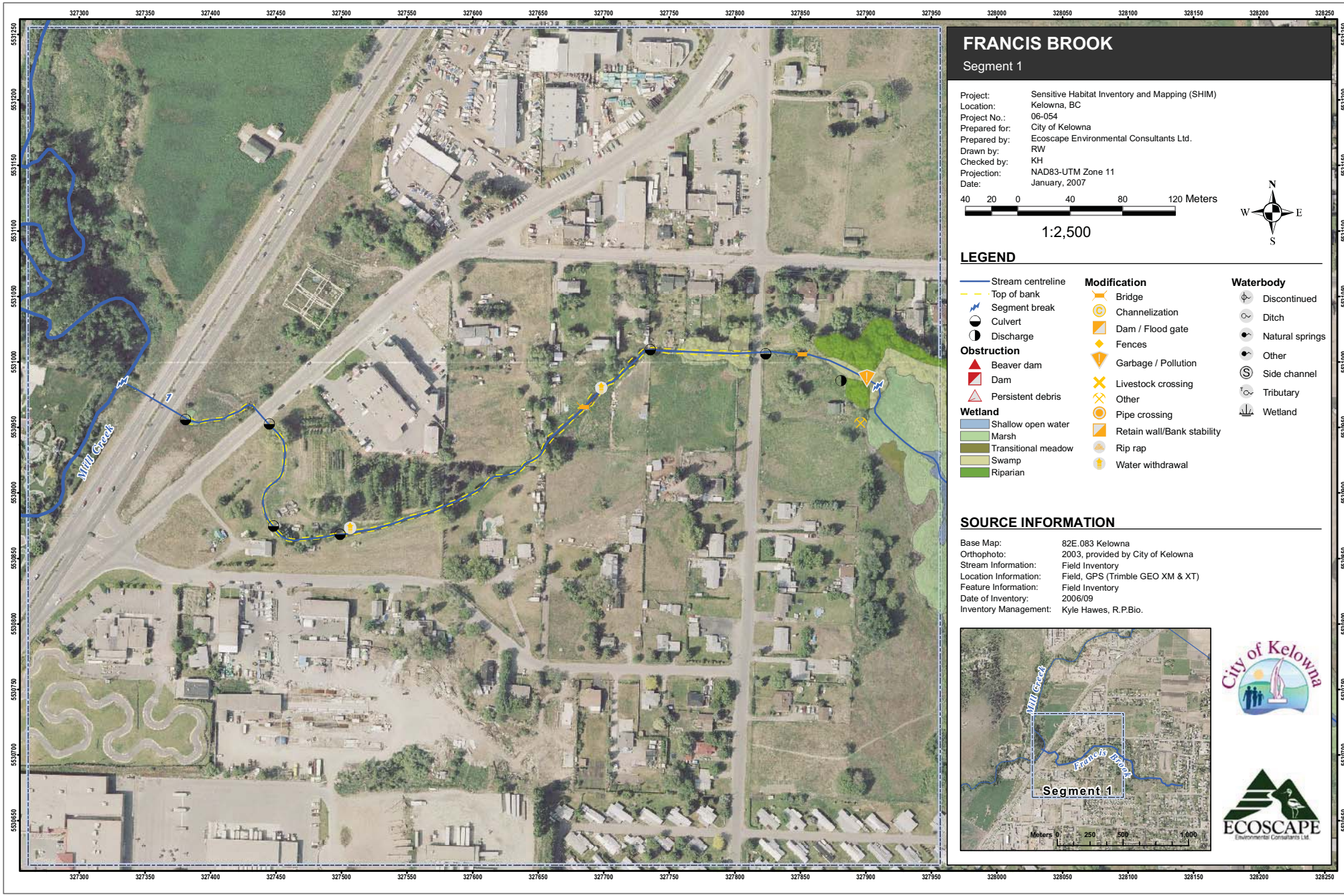


FRANCIS BROOK

Segment 1

Project:	Sensitive Habitat Inventory and Mapping (SHIM)
Location:	Kelowna, BC
Project No.:	06-054
Prepared for:	City of Kelowna
Prepared by:	Ecoscape Environmental Consultants Ltd.
Drawn by:	RW
Checked by:	KH
Projection:	NAD83-UTM Zone 11
Date:	January, 2007

40 20 0 40 80 120 Meters

1:2,500

N W E S

LEGEND

- Stream centreline
- Top of bank
- Segment break
- Culvert
- Discharge

Obstruction

- Beaver dam
- Dam
- Persistent debris

Wetland

- Shallow open water
- Marsh
- Transitional meadow
- Swamp
- Riparian

Modification

- Bridge
- Channelization
- Dam / Flood gate
- Fences
- Garbage / Pollution
- Livestock crossing
- Other
- Pipe crossing
- Retain wall/Bank stability
- Rip rap
- Water withdrawal

