Sensitive Habitat Inventory and Mapping (SHIM)
Inventory Summary — Segments 50-51

Segment	Primary	Length (m)	Hydraulic	Gradient (%)	Crown Closure	Spawning Habitat	Substrates (%) [a]						Channel (m)				Cover (%) [b]							
							O	F	G	C	B	R	Wetted Width	Bankfull Width	Wetted Depth	Bankfull Depth	Total Cover	B	DP	IV	LWD	OV	SWD	UC
50.0	Channelized	163	Run	0.5	1-20%	Unknown	15	75	5	5	0	0	5.00	6.50	0.26	0.95	5	0	50	0	5	10	35	0
51.0	Natural	324	Slough	0.5	41-70%	Unknown	15	75	5	5	0	0	5.00	6.50	0.50	1.30	80	0	60	0	5	15	20	0

a. Substrate codes: O=organics; F=silt/sand; G=gravel; C=cobble; B=boulder; R=bedrock

b. Cover codes: B=boulder; DP=deep pool; IV=instream vegetation; LWD=large woody debris; OV=overstream vegetation; SWD=small woody debris; UC=undercut bank

Segment	Left Bank Riparian					Right Bank Riparian					Level of Impact [c]	Enhancement Opportunity
	Class	Qualifier	Stage	Shrub cover	Bank stability	Class	Qualifier	Stage	Shrub cover	Bank stability		
50.0	Broadleaf forest	Disturbed	young forest	34-66%	Medium	Herbs/grasses	Disturbed	low shrubs <2m	<5%	Low	5	Moderate
51.0	Natural wetland	Disturbed	young forest	67-100%	High	Natural wetland	Disturbed	young forest	67-100%	High	1	Nil

c. Impact rating: 0=nil; 1 = 1-bank low; 2 = 1-bank moderate; 3 = 1-bank high; 4 = both banks low; 5 = both banks moderate; 6 = both banks high

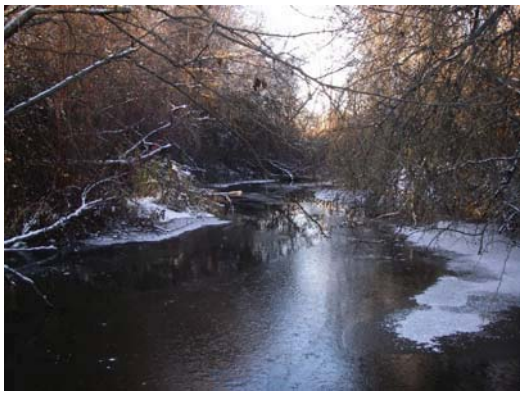
Segment: 50

Channelized by Highway 97 (to west) and to lesser extent by commercial development to east.



Segment: 51

Riparian floodplain/ riverine swamp association. Deep slough attributed to beaver activity.





Mill Creek

Sensitive Habitat Inventory and Mapping (SHIM) Segments 50-51

30 0 30 60 90 Meters

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Map: 13 of 19
Title: Segments 50-51 of 74
Projection: NAD 83, 11 North
Prepared for: City of Kelowna
Prepared by: Ecoscape Environmental Consultants
Drawn by: KH
Date: December, 2005

LEGEND

- Stream centreline
- Top of bank
- Segment break

Modification
- Bridge
- Channelization
- Dam/floodgate
- Fences
- Garbage/Pollution
- Livestock crossing
- PipeCrossing
- Retain Wall/Bank stability
- Water Withdrawal

- Erosion
- Discharge
- Culvert

Obstruction
- Beaver Dam
- Dam
- Persistent Debris

Waterbody
- Discontinued
- Ditch
- Natural Springs
- Other
- Side Channel
- Tributary
- Wetland
- Wetland (polygon)

Fish habitat
- Deep Pool
- Instream Vegetation
- Instream woody debris
- Other
- Over Stream Vegetn.
- Spawning Habitat
- Undercut Bank

- Enhancement



2 0 2 4 6 8 Kilometers

Inset Map

Source Information

Base map:	82E.083 Kelowna
Orthophotos:	2003, provided by City of Kelowna
Stream information:	field inventory
Location information:	field, GPS (Trimble Geo XM)
Feature information:	field inventory
Date of inventory:	2005/11
Inventory management:	Kyle Hawes, R.P.Bio.

