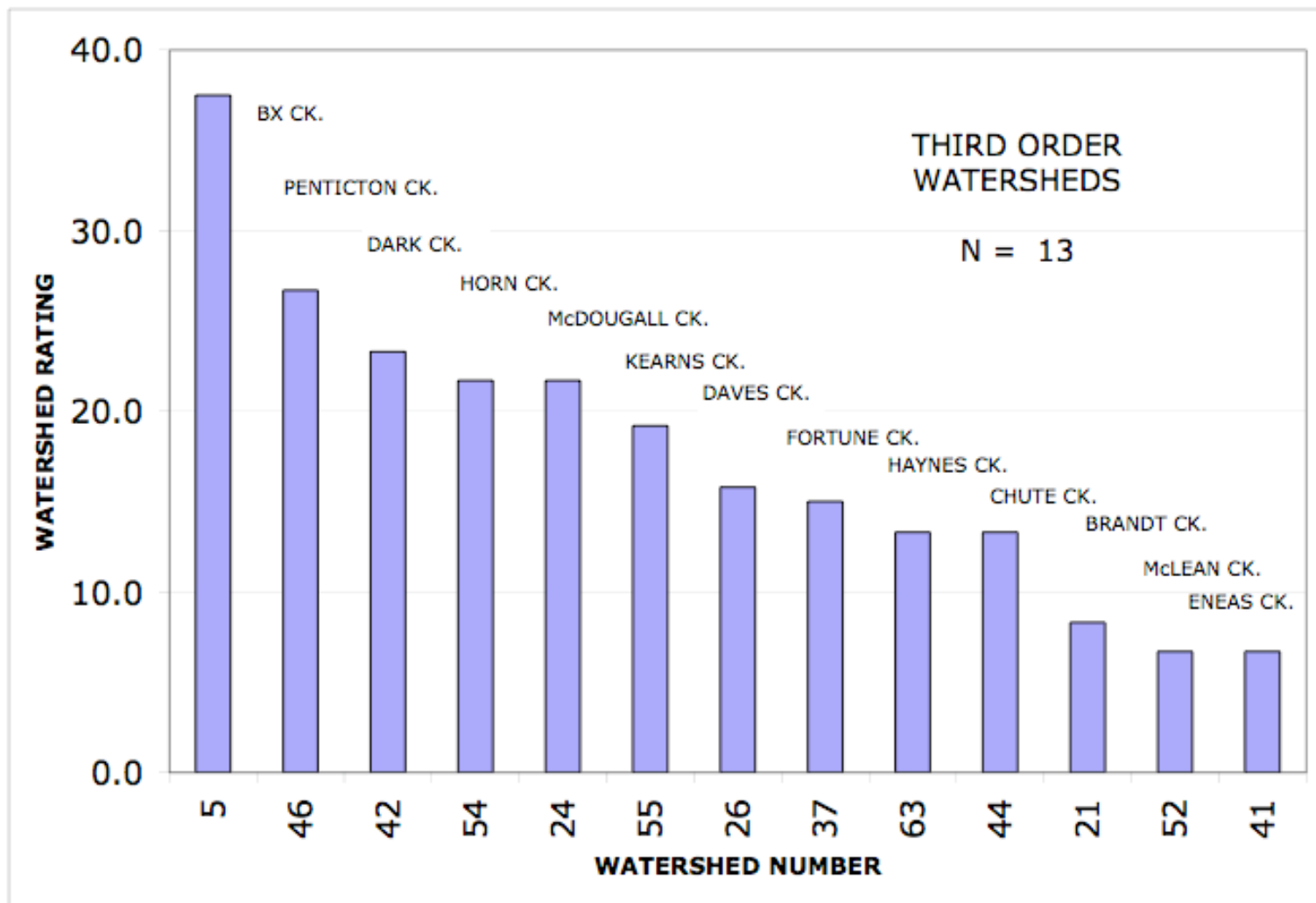


Figure 25. Distribution of third order watershed ratings.

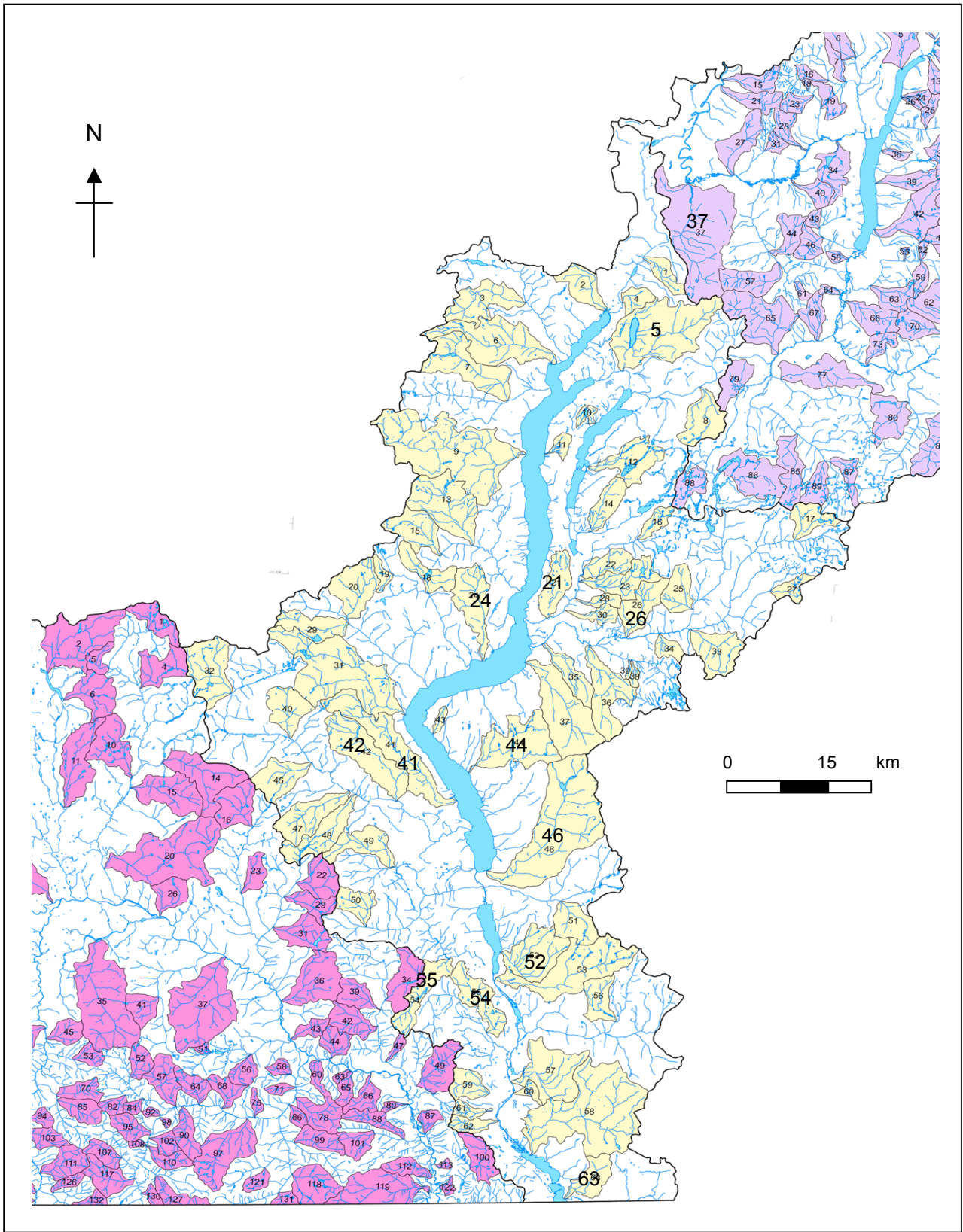


Figure 26. Priority third order watersheds for ground water quantity monitoring in bedrock aquifers. Watershed numbers in bold are cross-referenced in Table 16. Base map from Ministry of Environment (2006c).

Table 1. Classified unconsolidated aquifers in the study area.

Item	Aquifer Number	Aquifer Name	Aquifer Type	Location Description	Level of Development	Intrinsic Vulnerability	Ranking Value	Area km ²	Type of Water Use
1	464		Unconsolidated	Valley bottom S, E, NE of Kelowna	I	C	14	68.0	Multiple
2	463		Unconsolidated	S, E, NE of Kelowna; S & E side of valley	I	C	14	64.2	Multiple
3	254		Unconsolidated	Osoyoos Lake to southwest of Tug Lake	I	A	16	22.3	Multiple
4	255		Unconsolidated	North of Tug Lake to Vaseux Lake	I	A	15	10.7	Multiple
5	344		Unconsolidated	Ellison Lake to Wood Lake	I	B	13	8.7	Multiple
6	353		Unconsolidated	SE of Armstrong	I	A	14	6.8	Multiple
7	347		Unconsolidated		I	C	12	6.0	Multiple
8	346		Unconsolidated	Kalamalka Lake to Vernon	I	A	13	0.91	Multiple
9	468		Unconsolidated	2 km N of Kelowna; Clifton Rd. area	I	C	12	0.15	Drinking Water
10	111		Unconsolidated	Lower Shuswap River Valley	II	C	11	140.0	Multiple
11	259		Unconsolidated	US Border to Princeton	II	A	14	119.8	Multiple
12	349		Unconsolidated	Northeast of Vernon along BX Creek	II	C	8	15.6	Multiple
13	102		Unconsolidated	Hullcar	II	C	11	15.1	Multiple

Item	Aquifer Number	Aquifer Name	Aquifer Type	Location Description	Level of Development	Intrinsic Vulnerability	Ranking Value	Area km ²	Type of Water Use
14	352		Unconsolidated	Coldstream Valley. E of Lavington to W of	II	C	11	15.0	Multiple
15	354		Unconsolidated	O'Keefe Valley and Grandview Flats	II	A	13	14.5	Multiple
16	193	Osoyoos West	Unconsolidated	Osoyoos West	II	A	16	13.3	Multiple
17	103		Unconsolidated	Parkinson Lake	II	A	12	11.7	Drinking Water
18	348		Unconsolidated	Just north of Vernon to north of Swan Lake	II	C	10	11.1	Multiple
19	467		Unconsolidated	East Kelowna and Rutland area	II	A	13	10.3	Multiple
20	264		Unconsolidated	Okanagan Falls and east of Okanagan Falls	II	B	11	9.1	Multiple
21	258		Unconsolidated	Richter Pass	II	C	10	7.6	Multiple
22	319		Unconsolidated	North of Lumby	II	B	11	7.4	Multiple
23	267		Unconsolidated	Shingle Creek	II	B	11	6.8	Drinking Water
24	257		Unconsolidated	Meyers Flat	II	A	14	5.2	Multiple
25	270		Unconsolidated	Ellis Creek	II	B	12	4.7	Multiple
26	265		Unconsolidated	Between OK Falls and Vaseux Lk	II	B	11	4.7	Multiple
27	315		Unconsolidated	Bessette Creek Southwest of Lumby	II	A	10	4.1	Drinking Water
28	194	Osoyoos East	Unconsolidated	Osoyoos East	II	A	15	4.0	Multiple

Table 1

Item	Aquifer Number	Aquifer Name	Aquifer Type	Location Description	Level of Development	Intrinsic Vulnerability	Ranking Value	Area km ²	Type of Water Use
29	306	East of Westbank	Unconsolidated	East of Westbank, parallel to Mt. Boucher	II	C	8	3.6	Drinking Water
30	261		Unconsolidated	Marron Valley northwest of Okanagan Falls	II	B	11	3.1	Multiple
31	357		Unconsolidated	Whiteman Creek Fan	II	A	11	2.6	Multiple
32	345		Unconsolidated	Oyama	II	A	14	1.8	Multiple
33	302	South of Westbank, B.C.	Unconsolidated	South of Westbank adjacent to Okanagan Lk.	II	B	10	1.6	Drinking Water
34	301	Shannon Lake	Unconsolidated	Shannon Lake	II	B	10	1.1	Drinking Water
35	358		Unconsolidated	Fintry Fan, Short Creek	II	A	11	0.95	Drinking Water
36	195	Osoyoos East Confined	Unconsolidated	Osoyoos East	II	B	10	0.53	Drinking Water
37	109		Unconsolidated	Highway 97B	III	C	10	25.4	Multiple
38	317		Unconsolidated	Lumby	III	C	9	25.2	Multiple
39	316		Unconsolidated	Lumby	III	A	9	23.6	Drinking Water
40	318		Unconsolidated	Northeast of Lumby	III	C	9	21.2	Multiple
41	256		Unconsolidated	Testalinden Creek to Reed Creek	III	C	9	15.9	Drinking Water
42	461		Unconsolidated	Upper Mission Creek	III	B	9	15.1	Drinking Water
43	469		Unconsolidated	Glenmore Valley, N. of Kelowna	III	C	9	12.4	Multiple
44	113		Unconsolidated	Ashton Creek	III	C	9	11.5	Multiple

Table 1

Item	Aquifer Number	Aquifer Name	Aquifer Type	Location Description	Level of Development	Intrinsic Vulnerability	Ranking Value	Area km ²	Type of Water Use
45	108		Unconsolidated	4 kilometres southeast of Salmon Arm	III	A	11	10.8	Multiple
46	299	Fauder	Unconsolidated	Fauder (Meadow Valley)	III	C	10	7.8	Multiple
47	314		Unconsolidated	Lumby	III	C	10	6.4	Multiple
48	462		Unconsolidated	1 km south of Mission Ck	III	A	9	3.7	Drinking Water
49	356		Unconsolidated	Mouth of Deep Creek	III	B	7	3.4	Multiple
50	310		Unconsolidated	Creighton Valley, Southeast of Lumby	III	B	8	3.4	Domestic
51	809		Unconsolidated		III	C	7	2.9	
52	266		Unconsolidated	Stafford Creek southwest of Penticton	III	C	8	2.7	Drinking Water
53	297		Unconsolidated	Summerland, Trout Creek	III	B	11	2.6	Drinking Water
54	303	Southeast of Westbank	Unconsolidated	Southeast of Westbank adj. to Okanagan Lk.	III	B	8	2.1	Drinking Water
55	262		Unconsolidated	White Lake Basin 35 km south of Penticton	III	A	9	1.2	Non-Drinking Water
56	465		Unconsolidated	S. Kelowna; possibly E. to Rutland	III	C	5	0.32	
57	466		Unconsolidated	6 km SE of Kelowna	III	A	10	0.23	Drinking Water

Note: Aquifers in this table have been sorted by level of development and size of area.

Table 2. Classified bedrock aquifers in the study area.

Item	Aquifer Number	Aquifer Name	Aquifer Type	Location Description	Level of Development	Intrinsic Vulnerability	Ranking Value	Area km ²	Type of Water Use
1	298	Naramata	Bedrock	Naramata	II	B	10	203	Domestic
2	300	Faulder	Bedrock	Faulder (Eneas Creek)	II	C	12	55.1	Domestic
3	260		Bedrock	Marron Valley northwest of Okanagan Falls	II	B	11	54.7	Domestic
4	473		Bedrock	Mission, Daves & Cardinal Ck area	II	C	8	39.4	Domestic
5	268		Bedrock	Penticton East and east shore of Skaha Lk.	II	B	10	26.0	Domestic
6	305	Westbank	Bedrock	West side of Okanagan Lk, west of Kelowna	II	B	9	23.3	Domestic
7	351		Bedrock	NE of Vernon and to the north of BX Creek	II	C	9	21.8	Multiple
8	107		Bedrock	Gardom Lake to Enderby	II	B	9	21.4	Domestic
9	304	Westbank	Bedrock	West side of Okanagan Lk, west of Kelowna	II	B	9	19.4	Domestic
10	110		Bedrock	Grandview Bench	III	B	8	13.5	Domestic
11	808		Bedrock	East of Osoyoos, Anarchist Mountain	II	B	11	10.8	Multiple
12	269		Bedrock	Ellis Creek	II	B	9	10.5	Domestic

Item	Aquifer Number	Aquifer Name	Aquifer Type	Location Description	Level of Development	Intrinsic Vulnerability	Ranking Value	Area km ²	Type of Water Use
13	263		Bedrock	North of Okanagan Falls/ shore of Skaha Lk	II	A	9	8.4	Domestic
14	804		Bedrock	Shuswap River-east of Enderby	II	C	7	5.7	Domestic
15	350		Bedrock	NE of Vernon and to the south of BX Creek	II	C	9	4.4	Multiple
16	810		Bedrock	East of Osoyoos	II	C	6	2.8	Domestic
17	104		Bedrock	1 kilometre northwest of Hullcar	II	B	9	1.0	Domestic
18	106		Bedrock	Southwest of Leduc Creek	III	C	7	16.9	Domestic
19	355		Bedrock	West of Deep Creek, NW of Armstrong	III	C	6	15.1	Domestic
20	471		Bedrock	West of Ellison Lake	III	B	9	7.4	Multiple
21	472		Bedrock	Southeast of Ellison Lake	III	B	9	4.1	Domestic
22	470		Bedrock	Kelowna north to Ellison Lake	III	B	10	3.7	Multiple
23	112		Bedrock	2 kilometres northeast of Enderby	III	C	7	2.7	Domestic
24	105		Bedrock	Hillcrest	III	B	6	1.7	Domestic
25	238		Bedrock	Spotted Lake, Osoyoos	III	C	7	0.62	Domestic
26	248		Bedrock	Spotted Lake, Osoyoos	III	C	7	0.52	Domestic

Note: Aquifers in this table have been sorted by level of development and size of area.

Table 3. Active (2006) Environment Canada climate stations.

Site No.	Station No.	Station Name	Elevation (m)	Latitude	Longitude	BCGS Area
1	1128583	Vernon North	512.0	50° 20' N	119° 16' W	082L034
2	1128584	Vernon Silver Star Lodge	1572.0	50° 21' N	119° 3' W	082L035
3	1128586	Vernon Swan Lake	490.0	50° 19' N	119° 16' W	082L034
4	1128581	Vernon CS	482.0	50° 13' N	119° 11' W	082L025
5	1128958	Winfield	502.9	50° 2' N	119° 25' W	082L003
6	1123993	Kelowna Quails Gate	417.0	49° 50' N	119° 34' W	082E083
7	1123965	Kelowna AWOS	429.5	49° 57' N	119° 22' W	082E094
8	11239R0	Kelowna MWSO	456.0	49° 57' N	119° 24' W	082E093
9	1126070	Peachland	345.0	49° 46' N	119° 43' W	082E072
10	112G8L1	Summerland CS	454.2	49° 33' N	119° 38' W	082E052
11	1126150	Penticton A	344.1	49° 27' N	119° 36' W	082E042
12	1125760	Oliver	315.2	49° 10' N	119° 33' W	082E013
13	1125852	Osoyoos CS	282.9	49° 1' N	119° 26' W	082E003
14	1123721	Jellicoe	929.0	49° 40' N	120° 19' W	092H069
15	1126510	Princeton A	700.4	49° 28' N	120° 30' W	092H048
16	112FN0M	Princeton CS	700.4	49° 28' N	120° 30' W	092H048
17	1166R45	Salmon Arm A	527.3	50° 40' N	119° 13' W	082L064
18	116FRMN	Salmon Arm CS	350.5	50° 42' N	119° 17' W	082L074
19	1167337	Silver Creek	419.0	50° 33' N	119° 21' W	082L054
20	1123360	Hedley	517	49.357	-120.077	092H040
21	1123390	Hedley NP Mine	1707	49.369	-120.022	092H040
22	1125865	Osoyoos West	297	49.032	-119.443	082E003
23	1123982	Kelowna Dav-Spiers Road	375	49.851	-119.445	082E083
24	1125570	Nicklen Lake	1317	50.133	-119	082L015
25	1164729	Lumby	500	50.236	-118.956	082L026
26	1164730	Lumby Sigalet Road	560	50.367	-118.767	082L037
27	1166945	Salmon Arm	506	50.7	-119.25	082L074
28	1125766	Oliver STP	297	49.179	-119.545	082E013
29	1125700	Okanagan Centre	370	50.056	-119.462	082L003
30	1123750	Joe Rich Creek	875	49.857	-119.126	082E085
31	1123970	Kelowna A	430	49.956	-119.378	082E094
32	1123990	Kelowna Lakeview	525	49.864	-119.553	082E083
33	1123981	Kelowna Cedar creek	375	49.789	-119.541	082E073
34	1126071	Peachland	351	49.783	-119.715	082E072
35	1126078	Peachland Greata Ranch	398	49.7	-119.741	082E072
36	1125381	Naramata	411	49.551	-119.571	082E053

Data from: http://www.climate.weatheroffice.ec.gc.ca/Welcome_e.html for Sites 1 to 19.

and http://scitech.pyr.ec.gc.ca/climhydro/mainContent/main_e.asp?province=bc for Sites 20 to 36.

Note differences in data format.

Site locations shown in Figure 13.

Table 4. Active (2006) Farmwest and Ministry of Forests and Range, Protection Branch climate stations.

Site No.	Agency	Station Name	Elevation (m)	Latitude	Longitude	BCGS Area
a	MoFR	Ashnola	780	50 40 24	120 28 54	092H019
b	MoFR	Brenda Mines	1493	49 52 06	119 59 36	082E081
c	MoFR	Fintry	670	50 12 24	119 28 48	082L013
d	MoFR	Ida Bell III	1300	49 46 02	119 07 27	082E075
e	MoFR	McCuddy	1067	49 08 54	119 24 54	082E013
f	MoFR	Penticton RS	427	49 31 06	119 33 12	082E053
g	MoFR	Salmon Arm	527	50 41 06	119 14 06	082L064
h	MoFR	Stemwinder	579	49 22 48	120 09 12	092H040
l	MoFR	Thynne	1524	49 42 54	120 52 00	092H076
j	FW	Salmon Arm	-	-	-	082L064
k	FW	Silver Creek	-	-	-	082L064
l	FW	Vernon	-	-	-	082L024
m	FW	Vernon North	-	-	-	082L034
n	FW	Westbank	-	-	-	082E082,083
o	FW	Winfield North	-	-	-	082L003,004
p	FW	Winfield South	-	-	-	082L003,004
q	FW	Kelowna Airport	-	-	-	082E094
r	FW	Belgo	-	-	-	082E085
s	FW	Ellison	-	-	-	082E093,094
t	FW	Kelowna East	-	-	-	082E083
u	FW	Kelowna South	-	-	-	082E083
v	FW	Okanagan Landing	-	-	-	082L024
w	FW	Oyama	-	-	-	082L014
x	FW	Glenmore	-	-	-	082E083,093
y	FW	Rutland	-	-	-	082L083
z	FW	Cawston	-	-	-	082E012,022
aa	FW	Keremeos	-	-	-	082E021
ab	FW	Oliver North	-	-	-	082E013
ac	FW	Oliver South	-	-	-	082E013
ad	FW	Osoyoos East	-	-	-	082E003
ae	FW	Osoyoos West	-	-	-	082E003
af	FW	Penticton Airport	-	-	-	082E042
ag	FW	Penticton South	-	-	-	082E043
ah	FW	Summerland	-	-	-	082E052
ai	FW	Summerland North	-	-	-	082E052
aj	FW	Summerland South	-	-	-	082E052
ak	FW	Princeton Airport	-	-	-	092H048

Farmwest (FW) data from: <<http://www.farmwest.com/index.cfm>> ; location coordinates not reported. Includes some Environment Canada stations.

MoFR Protection Branch data from: <<http://www.for.gov.bc.ca/protect/weather/>>

Site locations shown in Figure 14.

Table 5. Active (2006) British Columbia-Environment Canada hydrometric stations.

Site No.	Station No.	Station Name	Elevation (m)	Latitude	Longitude	BCGS Area
1	08LC002	Shuswap River Near Enderby	N/A	50.543	-119.013	082L055
2	08LC003	Shuswap River Near Lumby	N/A	50.304	-118.817	082L036
3	08LC039	Besette Creek Above Beaverjack Creek	N/A	50.298	-118.858	082L026
4	08LC040	Vance Creek Below Deafies Creek	N/A	50.285	-118.947	082L026
5	08LC042	Besette Creek Above Lumby Creek	N/A	50.253	-118.961	082L026
6	08NM142	Coldstream Creek Above Municipal Intake	N/A	50.258	-119.082	082L025
7	08NM065	Vernon Creek at Outlet of Kalamalka Lake	N/A	50.237	-119.265	082L024
8	08NM143	Kalamalka Lake at Vernon Pumphouse	N/A	50.23	-119.274	082L024
9	08NM174	Whiteman Creek above Bouleau Creek	N/A	50.213	-119.539	082L023
10	08NM145	Bulman Creek at the Mouth	N/A	50.005	-119.252	082L004
11	08NM232	Belgo Creek below Hilda Creek	N/A	49.999	-119.071	082E084
12	08NM083	Okanagan Lake at Kelowna	N/A	49.887	-119.497	082E083
13	08NM116	Mission Creek near East Kelowna	N/A	49.878	-119.413	082E083
14	08NM242	Dennis Creek near 1780 metre contour	N/A	49.624	-119.381	082E064
15	08NM241	Two Forty-One Creek near Penticton	N/A	49.649	-119.392	082E064
16	08NM240	Two Forty-One Creek near Penticton	N/A	49.651	-119.397	082E064
17	08NM041	Trepanier Creek near Peachland	N/A	49.826	-119.787	082E082
18	08NM173	Greata Creek near the mouth	N/A	49.794	-119.851	082E071
19	08NM134	Camp Creek at mouth near Thirsk	N/A	49.725	-120.008	092H080
20	08NM037	Shatford Creek near Penticton	N/A	49.416	-119.749	082E042
21	08NM050	Okanagan River at Penticton	N/A	49.499	-119.615	082E042,052
22	08NM084	Skaha Lake at Okanagan Falls	N/A	49.409	-119.574	082E043
23	08NM002	Okanagan River at Okanagan Falls	N/A	49.342	-119.578	082E033
24	08NM243	Vaseux Lake near the outlet	N/A	49.274	-119.523	082E023
25	08NM171	Vaseux Creek above Solco Creek	N/A	49.249	-119.321	082E024
26	08NM085	Okanagan River near Oliver	N/A	49.115	-119.564	082E013
27	08NM113	Osoyoos Lake near Osoyoos	N/A	49.029	-119.46	082E003
28	08NL045	Keremeos Creek below Willis intake	N/A	49.259	-119.826	082E021
29	08NL004	Ashnola River near Keremeos	N/A	49.207	-119.99	082E021
30	08NL038	Similkameen River near Hedley	N/A	49.379	-120.152	092H040
31	08NL039	Siwash Creek Near Princeton	N/A	49.662	-120.334	092H069
32	08NL024	Tulameen River at Princeton	N/A	49.458	-120.518	092H048
33	08NL007	Similkameen River at Princeton	N/A	49.458	-120.502	092H048
34	08NL071	Tulameen River Below Vuich Creek	N/A	49.465	-120.977	092H046
35	08NL070	Similkameen River above Goodfellow Creek	N/A	49.1	-120.665	092H017
36	08NL069	Pasayten River above Calcite Creek	N/A	49.099	-120.577	092H018

Data from: Environment Canada website:

<http://scitech.pyr.ec.gc.ca/climhydro/mainContent/main_e.asp?province=bc>

Site locations shown in Figure 16.

Table 6. Listing of ground water supply system sources in the study area.

Item	BCGS Area	NORTHING	EASTERLY	Elevation (m)	Description of System/Source
1	82E003	49 0.5370	-119 26.3248	281	Tamri Motel & Campground Well
2	82E003	49 0.5763	-119 26.2051	282	Cabana Beach Campground Well No.1
3	82E003	49 0.5834	-119 26.3046	279	Cabana Beach Campground Irrigation Well
4	82E003	49 0.6464	-119 27.2056	281	Idle-O Apartments-Well in concrete vault
5	82E003	49 0.8892	-119 26.1254	282	Walton's Mountain Resort Well
6	82E003	49 1.6342	-119 28.0865	279	Town of Osoyoos-Well No.1
7	82E003	49 1.6962	-119 27.7722	280	Town of Osoyoos-Well No. 8
8	82E003	49 1.8808	-119 26.6744	279	Town of Osoyoos-Well No. 3
9	82E003	49 1.9161	-119 26.8904	280	Town of Osoyoos-Well No.5
10	82E003	49 1.9206	-119 26.8951	280	Town of Osoyoos-Well No.4
11	82E012	49 10.4743	-119 44.1763	418	Fairview Heights Irrigation District - Gardener site - Well G1
12	82E012	49 10.4744	-119 44.2544	415	Fairview Heights Irrigation District - Gardener site - Well G3
13	82E012	49 10.4749	-119 44.2136	413	Fairview Heights Irrigation District - Gardener site - Well G2
14	82E013	49 10.5105	-119 33.4687	302	Town of Oliver - Rockcliffe Well
15	82E012	49 10.5610	-119 44.6934	410	Fairview Heights Irrigation District - McDonald's Site - Well M2
16	82E012	49 10.5686	-119 44.6956	407	Fairview Heights Irrigation District - McDonald's Site - Well M1
17	82E013	49 11.1834	-119 32.9485	297	Town of Oliver-CPR Well and Pump Station
18	82E013	49 11.2219	-119 32.9697	297	Town of Oliver-Lions Park Well
19	82E013	49 11.4628	-119 32.2284	304	Tuc-il-nuit Well
20	82E013	49 11.5118	-119 32.4798	301	Town of Oliver-Tucelnuit Pump Station Well
21	82E013	49 11.5318	-119 32.2280	300	Park Drive Well (Well No.2) Backup
22	82E013	49 11.5694	-119 31.2174	377	Mckinney Well (Within well house)
23	82E021	49 12.2083	-119 50.1902	415	KID West Field - Well No.4
24	82E021	49 12.2205	-119 50.1752	416	KID West Field - Well No.3
25	82E021	49 12.2214	-119 50.2070	417	KID West Field - Well No.2
26	82E021	49 12.2221	-119 50.2248	418	KID West Field - Well No.1
27	82E021	49 12.2968	-119 52.9997	427	KID - Falkenberg Site Well 1 (Under slant-roof shelter)
28	82E021	49 12.2980	-119 52.9849	426	KID - Falkenberg Site Well 2
29	82E021	49 12.4572	-119 48.3111	409	KID East Field - Well No.6
30	82E021	49 12.4720	-119 48.3252	412	KID East Field - Well No.2
31	82E021	49 12.4738	-119 48.3405	411	KID East Field - Well No.1
32	82E021	49 12.4747	-119 48.2849	411	KID East Field - Well No.4
33	82E021	49 12.4751	-119 48.3013	409	KID East Field - Well No.3
34	82E021	49 12.4781	-119 48.3247	412	KID East Field - Well No.5
35	82E021	49 12.6772	-119 48.9941	438	KID - 1st Avenue Well
36	82E021	49 12.8058	-119 54.3020	429	Riverside Estates Well
37	82E023	49 12.8730	-119 32.7289	300	Town of Oliver-Buchanan Road Well
38	82E023	49 13.7553	-119 32.4707	311	Weeping Willow Mobile Home Park Well
39	82E021	49 14.3224	-119 59.8380	449	Lucky "R" Mobile Home Park Well
40	82E021	49 14.3429	-119 59.9752	451	Sunkatchers RV Park-Deactivated Well
41	82E021	49 14.4164	-120 0.0156	452	Sunkatchers RV-Main Well
42	82E023	49 14.5182	-119 31.4162	319	Cottonwoods Mobile Home Park Well (In shed)
43	82E021	49 14.8621	-119 49.6448	487	Sagewood Mobile Home Park Well
44	82E021	49 15.6217	-119 49.7742	510	Olalla Water System-Van Wallegam Rd Well
45	82E023	49 15.7344	-119 35.3307	440	Willowbrook Utilities Well
46	82E021	49 17.3447	-119 49.8675	537	Victoria Pines Mobile Home Park Well No.1
47	82E021	49 17.3475	-119 49.8736	535	Victoria Pines Mobile Home Park Well No.2
48	82E023	49 17.5434	-119 31.5648	338	Vaseaux Lake Improvement District-Well
49	82E033	49 18.8954	-119 32.5315	357	Rolling Hills Waterworks Well
50	82E032	49 19.0683	-119 37.1321	539	Dominion Radio Astrophysical Observatory-Well
51	82E033	49 19.1435	-119 33.0561	355	Sun Valley Improvement District Well
52	82E032	49 19.9079	-119 43.1601	807	Twin Lakes Golf-C1 Well
53	82E033	49 19.9877	-119 33.8054	373	Okanagan Falls Well No.4 (Mill Road)
54	82E003	49 2.4227	-119 28.0058	283	Town of Osoyoos-Well No.6
55	82E003	49 2.4854	-119 28.0460	284	Town of Osoyoos-Well No.7
56	out of area				
57	82E033	49 20.1165	-119 33.5691	378	Weyerhaeuser Canada-OK Falls Well
58	82E032	49 20.1260	-119 43.3095	781	Twin Lakes Golf Main Well
59	82E032	49 20.1446	-119 43.3211	781	Twin Lakes Golf-Domestic Well
60	82E033	49 20.3243	-119 33.9184	361	Okanagan Falls Well No.3 (14th Avenue Well)
61	82E033	49 20.4205	-119 34.7387	343	Golden Arrow Well- In small building at trailer No.36
62	82E033	49 20.4372	-119 34.2756	342	Okanagan Falls Well No.5 (Tickleberries Parking Lot)
63	82E032	49 20.4447	-119 37.9764	558	St Andrews Utility Well
64	82E033	49 20.5221	-119 34.3430	347	Okanagan Falls Well No.1 (12th Avenue)
65	82E033	49 20.5629	-119 34.3470	347	Okanagan Falls Well No.2 (Behind the Firehall on 11th Ave)
66	82E032	49 20.5707	-119 43.2209	775	Twin Lakes Golf-New Hwy Well
67	92H040	49 21.2642	-120 4.5489	517	Hedley Improvement District-Well No.1
68	92H040	49 21.2659	-120 4.5410	518	Hedley Improvement District-Well No.2
69	82E031	49 23.3299	-119 55.4105	1861	Apex Mountain Resort - Keremeos Creek Intake

Item	BCGS Area	NORTHING	EASTERLY	Elevation (m)	Description of System/Source
70	82E031	49 23.6148	-119 54.8867	1784	Apex Mountain Resort Well
71	82E031	49 23.6520	-119 57.4220	1848	Apex Mountain Resort- Nickel Plate Lake
72	82E031	49 23.6670	-119 55.2816	1861	Apex Circle Well
73	out of area				
74	out of area				
75	92H048	49 26.9026	-120 31.8570	649	Town of Princeton-Well site No.4
76	92H048	49 27.4444	-120 31.2389	639	Town of Princeton-Well No.3 (Shop Well)
77	92H048	49 27.6618	-120 33.1296	768	Pineapple Junction Well
78	92H048	49 27.8407	-120 29.9136	631	Town of Princeton-Memorial Park Well No.2
79	92H048	49 27.8411	-120 29.3804	637	Weyerhaeuser Canada-Princeton Well
80	92H048	49 27.8436	-120 29.9277	631	Town of Princeton-Memorial Park Well No.1 (West)
81	82E043	49 28.3424	-119 35.5164	341	City of Penticton-Warren Avenue Well
82	92H048	49 28.4975	-120 29.9099	656	Industrial Park Well
83	82E042	49 28.5987	-119 37.1756	365	Lower Village Well (In pumphouse)
84	82E042	49 28.7635	-119 37.1093	364	Upper Village Well No.1
85	out of area				
86	out of area				
87	out of area				
88	out of area				
89	out of area				
90	out of area				
91	out of area				
92	92H057	49 34.9435	-120 46.2269	788	Otter Lake Water Company Well
93	82E052	49 35.1042	-119 43.8840	619	Municipality of Summerland-Well No.5
94	82E052	49 35.1046	-119 43.9542	627	Municipality of Summerland-Rodeo Grounds Well
95	82E052	49 35.1651	-119 43.9310	623	Municipality of Summerland-Well No.3
96	92H057	49 35.2238	-120 46.4464	791	Otter Lake Provincial Camground-Hand Pump Well
97	82E062	49 36.6459	-119 46.9023	678	Faulder Well No.1
98	82E003	49 4.4487	-119 31.7200	278	Willowbeach Mobile Home Park Well
99	82E062	49 41.0279	-119 43.3340	344	Well located at South end of Park
100	92H067	49 41.2858	-120 36.1254	893	Allison Lake Irrigation District-Main Well
101	82E062	49 41.4159	-119 43.6945	350	Well located at North end of park
102	82E062	49 41.5304	-119 43.8480	345	Well located at North End of Park
103	92H079	49 43.3064	-120 13.7781	1158	Lakeview Heights Well
104	out of area				
105	82E072	49 44.4432	-119 45.8618	347	Antler Beach Estate Well
106	82E072	49 44.5278	-119 45.7873	348	Edgewater Pines Mobile Home Park Well
107	out of area				
108	out of area				
109	82E072	49 47.0824	-119 43.2847	387	District of Peachland Well No.2- 4171 Ponderosa Ave. (East side of road)
110	82E072	49 47.0831	-119 43.3110	384	District of Peachland Well No.1- 4179 Ponderosa Ave.(West side of road)
111	82E073	49 47.2040	-119 33.4469	345	Bertram Creek Well
112	82E073	49 47.4745	-119 32.1182	362	Camp Dunlop Well-5325 Lakeshore Road (adjacent to lodge)
113	out of area				
114	out of area				
115	82E083	49 49.3181	-119 35.5924	346	Jennens Road Well
116	82E083	49 49.8890	-119 34.6936	345	Boucherie Beach Resort Water System-Well
117	82E082	49 51.1771	-119 39.6764	646	Okanagan Camp and Retreat Well
118	82E082	49 51.3909	-119 36.9694	501	Shannon Lake Montessori Preschool Well
119	82E083	49 51.5189	-119 26.3552	376	Demontreuil Waterworks Well
120	82E083	49 51.6642	-119 25.4117	425	South East Kelowna Irrigation District-Well No.1(Rutland Aquifer)
121	82E085	49 51.7256	-119 8.1526	843	Greystokes Improvement District Well
122	out of area				
123	82E085	49 51.8523	-119 8.4921	827	Joe Rich Fire Hall Well
124	82E083	49 51.9029	-119 25.4094	433	South East Kelowna Irrigation District-Well No.2
125	82E083	49 51.9383	-119 25.7403	393	South East Kelowna Irrigation District- O'Reilly Well
126	82E084	49 52.3446	-119 23.6521	404	Rutland Well No. 5
127	82E084	49 52.3490	-119 23.6829	404	Rutland Well No. 11
128	82E084	49 52.3541	-119 23.6711	404	Rutland Well No. 16
129	82E084	49 52.3547	-119 23.7329	403	Rutland Well No. 8
130	82E084	49 52.3867	-119 23.9149	401	Rutland Well No. 15 (Hollywood Road South)
131	82E084	49 52.4765	-119 23.5807	406	Rutland Well No. 9 (Springfield Road)
132	82E083	49 52.5825	-119 24.5097	391	Rutland Well No.13 South
133	82E083	49 52.6431	-119 24.5347	390	Rutland Well No. 13 North
134	82E084	49 52.6653	-119 23.8616	401	Rutland Well No.14 West
135	82E084	49 52.6694	-119 23.8158	401	Rutland Well No. 14 East
136	82E084	49 52.7532	-119 23.6806	405	Rutland Well No. 4 (Cactus Road)
137	82E084	49 52.7913	-119 23.9233	397	Rutland Well No. 12 (New)

Table 6

Item	BCGS Area	NORTHING	EASTERLY	Elevation (m)	Description of System/Source
138	82E083	49 52.8233	-119 24.2693	394	Rutland Well No.7 East
139	82E083	49 52.8237	-119 24.2747	395	Rutland Well No.7 West (Ruston Road)
140	82E083	49 52.8446	-119 25.0814	384	Rutland Well No. 6 (Ziprick Road)
141	82E083	49 52.8462	-119 25.2425	381	Rutland Well No. 10 (Springfield Road)
142	82E084	49 52.8809	-119 15.2630	1070	Goudie Road Firehall Well
143	82E084	49 52.9114	-119 23.7700	402	Rutland Well No. 3 (Hollydell Road)
144	82E082	49 52.9119	-119 42.6660	1174	Crystal Mountain-Well No.1
145	82E084	49 52.9148	-119 23.7645	404	Rutland Well No.3a (Hollydell Road)
146	82E084	49 53.3990	-119 23.3003	418	Rutland Well No. 2 (Hwy 33 West)
147	82E094	49 54.7957	-119 22.6041	410	Black Mountain Irrigation District-Cornish Road Well
148	82E094	49 55.1138	-119 23.6404	406	Glenmore-Ellison Sexsmith Well
149	82E094	49 56.0437	-119 21.5466	457	Black Mountain Irrigation District Well No.5 (Weston Road)
150	82E094	49 56.0537	-119 21.5417	457	Black Mountain Irrigation District Well No.4 (Weston Road)
151	82E094	49 56.3961	-119 21.1421	459	Sunset Ranch Water System-Well No.1 (south)
152	82E094	49 56.4045	-119 21.1399	459	Sunset Ranch Water Systems-Well No.2 (North)
153	82E094	49 56.4653	-119 23.4837	422	Glenmore-Ellison Vector Well No.1
154	82E094	49 56.4701	-119 23.4463	421	Glenmore-Ellison Vector Well No.2
155	82E094	49 56.4976	-119 21.9365	438	Glenmore-Ellison (Ellison Well)
156	82E092	49 56.6954	-119 44.5473	1148	Crystal Mountain-Well No.2
157	82E094	49 57.6950	-119 23.2038	456	Glenmore-Ellison Lochrem Well
158	82E094	49 58.1855	-119 23.0885	431	Glenmore Ellison-Well No.2 Airport
159	82E094	49 58.2132	-119 23.0818	432	Glenmore-Ellison Airport Well #1
160	out of area				
161	82E013	49 7.5357	-119 34.2873	285	Town of Oliver Black Sage Well No.1
162	82E013	49 7.5375	-119 34.3070	284	Town of Oliver Black Sage Well No.3
163	82E013	49 7.5448	-119 34.3048	285	Town of Oliver Black Sage Well No.2
164	82E013	49 7.7255	-119 34.5263	290	Town of Oliver Black Sage Well No.4
165	92H017	49 9.1382	-120 37.4697	1205	Bonnevier Wet Well-located beside Bell Creek
166	82E014	49 9.2239	-119 14.1515	1734	Mt Baldy Well (To the right of the ski lift bottom)
167	82E014	49 9.3256	-119 14.9720	1888	Mt Baldi-Upper Spring
168	82E013	49 9.3718	-119 34.3576	305	Town of Oliver-Fairview Domestic Well
169	out of area				
170	82L014	50 10.8079	-119 20.4688	393	Kekuli Bay- Well (Next to Okanagan Lake)
171	82L024	50 13.0249	-119 23.0555	357	Whitewood Neighborhood Well
172	82L026	50 13.2361	-118 59.7262	519	Whitevale Utilities-Well located at 715 Franklyn Rd
173	82L025	50 13.2791	-119 11.5931	479	City of Vernon - Coldstream Ranch Well No. 2
174	82L025	50 13.4774	-119 11.8404	476	City of Vernon - Coldstream Ranch Well No. 1
175	82L023	50 13.7804	-119 27.0871	366	Whiteman Creek Well No.1
176	82L023	50 13.8473	-119 27.1831	371	Whiteman Creek Well No.3
177	82L023	50 13.8521	-119 27.1744	370	Whiteman Creek-Well No.2
178	82L025	50 14.1508	-119 6.3742	520	Coldstream-Antwerp Well No.2
179	82L025	50 14.1547	-119 6.3770	520	Coldstream-Antwerp Well No.1
180	82L024	50 14.3063	-119 20.1161	363	Claremont Utilities-Well No.1 (West)
181	82L024	50 14.4447	-119 19.6864	359	Claremont Utilities-Well No.2 (East)
182	82L024	50 14.5349	-119 19.4196	352	Okanagan Landing Utilities Well
183	82L024	50 14.6505	-119 18.8727	357	Crown Villas Mobile Home Park Well
184	out of area				
185	82L026	50 14.7139	-118 58.1847	496	Duteau Creek Well No.3
186	82L026	50 14.7324	-118 58.1846	497	Duteau Creek Well No.2
187	82L026	50 14.7428	-118 58.1838	498	Duteau Creek Well No.1
188	out of area				
189	out of area				
190	82L026	50 15.3303	-118 57.9882	492	Village of Lumby Well No. 2
191	82L026	50 15.4793	-118 57.9924	491	Village of Lumby Well No.1
192	82L026	50 15.6075	-118 58.0045	490	Village of Lumby Well No.3
193	82L026	50 16.9168	-118 56.7944	498	Valleyview Mobile Home Park- Well No.1
194	82L023	50 17.3558	-119 24.8537	374	Six Mile Water System-Well No.1
195	82L023	50 17.6598	-119 25.3628	391	Six Mile Water System-Well No.2
196	82L024	50 17.9146	-119 15.3143	393	Silver Star RV Park Well
197	82L034	50 18.5321	-119 22.6678	360	Bradley Creek Well No.1
198	82L034	50 18.6263	-119 12.0649	675	Schon Springs Intake (Surface Collection)
199	82L004	50 2.0556	-119 23.6472	407	Alto Utilities South Well
200	82L004	50 2.0699	-119 23.6545	408	Alto Utilities North Well
201	82L004	50 2.6341	-119 15.3313	1357	Beaver Lake Lodge Well
202	82L003	50 2.9265	-119 24.2225	395	Greek House Market Well
203	82L003	50 2.9420	-119 24.2693	395	Greek House Restaurant Well
204	82L003	50 2.9720	-119 24.5437	394	Woods Lake Resort Well No.2 (South)
205	82L034	50 20.4090	-119 17.1215	489	Head of the Lake Artesian Well
206	82L034	50 21.0277	-119 17.9440	358	Head of the Lake Well
207	82L035	50 21.2038	-119 4.6488	1517	Silver Star Water Utility-Well No.12

Table 6

Item	BCGS Area	NORTHING	EASTERLY	Elevation (m)	Description of System/Source
208	82L034	50 21.3517	-119 18.4950	352	Irish Creek Well
209	out of area				
210	82L034	50 21.5482	-119 17.0941	357	Clubhouse Well
211	82L035	50 21.5731	-119 2.6787	1417	Silver Star Water Utility-Well No.7
212	82L034	50 21.6757	-119 17.0340	358	Well No.2
213	82L035	50 21.7796	-119 6.2722	1669	Sovereign Lake Well No.2
214	82L035	50 21.8518	-119 2.2111	1529	Silver Star Water Utility-Well No.9
215	82L035	50 22.4275	-119 2.2377	1618	Silver Star Water Utility-Well No.11
216	82L035	50 22.6873	-119 2.8105	1728	Paradise Camp Well #6 (Silver Star Mountain)
217	82L034	50 23.4088	-119 13.1660	440	Eagle Rock Mobile Home Park Well
218	82L034	50 23.5884	-119 13.2042	448	Larkin Improvement District-LR Well No.4
219	82L035	50 23.7015	-119 1.5049	1140	Silver Star Water Utility-Well No.8
220	82L034	50 23.8588	-119 18.1657	427	Grandview Improvement District-Grandview Well No.2
221	82L034	50 23.8713	-119 18.1512	421	Grandview Improvement District-Grandview Well No.1
222	82L044	50 24.1777	-119 13.0134	421	Eagle Rock Improvement District-Well No.2
223	82L044	50 24.1827	-119 13.0422	421	Eagle Rock Improvement District-Well No.3
224	82L044	50 24.2126	-119 13.0203	417	Larkin Improvement District-L R Well No.3
225	82L044	50 24.3059	-119 13.2865	407	Larkin Improvement District-L R Well No.2
226	82L044	50 25.6227	-119 13.6649	374	Otter Lake Improvement District-Main Well
227	82L047	50 25.6776	-118 45.3174	396	Odd fellows & Rebecca Lodge Well
228	82L044	50 25.8694	-119 20.5617	447	Round Lake Well
229	82L044	50 26.1863	-119 12.3203	391	City of Armstrong-Pleasant Valley Well
230	82L044	50 26.3901	-119 21.2368	451	Madeline Lake Well
231	82L045	50 26.4399	-119 8.9951	425	Laird Improvement District Pump Station-Well No.1
232	82L045	50 26.4423	-119 8.9948	424	Laird Improvement District Pump Station-Well No.2
233	82L045	50 26.8034	-119 8.6000	414	Chickadee Ridge Miniatures Main Well
234	82L045	50 26.9966	-119 11.3356	357	City of Armstrong-Firehall Well (3540 Kirton Ave)
235	82L047	50 27.2819	-118 44.1062	404	Mabel Lake Provincial Park Well
236	out of area				
237	82L045	50 27.5418	-119 7.6200	436	Mountain View Well
238	out of area				
239	out of area				
240	out of area				
241	82L045	50 29.3307	-119 7.7945	356	Log Barn Fruitstand Well No.2 (South well)
242	82L045	50 29.3481	-119 7.7738	357	Log Barn Fruitstand Well No.1 (North well)
243	82L003	50 3.0021	-119 24.2115	394	Sunny Acres Well (In front of trailer No.3)
244	82L003	50 3.0714	-119 24.6170	394	Woods Lake Resort Well No.1(North)
245	82L004	50 3.0863	-119 23.6071	393	The Spot Country Club Estates Well
246	out of area				
247	out of area				
248	82L054	50 30.6018	-119 12.9490	490	Steele Springs Intake
249	82L055	50 31.4442	-119 10.9282	511	Jack Pine Well
250	82L055	50 31.5295	-119 11.2172	510	Canyon Improvement District Well
251	82L054	50 31.7402	-119 14.0072	538	Cedar Ridge Guest Ranch Well
252	82L055	50 32.2295	-119 8.1877	373	Quilakwa (East) Well No.1
253	82L055	50 32.2315	-119 8.2115	373	Quilakwa Well No.2 (West)
254	82L055	50 33.2976	-119 3.5204	354	City of Enderby-Shuswap Well
255	82L055	50 33.3797	-119 0.4090	399	Creekside Mobile Homes Well No.2
256	82L055	50 33.4282	-119 0.3559	405	Creekside Mobile Home Park-Well No.1
257	out of area				
258	out of area				
259	out of area				
260	82L055	50 35.5804	-119 9.3561	357	Cedar Park Inn Well
261	82L065	50 36.5935	-119 9.1917	383	Forest Grove Mobile Home Park Well
262	82L065	50 37.6733	-119 11.3087	531	Oakside Manor Well
263	82L065	50 37.9363	-119 6.5827	353	Birchdale Par 3 Golf Well
264	82L003	50 4.1796	-119 24.4413	394	Ponderosa Well (two wells in this subfacility)
265	82L065	50 40.6639	-119 10.3950	867	Son Seekers Ridge Golf Course-Thornton Spring Intake
266	82L065	50 40.8994	-119 3.0687	368	B & D Mobile Home Park Well
267	out of area				
268	out of area				
269	out of area				
270	out of area				
271	out of area				
272	82L013	50 8.5264	-119 29.9964	348	Fintry Provincial Park Well

Table 6

Table 7. Summary of reported water quantity issues in the study area.

Item Number	Water Quantity Issue	Areas	Specific Sites	Agency(ies) Involved	References	Comments/Needs
1.	Location of ground water recharge and discharge areas, rates of infiltration, discharge rates and flow direction (divides).	Armstrong, Spallumcheen, Osoyoos, Oliver, Kelowna, Vernon, Enderby, RDCO, Summerland, North Okanagan	Summerland- discharge rates from Meadow Valley Aquifer Spallumcheen/Armstrong-ground water divide Armstrong, Spallumcheen – Aquifers 356, 102, 103.	RDCO, RDOS, Kelowna Joint Water Committee, Greater Vernon Services Water Dept., Township of Spallumcheen, Town of Oliver, City of Enderby	1, 2, 3, 4, 5	
2.	Surface/groundwater interactions	Spallumcheen, RDCO, Summerland, North Okanagan	Spallumcheen – Otter Lake, aquifers 102 and 103, and northern part of township, Enderby Summerland (Garnet Valley) Powers Creek	RDCO, Township of Spallumcheen, District of Summerland, Westbank Irrigation District	1, 4, 7, 11, 12	
3.	Well interference	Spallumcheen, RDOS, Kelowna, North Okanagan	Spallumcheen – Aquifers 102 and 103,	RDOS, Kelowna Joint Water Committee, Township of Spallumcheen	7	<ul style="list-style-type: none"> - maps of potential yield, - capture zones - numerical models
4.	Sustainable water supply, aquifer capacity, ground water availability, demand and water balances	Spallumcheen, Osoyoos, Oliver, RDOS, Summerland Enderby and North Okanagan	4 groundwater systems managed by RDOS, Silver Star area	Kelowna Joint Water Committee, Township of Spallumcheen RDOS, Greater Vernon Services Water Dept. (RDNO), Golders, Town of Oliver, Town of Osoyoos, District of Summerland	2, 3, 4, 8, 9, 10	
5.	Licensing of groundwater extractions	Spallumcheen, Oliver, Kelowna, Vernon, RDOS, North Okanagan		Kelowna Joint Water Committee, Township of Spallumcheen, Greater Vernon Services Water Dept., RDCO, RDOS, Town of Oliver, Joint Kelowna Water Committee	2, 3, 10	
6.	Wells going dry, aquifer depletion (mining), and water shortages	North Okanagan, Meyers Flat	Grindrod, Hullcar area, Granview Flats Meyers Flat/Willowbrook	Greater Vernon Services Water Department, Township of Spallumcheen, Water Districts and private well owners	7, 10, 12	

Item Number	Water Quantity Issue	Areas	Specific Sites	Agency(ies) Involved	References	Comments/Needs
7.	Potential impacts of development pressures on ground water supply	Regional District of Okanagan Similkameen, Regional District of the Central Okanagan (RDCO), North Okanagan, Summerland	4 groundwater systems managed by District Summerland (development pressures) Ellison and Joe Rich areas, proposed second bridge crossing of Okanagan Lake, Coldstream Valley and Kettleston, Aquifer east of Armstrong, Mission Creek, Rose Valley Powers Creek and Crystal Mountain Meadow Valley/Faulder Anarchist Mountain Grand View Bench	RDOS and Golders, RDCO, Greater Vernon Services Water Department, District of Summerland, City of Armstrong Westbank Irrigation District City of Enderby North Okanagan Regional District	1, 4, 6, 8, 10, 11	
8.	Rates of ground water extraction by various users	Kelowna		Kelowna Joint Water Committee	3	
9.	Future water demand	North Okanagan	Outside City boundaries	City of Enderby	5	
10.	Water conservation	North Okanagan	Armstrong	City of Armstrong	6	
11.	Stormwater management	Osoyoos		Town of Osoyoos	9	

1. Draft minutes of community consultation with RDCO, December 15, 2004 (GAOB).
2. Draft minutes of community consultation with Town of Oliver, January 25, 2005 (GAOB).
3. Draft minutes of community consultation with Kelowna Joint Water Committee, January 26, 2005 (GAOB).
4. Draft minutes of community consultation with District of Summerland, December 16, 2004 (GAOB).
5. Draft minutes of community consultation with City of Enderby, January 24, 2005 (GAOB).
6. Draft minutes of community consultation with City of Armstrong, December 14, 2004 (GAOB).
7. Draft minutes of community consultation with Township of Spallumcheen, December 14, 2004 (GAOB).
8. Draft minutes of community consultation with RDOS, January 27, 2005 (GAOB).
9. Draft minutes of community consultation with Town of Osoyoos, December 15, 2004 (GAOB).
10. Draft minutes of community consultation with Greater Vernon Services Water Department, January 25, 2005 (GAOB).
11. Personal communication, Des Anderson, MOE, August 2006.
12. Personal communication, Don McKee, MOE, September 2006.

Table 8. Distribution of reported quantity issues in the study area.

Item Number	Water Quantity Issue	Area/Site																														
		North															South															
		North Okanagan	Enderby	Armstrong	East of Armstrong	Spallumcheen	Otter Lake	Aquifer 356	Aquifer 102	Aquifer 103	Grand View Bench	Grindrod	Hullcar	Granview Flats	Vernon	Silver Star	Kettleton	Coldstream Valley	RDCO	Kelowna	Mission Creek	Joe Rich	Rose Valley	Ellison	Summerland	Crystal Mountain	Powers Creek	RDOS	Meadow Valley Aquifer	Oliver	Meyers Flat	Osoyoos
1	Location of ground water recharge and discharge areas, rates of infiltration, discharge rates and flow direction	X	X	X		X		X	X	X								X						X			X	X		X		
2	Surface/groundwater interactions	X	X			X	X		X	X								X						X			X					
3	Well interference	X				X			X	X									X								X					
4	Sustainable water supply, aquifer capacity, ground water availability, demand and water balances	X	X			X									X									X			X		X		X	
5	Licencing of groundwater extractions	X				X								X					X								X		X			
6	Wells going dry, aquifer depletion (mining), and water shortages	X										X	X	X																X		
7	Potential impacts of development pressures on ground water supply	X			X					X							X	X	X	X	X	X	X	X	X	X	X	X				X
8	Rates of ground water extraction by various users																		X													
9	Future water demand	X	X																													
10	Water conservation	X		X																												
11	Stormwater management																														X	

Table 9. Current or planned ground water research/planning projects.

Item Number	Project Description	General Location	BCGS Areas	Agencies Involved
1	Ground water modeling of the Deep Creek Basin	North Okanagan	082L034, 035, 044, 045, 054, 055, 064	University of British Columbia-Okanagan and Ministry of Environment
2	Ground water modeling of BX Creek	North Okanagan	082L024, 025, 034, 035	Simon Fraser University
3	Coupling of surface water and ground water modeling in fractured rock, Vaseux Creek Watershed	South Okanagan	082E033, 034	Simon Fraser University
4	Ground water modeling Okanagan Falls to Osoyoos Lake and capture zone study around Oliver.	South Okanagan	082E012, 013, 014, 022, 023, 024, 032, 033, 034	Simon Fraser University
5	Evaluation of elevated nitrate levels in the Osoyoos area.	South Okanagan	082E003	University of Saskatchewan, Golder Associates
6	Investigation of unconsolidated aquifers, geology and ground water modeling.	Kelowna	082E083, 084, 093, 094	Geological Survey of Canada, Simon Fraser University
7	Ground water recharge study, Upper Penticton Creek	East of Penticton, Penticton Creek Watershed	082E043, 053, 054, 064, 064	Ministry of Forests and Range, Simon Fraser University
8	Supply/demand modeling, Naramata area	South Okanagan	082E053, 063	Simon Fraser University, Regional District of Okanagan-Similkameen
9	Groundwater Assessment of the Okanagan Basin (GAOB)	Okanagan Basin	Regional	Ministry of Environment, Geological Survey of Canada
10	Okanagan Basin Water Supply Study	Okanagan Basin	Regional	Ministry of Environment, Okanagan-Basin Water Board
11	Aquifer vulnerability and aquifer recharge mapping.	Okanagan Basin	Regional	Simon Fraser University, Geological Survey of Canada

Table 10. Aquifer ranking template for *quantity* monitoring.

Aquifer Number:		Type:	Location:					
Item	Description	Measure	Point Scale	Points Assigned	Weighting Factor	Maximum Weighting	Score	
A.	Aquifer Area	> 50 km ²	3		1	10%	0.0	
		10 – 50 km ²	2		0.5		0.0	
		< 10 km ²	1		0.25		0.0	
B.	Aquifer Classification and Ranking	Degree of Development	I	3		10%	0.0	
			II	2			0.5	0.0
			III	1			0.25	0.0
C.	Aquifer Classification and Ranking	Vulnerability	A	3		5%	0.0	
			B	2			0.5	0.0
			C	1			0.25	0.0
D.	Aquifer Classification and Ranking	Ranking Value (based on 7 sub-factors)	5 to 21		1.0 – 0.24	5%	0.0	
E.	Estimated Current Ground Water Use	High > 64 L/s	3		1	10%	0.0	
		Medium 32 - 64 L/s	2		0.5		0.0	
		Low < 32 L/s	1		0.25		0.0	
F.	Number of Ground Water Supply Systems	> 5	3		1	15%	0.0	
		2 – 5	2		0.66		0.0	
		1	1		0.33		0.0	
		none reported	0		0		0.0	
G.	Number of Reported Irrigation Wells	> 10	3		1	10%	0.0	
		2 – 10	2		0.5		0.0	
		< 2	1		0.25		0.0	
		none reported	0		0			
H.	Well Density	> 5 km ²	3		1	10%	0.0	
		1 – 5 km ²	2		0.5		0.0	
		< 1 km ²	1		0.25		0.0	
I.	Number of Water Quantity Issues/Concerns Reported	> 3 (regional)	3		1	10%	0.0	
		2 to 3 (local)	2		0.5		0.0	
		1 (isolated)	1		0.25		0.0	
		none reported	0				0.0	
J.	Estimated Population Served by Groundwater	> 1000	3		1	10%	0.0	
		500 - 1000	2		0.5		0.0	
		< 500	1		0.25		0.0	
K.	Other, e.g. future land development	Being planned	3		1	5%	0.0	
		Possible	2		0.5		0.0	
		Unlikely	1		0.25		0.0	
						Total	0.0	

Table 11. BCGS area ranking template for *quantity* monitoring.

BCGS Area:		Location:					
Item	Description	Measure	Point Scale	Points Assigned	Weighting Factor	Maximum Weighting	Score
A.	Number of Classified Aquifers	> 5	3		1	15%	0.0
		3 – 5	2		0.75		0.0
		1 to 2	1		0.33		0.0
B.	Number of Reported Wells	> 300	3		1	15%	0.0
		100-300	2		0.75		0.0
		<100	1		0.33		0.0
C.	Number of Ground Water Supply Systems	> 5	3		1	15%	0.0
		3 – 5	2		0.75		0.0
		1 to 2	1		0.33		0.0
D.	Number of Ground Water Well and Spring Sources for Water Systems	> 5	3		1	10%	0.0
		3 – 5	2		0.5		0.0
		1 to 2	1		0.25		0.0
E.	Number of Water Quantity Issues/Concerns Reported	>3	3		1	20%	0.0
		2 to 3	2		0.5		0.0
		1	1		0.25		0.0
F.	Number of Research/Water Planning Projects active and proposed	> 3	3		1	5%	0.0
		2 to 3	2		0.5		0.0
		1	1		0.25		0.0
G.	Degree of Mountain Pine Beetle Infestation	severe	3		1	5%	0.0
		light to moderate	2		0.5		0.0
		nil to localized	1		0.25		0.0
H.	Number of Active Climate Stations	> 3	3		1	5%	0.0
		2 to 3	2		0.5		0.0
		1	1		0.25		0.0
I.	Number of Community Watersheds	> 3	3		1	5%	0.0
		2 to 3	2		0.5		0.0
		1	1		0.25		0.0
J.	Number of Active Hydrometric Sites and Snow pillows/courses	> 3	3		1	5%	0.0
		2 to 3	2		0.5		0.0
		1	1		0.25		0.0
						Total	0.00

Table 12. Third order watershed ranking template for quantity monitoring.

Watershed:			Location:				
Item	Description	Measure	Point Scale	Points Assigned	Weighting Factor	Maximum Weighting	Score
A.	Watershed Area	> 50 km ²	3		1	15%	0.0
		10 - 50 km ²	2		0.5		0.0
		< 10 km ²	1		0.25		0.0
B.	Number of Classified Bedrock Aquifers	> 3	3		1	15%	0.0
		2 to 3	2		0.75		0.0
		1	1		0.33		0.0
C.	Number of Ground Water Supply Systems	> 3	3		1	15%	0.0
		2 to 3	2		0.75		0.0
		1	1		0.33		0.0
D.	Number of Ground Water Well and Spring Sources for Water Systems	> 5	3		1	10%	0.0
		3 – 5	2		0.5		0.0
		1 to 2	1		0.25		0.0
E.	Number of Water Quantity Issues/Concerns Reported	>3	3		1	20%	0.0
		2 to 3	2		0.5		0.0
		1	1		0.25		0.0
F.	Number of Research/Water Planning Projects active and proposed	> 3	3		1	5%	0.0
		2 to 3	2		0.5		0.0
		1	1		0.25		0.0
G.	Degree of Mountain Pine Beetle Infestation	severe	3		1	5%	0.0
		light to moderate	2		0.5		0.0
		nil to localized	1		0.25		0.0
H.	Number of Active Climate Stations	> 3	3		1	5%	0.0
		2 to 3	2		0.5		0.0
		1	1		0.25		0.0
I.	Number of Community Watersheds	> 3	3		1	5%	0.0
		2 to 3	2		0.5		0.0
		1	1		0.25		0.0
J.	Number of Active Hydrometric Sites and Snow pillows/courses	> 3	3		1	5%	0.0
		2 to 3	2		0.5		0.0
		1	1		0.25		0.0
						Total	0.00

Table 13. Descending ranking scores of classified unconsolidated aquifers.

Aquifer Number	Aquifer Name	Aquifer Type	Location Description	Ranking Score for Quantity Monitoring
Okanagan Basin including Lumby and Enderby				
464		Unconsolidated	Valley bottom S, E, NE of Kelowna	77.5
463		Unconsolidated	S, E, NE of Kelowna; S & E side of valley	72.5
111		Unconsolidated	Lower Shuswap Valley	71.8
255		Unconsolidated	North of Tug. Lake to Vaseux Lake	71.1
193	Osoyoos West	Unconsolidated	Osoyoos West	68.8
254		Unconsolidated	Osoyoos Lake to southwest of Tug. Lake	68.8
344		Unconsolidated	Ellison Lake to Wood Lake	65.6
316		Unconsolidated	Lumby	57.1
353		Unconsolidated	SE of Armstrong	55.8
317		Unconsolidated	Lumby	53.8
194	Osoyoos East	Unconsolidated	Osoyoos East	53.6
102		Unconsolidated	Hullcar	51.8
354		Unconsolidated	O'Keefe Valley and Grandview Flats	50.6
352		Unconsolidated	Coldstream Valley E of Lavington to W of Lumby	49.3
264		Unconsolidated	Okanagan Falls and east of Okanagan Falls	48.6
349		Unconsolidated	Northeast of Vernon along BX Creek	48.6
345		Unconsolidated	Oyama	48.3
257		Unconsolidated	Meyers Flat	48.3
103		Unconsolidated	Parkinson Lake	45.4
299		Unconsolidated	Faulder (Meadow Valley)	44.0
108		Unconsolidated	4 kilometres southeast of Salmon Arm	42.6
346		Unconsolidated	Kalamalka Lake to Vernon	42.3
462		Unconsolidated	1 km. south of Mission Creek	42.1
347		Unconsolidated	Okanagan Landing	42.0
467		Unconsolidated	East Kelowna and Rutland Area	40.6
358		Unconsolidated	Fintry Fan, Short Creek	40.1
261		Unconsolidated	Marron Valley northwest of Okanagan Falls	40.1
319		Unconsolidated	North of Lumby	37.6
315		Unconsolidated	Besette Creek Southwest of Lumby	37.4
461		Unconsolidated	Upper Mission Creek	37.1
303		Unconsolidated	Southeast of Westbank adj. to Okanagan Lake	36.9
297		Unconsolidated	Summerland Trout Creek	36.8
314		Unconsolidated	Lumby	36.5
348		Unconsolidated	Just north of Vernon to north of Swan Lake	36.5

Aquifer Number	Aquifer Name	Aquifer Type	Location Description	Ranking Score for Quantity Monitoring
256		Unconsolidated	Testalinden Creek to Reed	36.3
113		Unconsolidated	Ashton Creek	36.3
265		Unconsolidated	Between OK Falls and Vaseux Lake	35.1
301		Unconsolidated	Shannon Lake	34.9
262		Unconsolidated	White Lake Basin 35 km south of Penticton	33.8
318		Unconsolidated	Northeast of Lumby	33.8
270		Unconsolidated	Ellis Creek	32.9
357		Unconsolidated	Whiteman Creek Fan	32.6
195		Unconsolidated	Osoyoos East	32.4
109		Unconsolidated	Highway 97B	31.5
267		Unconsolidated	Shingle Creek	30.1
302		Unconsolidated	South of Westbank adjacent to Okanagan Lake	29.9
466		Unconsolidated	6 km. SE of Kelowna	29.0
468		Unconsolidated	2 km N of Kelowna; Clifton Rd. area	28.7
469		Unconsolidated	Glenmore Valley, N. of Kelowna	26.3
306		Unconsolidated	East of Westbank parallel to Mt. Boucher	26.1
356		Unconsolidated	Mouth of Deep Creek	25.8
266		Unconsolidated	Stafford Creek southwest of Penticton	21.1
310		Unconsolidated	Creighton Valley	21.1
809		Unconsolidated		20.8
465		Unconsolidated	S. Kelowna; possibly E. to Rutland	17.0
Similkameen Basin				
259		Unconsolidated	US Border to Princeton	83.3
258		Unconsolidated	Richter Pass	29.0

Table 13.

Table 14. Descending ranking scores of classified bedrock aquifers.

Aquifer Number	Aquifer Name	Aquifer Type	Location Description	Ranking Score for Quantity Monitoring
Okanagan Basin including Lumby and Enderby				
260		Bedrock	Marron Valley northwest of Okanagan Falls	45.1
110		Bedrock	Grandview Bench	39.4
298	Naramata	Bedrock	Naramata	37.4
473		Bedrock	Mission, Davies & Cardinal Creek area	33.6
808		Bedrock	Anarchist Mountain	32.6
107		Bedrock	Gardom Lake to Enderby	32.1
269		Bedrock	Ellis Creek	32.1
263		Bedrock	North of Okanagan Falls/shore of Skaha Lake	32.1
351		Bedrock	NE of Vernon and to the north of BX Creek	31.3
350		Bedrock	NE of Vernon and to the south of BX Creek	31.3
304	Westbank	Bedrock	West side of Okanagan Lake, west of Kelowna	29.6
104		Bedrock	1 kilometre northwest of Hullcar	29.6
300	Faulder	Bedrock	Faulder (Eneas Creek)	29.5
106		Bedrock	Southwest of Leduc Creek	28.3
268		Bedrock	Penticton East and shore of Skaha Lake	27.4
470		Bedrock	Kelowna north to Ellison Lake	27.4
305	Westbank	Bedrock	West side of Okanagan Lake, west of Kelowna	27.1
472		Bedrock	Southeast of Ellison Lake	27.1
238		Bedrock	Spotted Lake, Osoyoos	25.8
248		Bedrock	Spotted Lake, Osoyoos	25.8
804		Bedrock	Shuswap River	23.3
355		Bedrock	West of Deep Creek, NW of Armstrong	23.1
810		Bedrock	East of Osoyoos	22.3
471		Bedrock	West of Ellison Lake	22.1
105		Bedrock	Hillcrest	21.4
112		Bedrock	2 kilometres northeast of Enderby	20.0

Table 15. Descending ranking scores of BCGS areas.

