SIMPSON'S SPRING

Segment 1

Project:	Sensitive Habitat Inventory and Mapping (SHIM)
Location:	Kelowna, BC
Project No.:	08-293
Prepared for:	City of Kelowna
Prepared by:	Ecoscape Environmental Consultants Ltd.
Drawn by:	Robert Wagner
Checked by:	Kyle Hawes
Projection:	NAD83-UTM Zone 11
Date:	February, 2009

40 20 0 40 80 Meters

1:2,000

N W E S

LEGEND

- 99 Segment Number
- Segment Break
- Stream Centreline
- Top of Bank
- Wetland/Low Flood Riparian
- City of Kelowna
- Culvert
- Discharge
- Enhancement
- Erosion

Obstruction

- Beaver Dam
- Dam
- Persistent Debris
- Rock

Modification

- Bridge
- Channelization
- Dam/Flood Gate
- Ditch
- Dock
- Fences
- Garbage/Pollution
- Livestock Crossing
- Other
- Pipe Crossing
- Retain Wall/Bank Stability
- Rip Rap
- Water Withdrawal

Fish Habitat

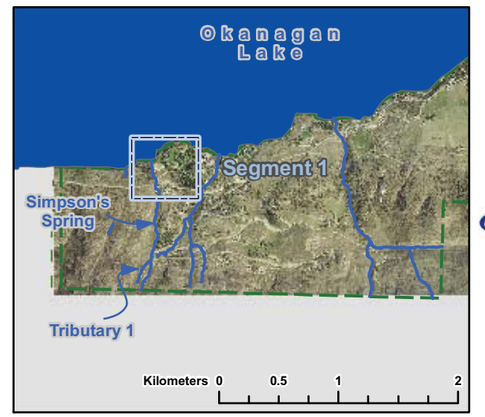
- Deep Pool
- Instream Vegetation
- Large Woody Debris
- Overstream Vegetation
- Small Woody Debris
- Spawning Habitat
- Undercut Bank

Waterbody

- Discontinued
- Ditch
- Tributary
- Wetland

SOURCE INFORMATION

Base Map:	82E.073 Kelowna
Orthophoto:	2006, provided by City of Kelowna
Stream Information:	Field Inventory
Location Information:	Field, GPS (Trimble GEO XM & XT)
Feature Information:	Field Inventory
Date of Inventory:	2008
Inventory Management:	Kyle Hawes, R.P.Bio.



City of Kelowna

Okanagan Basin Water Board

ECOSCAPE Environmental Consultants Ltd.



314250 314300 314350 314400 314450 314500 314550 314600 314650 314700 314750 314800 314850 314900 314950 315000

5517900 5517850 5517800 5517750 5517700 5517650 5517600 5517550 5517500 5517450

SIMPSON'S SPRING

Segments 2-3

Project:	Sensitive Habitat Inventory and Mapping (SHIM)
Location:	Kelowna, BC
Project No.:	08-293
Prepared for:	City of Kelowna
Prepared by:	Ecoscape Environmental Consultants Ltd.
Drawn by:	Robert Wagner
Checked by:	Kyle Hawes
Projection:	NAD83-UTM Zone 11
Date:	February, 2009

40 20 0 40 80 Meters

1:2,000

N W E S

LEGEND

- 99 Segment Number
- Segment Break
- Stream Centreline
- Top of Bank
- Wetland/Low Flood Riparian
- City of Kelowna
- Culvert
- Discharge
- Enhancement
- Erosion

Obstruction

- Beaver Dam
- Dam
- Persistent Debris
- Rock

Modification

- Bridge
- Channelization
- Dam/Flood Gate
- Ditch
- Dock
- Fences
- Garbage/Pollution
- Livestock Crossing
- Other
- Pipe Crossing
- Retain Wall/Bank Stability
- Rip Rap
- Water Withdrawal

Fish Habitat

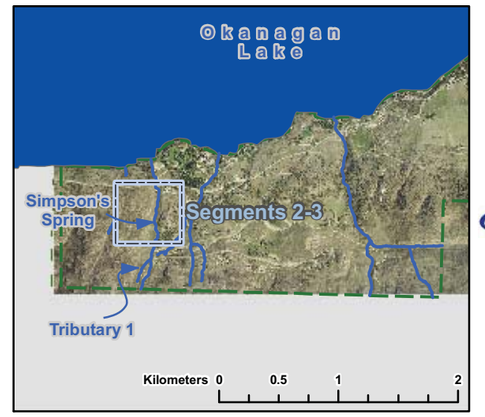
- Deep Pool
- Instream Vegetation
- Large Woody Debris
- Overstream Vegetation
- Small Woody Debris
- Spawning Habitat
- Undercut Bank

Waterbody

- Discontinued
- Ditch
- Tributary
- Wetland

SOURCE INFORMATION

Base Map:	82E.073 Kelowna
Orthophoto:	2006, provided by City of Kelowna
Stream Information:	Field Inventory
Location Information:	Field, GPS (Trimble GEO XM & XT)
Feature Information:	Field Inventory
Date of Inventory:	2008
Inventory Management:	Kyle Hawes, R.P.Bio.



