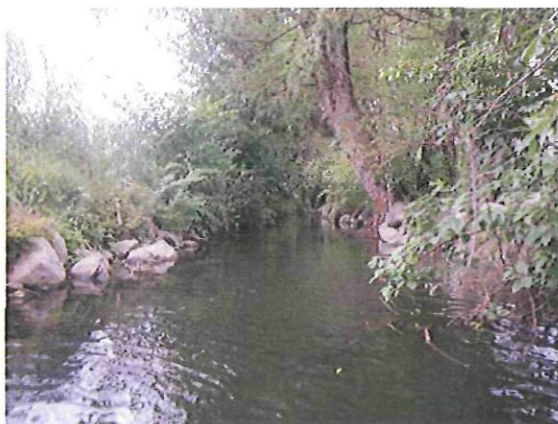


STREAM SUMMARY PLATES REPRESENTATIVE PHOTOS



Coldstream Creek											
Segment(s): 1 - 4											
Segment	Primary	Secondary	Length (m)	Hydraulic	Gradient (%)	Crown Closure	Spawning Habitat	Comment Class			
1	Channelized		127	Slough	0.0	>90%	Unknown	Kalamela lake influence with backwatering			
2	Modified		856	Riffle/Pool	1.5	71-90%	Potential	Urban residential			
3	Modified	Non-channelized	468	Riffle/Pool	1.5	71-90%	Potential	Park left bank-playing field, skate park; dog park right bank			
4	Modified		269	Riffle/Pool	2.0	71-90%	Potential	Residential area w/s park-mem channel modifications/less riparian veg			
Substrates (%) a											
Segment	O	F	G	C	B	R	Wetted Width	Bankfull Width	Wetted Depth	Bankfull Depth	Comment Substrates/Channel
1	0	95	0	3	2	0	3.50	4.40	0.41	0.80	Channelized
2	0	25	60	10	5	0	3.60	4.90	0.25	0.70	Modified with bank protection works and urban encroachment; meandering with narrow riparian band
3	0	5	70	20	5	0	5.00	6.40	0.30	0.60	Less confined in this seg; increased riparian, meandering
4	0	5	70	15	10	0	4.40	6.30	0.30	0.60	Meandering with armoured, encroachment with residential use; narrow riparian band-less native veg
a. Substrate codes: O=organk; F=silt/sand; G=gravel; C=cobble; B=boulder; R=bedrock											
Cover (%) b											
Segment	Total Cover	B	DP	IV	LWD	OV	SVD	UC	Comment Cover		
1	50	20	55	0	0	5	0	20	Pools dominant, rock falling in from bank		
2	50	20	30	0	0	25	0	25	0		
3	55	5	30	0	15	30	15	5	Good cover, frequent pools, bnd, ov		
4	25	40	30	0	5	5	15	5	Boulder cover associated with armouring		
b. Cover codes: B=boulder; DP=deep pool; IV=instream vegetation; LWD=large woody debris; OV=openstream vegetation; SVD=small woody debris; UC=undercut bank											
Left Bank Riparian											
Segment	Class	Qualifer	Stage	Shrub cover	Snags	Veteran Trees	Bank stability	Comment			
1	Broadleaf forest	Urban Residential	mature forest	5-33%	<5	No	High	Narrow band of veg, mature Pacific willow provides canopy cover, bank dense willow roots and soil			
2	Broadleaf forest	Urban Residential	mature forest	5-33%	<5	No	High	Mat cottonwood/willow, native veg, mixed with manicured turf, var. bank mat, ret. structures			
3	Broadleaf forest	Recreation	mature forest	34-66%	<5	No	Medium	Willow, cottonwood, red-osier dogwood, riparian band, moved lawn spots fields, some armoring			
4	Broadleaf forest	Rural Residential	mature forest	5-33%	<5	No	Medium	Bank material/rock armoring, soils; more agricultural than right bank			
Right Bank Riparian											
Segment	Class	Qualifer	Stage	Shrub cover	Snags	Veteran Trees	Bank stability	Comment			
1	Broadleaf forest	Urban Residential	mature forest	5-33%	<5	No	High	Naturalized band with mature willow, channelization, manicured landscaping adjacent riparian band			
2	Broadleaf forest	Urban Residential	mature forest	5-33%	<5	No	High	Variable bank material and retaining structures, roots, rip. band with mature trees/shrubs/manicured			
3	Broadleaf forest	Recreation	mature forest	67-100%	<5	0	Medium	Wider riparian band - more naturalized, gradual bank, moved lawn spots fields, some armoring			
4	Broadleaf forest	Rural Residential	mature forest	5-33%	<5	No	Medium	Residential encroachment, lack of veg and recruitment potential of bud			
Flora											
Segment	Flora										
1	Pacific willow, red-osier dogwood, Oregon grape, snowberry, nightshade, hort. varieties										
2	Cottonwood, Pac. willow, red-osier dogwood, rose sp., snowberry, Oregon grape, hort. herbs/shrubs										
3	Willow, cottonwood, snowberry dogwood, Douglas maple, burdock, nightshade, black hawthorn, rose, alder										
4	Cottonwood, doug maple, non-native maple, nightshade, willow, grass, hops										
Fauna											
Segment	Fauna										
1	Belted Kingfisher, Steller Jay, Mallards, Carp										
2	Black-capped chickadee, Hairy woodpecker, Northern Flicker, Steller Jay, gen. fish, American robin										
3	Beaver, bear										
4	Black-bird Magpie, California Quail, American Robin, European Starling										
Level of Impact ^c											
Segment	Score	Comment					Rating	Enhancement Opportunity			
1	1	Channelization with retention of narrow native riparian band					Low	Expanded riparian zone			
2	2	Var. bank stability materials; land use and impact typical of urban residential-narrow riparian band					Low	Expansion of riparian area, streamside rip. removal of concrete debris			
3	4	Left bank moved live near bank in places; right bank wider riparian area, some armoring					Moderate	Increase riparian band width, particularly along left bank - create a wider non-mud strip			
4	2	Residential encroachment; channel retains some movement but channelized or walled throughout					Low	Riparian enhancement; plantings and expansion of veg			
c. Impact rating: See Table 2											