Waterbody

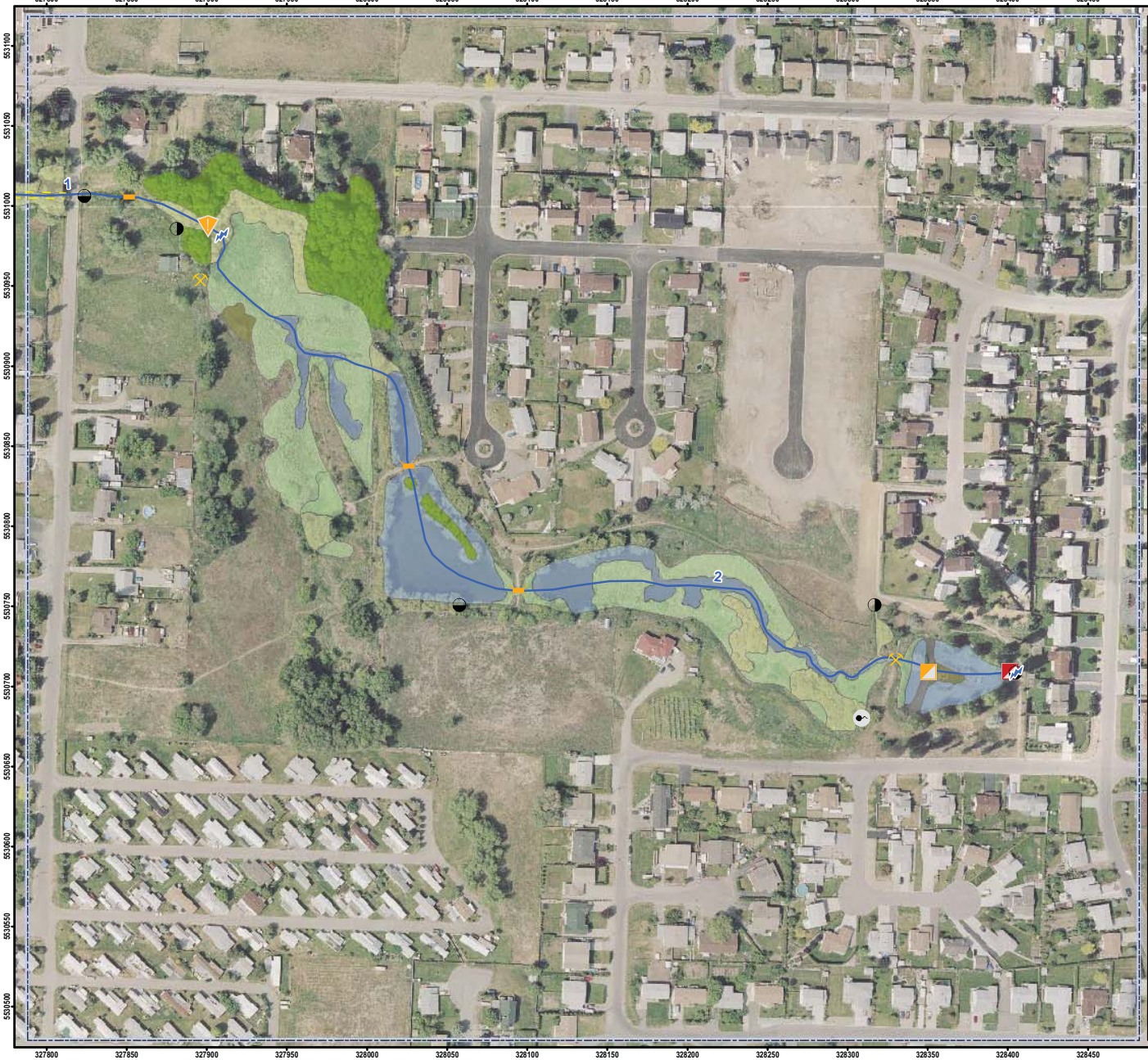
- Discontinued
- Ditch
- Natural springs
- Other
- Side channel
- Tributary
- Wetland

SOURCE INFORMATION

Base Map:	82E.083 Kelowna
Orthophoto:	2003, provided by City of Kelowna
Stream Information:	Field Inventory
Location Information:	Field, GPS (Trimble GEO XM & XT)
Feature Information:	Field Inventory
Date of Inventory:	2006/09
Inventory Management:	Kyle Hawes, R.P.Bio.