ECOSCAPE Environmental Consultants

City of Kelowna

Sensitive Habitat Inventory and Mapping (SHIM)
Inventory Summary — Segment 52

Segment	Primary	Length (m)	Hydraulic	Gradient (%)	Crown Closure	Spawning Habitat	Substrates (%) [a]						Channel (m)				Cover (%) [b]							
							O	F	G	C	B	R	Wetted Width	Bankfull Width	Wetted Depth	Bankfull Depth	Total Cover	B	DP	IV	LWD	OV	SWD	UC
52.0	Channelized	749	Run	0.5	1-20%	Resident	13	75	5	1	1	0	3.70	5.00	0.38	1.20	20	0	10	0	10	25	50	5

a. Substrate codes: O=organics; F=silt/sand; G=gravel; C=cobble; B=boulder; R=bedrock

b. Cover codes: B=boulder; DP=deep pool; IV=instream vegetation; LWD=large woody debris; OV=overstream vegetation; SWD=small woody debris; UC=undercut bank

Segment	Left Bank Riparian					Right Bank Riparian					Level of Impact [c]	Enhancement Opportunity
	Class	Qualifier	Stage	Shrub cover	Bank stability	Class	Qualifier	Stage	Shrub cover	Bank stability		
52.0	Shrubs	Disturbed	tall shrubs 2-10m	67-100%	Medium	Shrubs	Disturbed	tall shrubs 2-10m	67-100%	Medium	5	Moderate

c. Impact rating: 0=nil; 1 = 1-bank low; 2 = 1-bank moderate; 3 = 1-bank high; 4 = both banks low; 5 = both banks moderate; 6 = both banks high

Segment: 52

Ditched through field. Run with intermittent riffle-pool development.



Mill Creek
Sensitive Habitat Inventory and Mapping (SHIM)
Segment 52

30 0 30 60 90 Meters

N
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Map:	14 of 19
Title:	Segments 52 of 74
Projection:	NAD 83, 11 North
Prepared for:	City of Kelowna
Prepared by:	Ecoscape Environmental Consultants
Drawn by:	KH
Date:	December, 2005

LEGEND

- Stream centreline
- Top of bank
- Segment break

Modification
- Bridge
- Channelization
- Dam/floodgate
- Fences
- Garbage/Pollution
- Livestock crossing
- PipeCrossing
- Retain Wall/Bank stability
- Water Withdrawal

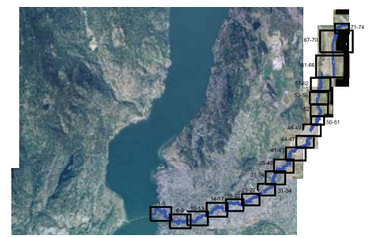
- Erosion
- Discharge
- Culvert

Obstruction
- Beaver Dam
- Dam
- Persistent Debris

Waterbody
- Discontinued
- Ditch
- Natural Springs
- Other
- Side Channel
- Tributary
- Wetland
- Wetland (polygon)

Fish habitat
- Deep Pool
- Instream Vegetation
- Instream woody debris
- Other
- Over Stream Vegetn.
- Spawning Habitat
- Undercut Bank

- Enhancement



2 0 2 4 6 8 Kilometers

Inset Map

Source Information

Base map:	82E.083 Kelowna
Orthophotos:	2003, provided by City of Kelowna
Stream information:	field inventory
Location information:	field, GPS (Trimble Geo XM)
Feature information:	field inventory
Date of inventory:	2005/11
Inventory management:	Kyle Hawes, R.P.Bio.

ECOSCAPE Environmental Consultants

City of Kelowna

Sensitive Habitat Inventory and Mapping (SHIM)
Inventory Summary — Segments 53-56

Segment	Primary	Length (m)	Hydraulic	Gradient (%)	Crown Closure	Spawning Habitat	Bars	Substrates (%) [a]						Channel (m)				Cover (%) [b]							
								O	F	G	C	B	R	Wetted Width	Bankfull Width	Wetted Depth	Bankfull Depth	Total Cover	B	DP	IV	LWD	OV	SWD	UC
53.0	Modified	159	Riffle/Pool	2.0	1-20%	Resident	Side	5	35	45	15	0	0	5.00	6.20	0.20	0.85	10	0	70	0	0	25	5	0
54.0	Channelized	165	Run	1.0	21-40%	Unknown	Side	10	35	35	15	0	0	4.00	6.50	0.17	0.80	25	0	0	0	0	50	50	0
55.0	Modified	270	Riffle/Pool	2.0	41-70%	Resident	None	1	15	74	10	0	0	4.00	5.50	0.10	0.65	3	0	40	0	0	0	20	40
56.0	Channelized	111	Run	1.5	0	Unknown	None	0	5	5	30	60	0	3.00	3.00	0.25	0.70	5	100	0	0	0	0	0	0

a. Substrate codes: O=organics; F=silt/sand; G=gravel; C=cobble; B=boulder; R=bedrock

b. Cover codes: B=boulder; DP=deep pool; IV=instream vegetation; LWD=large woody debris; OV=overstream vegetation; SWD=small woody debris; UC=undercut bank