Segment 1



Segment 2



Segment 3



Segment 4

**Coldstream Creek
Segment(s): 5 - 8**

Segment	Primary	Secondary	Length (m)	Hydraulic	Gradient (%)	Crown Closure	Spawning Habitat	Comment Class
5	Modified	Non-channelized	1772	Riffle/Pool	2.0	71-92%	Potential	Large rural properties, less modifications; native riparian, but some anthropogenic influence
6	Modified		134	Riffle/Pool	3.0	71-92%	Potential	Park; mature trees, manicured turf, ball field; fisheries enhancement have occurred
7	Natural	Other	866	Riffle/Pool	2.0	71-92%	Potential	Rural anthropogenic impacts but native riparian veg, good recruitment of lwd, sld, fish habitat
8	Natural		318	Riffle/Pool	1.5	>90%	Potential	Ravine, wide riparian band, non-native mature deciduous forest; also includes native species

Segment	Substrates (%) a						Channel (m)				Comment Substrates/Channel
	O	F	G	C	B	R	Wetted Width	Bankfull Width	Wetted Depth	Bankfull Depth	
5	0	15	55	25	5	0	4.50	6.30	0.25	0.50	Meandering, wide riparian area in general with limited confinement
6	0	5	40	30	25	0	3.90	4.90	0.25	0.60	
7	0	8	50	30	10	2	5.20	6.70	0.25	0.70	Meandering; little anthropogenic impact, natural stream processes
8	0	20	45	30	5	0	5.00	6.90	0.24	0.70	Some erosion, seeps along left bank

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

Segment	Cover (%) b								Comment Cover
	Tot. Cover	B	DP	IV	LWD	OV	SWD	UC	
5	60	5	23	2	15	25	25	5	Natural state allows input of lwd and sld, contrib. to pool formation; B cov. with bank protection
6	30	35	30	0	0	30	5	0	Boulder cover at d/d end of segment associated with armouring; weirs have created pools; some ov
7	65	5	20	0	30	20	20	5	Good cover for fish; potential for lwd, sld and increased habitat complexity with natural riparian
8	40	5	20	0	30	15	25	5	Lwd and sld recruitment; assoc. pools