Item Number	BCGS Area	Watershed	Location Description	Ranking Score for Quantity Monitoring
Okanagan Basin including Lumby and Enderby				
	082E003	Okanagan	Osoyoos	65.0
	082L034	Okanagan	Deep Creek South	65.0
	082E083	Okanagan	Kelowna	62.5
	082L044	Okanagan & South Thompson	Otter Lake	60.8
	082L024	Okanagan	Vernon	60.0
	082E094	Okanagan	Ellison	58.3
	082L026	South Thompson	Lumby	57.5
	082L055	Okanagan & South Thompson	Enderby	56.7
	082E084	Okanagan	Mission Creek	52.5
	082E033	Okanagan	Okanagan Falls	51.7
	082E013	Okanagan	Oliver	50.0
	082L065	South Thompson	Shuswap River north of	49.2
	082L045	Okanagan & South Thompson	East of Armstrong	49.2
	082L035	Okanagan & South Thompson	Silverstar	48.3
	082E032	Okanagan	West of Okanagan Falls	43.3
	082E082	Okanagan	Westbank	42.5
	082E004	Okanagan	East of Osoyoos	41.7
	082L003	Okanagan	Winfield West	40.8
	082E023	Okanagan	Vaseux Lake	40.0
	082L025	Okanagan & South Thompson	Coldstream Valley	39.2
	082L004	Okanagan	Winfield East	38.3
	082L054	Okanagan & South Thompson	Deep Creek North	38.3
	082E043	Okanagan	Penticton	36.7
	082E052	Okanagan	Summerland	35.8
	082E062	Okanagan	Faulder	33.3
	082E093	Okanagan	Glenmore	33.3
	082E072	Okanagan	Peachland	30.8
	082E085	Okanagan	Upper Mission Creek	26.7
	082L014	Okanagan	Oyama	25.8
	082E042	Okanagan	West of Penticton	25.0
	082L023	Okanagan	Whiteman Creek	23.3
	082L013	Okanagan	Fintry	23.3
	082E053	Okanagan	Naramata	23.3
	082E073	Okanagan	South Kelowna	22.5
	082L064	Okanagan & South Thompson	South of Salmon Arm	20.8
	082E063	Okanagan	North of Naramata	20.0
	082E022	Okanagan	West of Meyers Flat	15.0
	082E095	Okanagan	Upper Mission Creek North	14.2
	082L037	Okanagan	North of Lumby	13.3
	082L056	South Thompson	Shuswap River east of Enderby	13.3

Item Number	BCGS Area	Watershed	Location Description	Ranking Score for Quantity Monitoring
Similkameen Basin				
	082E021	Similkameen	Keremeos	47.5
	092H048	Similkameen	Princeton	37.5
	082E012	Similkameen	Cawston	30.0
	092H040	Similkameen	Hedley	24.2
	092H049	Similkameen	East of Princeton	12.5
	092H039	Similkameen	Smith Creek south of Similkameen	12.5
	082E002	Similkameen	Richter Pass	12.5
	092H030	Similkameen	Similkameen northwest of Ashnola	11.7
	082E011	Similkameen	South of Keremeos	11.7

Table 15.

Table 16. Descending ranking scores of third order watersheds.

Item Number	Watershed Number	Bedrock Aquifer Numbers	BCGS Areas	MOE Watershed ID	Watershed Area km²	Location Description	Ranking Score for Quantity Monitoring
1	5	350, 351	082L024, 025, 034, 035	OKANWSD000010	130.7	BX Creek	37.5
2	46	269, 298	082E043, 053, 054, 063, 064	OKANWSD000070	184.3	Penticton Creek	26.7
3	42	300	082E061, 062, 071	OKANWSD000065	76.7	Dark Creek	23.3
4	54	260	082E022, 032	OKANWSD000083	37.6	Horn Creek-Twin Lakes	21.7
5	24	305	082E082, 083, 092, 093	OKANWSD000040	52.7	McDougall Creek	21.7
6	55	260	082E022, 023, 032, 033	OKANWSD000084	43.3	Kearns Creek	19.2
7	26	473	082E084, 094, 095	OKANWSD000045	37.2	Daves Creek	15.8
8	37	106, 107	082L035, 045, 055	USHUWSD000049	160.9	Fortune Creek	15.0
9	63	808	082E003, 004	OKANWSD000096	29.4	Haynes Creek	13.3
10	44	298	082E062, 063, 073	OKANWSD000068	79.2	Chute Creek	13.3
11	21	470	082E083, 093, 094	OKANWSD000042	34.0	Brandt Creek	8.3
12	52	263	082E033, 043	OKANWSD000080	60.6	McLean Creek	6.7
13	41	300	082E061, 062, 071, 072	OKANWSD000067	89.8	Eneas Creek	6.7

Table 17. Comparison of top-rated BCGS areas versus top-rated unconsolidated aquifers.

Item Number	BCGS Area	Watershed	Location Description	Area Ranking Score for Quantity Monitoring	Aquifer Number	BCGS Areas	Aquifer Name	Location Description	Aquifer Ranking Score for Quantity Monitoring
Okanagan Basin including Lumby and Enderby Areas									
1	082E003	Okanagan	Osoyoos	65.0	464	082E093, 094, 083, 084		Valley bottom S, E, NE of Kelowna	77.5
2	082L034	Okanagan	Deep Creek South	65.0	463	082E094, 083, 084		S, E, NE of Kelowna; S & E side of valley	72.5
3	082E083	Okanagan	Kelowna	62.5	111	082L034, 044, 045, 055, 065		Lower Shuswap Valley	71.8
4	082L044	Okanagan & South Thompson	Otter Lake	60.8	255	082E013, 023		North of Tug. Lake to Vaseux Lake	71.1
5	082L024	Okanagan	Vernon	60.0	193	082E003	Osoyoos West	Osoyoos West	68.8
6	082E094	Okanagan	Ellison	58.3	254	082E003, 013		Osoyoos Lake to southwest of Tug. Lake	68.8
7	082L026	South Thompson	Lumby	57.5	344	082L003, 004		Ellison Lake to Wood Lake	65.6
8	082L055	Okanagan & South Thompson	Enderby	56.7	316	082L025, 026		Lumby	57.1
9	082E084	Okanagan	Mission Creek	52.5	353	082L034, 044, 045		SE of Armstrong	55.8
10	082E033	Okanagan	Okanagan Falls	51.7	317	082L026		Lumby	53.8
11	082E013	Okanagan	Oliver	50.0	194	082E003	Osoyoos East	Osoyoos East	53.6
12	082L065	South Thompson	Shuswap River	49.2	102	082L044,		Hullcar	51.8

Item Number	BCGS Area	Watershed	Location Description	Area Ranking Score for Quantity Monitoring	Aquifer Number	BCGS Areas	Aquifer Name	Location Description	Aquifer Ranking Score for Quantity Monitoring
Similkameen Basin									
1	082E021	Similkameen	Keremeos	47.5	259	082E002, 011, 012, 021, 022, 092H030, 039, 040, 049, 048		US Border to Princeton	83.3
2	092H048	Similkameen	Princeton	37.5	258	082E002		Richter Pass	29.0
3	082E012	Similkameen	Cawston	30.0					
4	092H040	Similkameen	Hedley	24.2					

Note: Common BCGS areas highlighted in green.

Table 18. Comparison of top-rated BCGS areas, bedrock aquifers and third order watersheds.

Item Number	Priority BCGS Areas				Priority Bedrock Aquifers					Priority Watersheds				
	BCGS Area	Watershed	Location Description	Area Ranking Score for Quantity Monitoring	Aquifer Number	BCGS Areas	Aquifer Name	Location Description	Aquifer Ranking Score for Quantity Monitoring	Watershed Number	Watershed Ranking Score	Location Description	Bedrock Aquifer Numbers	BCGS Areas
1	082E003	Okanagan	Osoyoos	65.0	260	082E032		Marron Valley northwest of Okanagan Falls	45.1	5	37.5	BX Creek	350, 351	082L024, 025, 034, 035
2	082L034	Okanagan	Deep Creek South	65.0	110	082L064, 065		Grandview Bench	39.4	46	26.7	Penticton Creek	269, 298	082E043, 053, 054, 063, 064
3	082E083	Okanagan	Kelowna	62.5	298	082E053, 062, 063	Naramata	Naramata	37.4	42	23.3	Dark Creek	300	082E061, 062, 071
4	082L044	Okanagan & South Thompson	Otter Lake	60.8	473	082E084, 094		Mission, Davies & Cardinal Creek area	33.6	54	21.7	Horn Creek-Twin Lakes	260	082E022, 032
5	082L024	Okanagan	Vernon	60.0	808	082E003, 004		Anarchist Mountain	32.6	24	21.7	McDougall Creek	305	082E082, 083, 092, 093
6	082E094	Okanagan	Ellison	58.3	107	082L054, 055, 065		Gardom Lake to Enderby	32.1	55	19.2	Kearns Creek	260	082E022, 023, 032, 033
7	082L026	South Thompson	Lumby	57.5	269	082E043		Ellis Creek	32.1	26	15.8	Daves Creek	473	082E084, 094, 095
8	082L055	Okanagan & South Thompson	Enderby	56.7	263	082E033		North of Okanagan Falls/shore of Skaha Lake	32.1	37	15.0	Fortune Creek	106, 107	082L035, 045, 055
9	082E084	Okanagan	Mission Creek	52.5	351	082L034, 035		NE of Vernon and to the north of BX Creek	31.3	63	13.3	Haynes Creek	808	082E003, 004
10	082E033	Okanagan	Okanagan Falls	51.7	350	082L024, 025, 034, 035		NE of Vernon and to the south of BX Creek	31.3	44	13.3	Chute Creek	298	082E062, 063, 073
11	082E013	Okanagan	Oliver	50.0	304	082E082	Westbank	West side of Okanagan Lake, west of Kelowna	29.6	21	8.3	Brandt Creek	470	082E083, 093, 094
12	082L065	South Thompson	Shuswap River north of Enderby	49.2	104	082L054		1 kilometre northwest of Hullcar	29.6	52	6.7	McLean Creek	263	082E033, 043

Note: Common BCGS areas highlighted in green and common aquifers highlighted in yellow.

Table 19. Recommended objectives and targets for priority monitoring areas.

Priority Sub-area	Location Description	Area Objectives	Minimum Target Number of Observation Wells	Priority Aquifers	Priority Watersheds
Okanagan Basin including Lumby and Enderby					
1	North Okanagan, north of Vernon to Enderby	monitor groundwater/surface relationships, recharge and discharge mechanisms/rates/timing in lowland and upland areas, impact of drought and flooding on groundwater, impact of short and long term effects of climate and climate change, impact of long-term well pumping	6	bedrock 351, 106 and 107 unconsolidated 102, 111, 349 and 353	BX Creek, Fortune Creek, Deep Creek, Coldstream Creek and Vernon Creek
2	Kelowna-Westbank	monitor groundwater/surface relationships, recharge and discharge mechanisms/rates/timing in lowland and upland areas, impact of drought on groundwater, impact of short and long term effects of climate and climate change, impact of long-term well pumping	6	bedrock 305, 470 and 473 unconsolidated 464, 463, 344	McDougall Creek, Brandt Creek, Daves Creek, Mission Creek, Kelowna Creek and Powers Creek
3	Okanagan Falls to Osoyoos	monitor groundwater/surface relationships, recharge and discharge mechanisms/rates/timing in lowland and upland areas, impact of drought and flooding on groundwater, impact of short and long term effects of climate and climate change, impact of long-term well pumping	6	bedrock 260 and 808 unconsolidated 193, 194, 254, 255 and 264	Horn Creek-Twin Lakes, Kearns Creek, Haynes Creek, McLean Creek and Shuttleworth Creek
4	Lumby	monitor groundwater/surface relationships, recharge and discharge mechanisms/rates/timing in lowland and upland areas, impact of drought and flooding on groundwater, impact of short and long term effects of climate and climate change, impact of long-term well pumping	2	unconsolidated 316 and 317	Besette Creek

Priority Sub-area	Location Description	Area Objectives	Minimum Target Number of Observation Wells	Priority Aquifers	Priority Watersheds
5	Penticton-Summerland	monitor groundwater/surface relationships, recharge and discharge mechanisms/rates/timing in lowland and upland areas, impact of drought on groundwater, impact of short and long term effects of climate and climate change, impact of long-term well pumping	4	bedrock 269, 298 and 300 unconsolidated 299	Penticton Creek, Dark Creek and Trout Creek
Similkameen Basin					
1	Keremeos-Cawston	monitor groundwater/surface relationships, recharge and discharge mechanisms/rates/timing in lowland and upland areas, impact of drought and flooding on groundwater, impact of short and long term effects of climate and climate change, impact of long-term well pumping	4	unconsolidated 259	Keremeos Creek
2	Hedley	monitor groundwater/surface relationships, recharge and discharge mechanisms/rates/timing in lowland and upland areas, impact of drought and flooding on groundwater, impact of short and long term effects of climate and climate change, impact of long-term well pumping	2	unconsolidated 259	Cahill Creek
3	Princeton	monitor groundwater/surface relationships, recharge and discharge mechanisms/rates/timing in lowland and upland areas and impact of drought and flooding on groundwater, impact of short and long term effects of climate and climate change, impact of long-term well pumping	3	unconsolidated 259	Allison Creek
Total:			33		

Notes: Primary objective for unconsolidated aquifers is to monitor effects of ground water extraction.
Primary objective for bedrock aquifers is to monitor ground water recharge.

Table 19.

APPENDIX A. Project Tasks

Phase 1 and Task	Task Description
1.1	Assemble and summarize available information on climate, topography, drainage, aquifers, wells and ground water supply systems from existing data sources and reports.
1.2	Prepare maps outlining, climatic zones, classified aquifers, sub-basins, topography and major drainage features, and locations of existing climate stations (Env. Canada, Min. of Forest Fire Weather, Min. of Transportation, FarmWest), hydrometric stations, snow courses/pillows, observation wells and ground water supply systems.
1.3	Identify current and potential ground water quantity issues through telephone interviews with representative stake holders and examination of relevant water supply reports.
1.4	Draft weighted criteria for prioritizing aquifers and sites for ground water level monitoring in recharge and discharge areas and review with Ministry staff before finalizing. Prioritization shall be based on a numerical rating scheme.
1.5	Prioritize and list aquifers and sites (priority areas) for monitoring following the Ministry approved criteria.
1.6	Consult with Ministry staff on overall objectives and guiding principles and draft a strategic plan for establishing new monitoring sites for the priority areas including site specific objectives and targets.
1.7	Submit draft interim report to Ministry staff on prioritized areas and strategic plan for further discussion and refinement.
1.8	Finalize strategic plan for establishing new wells.

Phase 2 and Task	Task Description
2.1	Assemble and summarize key information on existing observation wells in priority areas and categorize the wells (e.g. shallow, deep, bedrock, unconsolidated, quality of hydrograph record, recharge or discharge conditions).
2.2	Assess relevancy of the existing wells for meeting the objectives and targets and recommend retention, reactivation or closure for: <ol style="list-style-type: none"> i. wells in priority areas, and ii. wells not in priority areas.
2.3	Draft an implementation plan for rehabilitating or closing of any existing observation wells.
2.4	Submit draft report to Ministry staff on results of assessment and proposed implementation plan for existing wells linked to overall strategic plan.
2.5	Finalize implementation plan for existing wells.

APPENDIX B

Vision for British Columbia's Ministry of Environment **Groundwater Observation Well Network**

Vision:

An effective observation well network that monitors the water level and groundwater chemistry of aquifers and basins to support management, protection and sustainability of our groundwater resource.

Mission Statement:

Through our network of dedicated observation wells, we monitor the water level and groundwater chemistry of priority aquifers and basins, by collecting, interpreting and reporting high quality, relevant data and information in a timely fashion.

Monitoring Objectives

- 1) Understand local and regional hydrogeological processes and characteristics including:**
 - a) Monitoring groundwater/surface water relationships, recharge and discharge mechanisms/rates/timing in lowland and upland areas and impact of drought and flooding on groundwater,
 - b) Fundamental aquifer or basin characteristics (e.g. groundwater levels, temporal trends, transmissivity, hydraulic conductivity and storativity values, water chemistry, etc.),
 - c) Monitoring impact of short and long term effects of climate and climate change on groundwater levels.

- 2) Support effective use of the resource and minimize groundwater conflicts between users by:**
 - a) Helping to assess the impact of groundwater withdrawals in specific areas to determine if further ground water development is possible without adversely affecting sustainability of the resource,
 - b) Helping to resolve water use conflicts, such as interference between wells and ground water withdrawal near fully allocated lakes and streams,
 - c) Assessing the long-term and short-term effects of human-induced activities such as pumping and construction of drainage works on ground water levels, both locally and regionally.

APPENDIX B

Operational Objectives:

- 1) Use an effective model to fund and manage the network by:**
 - a) Defining roles, responsibilities and coordination between Headquarters and Regional staff,
 - b) Setting priorities and seeking funding for staffing levels, data management and reporting, operations, capital and training budgets,
 - c) Effectively communicating and transferring knowledge and ideas between Regions and Headquarters,
 - d) Partnering with other local government, community, provincial and federal agencies where beneficial.

- 2) Operate an effective observation well network by:**
 - a) Maintaining an economic, efficient and effective network in priority aquifers and basins,
 - b) Collecting high quality and relevant data and information in a timely way,
 - c) Assigning a relevancy review cycle (e.g. every 1, 3, 5 years) for each observation well, based on each well's unique conditions,
 - d) Providing staff and contractors with proper training and access to effective and up-to-date techniques and practices,
 - e) Ensuring our network wells are compliant with the Ground Water Protection Regulation,
 - f) Supporting groundwater studies in specific areas or for specific issues (e.g. Groundwater Assessment of the Okanagan Basin, Coal Bed Methane Extraction),
 - g) Reviewing network program objectives and revising as required every 3 years.

- 3) Report relevant data and information, and issue advisories to support major users of groundwater to better manage, protect and sustain the resource by:**
 - a) Insuring data and information meet Ministry standards and are reported in a timely manner to relevant end users and decision makers,
 - b) Helping people better understand the nature and sustainability of our groundwater resource (e.g. water supply and drought forecasting),
 - c) Helping to convert groundwater monitoring data into relevant information (e.g. recharge rates, temporal trends, aquifer characteristics),
 - d) Employing user friendly and publically accessible formats (e.g. Snow Survey Bulletin, Observation Well Web page, etc.),
 - e) Utilizing current and effective technology and best practices.

APPENDIX C

Objectives of Draft Water, Land and Air Quality Monitoring & Reporting Strategy

Air & Water Monitoring & Reporting Technical Committee (2002).

A water, land and air quality monitoring and reporting strategy forms the basis to achieve Ministry objectives and performance targets. These objectives include the following:

1. To develop and implement air and water quality monitoring and reporting programs that reflect the Ministry shift toward:
 - shared stewardship for environmental management;
 - increased service delivery through partnerships;
 - setting standards and ensuring that they are met;
 - clear roles for environmental stakeholders in gathering and reporting environmental information;
 - integrated ministry program delivery based on best available science and an ecosystem-based approach;
 - providing monitoring and assessment information in a transparent, timely and easily accessible manner, (enhanced internet access) and;
 - increased electronic service delivery.
2. To collect and report air and water monitoring data of sufficient quality to:
 - inform the public and other stakeholders;
 - support Ministry management strategies for protecting human health and for ensuring clean air and healthy aquatic ecosystems;
 - support resource management actions for protecting human health from air and water degradation, protecting aquatic ecosystems and for sustaining agricultural, industrial and recreational benefits from environmental resource usage, and
 - provide a measure of progress in achieving government and ministry strategic environmental objectives.
3. To acquire monitoring data from airsheds, watersheds, and aquifers that are degraded or at serious risk of degradation due to impacts of human activities, where public perception, recreational use or economic values dictate some priority on monitoring.
4. To conduct monitoring using standardized monitoring, data management and quality assurance protocols to ensure the scientific integrity of the data and to enable multi-party submission, access and sharing of the data.
5. To deliver efficient, cost effective monitoring activities funded through user-pay mechanisms and partnerships where practicable.

APPENDIX D

Factors/Criteria Examined and Information Sources

Major Watershed Boundaries

The major watershed boundary for the Okanagan River Watershed in British Columbia as shown in Figure 1 was obtained at a scale of 1 : 250 000 from the *BC Water Resources Atlas* website at <http://srmapps.gov.bc.ca/apps/wrbc/>. The Okanagan River Watershed includes the Similkameen River Watershed and occupies a total area of 15,500 km². Lumby and Enderby are situated in the South Thompson River Watershed and the Thompson River Watershed lies north of the Similkameen River Watershed. For purposes of this report the Similkameen River Watershed is referred to as the Similkameen Basin (7,300 km²) and the main stem portion of the Okanagan River Watershed is referred to as the Okanagan Basin (8,200 km²). The boundary between the Similkameen Basin and the Okanagan Basin was interpreted from the 1 : 250 000 mapscale.

Main Drainage Features

The Okanagan Basin is characterized by a series of valley-bottom lakes that run north-south draining south to the Okanagan River. The Similkameen River and its tributary, the Tulameen River, are the main drainage features of the Similkameen Basin. Drainage features shown in Figure 1 were obtained at a scale of 1 : 250 000 from the *BC Water Resources Atlas* website at <http://srmapps.gov.bc.ca/apps/wrbc/>

Topography

Most of the study area is situated within the Thompson Plateau physiographic sub-region (Holland, 1964) that is a gently rolling upland of low relief, generally between 1200 m and 1500 m in elevation. Elevations above 2000 m occur south of Keremeos to the Canada-USA boundary within the Cascade Mountains sub-region. Contours at elevations of 1000 and 2000 m are shown in Figure 3 as they illustrate the general demarcation zone between upland (bedrock dominated) areas and the valley bottom areas where thicker sections of unconsolidated deposits are found. While bedrock aquifers also occur below the 1000 m contour they often extend above this elevation. Topographic contours shown in Figure 3 were obtained at a scale of 1 : 250 000 from the *BC Water Resources Atlas* website at <http://srmapps.gov.bc.ca/apps/wrbc/>

Bedrock Geology

Liskop and Allen (2005) provide an excellent summary of the bedrock geology and nature of the unconsolidated deposits underlying the Okanagan Basin based on findings of several investigators that have worked in the region. For purposes of this report it should be noted that the bedrock geology is very complex, with dominantly crystalline bedrock units ranging from Proterozoic gneisses to Tertiary volcanic rocks such as basalts and rhyolitic lava flows. Ground water is found primarily within fractures of these rock types. Fault and fracture mapping from interpretation of aerial, satellite and DEM imagery is available for the Okanagan Basin (pers. comm., D. Anderson, 2006). In the Similkameen Basin, Tertiary coal deposits are found in the Tulameen basin and Princeton basins near the community of Princeton (MEMPR, 2006) where ground water may be found in fractures and within the primary porosity of these deposits. Further details on the geology of specific bedrock aquifers identified in the study area region is available from the individual classification worksheets for these aquifers (pers. comm., K. Ronneseth, 2006). While bedrock aquifers are generally found extending into the upland areas above the 1000 m elevation contour they have also been encountered underlying unconsolidated aquifers e.g. Marron Valley area west of the community of Okanagan Falls and along the shores of Okanagan Lake e.g. at Naramata.

Unconsolidated Quaternary Deposits

The distribution of unconsolidated Quaternary deposits in the study area is shown in Figure 4. For the most part these are confined to valley-bottom areas along the major drainage features. The most significant deposits occur between Vernon and Enderby at the north end of the Okanagan Basin, between Vernon and Lumby in the Coldstream Valley and along its extension into the South Thompson Watershed, around Kelowna, Penticton, along the Okanagan River south of Skaha Lake to the Canada-USA boundary, along the Similkameen and Tulameen Rivers and around Princeton. The more permeable deposits at these locations host the many unconsolidated aquifers that have been classified in the study area. Extent of the unconsolidated deposits shown in Figure 4 were obtained at a scale of 1 : 250 000 from the *BC Water Resources Atlas* website at <http://srmapps.gov.bc.ca/apps/wrbc/>

Classified Aquifers

Classified aquifers include unconsolidated and bedrock aquifers identified under the *British Columbia Aquifer Classification System* (BCACS). In bedrock aquifers, groundwater occurs in both primary (intergranular) and secondary (fracture and bedding plane) porosity. In unconsolidated aquifers, groundwater occurs within intergranular porosity. A brief summary of the BCACS is provided in Appendix E.

Information on individual aquifers can be accessed from the aquifer database at http://www.env.gov.bc.ca/wsd/plan_protect_sustain/groundwater/aquifers/index.html

Figure 5 shows the distribution of 83 classified aquifers in the study area. Tables 1 and 2 provide listings of the 57 unconsolidated and 26 bedrock aquifers respectively with information on their classification components (level of development and intrinsic vulnerability), ranking and area. From Figure 5 it is evident that the aquifers appear to occur in four main groups, associated in part with the distribution of unconsolidated deposits in the study area. These groups are approximately centered in the:

- A. the north Okanagan around Enderby, Vernon and Lumby;
- B. the area around Kelowna;
- C. the area around Penticton, and;
- D. the southern Okanagan around Oliver and along the Similkameen River valley from the Canada-USA boundary to Princeton.

Figures 6, 7 8 and 9 show the location of classified aquifers in these four groupings respectively. Aquifer locations were obtained from the *BC Water Resources Atlas* website at <http://srmapps.gov.bc.ca/apps/wrbc/>

The classification components of the BCACS include the following:

BCACS-Degree of Development

This refers to the level of development of an aquifer by assessing demand verses the aquifer's yield or productivity. A high (I), moderate (II), or low (III) level of development can be designated.

BCACS-Vulnerability

This refers to the intrinsic vulnerability of an aquifer to contamination from surface sources based on aquifer type, thickness and extent of material overlying the aquifer, depth to water (or top of confined aquifers), and type of aquifer materials. A high (A), moderate (B), or low (C) vulnerability can be designated.

BCACS-Ranking Value

This refers to a numerical measure that considers 7 sub-factors namely: productivity, aquifer size, vulnerability, demand, type of use, quality concerns (that have health risk implications) and quantity concerns. Possible ranking scores range from a low of 5 to a high of 21. This ranking assists in prioritizing aquifers that may be classified at the same level based on vulnerability and

degree of development factors. Note this factor includes some “double counting” to some degree but its purpose is to assist in fine tuning the classification of the aquifers.

Note that the BCACS ranking value is different than the ranking values being developed for determining the priorities for monitoring aquifers.

Well Locations and Well Density

The distribution of reported wells in the study area is shown in Figure 10. Wells are concentrated in the lower elevation areas along the main drainage features and transportation corridors where most of the population resides. The wells also reflect areas where aquifers have been classified. It should be noted that there are groups of wells in areas where aquifers have yet to be identified and classified, e.g. around Princeton, north of Keremeos, and south of Vernon around Kalamalka and Wood Lake. Well locations were obtained at a scale of 1 : 250 000 from the *BC Water Resources Atlas* website at <http://srmapps.gov.bc.ca/apps/wrbc/>

Well density for each 1 : 20 000 BCGS or TRIM mapsheet as shown in Figure 11 was determined by carrying out a customized water well data search finding the number of reported wells in each mapsheet at the Ministry of Environment WELL database website <http://aardvark.gov.bc.ca/apps/wells/jsp/public/wellsreport6.jsp> It is evident from Figure 11 that well density is highest in three areas, namely; the North Okanagan, around Kelowna and in the southern Okanagan between Oliver and Osoyoos.

Community Watersheds

Community watersheds are natural watershed areas on which a community holds a valid water licence issued under the Water Act and where water is used for human consumption. For purposes of this report they are of interest as they are indicative of watershed areas where there are local community interests in protecting and maintaining water availability and water quality. Figure 12 shows the distribution of community watersheds in the study area accessed at a scale of 1 : 250 000 from the *BC Water Resources Atlas* website at <http://srmapps.gov.bc.ca/apps/wrbc/> Further information on community watersheds can be obtained from MOE website http://www.env.gov.bc.ca/wsd/plan_protect_sustain/comm_watersheds/index.html

It is evident from Figure 12 that the majority of community watersheds are situated in the Okanagan Basin upland areas east and west of Okanagan Lake between Penticton and just south of Vernon. They also occur in the South Thompson Watershed between Lumby and Enderby.

Active Climate Stations

Active climate stations for the study area include Environment Canada stations as shown in Figure 13 and stations maintained by Farmwest and the Ministry of Forests and Range (MoFR), Protection Branch (Figure 14). More site details on these stations are provided in Tables 3 and 4 respectively.

Information on the Environment Canada climates stations was obtained from their websites at

http://www.climate.weatheroffice.ec.gc.ca/Welcome_e.html

http://scitech.pyr.ec.gc.ca/climhydro/mainContent/main_e.asp?province=bc

Information on the Farmwest and MoFR climates stations was obtained from their respective websites at

<http://www.farmwest.com/index.cfm>

<http://www.for.gov.bc.ca/protect/weather/>

It should be noted that there is some overlapping of sites between the agencies. and differences in the availability of climate parameters. MoFR stations are focused on providing hourly weather observations to support fire weather forecasting during the summer months.

In terms of potential ground water monitoring sites, the proximity of climate stations to ground water monitoring sites facilitates the interpretation of water level fluctuations at the monitoring sites. In establishing new observation well sites, the location of active climate stations is more important than the location of archived climate sites and historic data. Figures 13 and 14 indicate that there is good coverage of climate sites at low elevations in the Kelowna, Penticton and Oliver-Osoyoos areas. Apart from one or two areas e.g. Silver Star, there is limited coverage of climate stations in the upland areas.

Active Snow Courses and Snow Pillows

Figure 15 shows the location of active snow courses and snow pillows accessed at a scale of 1 : 250 000 from the *BC Water Resources Atlas* website at <http://srmapps.gov.bc.ca/apps/wrbc/> Most of these sites are situated in the uppermost reaches of the watersheds where they are within community watersheds. These sites are important for assessing inputs from snow melt and runoff that contribute to natural recharge of aquifers and the ground water regime in upland areas.

Active Hydrometric Sites

Figure 16 shows the location of active British Columbia-Environment Canada hydrometric stations. Site information for these stations was accessed from the

Environment Canada website at

http://scitech.pyr.ec.gc.ca/climhydro/mainContent/main_e.asp?province=bc

Table 5 provides a listing of the stations. The majority of these sites monitor flows along the main stem Okanagan River and Similkameen Rivers and headwaters of major tributaries.

Locations of Ground Water Supply System Sources

A listing of ground water supply system sources (wells and springs) is provided in Table 6. This list was derived from a more complete draft listing of both ground water and surface water supply sources that was provided by Vicki Carmichael with the Ministry of Environment. Ground water supply systems may have more than one ground water source. Springs, while licensed as surface water sources, are regarded as ground water sources for purposes of this report. BCGS 1 : 20 000 mapsheet numbers were determined for each of the sites and added to the listing. Site location information derived from GPS surveys undertaken as part of the *Drinking Water Information Management Project (DWIMP)* were used to plot the locations of the sites as shown in Figures 17, 18, 19 and 20 covering the four main groupings of classified aquifers discussed above under the section on classified aquifers. While individual sources were linked to the classified aquifers, BCGS areas and third order watersheds on a proximity basis this cross referencing was regarded as preliminary only. Further detailed work would be required to verify the linkages. It should be noted that while most ground water supply sources are associated with classified aquifers there are a number of sources situated where aquifers have not been classified e.g. north of Keremeos, southwest and northeast of Vernon. The largest number of ground water supply sources occurs in the North Okanagan and Kelowna areas with the least number in the Penticton area.

Health Authorities classify the water supply systems in the region into three main categories namely:

WS1 (large), with 301 or more connections;
WS2 (medium), with 15 to 300 connections; and
WS3 (small), with 1 to 14 connections.

In addition, Health Authorities also recognize WS4 systems that have one connection such as a restaurant, campsite, foodstore or maintenance yard for example.

Apart from considering the number of ground water systems and sources for each aquifer, BCGS mapsheet and third order watershed that were ranked, a detailed examination of each water system was not undertaken for this project.

Third Order Watershed Boundaries

Figure 21 shows the location of third order watersheds in the study area. These were originally produced by Rick Hardy of the Ministry of Environment on a base map at a scale of 1 : 250 000 with tables (not shown) listing the area of each watershed.

Reported Ground Water Quantity Issues

Ground water quantity issues were identified in a series of meetings conducted during the initial phase of consultations (2004-05) for the Groundwater Assessment of the Okanagan Basin (GAOB) project with local government personnel, water system purveyors, well drillers and other stakeholders. A summary of these issues, derived from a summary provided by Vicki Carmichael of the Ministry of Environment, minutes of the meetings and recent (2006) discussions with Ministry staff, is shown in Table 7. Wider issues such as the potential effects of climate change and potential effects of mountain pine beetle infestation on ground water availability are discussed elsewhere in this report.

An indication of water quantity issues for each aquifer are also recorded at the MOE aquifer database at http://www.env.gov.bc.ca/wsd/plan_protect_sustain/groundwater/aquifers/index.html where quantity concerns are reported as either; isolated, local, regional or none.

A questionnaire (Appendix F) was also sent to about 30 individuals including water purveyors, local government officials, ground water consultants, well drillers and water researchers to determine their interest in observation well information and their suggestions for establishing new sites. Their concerns confirm the main issues covered in Table 7.

Table 8 provides an overview of the general and specific areas where the quantity issues listed in Table 7 are reported. Many of the issues such as concerns about potential impacts of development pressures on ground water supply are reported throughout the study area. Ground water availability, sustainability and aquifer capacity concerns are widespread. A wide number of issues appear prevalent in the North Okanagan and in the southern Okanagan area between Oliver and Osoyoos.

Current or Planned Ground Water Research/planning Projects

A number of agencies and water research facilities are conducting or planning ground water research projects or water planning activities in the study area. A listing of known or potential projects is provided in Table 9. Scope of the projects ranges from basin wide studies to specific area or watershed studies.

Corresponding BCGS 1 : 20 000 mapsheets were matched to the areas of investigation where possible.

Areas of Mountain Pine Beetle Infestation

Areas of mountain pine beetle infestation are of interest as deforested areas may result in physical changes to natural water balances, the recharge regimes for ground water in upland areas and subsequently ground water availability. A regional map at a scale of 1 : 300 000, showing the severity of mountain pine beetle infestation in the Okanagan region based on 2005 data was made available by Des Anderson of the Ministry of Environment. The map was produced by Chris Ens with the Integrated Land Management Bureau, Land Information BC in 2005 and shows the location of spot infestations of trees (number of trees affected) and areas of infestation based on a severity scale ranging from trace (< 1%) to very severe (> 50%). A BCGS grid showing the locations of 1 : 20 000 mapsheets was drawn over the 1 : 300 000 infestation basemap and individual BCGS mapsheets were then identified as to their general degree of infestation being (a) severe, (b) light to moderate, or (c) nil to localized. For the most part, BCGS mapsheets through the central Okanagan Basin exhibit (c) nil to localized infestation. Mapsheets in an east-west trend, north and south of Vernon in the North Okanagan and south of Lumby show light to moderate infestation. Mapsheets west of Osoyoos and west of a north-south line approximately through Princeton show moderate to severe infestation in the Similkameen Basin. Mapsheets northwest and southwest of Enderby show moderate to severe infestation.

Estimates of Current Ground Water Use

Current ground water use for each aquifer on an averaged rate of use over a year was estimated roughly based on the number of reported wells in the aquifer, reported yields of larger capacity wells and the type of water use (e.g. domestic, municipal, irrigation) where known. The number of wells in each aquifer was estimated at various map scales at the *BC Water Resources Atlas* website at <http://srmapps.gov.bc.ca/apps/wrbc/>

Domestic wells were estimated to supply approximately 500 USgpd (1893 L/d) each. Population estimates for some communities were also utilized based on a water use rate of 500 USgpd (1893 L/d) for three persons where it was known that they used ground water in a particular aquifer (e.g. community of Okanagan Falls). While the accuracy of these estimates is not known and may be high the estimates are considered reasonable where used for the ranking of aquifers.

Location and Number of Reported Irrigation Wells

The locations and number of irrigation wells reported for each aquifer was determined through the *BC Water Resources Atlas* website at <http://srmapps.gov.bc.ca/apps/wrbc/> where types of well use can be queried and the locations displayed. Irrigation wells are important since they are usually larger capacity wells and may be indicative of significant ground water use during the irrigation period.

Estimates of Population Served by Ground Water

This was determined by checking the number and type of wells over an aquifer and the number and type of water systems. The number of wells in each aquifer was estimated at various map scales at the *BC Water Resources Atlas* website at <http://srmapps.gov.bc.ca/apps/wrbc/>. It was assumed that each private domestic well would serve an average of 3 persons. Current population figures available for some communities from their community websites were also considered where it was known that they used ground water in a particular aquifer (e.g. community of Okanagan Falls). While the accuracy of these population estimates is not known and may be high, the estimates are considered reasonable where used for the ranking of aquifers.

Reports of Future Land Development

This measure was briefly assessed by considering the size of individual aquifers, well density and reports regarding quantity issues identified in Table 7. For relatively small aquifers in urban settings such as Aquifer 468 near Kelowna and Aquifer 301 near Westbank, for example, future land development may be unlikely. This factor, however, needs to be confirmed by persons with local knowledge.

APPENDIX E

1. The British Columbia Aquifer Classification System (BCACS)

The following sections describe how an aquifer classification is derived and how these classifications are to be interpreted. For further information on using and understanding the BCACS and on interpreting aquifer mapping, the publication entitled *A Guide to using the BC Aquifer Classification Maps for the Protection and Management of Groundwater* by Berardinucci and Ronneseth (2002) is recommended for reading. The application of the British Columbia Aquifer Classification System on a province-wide basis would provide a comprehensive inventory of aquifers (**Figure 1**).

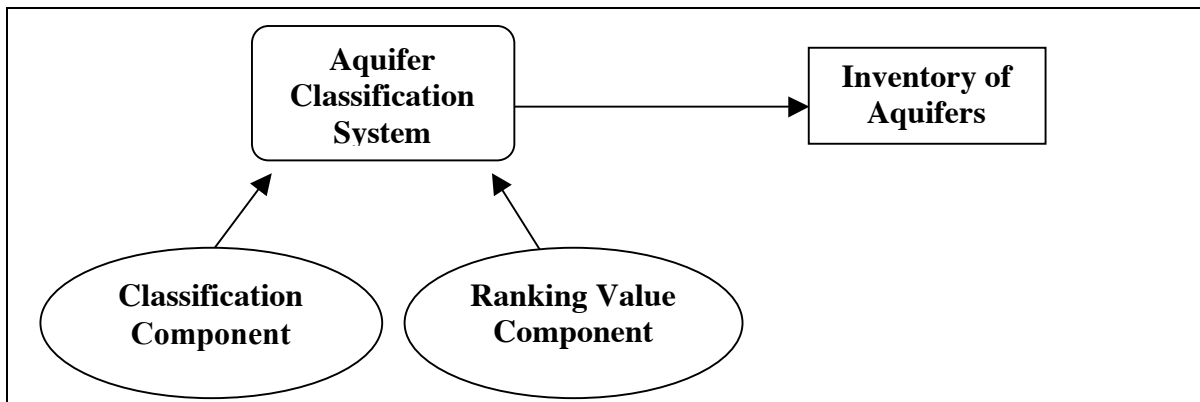


Figure 1. Structure of the British Columbia Aquifer Classification System.

1.1 The Classification System

The aquifer classification system has two components: a *classification* component to categorize aquifers based on their current level of development (use), and vulnerability to contamination, and a *ranking value* component to indicate the relative importance of an aquifer.

The classification component categorizes aquifers according to level of development and vulnerability to contamination: *Level of Development* and *Vulnerability* categories are designated. The composite of these two categories is the *Aquifer Class* (**Table 1**). Classification and ranking values are determined for aquifers as a whole, and not for parts of aquifers.

Development category: The level of development of an aquifer is determined by assessing demand versus the aquifer's yield or productivity. A high (I), moderate (II), or low (III) level of development can be designated.

Vulnerability category: The vulnerability of an aquifer to contamination from surface sources is assessed based on: type, thickness and extent of geologic materials overlying the aquifer, depth to water (or top of confined aquifers), and the type of aquifer materials. A high (**A**), moderate (**B**), or low (**C**) vulnerability can be designated.

Aquifer Class: The combination of the three development and three vulnerability categories results in nine aquifer classes (**Table 1**). For example, a class **IA** aquifer would be heavily developed with high vulnerability to contamination, while a **IIIC** would be lightly developed with low vulnerability.

Table 1. Aquifer classification components.

Development Category

I	II	III
Heavy (demand is high relative to productivity)	Moderate (demand is moderate relative to productivity)	Low (demand is low relative to productivity)

Vulnerability Category

A	B	C
High (highly vulnerable to contamination from surface sources)	Moderate (moderately vulnerable to contamination from surface sources)	Low (not very vulnerable to contamination from surface sources)

Aquifer Class

	I	II	III
A	IA – heavily developed, high vulnerability aquifer	IIA – moderately developed, high vulnerability aquifer	IIIA – lightly developed, high vulnerability aquifer
B	IB – heavily developed, moderate vulnerability aquifer	IIB – moderately developed, moderate vulnerability aquifer	IIIB – lightly developed, moderate vulnerability aquifer
C	IC – heavily developed, low vulnerability aquifer	IIC – moderately developed, low vulnerability aquifer	IIIC – lightly developed, low vulnerability aquifer

1.2 The Ranking Value Component

A numerical measure of an aquifer's priority is provided by the aquifer's ranking value. The ranking value is determined by summing the point values for each of the following hydrogeologic and water use criteria: productivity, size, vulnerability, demand, type of use, quality concerns (that have health risk implications), and

quantity concerns (**Table 2**). All criteria have arbitrarily been assigned equal weight. Values range from a minimum of “1” to a maximum of “3”, except for quality and quantity concerns which are assigned a minimum of “0” if concerns are not evident. Possible ranking scores range from a low of 5 to a high of 21; the higher the ranking score, the greater the aquifer’s priority.

Table 2. Aquifer ranking component

Criteria	Point Value			Rationale
	1	2	3	
Productivity	Low	Moderate	High	Abundance of the resource
Vulnerability	Low	Moderate	High	Potential for water quality degradation
Size	<5 km ²	5 - 25 km ²	>25 km ²	Regionality of the resource
Demand	Low	Moderate	High	Level of reliance on the resource
Type of Use	Non-drinking water	Drinking water	Multiple use/ drinking water	Variability/ diversity of the resource for supply
Quality Concerns	Isolated	Local	Regional	Actual concerns
Quantity Concerns	Isolated	Local	Regional	Actual concerns

The classification system is map-based with aquifers delineated at a scale of 1:20,000 or 1:50,000 (the classification system is only being applied in areas with well location mapping). An inventory database containing the attributes of each aquifer is built as aquifers are identified and classified. The maps and database can be readily incorporated into a geographical information system (GIS).

Much of the information upon which mapping and classification is based is office-derived, using existing and readily available data sources. These include well records (approximately 70,000 available across the province) provided by well drillers, published geologic mapping, and Ministry and consultants reports. Data availability and reliability constrain how technically rigorous the assessments can be (e.g., while transmissivity values provide the basis for assessing aquifer productivity, these values are rarely available; productivity can alternatively be assessed using typical well yields, type of well use, aquifer materials and other simpler, more subjective indicators). The data limitations are important to note as class designations strive for *reasonable assessments* based on the available data, not rigorous determinations. Given the broader management objectives of the system and the operational and data constraints, this approach is appropriate. The

classification and ranking value of an aquifer is time dependent and could change with up-dated information.

1.3 Delineating Aquifer Boundaries

One of the primary tasks of classification is identification of an aquifer and delineation of its boundaries. As classification is based on existing information, aquifer boundaries range from reasonable assessments (where detailed information is available) to general approximations (scarce information availability). Only those aquifers that have sufficient groundwater development are delineated and classified. In cases where aquifers cannot be fully delineated, especially confined, unconsolidated aquifers and bedrock aquifers, boundaries are defined by the area of groundwater development. Aquifers with areas less than one square kilometre are generally not mapped. Guidelines for determining level of development, vulnerability to contamination and ranking values are detailed in Kreye and Wei (1994).

1.4 Relationship between Aquifer Class and Ranking Value

Aquifer class and ranking values are related in that, together, they provide both descriptive and numerical ranking information about the priority of an aquifer for management and protection. According to Kreye and Wei (1994), classification of over 430 aquifers province-wide showed that ranking values generally increase with increasing levels of development and increasing vulnerability. This occurs because factors considered in the classification component (demand, productivity and vulnerability) also appear in the ranking component.

1.5 Interpreting Aquifer Maps

The main product in mapping and classifying aquifers is aquifer classification maps. These maps show locations of aquifers, their classification and ranking values. Where insufficient data exists, dashed lines appear on the mapping in order to indicate a lower level of confidence of the aquifer boundaries. Data reliability can be a concern in areas where well records have not been submitted to MOE, they are incomplete, the wells could not be located or where very few wells exist in a geologic formation. These areas may, however, be revisited when additional data are available. Hydrogeological cross sections are valuable in illustrating where an aquifer is relative to another at depth, possible direction of groundwater flow, and why one aquifer may be more vulnerable than another. It is important to note that the aquifer maps are not intended to indicate geology at a site specific level of detail. A greater level of investigation is necessary in establishing site-specific details. Therefore site-specific decisions or determinations should not be made using only aquifer mapping.

1.6 Uses of the B.C. Aquifer Classification System

The B.C. Aquifer Classification System can serve a variety of functions. A primary benefit is the accumulation of an aquifer inventory in the Regional Districts, which is critical for comprehensive groundwater management. It is important to have knowledge of the number of aquifers to be managed and their general geographical, physical and hydrologic characteristics. The classification system can guide in planning of land use as well as monitoring activities such as establishment of a Regional District network of observation wells to monitor groundwater level and ambient water quality in the key aquifers. The system can also provide a method for identifying aquifers that require more detailed assessment, including hydrogeologic mapping, modelling and identification of recharge and discharge areas of aquifers. Operational policies for hydrologic assessment could be developed for individual aquifer classes. For instance, detailed hydrogeologic mapping and groundwater flow modelling may be initiated for heavily developed aquifers (**IA, IB, IC**) to assist in allocation planning. Water quality surveys, vulnerability mapping and monitoring programs could be initiated for high vulnerability aquifers that have a moderate to heavy level of development (**IA, IIA**). The information and aquifer maps also provide managers, planners and stakeholders with interpreted groundwater information (not raw data) that will support decision-making in regional resources inventory and planning processes in B.C. (e.g. Commission on Resource and Environment (CORE); Land Resource Management Plans (LRMPs); and Growth Strategy Planning). In addition, the B.C. Aquifer Classification System produces information, which can be a valuable educational tool to promote understanding and awareness of the groundwater resource.

1.7 Aquifer Classification Map Applications and Limitations

Aquifer Classification Maps and Worksheets are intended to identify aquifers that may or may not provide groundwater supplies, and identify aquifers that are at risk of contamination. The aquifer classification maps provide land use planners with hydrogeological information that can support the planning process and help to better understand, protect and sustain the groundwater resource. Aquifer maps can be used at the provincial, regional and local planning and management levels. They provide a regional perspective on areas that should be given priority for protection and management of the groundwater resource and they are presently used by both government agencies and industry. The aquifer classification system is, however, subjective and care must be taken when using and interpreting the maps for specific land use planning. For example, the vast majority of wells completed in surficial deposits are completed and developed without well screens. It should be recognized that if most or all wells located within an aquifer were developed with well screens, the wells would be more efficient and likely produce higher yields than those reported thus denoting a higher productivity to the aquifer. As a result, the productivity could change from low to moderate or moderate to high depending on the situation. It should also be kept in mind that although an aquifer may be classified as more vulnerable than another, how much more vulnerable cannot be determined solely from the aquifer maps. There may also be areas within an aquifer

classified as moderately vulnerable that are highly vulnerable (i.e. windows of high vulnerability). For this reason a site-specific assessment may be necessary to more accurately determine aquifer vulnerability. It has also been assumed that all wells reviewed are in use and well yields reported equal the amount of groundwater used. This assumption is likely not accurate, and to gain a clearer understanding of aquifer development a site-specific assessment would also be necessary.

APPENDIX F
Observation Well Network Questionnaire
Okanangan-Similkameen Watersheds

1. Check the appropriate box or boxes that describe your field of work or responsibility.
- engineering/environmental consulting
 - environmental planning
 - environmental health
 - water supply systems/utilities
 - applied research
2. Are you aware of the availability of groundwater level data and information at the following Ministry of Environment websites?

http://www.env.gov.bc.ca/wsd/data_searches/obswell/index.html
<http://www.env.gov.bc.ca/rfc/>

YES NO

Comments _____

3. Have you accessed any water level information from Ministry offices or the above Ministry websites in the last 12 months ?
- YES NO

Comments _____

4. How often do you require information on ground water levels ?
- Annually Seasonally Monthly Occasionally Not Required

Comments _____

5. For what purposes do you require groundwater level information?
- current trends historic trends water conservation/availability
 well yield assessments well field operation other _____

Comments _____

6. Are there any observation wells, aquifers or areas where you have a specific interest? Wells _____ Aquifers _____ Areas _____

7. In your opinion, are there generally sufficient observation well monitoring sites for those areas where you require ground water level information ?
- YES NO

Comments _____

8. Are there any areas or aquifers where you would like to see observation wells established? Aquifers _____ Areas _____

9. Other comments or suggestions?

Comments _____

Observation Well Network Review Okanagan Region

PHASE 2
Review of Existing Wells

FINAL REPORT

for

Water Stewardship Division
BC Ministry of Environment
Penticton, British Columbia

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EXECUTIVE SUMMARY

This report summarizes the results of the Phase 2 part of a project carried out for the Ministry of Environment to review and assess the existing observation wells in the Okanagan Region to insure the network meets the vision, mission and objectives for the Provincial Observation Well Network. Phase 1 included identifying priority monitoring areas and developing a strategic monitoring plan. Phase 2, the final phase of the project, involved reviewing the existing network wells and providing recommendations for each site. Further details were also provided for planning new observation wells in priority areas.

Available information on 49 observation well sites in the Okanagan and Similkameen Basins was reviewed and assessed. Thirty-nine (39) or 80 percent of the sites were found to be located within the high priority aquifers and watersheds that were identified in the Phase 1 report, indicating that the majority of observation wells in the Okanagan and Similkameen Basins are currently located in strategic areas for monitoring purposes. Four (4) wells were identified for possible rehabilitation and 14 wells were identified for well closure including redundant sites in priority areas.

Well closure of the 14 well sites will require contracting of qualified well drillers for the work to meet the requirements of the *Ground Water Protection Regulation* and will also need the approval of property owners. Although all of the proposed wells for closure belong to the crown, they are all located on private lands.

Sixteen (16) candidate priority aquifers and 16 watersheds, where observation currently do not exist, were identified for possible establishment of new observation wells. For future planning, consideration should be given to focusing establishment of new observation wells in one to two priority sub-networks, or two to four priority aquifers each year. Involvement of potential partners in the planning of specific sites in the priority sub-networks is recommended along with additional classification mapping in the Similkameen Basin and Wood Lake area of the Okanagan Basin. Aquifer classification mapping will assist in identifying potential sites for new observation wells.

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ACRONYMS

BCGS	British Columbia Geographic System
FHID	Fairview Heights Irrigation District
MOE	Ministry of Environment
NTS	National Topographic System
PVC	Polyvinyl chloride (plastic)
RWD	Rutland Waterworks District
SEKID	South East Kelowna Irrigation District
SOMID	South Okanagan Mission Irrigation District
UTM	Universal Transverse Mercator
WSD	Water Stewardship Division

Observation Well Network Review - Okanagan Region

Phase 2 - Review of Existing Wells

1. Background and Purpose

The Water Stewardship Division (WSD) of the Ministry of Environment (MOE) operates a network of observation wells in the Okanagan Region of British Columbia. This report summarizes the results of the Phase 2 part of a project carried out for MOE to review and assess the existing observation wells to insure that the network is effective and meets the MOE-WSD vision, mission and objectives for the Provincial Observation Well Network. Phase 1 of the project included developing a strategic approach for monitoring and identifying priority areas. Phase 2, involved a review and assessment of the existing observation wells. Funding for the project was provided by MOE under Contract CPNEN07037.

The study area as shown in Figure 1, included the Okanagan and Similkameen Basins situated in the Okanagan River Watershed, the Coldstream valley extending from east of Vernon to near Lumby and the valley between Armstrong and south of Enderby. Lumby and Enderby are situated in the South Thompson Watershed.

Phase 2 work included determining the specific location of each observation well site and identifying the specific classified aquifers monitored and their respective watersheds. Wells were then grouped and linked to the eight priority sub-network areas and their respective high priority aquifers and watersheds that were previously identified in the Phase 1 report. Background information on each site was compiled based on the Excel[®] summary spreadsheet maintained by MOE for all observation well sites in the province. This was supplemented by checking available Ministry headquarters files on each of the sites. Hydrographs for each site that were available at Ministry websites were also reviewed. Secondary observation wells, not in the high priority aquifers, were also identified and reviewed. Each site was assessed with regard to the quality of hydrograph data being obtained and relevance to network objectives. Recommendations were subsequently developed for each monitoring well and an overall plan was developed for carrying out the rehabilitation or closing of some wells. More details were also added to the monitoring plan originally outlined in the Phase 1 report for establishing new observation wells.

Further details on the project objectives, scope of work and deliverables are contained in the Phase 1 report. All of the tasks for Phase 2 of the project were completed. Deliverables for Phase 2 of the project included an electronic copy of the Phase 2 draft report with recommendations for each monitoring site and more

details on the plan for establishing new monitor wells. This report was submitted to fulfill the requirements for Phase 2 of the project.

2. Methodology

Phase 2 of the project was carried out in a series of steps following the main project tasks. The main steps were as follows:

- (i) determining and plotting the location of each monitoring site at various map scales at the *BC Water Resources Atlas* website, utilizing several sources of information including UTM map coordinates and Well Tag Numbers listed in the Ministry Excel[®] summary, well records and other file information to locate the sites, these are listed in Table 1 with locations shown in (Appendix A);
- (ii) determining the respective aquifers and watersheds at each of the well sites utilizing the *BC Water Resources Atlas* website and available third order watershed mapping;
- (iii) grouping the wells within the eight priority sub-network areas and with their respective high priority aquifers and watersheds (Table 2);
- (iv) compiling and summarizing key background information on each observation well for each priority sub-network area (Tables 3, 4, 5 and 6);
- (v) compiling and summarizing key background information on each observation well not in the high priority sub-network aquifers or watersheds (Table 7);
- (vi) assessing the general flow depth regime (recharge or discharge) and (shallow or deep) conditions, quality of the hydrograph record from MOE Observation Well Information website <http://srmapps.gov.bc.ca/apps/gwl/wellSelectionInit.do> and the Groundwater Level (GWL) website http://www.env.gov.bc.ca/wsd/data_searches/obswell/wellindex.html and determining relevant network objectives for each site;
- (vii) providing recommendations for each site on retaining, closing or rehabilitating the site, and summarizing the results (Tables 8);
- (viii) outlining a plan for rehabilitating and closing existing wells and the overall plan for establishing new wells in priority areas;

- (ix) listing priority candidate areas for establishing new observation wells (Table 10).

3. Assessment of Observation Wells in Priority Aquifers and Watersheds

Forty-nine (49) observation well sites, as listed in Table 1, were examined in the Okanagan and Similkameen Basins, including 2 sites south of Enderby (Wells 118 and 122) and one site near Lumby (Well 294). Six (6) sites near the Town of Osoyoos are comprised of 10 individual piezometers that are monitored. Thirty-nine (39) or 80 percent of the sites are situated within high priority aquifers and watersheds that were identified in the Phase 1 report suggesting the majority of observation wells in the Okanagan and Similkameen Basins are currently located in strategic areas for monitoring purposes.

Table 2 links the existing observation wells with the high priority aquifers and watersheds in each of the priority sub-network areas. While some high priority aquifers have several observation wells (e.g. 13 sites in Aquifer 193 at Osoyoos), there are 16 high priority aquifer areas and 16 priority watersheds that are not being monitored. These priority areas are discussed further in later sections of this report.

Each observation well was examined to determine whether the site is situated in a recharge or discharge area and whether the site was in a shallow or deep ground water flow regime. Available hydrograph records for each site were also examined to determine whether the quality of the record was excellent, good or poor. Criteria for these factors was as follows:

Recharge Area: Topographically elevated area of an aquifer or watershed where downward or lateral ground water flow is dominant. Generally characterized by unconfined or semi-confined aquifer conditions.

Discharge Area: Topographically lower areas of an aquifer or watershed where lateral and upward ground water flow is dominant. These areas may be characterized by flowing artesian conditions, confined conditions, and high (shallow) water levels.

Shallow Flow Conditions: Wells less than 75 feet (22.9 m) in depth.

Deep Flow Conditions: Wells greater than 75 feet (22.9 m) in depth.

Excellent Hydrograph: Relatively continuous record with minor periods (1 to 3 months) of missing data. Shows seasonal fluctuations and longer-term water level trends are very evident.

Good Hydrograph: Relatively continuous record with minor periods (> 3 months) of missing data. Shows seasonal fluctuations and longer-term water level trends are discernable.

Poor Hydrograph: Large periods of missing data (several months to years). Fails to show any seasonal fluctuations. Water level trends not discernable.

Based on a review and assessment of each site, recommendations were made to either retain, close or rehabilitate the site. An in-depth assessment of other site factors including site maintenance, access conditions, observer, equipment and data resolution issues was not carried out. Table 8 summarizes the recommendations for the existing observation wells. A brief discussion of the observation wells in each of the priority sub-network areas is provided as follows:

3.1 North Okanagan Sub-Network Area

Table 3 summarizes the observation wells in the North Okanagan sub-network area where there are currently 8 observation wells. Four of the sites, situated in Aquifer 111, were established in 1971 following the 1970 deep drilling programs under the Federal-Provincial Okanagan Basin Agreement (Le Breton, 1972). Two sites (Wells 311 and 322) are situated in the BX Creek Watershed. A long-term (41 year duration) site is located at Silver Star Mountain and an important site is maintained with the Eagle Rock Waterworks District.

All of these sites should be maintained with the exception of Well 119 that could be considered redundant as the hydrograph for this well is mirrored by the nearby Well 117.

3.2 Kelowna-Westbank Sub-Network Area

Table 4 summarizes the observation wells in the Kelowna-Westbank sub-network area where there are currently 5 observation wells. Two of the sites, are situated near Kelowna in the vicinity of well fields where there is considerable ground water use (Rutland Waterworks District and South East Kelowna Irrigation District). One site, important for ground water recharge and climate change monitoring (Well 115), is a high elevation site at Mission Ridge. Well 305 is situated at Okanagan Mission and was secured as part of a 20-year research project in collaboration with the South Okanagan Mission Irrigation District. The well is currently not active.

All of these sites should be maintained. Consideration should be given to re-activating Well 305 and equipping it with a pressure transducer to obtain a more continuous hydrograph record as this well is subject to nearby pumping interference.

3.3 Okanagan Falls to Osoyoos Sub-Network Area

Table 5 summarizes the observation wells in the Okanagan Falls to Osoyoos sub-network area where there are currently 15 observation wells. The majority of the sites (13), are situated near Osoyoos. The remaining two sites are situated north and south of Oliver. Many of the Osoyoos wells are redundant and could be reduced in number unless they are required for water quality monitoring purposes. Three of the Osoyoos sites should be retained to provide coverage of Aquifer 193. The two wells near Oliver (Wells 332 and 348) should be retained as this is a high ground water use area and both wells show declining water level trends.

3.4 Lumby Sub-Network Area

Table 6 summarizes information on the only observation well (Well 294) in the Lumby sub-network area. This well should be retained as it is in a high ground water use area.

3.5 Penticton Sub-Network Area

Table 6 summarizes the observation wells in the Penticton sub-network area where there are currently 5 observation wells. Three of the sites, are situated near the mouth of Trout Creek where they were originally installed with several other wells to monitor high water table conditions. As this aquifer (297) is relatively small and not heavily used the number of wells could be reduced, retaining only the deepest well (Well 154) for monitoring. The other two wells (Well 366 and 367) are recent additions to the network in aquifer 299 and need to be retained.

3.6 Keremeos-Cawston Sub-Network Area

Table 6 summarizes the observation wells in the Keremeos-Cawston sub-network area where there are currently 4 observation wells. Three of the sites (Wells 75, 76 and 77) are situated near the community of Keremeos where they were originally installed to monitor high ground water withdrawals of the Keremeos Irrigation District. These wells should be retained for this important aquifer (Aquifer 297). The fourth well (Well 203), situated in Aquifer 297, at Cawston should also be retained as it monitors withdrawals of the Fairview Heights Irrigation District. Water levels have been declining at this latter site since 1996.

3.7 Princeton Sub-Network Area

Table 6 summarizes the only observation well (220) in the Princeton sub-network area. This well should be retained as it shows an overall decline in water levels since 1977. There have been large data gaps in recent years and the well is currently not active. The well should, however, be inspected, sounded and checked perhaps by pumping to ensure it is responding and not filling in with silt. A new agreement with the landowner will also be necessary to install a data logger.

4. Assessment of Observation Wells in Secondary Areas

Ten (10) of the observation well sites listed in Table 1, are not situated in any of the high priority aquifers or watersheds that were identified in the Phase 1 report. The majority of these wells (7) occur along the east side of Wood Lake between the communities of Oyama and Winfield where they were constructed during the Kalamalka-Wood Lake Basin Study in 1972 (Le Breton, 1974). Two wells (Well 53 and 54) are located at a high elevation at Carrs Landing and another high elevation well (Well 264) is situated on Mount Kobau between the Okanagan Basin and the Similkameen Basin. These wells have long periods of record and are of value for monitoring bedrock recharge and climate change response. Well 282 is located at Meyers Flat and is monitored in partnership with the Willowbrook Water Utility. It experiences dramatic long-term variations reflecting longer term climatic and fluctuations in surface run off recharging the aquifer.

All of the above wells should be retained with the exception of Well 173 at Wood Lake. The hydrograph of this well mirrors the response of Well 174 but shows a larger range of fluctuation. The other wells along the east side of Wood Lake monitor either bedrock or surficial conditions. Aquifer classification mapping in this area between Oyama and Winfield, however, has not been completed and there have been several new domestic wells drilled in recent years. This mapping should be undertaken to adequately assess the on-going need for the observation wells in this area. Well 264 at Mount Kobau would need to be re-activated.

Monitoring of one of the Carr Landing wells (Well 53) could be suspended as the hydrograph for this well mirrors Well 54. The well however should be maintained as a back-up in the event Well 54 is not available in the future due to changes in land ownership, for example. Both of the Carrs Landing wells are situated on private land.

5. Well Rehabilitation and Closure Plans

5.1 Well Rehabilitation

Four (4) wells (53 at Carrs Landing, 220 at Princeton, 264 at Mount Kobau and 305 at Okanagan Mission) were identified for possible rehabilitation.

Well 53

Suspended monitoring of this well or deactivation for less than 10 years will require that the well be maintained in accordance with Section 9 of the *Ground Water Protection Regulation* and Section 6 of the *Code of Practice For Construction, Testing, Maintenance, Alteration and Closure of Wells in British Columbia* (Queen's Printer, 2006). This requires that the well is

- (a) equipped with a secure well cap;
- (b) readily accessible for inspection purposes, and;
- (c) maintained in a safe and sanitary condition.

If the well is deactivated for more than 10 years it will be necessary to close the well in accordance with the *Ground Water Protection Regulation* (Queen's Printer, 2006).

Well 220

The hydrograph for Well 220 shows an overall decreasing water level trend since 1977, the cause of which is unknown, but may be due to silting in of the well or possible pumping effects. The general approach to follow would be to determine whether the well has silted in and not responding adequately. If this is the situation, then cleaning and redeveloping the well would be necessary. The following steps could be considered for Well 220:

- (i) contact the well owner in advance of visiting the site to obtain permission for pumping the well for a short duration in the fall or early spring prior to freshet;
- (ii) inspect the well during the fall or early spring when water levels are seasonally low and check for any nearby pumping wells ;
- (iii) determine the depth of the well by sounding the bottom of the well with a weighted tape measure (e.g. plumb bob attached to graduated tape) and compare the results to the reported depth in the well record;
- (iv) conduct a short-term pumping test of the well with a suction pump at a low rate (e.g. 2 to 5 gpm for 30 minutes) and measure the water level decline and recovery;
- (v) if a significant amount (>1 foot or 30 cm) of sand and silt appears to be in the bottom of the well and the water level recovers slowly after pumping,

consideration should be given then to having the well cleaned out and gently redeveloped by a well drilling contractor, using a bailor.

The well should also be considered for a data logger to improve the frequency of measurements being obtained. This may require a revised agreement with the landowner.

Well 264

According to file correspondence, Well 264 was vandalized in the past and monitoring was suspended in 2001 after Ministry staff reported an obstruction in the well at a depth of approximately 30 m. Further investigations including sounding of the well depth and attempts to clear the obstruction should be considered. Checking and clearing of the well could be attempted for example by lowering assembled lengths of 1 inch (25 mm) diameter galvanized pipe down the well. If the obstruction can be cleared or pushed further down the well, then consideration should be given to installing a pressure transducer in the well within a PVC liner.

Well 305

The hydrograph for Well 305 shows large gaps in missing data; most likely the result of extreme water fluctuations due to pumping of the S.O.M.I.D well field. Equipping the well with a pressure transducer should produce a better hydrograph record. The well is currently not active.

5.2 Well Closure

Fourteen (14) wells were identified for well closure (Table 8). These include Well 119 in the Armstrong area, 10 well sites at Osoyoos, Wells 153 and 158 at Summerland and Well 173 at Wood Lake. The general procedure for closure would require notifying any affected well observers and landowners in advance of closure. Landowners will need to provide permission for well removal and access of the necessary contractor's equipment. It may also be advisable to advise local municipalities and nearby water districts where they may have an interest in the sites. All of these sites would also need to be closed in accordance with Section 9 of the *Ground Water Protection Regulation* and Section 6 of the *Code of Practice For Construction, Testing, Maintenance, Alteration and Closure of Wells in British Columbia* (Queen's Printer, 2006).

A summary of the general requirements for closing the specific wells is provided in Table 9. As all of the wells are deeper than 15 feet, each well will need to be closed by a qualified well driller or person under the direct supervision of a

qualified well driller or qualified professional. All of the wells including their casings and screens etc., are the property of the Crown unless transferred to others.

The following steps could be considered for each site:

- (i) verify through land registry searches the current owner(s) of the property upon which the well is situated;
- (ii) contact the property owner for the necessary access permissions;
- (iii) if the landowner wishes to use the well for any purpose a legal transfer of crown assets document will need to be prepared by the Ministry's solicitor;
- (iv) prepare tender documents specifying requirements, site details, and access conditions for qualified contractors to close the wells;
- (v) hire contractors for the work and verify all work was completed to satisfaction of Ministry and landowner (through a release document);
- (vi) complete the required closure reports and retain in files.

6. Priority Aquifers and Watersheds for New Wells

The Phase 1 report outlined an overall monitoring plan to establish 8 priority sub-network areas for the Okanagan and Similkameen Basins with a suggested minimum of 33 key observation wells covering the priority areas. Upon review of the existing 49 observation wells it is recommended that 35 of the wells should be retained at this time with 26 of the wells covering the priority areas.

Table 10 is a listing of 16 candidate priority aquifers and 16 watersheds for the establishment of new observation wells where monitoring is currently not occurring. More detailed examination of the candidate areas would be necessary to determine potential sites. This listing assumes that no additional observation wells would be required in the aquifers and areas that are currently being monitored.

In terms of planning new wells a suggested approach would be to:

- (i) focus on one or two priority sub-networks, or two to four priority aquifers each year;
- (ii) contact potential partners in each sub-network to discuss overall monitoring goals, priority areas, their monitoring needs and objectives, possible partnerships, estimated costs and funding sources;
- (iii) secure funding;
- (iv) investigate and select potential sites (existing unused wells or sites for drilling);
- (v) establish and equip individual observation wells.

7. Conclusions

The conclusions for the Phase 2 portion of the project are as follows:

- (a) Available information on forty-nine (49) observation well sites in the Okanagan and Similkameen Basins was reviewed and assessed.
- (b) Thirty-nine (39) or 80 percent of the sites were found to be located within the high priority aquifers and watersheds that were identified in the Phase 1 report, indicating that the majority of observation wells in the Okanagan and Similkameen Basins are currently located in strategic areas for monitoring purposes.
- (c) Eight (8) observation well sites that are not situated in any of the high priority aquifers or watersheds, identified in the Phase 1 report, were identified for retention.
- (d) Four (4) wells (53 at Carrs Landing, 220 at Princeton, 264 at Mount Kobau and 305 at Okanagan Mission) were identified for possible rehabilitation.
- (e) Fourteen (14) wells were identified for well closure including redundant sites in priority areas. These include Well 119 in the Armstrong area, 10 well sites at Osoyoos, Wells 153 and 158 at Summerland and Well 173 at Wood Lake.
- (f) Well closure of the 14 well sites will require contracting of qualified well drillers for the work to meet the requirements of the *Ground Water Protection Regulation* and will also need the approval of property owners. Although all of the proposed wells for closure belong to the Crown, they are all located on private lands.
- (g) 16 candidate priority aquifers and 16 watersheds, where observation currently do not exist, were identified for possible establishment of new observation wells.