City of Kelowna

Okanagan Basin Water Board

ECOSCAPE Environmental Consultants Ltd.

Note:
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SIMPSON'S SPRING AND TRIBUTARY 1

Simpson's Spring Segments 3-6 and Tributary 1 Segment 1

Project:	Sensitive Habitat Inventory and Mapping (SHIM)
Location:	Kelowna, BC
Project No.:	08-293
Prepared for:	City of Kelowna
Prepared by:	Ecoscape Environmental Consultants Ltd.
Drawn by:	Robert Wagner
Checked by:	Kyle Hawes
Projection:	NAD83-UTM Zone 11
Date:	February, 2009

40 20 0 40 80 Meters

1:2,000

N W E S

LEGEND

99 Segment Number
Segment Break
Stream Centreline
Top of Bank
Wetland/Low Flood Riparian
City of Kelowna
Culvert
Discharge
Enhancement
Erosion

Obstruction
Beaver Dam
Dam
Persistent Debris
Rock

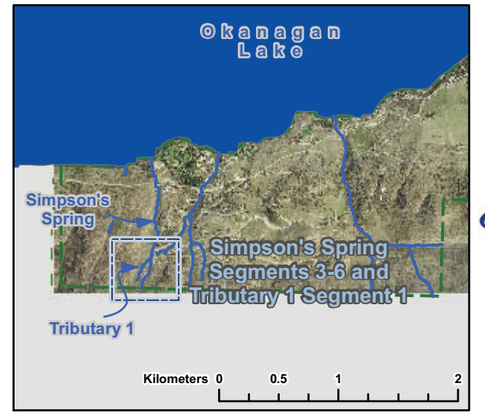
Modification
Bridge
Channelization
Dam/Flood Gate
Ditch
Dock
Fences
Garbage/Pollution
Livestock Crossing
Other
Pipe Crossing
Retain Wall/Bank Stability
Rip Rap
Water Withdrawal

Fish Habitat
Deep Pool
Instream Vegetation
Large Woody Debris
Overstream Vegetation
Small Woody Debris
Spawning Habitat
Undercut Bank

Waterbody
Discontinued
Ditch
Tributary
Wetland

SOURCE INFORMATION

Base Map:	82E.073 Kelowna
Orthophoto:	2006, provided by City of Kelowna
Stream Information:	Field Inventory
Location Information:	Field, GPS (Trimble GEO XM & XT)
Feature Information:	Field Inventory
Date of Inventory:	2008
Inventory Management:	Kyle Hawes, R.P.Bio.



City of Kelowna

Okanagan Basin WATER BOARD

ECOSCAPE Environmental Consultants Ltd.

Note:
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THOMPSON BROOK

Segments 1-4

Project:	Sensitive Habitat Inventory and Mapping (SHIM)
Location:	Kelowna, BC
Project No.:	08-293
Prepared for:	City of Kelowna
Prepared by:	Ecoscape Environmental Consultants Ltd.
Drawn by:	Robert Wagner
Checked by:	Kyle Hawes
Projection:	NAD83-UTM Zone 11
Date:	February, 2009

40 20 0 40 80 Meters

1:2,000

N W E S

LEGEND

- 99 Segment Number
- Segment Break
- Stream Centreline
- Top of Bank
- Wetland/Low Flood Riparian
- City of Kelowna
- Culvert
- Discharge
- Enhancement
- Erosion

Obstruction

- Beaver Dam
- Dam
- Persistent Debris
- Rock

Modification

- Bridge
- Channelization
- Dam/Flood Gate
- Ditch
- Dock
- Fences
- Garbage/Pollution
- Livestock Crossing
- Other
- Pipe Crossing
- Retain Wall/Bank Stability
- Rip Rap
- Water Withdrawal