Segment	Left Bank Riparian					Right Bank Riparian					Level of Impact [c]	Enhancement Opportunity
	Class	Qualifier	Stage	Shrub cover	Bank stability	Class	Qualifier	Stage	Shrub cover	Bank stability		
53.0	Broadleaf forest	Disturbed	sapling >10m	34-66%	Medium	Broadleaf forest	Disturbed	young forest	34-66%	Medium	4	Low
54.0	Shrubs	Disturbed	tall shrubs 2-10m	67-100%	Low	Broadleaf forest	Disturbed	young forest	34-66%	Medium	5	Moderate
55.0	Broadleaf forest	Disturbed	young forest	67-100%	Medium	Broadleaf forest	Disturbed	mature forest	34-66%	Medium	4	Moderate
56.0	Herbs/grasses	Urban residential	low shrubs <2m	<5%	High	Herbs/grasses	Urban residential	low shrubs <2m	<5%	High	6	Low

c. Impact rating: 0=nil; 1 = 1-bank low; 2 = 1-bank moderate; 3 = 1-bank high; 4 = both banks low; 5 = both banks moderate; 6 = both banks high

Segment: 53

More natural at bottom of segment becoming more channel-ized at the top with revet-ments.



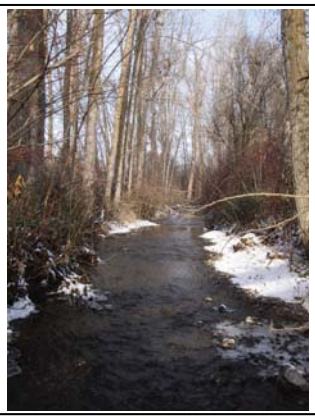
Segment: 54

Considerable left bank erosion.



Segment: 55

Large berm along right bank (naturalized) and Bulman Road along left bank (just set back).



Segment: 56

Channelized through retain-ing walls with series of rock lines.



Mill Creek

Sensitive Habitat Inventory and Mapping (SHIM) Segments 53-56

30 0 30 60 90 Meters

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Map:	15 of 19
Title:	Segments 53-56 of 74
Projection:	NAD 83, 11 North
Prepared for:	City of Kelowna
Prepared by:	Ecoscape Environmental Consultants
Drawn by:	KH
Date:	December, 2005

LEGEND

- Stream centreline
- Top of bank
- Segment break

Modification
- Bridge
- Channelization
- Dam/floodgate
- Fences
- Garbage/Pollution
- Livestock crossing
- PipeCrossing
- Retain Wall/Bank stability
- Water Withdrawal

Waterbody
- Discontinued
- Ditch
- Natural Springs
- Other
- Side Channel
- Tributary
- Wetland
- Wetland (polygon)

- Erosion
- Discharge
- Culvert

Obstruction
- Beaver Dam
- Dam
- Persistent Debris

Fish habitat
- Deep Pool
- Instream Vegetation
- Instream woody debris
- Other
- Over Stream Vegetn.
- Spawning Habitat
- Undercut Bank

- Enhancement



2 0 2 4 6 8 Kilometers

Inset Map

Source Information

Base map:	82E.083 Kelowna
Orthophotos:	2003, provided by City of Kelowna
Stream information:	field inventory
Location information:	field, GPS (Trimble Geo XM)
Feature information:	field inventory
Date of inventory:	2005/11
Inventory management:	Kyle Hawes, R.P.Bio.