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								Comment
Segment	Class	Qual. Fier	Stage	Shrub cover	Smgs	Veteran Trees	Bank stability	
5	Broadleaf forest	Rural Residential	mature forest	67-100%	>=5	<5	Medium	Natural riparian band with some rural/agricultural influence, incl. livestock access and field
6	Broadleaf forest	Recreation	mature forest	5-33%	<5	No	High	Park; rock armouring banks; mature willow and cottonwood; limited shrubs
7	Broadleaf forest	Natural	mature forest	67-100%	>=5	>=5	Medium	Some livestock fenced from creek; mature cottonwood, pine, fir; good recruitment lwd, rural/natural
8	Broadleaf forest	Natural	mature forest	67-100%	>=5	<5	Medium	Natural but historically modified with presence of mature non-native trees

Right Bank Riparian								Comment
Segment	Class	Qual. Fier	Stage	Shrub cover	Smgs	Veteran Trees	Bank stability	
5	Broadleaf forest	Rural Residential	mature forest	67-100%	>=5	<5	Medium	Relatively wide natural riparian band throughout most of seg; recruitment of lwd, sld, field, rural
6	Broadleaf forest	Recreation	mature forest	5-33%	<5	No	High	Bank material primarily riprap armouring; fines; turf to top of bank; limited shrubs; mature canopy
7	Broadleaf forest	Natural	mature forest	67-100%	>=5	>=5	Medium	Steeper ravine towards Coldstream Creek Rd; native veg; min. disturbance; livestock fencing
8	Broadleaf forest	Natural	mature forest	34-66%	<5	<5	Medium	Natural, modified historically; Coldstream Creek Rd beyond top of mature aspen, debris along bank

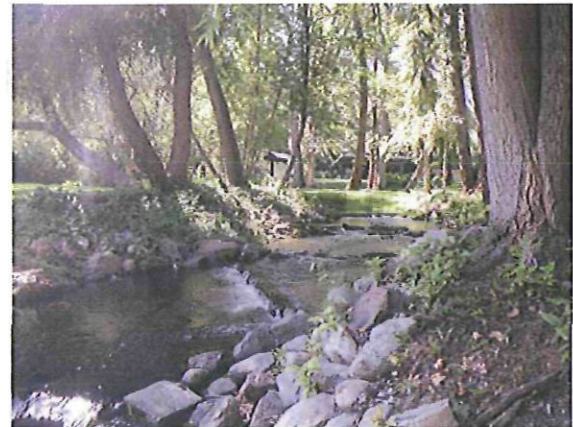
Segment	Flora				Fauna			
5	Cottonwood, willow, dogwood, aspen, douglas maple, snowberry, buttercup, reed, onychgrass, hawthorn				White-tail deer, great horned owl, western red squirrel, WEVR, RBNV, rainbow trout, NOFL			
6	Willow, cottonwood, turf, nightshade, dogwood, crabapple, snowberry, currant				Northern Flicker, Black-capped Chickadee			
7	Horsebail, chokecherry, cottonwood, willow, dogwood, ash, water birch, nightshade				Great horned owl, RBNV, BCOH, western red squirrel, pileated woodpecker, black bear			
8	Maple, Manitoba maple, horsebail, cottonwood, alder, black locust, dogwood, snowberry, nightshade, rose				Pileated woodpecker, black-capped chickadee, black bear			

Level of Impact c				Enhancement Opportunity			
Segment	Score	Comment	Rating	Segment	Score	Comment	Rating
5	4	Sporadic bank protection/fields/rural residential adjacent stream; relatively natural riparian area	Low	5	4	Riparian enhancement where fields near creek, fence/allow to naturalize, eroding clay bank	Low
6	3	Bank stabilization in park; lack of riparian, mowed lawn	Moderate	6	3	Expand riparian zone, livestock among rock or along grass banks, expand/locate no mow strip	Moderate
7	4	Sporadic rural/agricultural influence, but segment retains a rural character	Low	7	4	Natural riparian area; livestock fencing could be setback further from stream	Low
8	5	Some erosion, armouring at culvert; historically modified but a rural state, seeps along LB	Low	8	5	Sedimentation of substrates erosion, upstream activities, seeps small from seep along left bank	Low