City of Kelowna

ECOSCAPE Environmental Consultants Ltd.



FRANCIS BROOK

Segment 2

Project:	Sensitive Habitat Inventory and Mapping (SHIM)
Location:	Kelowna, BC
Project No.:	06-054
Prepared for:	City of Kelowna
Prepared by:	Ecoscape Environmental Consultants Ltd.
Drawn by:	RW
Checked by:	KH
Projection:	NAD83-UTM Zone 11
Date:	January, 2007

40 20 0 40 80 120 Meters

1:2,500

N W E S

LEGEND

- Stream centreline
- Top of bank
- Segment break
- Culvert
- Discharge

Obstruction

- Beaver dam
- Dam
- Persistent debris

Wetland

- Shallow open water
- Marsh
- Transitional meadow
- Swamp
- Riparian

Modification

- Bridge
- Channelization
- Dam / Flood gate
- Fences
- Garbage / Pollution
- Livestock crossing
- Other
- Pipe crossing
- Retain wall /Bank stability
- Rip rap
- Water withdrawal

Waterbody

- Discontinued
- Ditch
- Natural springs
- Other
- Side channel
- Tributary
- Wetland

SOURCE INFORMATION

Base Map:	82E.083 Kelowna
Orthophoto:	2003, provided by City of Kelowna
Stream Information:	Field Inventory
Location Information:	Field, GPS (Trimble GEO XM & XT)
Feature Information:	Field Inventory
Date of Inventory:	2006/09
Inventory Management:	Kyle Hawes, R.P.Bio.



City of Kelowna

ECOSCAPE Environmental Consultants Ltd.

Francis Brook and Chichester Wetland
Segment(s): 1 and 2

Segment	Primary	Secondary	Length (m)	Hydraulic	Gradient (%)	Crown Closure	Spawning Habitat	Comment Class
1.0	Modified		740.769	Riffle/Pool	0.5	1-20%	Unknown	Weak riffle-pool run/Dense ingrowth of northern watercress where tree canopy absent.
2.0	Modified		677.930	Wetland	0.0	1-20%	Unknown	Partially constructed / naturalized wetland complex.

	Substrates (%) [a]						Channel (m)				
Segment	O	F	G	C	B	R	Wetted Width	Bankfull Width	Wetted Depth	Bankfull Depth	Comment Substrates/Channel
1.0	40	55	3	2	0	0	2.30	2.75	0.14	0.40	
2.0	100	0	0	0	0	0	0.00	0.00	0.00	0.00	Deep organic muck.

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

	Cover (%) [b]								
Segment	Total Cover	B	DP	IV	LWD	OV	SWD	UC	Comment Cover
1.0	25	0	0	60	0	40	0	0	Northern watercress providing a nearly complete instream vegetative canopy.
2.0	99	0	0	98	0	2	0	0	

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

	Left Bank Riparian							
Segment	Class	Qualifier	Stage	Shrub cover	Snags	Veteran Trees	Bank stability	Comment
1.0	Herbs/grasses	Urban_Residential	low shrubs <2m	<5%	No	No	Low	Instability along banks from lack of riparian vegetation/mowing and some diking.
2.0	Disturbed wetland	Disturbed	tall shrubs 2-10m	67-100%	No	<5	High	Mature and veteran weeping willows along portions of wetland but predominantly tall shrub thickets.

	Right Bank Riparian							
Segment	Class	Qualifier	Stage	Shrub cover	Snags	Veteran Trees	Bank stability	Comment
1.0	Herbs/grasses	Disturbed	low shrubs <2m	<5%	No	No	Medium	Instability along banks from lack of riparian vegetation/mowing and some diking.
2.0	Disturbed wetland	Disturbed	tall shrubs 2-10m	67-100%	No	<5	High	Mature and veteran weeping willows along portions of wetland but predominantly tall shrub thickets.

Segment	Comment - Flora	Comment - Flora
1.0	Pacific willow;sow thistle;watercress;cottonwood;reed canary grass;cattail;nightshade	Reside shiner, brook trout, goldfish.
2.0	Cattail;watercress;willow sp.;red-osier dogwood;rose sp.;hawthorn;mustard sp.; sow thistle.	

	Level of Impact [c]		Enhancement Opportunity	
Segment	Rating	Comment	Rating	Comment
1.0	Both_banks_high	Historic riparian clearing and channel confinement. High weed invasion.	High	Instream enhancements (removal of invasive aquatics) in stream structures and riparian restoration
2.0	Both_banks_low	Naturalizing but with adjacent disturbed areas and high weed invasion ratios.	Very_high	Riparian restoration and weed management.

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