ECOSCAPE Environmental Consultants

City of Kelowna

Sensitive Habitat Inventory and Mapping (SHIM)
Inventory Summary — Segments 57-62

Segment	Primary	Secondary	Length (m)	Hydraulic	Gradient (%)	Crown Closure	Spawning Habitat	Substrates (%) [a]						Channel (m)				Cover (%) [b]							
								O	F	G	C	B	R	Wetted Width	Bankfull Width	Wetted Depth	Bankfull Depth	Total Cover	B	DP	IV	LWD	OV	SWD	UC
57.0	Modified	Side channel	527	Slough	0.2	1-20%	Potential	10	80	8	2	0	0	3.20	6.00	0.30	1.00	30	0	20	9	1	65	0	5
58.0	Modified		224	Riffle/Pool	1.5	1-20%	Potential	1	59	30	10	0	0	1.60	2.20	0.20	0.60	30	0	5	20	1	74	0	0
59.0	Modified		171	Riffle/Pool	1.5	41-70%	Potential	1	59	30	10	0	0	1.80	5.60	0.15	0.60	15	0	0	0	0	75	25	0
60.0	Modified		188	Riffle/Pool	1.5	0	Potential	5	60	24	10	1	0	3.00	6.10	0.18	0.60	30	0	30	30	0	30	10	0
61.0	Ditch		309	Run	1.0	0	Unknown	0	35	5	60	0	0	1.40	3.00	0.11	0.60	75	0	0	35	0	40	0	25
62.0	Ditch		139	Run	1.0	0	Unknown	2	95	2	1	0	0	0.80	4.80	0.35	0.50	75	0	0	35	0	40	0	25

a. Substrate codes: O=organics; F=silt/sand; G=gravel; C=cobble; B=boulder; R=bedrock

b. Cover codes: B=boulder; DP=deep pool; IV=instream vegetation; LWD=large woody debris; OV=overstream vegetation; SWD=small woody debris; UC=undercut bank

Segment	Left Bank Riparian					Right Bank Riparian					Level of Impact [c]	Enhancement Opportunity
	Class	Qualifier	Stage	Shrub cover	Bank stability	Class	Qualifier	Stage	Shrub cover	Bank stability		
57.0	Herbs/grasses	Recreation	tall shrubs 2-10m	5-33%	Medium	Herbs/grasses	Recreation	tall shrubs 2-10m	5-33%	Medium	4	Low
58.0	Herbs/grasses	Recreation	low shrubs <2m	5-33%	Medium	Herbs/grasses	Recreation	low shrubs <2m	5-33%	Medium	4	Low
59.0	Herbs/grasses	Recreation	low shrubs <2m	<5%	Medium	Broadleaf forest	Natural	mature forest	67-100%	High	2	Low
60.0	Herbs/grasses	Agriculture	low shrubs <2m	<5%	Low	Herbs/grasses	Disturbed	low shrubs <2m	<5%	Low	6	Moderate
61.0	Herbs/grasses	Disturbed	low shrubs <2m	<5%	High	Herbs/grasses	Disturbed	low shrubs <2m	<5%	High	6	Low
62.0	Herbs/grasses	Disturbed	low shrubs <2m	<5%	High	Herbs/grasses	Disturbed	low shrubs <2m	<5%	High	6	Low

c. Impact rating: 0=nil; 1 = 1-bank low; 2 = 1-bank moderate; 3 = 1-bank high; 4 = both banks low; 5 = both banks moderate; 6 = both banks high

Segment: 57

Slough with portions of riffle-pool-run. Side channels and islands.



Segment: 58

Riffle-pool-run. Narrower and shallower channel.



Segment: 59

Riffle-pool-run.



Segment: 60

Riffle-pool-run below bridge, run-slough upstream of bridge. Old bank diking evident.



Segment: 61



Segment: 62

Ditch less confined and predominated by cattail marsh.



Mill Creek

Sensitive Habitat Inventory and Mapping (SHIM) Segments 57-62



30 0 30 60 90 Meters

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Map:	16 of 19
Title:	Segments 57-62 of 74
Projection:	NAD 83, 11 North
Prepared for:	City of Kelowna
Prepared by:	Ecoscape Environmental Consultants
Drawn by:	KH
Date:	December, 2005

LEGEND

- Stream centreline
- Top of bank
- Segment break

Modification
- Bridge
- Channelization
- Dam/floodgate
- Fences
- Garbage/Pollution
- Livestock crossing
- PipeCrossing
- Retain Wall/Bank stability
- Water Withdrawal

Waterbody
- Discontinued
- Ditch
- Natural Springs
- Other
- Side Channel
- Tributary
- Wetland
- Wetland (polygon)

- Erosion
- Discharge
- Culvert

Obstruction
- Beaver Dam
- Dam
- Persistent Debris

Fish habitat
- Deep Pool
- Instream Vegetation
- Instream woody debris
- Other
- Over Stream Vegetn.
- Spawning Habitat
- Undercut Bank

- Enhancement



2 0 2 4 6 8 Kilometers

Inset Map

Source Information

Base map:	82E.083 Kelowna
Orthophotos:	2003, provided by City of Kelowna
Stream information:	field inventory
Location information:	field, GPS (Trimble Geo XM)
Feature information:	field inventory
Date of inventory:	2005/11
Inventory management:	Kyle Hawes, R.P.Bio.