Fish Habitat

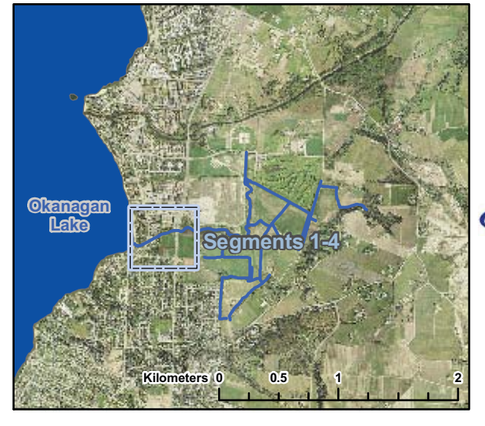
- Deep Pool
- Instream Vegetation
- Large Woody Debris
- Overstream Vegetation
- Small Woody Debris
- Spawning Habitat
- Undercut Bank

Waterbody

- Discontinued
- Ditch
- Tributary
- Wetland

SOURCE INFORMATION

Base Map:	82E.083 Kelowna
Orthophoto:	2006, provided by City of Kelowna
Stream Information:	Field Inventory
Location Information:	Field, GPS (Trimble GEO XM & XT)
Feature Information:	Field Inventory
Date of Inventory:	2008
Inventory Management:	Kyle Hawes, R.P.Bio.



City of Kelowna

Okanagan Basin WATER BOARD

ECOSCAPE Environmental Consultants Ltd.

Note:
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THOMPSON BROOK

Segment 4 (North) and 5 (North)

Project:	Sensitive Habitat Inventory and Mapping (SHIM)
Location:	Kelowna, BC
Project No.:	08-293
Prepared for:	City of Kelowna
Prepared by:	Ecoscape Environmental Consultants Ltd.
Drawn by:	Robert Wagner
Checked by:	Kyle Hawes
Projection:	NAD83-UTM Zone 11
Date:	February, 2009

40 20 0 40 80 Meters

1:2,000

N W E S

LEGEND

- 99 Segment Number
- Segment Break
- Stream Centreline
- Top of Bank
- Wetland/Low Flood Riparian
- City of Kelowna
- Culvert
- Discharge
- Enhancement
- Erosion

Obstruction

- Beaver Dam
- Dam
- Persistent Debris
- Rock

Modification

- Bridge
- Channelization
- Dam/Flood Gate
- Ditch
- Dock
- Fences
- Garbage/Pollution
- Livestock Crossing
- Other
- Pipe Crossing
- Retain Wall/Bank Stability
- Rip Rap
- Water Withdrawal

Fish Habitat

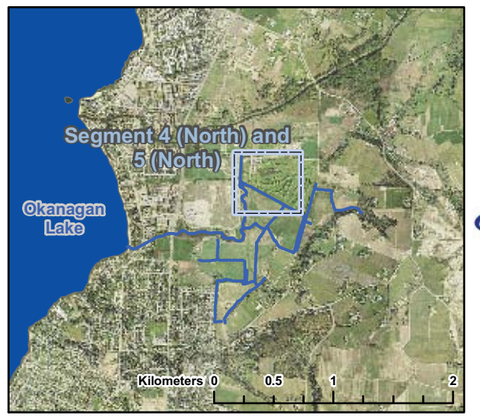
- Deep Pool
- Instream Vegetation
- Large Woody Debris
- Overstream Vegetation
- Small Woody Debris
- Spawning Habitat
- Undercut Bank

Waterbody

- Discontinued
- Ditch
- Tributary
- Wetland

SOURCE INFORMATION

Base Map:	82E.083 Kelowna
Orthophoto:	2006, provided by City of Kelowna
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Feature Information:	Field Inventory
Date of Inventory:	2008
Inventory Management:	Kyle Hawes, R.P.Bio.



City of Kelowna

Okanagan Basin WATER BOARD

ECOSCAPE Environmental Consultants Ltd.

Michaelbrook Creek

Thompson Brook

Michaelbrook Creek

1

4

5

Note:
Wetlands/Low Flood Riparian communities are from the 2008 Kelowna Wetland Inventory and Mapping (Ecoscape, 2008).

322000 322050 322100 322150 322200 322250 322300 322350 322400 322450 322500 322550 322600 322650 322700 322750

5523800 5523750 5523700 5523650 5523600 5523550 5523500 5523450 5523400 5523350

THOMPSON BROOK

Segment 5 (Centre)

Project:	Sensitive Habitat Inventory and Mapping (SHIM)
Location:	Kelowna, BC
Project No.:	08-293
Prepared for:	City of Kelowna
Prepared by:	Ecoscape Environmental Consultants Ltd.
Drawn by:	Robert Wagner
Checked by:	Kyle Hawes
Projection:	NAD83-UTM Zone 11
Date:	February, 2009