c. Impact rating: See Table 2



Segment 5



Segment 6



Segment 7



Segment 8

**Coldstream Creek
Segment(s): 9 - 12**

Segment	Primary	Secondary	Length (m)	Hydraulic	Gradient (%)	Crown Closure	Spawning Habitat	Comment Class
9	Modified	Non-channelized	137	Riff/Pool	1.5	71-90%	Potential	Agricultural field right bank out of native section; natural left bank
10	Modified	Non-channelized	935	Riff/Pool	1.5	71-90%	Potential	Agricultural and rural properties with native riparian vegetation riparian area varies in width
11	Modified	Other	833	Riff/Pool	1.5	71-90%	Potential	Native riparian vegetation and stream character; agricultural influence; grasses, invasive weeds
12	Modified		548	Riff/Pool	1.0	71-90%	Unknown	Increasing agricultural impacts; invasive weeds, cattle grazing visible; lack of riparian vegetation

Segment	Substrates (%) a						Channel (m)				Comment Substrates/Channel
	O	F	G	C	B	R	Wetbed Width	Bankfull Width	Wetbed Depth	Bankfull Depth	
9	0	20	45	30	5	0	4.90	6.10	0.22	0.20	Eroding banks where stream meanders; not channelized
10	0	25	40	30	5	0	4.90	6.00	0.22	0.60	Eroding banks
11	0	18	55	25	2	0	5.30	6.20	0.21	0.60	Not confined, meandering, natural recruitment of bed and bank
12	2	10	40	45	3	0	5.20	6.60	0.15	0.60	Meandering stream, not channelized; previous grazing/livestock access in riparian area

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

Segment	Cover (%) b								Comment Cover
	Total Cover	B	DP	IV	LWD	OV	SWD	UC	
9	35	2	20	0	35	15	23	5	Livestock, do and avoid dominant cover; juvenile RB observed in pools; live/avoid not posing obstruction
10	40	10	20	0	45	5	15	5	Functional live jams dominant cover type, along with associated scour pools and accumulation of avoid
11	60	0	25	5	45	5	20	0	
12	30	5	10	0	45	5	30	5	Boulder cover associated with bank armouring; woody debris dominant form of cover

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								Comment
Segment	Class	Qualifier	Stage	Shrub cover	Snags	Veteran Trees	Bank stability	
9	Broadleaf forest	Natural	mature forest	67-100%	>=5	<5	Medium	Non-native mature maples, mature cottonwoods, willow, alder, well-developed understory; native
10	Broadleaf forest	Agriculture	mature forest	67-100%	>=5	<5	Medium	Agricultural influence; farm barns, bank armouring and narrower riparian band in sections
11	Mixed forest	Natural	mature forest	34-66%	>=5	<5	Medium	Open coniferous; previous livestock access; fence setback from driveway; native veg
12	Mixed forest	Agriculture	mature forest	5-33%	>=5	No	Low	Disturbed with past livestock use of riparian, field beyond top

Right Bank Riparian								Comment
Segment	Class	Qualifier	Stage	Shrub cover	Snags	Veteran Trees	Bank stability	
9	Broadleaf forest	Rural Residential	mature forest	34-66%	<5	<5	Medium	Less riparian veg field beyond top of bank; trees have been planted; erosion issues noted
10	Broadleaf forest	Agriculture	mature forest	34-66%	>=5	<5	Low	Rural/agricultural influence; channel not confined, mat to wet cottonwoods along edge, native riparia
11	Mixed forest	Agriculture	young forest	5-33%	>=5	No	Low	Open field, seepage, erosion; previous livestock access; fence setback from driveway; native veg
12	Broadleaf forest	Agriculture	mature forest	5-33%	<5	No	Low	Invasive weeds, grazing, general lack of consistent native riparian vegetation

Flora				Fauna			
Segment	Class	Qualifier	Stage	Segment	Class	Qualifier	Stage
9	Cedar, maple, cottonwood, boxelder, nightshade, snowberry, dogwood, willow, alder, bud oak				Rainbow trout, deer tracks, black bear		
10	Cottonwood, water birch, dogwood, alder, elder, ash, viburnum, aster, ornamental cedar, hops, butternut, nightshade				Birds, white-tailed deer, black bear, RWH		
11	Doug fir, aspen, cedar, juniper, balsam poplar, cottonwood, dogwood, cedar, alder, willow, alder, dog maple				Red-tailed hawk, pheasant, white-tailed deer, RWH, KOP, BPO, BCOH		
12	Douglas fir, alder, cottonwood, cedar, non-native maple, chokeberry, horsetail, aspen, dogwood				American kestrel, Black Capped Chickadee, Red-tailed Hawk		