ECOSCAPE Environmental Consultants

City of Kelowna

Sensitive Habitat Inventory and Mapping (SHIM)
Inventory Summary — Segments 63-66

Segment	Primary	Length (m)	Hydraulic	Gradient (%)	Crown Closure	Spawning Habitat	Substrates (%) [a]						Channel (m)				Cover (%) [b]							
							O	F	G	C	B	R	Wetted Width	Bankfull Width	Wetted Depth	Bankfull Depth	Total Cover	B	DP	IV	LWD	OV	SWD	UC
61.0	Ditch	309	Run	1.0	0	Unknown	0	35	5	60	0	0	1.40	3.00	0.11	0.60	75	0	0	35	0	40	0	25
62.0	Ditch	139	Run	1.0	0	Unknown	2	95	2	1	0	0	0.80	4.80	0.35	0.50	75	0	0	35	0	40	0	25
63.0	Culvert	175	Slough	0.3	0	Unknown	5	1	0	0	0	0	3.20	3.20	0.50		0	0	0	0	0	0	0	0
64.0	Channelized	96	Riffle	1.0	0	Unknown	0	5	5	10	80	0	3.00	6.00	0.11	0.70	15	95	2	0	0	3	0	0
65.0	Ditch	112	Slough	0.3	0	Unknown	25	50	20	5	0	0	2.50	6.00	0.37	0.80	10	0	80	10	0	5	0	5
66.0	Ditch	1118	Run	1.5	0	Potential	0	5	50	45	0	0	3.50	4.00	0.06	0.50	5	0	0	80	0	10	0	10

a. Substrate codes: O=organics; F=silt/sand; G=gravel; C=cobble; B=boulder; R=bedrock

b. Cover codes: B=boulder; DP=deep pool; IV=instream vegetation; LWD=large woody debris; OV=overstream vegetation; SWD=small woody debris; UC=undercut bank

Segment	Left Bank Riparian					Right Bank Riparian					Level of Impact [c]	Enhancement Opportunity
	Class	Qualifier	Stage	Shrub cover	Bank stability	Class	Qualifier	Stage	Shrub cover	Bank stability		
63.0	High Impervious	Culvert				High Impervious	Culvert				6	Nil
64.0	Herbs/grasses	Disturbed	low shrubs <2m	5-33%	High	Herbs/grasses	Disturbed	low shrubs <2m	5-33%	High	6	Nil
65.0	Herbs/grasses	Disturbed	low shrubs <2m	5-33%	High	Herbs/grasses	Disturbed	low shrubs <2m	34-66%	High	6	Nil
66.0	Herbs/grasses	Disturbed	low shrubs <2m	5-33%	Medium	Herbs/grasses	Disturbed	low shrubs <2m	5-33%	Medium	6	Nil

c. Impact rating: 0=nil; 1 = 1-bank low; 2 = 1-bank moderate; 3 = 1-bank high; 4 = both banks low; 5 = both banks moderate; 6 = both banks high

Segment: 63



Segment: 64

Bottom of segment armoured with rip rap.



Segment: 65



Segment: 66

Weak riffle-pool inhibited by channeliza-tion.



Mill Creek

Sensitive Habitat Inventory and Mapping (SHIM) Segments 61-66



30 0 30 60 90 Meters

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Map:	17 of 19
Title:	Segments 61-66 of 74
Projection:	NAD 83, 11 North
Prepared for:	City of Kelowna
Prepared by:	Ecoscape Environmental Consultants
Drawn by:	KH
Date:	December, 2005

LEGEND

- Stream centreline
- Top of bank
- Segment break

Modification
- Bridge
- Channelization
- Dam/floodgate
- Fences
- Garbage/Pollution
- Livestock crossing
- PipeCrossing
- Retain Wall/Bank stability
- Water Withdrawal

Erosion

Discharge

Culvert

Obstruction
- Beaver Dam
- Dam
- Persistent Debris

Waterbody
- Discontinued
- Ditch
- Natural Springs
- Other
- Side Channel
- Tributary
- Wetland
- Wetland (polygon)

Fish habitat
- Deep Pool
- Instream Vegetation
- Instream woody debris
- Other
- Over Stream Vegetn.
- Spawning Habitat
- Undercut Bank

Enhancement



2 0 2 4 6 8 Kilometers

Inset Map

Source Information

Base map:	82E.083 Kelowna
Orthophotos:	2003, provided by City of Kelowna
Stream information:	field inventory
Location information:	field, GPS (Trimble Geo XM)
Feature information:	field inventory
Date of inventory:	2005/11
Inventory management:	Kyle Hawes, R.P.Bio.