8. Recommendations

The following recommendations are provided for future planning purposes:

- (a) Focus future establishment of new observation wells on one to two priority sub-networks, or two to four priority aquifers each year;
- (b) Contact potential partners in each sub-network to discuss overall monitoring goals, priority areas, their monitoring needs and objectives, possible partnerships, estimated costs and funding sources;

- (c) Carry out aquifer classification mapping in the Princeton (Allison Creek), Hedley (Cahill Creek) and Keremeos Creek (north of Keremeos) areas to assist in identifying potential sites for new observation wells.
- (d) Carry out aquifer classification mapping in the Wood Lake area to assist in reassessing the observation wells currently retained in this area. This area was not initially identified as a high priority area in the Phase 1 report.

9. Closure

This report was prepared in accordance with generally accepted engineering and consulting practices. The material contained in this report is intended only for sole use by the Ministry of Environment. This report is based on data and information available to the author from various sources at the time of its preparation and the findings of this report may therefore be subject to revision. Data and information supplied by others has not been independently confirmed or verified to be correct or accurate. Any errors, omissions or issues requiring clarification should be brought to the attention of the author. The author accepts no responsibility for damages suffered by any third party as a result of any unauthorized use of this report.

Respectfully submitted:

Alan P. Kohut, PEng
Hydrogeologist

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Ministry of Labour and Citizen's Services, Victoria, British Columbia.

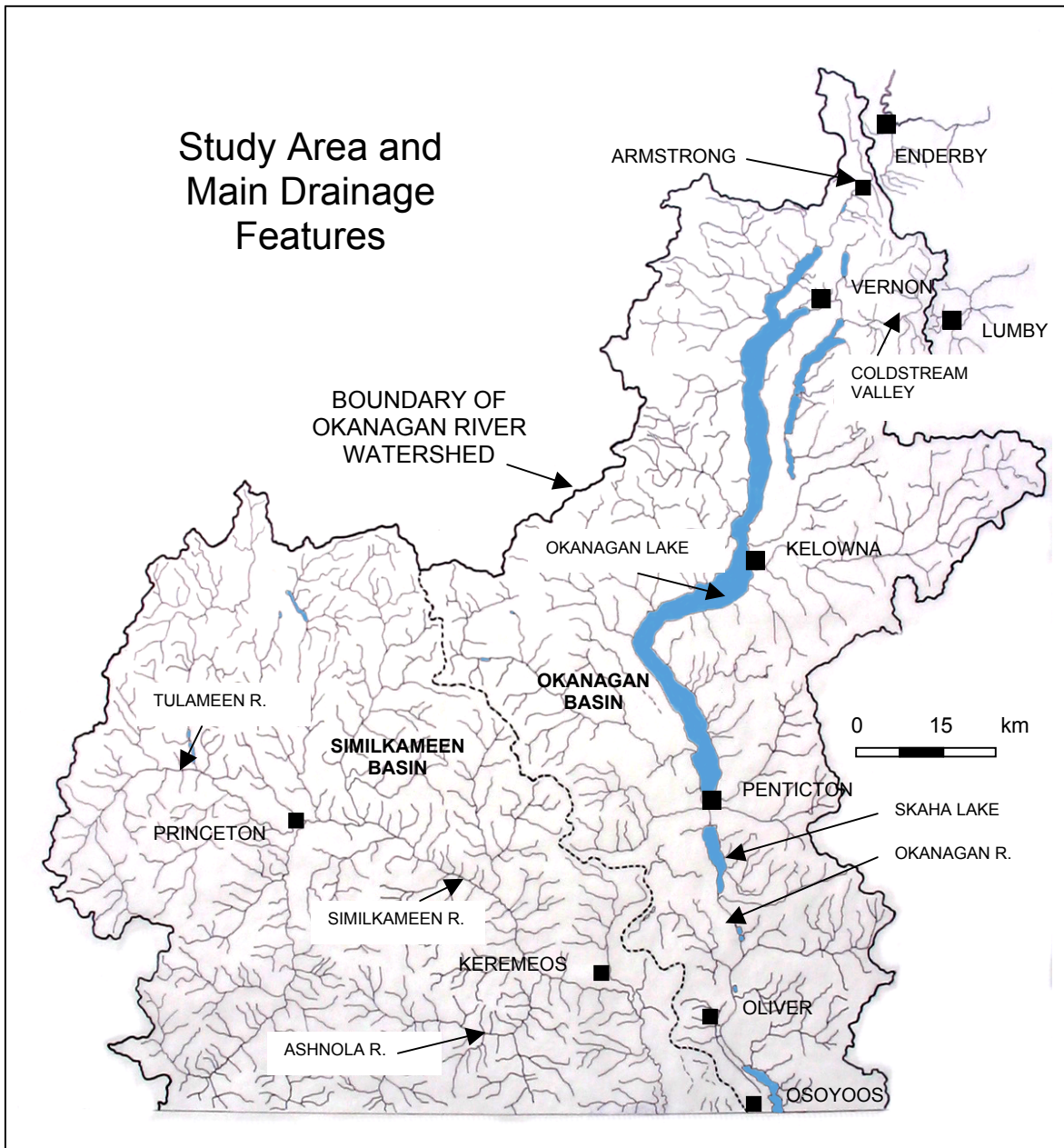


Figure 1. Study area and main drainage features. Base map adapted from *BC Water Resources Atlas* (MOE, 2006).

Table 1. List of observation wells reviewed in the Okanagan (including Lumby and Enderby areas) and Similkameen Basins.

Item No.	MOE Obs. Well No.	Well Tag No.	BCGS No.	Well No.	Aquifer Classification No.	Aquifer Classification and Ranking	Aquifer Type	Location	UTM Northing Nad 27*	UTM Easting Nad 27	Date Established	Well Depth (feet)**	Well Diameter (inches)	Collar Elevation (feet)	Initial Objective of Observation Well	Recorder Type	Owner of Well	Period of Record
1	47	49951	082L035.4.1.2	4		not classified	Bedrock	Silver Star Mt., Vernon	5581659	352422	1965	58	1	5960	Established for forecasting and to obtain baseline data	Manual	MOE	1965 - Present
2	53	19772	082L014.1.3.3	2		not classified	Bedrock	Carrs Landing	5557647	328506	1966	50	1	3169.25	Established for forecasting and to obtain baseline data	Manual	MOE	1966 - Present
3	54	22692	082L014.1.3.3	3		not classified	Bedrock	Carrs Landing	5557514	328466	1969	45	6	3185.85	Established for forecasting and to obtain baseline data	Stevens F 68 Recorder	MOE	1969 - Present
4	75	20533	082E021.2.2.2	20	259	IIA (14)	Surficial	Keremeos	5454238	294216	1967	89	6 (3.25 opening in cap)	1357.4	Initially established as groundwater research project	Manual	Village of Keremeos	1967 - Present
5	76	22585	082E021.2.2.1	19	259	IIA (14)	Surficial	Keremeos	5453948	293988	1969	74	6 (1.25 opening in cap)	1362.56	Initially established as groundwater research project	Manual	Keremeos Irrigation District	1969 - Present
6	77	22625	082E021.2.2.2	42	259	IIA (14)	Surficial	Keremeos	5454459	295118	1969	112	6 (1.25 opening in cap)	1409.46	Initially established as groundwater research project	Manual	Keremeos Irrigation District	1969 - Present
7	96	22769	082E003.2.3.1	12	193	II A (16)	Surficial	Osoyoos	5433551	318971	1969	35	2	1006.3	Initially established as groundwater research project	Manual	MOE	1969 - Present
8	97	22772	082E003.2.3.2	32	193	II A (16)	Surficial	Osoyoos	5433553	319020	1969	20	2	1005	Initially established as groundwater research project	Manual	MOE	1969 - Present
9	100	22733	082E003.3.2.2	14	193	II A (16)	Surficial	Osoyoos	5436882	316486	1969	62	2	1040.05	Initially established as groundwater research project	Manual	MOE	1969 - Present
10	101	22731	082E003.3.2.2	2	193	II A (16)	Surficial	Osoyoos	5436980	316592	1969	64	2	1048.94	Initially established as groundwater research project	Manual	MOE	1969 - Present
11	102	22713	082E003.3.2.2	5	193	II A (16)	Surficial	Osoyoos	5437287	316788	1969	52	2	997.3	Initially established as groundwater research project	Manual	MOE	1969 - Present
12	105	22702	082E003.3.2.2	9	193	II A (16)	Surficial	Osoyoos	5436454	317001	1969	42.5	2	1044.1	Initially established as groundwater research project	Manual	MOE	1969 - Present
13	107	22706	082E003.3.2.2	11	193	II A (16)	Surficial	Osoyoos	5436717	317166	1969	32	2	972.06	Initially established as groundwater research project	Manual	MOE	1969 - Present

Table 1.

Item No.	MOE Obs. Well No.	Well Tag No.	BCGS No.	Well No.	Aquifer Classification No.	Aquifer Classification and Ranking	Aquifer Type	Location	UTM Northing Nad 27*	UTM Easting Nad 27	Date Established	Well Depth (feet)**	Well Diameter (inches)	Collar Elevation (feet)	Initial Objective of Observation Well	Recorder Type	Owner of Well	Period of Record
14	115	23980	082E096.1.4.3	1		not classified	Bedrock	Mission Ridge	5534490	360315	1970	72	6	6000	Established for forecasting and to obtain baseline data	Pressure Transducer	MOE	1970 - Present
15	117	24062	082L044.2.4.1	12	111	II C (11)	Surficial	Armstrong	5588510	341721	May-71	1225	7 (liner)	1227.36	Initially established as groundwater research project	Thalimedes Datalogger	MOE	1972 - Present
16	118	24080	082L045.3.2.3	13	111	II C (11)	Surficial	Armstrong	5593141	348876	1971	1026	4 (liner)	1261.15	Initially established as groundwater research project	Thalimedes Datalogger	MOE	1972 - Present
17	119	24104	082L044.2.4.2	2	111	II C (11)	Surficial	Armstrong	5588360	342521	1971	280	4 (liner)	1281.31	Initially established as groundwater research project	Thalimedes Datalogger	MOE	1972 - Present
18	122	24093	082L055.1.2.1	1	111	II C (11)	Surficial	Enderby	5597110	349072	1971	730	4 (liner)	1212.76	Initially established as groundwater research project	Thalimedes Datalogger	MOE	1972 - Present
19	153	22796	082E052.4.2.4	1	297	IIIB (11)	Surficial	Summerland	5493762	310259	1969	23	2	1131.52	Initially established as groundwater research project	Manual	MOE	1969 - Present
20	154	22792	082E052.4.4.1	1	297	IIIB (11)	Surficial	Summerland	5495010	309500	1969	78	2	1142.44	Initially established as groundwater research project	Manual	MOE	1969 - Present
21	158	22813	082E052.4.2.3	12	297	IIIB (11)	Surficial	Summerland	5494373	308728	1969	50	2	1173.03	Initially established as groundwater research project	Manual	MOE	1969 - Present
22	162	26248	082L004.3.1.4	1			Bedrock	Kalawoods	5549052	330229	1972	13.5	6	1722.52	Initially established as groundwater research project	Thalimedes Datalogger	MOE	1969 - Present
23	172	8596	082L014.1.1.2	26	345	IIA(14)	Surficial	Kalawoods	5553762	331485	1972	61	6	1343.19	Initially established as groundwater research project	Thalimedes Datalogger	MOE	1972 - Present
24	173	8374	082L014.1.1.2	6	345	IIA(14)	Surficial	Kalawoods	5553183	331202	1972	62	6	1331.75	Initially established as groundwater research project	Manual	MOE	1972 - Present
25	174	8608	082L014.1.1.2	17	345	IIA(14)	Surficial	Kalawoods	5552806	330827	1972	133	6	1404.46	Initially established as groundwater research project	Thalimedes Datalogger	MOE	1972 - Present

Table 1.

Item No.	MOE Obs. Well No.	Well Tag No.	BCGS No.	Well No.	Aquifer Classification No.	Aquifer Classification and Ranking	Aquifer Type	Location	UTM Northing Nad 27*	UTM Easting Nad 27	Date Established	Well Depth (feet)**	Well Diameter (inches)	Collar Elevation (feet)	Initial Objective of Observation Well	Recorder Type	Owner of Well	Period of Record
26	175	8623	082L004.3.3.4	17		not classified	Bedrock	Kalawoods	5552149	331022	1972	76	6	1572.58	Initially established as groundwater research project	Manual	MOE	1972 - Present
27	176	8533	082L004.3.3.1	4		not classified	Surficial	Kalawoods	5550884	329986	1972	161	6	1425.87	Initially established as groundwater research project	Manual	MOE	1972 - Present
28	180	32340	082L044.2.2.2	12	353	IA (14)	Surficial	Eagle Rock Waterworks, Armstrong	5585857	342421	1972	123	6	1377.02	To monitor developed aquifers	Thalimedes Datalogger	Eagle Rock Waterworks, Armstrong	1975 - Present
29	203	33378	082E012.3.2.3	6	259	IIA (14)	Surficial	Cawston	5450469	300589	1975	199	8		To monitor developed aquifers	Thalimedes Datalogger	Fairview Heights Irrigation District	1975 - Present
30	220	20313	092H048.4.1.3	18	259	IIA (14)	Surficial	Princeton - Thomas	5482251	681239	May-81	32	8		To monitor developed aquifers	Manual	Private	1977 - 2004 (currently not active)
31	236	41865	082E084.3.3.1	1	464	IC(14)	Surficial	Rutland	5527947	327608	1979	140	6		To monitor developed aquifers	Thalimedes Logger	MOE	1979 - Present
32	262	44358	082E083.4.2.2	1	463	IC(14)	Surficial	Kelowna (S.E.K.I.D.)(McCulloch)	5525886	325956	1980	277	6		To monitor developed aquifers	Thalimedes Datalogger	SE Kelowna Irrigation District	1980 - Present
33	264	62733	082E012.2.1.3	1		not classified	Bedrock	Mt. Kobau	5444126	304573	1980	245	6	6012			MOE	1980 - 2001 (currently not active)
34	282	51824	082E023.3.1.3	5	257	IIA (14)	Surficial	Willow Brook/Meyers Flats	5459940	311446	1983	55	6		To monitor developed aquifers	Thalimedes Datalogger	MOE	1983 - Present
35	294	55834	082L025.2.2.4	27	315	IIA(10)	Surficial	Lumby	5564993	357037	1986	54	6	1709.68	To monitor developed aquifers	Thalimedes Datalogger	MOE	1986 - Present
36	305	53654	082E083.2.1.3	19	463	IC(14)	Surficial	Okanagan Mission	5520854	320533	1988	134	8		To monitor developed aquifers	Manual	MOE	1988 - Present
37	311	59305	082L034.2.2.4	7	351	IIC(9)	Bedrock	Vernon-BX Creek	5576559	343234	Oct. 1991	307	4 (liner)			Thalimedes	Private	1991 - 2001, 2006-
38	322	60266	082L035.1.1.3	38	349	IIC(9)	Surficial	Vernon (Falcon Rd. Silver Star)	5576229	344177	1993	100.4	6		To monitor developed aquifers	Stevens F 68 Recorder	MOE	1993 - Present
39	332	62966	082E013.1.3.4	23	254	1A (16)	Surficial	Oliver	5445955	312613	1997	91.4	6		To monitor developed aquifers	Thalimedes Datalogger	Private	1997-Present

Table 1.

Item No.	MOE Obs. Well No.	Well Tag No.	BCGS No.	Well No.	Aquifer Classification No.	Aquifer Classification and Ranking	Aquifer Type	Location	UTM Northing Nad 27*	UTM Easting Nad 27	Date Established	Well Depth (feet)**	Well Diameter (inches)	Collar Elevation (feet)	Initial Objective of Observation Well	Recorder Type	Owner of Well	Period of Record
40	348	79040	082E023.1.1.4	34	255	1A (15)	Surficial	Tug Lake - Vaseux Lake(Oliver)	5454397	313708	2000	15	48		To monitor developed aquifers	Manual	Private	2000-Present
41	356	81678	082L004.1.1.1	23	344	1B (13)	Surficial	Winfield	5542310	328625	2004	40	6		To monitor developed aquifers	Thalimedes Datalogger	MOE	2004-Present
42	366	83210	082E052.3.4.3	2	299	IIIC(10)	Surficial	Summerland, Rodeo Grounds/KVR Station	5496438	302314	2005	322	8		To monitor developed aquifers	Thalimedes Datalogger	District of Summerland	2005-Present
43	367				299	IIIC(10)	Surficial	northeast of Obs. Well 366	5496589	302446	2005	162				Thalimedes Datalogger	Private	2005-Present
44	Osoyoos 1	A1(P-1) and (P-2)	082E003		193	II A (16)	Surficial	Osoyoos	5435391	318890	1989	35.2 21.9	2 2	935		Manual	MOE	1993-Present
45	Osoyoos 2	B-1A,	082E003		193	II A (16)	Surficial	Osoyoos	5434122	319539	1989	43.9	2	944		Manual	MOE	1993-Present
46	Osoyoos 3	B-1B(P-2) and B-1B(P-3)	082E003		193	II A (16)	Surficial	Osoyoos	5434122	319539	1989	34.7 28.3	2 2	944		Manual	MOE	1993-Present
47	Osoyoos 4	B-5	082E003		193	II A (16)	Surficial	Osoyoos	5433685	318756	1989	22.6	2	1104		Manual	MOE	1993-Present
48	Osoyoos 5	B-7 (P-1) and (P-2)	082E003		193	II A (16)	Surficial	Osoyoos	5433866	318910	1989	35.1 28.5	2 2	1000		Manual	MOE	1993-Present
49	Osoyoos 6	B-8 (P-1) and (P-2)	082E003		193	II A (16)	Surficial	Osoyoos	5433311	319071	1989	23.7 20.0	2 2	1001		Manual	MOE	1993-Present

* UTM coordinates updated in 2006 from query of Well Tag Number at MOE website <<http://aardvark.gov.bc.ca/apps/wells/jsp/common/wellsreport7.jsp>>

** Well depth reported as the completed depth of the well and not the total drilled depth.

Note UTM coordinates for Osoyoos piezometers items 44 to 49 obtained from matching locations shown in Holmes and Madsen (1989) with cursor locations on Osoyoos area mapping at BC Water Resources Atlas.

Table 2. Existing observation wells in priority aquifers and priority watersheds.

Priority Sub-network Area	Location Description	Minimum Target Number of Observation Wells	Priority Aquifers and Existing Obs. Wells	Priority Watersheds and Existing Obs. Wells	Total Number of Existing Observation Wells
Okanagan Basin including Lumby and Enderby					
1	North Okanagan, north of Vernon to Enderby	6	bedrock 351, Wells 311 bedrock 106, none bedrock 107, none unconsolidated 102, none unconsolidated 111, Wells 117, 118, 119 and 122 unconsolidated 349, Well 322 unconsolidated 353, Well 180	BX Creek, Wells 311,322 and 47 Fortune Creek, Wells 118 and 122 Deep Creek, Wells 117, 119 and 180. Coldstream Creek, none Vernon Creek, none	8
2	Kelowna-Westbank	6	bedrock 305, none bedrock 470, none bedrock 473, none unconsolidated 344, Well 356 unconsolidated 463, Wells 262 and 305 unconsolidated 464, Well 236	McDougall Creek, none Daves Creek, none Mission Creek, Wells 236, 262 and 115 Kelowna Creek, none Powers Creek, none	5
3	Okanagan Falls to Osoyoos	6	bedrock 260, none bedrock 808, none unconsolidated 193, Wells 96, 97, 100, 101, 102, 105, 107 and 6 piezometer sites unconsolidated 194, none unconsolidated 254, Well 332 unconsolidated 255, Well 348 unconsolidated 264, none	Horn Creek-Twin Lakes, none Kearns Creek, none Haynes Creek, none Mclean Creek, none Shuttleworth Creek, none	15

Priority Sub-network Area	Location Description	Minimum Target Number of Observation Wells	Priority Aquifers and Existing Obs. Wells	Priority Watersheds and Existing Obs. Wells	Total Number of Existing Observation Wells
4	Lumby	2	unconsolidated 315, Well 294 unconsolidated 316, none unconsolidated 317, none	Besette Creek, Well 294	1
5	Penticton-Summerland	4	bedrock 269, none bedrock 298, none bedrock 300, none unconsolidated 299, Wells 366 and 367	Penticton Creek, none Dark Creek, none Trout Creek, Wells 153, 154, 158, 366 and 367	5
Similkameen Basin					
1	Keremeos-Cawston	4	unconsolidated 259, Wells 75, 76, 77 and 203	Keremeos Creek, Wells 75, 76, 77 and 203	4
2	Hedley	2	unconsolidated 259, none	Cahill Creek, none	0
3	Princeton	3	unconsolidated 259, Well 220	Allison Creek, none	1
Totals:		33			39

Table 2.

Table 3. Summary review of observation wells in the North Okanagan sub-network area.

Item	MOE Obs. Well No.	Aquifer Number	Aquifer Classification and Ranking	Aquifer Type	Location	Site Agreement	Date Established	Well Depth (feet)*	Well Diameter (inches)	Collar Elevation (feet)	Recorder Type	Owner of Well	Owner of Property	Period of Record	Duration (Years)	Water Level Response	Recharge or Discharge Regime	Shallow or Deep Flow Regime	Quality of Hydrograph Record	Recommendations	Relevant Network Objectives Achieved	Rationale and Comments
1	47		not classified	Bedrock	Silver Star Mt., Vernon	Agreement expired in 1989? No record of renewal.	1965	58	1	5960	Manual	MOE	Crown	1965 - Present	41	Evident seasonal recharge effects to snowmelt	Recharge	Shallow	Excellent	Retain	1 (a), 1 (c)	High elevation recharge area, long period of record, climate response monitoring,
2	117	111	II C (11)	Surficial	Armstrong	No written agreement	May-71	1225	7 (liner)	1227.36	Thalimedes	MOE	Otter Lake Water District	1972 - Present	34	Shows pumping effects	Discharge	Deep	Excellent (mirrors Well 119)	Retain	2 (a), 2(b) and 2 (c)	long period of record, water sustainability concerns
3	118	111	II C (11)	Surficial	Armstrong		1971	1026	4 (liner)	1261.15	Thalimedes	MOE	Private	1972 - Present	34	May reflect longer-term (e.g. 5-10 year) climatic cycles	Discharge	Deep	Excellent	Retain	1 (a), 1 (c)	climate response monitoring
4	119	111	II C (11)	Surficial	Armstrong		1971	280	4 (liner)	1281.31	Thalimedes	MOE		1972 - Present	34	Shows pumping effects	Discharge	Deep	Good to Excellent (mirrors Well 117)	Consider for closure as hydrograph is mirrored by Well 117	2 (a), 2(b) and 2 (c)	long period of record, water sustainability concern, proximity to Well 117 and similar hydrograph response
5	122	111	II C (11)	Surficial	Enderby		1971	730	4.5 (liner)	1212.76	Thalimedes	MOE	Private	1972 - Present	34	May reflect longer-term (e.g. 5-10 year) climatic cycles, flowing artesian conditions	Discharge	Deep	Good to Excellent	Retain	1 (a), 1 (c)	long-term climate response monitoring
6	180	353	IA (14)	Surficial	Eagle Rock Waterworks, Armstrong		1972	123	6	1377.02	Thalimedes	Eagle Rock Waterworks District	Eagle Rock Waterworks District	1975 - Present	31	Local pumping interference	Discharge	Deep	Excellent	Retain	2 (a), 2(b) and 2 (c)	High water use area, long period of record, water sustainability concerns. Partnership with Eagle Rock Waterworks District
7	311	351	IIC(9)	Bedrock	Vernon-BX Creek		Oct. 1991	307	4 (liner)		Thalimedes	Private	Private	1991 - 2001, 2006	15	Shows recharge during spring-summer	Discharge	Deep	Excellent	Retain	1 (a), 1 (c), 2 (a), 2(b) and 2 (c)	Reactivated October 2006, Thalimedes installed, water sustainability concerns, climatic response
8	322	349	IIC(9)	Surficial	Vernon (Falcon Rd. Silver Star)	Permit No. 02-013-10766 Ministry of Transportation and Highways	1993	100.4	6		Stevens F 68	MOE	Crown	1993 - Present	13	Shows recharge during spring-summer	Discharge	Deep	Excellent	Retain	2 (a), 2(b) and 2 (c)	artesian flow, extension welded on recently, water sustainability concerns

* Well depth reported as the completed depth of the well and not the total drilled depth.

Table 4. Summary review of observation wells in the Kelowna-Westbank sub-network area.

Item	MOE Obs. Well No.	Aquifer Number	Aquifer Classification and Ranking	Aquifer Type	Location	Site Agreement	Date Established	Well Depth* (feet)	Well Diameter (inches)	Collar Elevation (feet)	Recorder Type	Owner of Well	Owner of Property	Period of Record	Duration (Years)	Water Level Response	Recharge or Discharge Regime	Shallow or Deep Flow Regime	Quality of Hydrograph Record	Recommendations	Relevant Network Objectives Achieved	Rationale and Comments
1	115		not classified	Bedrock	Mission Ridge		1970	72	6	6000	Pressure Transducer	MOE	Crown	1970 - Present	36	Evident seasonal recharge effects to snowmelt	Recharge	Shallow	Excellent	Retain	1 (a), 1 (c)	High elevation recharge area, long period of record, climate response monitoring,
2	236	463	IC(14)	Surficial	Rutland	No written agreement	1979	140	6		Thalimedes	MOE	City of Kelowna	1979 - Present	27	Local pumping Interference	Discharge	Deep	Excellent	Retain	2 (a), 2(b) and 2 (c)	High water use area, long period of record, water sustainability concerns, partnership with water district (R.W.D)
3	262	464	IC(14)	Surficial	Kelowna (S.E.K.I.D.)(McCulloch)	No written agreement	1980	277	6		Thalimedes	SE Kelowna Irrigation District		1980 - Present	26	Local pumping Interference	Discharge	Deep	Excellent	Retain	2 (a), 2(b) and 2 (c)	High water use area, long period of record, water sustainability concerns, partnership with water district (S.E.K.I.D)
4	305	463	IC(14)	Surficial	Okanagan Mission		1988	134	8		Manual	MOE	City of Kelowna	1988 - 1998 (currently not active)	18	Significant local pumping Interference	Discharge	Deep	Poor to Good	Retain, consider installation of pressure transducer to improve continuity of record	2 (a), 2(b) and 2 (c)	High water use area, long period of record, water sustainability concerns, partnership with water district (S.O.M.I.D)
5	356	344	1B (13)	Surficial	Winfield	Road right of way jurisdiction of the City of Kelowna	2004	40	6		Thalimedes	MOE	City of Kelowna	2004- Present	2	insufficient record to adequately assess	Discharge	Shallow	Excellent	Retain	2 (a), 2(b) and 2 (c)	Newly established well.

* Well depth reported as the completed depth of the well and not the total drilled depth.

Table 5. Summary review of observation wells in the Okanagan Falls to Osoyoos sub-network area.

Item	MOE Obs. Well No.	Aquifer Number	Aquifer Classification and Ranking	Aquifer Type	Location	Site Agreement	Date Established	Well Depth (feet)	Well Diameter (inches)	Collar Elevation (feet)	Recorder Type	Owner of Well	Owner of Property	Period of Record	Duration (Years)	Water Level Response	Recharge or Discharge Regime	Shallow or Deep Flow Regime	Quality of Hydrograph Record	Recommendations	Relevant Network Objectives Achieved	Rationale and Comments
1	96	193	II A (16)	Surficial	Osoyoos	Agreement with original land owner on file	1969	35	2	1006.3	Manual	MOE	Private	1969 - Present	37	Shows pumping and climatic effects and recharge from irrigation	Recharge	Shallow	Excellent to Good	Retain	1 (a), 1 (c)	Recharge area, long period of record, climate response monitoring,
2	97	193	II A (16)	Surficial	Osoyoos		1969	20	2	1005	Manual	MOE		1969 - Present	37	Shows pumping and climatic effects and recharge from irrigation	Recharge	Shallow	Excellent to Good	Consider for closure as it mirrors Well 96, unless required for quality monitoring	1 (a), 1 (c)	Response mirrored in other wells.
3	100	193	II A (16)	Surficial	Osoyoos		1969	62	2	1040.05	Manual	MOE		1969 - Present	37	Shows pumping and climatic effects and recharge from irrigation	Recharge	Shallow	Excellent to Good	Consider for closure as it mirrors Wells 101 and 102, unless required for quality monitoring	1 (a), 1 (c)	Response mirrored in other wells.
4	101	193	II A (16)	Surficial	Osoyoos		1969	64	2	1048.94	Manual	MOE		1969 - Present	37	Shows pumping and climatic effects and recharge from irrigation	Recharge	Shallow	Excellent to Good	Retain	1 (a), 1 (c)	Recharge area, long period of record, climate response monitoring,
5	102	193	II A (16)	Surficial	Osoyoos	Agreement with original land owner on file	1969	52	2	997.3	Manual	MOE	Private	1969 - Present	37	Shows pumping and climatic effects and recharge from irrigation	Recharge	Shallow	Excellent to Good	Consider for closure as it mirrors Wells 100 and 101, unless required for quality monitoring	1 (a), 1 (c)	Response mirrored in other wells.
6	105	193	II A (16)	Surficial	Osoyoos	Agreement with original land owner on file	1969	42.5	2	1044.1	Manual	MOE	Private	1969 - Present	37	Shows pumping and climatic effects and recharge from irrigation	Recharge	Shallow	Excellent to Good	Consider for closure as it mirrors Well 107, unless required for quality monitoring	1 (a), 1 (c)	Response mirrored in other wells.
7	107	193	II A (16)	Surficial	Osoyoos	Agreement with original land owner on file	1969	32	2	972.06	Manual	MOE	Private	1969 - Present	37	Shows pumping and climatic effects and recharge from irrigation	Recharge	Shallow	Excellent to Good	Retain	1 (a), 1 (c)	Recharge area, long period of record, climate response monitoring,
8	A1(P-1) and (P-2)	193	II A (16)	Surficial	Osoyoos		1989	35.2 21.9	2 2	935	Manual	MOE		1993- Present	13	Shows climatic effects, recharge from irrigation and lake levels	Discharge	Shallow	Excellent	Consider for closure unless required for quality monitoring	1 (a), 1 (c)	Response mirrored in other wells.

Item	MOE Obs. Well No.	Aquifer Number	Aquifer Classification and Ranking	Aquifer Type	Location	Site Agreement	Date Established	Well Depth (feet)	Well Diameter (inches)	Collar Elevation (feet)	Recorder Type	Owner of Well	Owner of Property	Period of Record	Duration (Years)	Water Level Response	Recharge or Discharge Regime	Shallow or Deep Flow Regime	Quality of Hydrograph Record	Recommendations	Relevant Network Objectives Achieved	Rationale and Comments
9	B-1A,	193	II A (16)	Surficial	Osoyoos		1989	43.9	2	944	Manual	MOE		1993-Present	13	Shows climatic effects and recharge from irrigation	Discharge	Shallow	Excellent	Consider for closure unless required for quality monitoring	1 (a), 1 (c)	Response mirrored in other wells.
10	B-1B(P-2) and B-1B(P-3)	193	II A (16)	Surficial	Osoyoos		1989	34.7 28.3	2 2	944	Manual	MOE		1993-Present	13	Shows climatic effects and recharge from irrigation	Discharge	Shallow	Excellent Excellent	Consider for closure unless required for quality monitoring	1 (a), 1 (c)	Response mirrored in other wells.
11	B-5	193	II A (16)	Surficial	Osoyoos		1989	22.6	2	1104	Manual	MOE		1993-Present	13	Shows climatic effects and recharge from irrigation	Recharge	Shallow	not available	Consider for closure unless required for quality monitoring	1 (a), 1 (c)	Response mirrored in other wells.
12	B-7 (P-1) and (P-2)	193	II A (16)	Surficial	Osoyoos		1989	35.1 28.5	2 2	1000	Manual	MOE	Private	1993-Present	13	Shows climatic effects and recharge from irrigation	Recharge	Shallow	Excellent Excellent	Consider for closure unless required for quality monitoring	1 (a), 1 (c)	Response mirrored in other wells.
13	B-8 (P-1) and (P-2)	193	II A (16)	Surficial	Osoyoos		1989	23.7 20.0	2 2	1001	Manual	MOE	Private	1993-Present	13	Shows climatic effects and recharge from irrigation	Recharge	Shallow	Excellent Excellent	Consider for closure unless required for quality monitoring	1 (a), 1 (c)	Response mirrored in other wells.
14	332	254	1A (16)	Surficial	Oliver		1997	91.4	6		Thalimedes	Private	Private	1997-Present	9	Seasonal response to climate, river flows and possibly long term pumping withdrawals	Discharge	Deep	Excellent	Retain	2 (a), 2(b) and 2 (c)	High water use area, shows long-term declining trend
15	348	255	1A (15)	Surficial	Tug Lake - Vaseux Lake(Oliver)		2000	15	48		Manual	Private	Private	2000-Present	6	Seasonal response, climate, river flows and possibly irrigation recharge	Recharge	Shallow	Excellent	Retain	1 (a), 1 (c)	High water use area, possibly long-term declining trend

* Well depth reported as the completed depth of the well and not the total drilled depth.

Table 6. Summary review of observation wells in the Lumby, Penticton, Kermeos-Cawston and Princeton sub-network areas.

Item	MOE Obs. Well No.	Aquifer Number	Aquifer Classification and Ranking	Aquifer Type	Location	Site Agreement	Date Established	Well Depth* (feet)	Well Diameter (inches)	Collar Elevation (feet)	Recorder Type	Owner of Well	Owner of Property	Period of Record	Duration (Years)	Water Level Response	Recharge or Discharge Regime	Shallow or Deep Flow Regime	Quality of Hydrograph Record	Recommendations	Relevant Network Objectives Achieved	Rationale and Comments
Lumby Sub-network Area																						
1	294	315	IIA(10)	Surficial	Lumby	Permit No. K23-54-86 File no 23-21-2 Ministry of Transportation and Highways	1986	54	6	1709.68	Thalimedes	MOE	Crown	1986 - Present	20	Shows recharge with creek flows and precipitation	Recharge	Shallow	Excellent	Retain	2 (a), 2(b) and 2 (c)	High water use area
Okanagan Basin - Penticton Sub-network Area																						
1	153	297	IIIB (11)	Surficial	Summerland		1969	23	2	1131.52	Manual	MOE		1969 - Present	37	Responds to freshet, Trout Creek and Okanagan Lake	Discharge	Shallow	Good to Excellent	Consider closing well if no interest to District of Summerland	2 (a), 2(b) and 2 (c)	Aquifer is relatively small, one observation well may be representative.
2	154	297	IIIB (11)	Surficial	Summerland		1969	78	2	1142.44	Manual	MOE		1969 - Present	37	Responds to freshet, Trout Creek and Okanagan Lake	Discharge	Deep	Good to Excellent	Retain	2 (a), 2(b) and 2 (c)	Aquifer is relatively small, one observation well may be representative, water levels appears to be declining since 2001
3	158	297	IIIB (11)	Surficial	Summerland		1969	50	2	1173.03	Manual	MOE		1969 - Present	37	Responds to freshet, Trout Creek and Okanagan Lake	Recharge	Shallow	Good to Excellent	Consider closing well if no interest to District of Summerland	2 (a), 2(b) and 2 (c)	Aquifer is relatively small, one observation well may be representative.
4	366	299	IIIC(10)	Surficial	Summerland, Rodeo Grounds/KVR Station		2005	322	8		Thalimedes	District of Summerland		2005- Present	2		Discharge	Deep		Retain	2 (a), 2(b) and 2 (c)	newly established well, aquifer in Trout Creek Valley
5	367	299	IIIC(10)	Surficial	northeast of Obs. well 366		2005	162			Thalimedes	Private	Gibbs ?	2005- Present	2		Discharge	Deep		Retain	2 (a), 2(b) and 2 (c)	newly established well, aquifer in Trout Creek Valley
Similkameen Basin - Keremeos- Cawston Subnetwork Area																						
1	75	259	IIA (14)	Surficial	Keremeos		1967	89	6 (3.25 opening in cap)	1357.4	Manual	Village of Keremeos		1967 - Present	39	Recharge during freshet and pumping effects,	Discharge	Deep	Good to Excellent	Retain	2 (a), 2(b) and 2 (c)	Long-term record, high ground water use area, recharged during freshet possibly from Keremeos Creek
2	76	259	IIA (14)	Surficial	Keremeos		1969	74	6 (1.25 opening in cap)	1362.56	Manual	Keremeos Irrigation District		1969 - Present	36	Recharge during freshet and pumping effects,	Discharge	Shallow	Good to Excellent	Retain	2 (a), 2(b) and 2 (c)	Long-term record, high ground water use area, recharged during freshet possibly from Keremeos Creek

Item	MOE Obs. Well No.	Aquifer Number	Aquifer Classification and Ranking	Aquifer Type	Location	Site Agreement	Date Established	Well Depth* (feet)	Well Diameter (inches)	Collar Elevation (feet)	Recorder Type	Owner of Well	Owner of Property	Period of Record	Duration (Years)	Water Level Response	Recharge or Discharge Regime	Shallow or Deep Flow Regime	Quality of Hydrograph Record	Recommendations	Relevant Network Objectives Achieved	Rationale and Comments
3	77	259	IIA (14)	Surficial	Keremeos		1969	112	6 (1.25 opening in cap)	1409.46	Manual	Keremeos Irrigation District		1969 - Present	36	Recharge during freshet and pumping effects,	Discharge	Deep	Good to Excellent	Retain	2 (a), 2(b) and 2 (c)	Long-term record, high ground water use area, recharged during freshet possibly from Keremeos Creek
4	203	259	IIA (14)	Surficial	Cawston	No written agreement	1975	199	8		Thalimedes	Fairview Heights Irrigation District	Private	1975 - Present	31	Shows pumping effects	Discharge	Deep	Excellent	Retain	2 (a), 2(b) and 2 (c)	Long-term record, partnership with F.H.I.D., overall declining levels since 1996
Similkameen Basin - Princeton Subnetwork Area																						
1	220	259	IIA (14)	Surficial	Princeton - Thomas		May-81	32	8		Manual	Private	Private	1977 - 2004 (currently not active)	29	Shows recharge with river flows and precipitation, well is subject to flooding	Overall Discharge regime affected by river levels	Shallow	Good to Excellent	Retain, check depth and response by pumping	2 (a), 2(b) and 2 (c)	Long-term record, overall declining levels since 1977

* Well depth reported as the completed depth of the well and not the total drilled depth.

Table 7. Summary review of observation wells in secondary priority areas.

Item	MOE Obs. Well No.	Aquifer Number	Aquifer Classification and Ranking	Aquifer Type	Location	Site Agreement	Date Established	Well Depth* (feet)	Well Diameter (inches)	Collar Elevation (feet)	Recorder Type	Owner of Well	Owner of Property	Period of Record	Duration (Years)	Water Level Response	Recharge or Discharge Regime	Shallow or Deep Flow Regime	Quality of Hydrograph Record	Recommendations	Relevant Network Objectives Achieved	Rationale and Comments
1	53			Bedrock	Carrs Landing		1966	50	1	3169.25	Manual	MOE	Private	1966 - Present	40	Responds to snowmelt and precipitation	Recharge	Shallow	Good to Excellent	Mirrors Well 54, suspend monitoring but maintain as backup well to 54.	1 (a), 1 (c)	High elevation recharge area, long period of record, climate response monitoring, downward trend since 2001
2	54			Bedrock	Carrs Landing	R/W agreement was dissolved in 1977 with recommendation not to pursue a legal agreement	1969	45	6	3185.85	Stevens F 68	MOE	Private	1969 - Present	37	Responds to snowmelt and precipitation	Recharge	Shallow	Excellent	Retain	1 (a), 1 (c)	High elevation recharge area, long period of record, climate response monitoring, downward trend since 2001
3	162			Bedrock	Kalawoods		1972	13.25	6	1722.52	Thalimedes	MOE	Private	1969 - Present	37	Appears to respond to long-term climatic and local pumping effects	Discharge	Shallow	Excellent	Retain	1 (a), 1 (c), 2 (a), 2(b) and 2 (c)	Declining trend since 2000.
4	172	345	IIA(14)	Surficial	Kalawoods		1972	61	6	1343.19	Thalimedes	MOE		1972 - Present	34	Appears to respond to runoff period and local pumping	Discharge affected by streamflow conditions	Shallow	Excellent	Retain	2 (a), 2(b) and 2 (c)	Appears to be in Aquifer 345. Monitors surface water interaction.
5	173	345	IIA(14)	Surficial	Kalawoods		1972	62	6	1331.75	Manual	MOE	Private	1972 - Present	34	Appears to respond to runoff period and local pumping	Discharge affected by streamflow conditions	Shallow	Good to Excellent	Consider closing well or retaining in lieu of Well 174	2 (a), 2(b) and 2 (c)	Mirrors Well 174 but shows larger range in fluctuation.
6	174	345	IIA(14)	Surficial	Kalawoods		1972	133	6	1404.46	Thalimedes	MOE		1972 - Present	34	Appears to respond to runoff period and local pumping	Discharge affected by streamflow conditions	Deep	Good to Excellent	Retain	2 (a), 2(b) and 2 (c)	Key well reporting on ground water conditions for forecasting water supply outlook
7	175			Bedrock	Kalawoods		1972	76	6	1572.58	Manual	MOE		1972 - Present	34	Affected by local pumping and possibly irrigation	Discharge	Deep	Good to Excellent	Retain	2 (a), 2(b) and 2 (c)	Represents bedrock conditions
8	176			Surficial	Kalawoods		1972	161	6	1425.87	Manual	MOE		1972 - Present	34	Affected by local pumping and possibly irrigation	Discharge	Deep	Good to Excellent	Retain	2 (a), 2(b) and 2 (c)	Represents surficial conditions

Item	MOE Obs. Well No.	Aquifer Number	Aquifer Classification and Ranking	Aquifer Type	Location	Site Agreement	Date Established	Well Depth* (feet)	Well Diameter (inches)	Collar Elevation (feet)	Recorder Type	Owner of Well	Owner of Property	Period of Record	Duration (Years)	Water Level Response	Recharge or Discharge Regime	Shallow or Deep Flow Regime	Quality of Hydrograph Record	Recommendations	Relevant Network Objectives Achieved	Rationale and Comments
9	264			Bedrock	Mt. Kobau	Letter from Environment Canada offering GW section the full use of the well	1980	245	6	6012		MOE	Fed. Crown	1980 - 2001 (currently not active, obstruction in well at depth of approx. 30 m)	21	responds to snowmelt and precipitariton	Recharge	Deep	Good to Excellent	Retain and reactivate	1 (a), 1 (c)	High elevation recharge area, long period of record, climate response monitoring, at height of land between Okanagan and Similkameen Basins
10	282		IIA (14)	Surficial	Willow Brook/Meyers Flats	Permit No. K24-368-82 File no 24-21-1m Ministry of Transportation and Highways	1983	55	6		Thalimedes	MOE		1983 - Present	23	responds to long-term climatic, runoff conditions	Recharge	Shallow	Good to Excellent	Retain	1 (a), 1 (c), 2 (a), 2(b) and 2 (c)	Aquifer experiences wide fluctuations in water levels related to long-term climate variations and runoff conditions, partnership with Willowbrook Utility

* Well depth reported as the completed depth of the well and not the total drilled depth.

Table 8. Summary of recommendations for observation wells.

Priority Sub-network Area	Location Description	Minimum Target Number of Observation Wells	Wells to Retain	Wells to Rehabilitate	Wells to Close
Okanagan Basin including Lumby and Enderby					
1	North Okanagan, north of Vernon to Enderby	6	bedrock Wells 47 and 311 unconsolidated Wells 117, 118, 122, 180 and 322	none	unconsolidated Well 119
2	Kelowna-Westbank	6	bedrock Well 115 unconsolidated Wells 236, 262, 305 and 356	consider pressure transducer for Well 305	none
3	Okanagan Falls to Osoyoos	6	unconsolidated Wells 96, 101, 107, 322 and 348	none	unconsolidated Wells 97, 100, 102, 105 and 6 piezometer sites A and B
4	Lumby	2	unconsolidated Well 294	none	none
5	Penticton-Summerland	4	unconsolidated Well 154, 366 and 367	none	unconsolidated Wells 153 and 158
Similkameen Basin					
1	Keremeos-Cawston	4	unconsolidated Wells 75, 76, 77 and 203	none	none
2	Hedley	2	none	none	none
3	Princeton	3	unconsolidated Well 220	unconsolidated Well 220 , to be checked, pumped and cleaned if necessary	none
Subtotals:		33	26	2	13

Priority Sub-network Area	Location Description	Minimum Target Number of Observation Wells	Wells to Retain	Wells to Rehabilitate	Wells to Close
Secondary Areas					
1	Carrs Landing	1	bedrock Well 53 and 54	bedrock Well 53 , suspend monitoring but maintain site	none
2	Wood Lake-Kalawoods	6 Subject to Review	bedrock Well 162 and 175 unconsolidated Well 172, 174 and 176	none	unconsolidated Well 173
3	Mount Kobau	1	bedrock Well 264	bedrock Well 264 needs to be sounded, obstruction removed if possible and considered for a pressure transducer	none
4	Meyers Flat	1	unconsolidated Well 282	none	none
Subtotals:		9	9	1	1
Totals:		42	35	3	14

Table 8.

Table 9. General requirements for well closure.

Location Description	Wells to Close	Well Depth (feet)	Well Diameter (inches)	Closure Plug (feet)	Closure Report	Closure Report Submission
South of Armstrong	unconsolidated Well 119	280	4 (liner)	3	Yes	Retain Only
Osoyoos	unconsolidated Well 97	20	2	3	Yes	Retain Only
	unconsolidated Well 100	62	2	3	Yes	Retain Only
	unconsolidated Well 102	52	2	3	Yes	Retain Only
	unconsolidated Well 105	42.5	2	3	Yes	Retain Only
	unconsolidated piezometers A1 (P-1) and A1(P-2)	35.2 21.9	2 2	3	Yes	Retain Only
	unconsolidated piezometers B1A	43.9	2	3	Yes	Retain Only
	unconsolidated piezometers B-1B (P-2) and B-1(P-3)	34.7 28.3	2 2	3	Yes	Retain Only
	unconsolidated piezometers B-5	22.6	2	3	Yes	Retain Only
	unconsolidated piezometers B-7 (P-1) and (P-2)	35.1 28.5	2 2	3	Yes	Retain Only
	unconsolidated piezometers B-8 (P-1) and (P-2)	23.7 20.0	2 2	3	Yes	Retain Only
Summerland	unconsolidated Well 153	23	2	3	Yes	Retain Only
	unconsolidated Well 158	50	2	3	Yes	Retain Only
Wood Lake	unconsolidated Well 173	62	6	3	Yes	Retain Only

Note: All wells will need to be closed by a qualified well driller or person under direct supervision of a qualified well driller or qualified professional.

Table 10. Priority candidate areas for establishing new observation wells.

Priority Sub-network Area	Location Description	Priority Aquifers	Priority Watersheds	Watershed Comments	
Okanagan Basin including Lumby and Enderby					
1	North Okanagan, north of Vernon to Enderby	bedrock 106 and 107 unconsolidated 102	Deep Creek		
			Coldstream Creek		
			Vernon Creek (Okanagan Landing)		
2	Kelowna-Westbank		McDougall Creek		
			bedrock 470	Brandt Creek	
			bedrock 473	Daves Creek	
				Kelowna Creek	
				Mission Creek	east of Kelowna
3	Okanagan Falls to Osoyoos	bedrock 260	Horn Creek-Twin Lakes		
			Kearns Creek		
			bedrock 808	Haynes Creek	
			McLean Creek		
		unconsolidated 264	Shuttleworth Creek		
	unconsolidated 194		east side Osoyoos Lake		
4	Lumby	unconsolidated 316 and 317	Besette Creek		
5	Penticton-Summerland	bedrock 269 and 298	Penticton Creek		
		bedrock 300	Dark Creek		
Similkameen Basin					
1	Keremeos-Cawston	aquifers need to be identified	Keremeos Creek	north of Aquifer 259	
2	Hedley	unconsolidated 259 and other potential aquifers that need to be defined	Cahill Creek	north of Aquifer 259	
3	Princeton	aquifers need to be identified	Allison Creek	north of Aquifer 259	

APPENDIX A

LOCATION MAPS OF REVIEWED OBSERVATION WELLS

- Figure 1. Observation well 47 at Silver Star Mountain, northeast of Vernon.
- Figure 2. Observation wells 53 and 54 at Carrs Landing.
- Figure 3. Observation wells 75, 76, and 77 at Keremeos.
- Figure 4. Observation wells 96, 97 and piezometer sites A1, B1, B5, B7 and B8 at Osoyoos.
- Figure 5. Observation wells 100, 101, 102, 105 and 107 on west side of Osoyoos Lake near north end of lake.
- Figure 6. Observation well 115 at Mission Ridge, east of Kelowna.
- Figure 7. Observation wells 117, 119, and 180 south of Armstrong.
- Figure 8. Observation wells 118 and 122 south of Enderby.
- Figure 9. Observation wells 153, 154, and 154 at Summerland.
- Figure 10. Observation wells 162, 172, 173, 175, and 176 near Oyama.
- Figure 11. Observation well 203 at Cawston, southeast of Keremeos.
- Figure 12. Observation well 220 at Princeton.
- Figure 13. Observation wells 236 and 262 near Kelowna.
- Figure 14. Observation well 264 at Mount Kobau, west of Oliver.
- Figure 15. Observation well 282 at Meyers Flat, north of Oliver.
- Figure 16. Observation well 294 near Lumby.
- Figure 17. Observation well 305 at Okanagan Mission, southwest of Kelowna.
- Figure 18. Observation wells 311 and 322 at BX Creek Watershed, northeast of Vernon.
- Figure 19. Observation well 332 near Oliver.
- Figure 20. Observation well 348 north of Tugulnuit Lake near Oliver.
- Figure 21. Observation well 356 near Winfield.
- Figure 22. Observation wells 366 and 367 near Faulder.

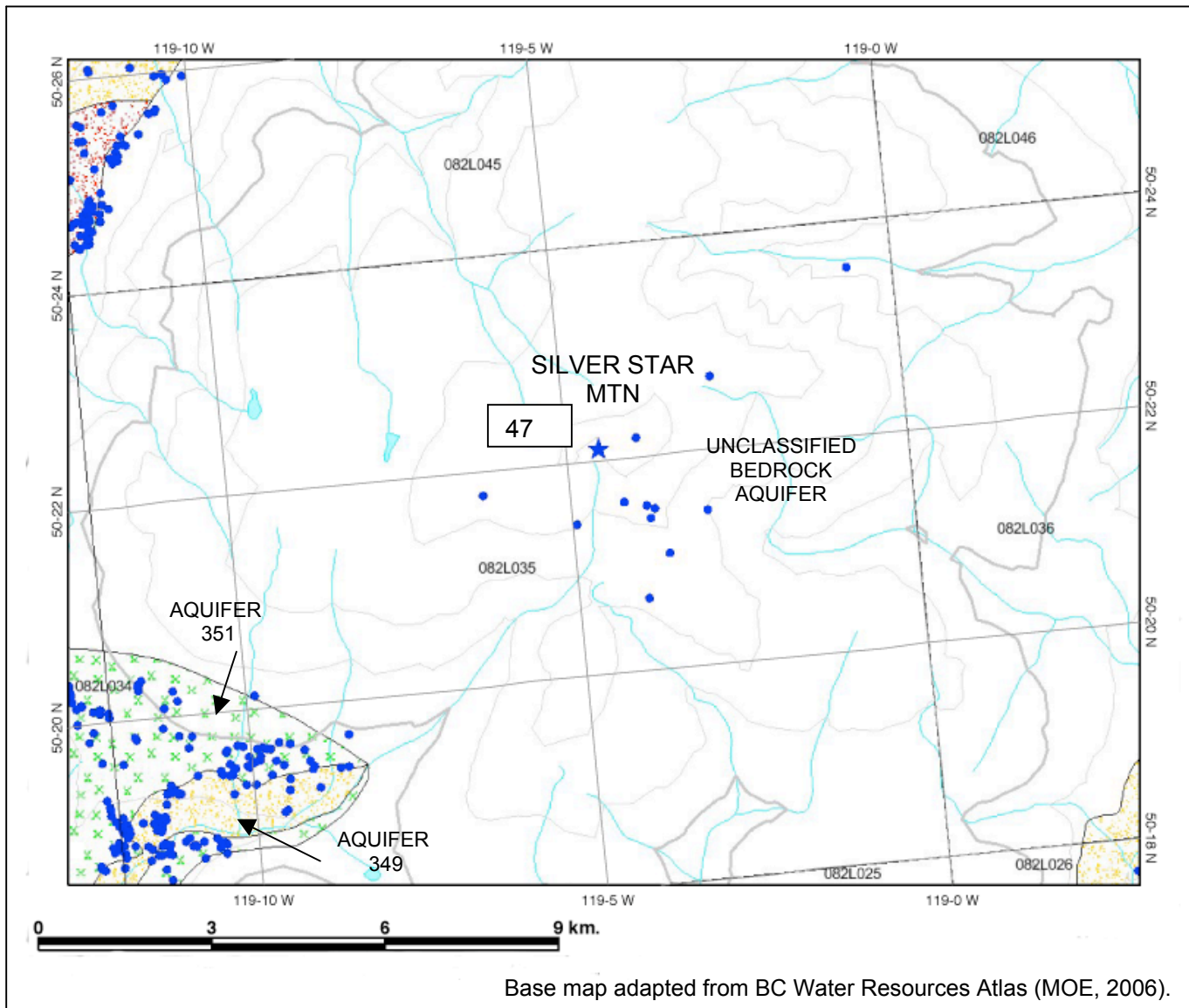


Figure 1. Observation well 47 at Silver Star Mountain, northeast of Vernon.

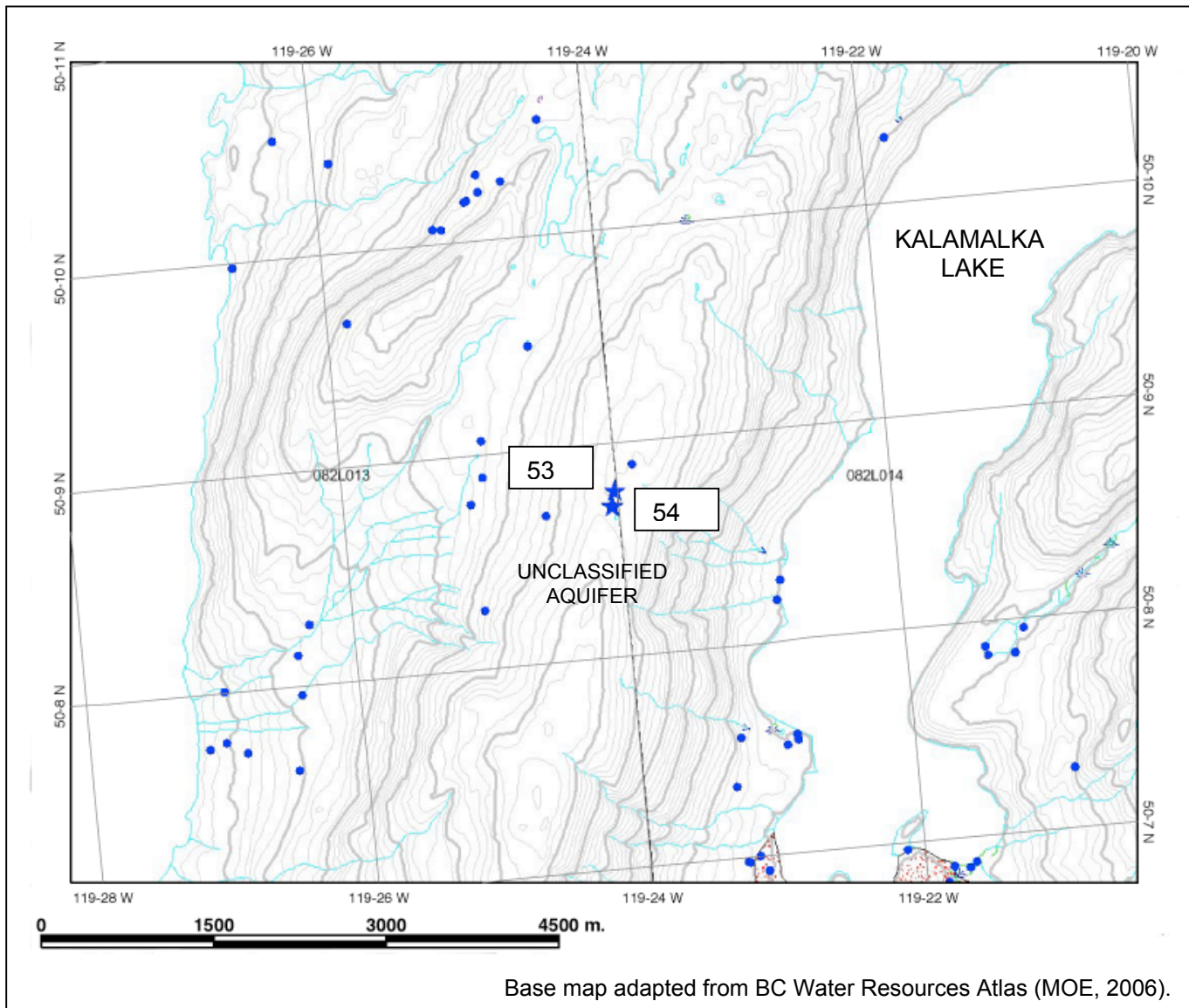


Figure 2. Observation wells 53 and 54 at Carrs Landing.

Figure 2. Appendix A.

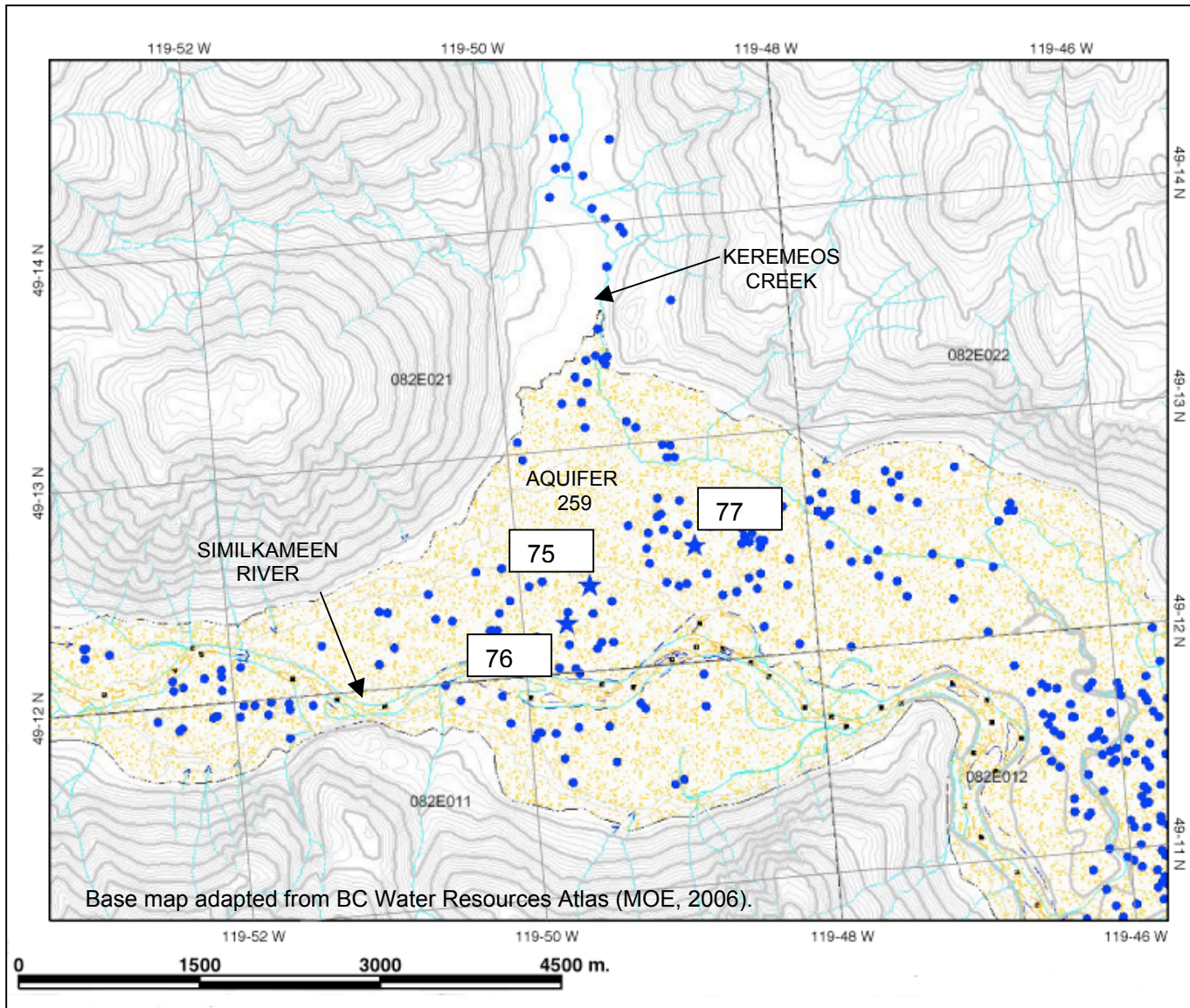


Figure 3. Observation wells 75, 76, and 77 at Keremeos.

Figure 3. Appendix A.

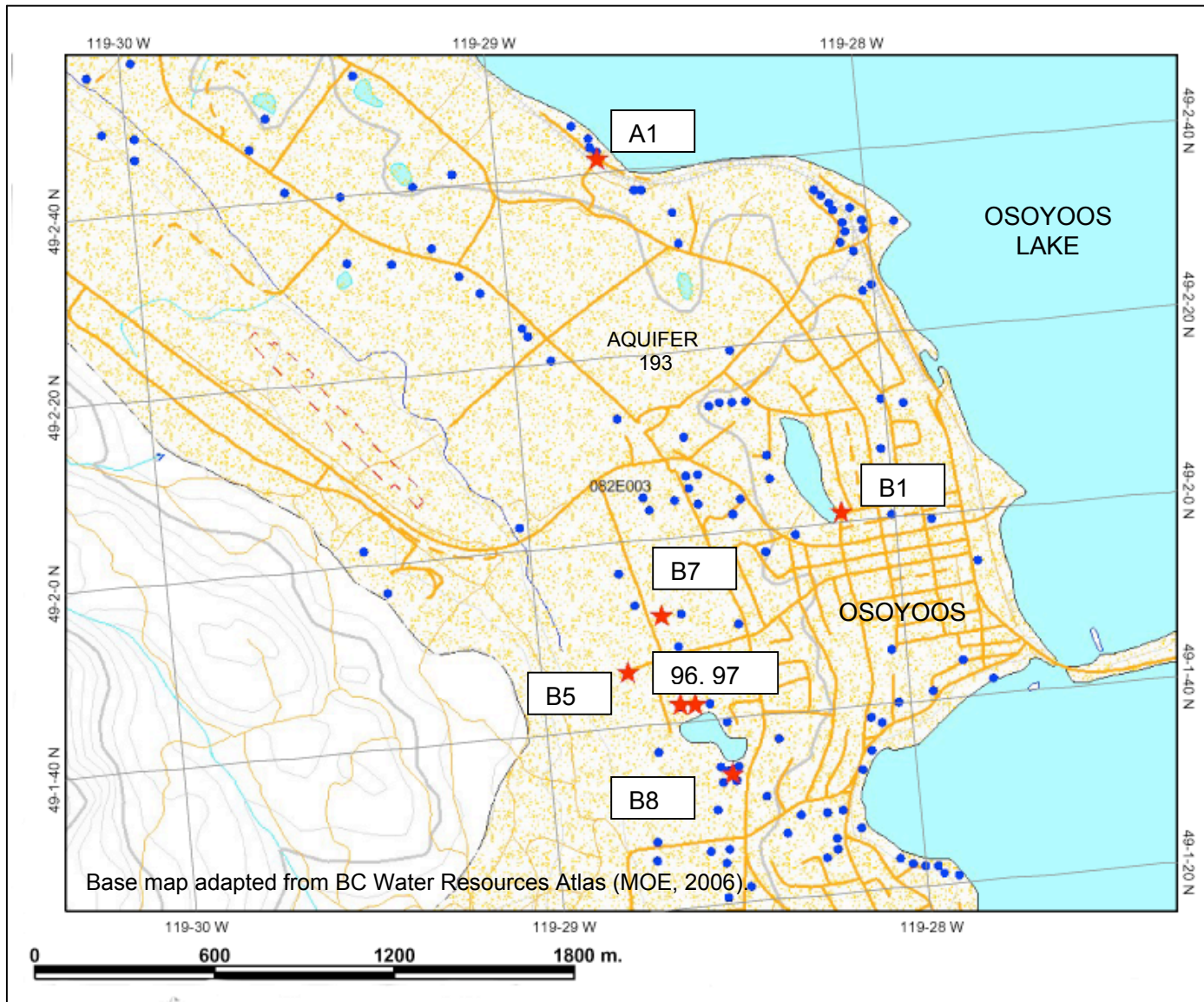


Figure 4. Observation wells 96, 97 and piezometer sites A1, B1, B5, B7 and B8 at Osoyoos.

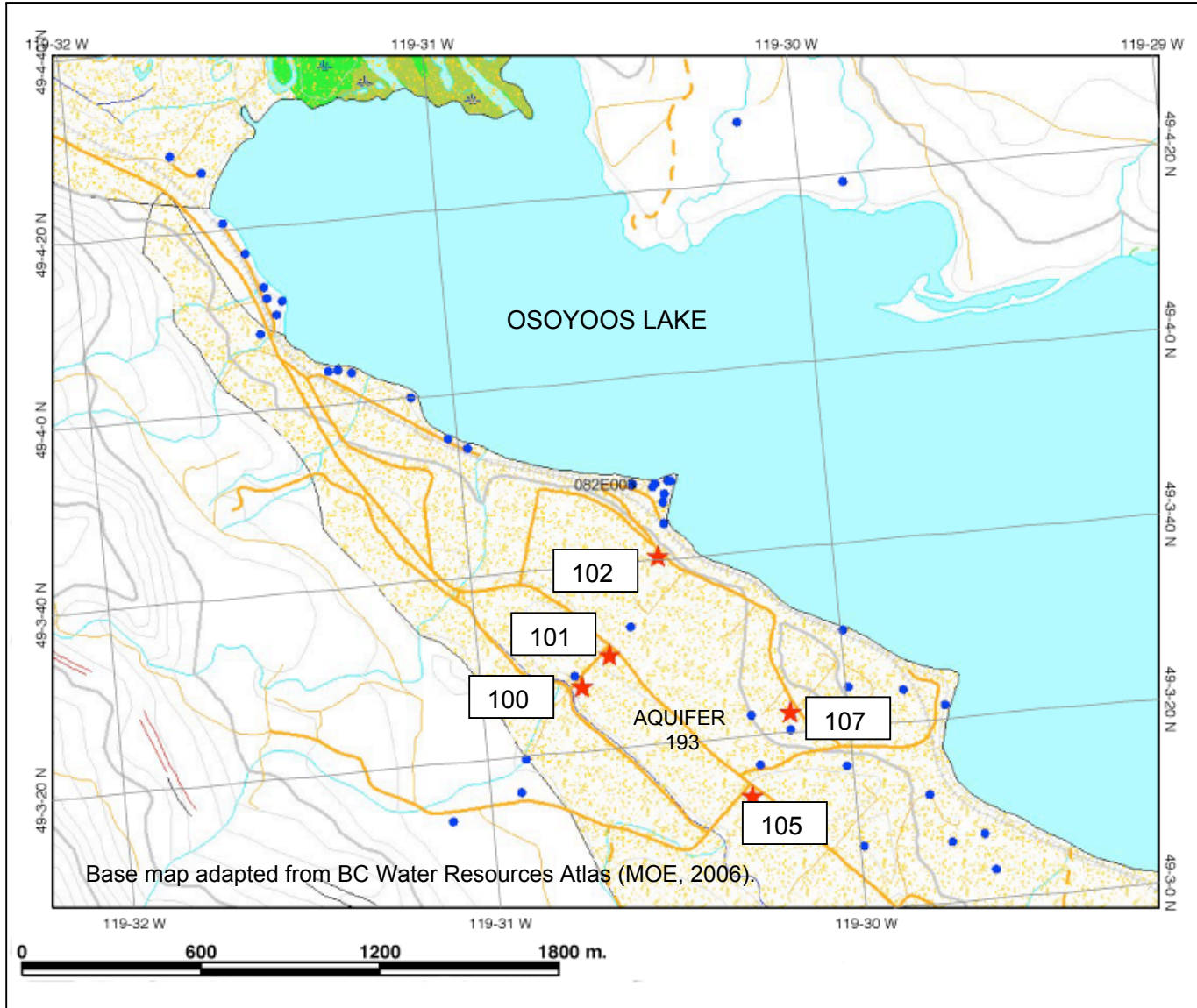


Figure 5. Observation wells 100, 101, 102, 105 and 107 on west side of Osoyoos Lake near north end of lake.