Level of Impact ^c			Enhancement Opportunity		
Segment	Score	Comment	Rating	Comment	
9	5	Historically modified but naturalized state; rural/agri use right bank; erosion noted	Low	Sedimentation of substrates; erosion, upstream activities, riparian planting, livestock	
10	3	Agri/rural encroachment within riparian area; erosion; riparian retains natural character in segment	Low	Increased riparian area, livestock, brush clearing	
11	3	Agricultural influence; poor livestock access; invasive species; erosion	Moderate	Increased riparian area; riparian planting; riparian access to livestock if still grazed in area	
12	2	Agricultural influence; livestock; lack of riparian vegetation and associated erosion	High	Replanting; fencing already in place, but restrict access to downstream end	

c. Impact rating: See Table 2



Segment 9



Segment 10



Segment 11



Segment 12

Coldstream Creek
Segment(s): 13 - 16

Segment	Primary	Secondary	Length (m)	Hydraulic	Gradient (%)	Crown Closure	Spawning Habitat	Comment Class
13	Modified		154	Rifle/Pool	1.0	41-70%	Unknown	Lack of riparian vegetation
14	Modified		157	Rifle/Pool	1.5	71-90%	Unknown	Intensely modified to channelized, concrete waste and debris, rip rap, discharge
15	Modified	Other	174	Slough	0.0	71-90%	Unknown	Water is backed up with dam; natural riparian, agriculture along it
16	Modified	Non-channelized	263	Rifle/Pool	1.0	71-90%	Unknown	Dense riparian band, ov, anthropogenic impacts beyond top of bank

Segment	Substrates (%) a						Channel (m)				Comment Substrates/Channel
	O	F	G	C	B	R	Wetted Width	Bankfull Width	Wetted Depth	Bankfull Depth	
13	2	10	40	45	3	0	4.00	6.00	0.15	0.60	Mandering stream, not channelized, previous grazing livestock access in riparian area
14	0	5	15	45	35	0	4.60	5.20	0.15	0.70	Erosion, bank armouring, steep, high banks, obstruction at u/s end, concrete flume
15	15	55	10	15	5	0	13.00	21.00	1.00	1.80	Variable depths 0.85m towards u/s; 1.3-2m at d/s end, variable widths
16	0	20	45	25	10	0	3.40	5.00	0.15	0.70	

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

Segment	Cover (%) b								Comment Cover
	Total Cover	B	DP	IV	LWD	OV	SWD	UC	
13	15	60	0	15	0	15	5	5	Limited cover, mostly associated with bank armouring
14	30	35	15	0	15	15	5	5	Boulder, concrete debris, dp below falls provide cover
15	80	5	65	15	10	0	5	0	Deep open water environment; lwd, ov and instream vegetation, reed canopy grass along banks
16	30	10	5	0	25	45	10	5	Boulder cov mainly associated with bank armouring

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								Comment
Segment	Class	Qualifier	Stage	Shrub cover	Snags	Veteran Trees	Bank stability	
13	Broadleaf forest	Agriculture	Young forest	5-33%	<5	No	Medium	Limited riparian, field beyond top
14	Broadleaf forest	Agriculture	mature forest	5-33%	>=5	No	Low	Agricultural operations beyond riparian band
15	Broadleaf forest	Natural	mature forest	67-100%	>=5	No	Medium	Nature, dense riparian vegetation, flooded, agricultural beyond riparian band
16	Broadleaf forest	Natural	mature forest	34-66%	>=5	<5	Low	Agricultural influence beyond top of bank; wide riparian throughout much of segment

Right Bank Riparian								Comment
Segment	Class	Qualifier	Stage	Shrub cover	Snags	Veteran Trees	Bank stability	
13	Broadleaf forest	Agriculture	Grass/Herb	5-33%	No	No	Low	Invasive weeds, grazing, lack of riparian vegetation, bank armouring
14	Broadleaf forest	Agriculture	mature forest	5-33%	<5	No	Low	Agricultural operations beyond top of bank, erosion
15	Broadleaf forest	Agriculture	young forest	5-33%	<5	No	Medium	Agricultural field/residential beyond top, modified
16	Broadleaf forest	Agriculture	young forest	34-66%	<5	No	Medium	Horse paddock to riparian band-established maples, natural character, erosion/ armouring adj. highway