ECOSCAPE Environmental Consultants

City of Kelowna

Sensitive Habitat Inventory and Mapping (SHIM)
Inventory Summary — Segments 67-70

Segment	Primary	Secondary	Length (m)	Hydraulic	Gradient (%)	Crown Closure	Spawning Habitat	Bars	Substrates (%) [a]						Channel (m)				Cover (%) [b]							
									O	F	G	C	B	R	Wetted Width	Bankfull Width	Wetted Depth	Bankfull Depth	Total Cover	B	DP	IV	LWD	OV	SWD	UC
67.0	Channelized		424	Riffle/Pool	2.0	0	Potential	Side	0	5	35	60	0	0	4.00	9.00	0.05	0.50	8	25	0	25	0	25	0	25
68.0	Channelized		201	Riffle	3.0	0	Unknown	None	0	5	25	45	25	0	5.00	7.00	0.05	0.55	10	50	10	40	0	0	0	0
69.0	Natural	Non-channelized	406	Riffle/Pool	1.0	1-20%	Unknown	Side	0	10	40	50	0	0	1.50	4.50	0.00	0.00	30	0	0	0	30	10	10	50
70.0	Natural	Braided	124	Riffle/Pool	1.0	21-40%	Unknown	Side	0	30	50	20	0	0	0.00	4.00	0.00	0.00	60	0	20	0	40	10	10	20

a. Substrate codes: O=organics; F=silt/sand; G=gravel; C=cobble; B=boulder; R=bedrock

b. Cover codes: B=boulder; DP=deep pool; IV=instream vegetation; LWD=large woody debris; OV=overstream vegetation; SWD=small woody debris; UC=undercut bank

Segment	Left Bank Riparian					Right Bank Riparian					Level of Impact [c]	Enhancement Opportunity
	Class	Qualifier	Stage	Shrub cover	Bank stability	Class	Qualifier	Stage	Shrub cover	Bank stability		
67.0	Herbs/grasses	Disturbed	low shrubs <2m	5-33%	Medium	Herbs/grasses	Disturbed	low shrubs <2m	5-33%	Medium	6	Nil
68.0	Rock	Disturbed	low shrubs <2m	5-33%	High	Rock	Disturbed	low shrubs <2m	5-33%	High	6	Nil
69.0	Broadleaf forest	Natural	mature forest	5-33%	Medium	Broadleaf forest	Natural	mature forest	5-33%	Medium	1	Nil
70.0	Mixed forest	Natural	mature forest	5-33%	Medium	Mixed forest	Natural	mature forest	5-33%	Medium	0	Nil

c. Impact rating: 0=nil; 1 = 1-bank low; 2 = 1-bank moderate; 3 = 1-bank high; 4 = both banks low; 5 = both banks moderate; 6 = both banks high

Segment: 67

Wider channel allowing meandering and more prominent riffle-pool character.