40 20 0 40 80 Meters

1:2,000

N W E S

LEGEND

- 99 Segment Number
- Segment Break
- Stream Centreline
- Top of Bank
- Wetland/Low Flood Riparian
- City of Kelowna
- Culvert
- Discharge
- Enhancement
- Erosion

Obstruction

- Beaver Dam
- Dam
- Persistent Debris
- Rock

Modification

- Bridge
- Channelization
- Dam/Flood Gate
- Ditch
- Dock
- Fences
- Garbage/Pollution
- Livestock Crossing
- Other
- Pipe Crossing
- Retain Wall/Bank Stability
- Rip Rap
- Water Withdrawal

Fish Habitat

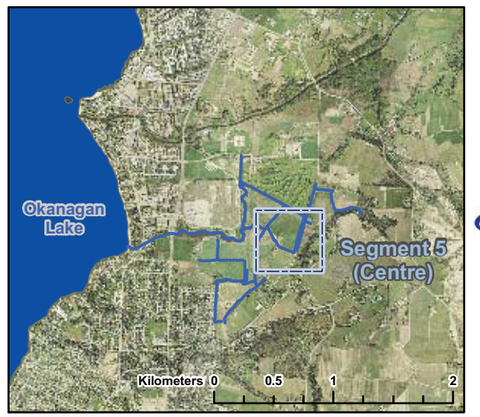
- Deep Pool
- Instream Vegetation
- Large Woody Debris
- Overstream Vegetation
- Small Woody Debris
- Spawning Habitat
- Undercut Bank

Waterbody

- Discontinued
- Ditch
- Tributary
- Wetland

SOURCE INFORMATION

Base Map:	82E.083 Kelowna
Orthophoto:	2006, provided by City of Kelowna
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Location Information:	Field, GPS (Trimble GEO XM & XT)
Feature Information:	Field Inventory
Date of Inventory:	2008
Inventory Management:	Kyle Hawes, R.P.Bio.



City of Kelowna

Okanagan Basin WATER BOARD

ECOSCAPE Environmental Consultants Ltd.

Note:
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THOMPSON BROOK

Segment 5 (East) and 6

Project:	Sensitive Habitat Inventory and Mapping (SHIM)
Location:	Kelowna, BC
Project No.:	08-293
Prepared for:	City of Kelowna
Prepared by:	Ecoscape Environmental Consultants Ltd.
Drawn by:	Robert Wagner
Checked by:	Kyle Hawes
Projection:	NAD83-UTM Zone 11
Date:	February, 2009

40 20 0 40 80 Meters

1:2,000

N W E S

LEGEND

- 99 Segment Number
- Segment Break
- Stream Centreline
- Top of Bank
- Wetland/Low Flood Riparian
- City of Kelowna
- Culvert
- Discharge
- Enhancement
- Erosion

Obstruction

- Beaver Dam
- Dam
- Persistent Debris
- Rock

Modification

- Bridge
- Channelization
- Dam/Flood Gate
- Ditch
- Dock
- Fences
- Garbage/Pollution
- Livestock Crossing
- Other
- Pipe Crossing
- Retain Wall/Bank Stability
- Rip Rap
- Water Withdrawal

Fish Habitat

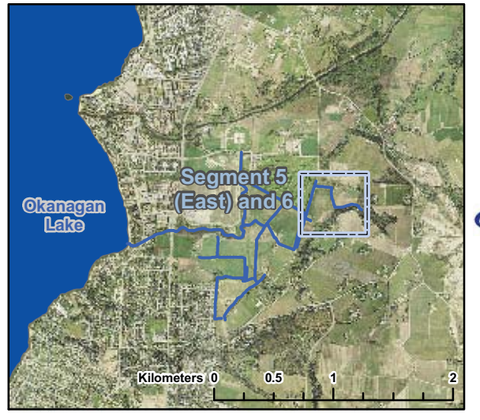
- Deep Pool
- Instream Vegetation
- Large Woody Debris
- Overstream Vegetation
- Small Woody Debris
- Spawning Habitat
- Undercut Bank

Waterbody

- Discontinued
- Ditch
- Tributary
- Wetland

SOURCE INFORMATION

Base Map:	82E.083 Kelowna
Orthophoto:	2006, provided by City of Kelowna
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Location Information:	Field, GPS (Trimble GEO XM & XT)
Feature Information:	Field Inventory
Date of Inventory:	2008
Inventory Management:	Kyle Hawes, R.P.Bio.



City of Kelowna

Okanagan Basin WATER BOARD

ECOSCAPE Environmental Consultants Ltd.