Segment	Flora				Fauna			
	Comment	Comment	Comment	Comment	Comment	Comment	Comment	Comment
13	Anthropogenic grasses, willow, invasive weeds				Black Capped Chickadee, Red-tailed Hawk			
14	Cottonwood, douglas maple, non-native veg, invasive weeds, red-osier dogwood				Potential for wildlife movement, avian species			
15	Willow, cottonwood, hops, rose, dogwood, hawthorn, reed canary grass				Bear, waterfowl, potential for diversity of wildlife-good opportunity for avian species			
16	Cottonwood, willow, non-native maple, dogwood, douglas maple, hops, alder, snowberry				Black capped chickadee, ring-necked pheasant, black bear tracks, avian sp.			

Segment	Level of Impact ^c		Enhancement Opportunity	
	Score	Comment	Rating	Comment
13	1	Agricultural influence-livestock, lack of riparian vegetation	High	Replanting, expand riparian band
14	1	Channel, riparian area modified	Moderate	Remove concrete debris, expand riparian
15	3	Flooded due to dam, valuable habitat-wildlife	Low	Expand riparian, preserve habitat value
16	3	Dense riparian band-bank armouring-increases adj. highway	Low	Expand riparian, limited with highway

c. Impact rating: See Table 2



Segment 13



Segment 14



Segment 15



Segment 16

Coldstream Creek
Segment(s): 17 - 20

Segment	Primary	Secondary	Length (m)	Hydraulic	Gradient (%)	Crown Closure	Spawning Habitat	Comment Class
17	Modified	Other	525	Riffle/Pool	1.5	71-90%	Unknown	More slough at u/s end, native riparian with influence from ag/ind use-railway, residential, agric
18	Channelized		521	Riffle/Pool	1.5	71-90%	Unknown	Narrow native riparian band, but both banks impinged, earth berm beyond lb
19	Channelized	Beaver Pond	101	Slough	0.0	71-90%	Unknown	Series of beaver dams and persistent debris resulting in slough-0.5 m to over 1.7 m deep
20	Modified	Beaver Pond	222	Beaver Pond	0.0	41-70%	Unknown	Wetland extends along left bank and beaver activity has resulted in a willow swamp-like environment

Segment	Substrates (%) a						Channel (m)				Comment Substrates/Channel
	O	F	G	C	B	R	Wetted Width	Bankfull Width	Wetted Depth	Bankfull Depth	
17	0	25	30	40	5	0	2.40	4.20	0.30	0.60	Variable depths-stream more channelized and deeper at u/s end of segment
18	0	25	45	25	5	0	2.60	3.70	0.18	0.70	Confined by adjacent land use and historic channelization.
19	35	50	5	5	5	0	5.00	6.00	0.90	1.40	Channel wider upstream of larger debris jam, wetted width between 3.5 m and 7.5 m
20	30	60	5	5	0	0	22.00	32.00	1.20	1.80	Variable widths, depths range from 0.4m-2m

a. Substrate codes: O=organic; F=fill/land; G=gravel; C=cobble; B=boulder; R=bedrock

Cover (%) b										Comment Cover
Segment	Total Cover	B	DP	IV	LWD	OV	SWD	UC		
17	45	15	20	0	40	10	10	5		High recruitment of lwd throughout segment-associated pools, and, boulder cover assoc. armouring
18	35	5	5	0	25	25	30	10		Several span logs-recruitment of swd and lwd
19	75	0	65	5	15	5	10	0		Slough characteristic provides deep water cover throughout the segment
20	65	0	65	15	10	5	5	0		Endstream veg associated with wetland, willows, lwd and deep water- extensive cover

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								Comment
Segment	Class	Qualifier	Stage	Shrub cover	Snags	Veteran Trees	Bank stability	
17	Broadleaf forest	Disturbed	mature forest	34-66%	>=5	No	Low	Wide, well-vegetated riparian with areas of encroachment to top of bank, railway influence
18	Broadleaf forest	Disturbed	mature forest	5-33%	>=5	No	Medium	Industrial and disturbed beyond top of bank; narrow riparian band
19	Broadleaf forest	Disturbed	mature forest	5-33%	>=5	No	Medium	Industrial, disturbed beyond top, earth berm beyond left bank
20	Disturbed wetland	Disturbed	stapling >10m	5-33%	<5	No	Low	Industrial/railway-disturbed beyond top, invasive weeds, wetland-grasses, willow, cattail