Segment: 68

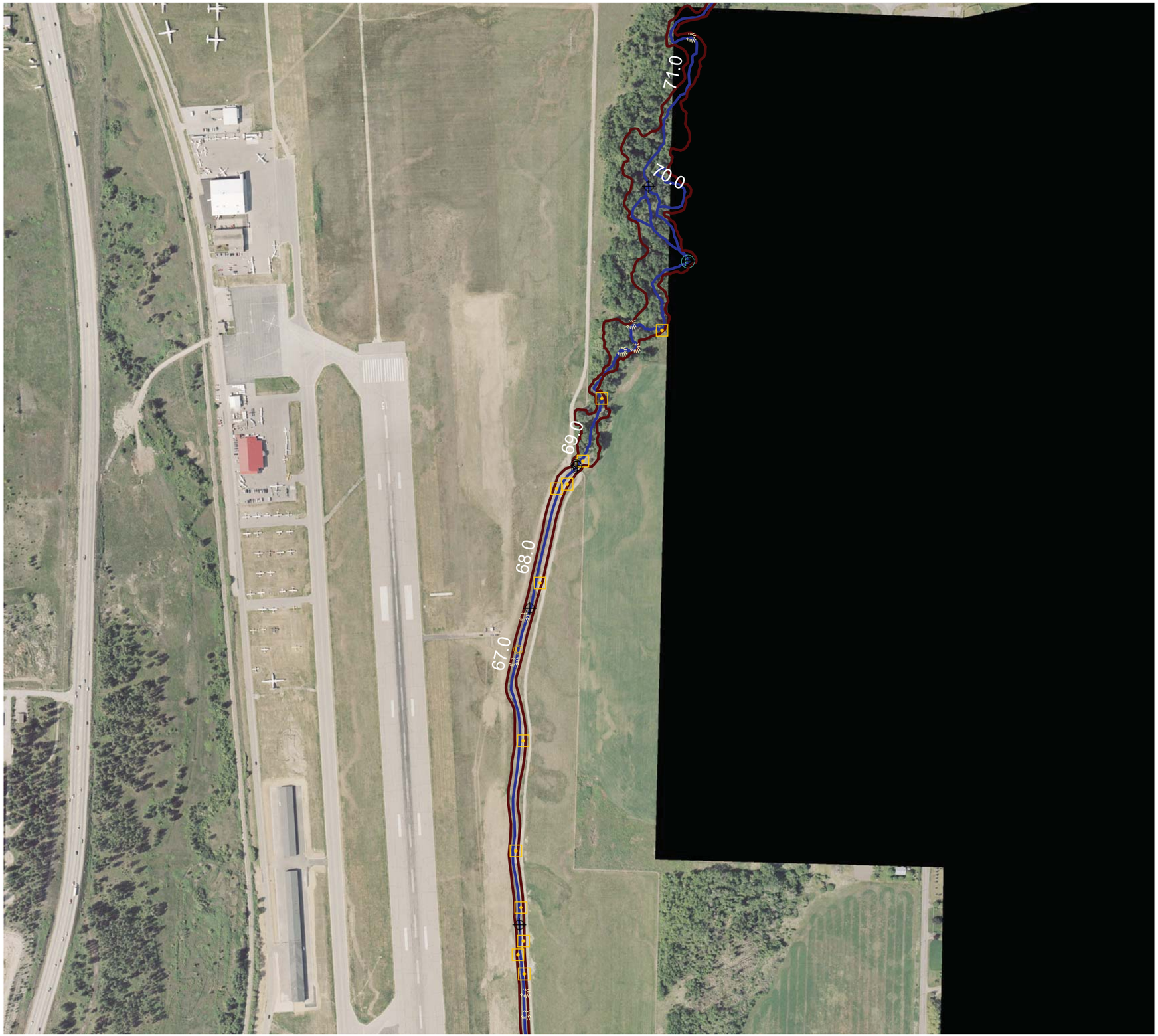


Segment: 69



Segment: 70





Mill Creek

Sensitive Habitat Inventory and Mapping (SHIM) Segments 67-70

30 0 30 60 90 Meters

N
W E
S

Map:	18 of 19
Title:	Segments 67-70 of 74
Projection:	NAD 83, 11 North
Prepared for:	City of Kelowna
Prepared by:	Ecoscape Environmental Consultants
Drawn by:	KH
Date:	December, 2005

LEGEND

- Stream centreline
- Top of bank
- Segment break

Modification
- Bridge
- Channelization
- Dam/floodgate
- Fences
- Garbage/Pollution
- Livestock crossing
- PipeCrossing
- Retain Wall/Bank stability
- Water Withdrawal

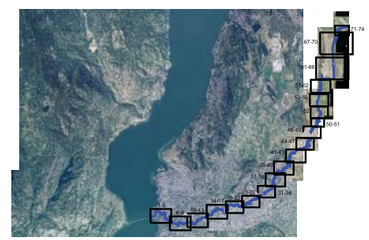
Waterbody
- Discontinued
- Ditch
- Natural Springs
- Other
- Side Channel
- Tributary
- Wetland
- Wetland (polygon)

- Erosion
- Discharge
- Culvert

Fish habitat
- Deep Pool
- Instream Vegetation
- Instream woody debris
- Other
- Over Stream Vegetn.
- Spawning Habitat
- Undercut Bank

Obstruction
- Beaver Dam
- Dam
- Persistent Debris

- Enhancement



2 0 2 4 6 8 Kilometers

Inset Map

Source Information

Base map:	82E.083 Kelowna
Orthophotos:	2003, provided by City of Kelowna
Stream information:	field inventory
Location information:	field, GPS (Trimble Geo XM)
Feature information:	field inventory
Date of inventory:	2005/11
Inventory management:	Kyle Hawes, R.P.Bio.