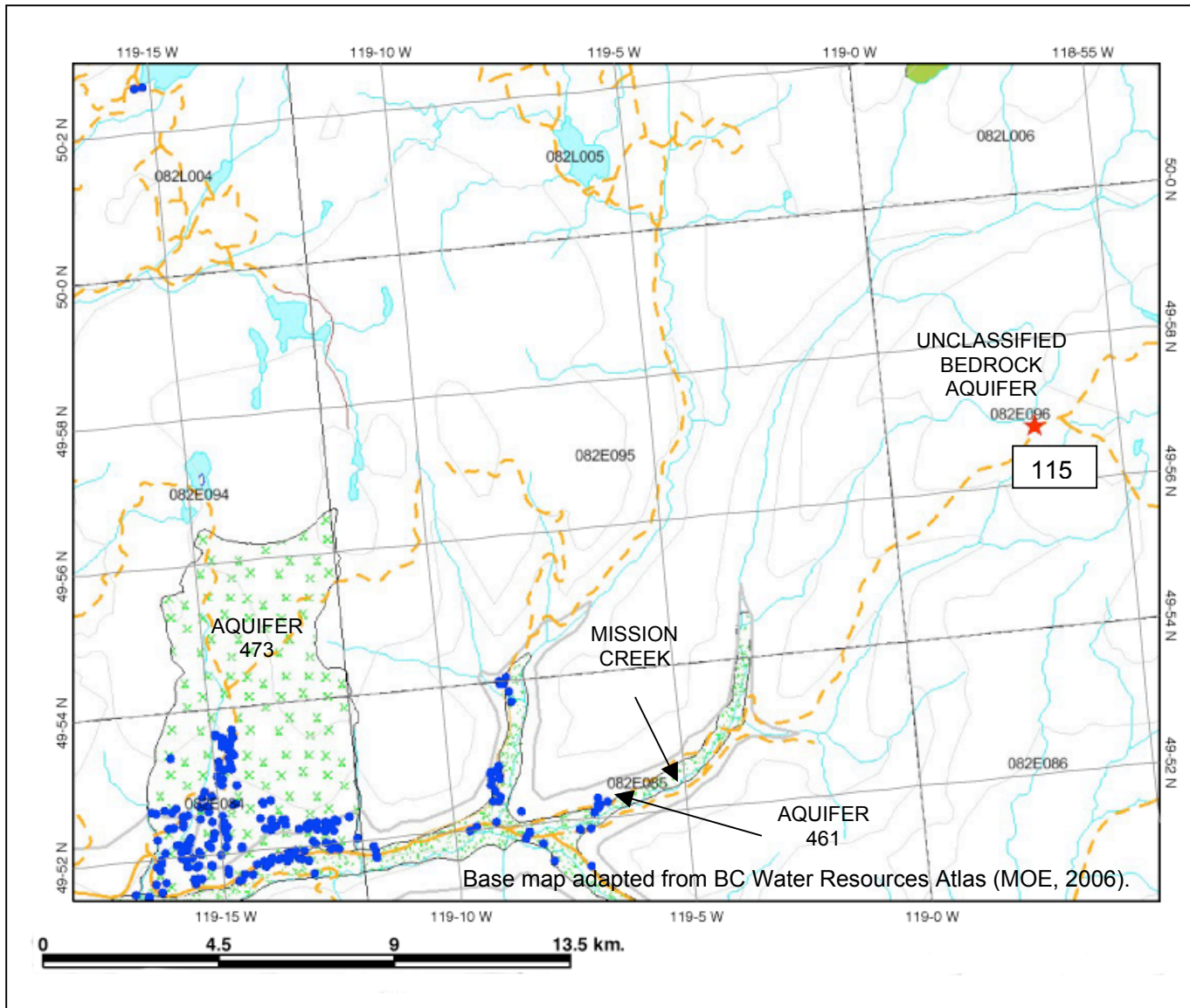


Figure 6. Observation well 115 at Mission Ridge, east of Kelowna.

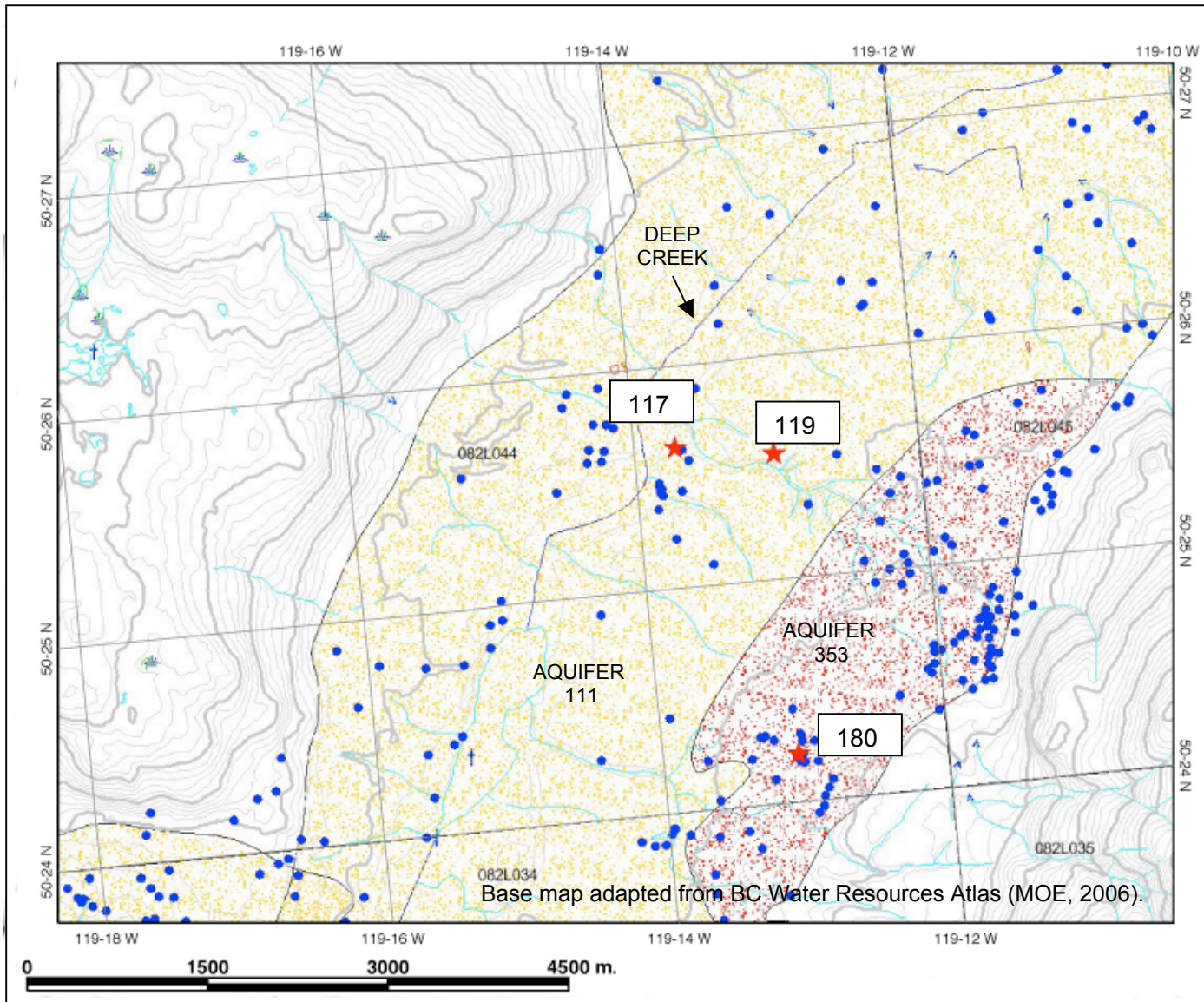


Figure 7. Observation wells 117, 119, and 180 south of Armstrong.

Figure 7. Appendix A.

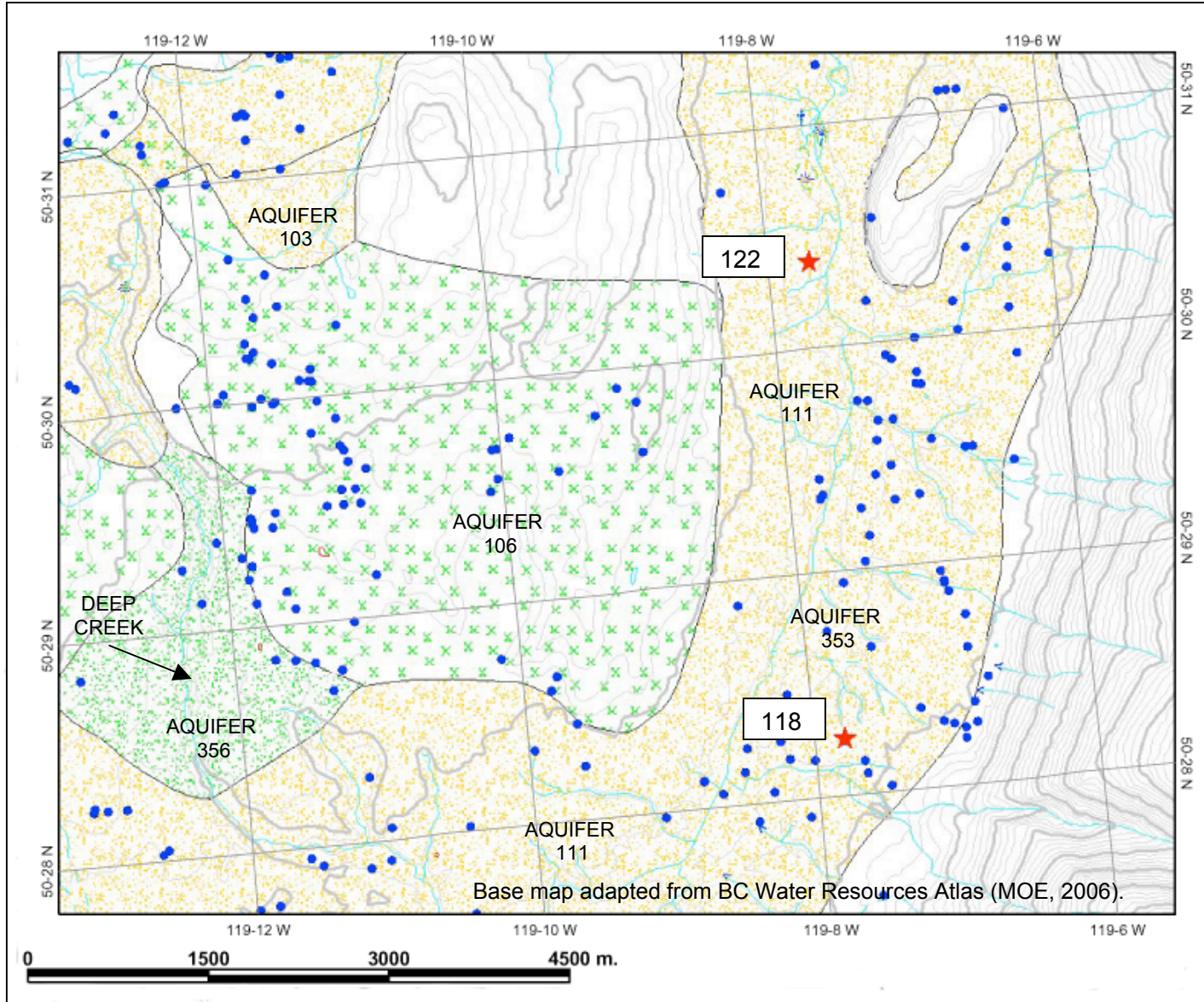


Figure 8. Observation wells 118 and 122 south of Enderby.

Figure 8. Appendix A.

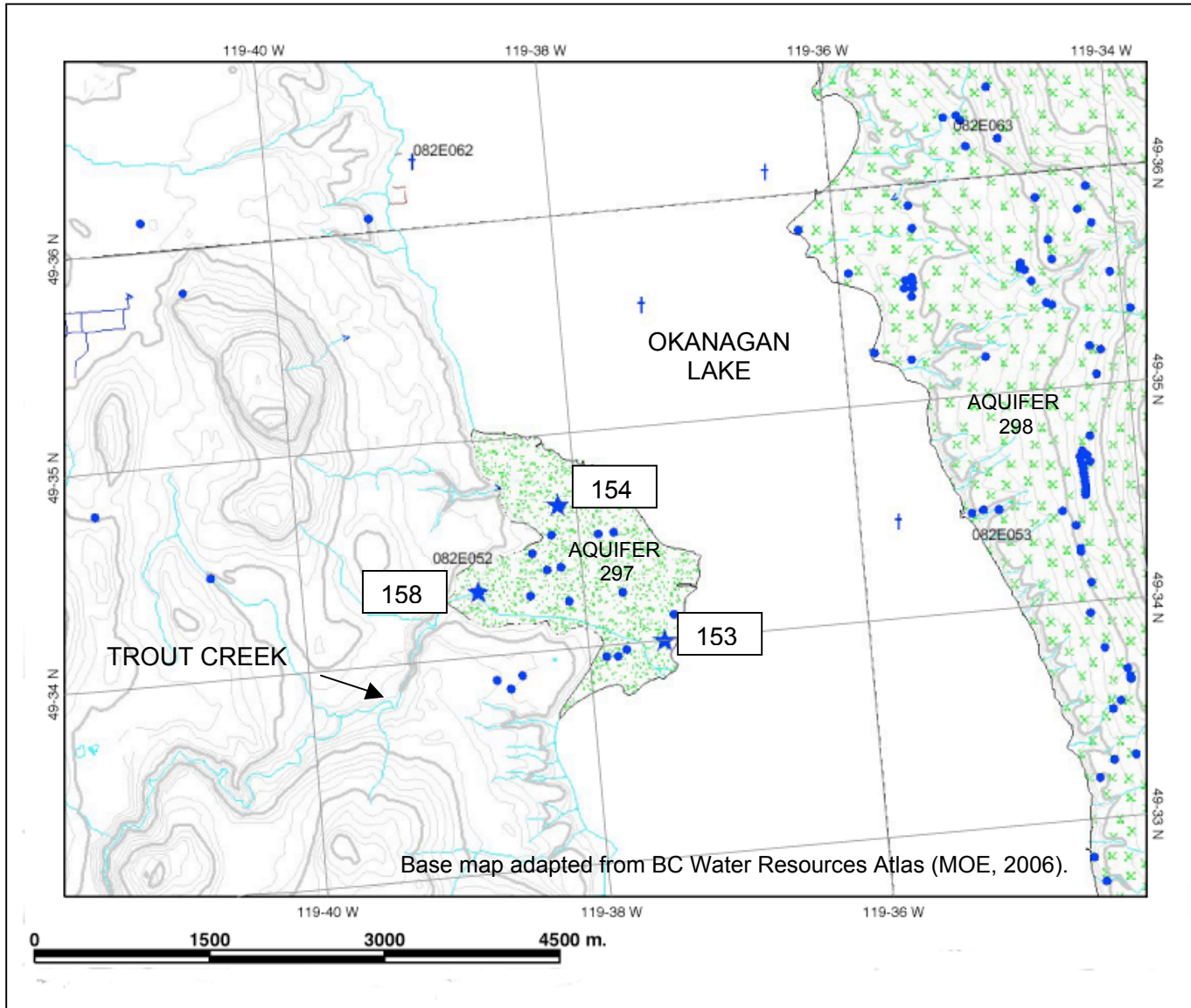


Figure 9. Observation wells 153, 154, and 154 at Summerland.

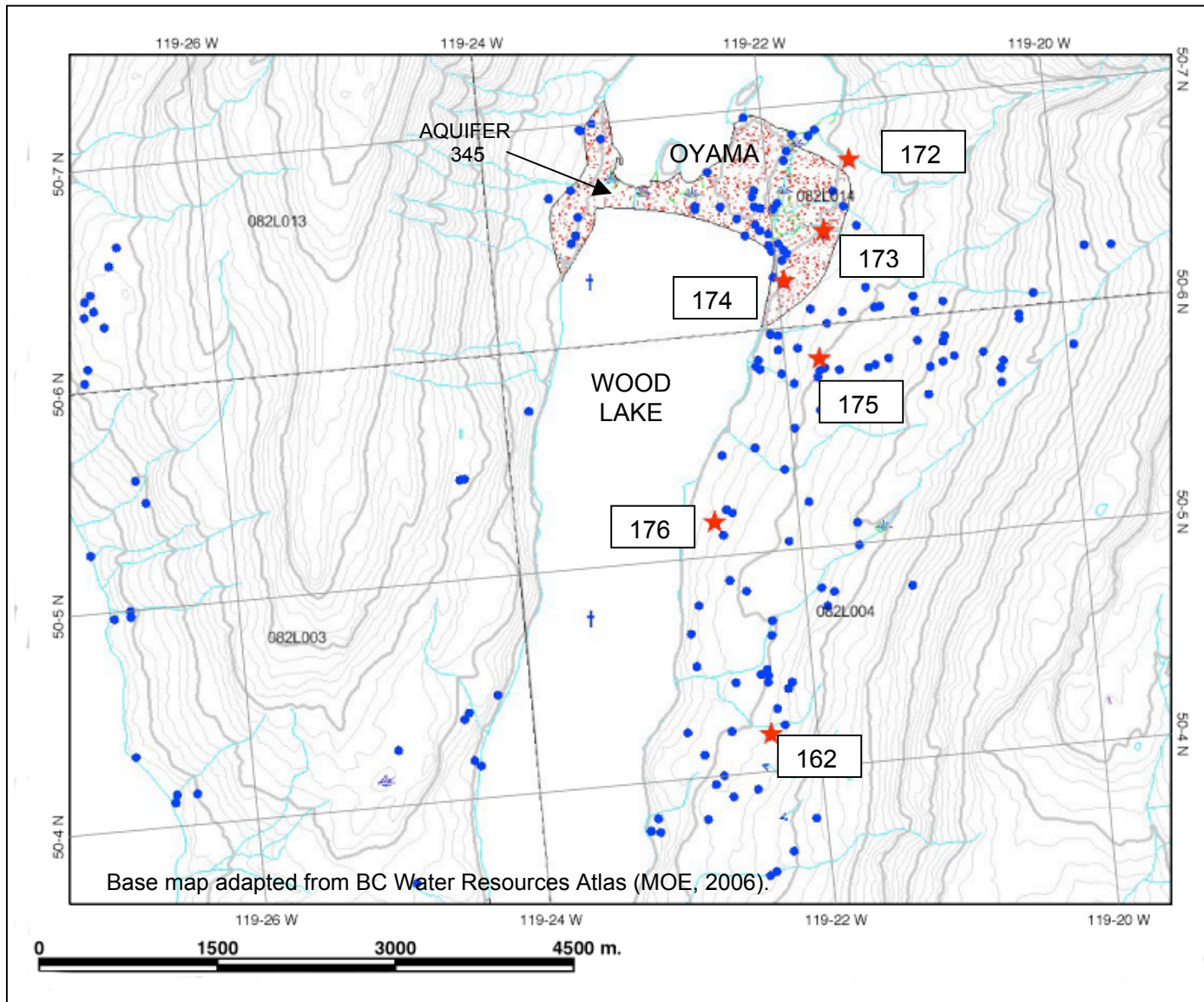


Figure 10. Observation wells 162, 172, 173, 175, and 176 near Oyama.

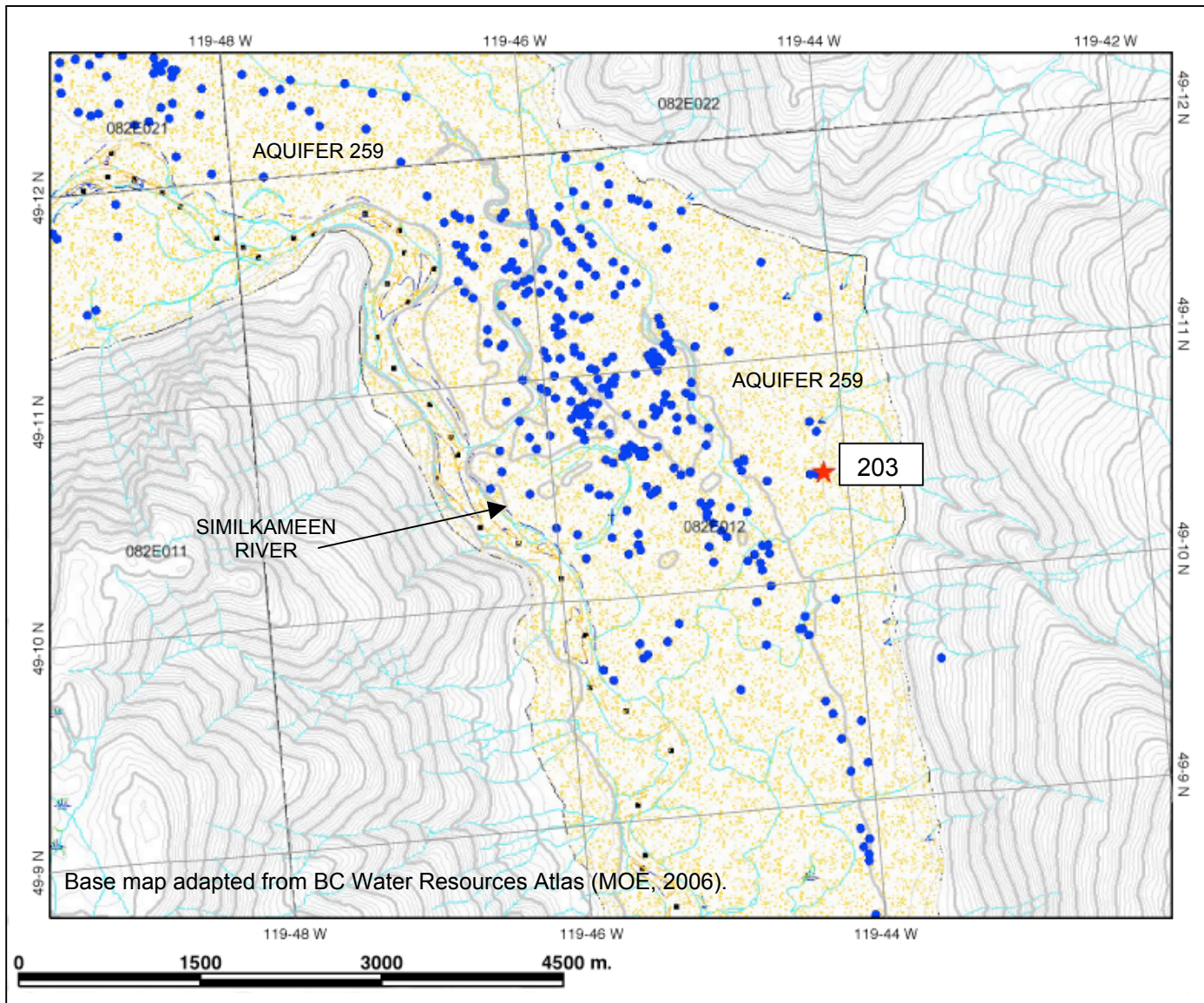


Figure 11. Observation well 203 at Cawston, southeast of Keremeos.

Figure 11. Appendix A.

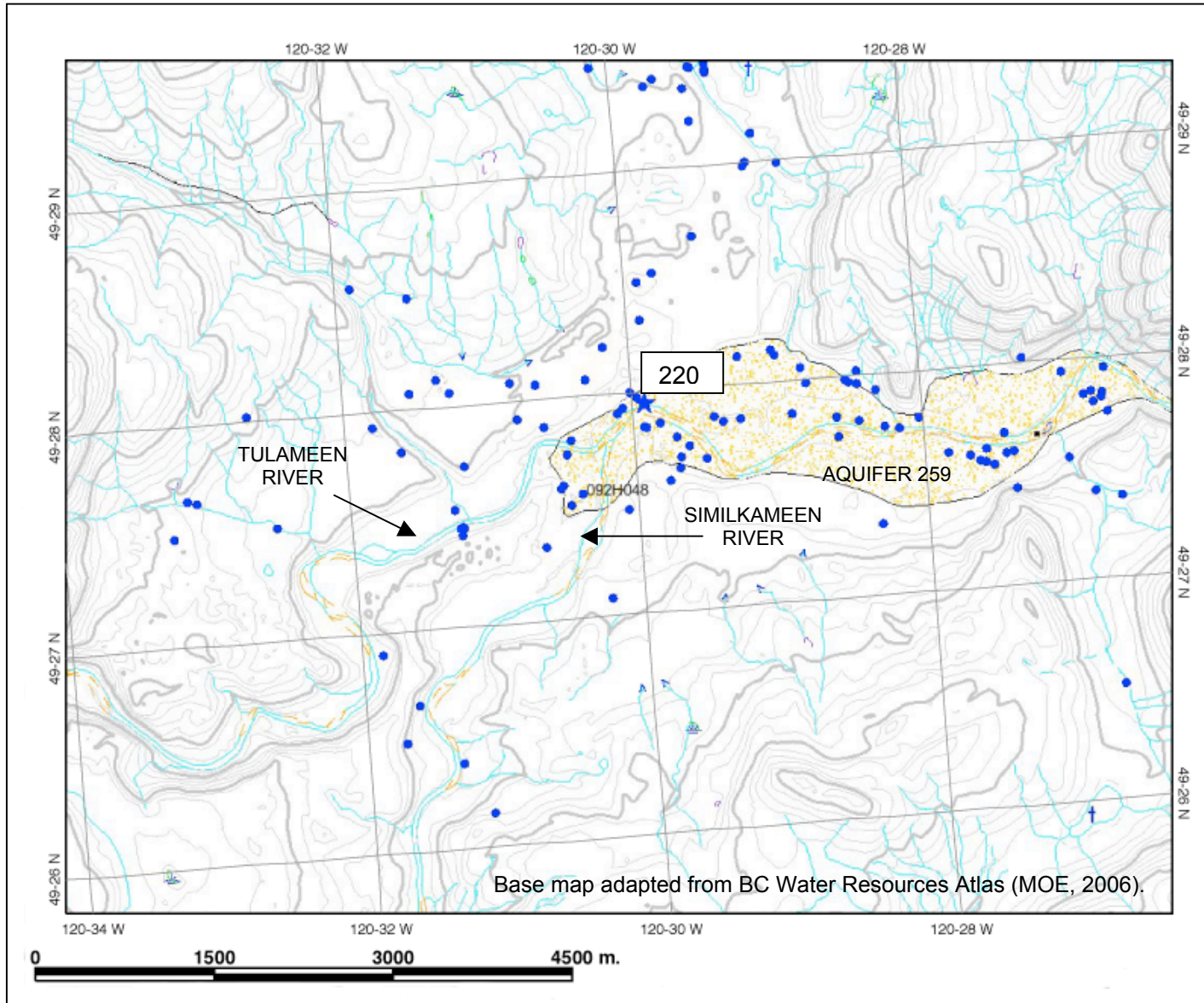


Figure 12. Observation well 220 at Princeton.

Figure 12. Appendix A.

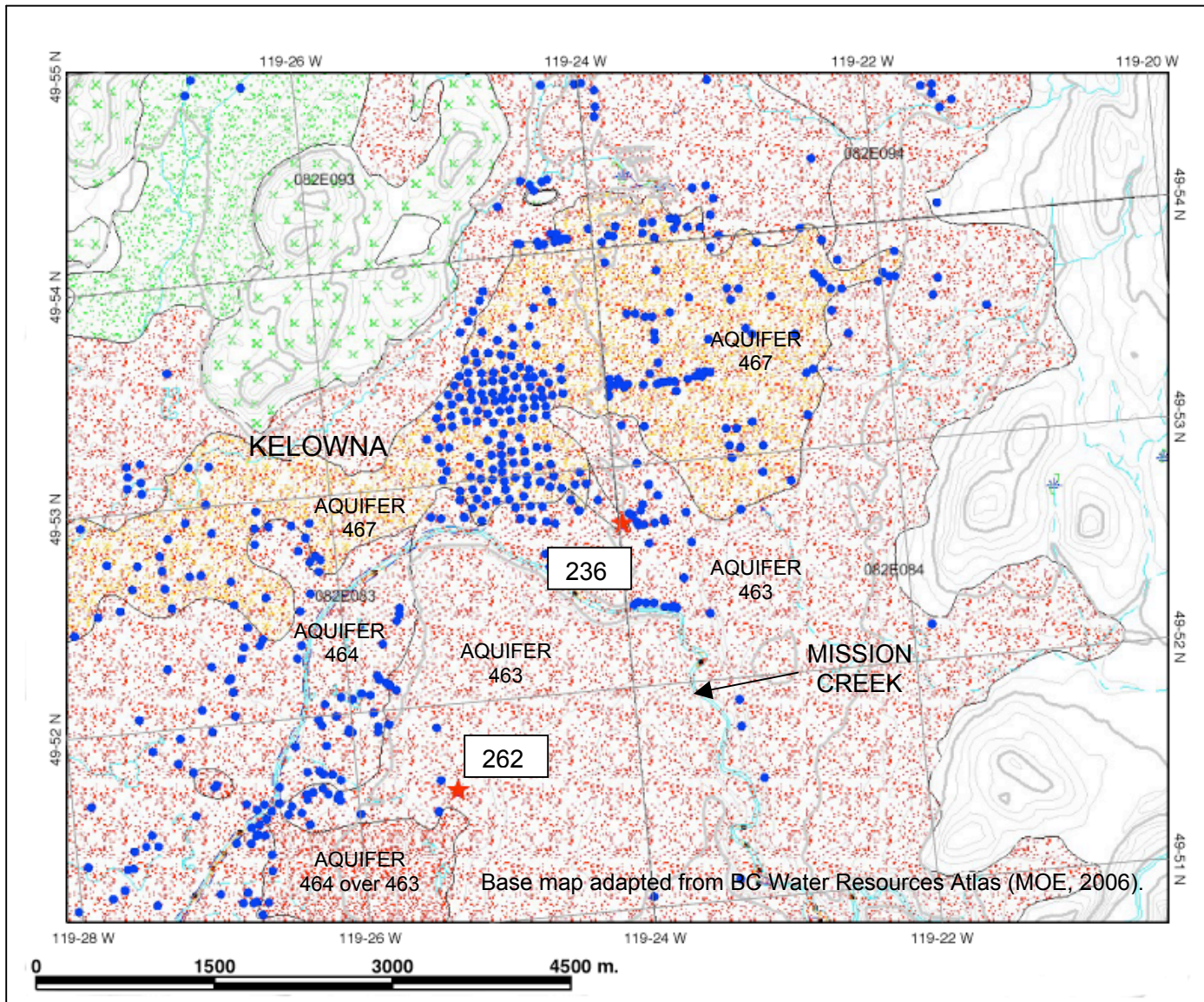


Figure 13. Observation wells 236 and 262 near Kelowna.

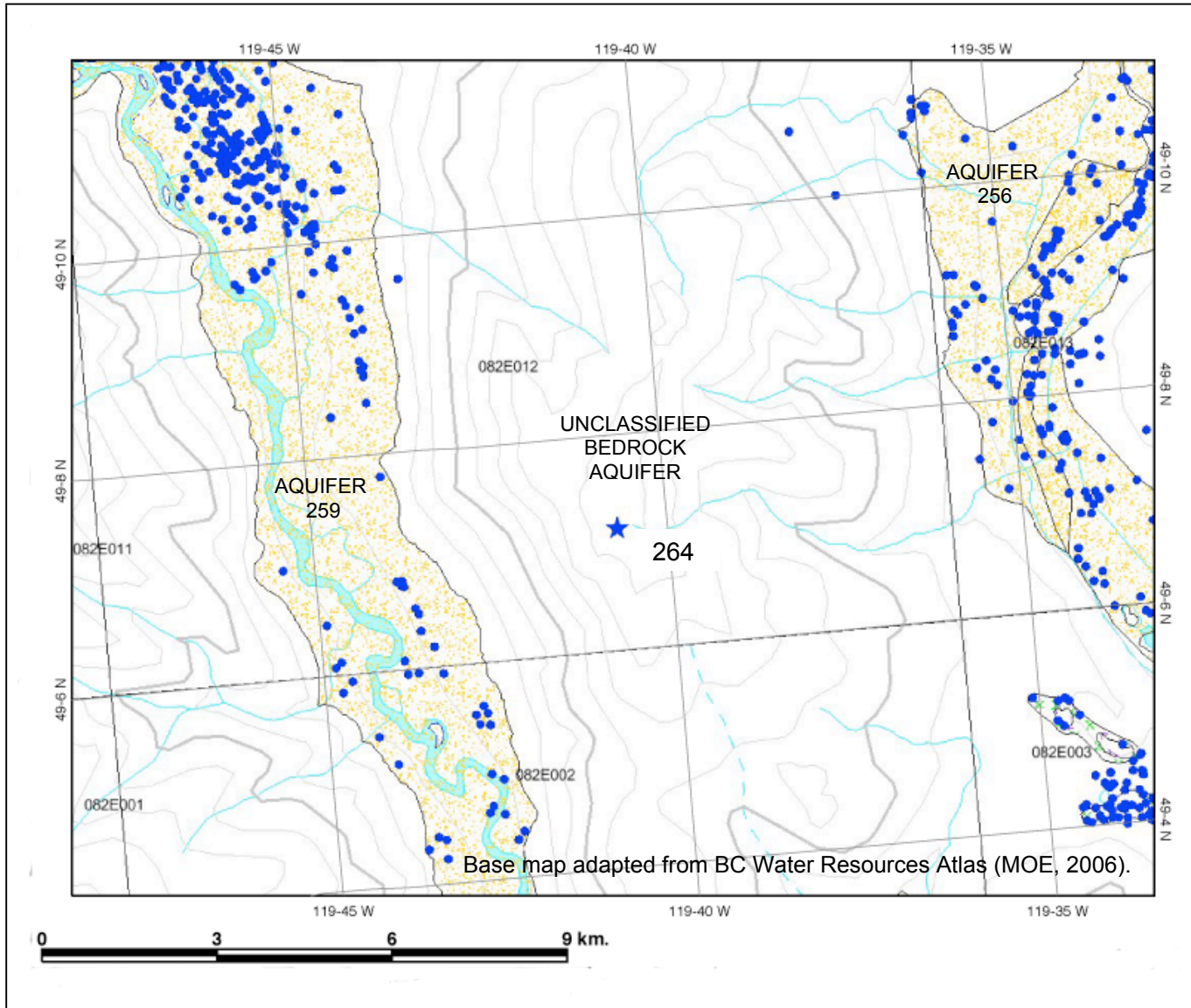


Figure 14. Observation well 264 at Mount Kobau, west of Oliver.

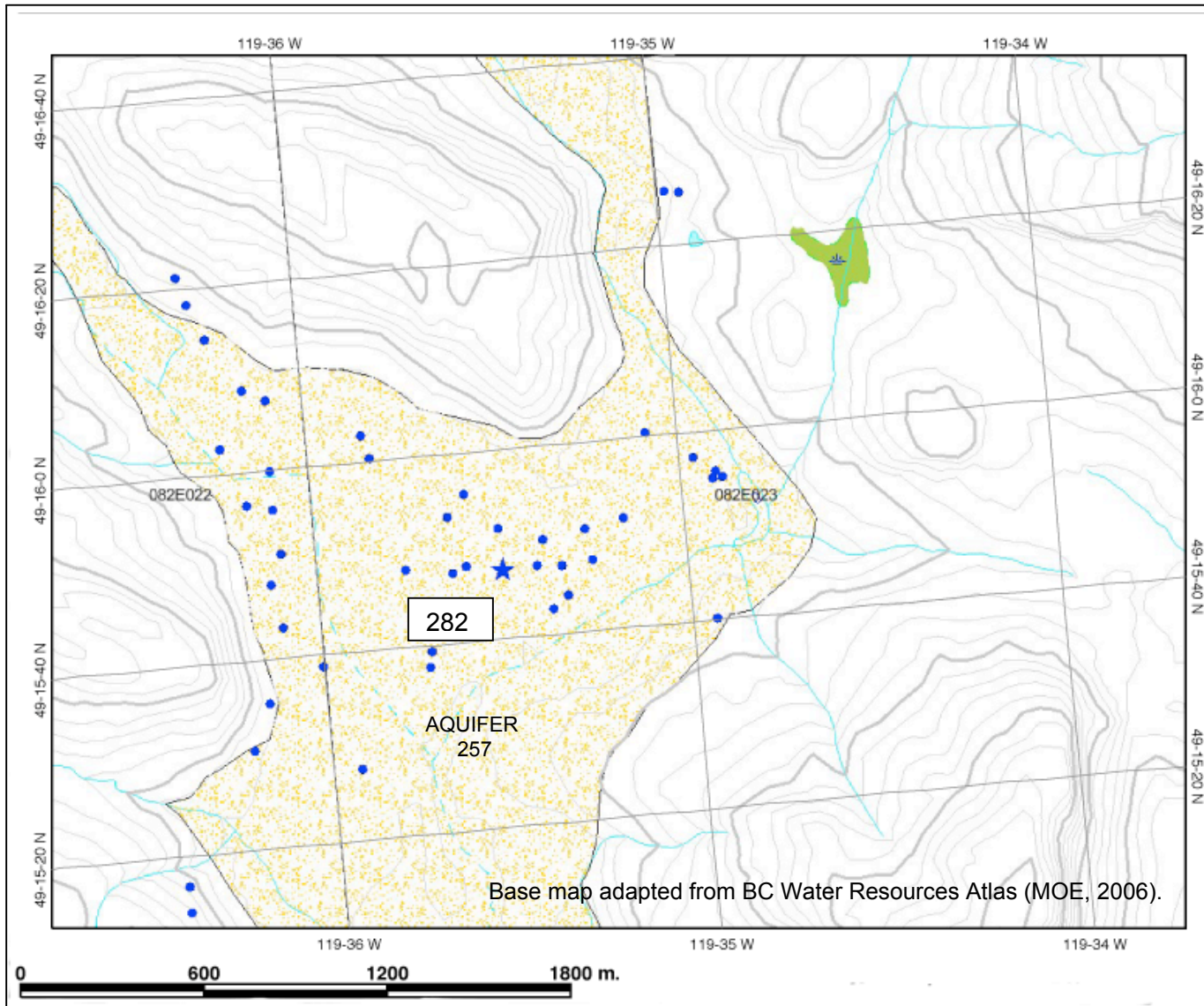


Figure 15. Observation well 282 at Meyers Flat, north of Oliver.

Figure 15. Appendix A.

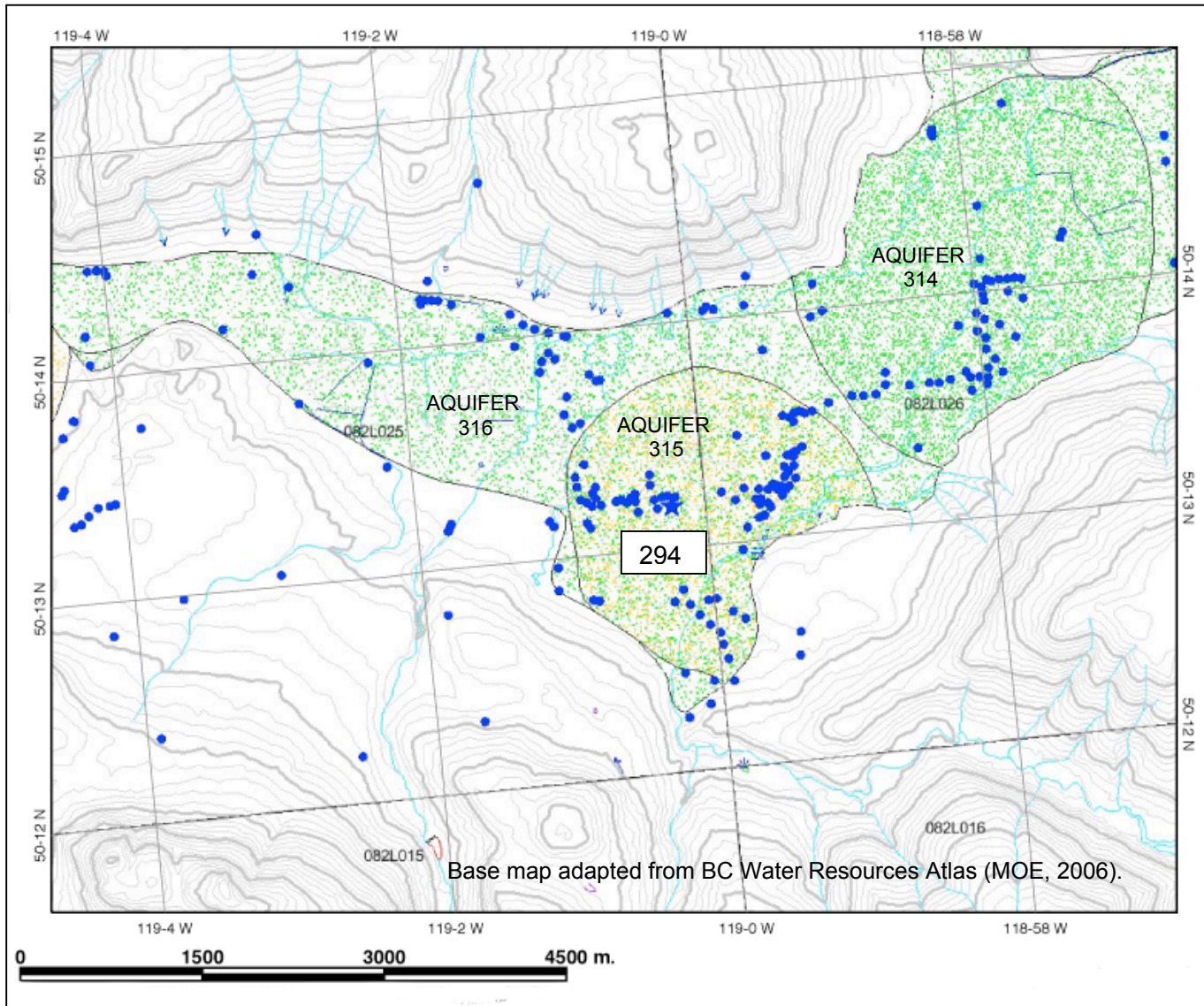


Figure 16. Observation well 294 near Lumby.

Figure 16. Appendix A.

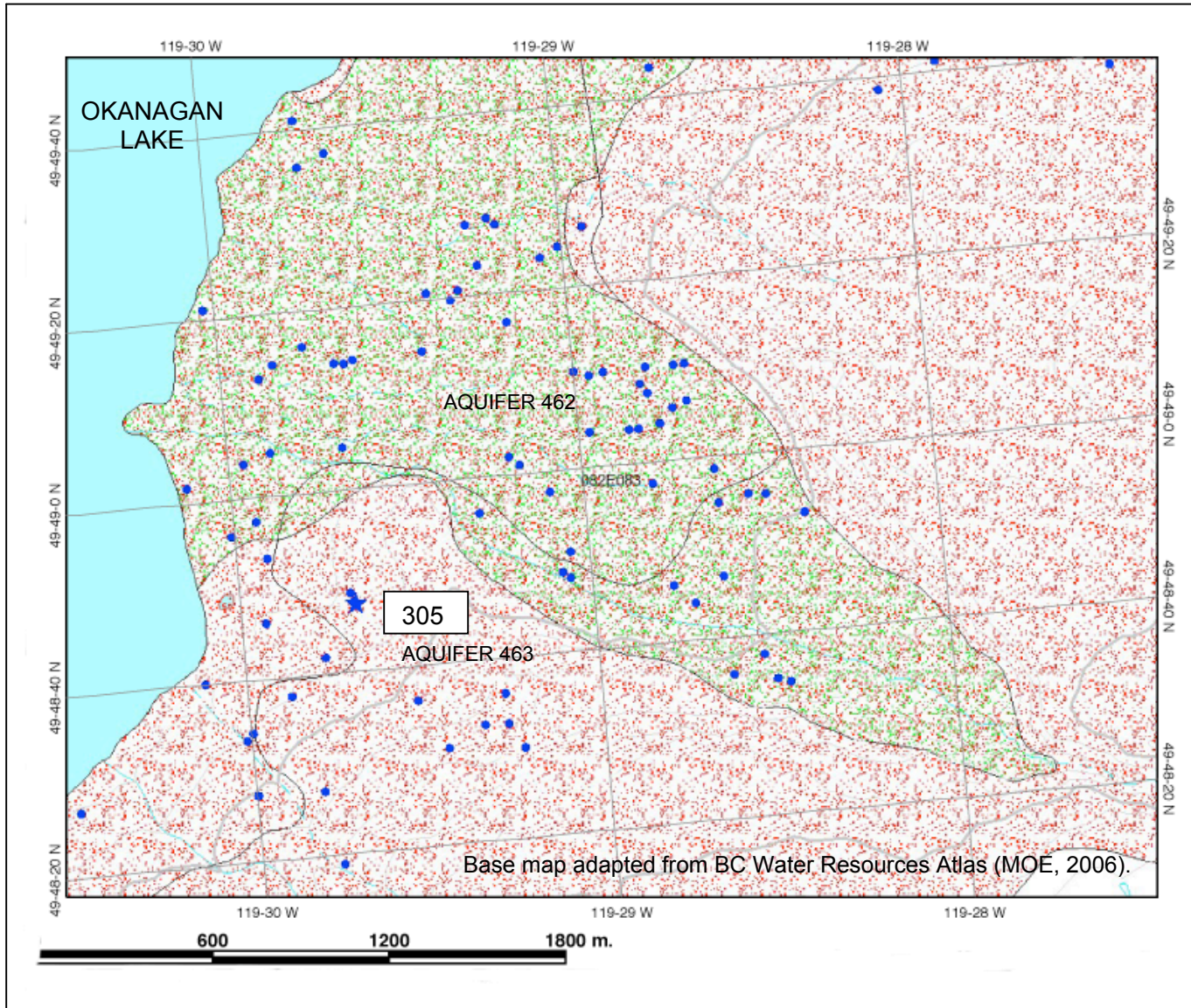


Figure 17. Observation well 305 at Okanagan Mission, southwest of Kelowna.

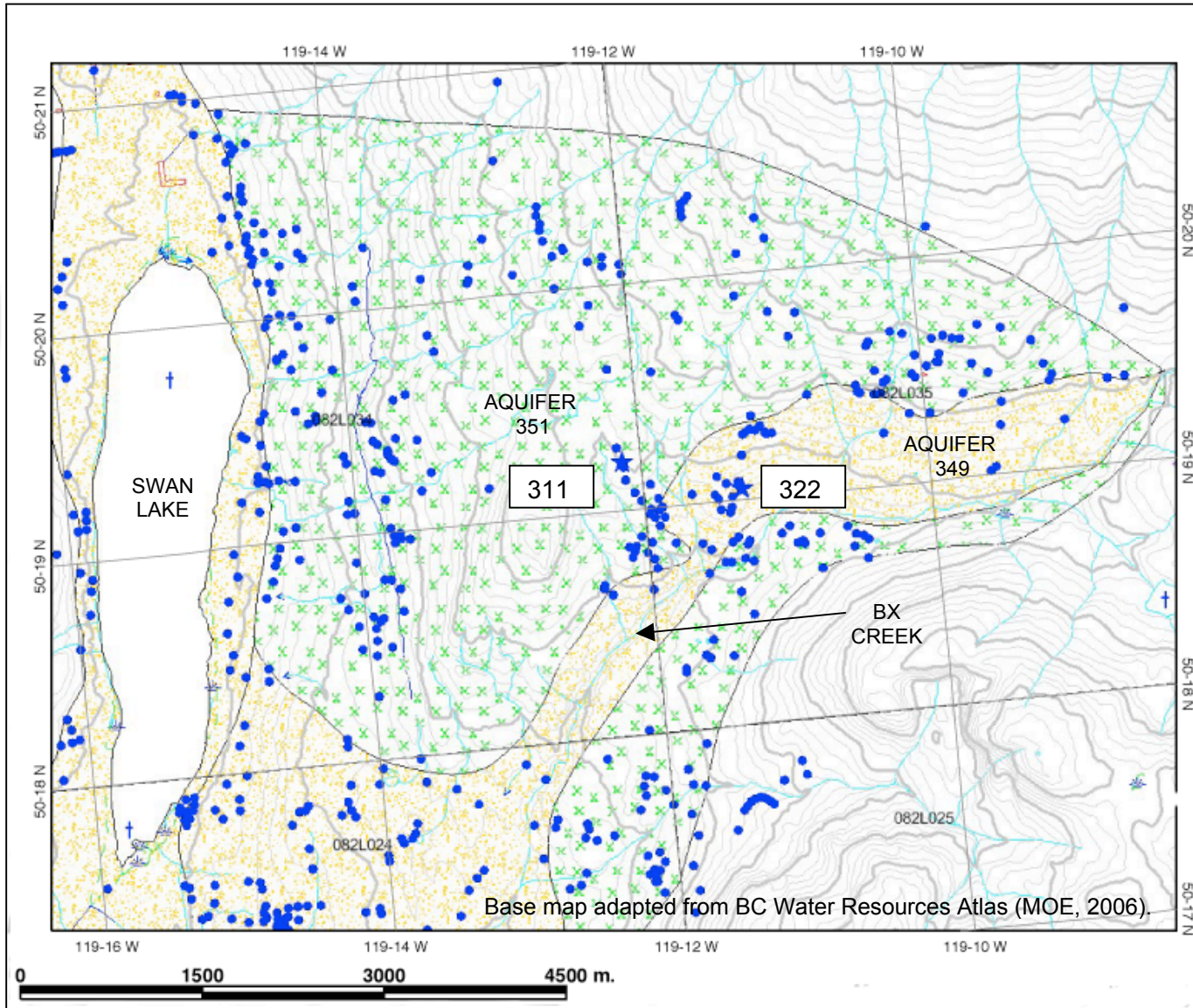


Figure 18. Observation wells 311 and 322 at BX Creek Watershed, northeast of Vernon.

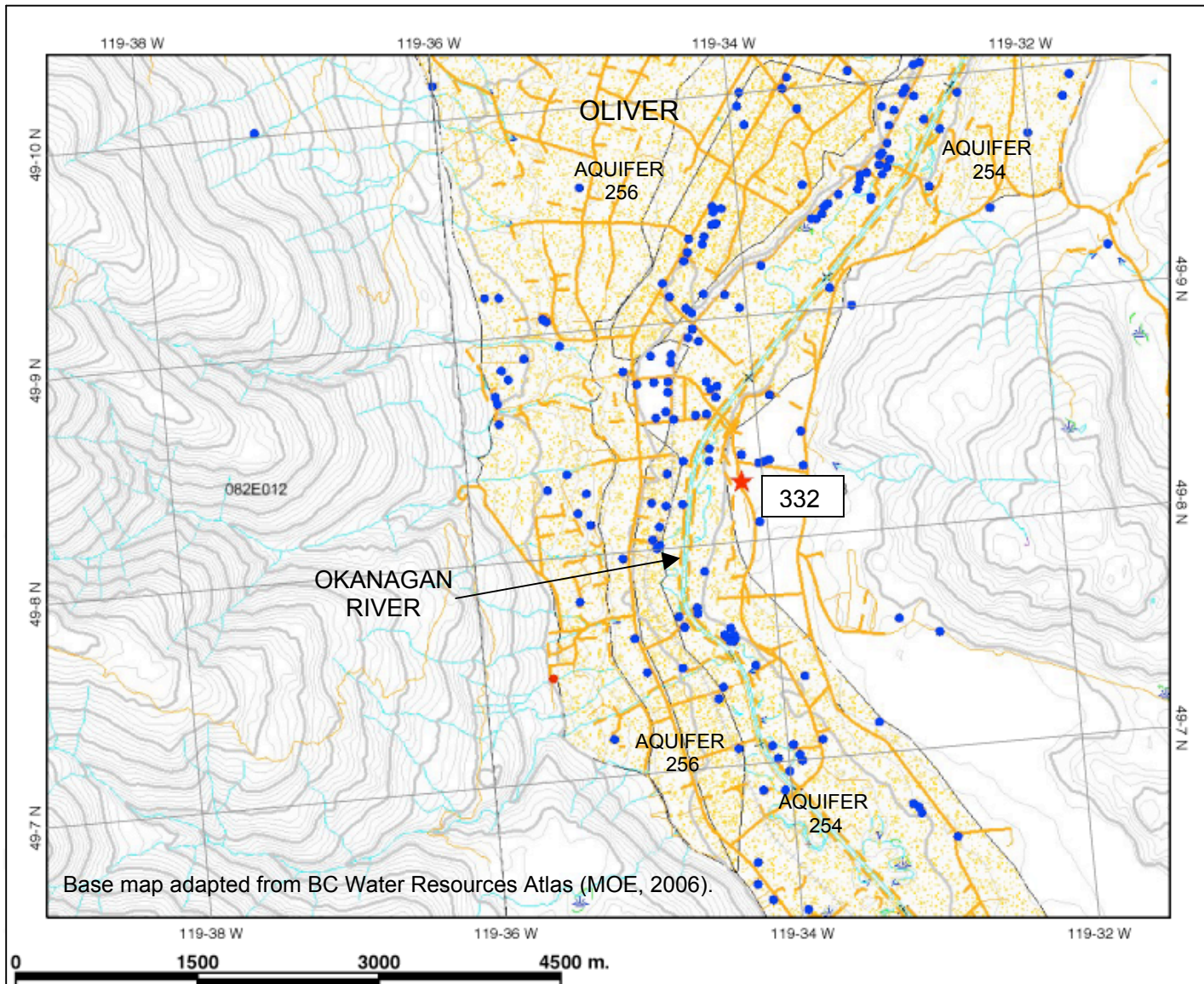


Figure 19. Observation well 332 near Oliver.

Figure 19. Appendix A.

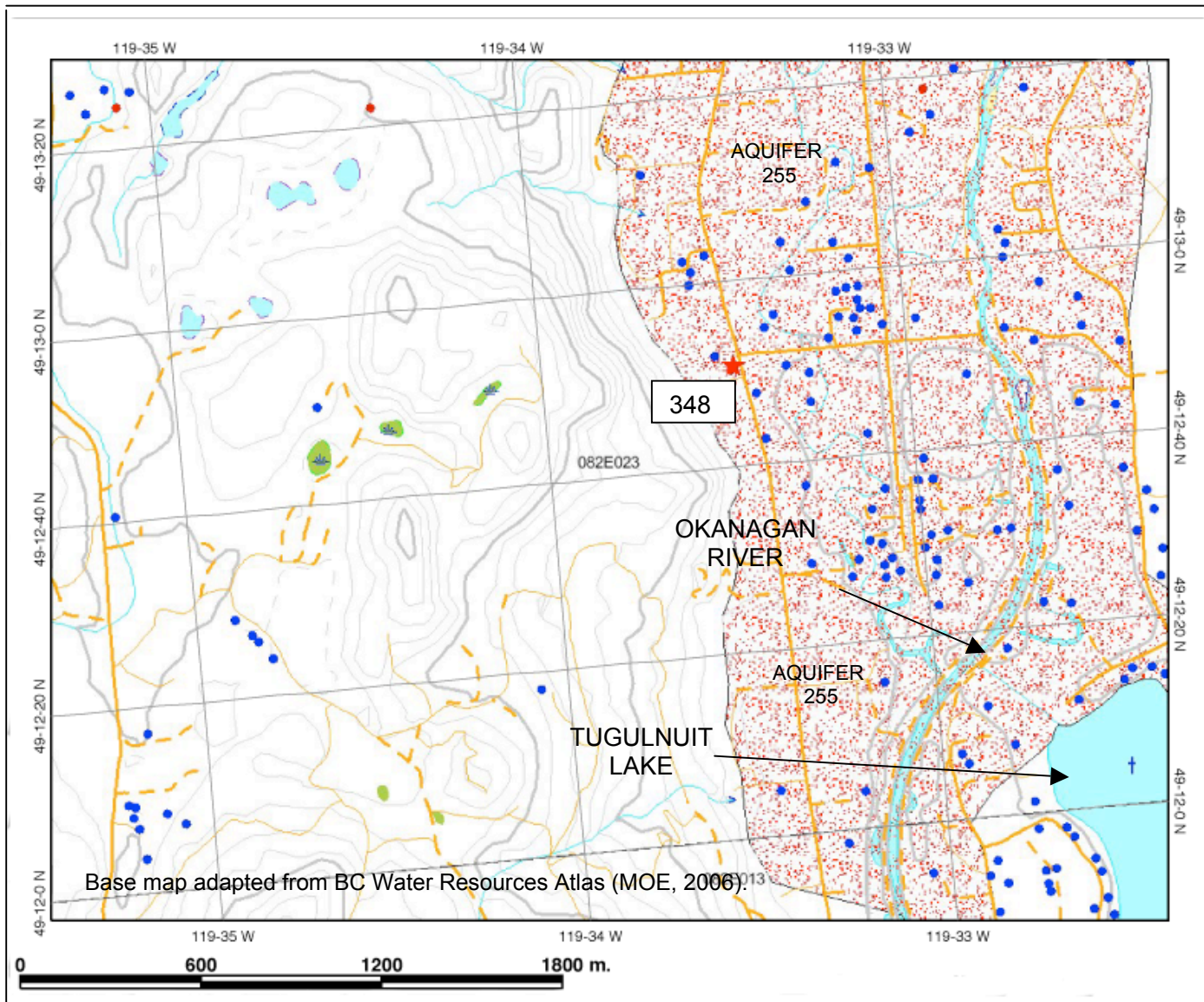


Figure 20. Observation well 348 north of Tugulnuit Lake near Oliver.

Figure 20. Appendix A.

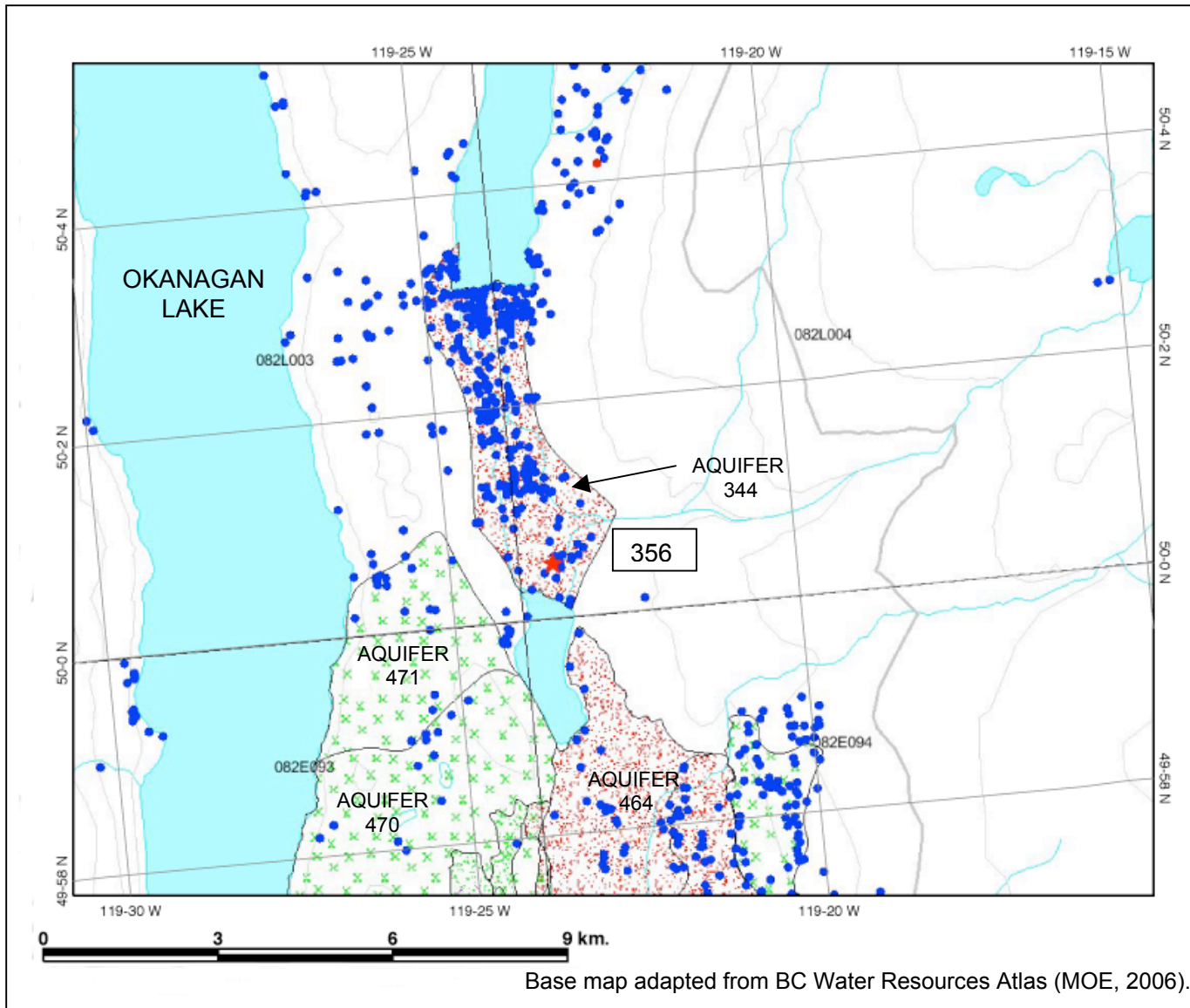


Figure 21. Observation well 356 near Winfield.

Figure 21. Appendix A.

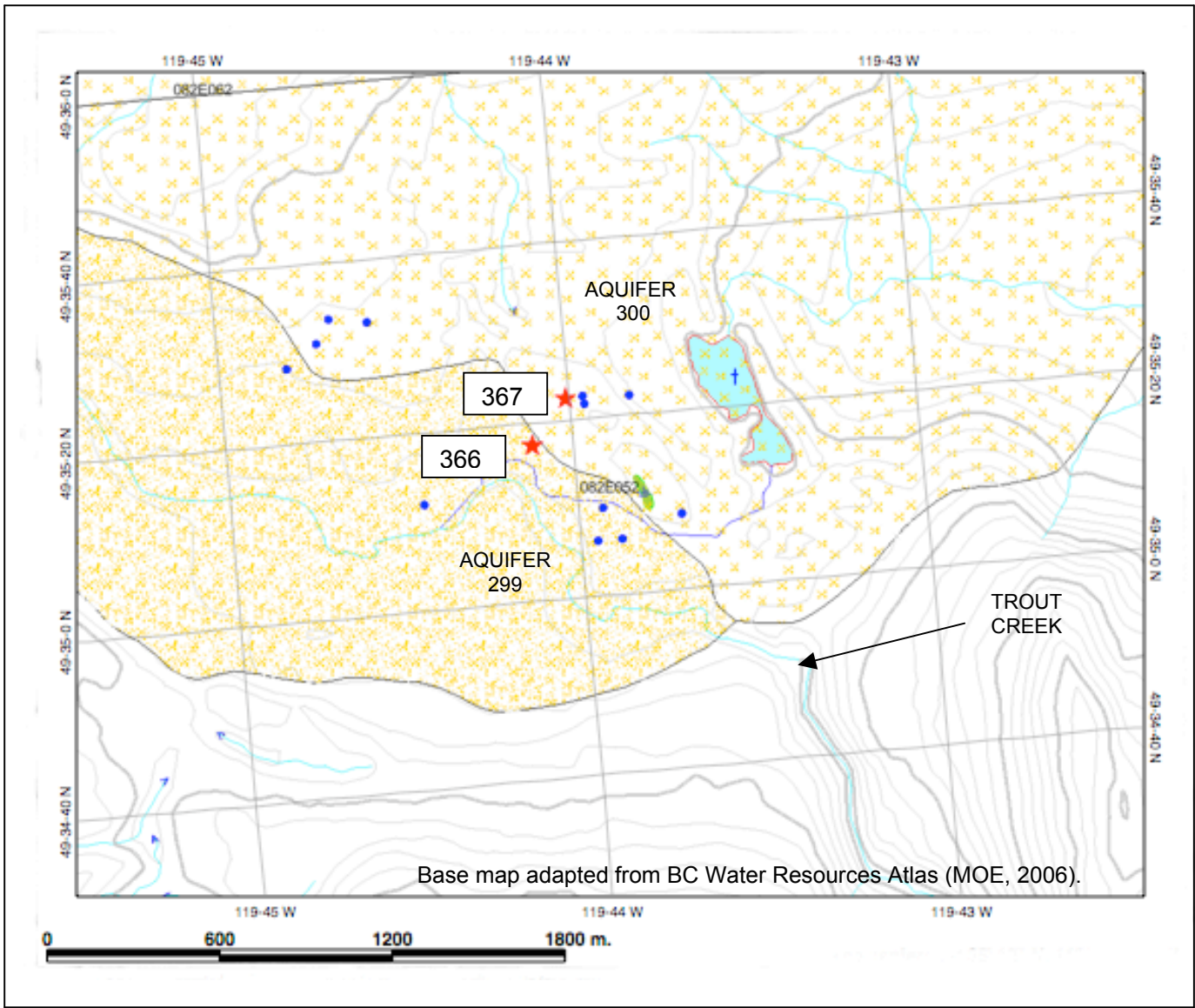


Figure 22. Observation wells 366 and 367 near Faulder.

Figure 22. Appendix A.