Note:
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THOMPSON BROOK

Segments 4, 5 (West), and 8 (North)

Project:	Sensitive Habitat Inventory and Mapping (SHIM)
Location:	Kelowna, BC
Project No.:	08-293
Prepared for:	City of Kelowna
Prepared by:	Ecoscape Environmental Consultants Ltd.
Drawn by:	Robert Wagner
Checked by:	Kyle Hawes
Projection:	NAD83-UTM Zone 11
Date:	February, 2009

40 20 0 40 80 Meters

1:2,000

N W E S

LEGEND

- 99 Segment Number
- Segment Break
- Stream Centreline
- Top of Bank
- Wetland/Low Flood Riparian
- City of Kelowna
- Culvert
- Discharge
- Enhancement
- Erosion

Obstruction

- Beaver Dam
- Dam
- Persistent Debris
- Rock

Modification

- Bridge
- Channelization
- Dam/Flood Gate
- Ditch
- Dock
- Fences
- Garbage/Pollution
- Livestock Crossing
- Other
- Pipe Crossing
- Retain Wall/Bank Stability
- Rip Rap
- Water Withdrawal

Fish Habitat

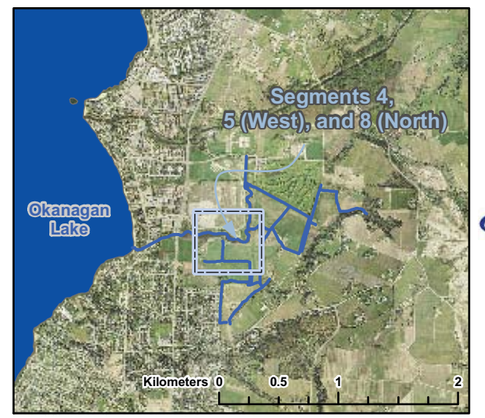
- Deep Pool
- Instream Vegetation
- Large Woody Debris
- Overstream Vegetation
- Small Woody Debris
- Spawning Habitat
- Undercut Bank

Waterbody

- Discontinued
- Ditch
- Tributary
- Wetland

SOURCE INFORMATION

Base Map:	82E.083 Kelowna
Orthophoto:	2006, provided by City of Kelowna
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Feature Information:	Field Inventory
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City of Kelowna

Okanagan Basin WATER BOARD

ECOSCAPE Environmental Consultants Ltd.

Note:
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THOMPSON BROOK

Segment 8 (South)

Project:	Sensitive Habitat Inventory and Mapping (SHIM)
Location:	Kelowna, BC
Project No.:	08-293
Prepared for:	City of Kelowna
Prepared by:	Ecoscape Environmental Consultants Ltd.
Drawn by:	Robert Wagner
Checked by:	Kyle Hawes
Projection:	NAD83-UTM Zone 11
Date:	February, 2009

40 20 0 40 80 Meters

1:2,000

N W E S

LEGEND

- 99 Segment Number
- Segment Break
- Stream Centreline
- Top of Bank
- Wetland/Low Flood Riparian
- City of Kelowna
- Culvert
- Discharge
- Enhancement
- Erosion

Obstruction

- Beaver Dam
- Dam
- Persistent Debris
- Rock

Modification

- Bridge
- Channelization
- Dam/Flood Gate
- Ditch
- Dock
- Fences
- Garbage/Pollution
- Livestock Crossing
- Other
- Pipe Crossing
- Retain Wall/Bank Stability
- Rip Rap
- Water Withdrawal

Fish Habitat

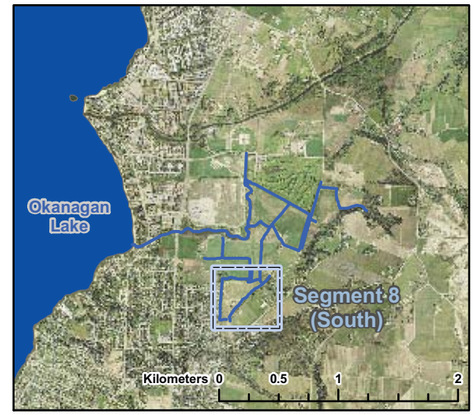
- Deep Pool
- Instream Vegetation
- Large Woody Debris
- Overstream Vegetation
- Small Woody Debris
- Spawning Habitat
- Undercut Bank

Waterbody

- Discontinued
- Ditch
- Tributary
- Wetland

SOURCE INFORMATION

Base Map:	82E.083 Kelowna
Orthophoto:	2006, provided by City of Kelowna
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Feature Information:	Field Inventory
Date of Inventory:	2008
Inventory Management:	Kyle Hawes, R.P.Bio.



City of Kelowna

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Note:
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