ECOSCAPE Environmental Consultants

City of Kelowna

Sensitive Habitat Inventory and Mapping (SHIM)
Inventory Summary — Segments 71-74

Segment	Primary	Secondary	Length (m)	Hydraulic	Gradient (%)	Crown Closure	Spawning Habitat	Bars	Substrates (%) [a]						Channel (m)				Cover (%) [b]							
									O	F	G	C	B	R	Wetted Width	Bankfull Width	Wetted Depth	Bankfull Depth	Total Cover	B	DP	IV	LWD	OV	SWD	UC
71.0	Natural	Intermittent	354	Riffle/Pool	2.0	1-20%	Unknown	Side	0	10	60	35	5	0	0.00	7.00	0.00	0.00	40	0	30	0	40	10	10	10
72.0	Modified	Side Channel	295	Riffle/Pool	2.0	21-40%	Unknown	Mid-channel	0	10	30	40	20	0	3.50	7.90	0.00	0.00	40	10	30	0	20	30	10	0
73.0	Modified	Side Channel	346	Riffle/Pool	2.0	21-40%	Unknown	Mid-channel	0	10	30	40	20	0	3.50	7.90	0.00	0.00	40	10	30	0	20	30	10	0
74.0	Culvert		42	Riffle	3.0	0	Unknown	None	0	0	0	0	0	0	0.00	1.60	0.00	0.00	0	0	0	0	0	0	0	0

a. Substrate codes: O=organics; F=silt/sand; G=gravel; C=cobble; B=boulder; R=bedrock

b. Cover codes: B=boulder; DP=deep pool; IV=instream vegetation; LWD=large woody debris; OV=overstream vegetation; SWD=small woody debris; UC=undercut bank

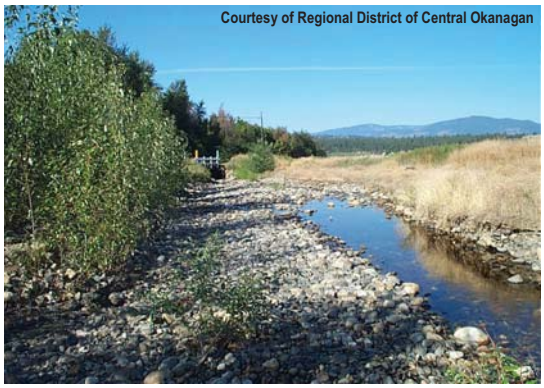
Segment	Left Bank Riparian					Right Bank Riparian					Level of Impact [c]	Enhancement Opportunity
	Class	Qualifier	Stage	Shrub cover	Bank stability	Class	Qualifier	Stage	Shrub cover	Bank stability		
71.0	Mixed forest	Natural	mature forest	34-66%	High	Mixed forest	Natural	mature forest	34-66%	High	0	Nil
72.0	Herbs/grasses	Disturbed	Herbs/grasses	<5%	Medium	Herbs\grasses	Disturbed			Medium	6	Mod
73.0	Broadleaf forest	Disturbed	young forest	<5%	Medium	Broadleaf forest	Disturbed	young forest	<5%	Medium	5	Mod
74.0	High Impervious					High Impervious					6	Nil

c. Impact rating: 0=nil; 1 = 1-bank low; 2 = 1-bank moderate; 3 = 1-bank high; 4 = both banks low; 5 = both banks moderate; 6 = both banks high

Segment: 71



Segment: 72



Segment: 73



Segment: 74





Mill Creek

Sensitive Habitat Inventory and Mapping (SHIM) Segments 71-74

30 0 30 60 90 Meters

N
W E
S

Map:	19 of 19
Title:	Segments 71-74 of 74
Projection:	NAD 83, 11 North
Prepared for:	City of Kelowna
Prepared by:	Ecoscape Environmental Consultants
Drawn by:	KH
Date:	December, 2005

LEGEND

- Stream centreline
- Top of bank
- Segment break

Modification
- Bridge
- Channelization
- Dam/floodgate
- Fences
- Garbage/Pollution
- Livestock crossing
- PipeCrossing
- Retain Wall/Bank stability
- Water Withdrawal

Erosion

Discharge

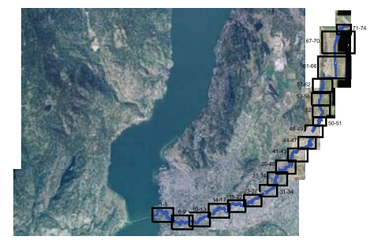
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