Observation Well Network Review Okanagan Region

FINAL REPORT

Volume II of II

Appendices G, H, I and J

for

Water Stewardship Division
BC Ministry of Environment
Penticton, British Columbia

Hy-Geo Consulting

1041 Laburnum Road, Victoria, BC V8Z 2M9 Phone (250) 658-1701

January 4, 2007

FILE NO. 1080-20

CPNEN07037

Aquifer Number: 102		Type: Unconsolidated		Location: Hullcar			
Item	Description	Measure	Point Scale	Points Assigned	Weighting Factor	Maximum Weighting	Score
A.	Aquifer Area	> 50 km ²	3	2	1	10%	0.0
		10 – 50 km ²	2		0.5		5.0
		< 10 km ²	1		0.25		0.0
B.	Aquifer Classification and Ranking	Degree of Development	I	2	1	10%	0.0
			II		0.5		5.0
			III		0.25		0.0
C.	Aquifer Classification and Ranking	Vulnerability	A	1	1	5%	0.0
			B		0.5		0.0
			C		0.25		1.7
D.	Aquifer Classification and Ranking	Ranking Value (based on 7 sub-factors)	5 to 21	11	1.0 – 0.24	5%	2.6
E.	Estimated Current Ground Water Use	High > 64 L/s	3	1	1	10%	0.0
		Medium 32 - 64 L/s	2		0.5		0.0
		Low < 32 L/s	1		0.25		2.5
F.	Number of Ground Water Supply Systems	> 5	3	2	1	15%	0.0
		2 – 5	2		0.66		10.0
		1	1		0.33		0.0
		none reported	0		0		0.0
G.	Number of Reported Irrigation Wells	> 10	3	3	1	10%	10.0
		2 – 10	2		0.5		0.0
		< 2	1		0.25		0.0
		none reported	0		0		0.0
H.	Well Density	> 5 km ²	3	2	1	10%	0.0
		1 – 5 km ²	2		0.5		5.0
		< 1 km ²	1		0.25		0.0
I.	Water Quantity Issues/Concerns Reported	> 3 (regional)	3	2	1	10%	0.0
		2 to 3 (local)	2		0.5		5.0
		1 (isolated)	1		0.25		0.0
		none reported	0		0		0.0
J.	Estimated Population Served by Groundwater	> 1000	3	1	1	10%	0.0
		500 - 1000	2		0.5		0.0
		< 500	1		0.25		2.5
K.	Other, e.g. future land development	Being planned	3	2	1	5%	0.0
		Possible	2		0.5		2.5
		Unlikely	1		0.25		0.0
						Total	51.8

Aquifer Number: 103		Type: Unconsolidated		Location: Parkinson Lake				
Item	Description	Measure	Point Scale	Points Assigned	Weighting Factor	Maximum Weighting	Score	
A.	Aquifer Area	> 50 km ²	3	2	1	10%	0.0	
		10 – 50 km ²	2		0.5		5.0	
		< 10 km ²	1		0.25		0.0	
B.	Aquifer Classification and Ranking	Degree of Development	I	3	2	10%	0.0	
			II	2			0.5	5.0
			III	1			0.25	0.0
C.	Aquifer Classification and Ranking	Vulnerability	A	3	3	5%	5.0	
			B	2			0.5	0.0
			C	1			0.25	0.0
D.	Aquifer Classification and Ranking	Ranking Value (based on 7 sub-factors)	5 to 21	12	1.0 – 0.24	5%	2.9	
E.	Estimated Current Ground Water Use	High > 64 L/s	3	1	10%	0.0		
		Medium 32 - 64 L/s	2			0.5	0.0	
		Low < 32 L/s	1			0.25	2.5	
F.	Number of Ground Water Supply Systems	> 5	3	1	15%	0.0		
		2 – 5	2			0.66	0.0	
		1	1			0.33	5.0	
		none reported	0			0	0.0	
G.	Number of Reported Irrigation Wells	> 10	3	2	10%	0.0		
		2 – 10	2			0.5	5.0	
		< 2	1			0.25	0.0	
		none reported	0			0	0.0	
H.	Well Density	> 5 km ²	3	2	10%	0.0		
		1 – 5 km ²	2			0.5	5.0	
		< 1 km ²	1			0.25	0.0	
I.	Water Quantity Issues/Concerns Reported	> 3 (regional)	3	2	10%	0.0		
		2 to 3 (local)	2			0.5	5.0	
		1 (isolated)	1			0.25	0.0	
		none reported	0			0	0.0	
J.	Estimated Population Served by Groundwater	> 1000	3	1	10%	0.0		
		500 - 1000	2			0.5	0.0	
		< 500	1			0.25	2.5	
K.	Other, e.g. future land development	Being planned	3	2	5%	0.0		
		Possible	2			0.5	2.5	
		Unlikely	1			0.25	0.0	
						Total	45.4	

Aquifer Number 108		Type: Unconsolidated		Location: 4 kilometres southeast of Salmon Arm				
Item	Description	Measure	Point Scale	Points Assigned	Weighting Factor	Maximum Weighting	Score	
A.	Aquifer Area	> 50 km ²	3	2	1	10%	0.0	
		10 – 50 km ²	2		0.5		5.0	
		< 10 km ²	1		0.25		0.0	
B.	Aquifer Classification and Ranking	Degree of Development	I	3	1	10%	0.0	
			II	2			0.5	0.0
			III	1			0.25	2.5
C.	Aquifer Classification and Ranking	Vulnerability	A	3	3	5%	5.0	
			B	2			0.5	0.0
			C	1			0.25	0.0
D.	Aquifer Classification and Ranking	Ranking Value (based on 7 sub-factors)	5 to 21	11	1.0 – 0.24	5%	2.6	
E.	Estimated Current Ground Water Use	High > 64 L/s	3	1	1	10%	0.0	
		Medium 32 - 64 L/s	2				0.5	0.0
		Low < 32 L/s	1				0.25	2.5
F.	Number of Ground Water Supply Systems	> 5	3	1	0.66	15%	0.0	
		2 – 5	2				0.33	0.0
		1	1				0	5.0
		none reported	0				0	0.0
G.	Number of Reported Irrigation Wells	> 10	3	2	1	10%	0.0	
		2 – 10	2				0.5	5.0
		< 2	1				0.25	0.0
		none reported	0				0	0.0
H.	Well Density	> 5 km ²	3	3	1	10%	10.0	
		1 – 5 km ²	2				0.5	0.0
		< 1 km ²	1				0.25	0.0
I.	Water Quantity Issues/Concerns Reported	> 3 (regional)	3	0	1	10%	0.0	
		2 to 3 (local)	2				0.5	0.0
		1 (isolated)	1				0.25	0.0
		none reported	0				0	0.0
J.	Estimated Population Served by Groundwater	> 1000	3	1	1	10%	0.0	
		500 - 1000	2				0.5	0.0
		< 500	1				0.25	2.5
K.	Other, e.g. future land development	Being planned	3	2	1	5%	0.0	
		Possible	2				0.5	2.5
		Unlikely	1				0.25	0.0
						Total	42.6	

Aquifer Number 109		Type: Unconsolidated		Location: Highway 97B				
Item	Description	Measure	Point Scale	Points Assigned	Weighting Factor	Maximum Weighting	Score	
A.	Aquifer Area	> 50 km ²	3	2	1	10%	0.0	
		10 – 50 km ²	2		0.5		5.0	
		< 10 km ²	1		0.25		0.0	
B.	Aquifer Classification and Ranking	Degree of Development	I	1	1	10%	0.0	
			II		2		0.5	0.0
			III		1		0.25	2.5
C.	Aquifer Classification and Ranking	Vulnerability	A	1	1	5%	0.0	
			B		2		0.5	0.0
			C		1		0.25	1.7
D.	Aquifer Classification and Ranking	Ranking Value (based on 7 sub-factors)	5 to 21	10	1.0 – 0.24	5%	2.4	
E.	Estimated Current Ground Water Use	High > 64 L/s	3	1	1	10%	0.0	
		Medium 32 - 64 L/s	2		0.5		0.0	
		Low < 32 L/s	1		0.25		2.5	
F.	Number of Ground Water Supply Systems	> 5	3	1	1	15%	0.0	
		2 – 5	2		0.66		0.0	
		1	1		0.33		5.0	
		none reported	0		0		0.0	
G.	Number of Reported Irrigation Wells	> 10	3	1	1	10%	0.0	
		2 – 10	2		0.5		0.0	
		< 2	1		0.25		2.5	
		none reported	0		0		0.0	
H.	Well Density	> 5 km ²	3	2	1	10%	0.0	
		1 – 5 km ²	2		0.5		5.0	
		< 1 km ²	1		0.25		0.0	
I.	Water Quantity Issues/Concerns Reported	> 3 (regional)	3	0	1	10%	0.0	
		2 to 3 (local)	2		0.5		0.0	
		1 (isolated)	1		0.25		0.0	
		none reported	0		0		0.0	
J.	Estimated Population Served by Groundwater	> 1000	3	1	1	10%	0.0	
		500 - 1000	2		0.5		0.0	
		< 500	1		0.25		2.5	
K.	Other, e.g. future land development	Being planned	3	2	1	5%	0.0	
		Possible	2		0.5		2.5	
		Unlikely	1		0.25		0.0	
						Total	31.5	

Aquifer Number: 111		Type: Unconsolidated		Location: Lower Shuswap Valley			
Item	Description	Measure	Point Scale	Points Assigned	Weighting Factor	Maximum Weighting	Score
A.	Aquifer Area	> 50 km ²	3	3	1	10%	10.0
		10 – 50 km ²	2		0.5		0.0
		< 10 km ²	1		0.25		0.0
B.	Aquifer Classification and Ranking	Degree of Development	I	2	1	10%	0.0
			II		0.5		5.0
			III		0.25		0.0
C.	Aquifer Classification and Ranking	Vulnerability	A	1	1	5%	0.0
			B		0.5		0.0
			C		0.25		1.7
D.	Aquifer Classification and Ranking	Ranking Value (based on 7 sub-factors)	5 to 21	11	1.0 – 0.24	5%	2.6
E.	Estimated Current Ground Water Use	High > 64 L/s	3	2	1	10%	0.0
		Medium 32 - 64 L/s	2		0.5		5.0
		Low < 32 L/s	1		0.25		0.0
F.	Number of Ground Water Supply Systems	> 5	3	3	1	15%	15.0
		2 – 5	2		0.66		0.0
		1	1		0.33		0.0
		none reported	0		0		0.0
G.	Number of Reported Irrigation Wells	> 10	3	3	1	10%	10.0
		2 – 10	2		0.5		0.0
		< 2	1		0.25		0.0
		none reported	0		0		0.0
H.	Well Density	> 5 km ²	3	2	1	10%	0.0
		1 – 5 km ²	2		0.5		5.0
		< 1 km ²	1		0.25		0.0
I.	Water Quantity Issues/Concerns Reported	> 3 (regional)	3	1	1	10%	0.0
		2 to 3 (local)	2		0.5		0.0
		1 (isolated)	1		0.25		2.5
		none reported	0		0		0.0
J.	Estimated Population Served by Groundwater	> 1000	3	3	1	10%	10.0
		500 - 1000	2		0.5		0.0
		< 500	1		0.25		0.0
K.	Other, e.g. future land development	Being planned	3	3	1	5%	5.0
		Possible	2		0.5		0.0
		Unlikely	1		0.25		0.0
						Total	71.8

Aquifer Number 113		Type: Unconsolidated		Location: Ashton Creek				
Item	Description	Measure	Point Scale	Points Assigned	Weighting Factor	Maximum Weighting	Score	
A.	Aquifer Area	> 50 km ²	3	2	1	10%	0.0	
		10 – 50 km ²	2		0.5		5.0	
		< 10 km ²	1		0.25		0.0	
B.	Aquifer Classification and Ranking	Degree of Development	I	3	1	10%	0.0	
			II	2			0.5	0.0
			III	1			0.25	2.5
C.	Aquifer Classification and Ranking	Vulnerability	A	3	1	5%	0.0	
			B	2			0.5	0.0
			C	1			0.25	1.7
D.	Aquifer Classification and Ranking	Ranking Value (based on 7 sub-factors)	5 to 21	9	1.0 – 0.24	5%	2.1	
E.	Estimated Current Ground Water Use	High > 64 L/s	3	1	10%	0.0		
		Medium 32 - 64 L/s	2			0.5	0.0	
		Low < 32 L/s	1			0.25	2.5	
F.	Number of Ground Water Supply Systems	> 5	3	2	1	15%	0.0	
		2 – 5	2				0.66	10.0
		1	1				0.33	0.0
		none reported	0				0	0.0
G.	Number of Reported Irrigation Wells	> 10	3	0	1	10%	0.0	
		2 – 10	2				0.5	0.0
		< 2	1				0.25	0.0
		none reported	0				0	0.0
H.	Well Density	> 5 km ²	3	2	1	10%	0.0	
		1 – 5 km ²	2				0.5	5.0
		< 1 km ²	1				0.25	0.0
I.	Water Quantity Issues/Concerns Reported	> 3 (regional)	3	0	1	10%	0.0	
		2 to 3 (local)	2				0.5	0.0
		1 (isolated)	1				0.25	0.0
		none reported	0				0	0.0
J.	Estimated Population Served by Groundwater	> 1000	3	2	1	10%	0.0	
		500 - 1000	2				0.5	5.0
		< 500	1				0.25	0.0
K.	Other, e.g. future land development	Being planned	3	2	1	5%	0.0	
		Possible	2				0.5	2.5
		Unlikely	1				0.25	0.0
						Total	36.3	

Aquifer Number: 193		Type: Unconsolidated		Location: Osoyoos West			
Item	Description	Measure	Point Scale	Points Assigned	Weighting Factor	Maximum Weighting	Score
A.	Aquifer Area	> 50 km ²	3	2	1	10%	0.0
		10 – 50 km ²	2		0.5		5.0
		< 10 km ²	1		0.25		0.0
B.	Aquifer Classification and Ranking	Degree of Development	I	2	1	10%	0.0
			II		0.5		5.0
			III		0.25		0.0
C.	Aquifer Classification and Ranking	Vulnerability	A	3	1	5%	5.0
			B		0.5		0.0
			C		0.25		0.0
D.	Aquifer Classification and Ranking	Ranking Value (based on 7 sub-factors)	5 to 21	16	1.0 – 0.24	5%	3.8
E.	Estimated Current Ground Water Use	High > 64 L/s	3	3	1	10%	10.0
		Medium 32 - 64 L/s	2		0.5		0.0
		Low < 32 L/s	1		0.25		0.0
F.	Number of Ground Water Supply Systems	> 5	3	2	1	15%	0.0
		2 – 5	2		0.66		10.0
		1	1		0.33		0.0
		none reported	0		0		0.0
G.	Number of Reported Irrigation Wells	> 10	3	2	1	10%	0.0
		2 – 10	2		0.5		5.0
		< 2	1		0.25		0.0
		none reported	0		0		0.0
H.	Well Density	> 5 km ²	3	3	1	10%	10.0
		1 – 5 km ²	2		0.5		0.0
		< 1 km ²	1		0.25		0.0
I.	Water Quantity Issues/Concerns Reported	> 3 (regional)	3	0	1	10%	0.0
		2 to 3 (local)	2		0.5		0.0
		1 (isolated)	1		0.25		0.0
		none reported	0		0		0.0
J.	Estimated Population Served by Groundwater	> 1000	3	3	1	10%	10.0
		500 - 1000	2		0.5		0.0
		< 500	1		0.25		0.0
K.	Other, e.g. future land development	Being planned	3	3	1	5%	5.0
		Possible	2		0.5		0.0
		Unlikely	1		0.25		0.0
						Total	68.8

Aquifer Number194		Type: Unconsolidated		Location: Osoyoos East				
Item	Description	Measure	Point Scale	Points Assigned	Weighting Factor	Maximum Weighting	Score	
A.	Aquifer Area	> 50 km ²	3	1	1	10%	0.0	
		10 – 50 km ²	2		0.5		0.0	
		< 10 km ²	1		0.25		2.5	
B.	Aquifer Classification and Ranking	Degree of Development	I	3	2	1	10%	0.0
			II	2		0.5	5.0	
			III	1		0.25	0.0	
C.	Aquifer Classification and Ranking	Vulnerability	A	3	3	1	5%	5.0
			B	2		0.5		0.0
			C	1		0.25		0.0
D.	Aquifer Classification and Ranking	Ranking Value (based on 7 sub-factors)	5 to 21	15	1.0 – 0.24	5%	3.6	
E.	Estimated Current Ground Water Use	High > 64 L/s	3	2	1	10%	0.0	
		Medium 32 - 64 L/s	2		0.5		5.0	
		Low < 32 L/s	1		0.25		0.0	
F.	Number of Ground Water Supply Systems	> 5	3	2	1	15%	0.0	
		2 – 5	2		0.66		10.0	
		1	1		0.33		0.0	
		none reported	0		0		0.0	
G.	Number of Reported Irrigation Wells	> 10	3	2	1	10%	0.0	
		2 – 10	2		0.5		5.0	
		< 2	1		0.25		0.0	
		none reported	0		0		0.0	
H.	Well Density	> 5 km ²	3	3	1	10%	10.0	
		1 – 5 km ²	2		0.5		0.0	
		< 1 km ²	1		0.25		0.0	
I.	Water Quantity Issues/Concerns Reported	> 3 (regional)	3	0	1	10%	0.0	
		2 to 3 (local)	2		0.5		0.0	
		1 (isolated)	1		0.25		0.0	
		none reported	0		0		0.0	
J.	Estimated Population Served by Groundwater	> 1000	3	2	1	10%	0.0	
		500 - 1000	2		0.5		5.0	
		< 500	1		0.25		0.0	
K.	Other, e.g. future land development	Being planned	3	2	1	5%	0.0	
		Possible	2		0.5		2.5	
		Unlikely	1		0.25		0.0	
						Total	53.6	

Aquifer Number 195		Type: Unconsolidated		Location: Osoyoos East				
Item	Description	Measure	Point Scale	Points Assigned	Weighting Factor	Maximum Weighting	Score	
A.	Aquifer Area	> 50 km ²	3	1	1	10%	0.0	
		10 – 50 km ²	2		0.5		0.0	
		< 10 km ²	1		0.25		2.5	
B.	Aquifer Classification and Ranking	Degree of Development	I	3	2	10%	0.0	
			II	2			0.5	5.0
			III	1			0.25	0.0
C.	Aquifer Classification and Ranking	Vulnerability	A	3	2	5%	0.0	
			B	2			0.5	2.5
			C	1			0.25	0.0
D.	Aquifer Classification and Ranking	Ranking Value (based on 7 sub-factors)	5 to 21	10	1.0 – 0.24	5%	2.4	
E.	Estimated Current Ground Water Use	High > 64 L/s	3	1	10%	0.0		
		Medium 32 - 64 L/s	2			0.5	0.0	
		Low < 32 L/s	1			0.25	2.5	
F.	Number of Ground Water Supply Systems	> 5	3	0	15%	0.0		
		2 – 5	2			0.66	0.0	
		1	1			0.33	0.0	
		none reported	0			0	0.0	
G.	Number of Reported Irrigation Wells	> 10	3	1	10%	0.0		
		2 – 10	2			0.5	0.0	
		< 2	1			0.25	2.5	
		none reported	0			0	0.0	
H.	Well Density	> 5 km ²	3	3	10%	10.0		
		1 – 5 km ²	2			0.5	0.0	
		< 1 km ²	1			0.25	0.0	
I.	Water Quantity Issues/Concerns Reported	> 3 (regional)	3	0	10%	0.0		
		2 to 3 (local)	2			0.5	0.0	
		1 (isolated)	1			0.25	0.0	
		none reported	0			0	0.0	
J.	Estimated Population Served by Groundwater	> 1000	3	1	10%	0.0		
		500 - 1000	2			0.5	0.0	
		< 500	1			0.25	2.5	
K.	Other, e.g. future land development	Being planned	3	2	5%	0.0		
		Possible	2			0.5	2.5	
		Unlikely	1			0.25	0.0	
						Total	32.4	

Aquifer Number: 254		Type: Unconsolidated		Location: Osoyoos Lake to southwest of Tug Lake					
Item	Description	Measure	Point Scale	Points Assigned	Weighting Factor	Maximum Weighting	Score		
A.	Aquifer Area	> 50 km ²	3	2	1	10%	0.0		
		10 – 50 km ²	2		0.5		5.0		
		< 10 km ²	1		0.25		0.0		
B.	Aquifer Classification and Ranking	Degree of Development	I	3	1	10%	10.0		
			II				2	0.5	0.0
			III				1	0.25	0.0
C.	Aquifer Classification and Ranking	Vulnerability	A	3	1	5%	5.0		
			B				2	0.5	0.0
			C				1	0.25	0.0
D.	Aquifer Classification and Ranking	Ranking Value (based on 7 sub-factors)	5 to 21	16	1.0 – 0.24	5%	3.8		
E.	Estimated Current Ground Water Use	High > 64 L/s	3	3	1	10%	10.0		
		Medium 32 - 64 L/s	2		0.5		0.0		
		Low < 32 L/s	1		0.25		0.0		
F.	Number of Ground Water Supply Systems	> 5	3	1	1	15%	0.0		
		2 – 5	2		0.66		0.0		
		1	1		0.33		5.0		
		none reported	0		0		0.0		
G.	Number of Reported Irrigation Wells	> 10	3	2	1	10%	0.0		
		2 – 10	2		0.5		5.0		
		< 2	1		0.25		0.0		
		none reported	0		0		0.0		
H.	Well Density	> 5 km ²	3	3	1	10%	10.0		
		1 – 5 km ²	2		0.5		0.0		
		< 1 km ²	1		0.25		0.0		
I.	Water Quantity Issues/Concerns Reported	> 3 (regional)	3	0	1	10%	0.0		
		2 to 3 (local)	2		0.5		0.0		
		1 (isolated)	1		0.25		0.0		
		none reported	0		0		0.0		
J.	Estimated Population Served by Groundwater	> 1000	3	3	1	10%	10.0		
		500 - 1000	2		0.5		0.0		
		< 500	1		0.25		0.0		
K.	Other, e.g. future land development	Being planned	3	3	1	5%	5.0		
		Possible	2		0.5		0.0		
		Unlikely	1		0.25		0.0		
						Total	68.8		

Aquifer Number: 255		Type: Unconsolidated	Location: North of Tug Lake to Vaseux Lake				
Item	Description	Measure	Point Scale	Points Assigned	Weighting Factor	Maximum Weighting	Score
A.	Aquifer Area	> 50 km ²	3	2	1	10%	0.0
		10 – 50 km ²	2		0.5		5.0
		< 10 km ²	1		0.25		0.0
B.	Aquifer Classification and Ranking	Degree of Development	I	3	1	10%	10.0
			II		0.5		0.0
			III		0.25		0.0
C.	Aquifer Classification and Ranking	Vulnerability	A	3	1	5%	5.0
			B		0.5		0.0
			C		0.25		0.0
D.	Aquifer Classification and Ranking	Ranking Value (based on 7 sub-factors)	5 to 21	15	1.0 – 0.24	5%	3.6
E.	Estimated Current Ground Water Use	High > 64 L/s	3	3	1	10%	10.0
		Medium 32 - 64 L/s	2		0.5		0.0
		Low < 32 L/s	1		0.25		0.0
F.	Number of Ground Water Supply Systems	> 5	3	2	1	15%	0.0
		2 – 5	2		0.66		10.0
		1	1		0.33		0.0
		none reported	0		0		0.0
G.	Number of Reported Irrigation Wells	> 10	3	3	1	10%	10.0
		2 – 10	2		0.5		0.0
		< 2	1		0.25		0.0
		none reported	0		0		0.0
H.	Well Density	> 5 km ²	3	3	1	10%	10.0
		1 – 5 km ²	2		0.5		0.0
		< 1 km ²	1		0.25		0.0
I.	Water Quantity Issues/Concerns Reported	> 3 (regional)	3	0	1	10%	0.0
		2 to 3 (local)	2		0.5		0.0
		1 (isolated)	1		0.25		0.0
		none reported	0		0		0.0
J.	Estimated Population Served by Groundwater	> 1000	3	2	1	10%	0.0
		500 - 1000	2		0.5		5.0
		< 500	1		0.25		0.0
K.	Other, e.g. future land development	Being planned	3	2	1	5%	0.0
		Possible	2		0.5		2.5
		Unlikely	1		0.25		0.0
						Total	71.1

Aquifer Number 256		Type: Unconsolidated		Location: Testalinden Creek to Reed Creek				
Item	Description	Measure	Point Scale	Points Assigned	Weighting Factor	Maximum Weighting	Score	
A.	Aquifer Area	> 50 km ²	3	2	1	10%	0.0	
		10 – 50 km ²	2		0.5		5.0	
		< 10 km ²	1		0.25		0.0	
B.	Aquifer Classification and Ranking	Degree of Development	I	1	1	10%	0.0	
			II		2		0.5	0.0
			III		1		0.25	2.5
C.	Aquifer Classification and Ranking	Vulnerability	A	1	1	5%	0.0	
			B		2		0.5	0.0
			C		1		0.25	1.7
D.	Aquifer Classification and Ranking	Ranking Value (based on 7 sub-factors)	5 to 21	9	1.0 – 0.24	5%	2.1	
E.	Estimated Current Ground Water Use	High > 64 L/s	3	2	1	10%	0.0	
		Medium 32 - 64 L/s	2		0.5		5.0	
		Low < 32 L/s	1		0.25		0.0	
F.	Number of Ground Water Supply Systems	> 5	3	1	1	15%	0.0	
		2 – 5	2		0.66		0.0	
		1	1		0.33		5.0	
		none reported	0		0		0.0	
G.	Number of Reported Irrigation Wells	> 10	3	1	1	10%	0.0	
		2 – 10	2		0.5		0.0	
		< 2	1		0.25		2.5	
		none reported	0		0		0.0	
H.	Well Density	> 5 km ²	3	2	1	10%	0.0	
		1 – 5 km ²	2		0.5		5.0	
		< 1 km ²	1		0.25		0.0	
I.	Water Quantity Issues/Concerns Reported	> 3 (regional)	3	0	1	10%	0.0	
		2 to 3 (local)	2		0.5		0.0	
		1 (isolated)	1		0.25		0.0	
		none reported	0		0		0.0	
J.	Estimated Population Served by Groundwater	> 1000	3	2	1	10%	0.0	
		500 - 1000	2		0.5		5.0	
		< 500	1		0.25		0.0	
K.	Other, e.g. future land development	Being planned	3	2	1	5%	0.0	
		Possible	2		0.5		2.5	
		Unlikely	1		0.25		0.0	
						Total	36.3	

Aquifer Number: 257		Type: Unconsolidated		Location: Meyers Flat				
Item	Description	Measure	Point Scale	Points Assigned	Weighting Factor	Maximum Weighting	Score	
A.	Aquifer Area	> 50 km ²	3	1	1	10%	0.0	
		10 – 50 km ²	2		0.5		0.0	
		< 10 km ²	1		0.25		2.5	
B.	Aquifer Classification and Ranking	Degree of Development	I	3	2	1	10%	0.0
			II	2		0.5	5.0	
			III	1		0.25	0.0	
C.	Aquifer Classification and Ranking	Vulnerability	A	3	3	1	5%	5.0
			B	2	0.5	0.0		
			C	1	0.25	0.0		
D.	Aquifer Classification and Ranking	Ranking Value (based on 7 sub-factors)	5 to 21	14	1.0 – 0.24	5%	3.3	
E.	Estimated Current Ground Water Use	High > 64 L/s	3	1	1	10%	0.0	
		Medium 32 - 64 L/s	2		0.5	0.0		
		Low < 32 L/s	1		0.25	2.5		
F.	Number of Ground Water Supply Systems	> 5	3	1	1	15%	0.0	
		2 – 5	2		0.66		0.0	
		1	1		0.33		5.0	
		none reported	0		0		0.0	
G.	Number of Reported Irrigation Wells	> 10	3	2	1	10%	0.0	
		2 – 10	2		0.5		5.0	
		< 2	1		0.25		0.0	
		none reported	0		0		0.0	
H.	Well Density	> 5 km ²	3	3	1	10%	10.0	
		1 – 5 km ²	2	0.5	0.0			
		< 1 km ²	1	0.25	0.0			
I.	Water Quantity Issues/Concerns Reported	> 3 (regional)	3	2	1	10%	0.0	
		2 to 3 (local)	2		0.5		5.0	
		1 (isolated)	1		0.25		0.0	
		none reported	0		0		0.0	
J.	Estimated Population Served by Groundwater	> 1000	3	1	1	10%	0.0	
		500 - 1000	2		0.5		0.0	
		< 500	1		0.25		2.5	
K.	Other, e.g. future land development	Being planned	3	2	1	5%	0.0	
		Possible	2		0.5		2.5	
		Unlikely	1		0.25		0.0	
						Total	48.3	

Aquifer Number: 258		Type: Unconsolidated		Location: Richter Pass				
Item	Description	Measure	Point Scale	Points Assigned	Weighting Factor	Maximum Weighting	Score	
A.	Aquifer Area	> 50 km ²	3	1	1	10%	0.0	
		10 – 50 km ²	2		0.5		0.0	
		< 10 km ²	1		0.25		2.5	
B.	Aquifer Classification and Ranking	Degree of Development	I	3	2	10%	0.0	
			II	2			0.5	5.0
			III	1			0.25	0.0
C.	Aquifer Classification and Ranking	Vulnerability	A	3	1	5%	0.0	
			B	2			0.5	0.0
			C	1			0.25	1.7
D.	Aquifer Classification and Ranking	Ranking Value (based on 7 sub-factors)	5 to 21	10	1.0 – 0.24	5%	2.4	
E.	Estimated Current Ground Water Use	High > 64 L/s	3	1	1	10%	0.0	
		Medium 32 - 64 L/s	2		0.5		0.0	
		Low < 32 L/s	1		0.25		2.5	
F.	Number of Ground Water Supply Systems	> 5	3	0	1	15%	0.0	
		2 – 5	2		0.66		0.0	
		1	1		0.33		0.0	
		none reported	0		0		0.0	
G.	Number of Reported Irrigation Wells	> 10	3	2	1	10%	0.0	
		2 – 10	2		0.5		5.0	
		< 2	1		0.25		0.0	
		none reported	0		0		0.0	
H.	Well Density	> 5 km ²	3	2	1	10%	0.0	
		1 – 5 km ²	2		0.5		5.0	
		< 1 km ²	1		0.25		0.0	
I.	Water Quantity Issues/Concerns Reported	> 3 (regional)	3	0	1	10%	0.0	
		2 to 3 (local)	2		0.5		0.0	
		1 (isolated)	1		0.25		0.0	
		none reported	0		0		0.0	
J.	Estimated Population Served by Groundwater	> 1000	3	1	1	10%	0.0	
		500 - 1000	2		0.5		0.0	
		< 500	1		0.25		2.5	
K.	Other, e.g. future land development	Being planned	3	2	1	5%	0.0	
		Possible	2		0.5		2.5	
		Unlikely	1		0.25		0.0	
						Total	29.0	

Aquifer Number: 259		Type: Unconsolidated		Location: US Border to Princeton			
Item	Description	Measure	Point Scale	Points Assigned	Weighting Factor	Maximum Weighting	Score
A.	Aquifer Area	> 50 km ²	3	3	1	10%	10.0
		10 – 50 km ²	2		0.5		0.0
		< 10 km ²	1		0.25		0.0
B.	Aquifer Classification and Ranking	Degree of Development	I	2	1	10%	0.0
			II		0.5		5.0
			III		0.25		0.0
C.	Aquifer Classification and Ranking	Vulnerability	A	3	1	5%	5.0
			B		0.5		0.0
			C		0.25		0.0
D.	Aquifer Classification and Ranking	Ranking Value (based on 7 sub-factors)	5 to 21	14	1.0 – 0.24	5%	3.3
E.	Estimated Current Ground Water Use	High > 64 L/s	3	3	1	10%	10.0
		Medium 32 - 64 L/s	2		0.5		0.0
		Low < 32 L/s	1		0.25		0.0
F.	Number of Ground Water Supply Systems	> 5	3	3	1	15%	15.0
		2 – 5	2		0.66		0.0
		1	1		0.33		0.0
		none reported	0		0		0.0
G.	Number of Reported Irrigation Wells	> 10	3	3	1	10%	10.0
		2 – 10	2		0.5		0.0
		< 2	1		0.25		0.0
		none reported	0		0		0.0
H.	Well Density	> 5 km ²	3	3	1	10%	10.0
		1 – 5 km ²	2		0.5		0.0
		< 1 km ²	1		0.25		0.0
I.	Water Quantity Issues/Concerns Reported	> 3 (regional)	3	0	1	10%	0.0
		2 to 3 (local)	2		0.5		0.0
		1 (isolated)	1		0.25		0.0
		none reported	0		0		0.0
J.	Estimated Population Served by Groundwater	> 1000	3	3	1	10%	10.0
		500 - 1000	2		0.5		0.0
		< 500	1		0.25		0.0
K.	Other, e.g. future land development	Being planned	3	3	1	5%	5.0
		Possible	2		0.5		0.0
		Unlikely	1		0.25		0.0
						Total	83.3

Aquifer Number 261		Type: Unconsolidated		Location: Marron Valley northwest of Okanagan Falls				
Item	Description	Measure	Point Scale	Points Assigned	Weighting Factor	Maximum Weighting	Score	
A.	Aquifer Area	> 50 km ²	3	1	1	10%	0.0	
		10 – 50 km ²	2		0.5		0.0	
		< 10 km ²	1		0.25		2.5	
B.	Aquifer Classification and Ranking	Degree of Development	I	3	2	1	10%	0.0
			II	2		0.5	5.0	
			III	1		0.25	0.0	
C.	Aquifer Classification and Ranking	Vulnerability	A	3	2	1	5%	0.0
			B	2		0.5	2.5	
			C	1		0.25	0.0	
D.	Aquifer Classification and Ranking	Ranking Value (based on 7 sub-factors)	5 to 21	11	1.0 – 0.24	5%	2.6	
E.	Estimated Current Ground Water Use	High > 64 L/s	3	1	1	10%	0.0	
		Medium 32 - 64 L/s	2		0.5	0.0		
		Low < 32 L/s	1		0.25	2.5		
F.	Number of Ground Water Supply Systems	> 5	3	1	1	15%	0.0	
		2 – 5	2		0.66		0.0	
		1	1		0.33		5.0	
		none reported	0		0		0.0	
G.	Number of Reported Irrigation Wells	> 10	3	2	1	10%	0.0	
		2 – 10	2		0.5		5.0	
		< 2	1		0.25		0.0	
		none reported	0		0		0.0	
H.	Well Density	> 5 km ²	3	3	1	10%	10.0	
		1 – 5 km ²	2		0.5		0.0	
		< 1 km ²	1		0.25		0.0	
I.	Water Quantity Issues/Concerns Reported	> 3 (regional)	3	0	1	10%	0.0	
		2 to 3 (local)	2		0.5		0.0	
		1 (isolated)	1		0.25		0.0	
		none reported	0		0		0.0	
J.	Estimated Population Served by Groundwater	> 1000	3	1	1	10%	0.0	
		500 - 1000	2		0.5		0.0	
		< 500	1		0.25		2.5	
K.	Other, e.g. future land development	Being planned	3	2	1	5%	0.0	
		Possible	2		0.5		2.5	
		Unlikely	1		0.25		0.0	
						Total	40.1	

Aquifer 262		Type: Unconsolidated		Location: White Lake Basin 35 km south of Penticton				
Item	Description	Measure	Point Scale	Points Assigned	Weighting Factor	Maximum Weighting	Score	
A.	Aquifer Area	> 50 km ²	3	1	1	10%	0.0	
		10 – 50 km ²	2		0.5		0.0	
		< 10 km ²	1		0.25		2.5	
B.	Aquifer Classification and Ranking	Degree of Development	I	3	1	10%	0.0	
			II	2			0.5	0.0
			III	1			0.25	2.5
C.	Aquifer Classification and Ranking	Vulnerability	A	3	3	5%	5.0	
			B	2			0.5	0.0
			C	1			0.25	0.0
D.	Aquifer Classification and Ranking	Ranking Value (based on 7 sub-factors)	5 to 21	9	1.0 – 0.24	5%	2.1	
E.	Estimated Current Ground Water Use	High > 64 L/s	3	1	1	10%	0.0	
		Medium 32 - 64 L/s	2		0.5		0.0	
		Low < 32 L/s	1		0.25		2.5	
F.	Number of Ground Water Supply Systems	> 5	3	1	1	15%	0.0	
		2 – 5	2		0.66		0.0	
		1	1		0.33		5.0	
		none reported	0		0		0.0	
G.	Number of Reported Irrigation Wells	> 10	3	0	1	10%	0.0	
		2 – 10	2		0.5		0.0	
		< 2	1		0.25		0.0	
		none reported	0		0		0.0	
H.	Well Density	> 5 km ²	3	3	1	10%	10.0	
		1 – 5 km ²	2		0.5		0.0	
		< 1 km ²	1		0.25		0.0	
I.	Water Quantity Issues/Concerns Reported	> 3 (regional)	3	0	1	10%	0.0	
		2 to 3 (local)	2		0.5		0.0	
		1 (isolated)	1		0.25		0.0	
		none reported	0		0		0.0	
J.	Estimated Population Served by Groundwater	> 1000	3	1	1	10%	0.0	
		500 - 1000	2		0.5		0.0	
		< 500	1		0.25		2.5	
K.	Other, e.g. future land development	Being planned	3	1	1	5%	0.0	
		Possible	2		0.5		0.0	
		Unlikely	1		0.25		1.7	
						Total	33.8	

Aquifer Number: 264		Type: Unconsolidated		Location: Okanagan Falls and east of Okanagan Falls				
Item	Description	Measure	Point Scale	Points Assigned	Weighting Factor	Maximum Weighting	Score	
A.	Aquifer Area	> 50 km ²	3	1	1	10%	0.0	
		10 – 50 km ²	2		0.5		0.0	
		< 10 km ²	1		0.25		2.5	
B.	Aquifer Classification and Ranking	Degree of Development	I	3	2	1	10%	0.0
			II	2		0.5		5.0
			III	1		0.25		0.0
C.	Aquifer Classification and Ranking	Vulnerability	A	3	2	1	5%	0.0
			B	2		0.5		2.5
			C	1		0.25		0.0
D.	Aquifer Classification and Ranking	Ranking Value (based on 7 sub-factors)	5 to 21	11	1.0 – 0.24	5%	2.6	
E.	Estimated Current Ground Water Use	High > 64 L/s	3	2	1	10%	0.0	
		Medium 32 - 64 L/s	2		0.5		5.0	
		Low < 32 L/s	1		0.25		0.0	
F.	Number of Ground Water Supply Systems	> 5	3	1	1	15%	0.0	
		2 – 5	2		0.66		0.0	
		1	1		0.33		5.0	
		none reported	0		0		0.0	
G.	Number of Reported Irrigation Wells	> 10	3	2	1	10%	0.0	
		2 – 10	2		0.5		5.0	
		< 2	1		0.25		0.0	
		none reported	0		0			
H.	Well Density	> 5 km ²	3	3	1	10%	10.0	
		1 – 5 km ²	2		0.5		0.0	
		< 1 km ²	1		0.25		0.0	
I.	Water Quantity Issues/Concerns Reported	> 3 (regional)	3	0	1	10%	0.0	
		2 to 3 (local)	2		0.5		0.0	
		1 (isolated)	1		0.25		0.0	
		none reported	0		0		0.0	
J.	Estimated Population Served by Groundwater	> 1000	3	3	1	10%	10.0	
		500 - 1000	2		0.5		0.0	
		< 500	1		0.25		0.0	
K.	Other, e.g. future land development	Being planned	3	2	1	5%	0.0	
		Possible	2		0.5		2.5	
		Unlikely	1		0.25		0.0	
						Total	50.1	

Aquifer Number: 265		Type: Unconsolidated		Location: Between OK Falls and Vaseux Lake				
Item	Description	Measure	Point Scale	Points Assigned	Weighting Factor	Maximum Weighting	Score	
A.	Aquifer Area	> 50 km ²	3	1	1	10%	0.0	
		10 – 50 km ²	2		0.5		0.0	
		< 10 km ²	1		0.25		2.5	
B.	Aquifer Classification and Ranking	Degree of Development	I	3	2	1	10%	0.0
			II	2		0.5		5.0
			III	1		0.25		0.0
C.	Aquifer Classification and Ranking	Vulnerability	A	3	2	1	5%	0.0
			B	2		0.5		2.5
			C	1		0.25		0.0
D.	Aquifer Classification and Ranking	Ranking Value (based on 7 sub-factors)	5 to 21	11	1.0 – 0.24	5%	2.6	
E.	Estimated Current Ground Water Use	High > 64 L/s	3	1	1	10%	0.0	
		Medium 32 - 64 L/s	2		0.5		0.0	
		Low < 32 L/s	1		0.25		2.5	
F.	Number of Ground Water Supply Systems	> 5	3	2	1	15%	0.0	
		2 – 5	2		0.66		10.0	
		1	1		0.33		0.0	
		none reported	0		0		0.0	
G.	Number of Reported Irrigation Wells	> 10	3	0	1	10%	0.0	
		2 – 10	2		0.5		0.0	
		< 2	1		0.25		0.0	
		none reported	0		0		0.0	
H.	Well Density	> 5 km ²	3	2	1	10%	0.0	
		1 – 5 km ²	2		0.5		5.0	
		< 1 km ²	1		0.25		0.0	
I.	Water Quantity Issues/Concerns Reported	> 3 (regional)	3	0	1	10%	0.0	
		2 to 3 (local)	2		0.5		0.0	
		1 (isolated)	1		0.25		0.0	
		none reported	0		0		0.0	
J.	Estimated Population Served by Groundwater	> 1000	3	1	1	10%	0.0	
		500 - 1000	2		0.5		0.0	
		< 500	1		0.25		2.5	
K.	Other, e.g. future land development	Being planned	3	2	1	5%	0.0	
		Possible	2		0.5		2.5	
		Unlikely	1		0.25		0.0	
						Total	35.1	

Aquifer Number 266		Type: Unconsolidated		Location: Stafford Creek southwest of Penticton				
Item	Description	Measure	Point Scale	Points Assigned	Weighting Factor	Maximum Weighting	Score	
A.	Aquifer Area	> 50 km ²	3	1	1	10%	0.0	
		10 – 50 km ²	2		0.5		0.0	
		< 10 km ²	1		0.25		2.5	
B.	Aquifer Classification and Ranking	Degree of Development	I	3	1	10%	0.0	
			II	2			0.5	0.0
			III	1			0.25	2.5
C.	Aquifer Classification and Ranking	Vulnerability	A	3	1	5%	0.0	
			B	2			0.5	0.0
			C	1			0.25	1.7
D.	Aquifer Classification and Ranking	Ranking Value (based on 7 sub-factors)	5 to 21	8	1.0 – 0.24	5%	1.9	
E.	Estimated Current Ground Water Use	High > 64 L/s	3	1	1	10%	0.0	
		Medium 32 - 64 L/s	2		0.5		0.0	
		Low < 32 L/s	1		0.25		2.5	
F.	Number of Ground Water Supply Systems	> 5	3	0	1	15%	0.0	
		2 – 5	2		0.66		0.0	
		1	1		0.33		0.0	
		none reported	0		0		0.0	
G.	Number of Reported Irrigation Wells	> 10	3	0	1	10%	0.0	
		2 – 10	2		0.5		0.0	
		< 2	1		0.25		0.0	
		none reported	0		0		0.0	
H.	Well Density	> 5 km ²	3	2	1	10%	0.0	
		1 – 5 km ²	2		0.5		5.0	
		< 1 km ²	1		0.25		0.0	
I.	Water Quantity Issues/Concerns Reported	> 3 (regional)	3	0	1	10%	0.0	
		2 to 3 (local)	2		0.5		0.0	
		1 (isolated)	1		0.25		0.0	
		none reported	0		0		0.0	
J.	Estimated Population Served by Groundwater	> 1000	3	1	1	10%	0.0	
		500 - 1000	2		0.5		0.0	
		< 500	1		0.25		2.5	
K.	Other, e.g. future land development	Being planned	3	2	1	5%	0.0	
		Possible	2		0.5		2.5	
		Unlikely	1		0.25		0.0	
						Total	21.1	

Aquifer Number: 267		Type: Unconsolidated		Location: Shingle Creek				
Item	Description	Measure	Point Scale	Points Assigned	Weighting Factor	Maximum Weighting	Score	
A.	Aquifer Area	> 50 km ²	3	1	1	10%	0.0	
		10 – 50 km ²	2		0.5		0.0	
		< 10 km ²	1		0.25		2.5	
B.	Aquifer Classification and Ranking	Degree of Development	I	3	2	1	10%	0.0
			II	2		0.5	5.0	
			III	1		0.25	0.0	
C.	Aquifer Classification and Ranking	Vulnerability	A	3	2	1	5%	0.0
			B	2		0.5	2.5	
			C	1		0.25	0.0	
D.	Aquifer Classification and Ranking	Ranking Value (based on 7 sub-factors)	5 to 21	11	1.0 – 0.24	5%	2.6	
E.	Estimated Current Ground Water Use	High > 64 L/s	3	1	1	10%	0.0	
		Medium 32 - 64 L/s	2		0.5	0.0		
		Low < 32 L/s	1		0.25	2.5		
F.	Number of Ground Water Supply Systems	> 5	3	1	1	15%	0.0	
		2 – 5	2		0.66		0.0	
		1	1		0.33		5.0	
		none reported	0		0		0.0	
G.	Number of Reported Irrigation Wells	> 10	3	0	1	10%	0.0	
		2 – 10	2		0.5		0.0	
		< 2	1		0.25		0.0	
		none reported	0		0		0.0	
H.	Well Density	> 5 km ²	3	2	1	10%	0.0	
		1 – 5 km ²	2		0.5		5.0	
		< 1 km ²	1		0.25		0.0	
I.	Water Quantity Issues/Concerns Reported	> 3 (regional)	3	0	1	10%	0.0	
		2 to 3 (local)	2		0.5		0.0	
		1 (isolated)	1		0.25		0.0	
		none reported	0		0		0.0	
J.	Estimated Population Served by Groundwater	> 1000	3	1	1	10%	0.0	
		500 - 1000	2		0.5		0.0	
		< 500	1		0.25		2.5	
K.	Other, e.g. future land development	Being planned	3	2	1	5%	0.0	
		Possible	2		0.5		2.5	
		Unlikely	1		0.25		0.0	
						Total	30.1	

Aquifer Number: 270		Type: Unconsolidated		Location: Ellis Creek				
Item	Description	Measure	Point Scale	Points Assigned	Weighting Factor	Maximum Weighting	Score	
A.	Aquifer Area	> 50 km ²	3	1	1	10%	0.0	
		10 – 50 km ²	2		0.5		0.0	
		< 10 km ²	1		0.25		2.5	
B.	Aquifer Classification and Ranking	Degree of Development	I	3	2	1	10%	0.0
			II	2		0.5	5.0	
			III	1		0.25	0.0	
C.	Aquifer Classification and Ranking	Vulnerability	A	3	2	1	5%	0.0
			B	2		0.5	2.5	
			C	1		0.25	0.0	
D.	Aquifer Classification and Ranking	Ranking Value (based on 7 sub-factors)	5 to 21	12	1.0 – 0.24	5%	2.9	
E.	Estimated Current Ground Water Use	High > 64 L/s	3	1	1	10%	0.0	
		Medium 32 - 64 L/s	2		0.5	0.0		
		Low < 32 L/s	1		0.25	2.5		
F.	Number of Ground Water Supply Systems	> 5	3	1	1	15%	0.0	
		2 – 5	2		0.66		0.0	
		1	1		0.33		5.0	
		none reported	0		0		0.0	
G.	Number of Reported Irrigation Wells	> 10	3	0	1	10%	0.0	
		2 – 10	2		0.5		0.0	
		< 2	1		0.25		0.0	
		none reported	0		0		0.0	
H.	Well Density	> 5 km ²	3	2	1	10%	0.0	
		1 – 5 km ²	2		0.5	5.0		
		< 1 km ²	1		0.25	0.0		
I.	Water Quantity Issues/Concerns Reported	> 3 (regional)	3	0	1	10%	0.0	
		2 to 3 (local)	2		0.5		0.0	
		1 (isolated)	1		0.25		0.0	
		none reported	0		0		0.0	
J.	Estimated Population Served by Groundwater	> 1000	3	2	1	10%	0.0	
		500 - 1000	2		0.5		5.0	
		< 500	1		0.25		0.0	
K.	Other, e.g. future land development	Being planned	3	2	1	5%	0.0	
		Possible	2		0.5		2.5	
		Unlikely	1		0.25		0.0	
						Total	32.9	

Aquifer Number 297		Type: Unconsolidated		Location: Summerland Trout Creek				
Item	Description	Measure	Point Scale	Points Assigned	Weighting Factor	Maximum Weighting	Score	
A.	Aquifer Area	> 50 km ²	3	1	1	10%	0.0	
		10 – 50 km ²	2		0.5		0.0	
		< 10 km ²	1		0.25		2.5	
B.	Aquifer Classification and Ranking	Degree of Development	I	3	1	10%	0.0	
			II	2			0.5	0.0
			III	1			0.25	2.5
C.	Aquifer Classification and Ranking	Vulnerability	A	3	2	5%	0.0	
			B	2			0.5	2.5
			C	1			0.25	0.0
D.	Aquifer Classification and Ranking	Ranking Value (based on 7 sub-factors)	5 to 21	11	1.0 – 0.24	5%	2.6	
E.	Estimated Current Ground Water Use	High > 64 L/s	3	1	1	10%	0.0	
		Medium 32 - 64 L/s	2		0.5		0.0	
		Low < 32 L/s	1		0.25		2.5	
F.	Number of Ground Water Supply Systems	> 5	3	1	1	15%	0.0	
		2 – 5	2		0.66		0.0	
		1	1		0.33		0.0	
		none reported	0		0		0.0	
G.	Number of Reported Irrigation Wells	> 10	3	1	1	10%	0.0	
		2 – 10	2		0.5		0.0	
		< 2	1		0.25		0.0	
		none reported	0		0		0.0	
H.	Well Density	> 5 km ²	3	3	1	10%	10.0	
		1 – 5 km ²	2		0.5		0.0	
		< 1 km ²	1		0.25		0.0	
I.	Water Quantity Issues/Concerns Reported	> 3 (regional)	3	3	1	10%	10.0	
		2 to 3 (local)	2		0.5		0.0	
		1 (isolated)	1		0.25		0.0	
		none reported	0		0		0.0	
J.	Estimated Population Served by Groundwater	> 1000	3	1	1	10%	0.0	
		500 - 1000	2		0.5		0.0	
		< 500	1		0.25		2.5	
K.	Other, e.g. future land development	Being planned	3	1	1	5%	0.0	
		Possible	2		0.5		0.0	
		Unlikely	1		0.25		1.7	
						Total	36.8	

Aquifer Number 299		Type: Unconsolidated		Location: Faulder (Meadow Valley)				
Item	Description	Measure	Point Scale	Points Assigned	Weighting Factor	Maximum Weighting	Score	
A.	Aquifer Area	> 50 km ²	3	1	1	10%	0.0	
		10 – 50 km ²	2		0.5		0.0	
		< 10 km ²	1		0.25		2.5	
B.	Aquifer Classification and Ranking	Degree of Development	I	3	1	10%	0.0	
			II	2			0.5	0.0
			III	1			0.25	2.5
C.	Aquifer Classification and Ranking	Vulnerability	A	3	1	5%	0.0	
			B	2			0.5	0.0
			C	1			0.25	1.7
D.	Aquifer Classification and Ranking	Ranking Value (based on 7 sub-factors)	5 to 21	10	1.0 – 0.24	5%	2.4	
E.	Estimated Current Ground Water Use	High > 64 L/s	3	1	1	10%	0.0	
		Medium 32 - 64 L/s	2		0.5		0.0	
		Low < 32 L/s	1		0.25		2.5	
F.	Number of Ground Water Supply Systems	> 5	3	2	1	15%	0.0	
		2 – 5	2		0.66		10.0	
		1	1		0.33		0.0	
		none reported	0		0		0.0	
G.	Number of Reported Irrigation Wells	> 10	3	2	1	10%	0.0	
		2 – 10	2		0.5		5.0	
		< 2	1		0.25		0.0	
		none reported	0		0		0.0	
H.	Well Density	> 5 km ²	3	3	1	10%	10.0	
		1 – 5 km ²	2		0.5		0.0	
		< 1 km ²	1		0.25		0.0	
I.	Water Quantity Issues/Concerns Reported	> 3 (regional)	3	1	1	10%	0.0	
		2 to 3 (local)	2		0.5		0.0	
		1 (isolated)	1		0.25		2.5	
		none reported	0		0		0.0	
J.	Estimated Population Served by Groundwater	> 1000	3	1	1	10%	0.0	
		500 - 1000	2		0.5		2.5	
		< 500	1		0.25		0.0	
K.	Other, e.g. future land development	Being planned	3	2	1	5%	0.0	
		Possible	2		0.5		2.5	
		Unlikely	1		0.25		0.0	
						Total	44.0	

Aquifer Number 301		Type: Unconsolidated		Location: Shannon Lake				
Item	Description	Measure	Point Scale	Points Assigned	Weighting Factor	Maximum Weighting	Score	
A.	Aquifer Area	> 50 km ²	3	1	1	10%	0.0	
		10 – 50 km ²	2		0.5		0.0	
		< 10 km ²	1		0.25		2.5	
B.	Aquifer Classification and Ranking	Degree of Development	I	3	2	1	10%	0.0
			II	2		0.5	5.0	
			III	1		0.25	0.0	
C.	Aquifer Classification and Ranking	Vulnerability	A	3	2	1	5%	0.0
			B	2		0.5	2.5	
			C	1		0.25	0.0	
D.	Aquifer Classification and Ranking	Ranking Value (based on 7 sub-factors)	5 to 21	10	1.0 – 0.24	5%	2.4	
E.	Estimated Current Ground Water Use	High > 64 L/s	3	1	1	10%	0.0	
		Medium 32 - 64 L/s	2		0.5	0.0		
		Low < 32 L/s	1		0.25	2.5		
F.	Number of Ground Water Supply Systems	> 5	3	1	1	15%	0.0	
		2 – 5	2		0.66		0.0	
		1	1		0.33		5.0	
		none reported	0		0		0.0	
G.	Number of Reported Irrigation Wells	> 10	3	0	1	10%	0.0	
		2 – 10	2		0.5		0.0	
		< 2	1		0.25		0.0	
		none reported	0		0		0.0	
H.	Well Density	> 5 km ²	3	3	1	10%	10.0	
		1 – 5 km ²	2		0.5		0.0	
		< 1 km ²	1		0.25		0.0	
I.	Water Quantity Issues/Concerns Reported	> 3 (regional)	3	0	1	10%	0.0	
		2 to 3 (local)	2		0.5		0.0	
		1 (isolated)	1		0.25		0.0	
		none reported	0		0		0.0	
J.	Estimated Population Served by Groundwater	> 1000	3	1	1	10%	0.0	
		500 - 1000	2		0.5		0.0	
		< 500	1		0.25		2.5	
K.	Other, e.g. future land development	Being planned	3	2	1	5%	0.0	
		Possible	2		0.5		2.5	
		Unlikely	1		0.25		0.0	
						Total	34.9	

Aquifer Number 302		Type: Unconsolidated		Location: South of Westbank adjacent to Okanagan Lake				
Item	Description	Measure	Point Scale	Points Assigned	Weighting Factor	Maximum Weighting	Score	
A.	Aquifer Area	> 50 km ²	3	1	1	10%	0.0	
		10 – 50 km ²	2		0.5		0.0	
		< 10 km ²	1		0.25		2.5	
B.	Aquifer Classification and Ranking	Degree of Development	I	3	2	1	10%	0.0
			II	2		0.5	5.0	
			III	1		0.25	0.0	
C.	Aquifer Classification and Ranking	Vulnerability	A	3	2	1	5%	0.0
			B	2		0.5	2.5	
			C	1		0.25	0.0	
D.	Aquifer Classification and Ranking	Ranking Value (based on 7 sub-factors)	5 to 21	10	1.0 – 0.24	5%	2.4	
E.	Estimated Current Ground Water Use	High > 64 L/s	3	1	1	10%	0.0	
		Medium 32 - 64 L/s	2		0.5	0.0		
		Low < 32 L/s	1		0.25	2.5		
F.	Number of Ground Water Supply Systems	> 5	3	0	1	15%	0.0	
		2 – 5	2		0.66		0.0	
		1	1		0.33		0.0	
		none reported	0		0		0.0	
G.	Number of Reported Irrigation Wells	> 10	3	0	1	10%	0.0	
		2 – 10	2		0.5		0.0	
		< 2	1		0.25		0.0	
		none reported	0		0		0.0	
H.	Well Density	> 5 km ²	3	3	1	10%	10.0	
		1 – 5 km ²	2		0.5		0.0	
		< 1 km ²	1		0.25		0.0	
I.	Water Quantity Issues/Concerns Reported	> 3 (regional)	3	0	1	10%	0.0	
		2 to 3 (local)	2		0.5		0.0	
		1 (isolated)	1		0.25		0.0	
		none reported	0		0		0.0	
J.	Estimated Population Served by Groundwater	> 1000	3	1	1	10%	0.0	
		500 - 1000	2		0.5		0.0	
		< 500	1		0.25		2.5	
K.	Other, e.g. future land development	Being planned	3	2	1	5%	0.0	
		Possible	2		0.5		2.5	
		Unlikely	1		0.25		0.0	
						Total	29.9	

Aquifer Number 303		Type: Unconsolidated		Location: Southeast of Westbank adj. to Okanagan Lake				
Item	Description	Measure	Point Scale	Points Assigned	Weighting Factor	Maximum Weighting	Score	
A.	Aquifer Area	> 50 km ²	3	1	1	10%	0.0	
		10 – 50 km ²	2		0.5		0.0	
		< 10 km ²	1		0.25		2.5	
B.	Aquifer Classification and Ranking	Degree of Development	I	3	1	10%	0.0	
			II	2			0.5	0.0
			III	1			0.25	2.5
C.	Aquifer Classification and Ranking	Vulnerability	A	3	2	5%	0.0	
			B	2			0.5	2.5
			C	1			0.25	0.0
D.	Aquifer Classification and Ranking	Ranking Value (based on 7 sub-factors)	5 to 21	8	1.0 – 0.24	5%	1.9	
E.	Estimated Current Ground Water Use	High > 64 L/s	3	1	1	10%	0.0	
		Medium 32 - 64 L/s	2		0.5		0.0	
		Low < 32 L/s	1		0.25		2.5	
F.	Number of Ground Water Supply Systems	> 5	3	2	1	15%	0.0	
		2 – 5	2		0.66		10.0	
		1	1		0.33		0.0	
		none reported	0		0		0.0	
G.	Number of Reported Irrigation Wells	> 10	3	0	1	10%	0.0	
		2 – 10	2		0.5		0.0	
		< 2	1		0.25		0.0	
		none reported	0		0		0.0	
H.	Well Density	> 5 km ²	3	3	1	10%	10.0	
		1 – 5 km ²	2		0.5		0.0	
		< 1 km ²	1		0.25		0.0	
I.	Water Quantity Issues/Concerns Reported	> 3 (regional)	3	0	1	10%	0.0	
		2 to 3 (local)	2		0.5		0.0	
		1 (isolated)	1		0.25		0.0	
		none reported	0		0		0.0	
J.	Estimated Population Served by Groundwater	> 1000	3	1	1	10%	0.0	
		500 - 1000	2		0.5		0.0	
		< 500	1		0.25		2.5	
K.	Other, e.g. future land development	Being planned	3	2	1	5%	0.0	
		Possible	2		0.5		2.5	
		Unlikely	1		0.25		0.0	
						Total	36.9	

Aquifer Number 306		Type: Unconsolidated		Location: East of Westbank parallel to Mt. Boucher				
Item	Description	Measure	Point Scale	Points Assigned	Weighting Factor	Maximum Weighting	Score	
A.	Aquifer Area	> 50 km ²	3	1	1	10%	0.0	
		10 – 50 km ²	2		0.5		0.0	
		< 10 km ²	1		0.25		2.5	
B.	Aquifer Classification and Ranking	Degree of Development	I	3	2	1	10%	0.0
			II	2		0.5	5.0	
			III	1		0.25	0.0	
C.	Aquifer Classification and Ranking	Vulnerability	A	3	1	1	5%	0.0
			B	2		0.5	0.0	
			C	1		0.25	1.7	
D.	Aquifer Classification and Ranking	Ranking Value (based on 7 sub-factors)	5 to 21	8	1.0 – 0.24	5%	1.9	
E.	Estimated Current Ground Water Use	High > 64 L/s	3	1	1	10%	0.0	
		Medium 32 - 64 L/s	2		0.5	0.0		
		Low < 32 L/s	1		0.25	2.5		
F.	Number of Ground Water Supply Systems	> 5	3	0	1	15%	0.0	
		2 – 5	2		0.66		0.0	
		1	1		0.33		0.0	
		none reported	0		0		0.0	
G.	Number of Reported Irrigation Wells	> 10	3	1	1	10%	0.0	
		2 – 10	2		0.5		0.0	
		< 2	1		0.25		2.5	
		none reported	0		0		0.0	
H.	Well Density	> 5 km ²	3	2	1	10%	0.0	
		1 – 5 km ²	2		0.5		5.0	
		< 1 km ²	1		0.25		0.0	
I.	Water Quantity Issues/Concerns Reported	> 3 (regional)	3	0	1	10%	0.0	
		2 to 3 (local)	2		0.5		0.0	
		1 (isolated)	1		0.25		0.0	
		none reported	0		0		0.0	
J.	Estimated Population Served by Groundwater	> 1000	3	1	1	10%	0.0	
		500 - 1000	2		0.5		0.0	
		< 500	1		0.25		2.5	
K.	Other, e.g. future land development	Being planned	3	2	1	5%	0.0	
		Possible	2		0.5		2.5	
		Unlikely	1		0.25		0.0	
						Total	26.1	

Aquifer Number 310		Type: Unconsolidated		Location: Creighton Valley				
Item	Description	Measure	Point Scale	Points Assigned	Weighting Factor	Maximum Weighting	Score	
A.	Aquifer Area	> 50 km ²	3	1	1	10%	0.0	
		10 – 50 km ²	2		0.5		0.0	
		< 10 km ²	1		0.25		2.5	
B.	Aquifer Classification and Ranking	Degree of Development	I	3	1	10%	0.0	
			II	2			0.5	0.0
			III	1			0.25	2.5
C.	Aquifer Classification and Ranking	Vulnerability	A	3	2	5%	0.0	
			B	2			0.5	2.5
			C	1			0.25	0.0
D.	Aquifer Classification and Ranking	Ranking Value (based on 7 sub-factors)	5 to 21	8	1.0 – 0.24	5%	1.9	
E.	Estimated Current Ground Water Use	High > 64 L/s	3	1	1	10%	0.0	
		Medium 32 - 64 L/s	2		0.5		0.0	
		Low < 32 L/s	1		0.25		2.5	
F.	Number of Ground Water Supply Systems	> 5	3	0	1	15%	0.0	
		2 – 5	2		0.66		0.0	
		1	1		0.33		0.0	
		none reported	0		0		0.0	
G.	Number of Reported Irrigation Wells	> 10	3	0	1	10%	0.0	
		2 – 10	2		0.5		0.0	
		< 2	1		0.25		0.0	
		none reported	0		0		0.0	
H.	Well Density	> 5 km ²	3	2	1	10%	0.0	
		1 – 5 km ²	2		0.5		5.0	
		< 1 km ²	1		0.25		0.0	
I.	Water Quantity Issues/Concerns Reported	> 3 (regional)	3	0	1	10%	0.0	
		2 to 3 (local)	2		0.5		0.0	
		1 (isolated)	1		0.25		0.0	
		none reported	0		0		0.0	
J.	Estimated Population Served by Groundwater	> 1000	3	1	1	10%	0.0	
		500 - 1000	2		0.5		0.0	
		< 500	1		0.25		2.5	
K.	Other, e.g. future land development	Being planned	3	1	1	5%	0.0	
		Possible	2		0.5		0.0	
		Unlikely	1		0.25		1.7	
						Total	21.1	

Aquifer Number 314		Type: Unconsolidated		Location: Lumby				
Item	Description	Measure	Point Scale	Points Assigned	Weighting Factor	Maximum Weighting	Score	
A.	Aquifer Area	> 50 km ²	3	1	1	10%	0.0	
		10 – 50 km ²	2		0.5		0.0	
		< 10 km ²	1		0.25		2.5	
B.	Aquifer Classification and Ranking	Degree of Development	I	3	1	10%	0.0	
			II	2			0.5	0.0
			III	1			0.25	2.5
C.	Aquifer Classification and Ranking	Vulnerability	A	3	1	5%	0.0	
			B	2			0.5	0.0
			C	1			0.25	1.7
D.	Aquifer Classification and Ranking	Ranking Value (based on 7 sub-factors)	5 to 21	10	1.0 – 0.24	5%	2.4	
E.	Estimated Current Ground Water Use	High > 64 L/s	3	1	1	10%	0.0	
		Medium 32 - 64 L/s	2		0.5		0.0	
		Low < 32 L/s	1		0.25		2.5	
F.	Number of Ground Water Supply Systems	> 5	3	1	1	15%	0.0	
		2 – 5	2		0.66		0.0	
		1	1		0.33		5.0	
		none reported	0		0		0.0	
G.	Number of Reported Irrigation Wells	> 10	3	1	1	10%	0.0	
		2 – 10	2		0.5		0.0	
		< 2	1		0.25		2.5	
		none reported	0		0		0.0	
H.	Well Density	> 5 km ²	3	3	1	10%	10.0	
		1 – 5 km ²	2		0.5		0.0	
		< 1 km ²	1		0.25		0.0	
I.	Water Quantity Issues/Concerns Reported	> 3 (regional)	3	0	1	10%	0.0	
		2 to 3 (local)	2		0.5		0.0	
		1 (isolated)	1		0.25		0.0	
		none reported	0		0		0.0	
J.	Estimated Population Served by Groundwater	> 1000	3	2	1	10%	0.0	
		500 - 1000	2		0.5		5.0	
		< 500	1		0.25		0.0	
K.	Other, e.g. future land development	Being planned	3	2	1	5%	0.0	
		Possible	2		0.5		2.5	
		Unlikely	1		0.25		0.0	
						Total	36.5	

Aquifer Number: 315		Type: Unconsolidated		Location: Besette Creek Southwest of Lumby				
Item	Description	Measure	Point Scale	Points Assigned	Weighting Factor	Maximum Weighting	Score	
A.	Aquifer Area	> 50 km ²	3	1	1	10%	0.0	
		10 – 50 km ²	2		0.5		0.0	
		< 10 km ²	1		0.25		2.5	
B.	Aquifer Classification and Ranking	Degree of Development	I	3	2	1	10%	0.0
			II	2		0.5	5.0	
			III	1		0.25	0.0	
C.	Aquifer Classification and Ranking	Vulnerability	A	3	3	1	5%	5.0
			B	2		0.5		0.0
			C	1		0.25		0.0
D.	Aquifer Classification and Ranking	Ranking Value (based on 7 sub-factors)	5 to 21	10	1.0 – 0.24	5%	2.4	
E.	Estimated Current Ground Water Use	High > 64 L/s	3	1	1	10%	0.0	
		Medium 32 - 64 L/s	2		0.5		0.0	
		Low < 32 L/s	1		0.25		2.5	
F.	Number of Ground Water Supply Systems	> 5	3	1	1	15%	0.0	
		2 – 5	2		0.66		0.0	
		1	1		0.33		5.0	
		none reported	0		0		0.0	
G.	Number of Reported Irrigation Wells	> 10	3	0	1	10%	0.0	
		2 – 10	2		0.5		0.0	
		< 2	1		0.25		0.0	
		none reported	0		0		0.0	
H.	Well Density	> 5 km ²	3	3	1	10%	10.0	
		1 – 5 km ²	2		0.5		0.0	
		< 1 km ²	1		0.25		0.0	
I.	Water Quantity Issues/Concerns Reported	> 3 (regional)	3	0	1	10%	0.0	
		2 to 3 (local)	2		0.5		0.0	
		1 (isolated)	1		0.25		0.0	
		none reported	0		0		0.0	
J.	Estimated Population Served by Groundwater	> 1000	3	1	1	10%	0.0	
		500 - 1000	2		0.5		0.0	
		< 500	1		0.25		2.5	
K.	Other, e.g. future land development	Being planned	3	2	1	5%	0.0	
		Possible	2		0.5		2.5	
		Unlikely	1		0.25		0.0	
						Total	37.4	

Aquifer Number 316		Type: Unconsolidated		Location: Lumby				
Item	Description	Measure	Point Scale	Points Assigned	Weighting Factor	Maximum Weighting	Score	
A.	Aquifer Area	> 50 km ²	3	2	1	10%	0.0	
		10 – 50 km ²	2		0.5		5.0	
		< 10 km ²	1		0.25		0.0	
B.	Aquifer Classification and Ranking	Degree of Development	I	3	1	10%	0.0	
			II	2			0.5	0.0
			III	1			0.25	2.5
C.	Aquifer Classification and Ranking	Vulnerability	A	3	3	1	5.0	
			B	2			0.5	0.0
			C	1			0.25	0.0
D.	Aquifer Classification and Ranking	Ranking Value (based on 7 sub-factors)	5 to 21	9	1.0 – 0.24	5%	2.1	
E.	Estimated Current Ground Water Use	High > 64 L/s	3	2	1	10%	0.0	
		Medium 32 - 64 L/s	2		0.5		5.0	
		Low < 32 L/s	1		0.25		0.0	
F.	Number of Ground Water Supply Systems	> 5	3	2	1	15%	0.0	
		2 – 5	2		0.66		10.0	
		1	1		0.33		0.0	
		none reported	0		0		0.0	
G.	Number of Reported Irrigation Wells	> 10	3	2	1	10%	0.0	
		2 – 10	2		0.5		5.0	
		< 2	1		0.25		0.0	
		none reported	0		0		0.0	
H.	Well Density	> 5 km ²	3	3	1	10%	10.0	
		1 – 5 km ²	2		0.5		0.0	
		< 1 km ²	1		0.25		0.0	
I.	Water Quantity Issues/Concerns Reported	> 3 (regional)	3	0	1	10%	0.0	
		2 to 3 (local)	2		0.5		0.0	
		1 (isolated)	1		0.25		0.0	
		none reported	0		0		0.0	
J.	Estimated Population Served by Groundwater	> 1000	3	3	1	10%	10.0	
		500 - 1000	2		0.5		0.0	
		< 500	1		0.25		0.0	
K.	Other, e.g. future land development	Being planned	3	2	1	5%	0.0	
		Possible	2		0.5		2.5	
		Unlikely	1		0.25		0.0	
						Total	57.1	

Aquifer Number 317		Type: Unconsolidated		Location: Lumby				
Item	Description	Measure	Point Scale	Points Assigned	Weighting Factor	Maximum Weighting	Score	
A.	Aquifer Area	> 50 km ²	3	2	1	10%	0.0	
		10 – 50 km ²	2		0.5		5.0	
		< 10 km ²	1		0.25		0.0	
B.	Aquifer Classification and Ranking	Degree of Development	I	3	1	10%	0.0	
			II	2			0.5	0.0
			III	1			0.25	2.5
C.	Aquifer Classification and Ranking	Vulnerability	A	3	1	5%	0.0	
			B	2			0.5	0.0
			C	1			0.25	1.7
D.	Aquifer Classification and Ranking	Ranking Value (based on 7 sub-factors)	5 to 21	9	1.0 – 0.24	5%	2.1	
E.	Estimated Current Ground Water Use	High > 64 L/s	3	2	1	10%	0.0	
		Medium 32 - 64 L/s	2		0.5		5.0	
		Low < 32 L/s	1		0.25		0.0	
F.	Number of Ground Water Supply Systems	> 5	3	2	1	15%	0.0	
		2 – 5	2		0.66		10.0	
		1	1		0.33		0.0	
		none reported	0		0		0.0	
G.	Number of Reported Irrigation Wells	> 10	3	2	1	10%	0.0	
		2 – 10	2		0.5		5.0	
		< 2	1		0.25		0.0	
		none reported	0		0		0.0	
H.	Well Density	> 5 km ²	3	3	1	10%	10.0	
		1 – 5 km ²	2		0.5		0.0	
		< 1 km ²	1		0.25		0.0	
I.	Water Quantity Issues/Concerns Reported	> 3 (regional)	3	0	1	10%	0.0	
		2 to 3 (local)	2		0.5		0.0	
		1 (isolated)	1		0.25		0.0	
		none reported	0		0		0.0	
J.	Estimated Population Served by Groundwater	> 1000	3	3	1	10%	10.0	
		500 - 1000	2		0.5		0.0	
		< 500	1		0.25		0.0	
K.	Other, e.g. future land development	Being planned	3	2	1	5%	0.0	
		Possible	2		0.5		2.5	
		Unlikely	1		0.25		0.0	
						Total	53.8	

Aquifer Number 318		Type: Unconsolidated		Location: Northeast of Lumby				
Item	Description	Measure	Point Scale	Points Assigned	Weighting Factor	Maximum Weighting	Score	
A.	Aquifer Area	> 50 km ²	3	2	1	10%	0.0	
		10 – 50 km ²	2		0.5		5.0	
		< 10 km ²	1		0.25		0.0	
B.	Aquifer Classification and Ranking	Degree of Development	I	1	1	10%	0.0	
			II		2		0.5	0.0
			III		1		0.25	2.5
C.	Aquifer Classification and Ranking	Vulnerability	A	1	1	5%	0.0	
			B		2		0.5	0.0
			C		1		0.25	1.7
D.	Aquifer Classification and Ranking	Ranking Value (based on 7 sub-factors)	5 to 21	9	1.0 – 0.24	5%	2.1	
E.	Estimated Current Ground Water Use	High > 64 L/s	3	1	1	10%	0.0	
		Medium 32 - 64 L/s	2		0.5		0.0	
		Low < 32 L/s	1		0.25		2.5	
F.	Number of Ground Water Supply Systems	> 5	3	0	1	15%	0.0	
		2 – 5	2		0.66		0.0	
		1	1		0.33		0.0	
		none reported	0		0		0.0	
G.	Number of Reported Irrigation Wells	> 10	3	2	1	10%	0.0	
		2 – 10	2		0.5		5.0	
		< 2	1		0.25		0.0	
		none reported	0		0		0.0	
H.	Well Density	> 5 km ²	3	3	1	10%	10.0	
		1 – 5 km ²	2		0.5		0.0	
		< 1 km ²	1		0.25		0.0	
I.	Water Quantity Issues/Concerns Reported	> 3 (regional)	3	0	1	10%	0.0	
		2 to 3 (local)	2		0.5		0.0	
		1 (isolated)	1		0.25		0.0	
		none reported	0		0		0.0	
J.	Estimated Population Served by Groundwater	> 1000	3	1	1	10%	0.0	
		500 - 1000	2		0.5		0.0	
		< 500	1		0.25		2.5	
K.	Other, e.g. future land development	Being planned	3	2	1	5%	0.0	
		Possible	2		0.5		2.5	
		Unlikely	1		0.25		0.0	
						Total	33.8	