Right Bank Riparian								Comment
Segment	Class	Qualifier	Stage	Shrub cover	Snags	Veteran Trees	Bank stability	
17	Broadleaf forest	Rural, Residential	mature forest	34-66%	>=5	No	Medium	Well-vegetated, naturalized riparian with areas of encroachment
18	Broadleaf forest	Agriculture	mature forest	34-66%	>=5	No	Medium	Com beyond top of bank; narrow native riparian band; several deciduous trees blown down
19	Broadleaf forest	Agriculture	mature forest	5-33%	>=5	No	Low	Com field beyond top of bank; narrow native riparian band
20	Broadleaf forest	Agriculture	mature forest	5-33%	>=5	No	Medium	Com field beyond top, narrow native riparian band

Flora				Fauna			
Segment							
17	Cottonwood, willow, non-native maple, dogwood, doug maple, snowberry, rose			Belted kingfisher/black-capped chickadee, great horned owl			
18	Cottonwood, willow, dogwood, rose sp., hops, snowberry			Rainbow trout, black bear, STJA; riparian band provides nesting, foraging, perching habitat			
19	Cottonwood, willow, dogwood, rose, hops			Beaver, black bear, red-breasted nuthatch, belted kingfisher, several avian species, rainbow trout			
20	Cottonwood, willow, dogwood, rose, hops, cattail, reed canary grass, invasive weeds			Beaver, bear, BENU Pacific treefrog, avian species-snags for cavity nesting, garter snake, RB			

Level of Impact ^c				Enhancement Opportunity	
Segment	Score	Comment	Rating	Comment	
17	4	Impacts from adjacent land use	Low	Expand riparian where adjacent land use encroaches; livestock and bioengineering where erosion	
18	1	Adjacent disturbance close to creek; channelized in past	Moderate	Expansion of riparian area/restoration of LB with re-development of property	
19	1	Adjacent disturbance close to creek; channelized in past	Moderate	Expand riparian area	
20	2	Disturbed areas close to creek-left bank industrial activity, railway	Moderate	Broaden riparian area around wetland and create larger buffer, expand right bank riparian	

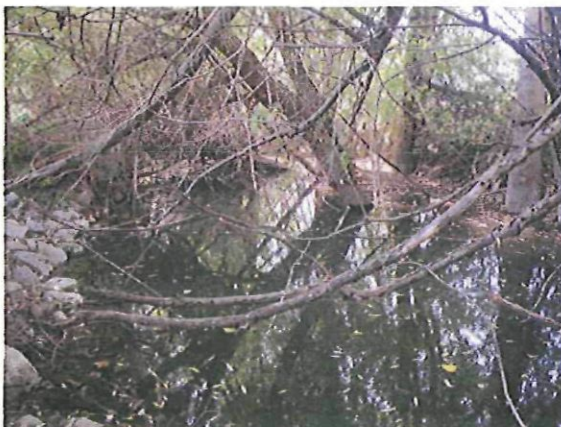
c. Impact rating: See Table 2



Segment 17



Segment 18



Segment 19



Segment 20

Coldstream Creek
Segment(s): 21 - 24

Segment	Primary	Secondary	Length (m)	Hydraulic	Gradient (%)	Crown Closure	Spawning Habitat	Comment Class
21	Channelized		222	Slough	0.0	71-90%	Unknown	Channelized-railway/disturbed left bank, agriculture right bank
22	Modified	Other	418	Run	1.0	41-70%	Unknown	Rifle pool character at d/s end near segment break, but run/slow hydrology for majority of seg
23	Modified		468	Rifle Pool	1.0	71-90%	Unknown	Low gradient rifle/pool
24	Modified	Other	870	Rifle Pool	1.0	41-70%	Potential	Low gradient rifle-pool, almost run