Aquifer Number: 319		Type: Unconsolidated		Location: North of Lumby				
Item	Description	Measure	Point Scale	Points Assigned	Weighting Factor	Maximum Weighting	Score	
A.	Aquifer Area	> 50 km ²	3	1	1	10%	0.0	
		10 – 50 km ²	2		0.5		0.0	
		< 10 km ²	1		0.25		2.5	
B.	Aquifer Classification and Ranking	Degree of Development	I	3	2	1	10%	0.0
			II	2		0.5	5.0	
			III	1		0.25	0.0	
C.	Aquifer Classification and Ranking	Vulnerability	A	3	2	1	5%	0.0
			B	2		0.5	2.5	
			C	1		0.25	0.0	
D.	Aquifer Classification and Ranking	Ranking Value (based on 7 sub-factors)	5 to 21	11	1.0 – 0.24	5%	2.6	
E.	Estimated Current Ground Water Use	High > 64 L/s	3	1	1	10%	0.0	
		Medium 32 - 64 L/s	2		0.5	0.0		
		Low < 32 L/s	1		0.25	2.5		
F.	Number of Ground Water Supply Systems	> 5	3	1	1	15%	0.0	
		2 – 5	2		0.66		0.0	
		1	1		0.33		5.0	
		none reported	0		0		0.0	
G.	Number of Reported Irrigation Wells	> 10	3	1	1	10%	0.0	
		2 – 10	2		0.5		0.0	
		< 2	1		0.25		2.5	
		none reported	0		0		0.0	
H.	Well Density	> 5 km ²	3	3	1	10%	10.0	
		1 – 5 km ²	2		0.5		0.0	
		< 1 km ²	1		0.25		0.0	
I.	Water Quantity Issues/Concerns Reported	> 3 (regional)	3	0	1	10%	0.0	
		2 to 3 (local)	2		0.5		0.0	
		1 (isolated)	1		0.25		0.0	
		none reported	0		0		0.0	
J.	Estimated Population Served by Groundwater	> 1000	3	1	1	10%	0.0	
		500 - 1000	2		0.5		0.0	
		< 500	1		0.25		2.5	
K.	Other, e.g. future land development	Being planned	3	2	1	5%	0.0	
		Possible	2		0.5		2.5	
		Unlikely	1		0.25		0.0	
						Total	37.6	

Aquifer Number: 344		Type: Unconsolidated		Location: Ellison Lake to Wood Lake					
Item	Description	Measure	Point Scale	Points Assigned	Weighting Factor	Maximum Weighting	Score		
A.	Aquifer Area	> 50 km ²	3	1	1	10%	0.0		
		10 – 50 km ²	2		0.5		0.0		
		< 10 km ²	1		0.25		2.5		
B.	Aquifer Classification and Ranking	Degree of Development	I	3	1	10%	10.0		
			II				2	0.5	0.0
			III				1	0.25	0.0
C.	Aquifer Classification and Ranking	Vulnerability	A	2	1	5%	0.0		
			B				2	0.5	2.5
			C				1	0.25	0.0
D.	Aquifer Classification and Ranking	Ranking Value (based on 7 sub-factors)	5 to 21	13	1.0 – 0.24	5%	3.1		
E.	Estimated Current Ground Water Use	High > 64 L/s	3	2	1	10%	0.0		
		Medium 32 - 64 L/s	2		0.5		5.0		
		Low < 32 L/s	1		0.25		0.0		
F.	Number of Ground Water Supply Systems	> 5	3	3	1	15%	15.0		
		2 – 5	2		0.66		0.0		
		1	1		0.33		0.0		
		none reported	0		0		0.0		
G.	Number of Reported Irrigation Wells	> 10	3	2	1	10%	0.0		
		2 – 10	2		0.5		5.0		
		< 2	1		0.25		0.0		
		none reported	0		0		0.0		
H.	Well Density	> 5 km ²	3	3	1	10%	10.0		
		1 – 5 km ²	2		0.5		0.0		
		< 1 km ²	1		0.25		0.0		
I.	Water Quantity Issues/Concerns Reported	> 3 (regional)	3	0	1	10%	0.0		
		2 to 3 (local)	2		0.5		0.0		
		1 (isolated)	1		0.25		0.0		
		none reported	0		0		0.0		
J.	Estimated Population Served by Groundwater	> 1000	3	3	1	10%	10.0		
		500 - 1000	2		0.5		0.0		
		< 500	1		0.25		0.0		
K.	Other, e.g. future land development	Being planned	3	2	1	5%	0.0		
		Possible	2		0.5		2.5		
		Unlikely	1		0.25		0.0		
						Total	65.6		

Aquifer Number 345		Type: Unconsolidated		Location: Oyama				
Item	Description	Measure	Point Scale	Points Assigned	Weighting Factor	Maximum Weighting	Score	
A.	Aquifer Area	> 50 km ²	3	1	1	10%	0.0	
		10 – 50 km ²	2		0.5		0.0	
		< 10 km ²	1		0.25		2.5	
B.	Aquifer Classification and Ranking	Degree of Development	I	3	2	1	10%	0.0
			II	2		0.5	5.0	
			III	1		0.25	0.0	
C.	Aquifer Classification and Ranking	Vulnerability	A	3	3	1	5%	5.0
			B	2		0.5		0.0
			C	1		0.25		0.0
D.	Aquifer Classification and Ranking	Ranking Value (based on 7 sub-factors)	5 to 21	14	1.0 – 0.24	5%	3.3	
E.	Estimated Current Ground Water Use	High > 64 L/s	3	2	1	10%	0.0	
		Medium 32 - 64 L/s	2		0.5		5.0	
		Low < 32 L/s	1		0.25		0.0	
F.	Number of Ground Water Supply Systems	> 5	3	1	1	15%	0.0	
		2 – 5	2		0.66		0.0	
		1	1		0.33		5.0	
		none reported	0		0		0.0	
G.	Number of Reported Irrigation Wells	> 10	3	2	1	10%	0.0	
		2 – 10	2		0.5		5.0	
		< 2	1		0.25		0.0	
		none reported	0		0		0.0	
H.	Well Density	> 5 km ²	3	3	1	10%	10.0	
		1 – 5 km ²	2		0.5		0.0	
		< 1 km ²	1		0.25		0.0	
I.	Water Quantity Issues/Concerns Reported	> 3 (regional)	3	0	1	10%	0.0	
		2 to 3 (local)	2		0.5		0.0	
		1 (isolated)	1		0.25		0.0	
		none reported	0		0		0.0	
J.	Estimated Population Served by Groundwater	> 1000	3	2	1	10%	0.0	
		500 - 1000	2		0.5		5.0	
		< 500	1		0.25		0.0	
K.	Other, e.g. future land development	Being planned	3	2	1	5%	0.0	
		Possible	2		0.5		2.5	
		Unlikely	1		0.25		0.0	
						Total	48.3	

Aquifer Number: 346		Type: Unconsolidated		Location: Kalamalka Lake to Vernon					
Item	Description	Measure	Point Scale	Points Assigned	Weighting Factor	Maximum Weighting	Score		
A.	Aquifer Area	> 50 km ²	3	1	1	10%	0.0		
		10 – 50 km ²	2		0.5		0.0		
		< 10 km ²	1		0.25		2.5		
B.	Aquifer Classification and Ranking	Degree of Development	I	3	1	10%	10.0		
			II				2	0.5	0.0
			III				1	0.25	0.0
C.	Aquifer Classification and Ranking	Vulnerability	A	3	1	5%	5.0		
			B				2	0.5	0.0
			C				1	0.25	0.0
D.	Aquifer Classification and Ranking	Ranking Value (based on 7 sub-factors)	5 to 21	13	1.0 – 0.24	5%	3.1		
E.	Estimated Current Ground Water Use	High > 64 L/s	3	1	10%	0.0			
		Medium 32 - 64 L/s	2			0.5	0.0		
		Low < 32 L/s	1			0.25	2.5		
F.	Number of Ground Water Supply Systems	> 5	3	1	15%	0.0			
		2 – 5	2			0.66	0.0		
		1	1			0.33	0.0		
		none reported	0			0	0.0		
G.	Number of Reported Irrigation Wells	> 10	3	1	10%	0.0			
		2 – 10	2			0.5	5.0		
		< 2	1			0.25	0.0		
		none reported	0			0	0.0		
H.	Well Density	> 5 km ²	3	3	1	10%	10.0		
		1 – 5 km ²	2				0.5	0.0	
		< 1 km ²	1				0.25	0.0	
I.	Water Quantity Issues/Concerns Reported	> 3 (regional)	3	1	10%	0.0			
		2 to 3 (local)	2			0.5	0.0		
		1 (isolated)	1			0.25	0.0		
		none reported	0			0	0.0		
J.	Estimated Population Served by Groundwater	> 1000	3	1	10%	0.0			
		500 - 1000	2			0.5	0.0		
		< 500	1			0.25	2.5		
K.	Other, e.g. future land development	Being planned	3	1	5%	0.0			
		Possible	2			0.5	0.0		
		Unlikely	1			0.25	1.7		
						Total	42.3		

Aquifer Number: 347		Type: Unconsolidated		Location: Okanagan Landing					
Item	Description	Measure	Point Scale	Points Assigned	Weighting Factor	Maximum Weighting	Score		
A.	Aquifer Area	> 50 km ²	3	1	1	10%	0.0		
		10 – 50 km ²	2		0.5		0.0		
		< 10 km ²	1		0.25		2.5		
B.	Aquifer Classification and Ranking	Degree of Development	I	3	1	10%	10.0		
			II				2	0.5	0.0
			III				1	0.25	0.0
C.	Aquifer Classification and Ranking	Vulnerability	A	3	1	5%	0.0		
			B				2	0.5	0.0
			C				1	0.25	1.7
D.	Aquifer Classification and Ranking	Ranking Value (based on 7 sub-factors)	5 to 21	12	1.0 – 0.24	5%	2.9		
E.	Estimated Current Ground Water Use	High > 64 L/s	3	1	1	10%	0.0		
		Medium 32 - 64 L/s	2		0.5		0.0		
		Low < 32 L/s	1		0.25		2.5		
F.	Number of Ground Water Supply Systems	> 5	3	1	0.66	15%	0.0		
		2 – 5	2				0.0		
		1	1				0.33	0.0	
		none reported	0				0	0.0	
G.	Number of Reported Irrigation Wells	> 10	3	2	1	10%	0.0		
		2 – 10	2				0.5	5.0	
		< 2	1				0.25	0.0	
		none reported	0				0	0.0	
H.	Well Density	> 5 km ²	3	3	1	10%	10.0		
		1 – 5 km ²	2		0.5		0.0		
		< 1 km ²	1		0.25		0.0		
I.	Water Quantity Issues/Concerns Reported	> 3 (regional)	3	0	1	10%	0.0		
		2 to 3 (local)	2		0.5		0.0		
		1 (isolated)	1		0.25		0.0		
		none reported	0		0		0.0		
J.	Estimated Population Served by Groundwater	> 1000	3	2	1	10%	0.0		
		500 - 1000	2		0.5		5.0		
		< 500	1		0.25		0.0		
K.	Other, e.g. future land development	Being planned	3	2	1	5%	0.0		
		Possible	2		0.5		2.5		
		Unlikely	1		0.25		0.0		
						Total	42.0		

Aquifer Number: 348		Type: Unconsolidated	Location: Just north of Vernon to north of Swan Lake				
Item	Description	Measure	Point Scale	Points Assigned	Weighting Factor	Maximum Weighting	Score
A.	Aquifer Area	> 50 km ²	3	2	1	10%	0.0
		10 – 50 km ²	2		0.5		5.0
		< 10 km ²	1		0.25		0.0
B.	Aquifer Classification and Ranking	Degree of Development	I	2	1	10%	0.0
			II		0.5		5.0
			III		0.25		0.0
C.	Aquifer Classification and Ranking	Vulnerability	A	1	1	5%	0.0
			B		0.5		0.0
			C		0.25		1.7
D.	Aquifer Classification and Ranking	Ranking Value (based on 7 sub-factors)	5 to 21	10	1.0 – 0.24	5%	2.4
E.	Estimated Current Ground Water Use	High > 64 L/s	3	1	1	10%	0.0
		Medium 32 - 64 L/s	2		0.5		0.0
		Low < 32 L/s	1		0.25		2.5
F.	Number of Ground Water Supply Systems	> 5	3	0	1	15%	0.0
		2 – 5	2		0.66		0.0
		1	1		0.33		0.0
		none reported	0		0		0.0
G.	Number of Reported Irrigation Wells	> 10	3	2	1	10%	0.0
		2 – 10	2		0.5		5.0
		< 2	1		0.25		0.0
		none reported	0		0		0.0
H.	Well Density	> 5 km ²	3	3	1	10%	10.0
		1 – 5 km ²	2		0.5		0.0
		< 1 km ²	1		0.25		0.0
I.	Water Quantity Issues/Concerns Reported	> 3 (regional)	3	0	1	10%	0.0
		2 to 3 (local)	2		0.5		0.0
		1 (isolated)	1		0.25		0.0
		none reported	0		0		0.0
J.	Estimated Population Served by Groundwater	> 1000	3	1	1	10%	0.0
		500 - 1000	2		0.5		0.0
		< 500	1		0.25		2.5
K.	Other, e.g. future land development	Being planned	3	2	1	5%	0.0
		Possible	2		0.5		2.5
		Unlikely	1		0.25		0.0
						Total	36.5

Aquifer Number: 349		Type: Unconsolidated		Location: Northeast of Vernon along BX Creek			
Item	Description	Measure	Point Scale	Points Assigned	Weighting Factor	Maximum Weighting	Score
A.	Aquifer Area	> 50 km ²	3	2	1	10%	0.0
		10 – 50 km ²	2		0.5		5.0
		< 10 km ²	1		0.25		0.0
B.	Aquifer Classification and Ranking	Degree of Development	I	2	1	10%	0.0
			II		0.5		5.0
			III		0.25		0.0
C.	Aquifer Classification and Ranking	Vulnerability	A	1	1	5%	0.0
			B		0.5		0.0
			C		0.25		1.7
D.	Aquifer Classification and Ranking	Ranking Value (based on 7 sub-factors)	5 to 21	8	1.0 – 0.24	5%	1.9
E.	Estimated Current Ground Water Use	High > 64 L/s	3	1	1	10%	0.0
		Medium 32 - 64 L/s	2		0.5		0.0
		Low < 32 L/s	1		0.25		2.5
F.	Number of Ground Water Supply Systems	> 5	3	2	1	15%	0.0
		2 – 5	2		0.66		10.0
		1	1		0.33		0.0
		none reported	0		0		0.0
G.	Number of Reported Irrigation Wells	> 10	3	2	1	10%	0.0
		2 – 10	2		0.5		5.0
		< 2	1		0.25		0.0
		none reported	0		0		0.0
H.	Well Density	> 5 km ²	3	3	1	10%	10.0
		1 – 5 km ²	2		0.5		0.0
		< 1 km ²	1		0.25		0.0
I.	Water Quantity Issues/Concerns Reported	> 3 (regional)	3	0	1	10%	0.0
		2 to 3 (local)	2		0.5		0.0
		1 (isolated)	1		0.25		0.0
		none reported	0		0		0.0
J.	Estimated Population Served by Groundwater	> 1000	3	2	1	10%	0.0
		500 - 1000	2		0.5		5.0
		< 500	1		0.25		0.0
K.	Other, e.g. future land development	Being planned	3	2	1	5%	0.0
		Possible	2		0.5		2.5
		Unlikely	1		0.25		0.0
						Total	48.6

Aquifer Number: 352		Type: Unconsolidated		Location: Coldstream Valley E of Lavington to W of Lumbly				
Item	Description	Measure	Point Scale	Points Assigned	Weighting Factor	Maximum Weighting	Score	
A.	Aquifer Area	> 50 km ²	3	2	1	10%	0.0	
		10 – 50 km ²	2		0.5		5.0	
		< 10 km ²	1		0.25		0.0	
B.	Aquifer Classification and Ranking	Degree of Development	I	3	2	1	10%	0.0
			II	2		0.5	5.0	
			III	1		0.25	0.0	
C.	Aquifer Classification and Ranking	Vulnerability	A	3	1	1	5%	0.0
			B	2		0.5	0.0	
			C	1		0.25	1.7	
D.	Aquifer Classification and Ranking	Ranking Value (based on 7 sub-factors)	5 to 21	11	1.0 – 0.24	5%	2.6	
E.	Estimated Current Ground Water Use	High > 64 L/s	3	2	1	10%	0.0	
		Medium 32 - 64 L/s	2		0.5		5.0	
		Low < 32 L/s	1		0.25		0.0	
F.	Number of Ground Water Supply Systems	> 5	3	2	1	15%	0.0	
		2 – 5	2		0.66		10.0	
		1	1		0.33		0.0	
		none reported	0		0		0.0	
G.	Number of Reported Irrigation Wells	> 10	3	2	1	10%	0.0	
		2 – 10	2		0.5		5.0	
		< 2	1		0.25		0.0	
		none reported	0		0		0.0	
H.	Well Density	> 5 km ²	3	2	1	10%	0.0	
		1 – 5 km ²	2		0.5		5.0	
		< 1 km ²	1		0.25		0.0	
I.	Water Quantity Issues/Concerns Reported	> 3 (regional)	3	1	1	10%	0.0	
		2 to 3 (local)	2		0.5		0.0	
		1 (isolated)	1		0.25		2.5	
		none reported	0		0		0.0	
J.	Estimated Population Served by Groundwater	> 1000	3	2	1	10%	0.0	
		500 - 1000	2		0.5		5.0	
		< 500	1		0.25		0.0	
K.	Other, e.g. future land development	Being planned	3	2	1	5%	0.0	
		Possible	2		0.5		2.5	
		Unlikely	1		0.25		0.0	
						Total	49.3	

Aquifer Number: 353		Type: Unconsolidated		Location: SE of Armstrong						
Item	Description	Measure	Point Scale	Points Assigned	Weighting Factor	Maximum Weighting	Score			
A.	Aquifer Area	> 50 km ²	3	1	1	10%	0.0			
		10 – 50 km ²	2		0.5		0.0			
		< 10 km ²	1		0.25		2.5			
B.	Aquifer Classification and Ranking	Degree of Development	I	3	3	1	10%	10.0		
			II					2	0.5	0.0
			III					1	0.25	0.0
C.	Aquifer Classification and Ranking	Vulnerability	A	3	3	1	5%	5.0		
			B					2	0.5	0.0
			C					1	0.25	0.0
D.	Aquifer Classification and Ranking	Ranking Value (based on 7 sub-factors)	5 to 21	14	1.0 – 0.24	5%	3.3			
E.	Estimated Current Ground Water Use	High > 64 L/s	3	2	1	10%	0.0			
		Medium 32 - 64 L/s	2				0.5	5.0		
		Low < 32 L/s	1				0.25	0.0		
F.	Number of Ground Water Supply Systems	> 5	3	2	1	15%	0.0			
		2 – 5	2				0.66	10.0		
		1	1				0.33	0.0		
		none reported	0				0	0.0		
G.	Number of Reported Irrigation Wells	> 10	3	2	1	10%	0.0			
		2 – 10	2				0.5	5.0		
		< 2	1				0.25	0.0		
		none reported	0				0	0.0		
H.	Well Density	> 5 km ²	3	3	1	10%	10.0			
		1 – 5 km ²	2				0.5	0.0		
		< 1 km ²	1				0.25	0.0		
I.	Water Quantity Issues/Concerns Reported	> 3 (regional)	3	0	1	10%	0.0			
		2 to 3 (local)	2				0.5	0.0		
		1 (isolated)	1				0.25	0.0		
		none reported	0				0	0.0		
J.	Estimated Population Served by Groundwater	> 1000	3	1	1	10%	0.0			
		500 - 1000	2				0.5	0.0		
		< 500	1				0.25	2.5		
K.	Other, e.g. future land development	Being planned	3	2	1	5%	0.0			
		Possible	2				0.5	2.5		
		Unlikely	1				0.25	0.0		
						Total	55.8			

Aquifer Number: 354		Type: Unconsolidated		Location: O'Keefe Valley and Grandview Flats			
Item	Description	Measure	Point Scale	Points Assigned	Weighting Factor	Maximum Weighting	Score
A.	Aquifer Area	> 50 km ²	3	2	1	10%	0.0
		10 – 50 km ²	2		0.5		5.0
		< 10 km ²	1		0.25		0.0
B.	Aquifer Classification and Ranking	Degree of Development	I	2	1	10%	0.0
			II		0.5		5.0
			III		0.25		0.0
C.	Aquifer Classification and Ranking	Vulnerability	A	3	1	5%	5.0
			B		0.5		0.0
			C		0.25		0.0
D.	Aquifer Classification and Ranking	Ranking Value (based on 7 sub-factors)	5 to 21	13	1.0 – 0.24	5%	3.1
E.	Estimated Current Ground Water Use	High > 64 L/s	3	2	1	10%	0.0
		Medium 32 - 64 L/s	2		0.5		5.0
		Low < 32 L/s	1		0.25		0.0
F.	Number of Ground Water Supply Systems	> 5	3	2	1	15%	0.0
		2 – 5	2		0.66		10.0
		1	1		0.33		0.0
		none reported	0		0		0.0
G.	Number of Reported Irrigation Wells	> 10	3	2	1	10%	0.0
		2 – 10	2		0.5		5.0
		< 2	1		0.25		0.0
		none reported	0		0		0.0
H.	Well Density	> 5 km ²	3	2	1	10%	0.0
		1 – 5 km ²	2		0.5		5.0
		< 1 km ²	1		0.25		0.0
I.	Water Quantity Issues/Concerns Reported	> 3 (regional)	3	1	1	10%	0.0
		2 to 3 (local)	2		0.5		0.0
		1 (isolated)	1		0.25		2.5
		none reported	0		0		0.0
J.	Estimated Population Served by Groundwater	> 1000	3	1	1	10%	0.0
		500 - 1000	2		0.5		0.0
		< 500	1		0.25		2.5
K.	Other, e.g. future land development	Being planned	3	2	1	5%	0.0
		Possible	2		0.5		2.5
		Unlikely	1		0.25		0.0
						Total	50.6

Aquifer Number 356		Type: Unconsolidated		Location: Mouth of Deep Creek				
Item	Description	Measure	Point Scale	Points Assigned	Weighting Factor	Maximum Weighting	Score	
A.	Aquifer Area	> 50 km ²	3	1	1	10%	0.0	
		10 – 50 km ²	2		0.5		0.0	
		< 10 km ²	1		0.25		2.5	
B.	Aquifer Classification and Ranking	Degree of Development	I	3	1	10%	0.0	
			II	2			0.5	0.0
			III	1			0.25	2.5
C.	Aquifer Classification and Ranking	Vulnerability	A	3	2	5%	0.0	
			B	2			0.5	2.5
			C	1			0.25	0.0
D.	Aquifer Classification and Ranking	Ranking Value (based on 7 sub-factors)	5 to 21	7	1.0 – 0.24	5%	1.7	
E.	Estimated Current Ground Water Use	High > 64 L/s	3	1	1	10%	0.0	
		Medium 32 - 64 L/s	2		0.5		0.0	
		Low < 32 L/s	1		0.25		2.5	
F.	Number of Ground Water Supply Systems	> 5	3	0	1	15%	0.0	
		2 – 5	2		0.66		0.0	
		1	1		0.33		0.0	
		none reported	0		0		0.0	
G.	Number of Reported Irrigation Wells	> 10	3	1	1	10%	0.0	
		2 – 10	2		0.5		0.0	
		< 2	1		0.25		2.5	
		none reported	0		0		0.0	
H.	Well Density	> 5 km ²	3	2	1	10%	0.0	
		1 – 5 km ²	2		0.5		5.0	
		< 1 km ²	1		0.25		0.0	
I.	Water Quantity Issues/Concerns Reported	> 3 (regional)	3	1	1	10%	0.0	
		2 to 3 (local)	2		0.5		0.0	
		1 (isolated)	1		0.25		2.5	
		none reported	0		0		0.0	
J.	Estimated Population Served by Groundwater	> 1000	3	1	1	10%	0.0	
		500 - 1000	2		0.5		0.0	
		< 500	1		0.25		2.5	
K.	Other, e.g. future land development	Being planned	3	1	1	5%	0.0	
		Possible	2		0.5		0.0	
		Unlikely	1		0.25		1.7	
						Total	25.8	

Aquifer Number 357		Type: Unconsolidated		Location: Whiteman Creek Fan				
Item	Description	Measure	Point Scale	Points Assigned	Weighting Factor	Maximum Weighting	Score	
A.	Aquifer Area	> 50 km ²	3	1	1	10%	0.0	
		10 – 50 km ²	2		0.5		0.0	
		< 10 km ²	1		0.25		2.5	
B.	Aquifer Classification and Ranking	Degree of Development	I	3	2	1	10%	0.0
			II	2		0.5	5.0	
			III	1		0.25	0.0	
C.	Aquifer Classification and Ranking	Vulnerability	A	3	3	1	5%	5.0
			B	2	0.5	0.0		
			C	1	0.25	0.0		
D.	Aquifer Classification and Ranking	Ranking Value (based on 7 sub-factors)	5 to 21	11	1.0 – 0.24	5%	2.6	
E.	Estimated Current Ground Water Use	High > 64 L/s	3	1	1	10%	0.0	
		Medium 32 - 64 L/s	2		0.5	0.0		
		Low < 32 L/s	1		0.25	2.5		
F.	Number of Ground Water Supply Systems	> 5	3	1	1	15%	0.0	
		2 – 5	2		0.66		0.0	
		1	1		0.33		5.0	
		none reported	0		0		0.0	
G.	Number of Reported Irrigation Wells	> 10	3	0	1	10%	0.0	
		2 – 10	2		0.5		0.0	
		< 2	1		0.25		0.0	
		none reported	0		0		0.0	
H.	Well Density	> 5 km ²	3	2	1	10%	0.0	
		1 – 5 km ²	2		0.5		5.0	
		< 1 km ²	1		0.25		0.0	
I.	Water Quantity Issues/Concerns Reported	> 3 (regional)	3	0	1	10%	0.0	
		2 to 3 (local)	2		0.5		0.0	
		1 (isolated)	1		0.25		0.0	
		none reported	0		0		0.0	
J.	Estimated Population Served by Groundwater	> 1000	3	1	1	10%	0.0	
		500 - 1000	2		0.5		0.0	
		< 500	1		0.25		2.5	
K.	Other, e.g. future land development	Being planned	3	2	1	5%	0.0	
		Possible	2		0.5		2.5	
		Unlikely	1		0.25		0.0	
						Total	32.6	

Aquifer Number 358		Type: Unconsolidated		Location: Fintry Fan, Short Creek				
Item	Description	Measure	Point Scale	Points Assigned	Weighting Factor	Maximum Weighting	Score	
A.	Aquifer Area	> 50 km ²	3	1	1	10%	0.0	
		10 – 50 km ²	2		0.5		0.0	
		< 10 km ²	1		0.25		2.5	
B.	Aquifer Classification and Ranking	Degree of Development	I	3	2	1	10%	0.0
			II	2		0.5	5.0	
			III	1		0.25	0.0	
C.	Aquifer Classification and Ranking	Vulnerability	A	3	3	1	5%	5.0
			B	2		0.5		0.0
			C	1		0.25		0.0
D.	Aquifer Classification and Ranking	Ranking Value (based on 7 sub-factors)	5 to 21	11	1.0 – 0.24	5%	2.6	
E.	Estimated Current Ground Water Use	High > 64 L/s	3	1	1	10%	0.0	
		Medium 32 - 64 L/s	2		0.5		0.0	
		Low < 32 L/s	1		0.25		2.5	
F.	Number of Ground Water Supply Systems	> 5	3	1	1	15%	0.0	
		2 – 5	2		0.66		0.0	
		1	1		0.33		5.0	
		none reported	0		0		0.0	
G.	Number of Reported Irrigation Wells	> 10	3	1	1	10%	0.0	
		2 – 10	2		0.5		0.0	
		< 2	1		0.25		2.5	
		none reported	0		0		0.0	
H.	Well Density	> 5 km ²	3	3	1	10%	10.0	
		1 – 5 km ²	2		0.5		0.0	
		< 1 km ²	1		0.25		0.0	
I.	Water Quantity Issues/Concerns Reported	> 3 (regional)	3	0	1	10%	0.0	
		2 to 3 (local)	2		0.5		0.0	
		1 (isolated)	1		0.25		0.0	
		none reported	0		0		0.0	
J.	Estimated Population Served by Groundwater	> 1000	3	1	1	10%	0.0	
		500 - 1000	2		0.5		0.0	
		< 500	1		0.25		2.5	
K.	Other, e.g. future land development	Being planned	3	2	1	5%	0.0	
		Possible	2		0.5		2.5	
		Unlikely	1		0.25		0.0	
						Total	40.1	

Aquifer Number 461		Type: Unconsolidated		Location: Upper Mission Creek				
Item	Description	Measure	Point Scale	Points Assigned	Weighting Factor	Maximum Weighting	Score	
A.	Aquifer Area	> 50 km ²	3	2	1	10%	0.0	
		10 – 50 km ²	2		0.5		5.0	
		< 10 km ²	1		0.25		0.0	
B.	Aquifer Classification and Ranking	Degree of Development	I	3	1	10%	0.0	
			II	2			0.5	0.0
			III	1			0.25	2.5
C.	Aquifer Classification and Ranking	Vulnerability	A	3	2	5%	0.0	
			B	2			0.5	2.5
			C	1			0.25	0.0
D.	Aquifer Classification and Ranking	Ranking Value (based on 7 sub-factors)	5 to 21	9	1.0 – 0.24	5%	2.1	
E.	Estimated Current Ground Water Use	High > 64 L/s	3	1	1	10%	0.0	
		Medium 32 - 64 L/s	2		0.5		0.0	
		Low < 32 L/s	1		0.25		2.5	
F.	Number of Ground Water Supply Systems	> 5	3	2	1	15%	0.0	
		2 – 5	2		0.66		10.0	
		1	1		0.33		0.0	
		none reported	0		0		0.0	
G.	Number of Reported Irrigation Wells	> 10	3	0	1	10%	0.0	
		2 – 10	2		0.5		0.0	
		< 2	1		0.25		0.0	
		none reported	0		0		0.0	
H.	Well Density	> 5 km ²	3	2	1	10%	0.0	
		1 – 5 km ²	2		0.5		5.0	
		< 1 km ²	1		0.25		0.0	
I.	Water Quantity Issues/Concerns Reported	> 3 (regional)	3	1	1	10%	0.0	
		2 to 3 (local)	2		0.5		0.0	
		1 (isolated)	1		0.25		2.5	
		none reported	0		0		0.0	
J.	Estimated Population Served by Groundwater	> 1000	3	1	1	10%	0.0	
		500 - 1000	2		0.5		0.0	
		< 500	1		0.25		2.5	
K.	Other, e.g. future land development	Being planned	3	2	1	5%	0.0	
		Possible	2		0.5		2.5	
		Unlikely	1		0.25		0.0	
						Total	37.1	

Aquifer Number 462		Type: Unconsolidated		Location: 1 km. south of Mission Creek				
Item	Description	Measure	Point Scale	Points Assigned	Weighting Factor	Maximum Weighting	Score	
A.	Aquifer Area	> 50 km ²	3	1	1	10%	0.0	
		10 – 50 km ²	2		0.5		0.0	
		< 10 km ²	1		0.25		2.5	
B.	Aquifer Classification and Ranking	Degree of Development	I	3	1	10%	0.0	
			II	2			0.5	0.0
			III	1			0.25	2.5
C.	Aquifer Classification and Ranking	Vulnerability	A	3	3	5%	5.0	
			B	2			0.5	0.0
			C	1			0.25	0.0
D.	Aquifer Classification and Ranking	Ranking Value (based on 7 sub-factors)	5 to 21	9	1.0 – 0.24	5%	2.1	
E.	Estimated Current Ground Water Use	High > 64 L/s	3	2	1	10%	0.0	
		Medium 32 - 64 L/s	2		0.5		5.0	
		Low < 32 L/s	1		0.25		0.0	
F.	Number of Ground Water Supply Systems	> 5	3	1	1	15%	0.0	
		2 – 5	2		0.66		0.0	
		1	1		0.33		5.0	
		none reported	0		0		0.0	
G.	Number of Reported Irrigation Wells	> 10	3	2	1	10%	0.0	
		2 – 10	2		0.5		5.0	
		< 2	1		0.25		0.0	
		none reported	0		0		0.0	
H.	Well Density	> 5 km ²	3	3	1	10%	10.0	
		1 – 5 km ²	2		0.5		0.0	
		< 1 km ²	1		0.25		0.0	
I.	Water Quantity Issues/Concerns Reported	> 3 (regional)	3	0	1	10%	0.0	
		2 to 3 (local)	2		0.5		0.0	
		1 (isolated)	1		0.25		0.0	
		none reported	0		0		0.0	
J.	Estimated Population Served by Groundwater	> 1000	3	1	1	10%	0.0	
		500 - 1000	2		0.5		0.0	
		< 500	1		0.25		2.5	
K.	Other, e.g. future land development	Being planned	3	2	1	5%	0.0	
		Possible	2		0.5		2.5	
		Unlikely	1		0.25		0.0	
						Total	42.1	

Aquifer Number: 463		Type: Unconsolidated		Location: S, E, NE of Kelowna; S & E side of valley				
Item	Description	Measure	Point Scale	Points Assigned	Weighting Factor	Maximum Weighting	Score	
A.	Aquifer Area	> 50 km ²	3	3	1	10%	10.0	
		10 – 50 km ²	2		0.5		0.0	
		< 10 km ²	1		0.25		0.0	
B.	Aquifer Classification and Ranking	Degree of Development	I	3	1	10%	10.0	
			II		2		0.5	0.0
			III		1		0.25	0.0
C.	Aquifer Classification and Ranking	Vulnerability	A	3	1	5%	0.0	
			B		2		0.5	0.0
			C		1		0.25	1.7
D.	Aquifer Classification and Ranking	Ranking Value (based on 7 sub-factors)	5 to 21	14	1.0 – 0.24	5%	3.3	
E.	Estimated Current Ground Water Use	High > 64 L/s	3	3	1	10%	10.0	
		Medium 32 - 64 L/s	2		0.5		0.0	
		Low < 32 L/s	1		0.25		0.0	
F.	Number of Ground Water Supply Systems	> 5	3	2	1	15%	0.0	
		2 – 5	2		0.66		10.0	
		1	1		0.33		0.0	
		none reported	0		0		0.0	
G.	Number of Reported Irrigation Wells	> 10	3	2	1	10%	0.0	
		2 – 10	2		0.5		5.0	
		< 2	1		0.25		0.0	
		none reported	0		0		0.0	
H.	Well Density	> 5 km ²	3	2	1	10%	0.0	
		1 – 5 km ²	2		0.5		5.0	
		< 1 km ²	1		0.25		0.0	
I.	Water Quantity Issues/Concerns Reported	> 3 (regional)	3	1	1	10%	0.0	
		2 to 3 (local)	2		0.5		0.0	
		1 (isolated)	1		0.25		2.5	
		none reported	0				0.0	
J.	Estimated Population Served by Groundwater	> 1000	3	3	1	10%	10.0	
		500 - 1000	2		0.5		0.0	
		< 500	1		0.25		0.0	
K.	Other, e.g. future land development	Being planned	3	3	1	5%	5.0	
		Possible	2		0.5		0.0	
		Unlikely	1		0.25		0.0	
						Total	72.5	

Aquifer Number: 464		Type: Unconsolidated		Location: Valley bottom S, E, NE of Kelowna				
Item	Description	Measure	Point Scale	Points Assigned	Weighting Factor	Maximum Weighting	Score	
A.	Aquifer Area	> 50 km ²	3	3	1	10%	10.0	
		10 – 50 km ²	2		0.5		0.0	
		< 10 km ²	1		0.25		0.0	
B.	Aquifer Classification and Ranking	Degree of Development	I	3	1	10%	10.0	
			II		2		0.5	0.0
			III		1		0.25	0.0
C.	Aquifer Classification and Ranking	Vulnerability	A	3	1	5%	0.0	
			B		2		0.5	0.0
			C		1		0.25	1.7
D.	Aquifer Classification and Ranking	Ranking Value (based on 7 sub-factors)	5 to 21	14	1.0 – 0.24	5%	3.3	
E.	Estimated Current Ground Water Use	High > 64 L/s	3	3	1	10%	10.0	
		Medium 32 - 64 L/s	2		0.5		0.0	
		Low < 32 L/s	1		0.25		0.0	
F.	Number of Ground Water Supply Systems	> 5	3	2	1	15%	0.0	
		2 – 5	2		0.66		10.0	
		1	1		0.33		0.0	
		none reported	0		0		0.0	
G.	Number of Reported Irrigation Wells	> 10	3	3	1	10%	10.0	
		2 – 10	2		0.5		0.0	
		< 2	1		0.25		0.0	
		none reported	0		0		0.0	
H.	Well Density	> 5 km ²	3	2	1	10%	0.0	
		1 – 5 km ²	2		0.5		5.0	
		< 1 km ²	1		0.25		0.0	
I.	Water Quantity Issues/Concerns Reported	> 3 (regional)	3	1	1	10%	0.0	
		2 to 3 (local)	2		0.5		0.0	
		1 (isolated)	1		0.25		2.5	
		none reported	0				0.0	
J.	Estimated Population Served by Groundwater	> 1000	3	3	1	10%	10.0	
		500 - 1000	2		0.5		0.0	
		< 500	1		0.25		0.0	
K.	Other, e.g. future land development	Being planned	3	3	1	5%	5.0	
		Possible	2		0.5		0.0	
		Unlikely	1		0.25		0.0	
						Total	77.5	

Aquifer Number 465		Type: Unconsolidated Location: S. Kelowna; possibly E. to Rutland						
Item	Description	Measure	Point Scale	Points Assigned	Weighting Factor	Maximum Weighting	Score	
A.	Aquifer Area	> 50 km ²	3	1	1	10%	0.0	
		10 – 50 km ²	2		0.5		0.0	
		< 10 km ²	1		0.25		2.5	
B.	Aquifer Classification and Ranking	Degree of Development	I	3	1	10%	0.0	
			II	2			0.5	0.0
			III	1			0.25	2.5
C.	Aquifer Classification and Ranking	Vulnerability	A	3	1	5%	0.0	
			B	2			0.5	0.0
			C	1			0.25	1.7
D.	Aquifer Classification and Ranking	Ranking Value (based on 7 sub-factors)	5 to 21	5	1.0 – 0.24	5%	1.2	
E.	Estimated Current Ground Water Use	High > 64 L/s	3	1	1	10%	0.0	
		Medium 32 - 64 L/s	2		0.5		0.0	
		Low < 32 L/s	1		0.25		2.5	
F.	Number of Ground Water Supply Systems	> 5	3	0	1	15%	0.0	
		2 – 5	2		0.66		0.0	
		1	1		0.33		0.0	
		none reported	0		0		0.0	
G.	Number of Reported Irrigation Wells	> 10	3	0	1	10%	0.0	
		2 – 10	2		0.5		0.0	
		< 2	1		0.25		0.0	
		none reported	0		0		0.0	
H.	Well Density	> 5 km ²	3	1	1	10%	0.0	
		1 – 5 km ²	2		0.5		0.0	
		< 1 km ²	1		0.25		2.5	
I.	Water Quantity Issues/Concerns Reported	> 3 (regional)	3	0	1	10%	0.0	
		2 to 3 (local)	2		0.5		0.0	
		1 (isolated)	1		0.25		0.0	
		none reported	0		0		0.0	
J.	Estimated Population Served by Groundwater	> 1000	3	1	1	10%	0.0	
		500 - 1000	2		0.5		0.0	
		< 500	1		0.25		2.5	
K.	Other, e.g. future land development	Being planned	3	1	1	5%	0.0	
		Possible	2		0.5		0.0	
		Unlikely	1		0.25		1.7	
						Total	17.0	

Aquifer Number 466		Type: Unconsolidated		Location: 6 km. SE of Kelowna				
Item	Description	Measure	Point Scale	Points Assigned	Weighting Factor	Maximum Weighting	Score	
A.	Aquifer Area	> 50 km ²	3	1	1	10%	0.0	
		10 – 50 km ²	2		0.5		0.0	
		< 10 km ²	1		0.25		2.5	
B.	Aquifer Classification and Ranking	Degree of Development	I	3	1	10%	0.0	
			II	2			0.5	0.0
			III	1			0.25	2.5
C.	Aquifer Classification and Ranking	Vulnerability	A	3	3	5%	5.0	
			B	2			0.5	0.0
			C	1			0.25	0.0
D.	Aquifer Classification and Ranking	Ranking Value (based on 7 sub-factors)	5 to 21	10	1.0 – 0.24	5%	2.4	
E.	Estimated Current Ground Water Use	High > 64 L/s	3	1	1	10%	0.0	
		Medium 32 - 64 L/s	2		0.5		0.0	
		Low < 32 L/s	1		0.25		2.5	
F.	Number of Ground Water Supply Systems	> 5	3	1	1	15%	0.0	
		2 – 5	2		0.66		0.0	
		1	1		0.33		0.0	
		none reported	0		0		0.0	
G.	Number of Reported Irrigation Wells	> 10	3	1	1	10%	0.0	
		2 – 10	2		0.5		0.0	
		< 2	1		0.25		0.0	
		none reported	0		0		0.0	
H.	Well Density	> 5 km ²	3	3	1	10%	10.0	
		1 – 5 km ²	2		0.5		0.0	
		< 1 km ²	1		0.25		0.0	
I.	Water Quantity Issues/Concerns Reported	> 3 (regional)	3	1	1	10%	0.0	
		2 to 3 (local)	2		0.5		0.0	
		1 (isolated)	1		0.25		0.0	
		none reported	0		0		0.0	
J.	Estimated Population Served by Groundwater	> 1000	3	1	1	10%	0.0	
		500 - 1000	2		0.5		0.0	
		< 500	1		0.25		2.5	
K.	Other, e.g. future land development	Being planned	3	1	1	5%	0.0	
		Possible	2		0.5		0.0	
		Unlikely	1		0.25		1.7	
						Total	29.0	

Aquifer Number: 467		Type: Unconsolidated		Location: East Kelowna and Rutland Area			
Item	Description	Measure	Point Scale	Points Assigned	Weighting Factor	Maximum Weighting	Score
A.	Aquifer Area	> 50 km ²	3	2	1	10%	0.0
		10 – 50 km ²	2		0.5		5.0
		< 10 km ²	1		0.25		0.0
B.	Aquifer Classification and Ranking	Degree of Development	I	2	1	10%	0.0
			II		0.5		5.0
			III		0.25		0.0
C.	Aquifer Classification and Ranking	Vulnerability	A	3	1	5%	5.0
			B		0.5		0.0
			C		0.25		0.0
D.	Aquifer Classification and Ranking	Ranking Value (based on 7 sub-factors)	5 to 21	13	1.0 – 0.24	5%	3.1
E.	Estimated Current Ground Water Use	High > 64 L/s	3	1	1	10%	0.0
		Medium 32 - 64 L/s	2		0.5		0.0
		Low < 32 L/s	1		0.25		2.5
F.	Number of Ground Water Supply Systems	> 5	3	0	1	15%	0.0
		2 – 5	2		0.66		0.0
		1	1		0.33		0.0
		none reported	0		0		0.0
G.	Number of Reported Irrigation Wells	> 10	3	2	1	10%	0.0
		2 – 10	2		0.5		5.0
		< 2	1		0.25		0.0
		none reported	0		0		0.0
H.	Well Density	> 5 km ²	3	3	1	10%	10.0
		1 – 5 km ²	2		0.5		0.0
		< 1 km ²	1		0.25		0.0
I.	Water Quantity Issues/Concerns Reported	> 3 (regional)	3	0	1	10%	0.0
		2 to 3 (local)	2		0.5		0.0
		1 (isolated)	1		0.25		0.0
		none reported	0		0		0.0
J.	Estimated Population Served by Groundwater	> 1000	3	1	1	10%	0.0
		500 - 1000	2		0.5		0.0
		< 500	1		0.25		2.5
K.	Other, e.g. future land development	Being planned	3	2	1	5%	0.0
		Possible	2		0.5		2.5
		Unlikely	1		0.25		0.0
						Total	40.6

Aquifer Number: 468		Type: Unconsolidated		Location: 2 km N of Kelowna; Clifton Rd. area					
Item	Description	Measure	Point Scale	Points Assigned	Weighting Factor	Maximum Weighting	Score		
A.	Aquifer Area	> 50 km ²	3	1	1	10%	0.0		
		10 – 50 km ²	2		0.5		0.0		
		< 10 km ²	1		0.25		2.5		
B.	Aquifer Classification and Ranking	Degree of Development	I	3	3	1	10%	10.0	
			II	2				0.5	0.0
			III	1				0.25	0.0
C.	Aquifer Classification and Ranking	Vulnerability	A	3	1	0.5	5%	0.0	
			B	2				0.25	0.0
			C	1				1	1.7
D.	Aquifer Classification and Ranking	Ranking Value (based on 7 sub-factors)	5 to 21	12	1.0 – 0.24	5%	2.9		
E.	Estimated Current Ground Water Use	High > 64 L/s	3	1	0.5	10%	0.0		
		Medium 32 - 64 L/s	2				0.25	0.0	
		Low < 32 L/s	1				1	2.5	
F.	Number of Ground Water Supply Systems	> 5	3	0	1	15%	0.0		
		2 – 5	2				0.66	0.0	
		1	1				0.33	0.0	
		none reported	0				0	0.0	
G.	Number of Reported Irrigation Wells	> 10	3	0	1	10%	0.0		
		2 – 10	2				0.5	0.0	
		< 2	1				0.25	0.0	
		none reported	0				0	0.0	
H.	Well Density	> 5 km ²	3	2	1	10%	0.0		
		1 – 5 km ²	2				0.5	5.0	
		< 1 km ²	1				0.25	0.0	
I.	Water Quantity Issues/Concerns Reported	> 3 (regional)	3	0	1	10%	0.0		
		2 to 3 (local)	2				0.5	0.0	
		1 (isolated)	1				0.25	0.0	
		none reported	0				0	0.0	
J.	Estimated Population Served by Groundwater	> 1000	3	1	0.5	10%	0.0		
		500 - 1000	2				0.25	0.0	
		< 500	1				1	2.5	
K.	Other, e.g. future land development	Being planned	3	1	1	5%	0.0		
		Possible	2				0.5	0.0	
		Unlikely	1				0.25	1.7	
						Total	28.7		

Aquifer Number 469		Type: Unconsolidated		Location: Glenmore Valley, N. of Kelowna				
Item	Description	Measure	Point Scale	Points Assigned	Weighting Factor	Maximum Weighting	Score	
A.	Aquifer Area	> 50 km ²	3	2	1	10%	0.0	
		10 – 50 km ²	2		0.5		5.0	
		< 10 km ²	1		0.25		0.0	
B.	Aquifer Classification and Ranking	Degree of Development	I	1	1	10%	0.0	
			II		2		0.5	0.0
			III		1		0.25	2.5
C.	Aquifer Classification and Ranking	Vulnerability	A	1	1	5%	0.0	
			B		2		0.5	0.0
			C		1		0.25	1.7
D.	Aquifer Classification and Ranking	Ranking Value (based on 7 sub-factors)	5 to 21	9	1.0 – 0.24	5%	2.1	
E.	Estimated Current Ground Water Use	High > 64 L/s	3	1	1	10%	0.0	
		Medium 32 - 64 L/s	2		0.5		0.0	
		Low < 32 L/s	1		0.25		2.5	
F.	Number of Ground Water Supply Systems	> 5	3	0	1	15%	0.0	
		2 – 5	2		0.66		0.0	
		1	1		0.33		0.0	
		none reported	0		0		0.0	
G.	Number of Reported Irrigation Wells	> 10	3	1	1	10%	0.0	
		2 – 10	2		0.5		0.0	
		< 2	1		0.25		2.5	
		none reported	0		0		0.0	
H.	Well Density	> 5 km ²	3	2	1	10%	0.0	
		1 – 5 km ²	2		0.5		5.0	
		< 1 km ²	1		0.25		0.0	
I.	Water Quantity Issues/Concerns Reported	> 3 (regional)	3	0	1	10%	0.0	
		2 to 3 (local)	2		0.5		0.0	
		1 (isolated)	1		0.25		0.0	
		none reported	0		0		0.0	
J.	Estimated Population Served by Groundwater	> 1000	3	1	1	10%	0.0	
		500 - 1000	2		0.5		0.0	
		< 500	1		0.25		2.5	
K.	Other, e.g. future land development	Being planned	3	2	1	5%	0.0	
		Possible	2		0.5		2.5	
		Unlikely	1		0.25		0.0	
						Total	26.3	

Aquifer Number 809		Type: Unconsolidated		Location:			
Item	Description	Measure	Point Scale	Points Assigned	Weighting Factor	Maximum Weighting	Score
A.	Aquifer Area	> 50 km ²	3	1	1	10%	0.0
		10 – 50 km ²	2		0.5		0.0
		< 10 km ²	1		0.25		2.5
B.	Aquifer Classification and Ranking	Degree of Development I	3	1	1	10%	0.0
		II	2		0.5		0.0
		III	1		0.25		2.5
C.	Aquifer Classification and Ranking	Vulnerability A	3	1	1	5%	0.0
		B	2		0.5		0.0
		C	1		0.25		1.7
D.	Aquifer Classification and Ranking	Ranking Value (based on 7 sub-factors)	5 to 21	7	1.0 – 0.24	5%	1.7
E.	Estimated Current Ground Water Use	High > 64 L/s	3	1	1	10%	0.0
		Medium 32 - 64 L/s	2		0.5		0.0
		Low < 32 L/s	1		0.25		2.5
F.	Number of Ground Water Supply Systems	> 5	3	0	1	15%	0.0
		2 – 5	2		0.66		0.0
		1	1		0.33		0.0
		none reported	0		0		0.0
G.	Number of Reported Irrigation Wells	> 10	3	0	1	10%	0.0
		2 – 10	2		0.5		0.0
		< 2	1		0.25		0.0
		none reported	0		0		0.0
H.	Well Density	> 5 km ²	3	2	1	10%	0.0
		1 – 5 km ²	2		0.5		5.0
		< 1 km ²	1		0.25		0.0
I.	Water Quantity Issues/Concerns Reported	> 3 (regional)	3	0	1	10%	0.0
		2 to 3 (local)	2		0.5		0.0
		1 (isolated)	1		0.25		0.0
		none reported	0		0		0.0
J.	Estimated Population Served by Groundwater	> 1000	3	1	1	10%	0.0
		500 - 1000	2		0.5		0.0
		< 500	1		0.25		2.5
K.	Other, e.g. future land development	Being planned	3	2	1	5%	0.0
		Possible	2		0.5		2.5
		Unlikely	1		0.25		0.0
						Total	20.8

Aquifer Number: 104		Type: Bedrock	Location: 1 kilometre northwest of Hullcar					
Item	Description	Measure	Point Scale	Points Assigned	Weighting Factor	Maximum Weighting	Score	
A.	Aquifer Area	> 50 km ²	3	1	1	10%	0.0	
		10 – 50 km ²	2		0.5		0.0	
		< 10 km ²	1		0.25		2.5	
B.	Aquifer Classification and Ranking	Degree of Development	I	3	2	1	10%	0.0
			II	2		0.5		5.0
			III	1		0.25		0.0
C.	Aquifer Classification and Ranking	Vulnerability	A	3	2	1	5%	0.0
			B	2		0.5		2.5
			C	1		0.25		0.0
D.	Aquifer Classification and Ranking	Ranking Value (based on 7 sub-factors)	5 to 21	9	1.0 – 0.24	5%	2.1	
E.	Estimated Current Ground Water Use	High > 64 L/s	3	1	1	10%	0.0	
		Medium 32 - 64 L/s	2		0.5		0.0	
		Low < 32 L/s	1		0.25		2.5	
F.	Number of Ground Water Supply Systems	> 5	3	0	1	15%	0.0	
		2 – 5	2		0.66		0.0	
		1	1		0.33		0.0	
		none reported	0		0		0.0	
G.	Number of Reported Irrigation Wells	> 10	3	0	1	10%	0.0	
		2 – 10	2		0.5		0.0	
		1	1		0.25		0.0	
		none reported	0		0		0.0	
H.	Well Density	> 5 km ²	3	3	1	10%	10.0	
		1 – 5 km ²	2		0.5		0.0	
		< 1 km ²	1		0.25		0.0	
I.	Water Quantity Issues/Concerns Reported	> 3 (regional)	3	0	1	10%	0.0	
		2 to 3 (local)	2		0.5		0.0	
		1 (isolated)	1		0.25		0.0	
		none reported	0		0		0.0	
J.	Estimated Population Served by Groundwater	> 1000	3	1	1	10%	0.0	
		500 - 1000	2		0.5		0.0	
		< 500	1		0.25		2.5	
K.	Other, e.g. future land development	Being planned	3	2	1	5%	0.0	
		Possible	2		0.5		2.5	
		Unlikely	1		0.25		0.0	
						Total	29.6	

Aquifer Number: 105		Type: Bedrock	Location: Hillcrest				
Item	Description	Measure	Point Scale	Points Assigned	Weighting Factor	Maximum Weighting	Score
A.	Aquifer Area	> 50 km ²	3	1	1	10%	0.0
		10 – 50 km ²	2		0.5		0.0
		< 10 km ²	1		0.25		2.5
B.	Aquifer Classification and Ranking	Degree of Development I	3	1	1	10%	0.0
		II	2		0.5		0.0
		III	1		0.25		2.5
C.	Aquifer Classification and Ranking	Vulnerability A	3	2	1	5%	0.0
		B	2		0.5		2.5
		C	1		0.25		0.0
D.	Aquifer Classification and Ranking	Ranking Value (based on 7 sub-factors)	5 to 21	6	1.0 – 0.24	5%	1.4
E.	Estimated Current Ground Water Use	High > 64 L/s	3	1	1	10%	0.0
		Medium 32 - 64 L/s	2		0.5		0.0
		Low < 32 L/s	1		0.25		2.5
F.	Number of Ground Water Supply Systems	> 5	3	0	1	15%	0.0
		2 – 5	2		0.66		0.0
		1	1		0.33		0.0
		none reported	0		0		0.0
G.	Number of Reported Irrigation Wells	> 10	3	0	1	10%	0.0
		2 – 10	2		0.5		0.0
		1	1		0.25		0.0
		none reported	0		0		0.0
H.	Well Density	> 5 km ²	3	2	1	10%	0.0
		1 – 5 km ²	2		0.5		5.0
		< 1 km ²	1		0.25		0.0
I.	Water Quantity Issues/Concerns Reported	> 3 (regional)	3	0	1	10%	0.0
		2 to 3 (local)	2		0.5		0.0
		1 (isolated)	1		0.25		0.0
		none reported	0		0		0.0
J.	Estimated Population Served by Groundwater	> 1000	3	1	1	10%	0.0
		500 - 1000	2		0.5		0.0
		< 500	1		0.25		2.5
K.	Other, e.g. future land development	Being planned	3	2	1	5%	0.0
		Possible	2		0.5		2.5
		Unlikely	1		0.25		0.0
						Total	21.4

Aquifer Number: 106		Type: Bedrock	Location: Southeast of Leduc Creek					
Item	Description	Measure	Point Scale	Points Assigned	Weighting Factor	Maximum Weighting	Score	
A.	Aquifer Area	> 50 km ²	3	2	1	10%	0.0	
		10 – 50 km ²	2		0.5		5.0	
		< 10 km ²	1		0.25		0.0	
B.	Aquifer Classification and Ranking	Degree of Development	I	3	1	10%	0.0	
			II	2			0.5	0.0
			III	1			0.25	2.5
C.	Aquifer Classification and Ranking	Vulnerability	A	3	1	5%	0.0	
			B	2			0.5	0.0
			C	1			0.25	1.7
D.	Aquifer Classification and Ranking	Ranking Value (based on 7 sub-factors)	5 to 21	7	1.0 – 0.24	5%	1.7	
E.	Estimated Current Ground Water Use	High > 64 L/s	3	1	1	10%	0.0	
		Medium 32 - 64 L/s	2		0.5		0.0	
		Low < 32 L/s	1		0.25		2.5	
F.	Number of Ground Water Supply Systems	> 5	3	0	1	15%	0.0	
		2 – 5	2		0.66		0.0	
		1	1		0.33		0.0	
		none reported	0		0		0.0	
G.	Number of Reported Irrigation Wells	> 10	3	2	1	10%	0.0	
		2 – 10	2		0.5		5.0	
		1	1		0.25		0.0	
		none reported	0		0		0.0	
H.	Well Density	> 5 km ²	3	2	1	10%	0.0	
		1 – 5 km ²	2		0.5		5.0	
		< 1 km ²	1		0.25		0.0	
I.	Water Quantity Issues/Concerns Reported	> 3 (regional)	3	0	1	10%	0.0	
		2 to 3 (local)	2		0.5		0.0	
		1 (isolated)	1		0.25		0.0	
		none reported	0		0		0.0	
J.	Estimated Population Served by Groundwater	> 1000	3	1	1	10%	0.0	
		500 - 1000	2		0.5		0.0	
		< 500	1		0.25		2.5	
K.	Other, e.g. future land development	Being planned	3	2	1	5%	0.0	
		Possible	2		0.5		2.5	
		Unlikely	1		0.25		0.0	
						Total	28.3	

Aquifer Number: 107		Type: Bedrock	Location: Gardom Lake to Enderby				
Item	Description	Measure	Point Scale	Points Assigned	Weighting Factor	Maximum Weighting	Score
A.	Aquifer Area	> 50 km ²	3	2	1	10%	0.0
		10 – 50 km ²	2		0.5		5.0
		< 10 km ²	1		0.25		0.0
B.	Aquifer Classification and Ranking	Degree of Development	I	2	1	10%	0.0
			II		0.5		5.0
			III		0.25		0.0
C.	Aquifer Classification and Ranking	Vulnerability	A	2	1	5%	0.0
			B		0.5		2.5
			C		0.25		0.0
D.	Aquifer Classification and Ranking	Ranking Value (based on 7 sub-factors)	5 to 21	9	1.0 – 0.24	5%	2.1
E.	Estimated Current Ground Water Use	High > 64 L/s	3	1	1	10%	0.0
		Medium 32 - 64 L/s	2		0.5		0.0
		Low < 32 L/s	1		0.25		2.5
F.	Number of Ground Water Supply Systems	> 5	3	0	1	15%	0.0
		2 – 5	2		0.66		0.0
		1	1		0.33		0.0
		none reported	0		0		0.0
G.	Number of Reported Irrigation Wells	> 10	3	0	1	10%	0.0
		2 – 10	2		0.5		0.0
		1	1		0.25		0.0
		none reported	0		0		0.0
H.	Well Density	> 5 km ²	3	3	1	10%	10.0
		1 – 5 km ²	2		0.5		0.0
		< 1 km ²	1		0.25		0.0
I.	Water Quantity Issues/Concerns Reported	> 3 (regional)	3	0	1	10%	0.0
		2 to 3 (local)	2		0.5		0.0
		1 (isolated)	1		0.25		0.0
		none reported	0		0		0.0
J.	Estimated Population Served by Groundwater	> 1000	3	1	1	10%	0.0
		500 - 1000	2		0.5		0.0
		< 500	1		0.25		2.5
K.	Other, e.g. future land development	Being planned	3	2	1	5%	0.0
		Possible	2		0.5		2.5
		Unlikely	1		0.25		0.0
						Total	32.1

Aquifer Number: 110		Type: Bedrock	Location: Grandview Bench					
Item	Description	Measure	Point Scale	Points Assigned	Weighting Factor	Maximum Weighting	Score	
A.	Aquifer Area	> 50 km ²	3	2	1	10%	0.0	
		10 – 50 km ²	2		0.5		5.0	
		< 10 km ²	1		0.25		0.0	
B.	Aquifer Classification and Ranking	Degree of Development	I	1	1	10%	0.0	
			II		2		0.5	0.0
			III		1		0.25	2.5
C.	Aquifer Classification and Ranking	Vulnerability	A	2	1	5%	0.0	
			B		2		0.5	2.5
			C		1		0.25	0.0
D.	Aquifer Classification and Ranking	Ranking Value (based on 7 sub-factors)	5 to 21	8	1.0 – 0.24	5%	1.9	
E.	Estimated Current Ground Water Use	High > 64 L/s	3	1	1	10%	0.0	
		Medium 32 - 64 L/s	2		0.5		0.0	
		Low < 32 L/s	1		0.25		2.5	
F.	Number of Ground Water Supply Systems	> 5	3	0	1	15%	0.0	
		2 – 5	2		0.66		0.0	
		1	1		0.33		0.0	
		none reported	0		0		0.0	
G.	Number of Reported Irrigation Wells	> 10	3	2	1	10%	0.0	
		2 – 10	2		0.5		5.0	
		1	1		0.25		0.0	
		none reported	0		0		0.0	
H.	Well Density	> 5 km ²	3	3	1	10%	10.0	
		1 – 5 km ²	2		0.5		0.0	
		< 1 km ²	1		0.25		0.0	
I.	Water Quantity Issues/Concerns Reported	> 3 (regional)	3	1	1	10%	0.0	
		2 to 3 (local)	2		0.5		0.0	
		1 (isolated)	1		0.25		2.5	
		none reported	0		0		0.0	
J.	Estimated Population Served by Groundwater	> 1000	3	1	1	10%	0.0	
		500 - 1000	2		0.5		0.0	
		< 500	1		0.25		2.5	
K.	Other, e.g. future land development	Being planned	3	3	1	5%	5.0	
		Possible	2		0.5		0.0	
		Unlikely	1		0.25		0.0	
						Total	39.4	

Aquifer Number: 112		Type: Bedrock	Location: 2 kilometres northeast of Enderby					
Item	Description	Measure	Point Scale	Points Assigned	Weighting Factor	Maximum Weighting	Score	
A.	Aquifer Area	> 50 km ²	3	1	1	10%	0.0	
		10 – 50 km ²	2		0.5		0.0	
		< 10 km ²	1		0.25		2.5	
B.	Aquifer Classification and Ranking	Degree of Development	I	3	1	10%	0.0	
			II	2			0.5	0.0
			III	1			0.25	2.5
C.	Aquifer Classification and Ranking	Vulnerability	A	3	1	5%	0.0	
			B	2			0.5	0.0
			C	1			0.25	1.7
D.	Aquifer Classification and Ranking	Ranking Value (based on 7 sub-factors)	5 to 21	7	1.0 – 0.24	5%	1.7	
E.	Estimated Current Ground Water Use	High > 64 L/s	3	1	1	10%	0.0	
		Medium 32 - 64 L/s	2		0.5		0.0	
		Low < 32 L/s	1		0.25		2.5	
F.	Number of Ground Water Supply Systems	> 5	3	0	1	15%	0.0	
		2 – 5	2		0.66		0.0	
		1	1		0.33		0.0	
		none reported	0		0		0.0	
G.	Number of Reported Irrigation Wells	> 10	3	0	1	10%	0.0	
		2 – 10	2		0.5		0.0	
		1	1		0.25		0.0	
		none reported	0		0		0.0	
H.	Well Density	> 5 km ²	3	2	1	10%	0.0	
		1 – 5 km ²	2		0.5		5.0	
		< 1 km ²	1		0.25		0.0	
I.	Water Quantity Issues/Concerns Reported	> 3 (regional)	3	0	1	10%	0.0	
		2 to 3 (local)	2		0.5		0.0	
		1 (isolated)	1		0.25		0.0	
		none reported	0		0		0.0	
J.	Estimated Population Served by Groundwater	> 1000	3	1	1	10%	0.0	
		500 - 1000	2		0.5		0.0	
		< 500	1		0.25		2.5	
K.	Other, e.g. future land development	Being planned	3	1	1	5%	0.0	
		Possible	2		0.5		0.0	
		Unlikely	1		0.25		1.7	
						Total	20.0	

Aquifer Number: 238		Type: Bedrock	Location: Spotted Lake. Osoyoos					
Item	Description	Measure	Point Scale	Points Assigned	Weighting Factor	Maximum Weighting	Score	
A.	Aquifer Area	> 50 km ²	3	1	1	10%	0.0	
		10 – 50 km ²	2		0.5		0.0	
		< 10 km ²	1		0.25		2.5	
B.	Aquifer Classification and Ranking	Degree of Development	I	3	1	10%	0.0	
			II	2			0.5	0.0
			III	1			0.25	2.5
C.	Aquifer Classification and Ranking	Vulnerability	A	3	1	5%	0.0	
			B	2			0.5	0.0
			C	1			0.25	1.7
D.	Aquifer Classification and Ranking	Ranking Value (based on 7 sub-factors)	5 to 21	7	1.0 – 0.24	5%	1.7	
E.	Estimated Current Ground Water Use	High > 64 L/s	3	1	1	10%	0.0	
		Medium 32 - 64 L/s	2		0.5		0.0	
		Low < 32 L/s	1		0.25		2.5	
F.	Number of Ground Water Supply Systems	> 5	3	0	1	15%	0.0	
		2 – 5	2		0.66		0.0	
		1	1		0.33		0.0	
		none reported	0		0		0.0	
G.	Number of Reported Irrigation Wells	> 10	3	0	1	10%	0.0	
		2 – 10	2		0.5		0.0	
		1	1		0.25		0.0	
		none reported	0		0		0.0	
H.	Well Density	> 5 km ²	3	3	1	10%	10.0	
		1 – 5 km ²	2		0.5		0.0	
		< 1 km ²	1		0.25		0.0	
I.	Water Quantity Issues/Concerns Reported	> 3 (regional)	3	0	1	10%	0.0	
		2 to 3 (local)	2		0.5		0.0	
		1 (isolated)	1		0.25		0.0	
		none reported	0		0		0.0	
J.	Estimated Population Served by Groundwater	> 1000	3	1	1	10%	0.0	
		500 - 1000	2		0.5		0.0	
		< 500	1		0.25		2.5	
K.	Other, e.g. future land development	Being planned	3	2	1	5%	0.0	
		Possible	2		0.5		2.5	
		Unlikely	1		0.25		0.0	
						Total	25.8	

Aquifer Number: 248		Type: Bedrock	Location: Spotted Lake. Osoyoos					
Item	Description	Measure	Point Scale	Points Assigned	Weighting Factor	Maximum Weighting	Score	
A.	Aquifer Area	> 50 km ²	3	1	1	10%	0.0	
		10 – 50 km ²	2		0.5		0.0	
		< 10 km ²	1		0.25		2.5	
B.	Aquifer Classification and Ranking	Degree of Development	I	3	1	10%	0.0	
			II	2			0.5	0.0
			III	1			0.25	2.5
C.	Aquifer Classification and Ranking	Vulnerability	A	3	1	5%	0.0	
			B	2			0.5	0.0
			C	1			0.25	1.7
D.	Aquifer Classification and Ranking	Ranking Value (based on 7 sub-factors)	5 to 21	7	1.0 – 0.24	5%	1.7	
E.	Estimated Current Ground Water Use	High > 64 L/s	3	1	1	10%	0.0	
		Medium 32 - 64 L/s	2		0.5		0.0	
		Low < 32 L/s	1		0.25		2.5	
F.	Number of Ground Water Supply Systems	> 5	3	0	1	15%	0.0	
		2 – 5	2		0.66		0.0	
		1	1		0.33		0.0	
		none reported	0		0		0.0	
G.	Number of Reported Irrigation Wells	> 10	3	0	1	10%	0.0	
		2 – 10	2		0.5		0.0	
		1	1		0.25		0.0	
		none reported	0		0		0.0	
H.	Well Density	> 5 km ²	3	3	1	10%	10.0	
		1 – 5 km ²	2		0.5		0.0	
		< 1 km ²	1		0.25		0.0	
I.	Water Quantity Issues/Concerns Reported	> 3 (regional)	3	0	1	10%	0.0	
		2 to 3 (local)	2		0.5		0.0	
		1 (isolated)	1		0.25		0.0	
		none reported	0		0		0.0	
J.	Estimated Population Served by Groundwater	> 1000	3	1	1	10%	0.0	
		500 - 1000	2		0.5		0.0	
		< 500	1		0.25		2.5	
K.	Other, e.g. future land development	Being planned	3	2	1	5%	0.0	
		Possible	2		0.5		2.5	
		Unlikely	1		0.25		0.0	
						Total	25.8	

Aquifer Number: 260		Type: Bedrock	Location: Marron Valley northwest of Okanagan Falls				
Item	Description	Measure	Point Scale	Points Assigned	Weighting Factor	Maximum Weighting	Score
A.	Aquifer Area	> 50 km ²	3	3	1	10%	10.0
		10 – 50 km ²	2		0.5		0.0
		< 10 km ²	1		0.25		0.0
B.	Aquifer Classification and Ranking	Degree of Development	I	2	1	10%	0.0
			II		0.5		5.0
			III		0.25		0.0
C.	Aquifer Classification and Ranking	Vulnerability	A	2	1	5%	0.0
			B		0.5		2.5
			C		0.25		0.0
D.	Aquifer Classification and Ranking	Ranking Value (based on 7 sub-factors)	5 to 21	11	1.0 – 0.24	5%	2.6
E.	Estimated Current Ground Water Use	High > 64 L/s	3	1	1	10%	0.0
		Medium 32 - 64 L/s	2		0.5		0.0
		Low < 32 L/s	1		0.25		2.5
F.	Number of Ground Water Supply Systems	> 5	3	1	1	15%	0.0
		2 – 5	2		0.66		0.0
		1	1		0.33		5.0
		none reported	0		0		0.0
G.	Number of Reported Irrigation Wells	> 10	3	2	1	10%	0.0
		2 – 10	2		0.5		5.0
		1	1		0.25		0.0
		none reported	0		0		0.0
H.	Well Density	> 5 km ²	3	2	1	10%	0.0
		1 – 5 km ²	2		0.5		5.0
		< 1 km ²	1		0.25		0.0
I.	Water Quantity Issues/Concerns Reported	> 3 (regional)	3	1	1	10%	0.0
		2 to 3 (local)	2		0.5		0.0
		1 (isolated)	1		0.25		2.5
		none reported	0		0		0.0
J.	Estimated Population Served by Groundwater	> 1000	3	1	1	10%	0.0
		500 - 1000	2		0.5		0.0
		< 500	1		0.25		2.5
K.	Other, e.g. future land development	Being planned	3	2	1	5%	0.0
		Possible	2		0.5		2.5
		Unlikely	1		0.25		0.0
						Total	45.1

Aquifer Number: 263		Type: Bedrock	Location: North of Okanagan Falls/shore of Skaha Lake				
Item	Description	Measure	Point Scale	Points Assigned	Weighting Factor	Maximum Weighting	Score
A.	Aquifer Area	> 50 km ²	3	1	1	10%	0.0
		10 – 50 km ²	2		0.5		0.0
		< 10 km ²	1		0.25		2.5
B.	Aquifer Classification and Ranking	Degree of Development	I	2	1	10%	0.0
			II		0.5		5.0
			III		0.25		0.0
C.	Aquifer Classification and Ranking	Vulnerability	A	3	1	5%	5.0
			B		0.5		0.0
			C		0.25		0.0
D.	Aquifer Classification and Ranking	Ranking Value (based on 7 sub-factors)	5 to 21	9	1.0 – 0.24	5%	2.1
E.	Estimated Current Ground Water Use	High > 64 L/s	3	1	1	10%	0.0
		Medium 32 - 64 L/s	2		0.5		0.0
		Low < 32 L/s	1		0.25		2.5
F.	Number of Ground Water Supply Systems	> 5	3	0	1	15%	0.0
		2 – 5	2		0.66		0.0
		1	1		0.33		0.0
		none reported	0		0		0.0
G.	Number of Reported Irrigation Wells	> 10	3	0	1	10%	0.0
		2 – 10	2		0.5		0.0
		1	1		0.25		0.0
		none reported	0		0		0.0
H.	Well Density	> 5 km ²	3	3	1	10%	10.0
		1 – 5 km ²	2		0.5		0.0
		< 1 km ²	1		0.25		0.0
I.	Water Quantity Issues/Concerns Reported	> 3 (regional)	3	0	1	10%	0.0
		2 to 3 (local)	2		0.5		0.0
		1 (isolated)	1		0.25		0.0
		none reported	0		0		0.0
J.	Estimated Population Served by Groundwater	> 1000	3	1	1	10%	0.0
		500 - 1000	2		0.5		0.0
		< 500	1		0.25		2.5
K.	Other, e.g. future land development	Being planned	3	2	1	5%	0.0
		Possible	2		0.5		2.5
		Unlikely	1		0.25		0.0
						Total	32.1

Aquifer Number: 268		Type: Bedrock	Location: Penticton East and shore of Skaha Lake				
Item	Description	Measure	Point Scale	Points Assigned	Weighting Factor	Maximum Weighting	Score
A.	Aquifer Area	> 50 km ²	3	2	1	10%	0.0
		10 – 50 km ²	2		0.5		5.0
		< 10 km ²	1		0.25		0.0
B.	Aquifer Classification and Ranking	Degree of Development	I	2	1	10%	0.0
			II		0.5		5.0
			III		0.25		0.0
C.	Aquifer Classification and Ranking	Vulnerability	A	2	1	5%	0.0
			B		0.5		2.5
			C		0.25		0.0
D.	Aquifer Classification and Ranking	Ranking Value (based on 7 sub-factors)	5 to 21	10	1.0 – 0.24	5%	2.4
E.	Estimated Current Ground Water Use	High > 64 L/s	3	1	1	10%	0.0
		Medium 32 - 64 L/s	2		0.5		0.0
		Low < 32 L/s	1		0.25		2.5
F.	Number of Ground Water Supply Systems	> 5	3	0	1	15%	0.0
		2 – 5	2		0.66		0.0
		1	1		0.33		0.0
		none reported	0		0		0.0
G.	Number of Reported Irrigation Wells	> 10	3	0	1	10%	0.0
		2 – 10	2		0.5		0.0
		1	1		0.25		0.0
		none reported	0		0		0.0
H.	Well Density	> 5 km ²	3	2	1	10%	0.0
		1 – 5 km ²	2		0.5		5.0
		< 1 km ²	1		0.25		0.0
I.	Water Quantity Issues/Concerns Reported	> 3 (regional)	3	0	1	10%	0.0
		2 to 3 (local)	2		0.5		0.0
		1 (isolated)	1		0.25		0.0
		none reported	0		0		0.0
J.	Estimated Population Served by Groundwater	> 1000	3	1	1	10%	0.0
		500 - 1000	2		0.5		0.0
		< 500	1		0.25		2.5
K.	Other, e.g. future land development	Being planned	3	2	1	5%	0.0
		Possible	2		0.5		2.5
		Unlikely	1		0.25		0.0
						Total	27.4

Aquifer Number: 269		Type: Bedrock	Location: Ellis Creek				
Item	Description	Measure	Point Scale	Points Assigned	Weighting Factor	Maximum Weighting	Score
A.	Aquifer Area	> 50 km ²	3	2	1	10%	0.0
		10 – 50 km ²	2		0.5		5.0
		< 10 km ²	1		0.25		0.0
B.	Aquifer Classification and Ranking	Degree of Development	I	2	1	10%	0.0
			II		0.5		5.0
			III		0.25		0.0
C.	Aquifer Classification and Ranking	Vulnerability	A	2	1	5%	0.0
			B		0.5		2.5
			C		0.25		0.0
D.	Aquifer Classification and Ranking	Ranking Value (based on 7 sub-factors)	5 to 21	9	1.0 – 0.24	5%	2.1
E.	Estimated Current Ground Water Use	High > 64 L/s	3	1	1	10%	0.0
		Medium 32 - 64 L/s	2		0.5		0.0
		Low < 32 L/s	1		0.25		2.5
F.	Number of Ground Water Supply Systems	> 5	3	0	1	15%	0.0
		2 – 5	2		0.66		0.0
		1	1		0.33		0.0
		none reported	0		0		0.0
G.	Number of Reported Irrigation Wells	> 10	3	0	1	10%	0.0
		2 – 10	2		0.5		0.0
		1	1		0.25		0.0
		none reported	0		0		0.0
H.	Well Density	> 5 km ²	3	3	1	10%	10.0
		1 – 5 km ²	2		0.5		0.0
		< 1 km ²	1		0.25		0.0
I.	Water Quantity Issues/Concerns Reported	> 3 (regional)	3	0	1	10%	0.0
		2 to 3 (local)	2		0.5		0.0
		1 (isolated)	1		0.25		0.0
		none reported	0		0		0.0
J.	Estimated Population Served by Groundwater	> 1000	3	1	1	10%	0.0
		500 - 1000	2		0.5		0.0
		< 500	1		0.25		2.5
K.	Other, e.g. future land development	Being planned	3	2	1	5%	0.0
		Possible	2		0.5		2.5
		Unlikely	1		0.25		0.0
						Total	32.1

Aquifer Number: 298		Type: Bedrock	Location: Naramata				
Item	Description	Measure	Point Scale	Points Assigned	Weighting Factor	Maximum Weighting	Score
A.	Aquifer Area	> 50 km ²	3	3	1	10%	10.0
		10 – 50 km ²	2		0.5		0.0
		< 10 km ²	1		0.25		0.0
B.	Aquifer Classification and Ranking	Degree of Development	I	2	1	10%	0.0
			II		0.5		5.0
			III		0.25		0.0
C.	Aquifer Classification and Ranking	Vulnerability	A	2	1	5%	0.0
			B		0.5		2.5
			C		0.25		0.0
D.	Aquifer Classification and Ranking	Ranking Value (based on 7 sub-factors)	5 to 21	10	1.0 – 0.24	5%	2.4
E.	Estimated Current Ground Water Use	High > 64 L/s	3	1	1	10%	0.0
		Medium 32 - 64 L/s	2		0.5		0.0
		Low < 32 L/s	1		0.25		2.5
F.	Number of Ground Water Supply Systems	> 5	3	0	1	15%	0.0
		2 – 5	2		0.66		0.0
		1	1		0.33		0.0
		none reported	0		0		0.0
G.	Number of Reported Irrigation Wells	> 10	3	0	1	10%	0.0
		2 – 10	2		0.5		0.0
		1	1		0.25		0.0
		none reported	0		0		0.0
H.	Well Density	> 5 km ²	3	2	1	10%	0.0
		1 – 5 km ²	2		0.5		5.0
		< 1 km ²	1		0.25		0.0
I.	Water Quantity Issues/Concerns Reported	> 3 (regional)	3	1	1	10%	0.0
		2 to 3 (local)	2		0.5		0.0
		1 (isolated)	1		0.25		2.5
		none reported	0		0		0.0
J.	Estimated Population Served by Groundwater	> 1000	3	2	1	10%	0.0
		500 - 1000	2		0.5		5.0
		< 500	1		0.25		0.0
K.	Other, e.g. future land development	Being planned	3	2	1	5%	0.0
		Possible	2		0.5		2.5
		Unlikely	1		0.25		0.0
						Total	37.4

Aquifer Number: 300		Type: Bedrock	Location: Faulder (Eneas Creek)				
Item	Description	Measure	Point Scale	Points Assigned	Weighting Factor	Maximum Weighting	Score
A.	Aquifer Area	> 50 km ²	3	3	1	10%	10.0
		10 – 50 km ²	2		0.5		0.0
		< 10 km ²	1		0.25		0.0
B.	Aquifer Classification and Ranking	Degree of Development	I	2	1	10%	0.0
			II		0.5		5.0
			III		0.25		0.0
C.	Aquifer Classification and Ranking	Vulnerability	A	1	1	5%	0.0
			B		0.5		0.0
			C		0.25		1.7
D.	Aquifer Classification and Ranking	Ranking Value (based on 7 sub-factors)	5 to 21	12	1.0 – 0.24	5%	2.9
E.	Estimated Current Ground Water Use	High > 64 L/s	3	1	1	10%	0.0
		Medium 32 - 64 L/s	2		0.5		0.0
		Low < 32 L/s	1		0.25		2.5
F.	Number of Ground Water Supply Systems	> 5	3	0	1	15%	0.0
		2 – 5	2		0.66		0.0
		1	1		0.33		0.0
		none reported	0		0		0.0
G.	Number of Reported Irrigation Wells	> 10	3	0	1	10%	0.0
		2 – 10	2		0.5		0.0
		1	1		0.25		0.0
		none reported	0		0		0.0
H.	Well Density	> 5 km ²	3	1	1	10%	0.0
		1 – 5 km ²	2		0.5		0.0
		< 1 km ²	1		0.25		2.5
I.	Water Quantity Issues/Concerns Reported	> 3 (regional)	3	0	1	10%	0.0
		2 to 3 (local)	2		0.5		0.0
		1 (isolated)	1		0.25		0.0
		none reported	0		0		0.0
J.	Estimated Population Served by Groundwater	> 1000	3	1	1	10%	0.0
		500 - 1000	2		0.5		0.0
		< 500	1		0.25		2.5
K.	Other, e.g. future land development	Being planned	3	2	1	5%	0.0
		Possible	2		0.5		2.5
		Unlikely	1		0.25		0.0
						Total	29.5

Aquifer Number: 304		Type: Bedrock	Location: West side of Okanagan Lake, west of Kelowna				
Item	Description	Measure	Point Scale	Points Assigned	Weighting Factor	Maximum Weighting	Score
A.	Aquifer Area	> 50 km ²	3	2	1	10%	0.0
		10 – 50 km ²	2		0.5		5.0
		< 10 km ²	1		0.25		0.0
B.	Aquifer Classification and Ranking	Degree of Development	I	2	1	10%	0.0
			II		0.5		5.0
			III		0.25		0.0
C.	Aquifer Classification and Ranking	Vulnerability	A	2	1	5%	0.0
			B		0.5		2.5
			C		0.25		0.0
D.	Aquifer Classification and Ranking	Ranking Value (based on 7 sub-factors)	5 to 21	9	1.0 – 0.24	5%	2.1
E.	Estimated Current Ground Water Use	High > 64 L/s	3	1	1	10%	0.0
		Medium 32 - 64 L/s	2		0.5		0.0
		Low < 32 L/s	1		0.25		2.5
F.	Number of Ground Water Supply Systems	> 5	3	0	1	15%	0.0
		2 – 5	2		0.66		0.0
		1	1		0.33		0.0
		none reported	0		0		0.0
G.	Number of Reported Irrigation Wells	> 10	3	1	1	10%	0.0
		2 – 10	2		0.5		0.0
		1	1		0.25		2.5
		none reported	0		0		0.0
H.	Well Density	> 5 km ²	3	2	1	10%	0.0
		1 – 5 km ²	2		0.5		5.0
		< 1 km ²	1		0.25		0.0
I.	Water Quantity Issues/Concerns Reported	> 3 (regional)	3	0	1	10%	0.0
		2 to 3 (local)	2		0.5		0.0
		1 (isolated)	1		0.25		0.0
		none reported	0		0		0.0
J.	Estimated Population Served by Groundwater	> 1000	3	1	1	10%	0.0
		500 - 1000	2		0.5		0.0
		< 500	1		0.25		2.5
K.	Other, e.g. future land development	Being planned	3	2	1	5%	0.0
		Possible	2		0.5		2.5
		Unlikely	1		0.25		0.0
						Total	29.6

Aquifer Number: 305		Type: Bedrock	Location: West side of Okanagan Lake, west of Kelowna				
Item	Description	Measure	Point Scale	Points Assigned	Weighting Factor	Maximum Weighting	Score
A.	Aquifer Area	> 50 km ²	3	2	1	10%	0.0
		10 – 50 km ²	2		0.5		5.0
		< 10 km ²	1		0.25		0.0
B.	Aquifer Classification and Ranking	Degree of Development	I	2	1	10%	0.0
			II		0.5		5.0
			III		0.25		0.0
C.	Aquifer Classification and Ranking	Vulnerability	A	2	1	5%	0.0
			B		0.5		2.5
			C		0.25		0.0
D.	Aquifer Classification and Ranking	Ranking Value (based on 7 sub-factors)	5 to 21	9	1.0 – 0.24	5%	2.1
E.	Estimated Current Ground Water Use	High > 64 L/s	3	1	1	10%	0.0
		Medium 32 - 64 L/s	2		0.5		0.0
		Low < 32 L/s	1		0.25		2.5
F.	Number of Ground Water Supply Systems	> 5	3	0	1	15%	0.0
		2 – 5	2		0.66		0.0
		1	1		0.33		0.0
		none reported	0		0		0.0
G.	Number of Reported Irrigation Wells	> 10	3	0	1	10%	0.0
		2 – 10	2		0.5		0.0
		1	1		0.25		0.0
		none reported	0		0		0.0
H.	Well Density	> 5 km ²	3	2	1	10%	0.0
		1 – 5 km ²	2		0.5		5.0
		< 1 km ²	1		0.25		0.0
I.	Water Quantity Issues/Concerns Reported	> 3 (regional)	3	0	1	10%	0.0
		2 to 3 (local)	2		0.5		0.0
		1 (isolated)	1		0.25		0.0
		none reported	0		0		0.0
J.	Estimated Population Served by Groundwater	> 1000	3	1	1	10%	0.0
		500 - 1000	2		0.5		0.0
		< 500	1		0.25		2.5
K.	Other, e.g. future land development	Being planned	3	2	1	5%	0.0
		Possible	2		0.5		2.5
		Unlikely	1		0.25		0.0
						Total	27.1

Aquifer Number: 350		Type: Bedrock	Location: NE of Vernon and to the south of BX Creek					
Item	Description	Measure	Point Scale	Points Assigned	Weighting Factor	Maximum Weighting	Score	
A.	Aquifer Area	> 50 km ²	3	1	1	10%	0.0	
		10 – 50 km ²	2		0.5		0.0	
		< 10 km ²	1		0.25		2.5	
B.	Aquifer Classification and Ranking	Degree of Development	I	3	2	1	10%	0.0
			II	2		0.5		5.0
			III	1		0.25		0.0
C.	Aquifer Classification and Ranking	Vulnerability	A	3	1	1	5%	0.0
			B	2		0.5		0.0
			C	1		0.25		1.7
D.	Aquifer Classification and Ranking	Ranking Value (based on 7 sub-factors)	5 to 21	9	1.0 – 0.24	5%	2.1	
E.	Estimated Current Ground Water Use	High > 64 L/s	3	1	1	10%	0.0	
		Medium 32 - 64 L/s	2		0.5		0.0	
		Low < 32 L/s	1		0.25		2.5	
F.	Number of Ground Water Supply Systems	> 5	3	0	1	15%	0.0	
		2 – 5	2		0.66		0.0	
		1	1		0.33		0.0	
		none reported	0		0		0.0	
G.	Number of Reported Irrigation Wells	> 10	3	0	1	10%	0.0	
		2 – 10	2		0.5		0.0	
		1	1		0.25		0.0	
		none reported	0		0		0.0	
H.	Well Density	> 5 km ²	3	3	1	10%	10.0	
		1 – 5 km ²	2		0.5		0.0	
		< 1 km ²	1		0.25		0.0	
I.	Water Quantity Issues/Concerns Reported	> 3 (regional)	3	1	1	10%	0.0	
		2 to 3 (local)	2		0.5		0.0	
		1 (isolated)	1		0.25		2.5	
		none reported	0		0		0.0	
J.	Estimated Population Served by Groundwater	> 1000	3	1	1	10%	0.0	
		500 - 1000	2		0.5		0.0	
		< 500	1		0.25		2.5	
K.	Other, e.g. future land development	Being planned	3	2	1	5%	0.0	
		Possible	2		0.5		2.5	
		Unlikely	1		0.25		0.0	
						Total	31.3	

Aquifer Number: 351		Type: Bedrock	Location: NE of Vernon and to the north of BX Creek				
Item	Description	Measure	Point Scale	Points Assigned	Weighting Factor	Maximum Weighting	Score
A.	Aquifer Area	> 50 km ²	3	2	1	10%	0.0
		10 – 50 km ²	2		0.5		5.0
		< 10 km ²	1		0.25		0.0
B.	Aquifer Classification and Ranking	Degree of Development	I	2	1	10%	0.0
			II		0.5		5.0
			III		0.25		0.0
C.	Aquifer Classification and Ranking	Vulnerability	A	1	1	5%	0.0
			B		0.5		0.0
			C		0.25		1.7
D.	Aquifer Classification and Ranking	Ranking Value (based on 7 sub-factors)	5 to 21	9	1.0 – 0.24	5%	2.1
E.	Estimated Current Ground Water Use	High > 64 L/s	3	1	1	10%	0.0
		Medium 32 - 64 L/s	2		0.5		0.0
		Low < 32 L/s	1		0.25		2.5
F.	Number of Ground Water Supply Systems	> 5	3	0	1	15%	0.0
		2 – 5	2		0.66		0.0
		1	1		0.33		0.0
		none reported	0		0		0.0
G.	Number of Reported Irrigation Wells	> 10	3	0	1	10%	0.0
		2 – 10	2		0.5		0.0
		1	1		0.25		0.0
		none reported	0		0		0.0
H.	Well Density	> 5 km ²	3	3	1	10%	10.0
		1 – 5 km ²	2		0.5		0.0
		< 1 km ²	1		0.25		0.0
I.	Water Quantity Issues/Concerns Reported	> 3 (regional)	3	0	1	10%	0.0
		2 to 3 (local)	2		0.5		0.0
		1 (isolated)	1		0.25		0.0
		none reported	0		0		0.0
J.	Estimated Population Served by Groundwater	> 1000	3	1	1	10%	0.0
		500 - 1000	2		0.5		0.0
		< 500	1		0.25		2.5
K.	Other, e.g. future land development	Being planned	3	2	1	5%	0.0
		Possible	2		0.5		2.5
		Unlikely	1		0.25		0.0
						Total	31.3

Aquifer Number: 355		Type: Bedrock	Location: West of deep Creek, NW of Armstrong					
Item	Description	Measure	Point Scale	Points Assigned	Weighting Factor	Maximum Weighting	Score	
A.	Aquifer Area	> 50 km ²	3	2	1	10%	0.0	
		10 – 50 km ²	2		0.5		5.0	
		< 10 km ²	1		0.25		0.0	
B.	Aquifer Classification and Ranking	Degree of Development	I	1	1	10%	0.0	
			II		2		0.5	0.0
			III		1		0.25	2.5
C.	Aquifer Classification and Ranking	Vulnerability	A	1	1	5%	0.0	
			B		2		0.5	0.0
			C		1		0.25	1.7
D.	Aquifer Classification and Ranking	Ranking Value (based on 7 sub-factors)	5 to 21	6	1.0 – 0.24	5%	1.4	
E.	Estimated Current Ground Water Use	High > 64 L/s	3	1	1	10%	0.0	
		Medium 32 - 64 L/s	2		0.5		0.0	
		Low < 32 L/s	1		0.25		2.5	
F.	Number of Ground Water Supply Systems	> 5	3	0	1	15%	0.0	
		2 – 5	2		0.66		0.0	
		1	1		0.33		0.0	
		none reported	0		0		0.0	
G.	Number of Reported Irrigation Wells	> 10	3	0	1	10%	0.0	
		2 – 10	2		0.5		0.0	
		1	1		0.25		0.0	
		none reported	0		0		0.0	
H.	Well Density	> 5 km ²	3	2	1	10%	0.0	
		1 – 5 km ²	2		0.5		5.0	
		< 1 km ²	1		0.25		0.0	
I.	Water Quantity Issues/Concerns Reported	> 3 (regional)	3	0	1	10%	0.0	
		2 to 3 (local)	2		0.5		0.0	
		1 (isolated)	1		0.25		0.0	
		none reported	0		0		0.0	
J.	Estimated Population Served by Groundwater	> 1000	3	1	1	10%	0.0	
		500 - 1000	2		0.5		0.0	
		< 500	1		0.25		2.5	
K.	Other, e.g. future land development	Being planned	3	2	1	5%	0.0	
		Possible	2		0.5		2.5	
		Unlikely	1		0.25		0.0	
						Total	23.1	

Aquifer Number: 470		Type: Bedrock	Location: Kelowna north to Ellison Lake					
Item	Description	Measure	Point Scale	Points Assigned	Weighting Factor	Maximum Weighting	Score	
A.	Aquifer Area	> 50 km ²	3	3	1	10%	10.0	
		10 – 50 km ²	2		0.5		0.0	
		< 10 km ²	1		0.25		0.0	
B.	Aquifer Classification and Ranking	Degree of Development	I	1	1	10%	0.0	
			II		2		0.5	0.0
			III		1		0.25	2.5
C.	Aquifer Classification and Ranking	Vulnerability	A	2	1	5%	0.0	
			B		2		0.5	2.5
			C		1		0.25	0.0
D.	Aquifer Classification and Ranking	Ranking Value (based on 7 sub-factors)	5 to 21	10	1.0 – 0.24	5%	2.4	
E.	Estimated Current Ground Water Use	High > 64 L/s	3	1	1	10%	0.0	
		Medium 32 - 64 L/s	2		0.5		0.0	
		Low < 32 L/s	1		0.25		2.5	
F.	Number of Ground Water Supply Systems	> 5	3	0	1	15%	0.0	
		2 – 5	2		0.66		0.0	
		1	1		0.33		0.0	
		none reported	0		0		0.0	
G.	Number of Reported Irrigation Wells	> 10	3	0	1	10%	0.0	
		2 – 10	2		0.5		0.0	
		1	1		0.25		0.0	
		none reported	0		0		0.0	
H.	Well Density	> 5 km ²	3	1	1	10%	0.0	
		1 – 5 km ²	2		0.5		0.0	
		< 1 km ²	1		0.25		2.5	
I.	Water Quantity Issues/Concerns Reported	> 3 (regional)	3	0	1	10%	0.0	
		2 to 3 (local)	2		0.5		0.0	
		1 (isolated)	1		0.25		0.0	
		none reported	0		0		0.0	
J.	Estimated Population Served by Groundwater	> 1000	3	1	1	10%	0.0	
		500 - 1000	2		0.5		0.0	
		< 500	1		0.25		2.5	
K.	Other, e.g. future land development	Being planned	3	2	1	5%	0.0	
		Possible	2		0.5		2.5	
		Unlikely	1		0.25		0.0	
						Total	27.4	

Aquifer Number: 471		Type: Bedrock	Location: West of Ellison Lake				
Item	Description	Measure	Point Scale	Points Assigned	Weighting Factor	Maximum Weighting	Score
A.	Aquifer Area	> 50 km ²	3	1	1	10%	0.0
		10 – 50 km ²	2		0.5		0.0
		< 10 km ²	1		0.25		2.5
B.	Aquifer Classification and Ranking	Degree of Development	I	1	1	10%	0.0
		II	2		0.5		0.0
		III	1		0.25		2.5
C.	Aquifer Classification and Ranking	Vulnerability	A	2	1	5%	0.0
		B	2		0.5		2.5
		C	1		0.25		0.0
D.	Aquifer Classification and Ranking	Ranking Value (based on 7 sub-factors)	5 to 21	9	1.0 – 0.24	5%	2.1
E.	Estimated Current Ground Water Use	High > 64 L/s	3	1	1	10%	0.0
		Medium 32 - 64 L/s	2		0.5		0.0
		Low < 32 L/s	1		0.25		2.5
F.	Number of Ground Water Supply Systems	> 5	3	0	1	15%	0.0
		2 – 5	2		0.66		0.0
		1	1		0.33		0.0
		none reported	0		0		0.0
G.	Number of Reported Irrigation Wells	> 10	3	0	1	10%	0.0
		2 – 10	2		0.5		0.0
		1	1		0.25		0.0
		none reported	0		0		0.0
H.	Well Density	> 5 km ²	3	2	1	10%	0.0
		1 – 5 km ²	2		0.5		5.0
		< 1 km ²	1		0.25		0.0
I.	Water Quantity Issues/Concerns Reported	> 3 (regional)	3	0	1	10%	0.0
		2 to 3 (local)	2		0.5		0.0
		1 (isolated)	1		0.25		0.0
		none reported	0		0		0.0
J.	Estimated Population Served by Groundwater	> 1000	3	1	1	10%	0.0
		500 - 1000	2		0.5		0.0
		< 500	1		0.25		2.5
K.	Other, e.g. future land development	Being planned	3	2	1	5%	0.0
		Possible	2		0.5		2.5
		Unlikely	1		0.25		0.0
						Total	22.1

Aquifer Number: 472		Type: Bedrock	Location: Southeast of Ellison Lake				
Item	Description	Measure	Point Scale	Points Assigned	Weighting Factor	Maximum Weighting	Score
A.	Aquifer Area	> 50 km ²	3	1	1	10%	0.0
		10 – 50 km ²	2		0.5		0.0
		< 10 km ²	1		0.25		2.5
B.	Aquifer Classification and Ranking	Degree of Development	I	1	1	10%	0.0
		II	2		0.5		0.0
		III	1		0.25		2.5
C.	Aquifer Classification and Ranking	Vulnerability	A	2	1	5%	0.0
		B	2		0.5		2.5
		C	1		0.25		0.0
D.	Aquifer Classification and Ranking	Ranking Value (based on 7 sub-factors)	5 to 21	9	1.0 – 0.24	5%	2.1
E.	Estimated Current Ground Water Use	High > 64 L/s	3	1	1	10%	0.0
		Medium 32 - 64 L/s	2		0.5		0.0
		Low < 32 L/s	1		0.25		2.5
F.	Number of Ground Water Supply Systems	> 5	3	0	1	15%	0.0
		2 – 5	2		0.66		0.0
		1	1		0.33		0.0
		none reported	0		0		0.0
G.	Number of Reported Irrigation Wells	> 10	3	0	1	10%	0.0
		2 – 10	2		0.5		0.0
		1	1		0.25		0.0
		none reported	0		0		0.0
H.	Well Density	> 5 km ²	3	3	1	10%	10.0
		1 – 5 km ²	2		0.5		0.0
		< 1 km ²	1		0.25		0.0
I.	Water Quantity Issues/Concerns Reported	> 3 (regional)	3	0	1	10%	0.0
		2 to 3 (local)	2		0.5		0.0
		1 (isolated)	1		0.25		0.0
		none reported	0		0		0.0
J.	Estimated Population Served by Groundwater	> 1000	3	1	1	10%	0.0
		500 - 1000	2		0.5		0.0
		< 500	1		0.25		2.5
K.	Other, e.g. future land development	Being planned	3	2	1	5%	0.0
		Possible	2		0.5		2.5
		Unlikely	1		0.25		0.0
						Total	27.1

Aquifer Number: 473		Type: Bedrock	Location: Mission, Davies & Cardinal Creek area				
Item	Description	Measure	Point Scale	Points Assigned	Weighting Factor	Maximum Weighting	Score
A.	Aquifer Area	> 50 km ²	3	2	1	10%	0.0
		10 – 50 km ²	2		0.5		5.0
		< 10 km ²	1		0.25		0.0
B.	Aquifer Classification and Ranking	Degree of Development	I	2	1	10%	0.0
			II		0.5		5.0
			III		0.25		0.0
C.	Aquifer Classification and Ranking	Vulnerability	A	1	1	5%	0.0
			B		0.5		0.0
			C		0.25		1.7
D.	Aquifer Classification and Ranking	Ranking Value (based on 7 sub-factors)	5 to 21	8	1.0 – 0.24	5%	1.9
E.	Estimated Current Ground Water Use	High > 64 L/s	3	1	1	10%	0.0
		Medium 32 - 64 L/s	2		0.5		0.0
		Low < 32 L/s	1		0.25		2.5
F.	Number of Ground Water Supply Systems	> 5	3	1	1	15%	0.0
		2 – 5	2		0.66		0.0
		1	1		0.33		5.0
		none reported	0		0		0.0
G.	Number of Reported Irrigation Wells	> 10	3	1	1	10%	0.0
		2 – 10	2		0.5		0.0
		1	1		0.25		2.5
		none reported	0		0		0.0
H.	Well Density	> 5 km ²	3	2	1	10%	0.0
		1 – 5 km ²	2		0.5		5.0
		< 1 km ²	1		0.25		0.0
I.	Water Quantity Issues/Concerns Reported	> 3 (regional)	3	0	1	10%	0.0
		2 to 3 (local)	2		0.5		0.0
		1 (isolated)	1		0.25		0.0
		none reported	0		0		0.0
J.	Estimated Population Served by Groundwater	> 1000	3	1	1	10%	0.0
		500 - 1000	2		0.5		0.0
		< 500	1		0.25		2.5
K.	Other, e.g. future land development	Being planned	3	2	1	5%	0.0
		Possible	2		0.5		2.5
		Unlikely	1		0.25		0.0
						Total	33.6

Aquifer Number: 804		Type: Bedrock	Location: Shuswap River					
Item	Description	Measure	Point Scale	Points Assigned	Weighting Factor	Maximum Weighting	Score	
A.	Aquifer Area	> 50 km ²	3	1	1	10%	0.0	
		10 – 50 km ²	2		0.5		0.0	
		< 10 km ²	1		0.25		2.5	
B.	Aquifer Classification and Ranking	Degree of Development	I	3	2	1	10%	0.0
			II	2		0.5	5.0	
			III	1		0.25	0.0	
C.	Aquifer Classification and Ranking	Vulnerability	A	3	1	1	5%	0.0
			B	2		0.5	0.0	
			C	1		0.25	1.7	
D.	Aquifer Classification and Ranking	Ranking Value (based on 7 sub-factors)	5 to 21	7	1.0 – 0.24	5%	1.7	
E.	Estimated Current Ground Water Use	High > 64 L/s	3	1	1	10%	0.0	
		Medium 32 - 64 L/s	2		0.5		0.0	
		Low < 32 L/s	1		0.25		2.5	
F.	Number of Ground Water Supply Systems	> 5	3	0	1	15%	0.0	
		2 – 5	2		0.66		0.0	
		1	1		0.33		0.0	
		none reported	0		0		0.0	
G.	Number of Reported Irrigation Wells	> 10	3	0	1	10%	0.0	
		2 – 10	2		0.5		0.0	
		1	1		0.25		0.0	
		none reported	0		0		0.0	
H.	Well Density	> 5 km ²	3	2	1	10%	0.0	
		1 – 5 km ²	2		0.5		5.0	
		< 1 km ²	1		0.25		0.0	
I.	Water Quantity Issues/Concerns Reported	> 3 (regional)	3	0	1	10%	0.0	
		2 to 3 (local)	2		0.5		0.0	
		1 (isolated)	1		0.25		0.0	
		none reported	0		0		0.0	
J.	Estimated Population Served by Groundwater	> 1000	3	1	1	10%	0.0	
		500 - 1000	2		0.5		0.0	
		< 500	1		0.25		2.5	
K.	Other, e.g. future land development	Being planned	3	2	1	5%	0.0	
		Possible	2		0.5		2.5	
		Unlikely	1		0.25		0.0	
						Total	23.3	

Aquifer Number: 808		Type: Bedrock	Location: Anarchist Mountain				
Item	Description	Measure	Point Scale	Points Assigned	Weighting Factor	Maximum Weighting	Score
A.	Aquifer Area	> 50 km ²	3	2	1	10%	0.0
		10 – 50 km ²	2		0.5		5.0
		< 10 km ²	1		0.25		0.0
B.	Aquifer Classification and Ranking	Degree of Development	I	2	1	10%	0.0
			II		0.5		5.0
			III		0.25		0.0
C.	Aquifer Classification and Ranking	Vulnerability	A	2	1	5%	0.0
			B		0.5		2.5
			C		0.25		0.0
D.	Aquifer Classification and Ranking	Ranking Value (based on 7 sub-factors)	5 to 21	11	1.0 – 0.24	5%	2.6
E.	Estimated Current Ground Water Use	High > 64 L/s	3	1	1	10%	0.0
		Medium 32 - 64 L/s	2		0.5		0.0
		Low < 32 L/s	1		0.25		2.5
F.	Number of Ground Water Supply Systems	> 5	3	0	1	15%	0.0
		2 – 5	2		0.66		0.0
		1	1		0.33		0.0
		none reported	0		0		0.0
G.	Number of Reported Irrigation Wells	> 10	3	0	1	10%	0.0
		2 – 10	2		0.5		0.0
		1	1		0.25		0.0
		none reported	0		0		0.0
H.	Well Density	> 5 km ²	3	2	1	10%	0.0
		1 – 5 km ²	2		0.5		5.0
		< 1 km ²	1		0.25		0.0
I.	Water Quantity Issues/Concerns Reported	> 3 (regional)	3	1	1	10%	0.0
		2 to 3 (local)	2		0.5		0.0
		1 (isolated)	1		0.25		2.5
		none reported	0		0		0.0
J.	Estimated Population Served by Groundwater	> 1000	3	1	1	10%	0.0
		500 - 1000	2		0.5		0.0
		< 500	1		0.25		2.5
K.	Other, e.g. future land development	Being planned	3	3	1	5%	5.0
		Possible	2		0.5		0.0
		Unlikely	1		0.25		0.0
						Total	32.6

Aquifer Number: 810		Type: Bedrock	Location:						
Item	Description	Measure	Point Scale	Points Assigned	Weighting Factor	Maximum Weighting	Score		
A.	Aquifer Area	> 50 km ²	3	1	1	10%	0.0		
		10 – 50 km ²	2		0.5		0.0		
		< 10 km ²	1		0.25		2.5		
B.	Aquifer Classification and Ranking	Degree of Development	I	2	1	10%	0.0		
			II				2	0.5	5.0
			III				1	0.25	0.0
C.	Aquifer Classification and Ranking	Vulnerability	A	1	1	5%	0.0		
			B				2	0.5	0.0
			C				1	0.25	1.7
D.	Aquifer Classification and Ranking	Ranking Value (based on 7 sub-factors)	5 to 21	6	1.0 – 0.24	5%	1.4		
E.	Estimated Current Ground Water Use	High > 64 L/s	3	1	10%	0.0			
		Medium 32 - 64 L/s	2			0.5	0.0		
		Low < 32 L/s	1			0.25	2.5		
F.	Number of Ground Water Supply Systems	> 5	3	0	1	15%	0.0		
		2 – 5	2				0.66	0.0	
		1	1				0.33	0.0	
		none reported	0				0	0.0	
G.	Number of Reported Irrigation Wells	> 10	3	0	1	10%	0.0		
		2 – 10	2				0.5	0.0	
		1	1				0.25	0.0	
		none reported	0				0	0.0	
H.	Well Density	> 5 km ²	3	2	1	10%	0.0		
		1 – 5 km ²	2				0.5	5.0	
		< 1 km ²	1				0.25	0.0	
I.	Water Quantity Issues/Concerns Reported	> 3 (regional)	3	0	1	10%	0.0		
		2 to 3 (local)	2				0.5	0.0	
		1 (isolated)	1				0.25	0.0	
		none reported	0				0	0.0	
J.	Estimated Population Served by Groundwater	> 1000	3	1	1	10%	0.0		
		500 - 1000	2				0.5	0.0	
		< 500	1				0.25	2.5	
K.	Other, e.g. future land development	Being planned	3	1	1	5%	0.0		
		Possible	2				0.5	0.0	
		Unlikely	1				0.25	1.7	
						Total	22.3		

BCGS Area: 082E002			Location:				
Item	Description	Measure	Point Scale	Points Assigned	Weighting Factor	Maximum Weighting	Score
A.	Number of Classified Aquifers	> 5	3	1	1	15%	0.0
		3 – 5	2				0.0
		1 to 2	1				5.0
B.	Number of Reported Wells	> 300	3	1	1	15%	0.0
		100-300	2				0.0
		<100	1				5.0
C.	Number of Ground Water Supply Systems	> 5	3		1	15%	0.0
		3 – 5	2				0.0
		1 to 2	1				0.0
D.	Number of Ground Water Well and Spring Sources for Water Systems	> 5	3		1	10%	0.0
		3 – 5	2				0.0
		1 to 2	1				0.0
E.	Water Quantity Issues/Concerns Reported	>3	3		1	20%	0.0
		2 to 3	2				0.0
		1	1				0.0
F.	Number of Research/Water Planning Projects active and proposed	> 3	3		1	5%	0.0
		2 to 3	2				0.0
		1	1				0.0
G.	Mountain Pine Infestation	severe	3	2	1	5%	0.0
		light to moderate	2				2.5
		nil to localized	1				0.0
H.	Number of Active Climate Stations	> 3	3		1	5%	0.0
		2 to 3	2				0.0
		1	1				0.0
I.	Number of Community Watersheds	> 3	3		1	5%	0.0
		2 to 3	2				0.0
		1	1				0.0
J.	Number of Active Hydrometric Sites and Snow pillows/courses	> 3	3		1	5%	0.0
		2 to 3	2				0.0
		1	1				0.0
						Total	12.50

BCGS Area: 082E003			Location:				
Item	Description	Measure	Point Scale	Points Assigned	Weighting Factor	Maximum Weighting	Score
A.	Number of Classified Aquifers	> 5	3	3	1	15%	15.0
		3 – 5	2				0.0
		1 to 2	1				0.0
B.	Number of Reported Wells	> 300	3	3	1	15%	15.0
		100-300	2				0.0
		<100	1				0.0
C.	Number of Ground Water Supply Systems	> 5	3	3	1	15%	15.0
		3 – 5	2				0.0
		1 to 2	1				0.0
D.	Number of Ground Water Well and Spring Sources for Water Systems	> 5	3	3	1	10%	10.0
		3 – 5	2				0.0
		1 to 2	1				0.0
E.	Water Quantity Issues/Concerns Reported	>3	3		1	20%	0.0
		2 to 3	2				0.0
		1	1				0.0
F.	Number of Research/Water Planning Projects active and proposed	> 3	3		1	5%	0.0
		2 to 3	2				0.0
		1	1				1.7
G.	Mountain Pine Infestation	severe	3		1	5%	0.0
		light to moderate	2				0.0
		nil to localized	1				1.7
H.	Number of Active Climate Stations	> 3	3		1	5%	0.0
		2 to 3	2				2.5
		1	1				0.0
I.	Number of Community Watersheds	> 3	3		1	5%	0.0
		2 to 3	2				0.0
		1	1				1.7
J.	Number of Active Hydrometric Sites and Snow pillows/courses	> 3	3		1	5%	0.0
		2 to 3	2				2.5
		1	1				0.0
						Total	65.00

BCGS Area: 082E004			Location:				
Item	Description	Measure	Point Scale	Points Assigned	Weighting Factor	Maximum Weighting	Score
A.	Number of Classified Aquifers	> 5	3	2	1	15%	0.0
		3 – 5	2		0.75		10.0
		1 to 2	1		0.33		0.0
B.	Number of Reported Wells	> 300	3	1	1	15%	0.0
		100-300	2		0.75		0.0
		<100	1		0.33		5.0
C.	Number of Ground Water Supply Systems	> 5	3	3	1	15%	15.0
		3 – 5	2		0.75		0.0
		1 to 2	1		0.33		0.0
D.	Number of Ground Water Well and Spring Sources for Water Systems	> 5	3	3	1	10%	10.0
		3 – 5	2		0.5		0.0
		1 to 2	1		0.25		0.0
E.	Water Quantity Issues/Concerns Reported	>3	3		1	20%	0.0
		2 to 3	2		0.5		0.0
		1	1		0.25		0.0
F.	Number of Research/Water Planning Projects active and proposed	> 3	3		1	5%	0.0
		2 to 3	2		0.5		0.0
		1	1		0.25		0.0
G.	Mountain Pine Infestation	severe	3	1	1	5%	0.0
		light to moderate	2		0.5		0.0
		nil to localized	1		0.25		1.7
H.	Number of Active Climate Stations	> 3	3		1	5%	0.0
		2 to 3	2		0.5		0.0
		1	1		0.25		0.0
I.	Number of Community Watersheds	> 3	3		1	5%	0.0
		2 to 3	2		0.5		0.0
		1	1		0.25		0.0
J.	Number of Active Hydrometric Sites and Snow pillows/courses	> 3	3		1	5%	0.0
		2 to 3	2		0.5		0.0
		1	1		0.25		0.0
						Total	41.67

BCGS Area: 082E011			Location: Similkameen				
Item	Description	Measure	Point Scale	Points Assigned	Weighting Factor	Maximum Weighting	Score
A.	Number of Classified Aquifers	> 5	3	1	1	15%	0.0
		3 – 5	2				0.0
		1 to 2	1				5.0
B.	Number of Reported Wells	> 300	3	1	1	15%	0.0
		100-300	2				0.0
		<100	1				5.0
C.	Number of Ground Water Supply Systems	> 5	3		1	15%	0.0
		3 – 5	2				0.0
		1 to 2	1				0.0
D.	Number of Ground Water Well and Spring Sources for Water Systems	> 5	3		1	10%	0.0
		3 – 5	2				0.0
		1 to 2	1				0.0
E.	Water Quantity Issues/Concerns Reported	>3	3		1	20%	0.0
		2 to 3	2				0.0
		1	1				0.0
F.	Number of Research/Water Planning Projects active and proposed	> 3	3		1	5%	0.0
		2 to 3	2				0.0
		1	1				0.0
G.	Mountain Pine Infestation	severe	3	1	1	5%	0.0
		light to moderate	2				0.0
		nil to localized	1				1.7
H.	Number of Active Climate Stations	> 3	3		1	5%	0.0
		2 to 3	2				0.0
		1	1				0.0
I.	Number of Community Watersheds	> 3	3		1	5%	0.0
		2 to 3	2				0.0
		1	1				0.0
J.	Number of Active Hydrometric Sites and Snow pillows/courses	> 3	3		1	5%	0.0
		2 to 3	2				0.0
		1	1				0.0
						Total	11.67

BCGS Area: 082E012			Location:				
Item	Description	Measure	Point Scale	Points Assigned	Weighting Factor	Maximum Weighting	Score
A.	Number of Classified Aquifers	> 5	3	1	1	15%	0.0
		3 – 5	2				0.0
		1 to 2	1				5.0
B.	Number of Reported Wells	> 300	3	2	1	15%	0.0
		100-300	2				10.0
		<100	1				0.0
C.	Number of Ground Water Supply Systems	> 5	3	1	1	15%	0.0
		3 – 5	2				0.0
		1 to 2	1				5.0
D.	Number of Ground Water Well and Spring Sources for Water Systems	> 5	3	2	1	10%	0.0
		3 – 5	2				5.0
		1 to 2	1				0.0
E.	Water Quantity Issues/Concerns Reported	>3	3	1	1	20%	0.0
		2 to 3	2				0.0
		1	1				0.0
F.	Number of Research/Water Planning Projects active and proposed	> 3	3	1	1	5%	0.0
		2 to 3	2				0.0
		1	1				1.7
G.	Mountain Pine Infestation	severe	3	1	1	5%	0.0
		light to moderate	2				0.0
		nil to localized	1				1.7
H.	Number of Active Climate Stations	> 3	3	1	1	5%	0.0
		2 to 3	2				0.0
		1	1				1.7
I.	Number of Community Watersheds	> 3	3	1	1	5%	0.0
		2 to 3	2				0.0
		1	1				0.0
J.	Number of Active Hydrometric Sites and Snow pillows/courses	> 3	3	1	1	5%	0.0
		2 to 3	2				0.0
		1	1				0.0
						Total	30.00

BCGS Area: 082E013			Location:				
Item	Description	Measure	Point Scale	Points Assigned	Weighting Factor	Maximum Weighting	Score
A.	Number of Classified Aquifers	> 5	3	2	1	15%	0.0
		3 – 5	2		0.75		10.0
		1 to 2	1		0.33		0.0
B.	Number of Reported Wells	> 300	3	3	1	15%	15.0
		100-300	2		0.75		0.0
		<100	1		0.33		0.0
C.	Number of Ground Water Supply Systems	> 5	3	1	1	15%	0.0
		3 – 5	2		0.75		0.0
		1 to 2	1		0.33		5.0
D.	Number of Ground Water Well and Spring Sources for Water Systems	> 5	3	3	1	10%	10.0
		3 – 5	2		0.5		0.0
		1 to 2	1		0.25		0.0
E.	Water Quantity Issues/Concerns Reported	>3	3		1	20%	0.0
		2 to 3	2		0.5		0.0
		1	1		0.25		0.0
F.	Number of Research/Water Planning Projects active and proposed	> 3	3	1	1	5%	0.0
		2 to 3	2		0.5		0.0
		1	1		0.25		1.7
G.	Mountain Pine Infestation	severe	3	1	1	5%	0.0
		light to moderate	2		0.5		0.0
		nil to localized	1		0.25		1.7
H.	Number of Active Climate Stations	> 3	3	3	1	5%	5.0
		2 to 3	2		0.5		0.0
		1	1		0.25		0.0
I.	Number of Community Watersheds	> 3	3		1	5%	0.0
		2 to 3	2		0.5		0.0
		1	1		0.25		0.0
J.	Number of Active Hydrometric Sites and Snow pillows/courses	> 3	3	1	1	5%	0.0
		2 to 3	2		0.5		0.0
		1	1		0.25		1.7
						Total	50.00

BCGS Area: 082E021			Location: Similkameen				
Item	Description	Measure	Point Scale	Points Assigned	Weighting Factor	Maximum Weighting	Score
A.	Number of Classified Aquifers	> 5	3	1	1	15%	0.0
		3 – 5	2				0.0
		1 to 2	1				5.0
B.	Number of Reported Wells	> 300	3	2	1	15%	0.0
		100-300	2				10.0
		<100	1				0.0
C.	Number of Ground Water Supply Systems	> 5	3	3	1	15%	15.0
		3 – 5	2				0.0
		1 to 2	1				0.0
D.	Number of Ground Water Well and Spring Sources for Water Systems	> 5	3	3	1	10%	10.0
		3 – 5	2				0.0
		1 to 2	1				0.0
E.	Water Quantity Issues/Concerns Reported	>3	3		1	20%	0.0
		2 to 3	2				0.0
		1	1				0.0
F.	Number of Research/Water Planning Projects active and proposed	> 3	3		1	5%	0.0
		2 to 3	2				0.0
		1	1				0.0
G.	Mountain Pine Infestation	severe	3	1	1	5%	0.0
		light to moderate	2				0.0
		nil to localized	1				1.7
H.	Number of Active Climate Stations	> 3	3	1	1	5%	0.0
		2 to 3	2				0.0
		1	1				1.7
I.	Number of Community Watersheds	> 3	3	1	1	5%	0.0
		2 to 3	2				0.0
		1	1				1.7
J.	Number of Active Hydrometric Sites and Snow pillows/courses	> 3	3	2	1	5%	0.0
		2 to 3	2				2.5
		1	1				0.0
						Total	47.50

BCGS Area: 082E022		Location: Okanagan					
Item	Description	Measure	Point Scale	Points Assigned	Weighting Factor	Maximum Weighting	Score
A.	Number of Classified Aquifers	> 5	3	1	1	15%	0.0
		3 – 5	2				0.0
		1 to 2	1				5.0
B.	Number of Reported Wells	> 300	3	1	1	15%	0.0
		100-300	2				0.0
		<100	1				5.0
C.	Number of Ground Water Supply Systems	> 5	3		1	15%	0.0
		3 – 5	2				0.0
		1 to 2	1				0.0
D.	Number of Ground Water Well and Spring Sources for Water Systems	> 5	3		1	10%	0.0
		3 – 5	2				0.0
		1 to 2	1				0.0
E.	Water Quantity Issues/Concerns Reported	>3	3		1	20%	0.0
		2 to 3	2				0.0
		1	1				0.0
F.	Number of Research/Water Planning Projects active and proposed	> 3	3	1	1	5%	0.0
		2 to 3	2				0.0
		1	1				1.7
G.	Mountain Pine Infestation	severe	3	1	1	5%	0.0
		light to moderate	2				0.0
		nil to localized	1				1.7
H.	Number of Active Climate Stations	> 3	3	1	1	5%	0.0
		2 to 3	2				0.0
		1	1				1.7
I.	Number of Community Watersheds	> 3	3		1	5%	0.0
		2 to 3	2				0.0
		1	1				0.0
J.	Number of Active Hydrometric Sites and Snow pillows/courses	> 3	3		1	5%	0.0
		2 to 3	2				0.0
		1	1				0.0
						Total	15.00

BCGS Area: 082E022			Location: Similkameen				
Item	Description	Measure	Point Scale	Points Assigned	Weighting Factor	Maximum Weighting	Score
A.	Number of Classified Aquifers	> 5	3	1	1	15%	0.0
		3 – 5	2				0.0
		1 to 2	1				5.0
B.	Number of Reported Wells	> 300	3	1	1	15%	0.0
		100-300	2				0.0
		<100	1				5.0
C.	Number of Ground Water Supply Systems	> 5	3		1	15%	0.0
		3 – 5	2				0.0
		1 to 2	1				0.0
D.	Number of Ground Water Well and Spring Sources for Water Systems	> 5	3		1	10%	0.0
		3 – 5	2				0.0
		1 to 2	1				0.0
E.	Water Quantity Issues/Concerns Reported	>3	3		1	20%	0.0
		2 to 3	2				0.0
		1	1				0.0
F.	Number of Research/Water Planning Projects active and proposed	> 3	3		1	5%	0.0
		2 to 3	2				0.0
		1	1				0.0
G.	Mountain Pine Infestation	severe	3	1	1	5%	0.0
		light to moderate	2				0.0
		nil to localized	1				1.7
H.	Number of Active Climate Stations	> 3	3	1	1	5%	0.0
		2 to 3	2				0.0
		1	1				1.7
I.	Number of Community Watersheds	> 3	3		1	5%	0.0
		2 to 3	2				0.0
		1	1				0.0
J.	Number of Active Hydrometric Sites and Snow pillows/courses	> 3	3		1	5%	0.0
		2 to 3	2				0.0
		1	1				0.0
						Total	13.33

BCGS Area: 082E023			Location:				
Item	Description	Measure	Point Scale	Points Assigned	Weighting Factor	Maximum Weighting	Score
A.	Number of Classified Aquifers	> 5	3	1	1	15%	0.0
		3 – 5	2				0.0
		1 to 2	1				5.0
B.	Number of Reported Wells	> 300	3	3	1	15%	15.0
		100-300	2				0.0
		<100	1				0.0
C.	Number of Ground Water Supply Systems	> 5	3	2	1	15%	0.0
		3 – 5	2				10.0
		1 to 2	1				0.0
D.	Number of Ground Water Well and Spring Sources for Water Systems	> 5	3	2	1	10%	0.0
		3 – 5	2				5.0
		1 to 2	1				0.0
E.	Water Quantity Issues/Concerns Reported	>3	3		1	20%	0.0
		2 to 3	2				0.0
		1	1				0.0
F.	Number of Research/Water Planning Projects active and proposed	> 3	3	1	1	5%	0.0
		2 to 3	2				0.0
		1	1				1.7
G.	Mountain Pine Infestation	severe	3	1	1	5%	0.0
		light to moderate	2				0.0
		nil to localized	1				1.7
H.	Number of Active Climate Stations	> 3	3		1	5%	0.0
		2 to 3	2				0.0
		1	1				0.0
I.	Number of Community Watersheds	> 3	3		1	5%	0.0
		2 to 3	2				0.0
		1	1				0.0
J.	Number of Active Hydrometric Sites and Snow pillows/courses	> 3	3	1	1	5%	0.0
		2 to 3	2				0.0
		1	1				1.7
						Total	40.00

BCGS Area: 082E032			Location:				
Item	Description	Measure	Point Scale	Points Assigned	Weighting Factor	Maximum Weighting	Score
A.	Number of Classified Aquifers	> 5	3	2	1	15%	0.0
		3 – 5	2		0.75		10.0
		1 to 2	1		0.33		0.0
B.	Number of Reported Wells	> 300	3	2	1	15%	0.0
		100-300	2		0.75		10.0
		<100	1		0.33		0.0
C.	Number of Ground Water Supply Systems	> 5	3	2	1	15%	0.0
		3 – 5	2		0.75		10.0
		1 to 2	1		0.33		0.0
D.	Number of Ground Water Well and Spring Sources for Water Systems	> 5	3	3	1	10%	10.0
		3 – 5	2		0.5		0.0
		1 to 2	1		0.25		0.0
E.	Water Quantity Issues/Concerns Reported	>3	3		1	20%	0.0
		2 to 3	2		0.5		0.0
		1	1		0.25		0.0
F.	Number of Research/Water Planning Projects active and proposed	> 3	3	1	1	5%	0.0
		2 to 3	2		0.5		0.0
		1	1		0.25		1.7
G.	Mountain Pine Infestation	severe	3	1	1	5%	0.0
		light to moderate	2		0.5		0.0
		nil to localized	1		0.25		1.7
H.	Number of Active Climate Stations	> 3	3		1	5%	0.0
		2 to 3	2		0.5		0.0
		1	1		0.25		0.0
I.	Number of Community Watersheds	> 3	3		1	5%	0.0
		2 to 3	2		0.5		0.0
		1	1		0.25		0.0
J.	Number of Active Hydrometric Sites and Snow pillows/courses	> 3	3		1	5%	0.0
		2 to 3	2		0.5		0.0
		1	1		0.25		0.0
						Total	43.33

BCGS Area: 082E033			Location:				
Item	Description	Measure	Point Scale	Points Assigned	Weighting Factor	Maximum Weighting	Score
A.	Number of Classified Aquifers	> 5	3	2	1	15%	0.0
		3 – 5	2		0.75		10.0
		1 to 2	1		0.33		0.0
B.	Number of Reported Wells	> 300	3	2	1	15%	0.0
		100-300	2		0.75		10.0
		<100	1		0.33		0.0
C.	Number of Ground Water Supply Systems	> 5	3	3	1	15%	15.0
		3 – 5	2		0.75		0.0
		1 to 2	1		0.33		0.0
D.	Number of Ground Water Well and Spring Sources for Water Systems	> 5	3	3	1	10%	10.0
		3 – 5	2		0.5		0.0
		1 to 2	1		0.25		0.0
E.	Water Quantity Issues/Concerns Reported	>3	3		1	20%	0.0
		2 to 3	2		0.5		0.0
		1	1		0.25		0.0
F.	Number of Research/Water Planning Projects active and proposed	> 3	3	2	1	5%	0.0
		2 to 3	2		0.5		2.5
		1	1		0.25		0.0
G.	Mountain Pine Infestation	severe	3	1	1	5%	0.0
		light to moderate	2		0.5		0.0
		nil to localized	1		0.25		1.7
H.	Number of Active Climate Stations	> 3	3		1	5%	0.0
		2 to 3	2		0.5		0.0
		1	1		0.25		0.0
I.	Number of Community Watersheds	> 3	3		1	5%	0.0
		2 to 3	2		0.5		0.0
		1	1		0.25		0.0
J.	Number of Active Hydrometric Sites and Snow pillows/courses	> 3	3	2	1	5%	0.0
		2 to 3	2		0.5		2.5
		1	1		0.25		0.0
						Total	51.67

BCGS Area: 082E042			Location:				
Item	Description	Measure	Point Scale	Points Assigned	Weighting Factor	Maximum Weighting	Score
A.	Number of Classified Aquifers	> 5	3	1	1	15%	0.0
		3 – 5	2				0.0
		1 to 2	1				5.0
B.	Number of Reported Wells	> 300	3	1	1	15%	0.0
		100-300	2				0.0
		<100	1				5.0
C.	Number of Ground Water Supply Systems	> 5	3	1	1	15%	0.0
		3 – 5	2				0.0
		1 to 2	1				5.0
D.	Number of Ground Water Well and Spring Sources for Water Systems	> 5	3	1	1	10%	0.0
		3 – 5	2				0.0
		1 to 2	1				2.5
E.	Water Quantity Issues/Concerns Reported	>3	3	1	1	20%	0.0
		2 to 3	2				0.0
		1	1				0.0
F.	Number of Research/Water Planning Projects active and proposed	> 3	3	1	1	5%	0.0
		2 to 3	2				0.0
		1	1				0.0
G.	Mountain Pine Infestation	severe	3	1	1	5%	0.0
		light to moderate	2				0.0
		nil to localized	1				1.7
H.	Number of Active Climate Stations	> 3	3	1	1	5%	0.0
		2 to 3	2				0.0
		1	1				1.7
I.	Number of Community Watersheds	> 3	3	1	1	5%	0.0
		2 to 3	2				0.0
		1	1				1.7
J.	Number of Active Hydrometric Sites and Snow pillows/courses	> 3	3	2	1	5%	0.0
		2 to 3	2				2.5
		1	1				0.0
						Total	25.00

BCGS Area: 082E043			Location:				
Item	Description	Measure	Point Scale	Points Assigned	Weighting Factor	Maximum Weighting	Score
A.	Number of Classified Aquifers	> 5	3	2	1	15%	0.0
		3 – 5	2				10.0
		1 to 2	1				0.0
B.	Number of Reported Wells	> 300	3	2	1	15%	0.0
		100-300	2				10.0
		<100	1				0.0
C.	Number of Ground Water Supply Systems	> 5	3	1	1	15%	0.0
		3 – 5	2				0.0
		1 to 2	1				5.0
D.	Number of Ground Water Well and Spring Sources for Water Systems	> 5	3	1	1	10%	0.0
		3 – 5	2				0.0
		1 to 2	1				2.5
E.	Water Quantity Issues/Concerns Reported	>3	3	1	1	20%	0.0
		2 to 3	2				0.0
		1	1				0.0
F.	Number of Research/Water Planning Projects active and proposed	> 3	3	1	1	5%	0.0
		2 to 3	2				0.0
		1	1				1.7
G.	Mountain Pine Infestation	severe	3	1	1	5%	0.0
		light to moderate	2				0.0
		nil to localized	1				1.7
H.	Number of Active Climate Stations	> 3	3	1	1	5%	0.0
		2 to 3	2				0.0
		1	1				1.7
I.	Number of Community Watersheds	> 3	3	2	1	5%	0.0
		2 to 3	2				2.5
		1	1				0.0
J.	Number of Active Hydrometric Sites and Snow pillows/courses	> 3	3	1	1	5%	0.0
		2 to 3	2				0.0
		1	1				1.7
						Total	36.67

BCGS Area: 082E052			Location:				
Item	Description	Measure	Point Scale	Points Assigned	Weighting Factor	Maximum Weighting	Score
A.	Number of Classified Aquifers	> 5	3	2	1	15%	0.0
		3 – 5	2		0.75		10.0
		1 to 2	1		0.33		0.0
B.	Number of Reported Wells	> 300	3	1	1	15%	0.0
		100-300	2		0.75		0.0
		<100	1		0.33		5.0
C.	Number of Ground Water Supply Systems	> 5	3	1	1	15%	0.0
		3 – 5	2		0.75		0.0
		1 to 2	1		0.33		5.0
D.	Number of Ground Water Well and Spring Sources for Water Systems	> 5	3	2	1	10%	0.0
		3 – 5	2		0.5		5.0
		1 to 2	1		0.25		0.0
E.	Water Quantity Issues/Concerns Reported	>3	3		1	20%	0.0
		2 to 3	2		0.5		0.0
		1	1		0.25		0.0
F.	Number of Research/Water Planning Projects active and proposed	> 3	3		1	5%	0.0
		2 to 3	2		0.5		0.0
		1	1		0.25		0.0
G.	Mountain Pine Infestation	severe	3	1	1	5%	0.0
		light to moderate	2		0.5		0.0
		nil to localized	1		0.25		1.7
H.	Number of Active Climate Stations	> 3	3	3	1	5%	5.0
		2 to 3	2		0.5		0.0
		1	1		0.25		0.0
I.	Number of Community Watersheds	> 3	3	2	1	5%	0.0
		2 to 3	2		0.5		2.5
		1	1		0.25		0.0
J.	Number of Active Hydrometric Sites and Snow pillows/courses	> 3	3	1	1	5%	0.0
		2 to 3	2		0.5		0.0
		1	1		0.25		1.7
						Total	35.83

BCGS Area: 082E053			Location:				
Item	Description	Measure	Point Scale	Points Assigned	Weighting Factor	Maximum Weighting	Score
A.	Number of Classified Aquifers	> 5	3	1	1	15%	0.0
		3 – 5	2				0.0
		1 to 2	1				5.0
B.	Number of Reported Wells	> 300	3	2	1	15%	0.0
		100-300	2				10.0
		<100	1				0.0
C.	Number of Ground Water Supply Systems	> 5	3		1	15%	0.0
		3 – 5	2				0.0
		1 to 2	1				0.0
D.	Number of Ground Water Well and Spring Sources for Water Systems	> 5	3		1	10%	0.0
		3 – 5	2				0.0
		1 to 2	1				0.0
E.	Water Quantity Issues/Concerns Reported	>3	3		1	20%	0.0
		2 to 3	2				0.0
		1	1				0.0
F.	Number of Research/Water Planning Projects active and proposed	> 3	3	1	1	5%	0.0
		2 to 3	2				0.0
		1	1				1.7
G.	Mountain Pine Infestation	severe	3	1	1	5%	0.0
		light to moderate	2				0.0
		nil to localized	1				1.7
H.	Number of Active Climate Stations	> 3	3	2	1	5%	0.0
		2 to 3	2				2.5
		1	1				0.0
I.	Number of Community Watersheds	> 3	3	2	1	5%	0.0
		2 to 3	2				2.5
		1	1				0.0
J.	Number of Active Hydrometric Sites and Snow pillows/courses	> 3	3		1	5%	0.0
		2 to 3	2				0.0
		1	1				0.0
						Total	23.33

BCGS Area: 082E062			Location:				
Item	Description	Measure	Point Scale	Points Assigned	Weighting Factor	Maximum Weighting	Score
A.	Number of Classified Aquifers	> 5	3	2	1	15%	0.0
		3 – 5	2		0.75		10.0
		1 to 2	1		0.33		0.0
B.	Number of Reported Wells	> 300	3	2	1	15%	0.0
		100-300	2		0.75		10.0
		<100	1		0.33		0.0
C.	Number of Ground Water Supply Systems	> 5	3	1	1	15%	0.0
		3 – 5	2		0.75		0.0
		1 to 2	1		0.33		5.0
D.	Number of Ground Water Well and Spring Sources for Water Systems	> 5	3	2	1	10%	0.0
		3 – 5	2		0.5		5.0
		1 to 2	1		0.25		0.0
E.	Water Quantity Issues/Concerns Reported	>3	3		1	20%	0.0
		2 to 3	2		0.5		0.0
		1	1		0.25		0.0
F.	Number of Research/Water Planning Projects active and proposed	> 3	3		1	5%	0.0
		2 to 3	2		0.5		0.0
		1	1		0.25		0.0
G.	Mountain Pine Infestation	severe	3	1	1	5%	0.0
		light to moderate	2		0.5		0.0
		nil to localized	1		0.25		1.7
H.	Number of Active Climate Stations	> 3	3		1	5%	0.0
		2 to 3	2		0.5		0.0
		1	1		0.25		0.0
I.	Number of Community Watersheds	> 3	3	1	1	5%	0.0
		2 to 3	2		0.5		0.0
		1	1		0.25		1.7
J.	Number of Active Hydrometric Sites and Snow pillows/courses	> 3	3		1	5%	0.0
		2 to 3	2		0.5		0.0
		1	1		0.25		0.0
						Total	33.33

BCGS Area: 082E063			Location:				
Item	Description	Measure	Point Scale	Points Assigned	Weighting Factor	Maximum Weighting	Score
A.	Number of Classified Aquifers	> 5	3	1	1	15%	0.0
		3 – 5	2				0.0
		1 to 2	1				5.0
B.	Number of Reported Wells	> 300	3	1	1	15%	0.0
		100-300	2				0.0
		<100	1				5.0
C.	Number of Ground Water Supply Systems	> 5	3		1	15%	0.0
		3 – 5	2				0.0
		1 to 2	1				0.0
D.	Number of Ground Water Well and Spring Sources for Water Systems	> 5	3		1	10%	0.0
		3 – 5	2				0.0
		1 to 2	1				0.0
E.	Water Quantity Issues/Concerns Reported	>3	3		1	20%	0.0
		2 to 3	2				0.0
		1	1				0.0
F.	Number of Research/Water Planning Projects active and proposed	> 3	3	1	1	5%	0.0
		2 to 3	2				0.0
		1	1				1.7
G.	Mountain Pine Infestation	severe	3	1	1	5%	0.0
		light to moderate	2				0.0
		nil to localized	1				1.7
H.	Number of Active Climate Stations	> 3	3		1	5%	0.0
		2 to 3	2				0.0
		1	1				0.0
I.	Number of Community Watersheds	> 3	3	3	1	5%	5.0
		2 to 3	2				0.0
		1	1				0.0
J.	Number of Active Hydrometric Sites and Snow pillows/courses	> 3	3	1	1	5%	0.0
		2 to 3	2				0.0
		1	1				1.7
						Total	20.00

BCGS Area: 082E072			Location:				
Item	Description	Measure	Point Scale	Points Assigned	Weighting Factor	Maximum Weighting	Score
A.	Number of Classified Aquifers	> 5	3	1	1	15%	0.0
		3 – 5	2				0.0
		1 to 2	1				5.0
B.	Number of Reported Wells	> 300	3	1	1	15%	0.0
		100-300	2				0.0
		<100	1				5.0
C.	Number of Ground Water Supply Systems	> 5	3	2	1	15%	0.0
		3 – 5	2				10.0
		1 to 2	1				0.0
D.	Number of Ground Water Well and Spring Sources for Water Systems	> 5	3	2	1	10%	0.0
		3 – 5	2				5.0
		1 to 2	1				0.0
E.	Water Quantity Issues/Concerns Reported	>3	3	1	1	20%	0.0
		2 to 3	2				0.0
		1	1				0.0
F.	Number of Research/Water Planning Projects active and proposed	> 3	3	1	1	5%	0.0
		2 to 3	2				0.0
		1	1				0.0
G.	Mountain Pine Infestation	severe	3	1	1	5%	0.0
		light to moderate	2				0.0
		nil to localized	1				1.7
H.	Number of Active Climate Stations	> 3	3	2	1	5%	0.0
		2 to 3	2				2.5
		1	1				0.0
I.	Number of Community Watersheds	> 3	3	1	1	5%	0.0
		2 to 3	2				0.0
		1	1				1.7
J.	Number of Active Hydrometric Sites and Snow pillows/courses	> 3	3	1	1	5%	0.0
		2 to 3	2				0.0
		1	1				0.0
						Total	30.83

BCGS Area: 082E073			Location:				
Item	Description	Measure	Point Scale	Points Assigned	Weighting Factor	Maximum Weighting	Score
A.	Number of Classified Aquifers	> 5	3	1	1	15%	0.0
		3 – 5	2				0.0
		1 to 2	1				5.0
B.	Number of Reported Wells	> 300	3	1	1	15%	0.0
		100-300	2				0.0
		<100	1				5.0
C.	Number of Ground Water Supply Systems	> 5	3	1	1	15%	0.0
		3 – 5	2				0.0
		1 to 2	1				5.0
D.	Number of Ground Water Well and Spring Sources for Water Systems	> 5	3	1	1	10%	0.0
		3 – 5	2				0.0
		1 to 2	1				2.5
E.	Water Quantity Issues/Concerns Reported	>3	3	1	1	20%	0.0
		2 to 3	2				0.0
		1	1				0.0
F.	Number of Research/Water Planning Projects active and proposed	> 3	3	1	1	5%	0.0
		2 to 3	2				0.0
		1	1				0.0
G.	Mountain Pine Infestation	severe	3	1	1	5%	0.0
		light to moderate	2				0.0
		nil to localized	1				1.7
H.	Number of Active Climate Stations	> 3	3	1	1	5%	0.0
		2 to 3	2				0.0
		1	1				1.7
I.	Number of Community Watersheds	> 3	3	1	1	5%	0.0
		2 to 3	2				0.0
		1	1				1.7
J.	Number of Active Hydrometric Sites and Snow pillows/courses	> 3	3	1	1	5%	0.0
		2 to 3	2				0.0
		1	1				0.0
						Total	22.50

BCGS Area: 082E082			Location:				
Item	Description	Measure	Point Scale	Points Assigned	Weighting Factor	Maximum Weighting	Score
A.	Number of Classified Aquifers	> 5	3	2	1	15%	0.0
		3 – 5	2		0.75		10.0
		1 to 2	1		0.33		0.0
B.	Number of Reported Wells	> 300	3	2	1	15%	0.0
		100-300	2		0.75		10.0
		<100	1		0.33		0.0
C.	Number of Ground Water Supply Systems	> 5	3	2	1	15%	0.0
		3 – 5	2		0.75		10.0
		1 to 2	1		0.33		0.0
D.	Number of Ground Water Well and Spring Sources for Water Systems	> 5	3	2	1	10%	0.0
		3 – 5	2		0.5		5.0
		1 to 2	1		0.25		0.0
E.	Water Quantity Issues/Concerns Reported	>3	3		1	20%	0.0
		2 to 3	2		0.5		0.0
		1	1		0.25		0.0
F.	Number of Research/Water Planning Projects active and proposed	> 3	3		1	5%	0.0
		2 to 3	2		0.5		0.0
		1	1		0.25		0.0
G.	Mountain Pine Infestation	severe	3	1	1	5%	0.0
		light to moderate	2		0.5		0.0
		nil to localized	1		0.25		1.7
H.	Number of Active Climate Stations	> 3	3	1	1	5%	0.0
		2 to 3	2		0.5		0.0
		1	1		0.25		1.7
I.	Number of Community Watersheds	> 3	3	2	1	5%	0.0
		2 to 3	2		0.5		2.5
		1	1		0.25		0.0
J.	Number of Active Hydrometric Sites and Snow pillows/courses	> 3	3	1	1	5%	0.0
		2 to 3	2		0.5		0.0
		1	1		0.25		1.7
						Total	42.50

BCGS Area: 082E083			Location:				
Item	Description	Measure	Point Scale	Points Assigned	Weighting Factor	Maximum Weighting	Score
A.	Number of Classified Aquifers	> 5	3	3	1	15%	15.0
		3 – 5	2				0.0
		1 to 2	1				0.0
B.	Number of Reported Wells	> 300	3	3	1	15%	15.0
		100-300	2				0.0
		<100	1				0.0
C.	Number of Ground Water Supply Systems	> 5	3	2	1	15%	0.0
		3 – 5	2				10.0
		1 to 2	1				0.0
D.	Number of Ground Water Well and Spring Sources for Water Systems	> 5	3	3	1	10%	10.0
		3 – 5	2				0.0
		1 to 2	1				0.0
E.	Water Quantity Issues/Concerns Reported	>3	3		1	20%	0.0
		2 to 3	2				0.0
		1	1				0.0
F.	Number of Research/Water Planning Projects active and proposed	> 3	3	1	1	5%	0.0
		2 to 3	2				0.0
		1	1				1.7
G.	Mountain Pine Infestation	severe	3	1	1	5%	0.0
		light to moderate	2				0.0
		nil to localized	1				1.7
H.	Number of Active Climate Stations	> 3	3	3	1	5%	5.0
		2 to 3	2				0.0
		1	1				0.0
I.	Number of Community Watersheds	> 3	3	1	1	5%	0.0
		2 to 3	2				0.0
		1	1				1.7
J.	Number of Active Hydrometric Sites and Snow pillows/courses	> 3	3	2	1	5%	0.0
		2 to 3	2				2.5
		1	1				0.0
						Total	62.50

BCGS Area: 082E084			Location:				
Item	Description	Measure	Point Scale	Points Assigned	Weighting Factor	Maximum Weighting	Score
A.	Number of Classified Aquifers	> 5	3	3	1	15%	15.0
		3 – 5	2		0.75		0.0
		1 to 2	1		0.33		0.0
B.	Number of Reported Wells	> 300	3	3	1	15%	15.0
		100-300	2		0.75		0.0
		<100	1		0.33		0.0
C.	Number of Ground Water Supply Systems	> 5	3	1	1	15%	0.0
		3 – 5	2		0.75		0.0
		1 to 2	1		0.33		5.0
D.	Number of Ground Water Well and Spring Sources for Water Systems	> 5	3	3	1	10%	10.0
		3 – 5	2		0.5		0.0
		1 to 2	1		0.25		0.0
E.	Water Quantity Issues/Concerns Reported	>3	3	1	1	20%	0.0
		2 to 3	2		0.5		0.0
		1	1		0.25		0.0
F.	Number of Research/Water Planning Projects active and proposed	> 3	3	1	1	5%	0.0
		2 to 3	2		0.5		0.0
		1	1		0.25		1.7
G.	Mountain Pine Infestation	severe	3	1	1	5%	0.0
		light to moderate	2		0.5		0.0
		nil to localized	1		0.25		1.7
H.	Number of Active Climate Stations	> 3	3	1	1	5%	0.0
		2 to 3	2		0.5		0.0
		1	1		0.25		0.0
I.	Number of Community Watersheds	> 3	3	1	1	5%	0.0
		2 to 3	2		0.5		0.0
		1	1		0.25		1.7
J.	Number of Active Hydrometric Sites and Snow pillows/courses	> 3	3	2	1	5%	0.0
		2 to 3	2		0.5		2.5
		1	1		0.25		0.0
						Total	52.50

BCGS Area: 082E085			Location:				
Item	Description	Measure	Point Scale	Points Assigned	Weighting Factor	Maximum Weighting	Score
A.	Number of Classified Aquifers	> 5	3	1	1	15%	0.0
		3 – 5	2				0.0
		1 to 2	1				5.0
B.	Number of Reported Wells	> 300	3	1	1	15%	0.0
		100-300	2				0.0
		<100	1				5.0
C.	Number of Ground Water Supply Systems	> 5	3	1	1	15%	0.0
		3 – 5	2				0.0
		1 to 2	1				5.0
D.	Number of Ground Water Well and Spring Sources for Water Systems	> 5	3	1	1	10%	0.0
		3 – 5	2				0.0
		1 to 2	1				2.5
E.	Water Quantity Issues/Concerns Reported	>3	3	1	1	20%	0.0
		2 to 3	2				0.0
		1	1				0.0
F.	Number of Research/Water Planning Projects active and proposed	> 3	3	1	1	5%	0.0
		2 to 3	2				0.0
		1	1				0.0
G.	Mountain Pine Infestation	severe	3	1	1	5%	0.0
		light to moderate	2				0.0
		nil to localized	1				1.7
H.	Number of Active Climate Stations	> 3	3	2	2	5%	0.0
		2 to 3	2				2.5
		1	1				0.0
I.	Number of Community Watersheds	> 3	3	2	2	5%	0.0
		2 to 3	2				2.5
		1	1				0.0
J.	Number of Active Hydrometric Sites and Snow pillows/courses	> 3	3	2	2	5%	0.0
		2 to 3	2				2.5
		1	1				0.0
						Total	26.67

BCGS Area: 082E093			Location:				
Item	Description	Measure	Point Scale	Points Assigned	Weighting Factor	Maximum Weighting	Score
A.	Number of Classified Aquifers	> 5	3	3	1	15%	15.0
		3 – 5	2		0.75		0.0
		1 to 2	1		0.33		0.0
B.	Number of Reported Wells	> 300	3	2	1	15%	0.0
		100-300	2		0.75		10.0
		<100	1		0.33		0.0
C.	Number of Ground Water Supply Systems	> 5	3		1	15%	0.0
		3 – 5	2		0.75		0.0
		1 to 2	1		0.33		0.0
D.	Number of Ground Water Well and Spring Sources for Water Systems	> 5	3		1	10%	0.0
		3 – 5	2		0.5		0.0
		1 to 2	1		0.25		0.0
E.	Water Quantity Issues/Concerns Reported	>3	3		1	20%	0.0
		2 to 3	2		0.5		0.0
		1	1		0.25		0.0
F.	Number of Research/Water Planning Projects active and proposed	> 3	3	1	1	5%	0.0
		2 to 3	2		0.5		0.0
		1	1		0.25		1.7
G.	Mountain Pine Infestation	severe	3	1	1	5%	0.0
		light to moderate	2		0.5		0.0
		nil to localized	1		0.25		1.7
H.	Number of Active Climate Stations	> 3	3	2	1	5%	0.0
		2 to 3	2		0.5		2.5
		1	1		0.25		0.0
I.	Number of Community Watersheds	> 3	3	2	1	5%	0.0
		2 to 3	2		0.5		2.5
		1	1		0.25		0.0
J.	Number of Active Hydrometric Sites and Snow pillows/courses	> 3	3		1	5%	0.0
		2 to 3	2		0.5		0.0
		1	1		0.25		0.0
						Total	33.33

BCGS Area: 082E094			Location:				
Item	Description	Measure	Point Scale	Points Assigned	Weighting Factor	Maximum Weighting	Score
A.	Number of Classified Aquifers	> 5	3	3	1	15%	15.0
		3 – 5	2				0.0
		1 to 2	1				0.0
B.	Number of Reported Wells	> 300	3	3	1	15%	15.0
		100-300	2				0.0
		<100	1				0.0
C.	Number of Ground Water Supply Systems	> 5	3	2	1	15%	0.0
		3 – 5	2				10.0
		1 to 2	1				0.0
D.	Number of Ground Water Well and Spring Sources for Water Systems	> 5	3	3	1	10%	10.0
		3 – 5	2				0.0
		1 to 2	1				0.0
E.	Water Quantity Issues/Concerns Reported	>3	3		1	20%	0.0
		2 to 3	2				0.0
		1	1				0.0
F.	Number of Research/Water Planning Projects active and proposed	> 3	3	1	1	5%	0.0
		2 to 3	2				0.0
		1	1				1.7
G.	Mountain Pine Infestation	severe	3	1	1	5%	0.0
		light to moderate	2				0.0
		nil to localized	1				1.7
H.	Number of Active Climate Stations	> 3	3	2	1	5%	0.0
		2 to 3	2				2.5
		1	1				0.0
I.	Number of Community Watersheds	> 3	3	2	1	5%	0.0
		2 to 3	2				2.5
		1	1				0.0
J.	Number of Active Hydrometric Sites and Snow pillows/courses	> 3	3		1	5%	0.0
		2 to 3	2				0.0
		1	1				0.0
						Total	58.33

BCGS Area: 082E095			Location:				
Item	Description	Measure	Point Scale	Points Assigned	Weighting Factor	Maximum Weighting	Score
A.	Number of Classified Aquifers	> 5	3	1	1	15%	0.0
		3 – 5	2				0.0
		1 to 2	1				5.0
B.	Number of Reported Wells	> 300	3	1	1	15%	0.0
		100-300	2				0.0
		<100	1				5.0
C.	Number of Ground Water Supply Systems	> 5	3		1	15%	0.0
		3 – 5	2				0.0
		1 to 2	1				0.0
D.	Number of Ground Water Well and Spring Sources for Water Systems	> 5	3		1	10%	0.0
		3 – 5	2				0.0
		1 to 2	1				0.0
E.	Water Quantity Issues/Concerns Reported	>3	3		1	20%	0.0
		2 to 3	2				0.0
		1	1				0.0
F.	Number of Research/Water Planning Projects active and proposed	> 3	3		1	5%	0.0
		2 to 3	2				0.0
		1	1				0.0
G.	Mountain Pine Infestation	severe	3	1	1	5%	0.0
		light to moderate	2				0.0
		nil to localized	1				1.7
H.	Number of Active Climate Stations	> 3	3		1	5%	0.0
		2 to 3	2				0.0
		1	1				0.0
I.	Number of Community Watersheds	> 3	3	2	1	5%	0.0
		2 to 3	2				2.5
		1	1				0.0
J.	Number of Active Hydrometric Sites and Snow pillows/courses	> 3	3		1	5%	0.0
		2 to 3	2				0.0
		1	1				0.0
						Total	14.17

BCGS Area: 082L003			Location:				
Item	Description	Measure	Point Scale	Points Assigned	Weighting Factor	Maximum Weighting	Score
A.	Number of Classified Aquifers	> 5	3	1	1	15%	0.0
		3 – 5	2				0.0
		1 to 2	1				5.0
B.	Number of Reported Wells	> 300	3	2	1	15%	0.0
		100-300	2				10.0
		<100	1				0.0
C.	Number of Ground Water Supply Systems	> 5	3	2	1	15%	0.0
		3 – 5	2				10.0
		1 to 2	1				0.0
D.	Number of Ground Water Well and Spring Sources for Water Systems	> 5	3	3	1	10%	10.0
		3 – 5	2				0.0
		1 to 2	1				0.0
E.	Water Quantity Issues/Concerns Reported	>3	3	1	1	20%	0.0
		2 to 3	2				0.0
		1	1				0.0
F.	Number of Research/Water Planning Projects active and proposed	> 3	3	1	1	5%	0.0
		2 to 3	2				0.0
		1	1				0.0
G.	Mountain Pine Infestation	severe	3	1	1	5%	0.0
		light to moderate	2				0.0
		nil to localized	1				1.7
H.	Number of Active Climate Stations	> 3	3	2	1	5%	0.0
		2 to 3	2				2.5
		1	1				0.0
I.	Number of Community Watersheds	> 3	3	1	1	5%	0.0
		2 to 3	2				0.0
		1	1				1.7
J.	Number of Active Hydrometric Sites and Snow pillows/courses	> 3	3	1	1	5%	0.0
		2 to 3	2				0.0
		1	1				0.0
						Total	40.83

BCGS Area: 082L004			Location:				
Item	Description	Measure	Point Scale	Points Assigned	Weighting Factor	Maximum Weighting	Score
A.	Number of Classified Aquifers	> 5	3	1	1	15%	0.0
		3 – 5	2				0.0
		1 to 2	1				5.0
B.	Number of Reported Wells	> 300	3	2	1	15%	0.0
		100-300	2				10.0
		<100	1				0.0
C.	Number of Ground Water Supply Systems	> 5	3	2	1	15%	0.0
		3 – 5	2				10.0
		1 to 2	1				0.0
D.	Number of Ground Water Well and Spring Sources for Water Systems	> 5	3	2	1	10%	0.0
		3 – 5	2				5.0
		1 to 2	1				0.0
E.	Water Quantity Issues/Concerns Reported	>3	3	1	1	20%	0.0
		2 to 3	2				0.0
		1	1				0.0
F.	Number of Research/Water Planning Projects active and proposed	> 3	3	1	1	5%	0.0
		2 to 3	2				0.0
		1	1				0.0
G.	Mountain Pine Infestation	severe	3	1	1	5%	0.0
		light to moderate	2				0.0
		nil to localized	1				1.7
H.	Number of Active Climate Stations	> 3	3	1	1	5%	0.0
		2 to 3	2				0.0
		1	1				1.7
I.	Number of Community Watersheds	> 3	3	2	1	5%	0.0
		2 to 3	2				2.5
		1	1				0.0
J.	Number of Active Hydrometric Sites and Snow pillows/courses	> 3	3	2	1	5%	0.0
		2 to 3	2				2.5
		1	1				0.0
						Total	38.33

BCGS Area: 082L013			Location:				
Item	Description	Measure	Point Scale	Points Assigned	Weighting Factor	Maximum Weighting	Score
A.	Number of Classified Aquifers	> 5	3	1	1	15%	0.0
		3 – 5	2				0.0
		1 to 2	1				5.0
B.	Number of Reported Wells	> 300	3	1	1	15%	0.0
		100-300	2				0.0
		<100	1				5.0
C.	Number of Ground Water Supply Systems	> 5	3	1	1	15%	0.0
		3 – 5	2				0.0
		1 to 2	1				5.0
D.	Number of Ground Water Well and Spring Sources for Water Systems	> 5	3	1	1	10%	0.0
		3 – 5	2				0.0
		1 to 2	1				2.5
E.	Water Quantity Issues/Concerns Reported	>3	3	1	1	20%	0.0
		2 to 3	2				0.0
		1	1				0.0
F.	Number of Research/Water Planning Projects active and proposed	> 3	3	1	1	5%	0.0
		2 to 3	2				0.0
		1	1				0.0
G.	Mountain Pine Infestation	severe	3	1	1	5%	0.0
		light to moderate	2				0.0
		nil to localized	1				1.7
H.	Number of Active Climate Stations	> 3	3	1	1	5%	0.0
		2 to 3	2				0.0
		1	1				1.7
I.	Number of Community Watersheds	> 3	3	2	1	5%	0.0
		2 to 3	2				2.5
		1	1				0.0
J.	Number of Active Hydrometric Sites and Snow pillows/courses	> 3	3	1	1	5%	0.0
		2 to 3	2				0.0
		1	1				0.0
						Total	23.33

BCGS Area: 082L014			Location:				
Item	Description	Measure	Point Scale	Points Assigned	Weighting Factor	Maximum Weighting	Score
A.	Number of Classified Aquifers	> 5	3	1	1	15%	0.0
		3 – 5	2				0.0
		1 to 2	1				5.0
B.	Number of Reported Wells	> 300	3	1	1	15%	0.0
		100-300	2				0.0
		<100	1				5.0
C.	Number of Ground Water Supply Systems	> 5	3	1	1	15%	0.0
		3 – 5	2				0.0
		1 to 2	1				5.0
D.	Number of Ground Water Well and Spring Sources for Water Systems	> 5	3	1	1	10%	0.0
		3 – 5	2				0.0
		1 to 2	1				2.5
E.	Water Quantity Issues/Concerns Reported	>3	3	1	1	20%	0.0
		2 to 3	2				0.0
		1	1				0.0
F.	Number of Research/Water Planning Projects active and proposed	> 3	3	1	1	5%	0.0
		2 to 3	2				0.0
		1	1				0.0
G.	Mountain Pine Infestation	severe	3	2	1	5%	0.0
		light to moderate	2				2.5
		nil to localized	1				0.0
H.	Number of Active Climate Stations	> 3	3	1	1	5%	0.0
		2 to 3	2				0.0
		1	1				1.7
I.	Number of Community Watersheds	> 3	3	2	1	5%	0.0
		2 to 3	2				2.5
		1	1				0.0
J.	Number of Active Hydrometric Sites and Snow pillows/courses	> 3	3	1	1	5%	0.0
		2 to 3	2				0.0
		1	1				1.7
						Total	25.83

BCGS Area: 082L023			Location:				
Item	Description	Measure	Point Scale	Points Assigned	Weighting Factor	Maximum Weighting	Score
A.	Number of Classified Aquifers	> 5	3	1	1	15%	0.0
		3 – 5	2				0.0
		1 to 2	1				5.0
B.	Number of Reported Wells	> 300	3	1	1	15%	0.0
		100-300	2				0.0
		<100	1				5.0
C.	Number of Ground Water Supply Systems	> 5	3	1	1	15%	0.0
		3 – 5	2				0.0
		1 to 2	1				5.0
D.	Number of Ground Water Well and Spring Sources for Water Systems	> 5	3	2	1	10%	0.0
		3 – 5	2				5.0
		1 to 2	1				0.0
E.	Water Quantity Issues/Concerns Reported	>3	3	1	1	20%	0.0
		2 to 3	2				0.0
		1	1				0.0
F.	Number of Research/Water Planning Projects active and proposed	> 3	3	1	1	5%	0.0
		2 to 3	2				0.0
		1	1				0.0
G.	Mountain Pine Infestation	severe	3	1	1	5%	0.0
		light to moderate	2				0.0
		nil to localized	1				1.7
H.	Number of Active Climate Stations	> 3	3	1	1	5%	0.0
		2 to 3	2				0.0
		1	1				0.0
I.	Number of Community Watersheds	> 3	3	1	1	5%	0.0
		2 to 3	2				0.0
		1	1				0.0
J.	Number of Active Hydrometric Sites and Snow pillows/courses	> 3	3	1	1	5%	0.0
		2 to 3	2				0.0
		1	1				1.7
						Total	23.33

BCGS Area: 082L024			Location:				
Item	Description	Measure	Point Scale	Points Assigned	Weighting Factor	Maximum Weighting	Score
A.	Number of Classified Aquifers	> 5	3	3	1	15%	15.0
		3 – 5	2				0.0
		1 to 2	1				0.0
B.	Number of Reported Wells	> 300	3	3	1	15%	15.0
		100-300	2				0.0
		<100	1				0.0
C.	Number of Ground Water Supply Systems	> 5	3	2	1	15%	0.0
		3 – 5	2				10.0
		1 to 2	1				0.0
D.	Number of Ground Water Well and Spring Sources for Water Systems	> 5	3	3	1	10%	10.0
		3 – 5	2				0.0
		1 to 2	1				0.0
E.	Water Quantity Issues/Concerns Reported	>3	3	2	1	20%	0.0
		2 to 3	2				0.0
		1	1				0.0
F.	Number of Research/Water Planning Projects active and proposed	> 3	3	1	1	5%	0.0
		2 to 3	2				0.0
		1	1				1.7
G.	Mountain Pine Infestation	severe	3	1	1	5%	0.0
		light to moderate	2				0.0
		nil to localized	1				1.7
H.	Number of Active Climate Stations	> 3	3	2	1	5%	0.0
		2 to 3	2				2.5
		1	1				0.0
I.	Number of Community Watersheds	> 3	3	1	1	5%	0.0
		2 to 3	2				0.0
		1	1				1.7
J.	Number of Active Hydrometric Sites and Snow pillows/courses	> 3	3	2	1	5%	0.0
		2 to 3	2				2.5
		1	1				0.0
						Total	60.00

BCGS Area: 082L025			Location:				
Item	Description	Measure	Point Scale	Points Assigned	Weighting Factor	Maximum Weighting	Score
A.	Number of Classified Aquifers	> 5	3	2	1	15%	0.0
		3 – 5	2		0.75		10.0
		1 to 2	1		0.33		0.0
B.	Number of Reported Wells	> 300	3	2	1	15%	0.0
		100-300	2		0.75		10.0
		<100	1		0.33		0.0
C.	Number of Ground Water Supply Systems	> 5	3	1	1	15%	0.0
		3 – 5	2		0.75		0.0
		1 to 2	1		0.33		5.0
D.	Number of Ground Water Well and Spring Sources for Water Systems	> 5	3	2	1	10%	0.0
		3 – 5	2		0.5		5.0
		1 to 2	1		0.25		0.0
E.	Water Quantity Issues/Concerns Reported	>3	3		1	20%	0.0
		2 to 3	2		0.5		0.0
		1	1		0.25		0.0
F.	Number of Research/Water Planning Projects active and proposed	> 3	3	1	1	5%	0.0
		2 to 3	2		0.5		0.0
		1	1		0.25		1.7
G.	Mountain Pine Infestation	severe	3	1	1	5%	0.0
		light to moderate	2		0.5		0.0
		nil to localized	1		0.25		1.7
H.	Number of Active Climate Stations	> 3	3	1	1	5%	0.0
		2 to 3	2		0.5		0.0
		1	1		0.25		1.7
I.	Number of Community Watersheds	> 3	3	2	1	5%	0.0
		2 to 3	2		0.5		2.5
		1	1		0.25		0.0
J.	Number of Active Hydrometric Sites and Snow pillows/courses	> 3	3	1	1	5%	0.0
		2 to 3	2		0.5		0.0
		1	1		0.25		1.7
						Total	39.17

BCGS Area: 082L026			Location:				
Item	Description	Measure	Point Scale	Points Assigned	Weighting Factor	Maximum Weighting	Score
A.	Number of Classified Aquifers	> 5	3	3	1	15%	15.0
		3 – 5	2		0.75		0.0
		1 to 2	1		0.33		0.0
B.	Number of Reported Wells	> 300	3	3	1	15%	15.0
		100-300	2		0.75		0.0
		<100	1		0.33		0.0
C.	Number of Ground Water Supply Systems	> 5	3	2	1	15%	0.0
		3 – 5	2		0.75		10.0
		1 to 2	1		0.33		0.0
D.	Number of Ground Water Well and Spring Sources for Water Systems	> 5	3	3	1	10%	10.0
		3 – 5	2		0.5		0.0
		1 to 2	1		0.25		0.0
E.	Water Quantity Issues/Concerns Reported	>3	3	2	1	20%	0.0
		2 to 3	2		0.5		0.0
		1	1		0.25		0.0
F.	Number of Research/Water Planning Projects active and proposed	> 3	3	2	1	5%	0.0
		2 to 3	2		0.5		0.0
		1	1		0.25		0.0
G.	Mountain Pine Infestation	severe	3	1	1	5%	0.0
		light to moderate	2		0.5		0.0
		nil to localized	1		0.25		1.7
H.	Number of Active Climate Stations	> 3	3	1	1	5%	0.0
		2 to 3	2		0.5		0.0
		1	1		0.25		1.7
I.	Number of Community Watersheds	> 3	3	1	1	5%	0.0
		2 to 3	2		0.5		0.0
		1	1		0.25		1.7
J.	Number of Active Hydrometric Sites and Snow pillows/courses	> 3	3	2	1	5%	0.0
		2 to 3	2		0.5		2.5
		1	1		0.25		0.0
						Total	57.50

BCGS Area: 082L034			Location:				
Item	Description	Measure	Point Scale	Points Assigned	Weighting Factor	Maximum Weighting	Score
A.	Number of Classified Aquifers	> 5	3	3	1	15%	15.0
		3 – 5	2				0.0
		1 to 2	1				0.0
B.	Number of Reported Wells	> 300	3	3	1	15%	15.0
		100-300	2				0.0
		<100	1				0.0
C.	Number of Ground Water Supply Systems	> 5	3	3	1	15%	15.0
		3 – 5	2				0.0
		1 to 2	1				0.0
D.	Number of Ground Water Well and Spring Sources for Water Systems	> 5	3	3	1	10%	10.0
		3 – 5	2				0.0
		1 to 2	1				0.0
E.	Water Quantity Issues/Concerns Reported	>3	3		1	20%	0.0
		2 to 3	2				0.0
		1	1				0.0
F.	Number of Research/Water Planning Projects active and proposed	> 3	3	2	1	5%	0.0
		2 to 3	2				2.5
		1	1				0.0
G.	Mountain Pine Infestation	severe	3	2	1	5%	0.0
		light to moderate	2				2.5
		nil to localized	1				0.0
H.	Number of Active Climate Stations	> 3	3	2	1	5%	0.0
		2 to 3	2				2.5
		1	1				0.0
I.	Number of Community Watersheds	> 3	3	2	1	5%	0.0
		2 to 3	2				2.5
		1	1				0.0
J.	Number of Active Hydrometric Sites and Snow pillows/courses	> 3	3		1	5%	0.0
		2 to 3	2				0.0
		1	1				0.0
						Total	65.00

BCGS Area: 082L035			Location:				
Item	Description	Measure	Point Scale	Points Assigned	Weighting Factor	Maximum Weighting	Score
A.	Number of Classified Aquifers	> 5	3	2	1	15%	0.0
		3 – 5	2		0.75		10.0
		1 to 2	1		0.33		0.0
B.	Number of Reported Wells	> 300	3	2	1	15%	0.0
		100-300	2		0.75		10.0
		<100	1		0.33		0.0
C.	Number of Ground Water Supply Systems	> 5	3	1	1	15%	0.0
		3 – 5	2		0.75		0.0
		1 to 2	1		0.33		5.0
D.	Number of Ground Water Well and Spring Sources for Water Systems	> 5	3	3	1	10%	10.0
		3 – 5	2		0.5		0.0
		1 to 2	1		0.25		0.0
E.	Water Quantity Issues/Concerns Reported	>3	3		1	20%	0.0
		2 to 3	2		0.5		0.0
		1	1		0.25		0.0
F.	Number of Research/Water Planning Projects active and proposed	> 3	3	2	1	5%	0.0
		2 to 3	2		0.5		2.5
		1	1		0.25		0.0
G.	Mountain Pine Infestation	severe	3	2	1	5%	0.0
		light to moderate	2		0.5		2.5
		nil to localized	1		0.25		0.0
H.	Number of Active Climate Stations	> 3	3	1	1	5%	0.0
		2 to 3	2		0.5		0.0
		1	1		0.25		1.7
I.	Number of Community Watersheds	> 3	3	3	1	5%	5.0
		2 to 3	2		0.5		0.0
		1	1		0.25		0.0
J.	Number of Active Hydrometric Sites and Snow pillows/courses	> 3	3	1	1	5%	0.0
		2 to 3	2		0.5		0.0
		1	1		0.25		1.7
						Total	48.33

BCGS Area: 082L036			Location:				
Item	Description	Measure	Point Scale	Points Assigned	Weighting Factor	Maximum Weighting	Score
A.	Number of Classified Aquifers	> 5	3	1	1	15%	0.0
		3 – 5	2		0.75		0.0
		1 to 2	1		0.33		5.0
B.	Number of Reported Wells	> 300	3	1	1	15%	0.0
		100-300	2		0.75		0.0
		<100	1		0.33		5.0
C.	Number of Ground Water Supply Systems	> 5	3		1	15%	0.0
		3 – 5	2		0.75		0.0
		1 to 2	1		0.33		0.0
D.	Number of Ground Water Well and Spring Sources for Water Systems	> 5	3		1	10%	0.0
		3 – 5	2		0.5		0.0
		1 to 2	1		0.25		0.0
E.	Water Quantity Issues/Concerns Reported	>3	3		1	20%	0.0
		2 to 3	2		0.5		0.0
		1	1		0.25		0.0
F.	Number of Research/Water Planning Projects active and proposed	> 3	3		1	5%	0.0
		2 to 3	2		0.5		0.0
		1	1		0.25		0.0
G.	Mountain Pine Infestation	severe	3	1	1	5%	0.0
		light to moderate	2		0.5		0.0
		nil to localized	1		0.25		1.7
H.	Number of Active Climate Stations	> 3	3		1	5%	0.0
		2 to 3	2		0.5		0.0
		1	1		0.25		0.0
I.	Number of Community Watersheds	> 3	3		1	5%	0.0
		2 to 3	2		0.5		0.0
		1	1		0.25		0.0
J.	Number of Active Hydrometric Sites and Snow pillows/courses	> 3	3	1	1	5%	0.0
		2 to 3	2		0.5		0.0
		1	1		0.25		1.7
						Total	13.33

BCGS Area: 082L044			Location:				
Item	Description	Measure	Point Scale	Points Assigned	Weighting Factor	Maximum Weighting	Score
A.	Number of Classified Aquifers	> 5	3	3	1	15%	15.0
		3 – 5	2				0.0
		1 to 2	1				0.0
B.	Number of Reported Wells	> 300	3	3	1	15%	15.0
		100-300	2				0.0
		<100	1				0.0
C.	Number of Ground Water Supply Systems	> 5	3	3	1	15%	15.0
		3 – 5	2				0.0
		1 to 2	1				0.0
D.	Number of Ground Water Well and Spring Sources for Water Systems	> 5	3	3	1	10%	10.0
		3 – 5	2				0.0
		1 to 2	1				0.0
E.	Water Quantity Issues/Concerns Reported	>3	3		1	20%	0.0
		2 to 3	2				0.0
		1	1				0.0
F.	Number of Research/Water Planning Projects active and proposed	> 3	3		1	5%	0.0
		2 to 3	2				0.0
		1	1				1.7
G.	Mountain Pine Infestation	severe	3	2	1	5%	0.0
		light to moderate	2				2.5
		nil to localized	1				0.0
H.	Number of Active Climate Stations	> 3	3		1	5%	0.0
		2 to 3	2				0.0
		1	1				0.0
I.	Number of Community Watersheds	> 3	3	1	1	5%	0.0
		2 to 3	2				0.0
		1	1				1.7
J.	Number of Active Hydrometric Sites and Snow pillows/courses	> 3	3		1	5%	0.0
		2 to 3	2				0.0
		1	1				0.0
						Total	60.83

BCGS Area: 082L045			Location:				
Item	Description	Measure	Point Scale	Points Assigned	Weighting Factor	Maximum Weighting	Score
A.	Number of Classified Aquifers	> 5	3	2	1	15%	0.0
		3 – 5	2		0.75		10.0
		1 to 2	1		0.33		0.0
B.	Number of Reported Wells	> 300	3	2	1	15%	0.0
		100-300	2		0.75		10.0
		<100	1		0.33		0.0
C.	Number of Ground Water Supply Systems	> 5	3	2	1	15%	0.0
		3 – 5	2		0.75		10.0
		1 to 2	1		0.33		0.0
D.	Number of Ground Water Well and Spring Sources for Water Systems	> 5	3	3	1	10%	10.0
		3 – 5	2		0.5		0.0
		1 to 2	1		0.25		0.0
E.	Water Quantity Issues/Concerns Reported	>3	3		1	20%	0.0
		2 to 3	2		0.5		0.0
		1	1		0.25		0.0
F.	Number of Research/Water Planning Projects active and proposed	> 3	3	1	1	5%	0.0
		2 to 3	2		0.5		0.0
		1	1		0.25		1.7
G.	Mountain Pine Infestation	severe	3	2	1	5%	0.0
		light to moderate	2		0.5		2.5
		nil to localized	1		0.25		0.0
H.	Number of Active Climate Stations	> 3	3		1	5%	0.0
		2 to 3	2		0.5		0.0
		1	1		0.25		0.0
I.	Number of Community Watersheds	> 3	3	3	1	5%	5.0
		2 to 3	2		0.5		0.0
		1	1		0.25		0.0
J.	Number of Active Hydrometric Sites and Snow pillows/courses	> 3	3		1	5%	0.0
		2 to 3	2		0.5		0.0
		1	1		0.25		0.0
						Total	49.17

BCGS Area: 082L054			Location:				
Item	Description	Measure	Point Scale	Points Assigned	Weighting Factor	Maximum Weighting	Score
A.	Number of Classified Aquifers	> 5	3	3	1	15%	15.0
		3 – 5	2				0.0
		1 to 2	1				0.0
B.	Number of Reported Wells	> 300	3	2	1	15%	0.0
		100-300	2				10.0
		<100	1				0.0
C.	Number of Ground Water Supply Systems	> 5	3	1	1	15%	0.0
		3 – 5	2				0.0
		1 to 2	1				5.0
D.	Number of Ground Water Well and Spring Sources for Water Systems	> 5	3	1	1	10%	0.0
		3 – 5	2				0.0
		1 to 2	1				2.5
E.	Water Quantity Issues/Concerns Reported	>3	3	1	1	20%	0.0
		2 to 3	2				0.0
		1	1				0.0
F.	Number of Research/Water Planning Projects active and proposed	> 3	3	1	1	5%	0.0
		2 to 3	2				0.0
		1	1				1.7
G.	Mountain Pine Infestation	severe	3	2	1	5%	0.0
		light to moderate	2				2.5
		nil to localized	1				0.0
H.	Number of Active Climate Stations	> 3	3	1	1	5%	0.0
		2 to 3	2				0.0
		1	1				1.7
I.	Number of Community Watersheds	> 3	3	1	1	5%	0.0
		2 to 3	2				0.0
		1	1				0.0
J.	Number of Active Hydrometric Sites and Snow pillows/courses	> 3	3	1	1	5%	0.0
		2 to 3	2				0.0
		1	1				0.0
						Total	38.33

BCGS Area: 082L055			Location:				
Item	Description	Measure	Point Scale	Points Assigned	Weighting Factor	Maximum Weighting	Score
A.	Number of Classified Aquifers	> 5	3	3	1	15%	15.0
		3 – 5	2				0.0
		1 to 2	1				0.0
B.	Number of Reported Wells	> 300	3	2	1	15%	0.0
		100-300	2				10.0
		<100	1				0.0
C.	Number of Ground Water Supply Systems	> 5	3	3	1	15%	15.0
		3 – 5	2				0.0
		1 to 2	1				0.0
D.	Number of Ground Water Well and Spring Sources for Water Systems	> 5	3	3	1	10%	10.0
		3 – 5	2				0.0
		1 to 2	1				0.0
E.	Water Quantity Issues/Concerns Reported	>3	3		1	20%	0.0
		2 to 3	2				0.0
		1	1				0.0
F.	Number of Research/Water Planning Projects active and proposed	> 3	3		1	5%	0.0
		2 to 3	2				0.0
		1	1				1.7
G.	Mountain Pine Infestation	severe	3		1	5%	0.0
		light to moderate	2				0.0
		nil to localized	1				1.7
H.	Number of Active Climate Stations	> 3	3		1	5%	0.0
		2 to 3	2				0.0
		1	1				0.0
I.	Number of Community Watersheds	> 3	3		1	5%	0.0
		2 to 3	2				0.0
		1	1				1.7
J.	Number of Active Hydrometric Sites and Snow pillows/courses	> 3	3		1	5%	0.0
		2 to 3	2				0.0
		1	1				1.7
						Total	56.67

BCGS Area: 082L056			Location:				
Item	Description	Measure	Point Scale	Points Assigned	Weighting Factor	Maximum Weighting	Score
A.	Number of Classified Aquifers	> 5	3	1	1	15%	0.0
		3 – 5	2		0.75		0.0
		1 to 2	1		0.33		5.0
B.	Number of Reported Wells	> 300	3	1	1	15%	0.0
		100-300	2		0.75		0.0
		<100	1		0.33		5.0
C.	Number of Ground Water Supply Systems	> 5	3		1	15%	0.0
		3 – 5	2		0.75		0.0
		1 to 2	1		0.33		0.0
D.	Number of Ground Water Well and Spring Sources for Water Systems	> 5	3		1	10%	0.0
		3 – 5	2		0.5		0.0
		1 to 2	1		0.25		0.0
E.	Water Quantity Issues/Concerns Reported	>3	3		1	20%	0.0
		2 to 3	2		0.5		0.0
		1	1		0.25		0.0
F.	Number of Research/Water Planning Projects active and proposed	> 3	3		1	5%	0.0
		2 to 3	2		0.5		0.0
		1	1		0.25		0.0
G.	Mountain Pine Infestation	severe	3	1	1	5%	0.0
		light to moderate	2		0.5		0.0
		nil to localized	1		0.25		1.7
H.	Number of Active Climate Stations	> 3	3		1	5%	0.0
		2 to 3	2		0.5		0.0
		1	1		0.25		0.0
I.	Number of Community Watersheds	> 3	3	1	1	5%	0.0
		2 to 3	2		0.5		0.0
		1	1		0.25		1.7
J.	Number of Active Hydrometric Sites and Snow pillows/courses	> 3	3		1	5%	0.0
		2 to 3	2		0.5		0.0
		1	1		0.25		0.0
						Total	13.33

BCGS Area: 082L064			Location:				
Item	Description	Measure	Point Scale	Points Assigned	Weighting Factor	Maximum Weighting	Score
A.	Number of Classified Aquifers	> 5	3	1	1	15%	0.0
		3 – 5	2				0.0
		1 to 2	1				5.0
B.	Number of Reported Wells	> 300	3	2	1	15%	0.0
		100-300	2				10.0
		<100	1				0.0
C.	Number of Ground Water Supply Systems	> 5	3		1	15%	0.0
		3 – 5	2				0.0
		1 to 2	1				0.0
D.	Number of Ground Water Well and Spring Sources for Water Systems	> 5	3		1	10%	0.0
		3 – 5	2				0.0
		1 to 2	1				0.0
E.	Water Quantity Issues/Concerns Reported	>3	3		1	20%	0.0
		2 to 3	2				0.0
		1	1				0.0
F.	Number of Research/Water Planning Projects active and proposed	> 3	3	1	1	5%	0.0
		2 to 3	2				0.0
		1	1				1.7
G.	Mountain Pine Infestation	severe	3	1	1	5%	0.0
		light to moderate	2				0.0
		nil to localized	1				1.7
H.	Number of Active Climate Stations	> 3	3	2	1	5%	0.0
		2 to 3	2				2.5
		1	1				0.0
I.	Number of Community Watersheds	> 3	3		1	5%	0.0
		2 to 3	2				0.0
		1	1				0.0
J.	Number of Active Hydrometric Sites and Snow pillows/courses	> 3	3		1	5%	0.0
		2 to 3	2				0.0
		1	1				0.0
						Total	20.83

BCGS Area: 082L065			Location:				
Item	Description	Measure	Point Scale	Points Assigned	Weighting Factor	Maximum Weighting	Score
A.	Number of Classified Aquifers	> 5	3	3	1	15%	15.0
		3 – 5	2		0.75		0.0
		1 to 2	1		0.33		0.0
B.	Number of Reported Wells	> 300	3	3	1	15%	15.0
		100-300	2		0.75		0.0
		<100	1		0.33		0.0
C.	Number of Ground Water Supply Systems	> 5	3	2	1	15%	0.0
		3 – 5	2		0.75		10.0
		1 to 2	1		0.33		0.0
D.	Number of Ground Water Well and Spring Sources for Water Systems	> 5	3	2	1	10%	0.0
		3 – 5	2		0.5		5.0
		1 to 2	1		0.25		0.0
E.	Water Quantity Issues/Concerns Reported	>3	3		1	20%	0.0
		2 to 3	2		0.5		0.0
		1	1		0.25		0.0
F.	Number of Research/Water Planning Projects active and proposed	> 3	3		1	5%	0.0
		2 to 3	2		0.5		0.0
		1	1		0.25		0.0
G.	Mountain Pine Infestation	severe	3	2	1	5%	0.0
		light to moderate	2		0.5		2.5
		nil to localized	1		0.25		0.0
H.	Number of Active Climate Stations	> 3	3		1	5%	0.0
		2 to 3	2		0.5		0.0
		1	1		0.25		0.0
I.	Number of Community Watersheds	> 3	3	1	1	5%	0.0
		2 to 3	2		0.5		0.0
		1	1		0.25		1.7
J.	Number of Active Hydrometric Sites and Snow pillows/courses	> 3	3		1	5%	0.0
		2 to 3	2		0.5		0.0
		1	1		0.25		0.0
						Total	49.17

BCGS Area: 092H030		Location: Similkameen					
Item	Description	Measure	Point Scale	Points Assigned	Weighting Factor	Maximum Weighting	Score
A.	Number of Classified Aquifers	> 5	3	1	1	15%	0.0
		3 – 5	2				0.0
		1 to 2	1				5.0
B.	Number of Reported Wells	> 300	3	1	1	15%	0.0
		100-300	2				0.0
		<100	1				5.0
C.	Number of Ground Water Supply Systems	> 5	3		1	15%	0.0
		3 – 5	2				0.0
		1 to 2	1				0.0
D.	Number of Ground Water Well and Spring Sources for Water Systems	> 5	3		1	10%	0.0
		3 – 5	2				0.0
		1 to 2	1				0.0
E.	Water Quantity Issues/Concerns Reported	>3	3		1	20%	0.0
		2 to 3	2				0.0
		1	1				0.0
F.	Number of Research/Water Planning Projects active and proposed	> 3	3		1	5%	0.0
		2 to 3	2				0.0
		1	1				0.0
G.	Mountain Pine Infestation	severe	3	1	1	5%	0.0
		light to moderate	2				0.0
		nil to localized	1				1.7
H.	Number of Active Climate Stations	> 3	3		1	5%	0.0
		2 to 3	2				0.0
		1	1				0.0
I.	Number of Community Watersheds	> 3	3		1	5%	0.0
		2 to 3	2				0.0
		1	1				0.0
J.	Number of Active Hydrometric Sites and Snow pillows/courses	> 3	3		1	5%	0.0
		2 to 3	2				0.0
		1	1				0.0
						Total	11.67

BCGS Area: 092H039		Location: Similkameen					
Item	Description	Measure	Point Scale	Points Assigned	Weighting Factor	Maximum Weighting	Score
A.	Number of Classified Aquifers	> 5	3	1	1	15%	0.0
		3 – 5	2				0.0
		1 to 2	1				5.0
B.	Number of Reported Wells	> 300	3	1	1	15%	0.0
		100-300	2				0.0
		<100	1				5.0
C.	Number of Ground Water Supply Systems	> 5	3		1	15%	0.0
		3 – 5	2				0.0
		1 to 2	1				0.0
D.	Number of Ground Water Well and Spring Sources for Water Systems	> 5	3		1	10%	0.0
		3 – 5	2				0.0
		1 to 2	1				0.0
E.	Water Quantity Issues/Concerns Reported	>3	3		1	20%	0.0
		2 to 3	2				0.0
		1	1				0.0
F.	Number of Research/Water Planning Projects active and proposed	> 3	3		1	5%	0.0
		2 to 3	2				0.0
		1	1				0.0
G.	Mountain Pine Infestation	severe	3	2	1	5%	0.0
		light to moderate	2				2.5
		nil to localized	1				0.0
H.	Number of Active Climate Stations	> 3	3		1	5%	0.0
		2 to 3	2				0.0
		1	1				0.0
I.	Number of Community Watersheds	> 3	3		1	5%	0.0
		2 to 3	2				0.0
		1	1				0.0
J.	Number of Active Hydrometric Sites and Snow pillows/courses	> 3	3		1	5%	0.0
		2 to 3	2				0.0
		1	1				0.0
						Total	12.50

BCGS Area: 092H040			Location: Similkameen					
Item	Description	Measure	Point Scale	Points Assigned	Weighting Factor	Maximum Weighting	Score	
A.	Number of Classified Aquifers	> 5	3	1	1	15%	0.0	
		3 – 5	2				0.75	0.0
		1 to 2	1				0.33	5.0
B.	Number of Reported Wells	> 300	3	1	1	15%	0.0	
		100-300	2				0.75	0.0
		<100	1				0.33	5.0
C.	Number of Ground Water Supply Systems	> 5	3	1	1	15%	0.0	
		3 – 5	2				0.75	0.0
		1 to 2	1				0.33	5.0
D.	Number of Ground Water Well and Spring Sources for Water Systems	> 5	3	1	1	10%	0.0	
		3 – 5	2				0.5	0.0
		1 to 2	1				0.25	2.5
E.	Water Quantity Issues/Concerns Reported	>3	3	1	1	20%	0.0	
		2 to 3	2				0.5	0.0
		1	1				0.25	0.0
F.	Number of Research/Water Planning Projects active and proposed	> 3	3	1	1	5%	0.0	
		2 to 3	2				0.5	0.0
		1	1				0.25	0.0
G.	Mountain Pine Infestation	severe	3	1	1	5%	0.0	
		light to moderate	2				0.5	0.0
		nil to localized	1				0.25	1.7
H.	Number of Active Climate Stations	> 3	3	2	2	5%	0.0	
		2 to 3	2				0.5	2.5
		1	1				0.25	0.0
I.	Number of Community Watersheds	> 3	3	1	1	5%	0.0	
		2 to 3	2				0.5	0.0
		1	1				0.25	0.0
J.	Number of Active Hydrometric Sites and Snow pillows/courses	> 3	3	2	2	5%	0.0	
		2 to 3	2				0.5	2.5
		1	1				0.25	0.0
						Total	24.17	

BCGS Area: 092H048			Location: Similkameen					
Item	Description	Measure	Point Scale	Points Assigned	Weighting Factor	Maximum Weighting	Score	
A.	Number of Classified Aquifers	> 5	3	1	1	15%	0.0	
		3 – 5	2				0.75	0.0
		1 to 2	1				0.33	5.0
B.	Number of Reported Wells	> 300	3	2	1	15%	0.0	
		100-300	2				0.75	10.0
		<100	1				0.33	0.0
C.	Number of Ground Water Supply Systems	> 5	3	1	1	15%	0.0	
		3 – 5	2				0.75	0.0
		1 to 2	1				0.33	5.0
D.	Number of Ground Water Well and Spring Sources for Water Systems	> 5	3	3	1	10%	10.0	
		3 – 5	2				0.5	0.0
		1 to 2	1				0.25	0.0
E.	Water Quantity Issues/Concerns Reported	>3	3	1	1	20%	0.0	
		2 to 3	2				0.5	0.0
		1	1				0.25	0.0
F.	Number of Research/Water Planning Projects active and proposed	> 3	3	1	1	5%	0.0	
		2 to 3	2				0.5	0.0
		1	1				0.25	0.0
G.	Mountain Pine Infestation	severe	3	2	1	5%	0.0	
		light to moderate	2				0.5	2.5
		nil to localized	1				0.25	0.0
H.	Number of Active Climate Stations	> 3	3	2	1	5%	0.0	
		2 to 3	2				0.5	2.5
		1	1				0.25	0.0
I.	Number of Community Watersheds	> 3	3	1	1	5%	0.0	
		2 to 3	2				0.5	0.0
		1	1				0.25	0.0
J.	Number of Active Hydrometric Sites and Snow pillows/courses	> 3	3	2	1	5%	0.0	
		2 to 3	2				0.5	2.5
		1	1				0.25	0.0
						Total	37.50	

BCGS Area: 092H049		Location: Similkameen					
Item	Description	Measure	Point Scale	Points Assigned	Weighting Factor	Maximum Weighting	Score
A.	Number of Classified Aquifers	> 5	3	1	1	15%	0.0
		3 – 5	2				0.0
		1 to 2	1				5.0
B.	Number of Reported Wells	> 300	3	1	1	15%	0.0
		100-300	2				0.0
		<100	1				5.0
C.	Number of Ground Water Supply Systems	> 5	3		1	15%	0.0
		3 – 5	2				0.0
		1 to 2	1				0.0
D.	Number of Ground Water Well and Spring Sources for Water Systems	> 5	3		1	10%	0.0
		3 – 5	2				0.0
		1 to 2	1				0.0
E.	Water Quantity Issues/Concerns Reported	>3	3		1	20%	0.0
		2 to 3	2				0.0
		1	1				0.0
F.	Number of Research/Water Planning Projects active and proposed	> 3	3		1	5%	0.0
		2 to 3	2				0.0
		1	1				0.0
G.	Mountain Pine Infestation	severe	3	2	1	5%	0.0
		light to moderate	2				2.5
		nil to localized	1				0.0
H.	Number of Active Climate Stations	> 3	3		1	5%	0.0
		2 to 3	2				0.0
		1	1				0.0
I.	Number of Community Watersheds	> 3	3		1	5%	0.0
		2 to 3	2				0.0
		1	1				0.0
J.	Number of Active Hydrometric Sites and Snow pillows/courses	> 3	3		1	5%	0.0
		2 to 3	2				0.0
		1	1				0.0
						Total	12.50

Watershed: 5		Location: BX Creek					
Item	Description	Measure	Point Scale	Points Assigned	Weighting Factor	Maximum Weighting	Score
A.	Watershed Area	> 50 km ²	3	3	1	15%	15.0
		10 - 50 km ²	2				0.0
		< 10 km ²	1				0.0
B.	Number of Classified Bedrock Aquifers	> 3	3	2	1	15%	0.0
		2 – 3	2				10.0
		1	1				0.0
C.	Number of Ground Water Supply Systems	> 3	3	2	1	15%	0.0
		2 – 3	2				10.0
		1	1				0.0
D.	Number of Ground Water Well and Spring Sources for Water Systems	> 5	3	1	1	10%	0.0
		3 – 5	2				0.0
		1 to 2	1				2.5
E.	Water Quantity Issues/Concerns Reported	>3	3	1	1	20%	0.0
		2 to 3	2				0.0
		1	1				5.0
F.	Number of Research/Water Planning Projects active and proposed	> 3	3	1	1	5%	0.0
		2 to 3	2				0.0
		1	1				1.7
G.	Mountain Pine Infestation	severe	3	2	1	5%	0.0
		light to moderate	2				2.5
		nil to localized	1				0.0
H.	Number of Active Climate Stations	> 3	3	2	1	5%	0.0
		2 to 3	2				2.5
		1	1				0.0
I.	Number of Community Watersheds	> 3	3	1	1	5%	0.0
		2 to 3	2				0.0
		1	1				1.7
J.	Number of Active Hydrometric Sites and Snow pillows/courses	> 3	3	1	1	5%	0.0
		2 to 3	2				0.0
		1	1				1.7
						Total	37.50

Watershed: 21		Location: Brandt Creek					
Item	Description	Measure	Point Scale	Points Assigned	Weighting Factor	Maximum Weighting	Score
A.	Watershed Area	> 50 km ²	3	2	1	15%	0.0
		10 - 50 km ²	2				10.0
		< 10 km ²	1				0.0
B.	Number of Classified Bedrock Aquifers	> 3	3	1	0.75	15%	0.0
		2 – 3	2				0.0
		1	1				5.0
C.	Number of Ground Water Supply Systems	> 3	3	1	0.75	15%	0.0
		2 – 3	2				0.0
		1	1				0.0
D.	Number of Ground Water Well and Spring Sources for Water Systems	> 5	3	1	0.25	10%	0.0
		3 – 5	2				0.0
		1 to 2	1				0.0
E.	Water Quantity Issues/Concerns Reported	>3	3	1	0.5	20%	0.0
		2 to 3	2				0.0
		1	1				0.0
F.	Number of Research/Water Planning Projects active and proposed	> 3	3	1	0.25	5%	0.0
		2 to 3	2				0.0
		1	1				1.7
G.	Mountain Pine Infestation	severe	3	1	0.5	5%	0.0
		light to moderate	2				0.0
		nil to localized	1				1.7
H.	Number of Active Climate Stations	> 3	3	1	0.25	5%	0.0
		2 to 3	2				0.0
		1	1				0.0
I.	Number of Community Watersheds	> 3	3	1	0.25	5%	0.0
		2 to 3	2				0.0
		1	1				0.0
J.	Number of Active Hydrometric Sites and Snow pillows/courses	> 3	3	1	0.5	5%	0.0
		2 to 3	2				0.0
		1	1				0.0
						Total	8.33

Watershed: 24		Location: McDougall Creek					
Item	Description	Measure	Point Scale	Points Assigned	Weighting Factor	Maximum Weighting	Score
A.	Watershed Area	> 50 km ²	3	3	1	15%	15.0
		10 - 50 km ²	2				0.0
		< 10 km ²	1				0.0
B.	Number of Classified Bedrock Aquifers	> 3	3	1	0.75	15%	0.0
		2 – 3	2				0.0
		1	1				5.0
C.	Number of Ground Water Supply Systems	> 3	3	2	1	15%	0.0
		2 – 3	2				10.0
		1	1				0.0
D.	Number of Ground Water Well and Spring Sources for Water Systems	> 5	3	1	1	10%	0.0
		3 – 5	2				0.0
		1 to 2	1				2.5
E.	Water Quantity Issues/Concerns Reported	>3	3	1	1	20%	0.0
		2 to 3	2				0.0
		1	1				0.0
F.	Number of Research/Water Planning Projects active and proposed	> 3	3	1	1	5%	0.0
		2 to 3	2				0.0
		1	1				0.0
G.	Mountain Pine Infestation	severe	3	1	1	5%	0.0
		light to moderate	2				0.0
		nil to localized	1				1.7
H.	Number of Active Climate Stations	> 3	3	2	1	5%	0.0
		2 to 3	2				2.5
		1	1				0.0
I.	Number of Community Watersheds	> 3	3	1	1	5%	0.0
		2 to 3	2				0.0
		1	1				0.0
J.	Number of Active Hydrometric Sites and Snow pillows/courses	> 3	3	1	1	5%	0.0
		2 to 3	2				0.0
		1	1				0.0
						Total	21.67

Watershed: 26		Location: Daves Creek					
Item	Description	Measure	Point Scale	Points Assigned	Weighting Factor	Maximum Weighting	Score
A.	Watershed Area	> 50 km ²	3	2	1	15%	0.0
		10 - 50 km ²	2				10.0
		< 10 km ²	1				0.0
B.	Number of Classified Bedrock Aquifers	> 3	3	1	0.75	15%	0.0
		2 – 3	2				0.0
		1	1				5.0
C.	Number of Ground Water Supply Systems	> 3	3	1	0.75	15%	0.0
		2 – 3	2				0.0
		1	1				5.0
D.	Number of Ground Water Well and Spring Sources for Water Systems	> 5	3	1	0.5	10%	0.0
		3 – 5	2				0.0
		1 to 2	1				2.5
E.	Water Quantity Issues/Concerns Reported	>3	3	1	0.5	20%	0.0
		2 to 3	2				0.0
		1	1				0.0
F.	Number of Research/Water Planning Projects active and proposed	> 3	3	1	0.5	5%	0.0
		2 to 3	2				0.0
		1	1				0.0
G.	Mountain Pine Infestation	severe	3	1	0.5	5%	0.0
		light to moderate	2				0.0
		nil to localized	1				1.7
H.	Number of Active Climate Stations	> 3	3	1	0.5	5%	0.0
		2 to 3	2				0.0
		1	1				0.0
I.	Number of Community Watersheds	> 3	3	1	0.5	5%	0.0
		2 to 3	2				0.0
		1	1				1.7
J.	Number of Active Hydrometric Sites and Snow pillows/courses	> 3	3	1	0.5	5%	0.0
		2 to 3	2				0.0
		1	1				0.0
						Total	15.83

Watershed: 37		Location: Fortune Creek					
Item	Description	Measure	Point Scale	Points Assigned	Weighting Factor	Maximum Weighting	Score
A.	Watershed Area	> 50 km²	3	3	1	15%	15.0
		10 - 50 km²	2				0.0
		< 10 km²	1				0.0
B.	Number of Classified Bedrock Aquifers	> 3	3	2	1	15%	0.0
		2 – 3	2				10.0
		1	1				0.0
C.	Number of Ground Water Supply Systems	> 3	3		1	15%	0.0
		2 – 3	2				0.0
		1	1				0.0
D.	Number of Ground Water Well and Spring Sources for Water Systems	> 5	3		1	10%	0.0
		3 – 5	2				0.0
		1 to 2	1				0.0
E.	Water Quantity Issues/Concerns Reported	>3	3		1	20%	0.0
		2 to 3	2				0.0
		1	1				0.0
F.	Number of Research/Water Planning Projects active and proposed	> 3	3		1	5%	0.0
		2 to 3	2				0.0
		1	1				0.0
G.	Mountain Pine Infestation	severe	3	2	1	5%	0.0
		light to moderate	2				2.5
		nil to localized	1				0.0
H.	Number of Active Climate Stations	> 3	3		1	5%	0.0
		2 to 3	2				0.0
		1	1				0.0
I.	Number of Community Watersheds	> 3	3	2	1	5%	0.0
		2 to 3	2				2.5
		1	1				0.0
J.	Number of Active Hydrometric Sites and Snow pillows/courses	> 3	3		1	5%	0.0
		2 to 3	2				0.0
		1	1				0.0
						Total	15.00

Watershed: 41		Location: Eneas Creek					
Item	Description	Measure	Point Scale	Points Assigned	Weighting Factor	Maximum Weighting	Score
A.	Watershed Area	> 50 km ²	3	3	1	15%	15.0
		10 - 50 km ²	2				0.0
		< 10 km ²	1				0.0
B.	Number of Classified Bedrock Aquifers	> 3	3	1	0.75	15%	0.0
		2 – 3	2				0.0
		1	1				5.0
C.	Number of Ground Water Supply Systems	> 3	3	1	0.75	15%	0.0
		2 – 3	2				0.0
		1	1				0.0
D.	Number of Ground Water Well and Spring Sources for Water Systems	> 5	3	1	0.25	10%	0.0
		3 – 5	2				0.0
		1 to 2	1				0.0
E.	Water Quantity Issues/Concerns Reported	>3	3	1	0.5	20%	0.0
		2 to 3	2				0.0
		1	1				0.0
F.	Number of Research/Water Planning Projects active and proposed	> 3	3	1	0.5	5%	0.0
		2 to 3	2				0.0
		1	1				0.0
G.	Mountain Pine Infestation	severe	3	1	0.25	5%	0.0
		light to moderate	2				0.0
		nil to localized	1				1.7
H.	Number of Active Climate Stations	> 3	3	1	0.5	5%	0.0
		2 to 3	2				0.0
		1	1				0.0
I.	Number of Community Watersheds	> 3	3	1	0.25	5%	0.0
		2 to 3	2				0.0
		1	1				0.0
J.	Number of Active Hydrometric Sites and Snow pillows/courses	> 3	3	1	0.5	5%	0.0
		2 to 3	2				0.0
		1	1				0.0
						Total	6.67

Watershed: 42		Location: Dark Creek					
Item	Description	Measure	Point Scale	Points Assigned	Weighting Factor	Maximum Weighting	Score
A.	Watershed Area	> 50 km ²	3	3	1	15%	15.0
		10 - 50 km ²	2				0.0
		< 10 km ²	1				0.0
B.	Number of Classified Bedrock Aquifers	> 3	3	1	0.75	15%	0.0
		2 – 3	2				0.0
		1	1				5.0
C.	Number of Ground Water Supply Systems	> 3	3	2	1	15%	0.0
		2 – 3	2				10.0
		1	1				0.0
D.	Number of Ground Water Well and Spring Sources for Water Systems	> 5	3	2	1	10%	0.0
		3 – 5	2				5.0
		1 to 2	1				0.0
E.	Water Quantity Issues/Concerns Reported	>3	3	1	0.5	20%	0.0
		2 to 3	2				0.0
		1	1				0.0
F.	Number of Research/Water Planning Projects active and proposed	> 3	3	1	0.5	5%	0.0
		2 to 3	2				0.0
		1	1				0.0
G.	Mountain Pine Infestation	severe	3	1	1	5%	0.0
		light to moderate	2				0.0
		nil to localized	1				1.7
H.	Number of Active Climate Stations	> 3	3	1	0.5	5%	0.0
		2 to 3	2				0.0
		1	1				0.0
I.	Number of Community Watersheds	> 3	3	1	1	5%	0.0
		2 to 3	2				0.0
		1	1				1.7
J.	Number of Active Hydrometric Sites and Snow pillows/courses	> 3	3	1	1	5%	0.0
		2 to 3	2				0.0
		1	1				0.0
						Total	23.33

Watershed: 44		Location: Chute Creek					
Item	Description	Measure	Point Scale	Points Assigned	Weighting Factor	Maximum Weighting	Score
A.	Watershed Area	> 50 km ²	3	3	1	15%	15.0
		10 - 50 km ²	2				0.0
		< 10 km ²	1				0.0
B.	Number of Classified Bedrock Aquifers	> 3	3	1	0.75	15%	0.0
		2 – 3	2				0.0
		1	1				5.0
C.	Number of Ground Water Supply Systems	> 3	3	1	0.75	15%	0.0
		2 – 3	2				0.0
		1	1				0.0
D.	Number of Ground Water Well and Spring Sources for Water Systems	> 5	3	1	0.25	10%	0.0
		3 – 5	2				0.0
		1 to 2	1				0.0
E.	Water Quantity Issues/Concerns Reported	>3	3	1	0.5	20%	0.0
		2 to 3	2				0.0
		1	1				5.0
F.	Number of Research/Water Planning Projects active and proposed	> 3	3	1	0.5	5%	0.0
		2 to 3	2				0.0
		1	1				0.0
G.	Mountain Pine Infestation	severe	3	1	0.25	5%	0.0
		light to moderate	2				0.0
		nil to localized	1				1.7
H.	Number of Active Climate Stations	> 3	3	1	0.5	5%	0.0
		2 to 3	2				0.0
		1	1				0.0
I.	Number of Community Watersheds	> 3	3	1	0.5	5%	0.0
		2 to 3	2				0.0
		1	1				1.7
J.	Number of Active Hydrometric Sites and Snow pillows/courses	> 3	3	1	0.5	5%	0.0
		2 to 3	2				0.0
		1	1				0.0
						Total	13.33

Watershed: 46		Location: Penticton Creek						
Item	Description	Measure	Point Scale	Points Assigned	Weighting Factor	Maximum Weighting	Score	
A.	Watershed Area	> 50 km ²	3	3	1	15%	15.0	
		10 - 50 km ²	2				0.0	
		< 10 km ²	1				0.0	
B.	Number of Classified Bedrock Aquifers	> 3	3	2	1	15%	0.0	
		2 – 3	2				0.75	10.0
		1	1				0.33	0.0
C.	Number of Ground Water Supply Systems	> 3	3		1	15%	0.0	
		2 – 3	2				0.75	0.0
		1	1				0.33	0.0
D.	Number of Ground Water Well and Spring Sources for Water Systems	> 5	3		1	10%	0.0	
		3 – 5	2				0.5	0.0
		1 to 2	1				0.25	0.0
E.	Water Quantity Issues/Concerns Reported	>3	3	1	1	20%	0.0	
		2 to 3	2				0.5	0.0
		1	1				0.25	5.0
F.	Number of Research/Water Planning Projects active and proposed	> 3	3	1	1	5%	0.0	
		2 to 3	2				0.5	0.0
		1	1				0.25	1.7
G.	Mountain Pine Infestation	severe	3	1	1	5%	0.0	
		light to moderate	2				0.5	0.0
		nil to localized	1				0.25	1.7
H.	Number of Active Climate Stations	> 3	3	1	1	5%	0.0	
		2 to 3	2				0.5	0.0
		1	1				0.25	1.7
I.	Number of Community Watersheds	> 3	3	1	1	5%	0.0	
		2 to 3	2				0.5	0.0
		1	1				0.25	1.7
J.	Number of Active Hydrometric Sites and Snow pillows/courses	> 3	3	3	1	5%	5.0	
		2 to 3	2				0.5	0.0
		1	1				0.25	0.0
						Total	26.67	

Watershed: 52		Location: McLean Creek						
Item	Description	Measure	Point Scale	Points Assigned	Weighting Factor	Maximum Weighting	Score	
A.	Watershed Area	> 50 km ²	3	3	1	15%	15.0	
		10 - 50 km ²	2				0.75	0.0
		< 10 km ²	1				0.33	0.0
B.	Number of Classified Bedrock Aquifers	> 3	3	1	1	15%	0.0	
		2 – 3	2				0.75	0.0
		1	1				0.33	5.0
C.	Number of Ground Water Supply Systems	> 3	3	1	1	15%	0.0	
		2 – 3	2				0.75	0.0
		1	1				0.33	0.0
D.	Number of Ground Water Well and Spring Sources for Water Systems	> 5	3	1	1	10%	0.0	
		3 – 5	2				0.5	0.0
		1 to 2	1				0.25	0.0
E.	Water Quantity Issues/Concerns Reported	>3	3	1	1	20%	0.0	
		2 to 3	2				0.5	0.0
		1	1				0.25	0.0
F.	Number of Research/Water Planning Projects active and proposed	> 3	3	1	1	5%	0.0	
		2 to 3	2				0.5	0.0
		1	1				0.25	0.0
G.	Mountain Pine Infestation	severe	3	1	1	5%	0.0	
		light to moderate	2				0.5	0.0
		nil to localized	1				0.25	1.7
H.	Number of Active Climate Stations	> 3	3	1	1	5%	0.0	
		2 to 3	2				0.5	0.0
		1	1				0.25	0.0
I.	Number of Community Watersheds	> 3	3	1	1	5%	0.0	
		2 to 3	2				0.5	0.0
		1	1				0.25	0.0
J.	Number of Active Hydrometric Sites and Snow pillows/courses	> 3	3	1	1	5%	0.0	
		2 to 3	2				0.5	0.0
		1	1				0.25	0.0
						Total	6.67	

Watershed: 54		Location: Horn Creek-Twin Lakes					
Item	Description	Measure	Point Scale	Points Assigned	Weighting Factor	Maximum Weighting	Score
A.	Watershed Area	> 50 km ²	3	2	1	15%	0.0
		10 - 50 km ²	2				10.0
		< 10 km ²	1				0.0
B.	Number of Classified Bedrock Aquifers	> 3	3	1	0.75	15%	0.0
		2 – 3	2				0.0
		1	1				5.0
C.	Number of Ground Water Supply Systems	> 3	3	1	0.75	15%	0.0
		2 – 3	2				0.0
		1	1				5.0
D.	Number of Ground Water Well and Spring Sources for Water Systems	> 5	3	2	1	10%	0.0
		3 – 5	2				5.0
		1 to 2	1				0.0
E.	Water Quantity Issues/Concerns Reported	>3	3	1	0.5	20%	0.0
		2 to 3	2				0.0
		1	1				5.0
F.	Number of Research/Water Planning Projects active and proposed	> 3	3	1	0.5	5%	0.0
		2 to 3	2				0.0
		1	1				0.0
G.	Mountain Pine Infestation	severe	3	1	0.5	5%	0.0
		light to moderate	2				0.0
		nil to localized	1				1.7
H.	Number of Active Climate Stations	> 3	3	1	0.5	5%	0.0
		2 to 3	2				0.0
		1	1				0.0
I.	Number of Community Watersheds	> 3	3	1	0.5	5%	0.0
		2 to 3	2				0.0
		1	1				0.0
J.	Number of Active Hydrometric Sites and Snow pillows/courses	> 3	3	1	0.5	5%	0.0
		2 to 3	2				0.0
		1	1				0.0
						Total	21.67

Watershed: 55		Location: Kearns Creek					
Item	Description	Measure	Point Scale	Points Assigned	Weighting Factor	Maximum Weighting	Score
A.	Watershed Area	> 50 km ²	3	2	1	15%	0.0
		10 - 50 km ²	2				10.0
		< 10 km ²	1				0.0
B.	Number of Classified Bedrock Aquifers	> 3	3	1	0.75	15%	0.0
		2 – 3	2				0.0
		1	1				5.0
C.	Number of Ground Water Supply Systems	> 3	3	1	0.75	15%	0.0
		2 – 3	2				0.0
		1	1				5.0
D.	Number of Ground Water Well and Spring Sources for Water Systems	> 5	3	1	0.5	10%	0.0
		3 – 5	2				0.0
		1 to 2	1				2.5
E.	Water Quantity Issues/Concerns Reported	>3	3	1	0.5	20%	0.0
		2 to 3	2				0.0
		1	1				5.0
F.	Number of Research/Water Planning Projects active and proposed	> 3	3	1	0.5	5%	0.0
		2 to 3	2				0.0
		1	1				0.0
G.	Mountain Pine Infestation	severe	3	1	0.5	5%	0.0
		light to moderate	2				0.0
		nil to localized	1				1.7
H.	Number of Active Climate Stations	> 3	3	1	0.5	5%	0.0
		2 to 3	2				0.0
		1	1				0.0
I.	Number of Community Watersheds	> 3	3	1	0.5	5%	0.0
		2 to 3	2				0.0
		1	1				0.0
J.	Number of Active Hydrometric Sites and Snow pillows/courses	> 3	3	1	0.5	5%	0.0
		2 to 3	2				0.0
		1	1				0.0
						Total	19.17

Watershed: 63		Location: Haynes Creek					
Item	Description	Measure	Point Scale	Points Assigned	Weighting Factor	Maximum Weighting	Score
A.	Watershed Area	> 50 km²	3	2	1	15%	0.0
		10 - 50 km²	2				10.0
		< 10 km²	1				0.0
B.	Number of Classified Bedrock Aquifers	> 3	3	1	1	15%	0.0
		2 - 3	2				0.75
		1	1				0.33
C.	Number of Ground Water Supply Systems	> 3	3	1	1	15%	0.0
		2 - 3	2				0.75
		1	1				0.33
D.	Number of Ground Water Well and Spring Sources for Water Systems	> 5	3	1	1	10%	0.0
		3 - 5	2				0.5
		1 to 2	1				0.25
E.	Water Quantity Issues/Concerns Reported	>3	3	1	1	20%	0.0
		2 to 3	2				0.5
		1	1				0.25
F.	Number of Research/Water Planning Projects active and proposed	> 3	3	1	1	5%	0.0
		2 to 3	2				0.5
		1	1				0.25
G.	Mountain Pine Infestation	severe	3	1	1	5%	0.0
		light to moderate	2				0.5
		nil to localized	1				0.25
H.	Number of Active Climate Stations	> 3	3	1	1	5%	0.0
		2 to 3	2				0.5
		1	1				0.25
I.	Number of Community Watersheds	> 3	3	1	1	5%	0.0
		2 to 3	2				0.5
		1	1				0.25
J.	Number of Active Hydrometric Sites and Snow pillows/courses	> 3	3	1	1	5%	0.0
		2 to 3	2				0.5
		1	1				0.25
						Total	13.33