Substrates (%) a							Channel (m)				Comment Substrates/Channel
Segment	O	F	G	C	B	R	Wetted Width	Bankfull Width	Wetted Depth	Bankfull Depth	
21	5	85	5	5	0	0	5.10	8.20	0.60	1.30	Comment Substrates/Channel
22	0	65	20	15	0	0	3.60	4.80	0.31	0.70	Historically channelized with narrow riparian band
23	0	60	25	15	0	0	4.10	5.20	0.26	0.79	Channel bankfull width varies from 3.5 to 6.4 m
24	0	65	30	5	0	0	3.70	5.00	0.25	0.70	Confined to some extent by road along lb and associated disturbance, agriculture right bank

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

Segment	Total Cover	B	DP	IV	LWD	OV	SWD	UC	Comment Cover
21	60	0	55	5	25	5	10	0	Deep water cover throughout and associated silt and silt
22	40	0	15	15	25	10	35	0	Open field along lb; reed canary grass, willow and sporadic span logs
23	60	0	5	10	40	15	25	5	Good recruitment of woody debris with adj. cottonwoods, reed canary grass provides instream cover
24	55	0	25	5	30	5	20	5	Woody debris accumulation and associated pools dominant cover type, riparian vegetation lacking

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

Left Bank Riparian								Comment
Segment	Class	Qualifier	Stage	Shrub cover	Snags	Veteran Trees	Bank stability	
21	Broadleaf forest	Disturbed	mature forest	5-33%	>=5	No	Low	Railway and associated disturbance, invasive weeds, lack of riparian vegetation
22	Herb/grasses	Agriculture	Grass / Herb	5-33%	<5	No	Low	Agri. field beyond toby, trees/shrubs at d/s end, then minimal
23	Broadleaf forest	Disturbed	mature forest	5-33%	>=5	No	Low	Good stream cover, narrow native riparian band
24	Broadleaf forest	Agriculture	mature forest	5-33%	<5	No	Low	Grazed, invasive weeds, grasses-limited trees and shrubs; exclusion fencing in place for cattle lb

Right Bank Riparian								Comment
Segment	Class	Qualifier	Stage	Shrub cover	Snags	Veteran Trees	Bank stability	
21	Broadleaf forest	Agriculture	mature forest	5-33%	>=5	No	Low	Corn beyond toby, native riparian band-narrow cottonwood-blondown
22	Broadleaf forest	Agriculture	mature forest	5-33%	>=5	No	Low	Native vegetation, narrow riparian band
23	Broadleaf forest	Disturbed	mature forest	5-33%	>=5	No	Low	Narrow native riparian band, good wildlife and fisheries habitat value
24	Broadleaf forest	Agriculture	mature forest	5-33%	>=5	No	Low	Horses, grazing, erosion, invasive weeds, grasses, narrow band of riparian vegetation

Segment	Flora	Fauna
21	Cottonwood, willow, dogwood, invasive weeds, reed canary grass	Beaver, bear, RENU, BCOH, AHRO, STJA, avian species-snags for cavity nesting
22	Cottonwood, willow, dogwood, invasive weeds, reed canary grass, horsetail	Pacific chorus frog, Northern flicker, rainbow trout, black bear, beaver
23	Cottonwood, dogwood, hawthorn, rose, reed canary grass, nightshade, willow, invasive weeds	GBHE, RTHA, AHCR, RUGR, black bear, white tailed deer, rainbow trout
24	Cottonwood, dogwood, hawthorn, rose, reed canary grass, nightshade, willow, alder, burdock, thistle	GBHE, RTHA, AHCR, BCOH, horses, black bear

Segment	Score	Level of Impact ¹	Rating	Enhancement Opportunity
21	1	Adjacent disturbance close to creek, lb very disturbed-railway	Moderate	Expand riparian area, expand lb riparian; lts by railway on lb
22	1	Adjacent dist. close to creek, lacking riparian left bank; assoc. lack of cover, bank instability	Moderate	Expand riparian, livestock with willow
23	2	Narrow riparian and disturbance due to adjacent land use	Moderate	Expand riparian areas along both sides of creek
24	1	Lack of riparian vegetation, disturbed with grazing, consistent erosion and sediment source	High	Expand riparian, exclude livestock and create formalized water access for horses

c. Impact rating: See Table 2



Segment 21



Segment 22



Segment 23



Segment 24

Coldstream Creek
Segment(s): 25 - 28

Segment	Primary	Secondary	Length (m)	Hydraulic	Gradient (%)	Crown Closure	Spawning Habitat	Comment Class
25	Modified	Non-channelized	1528	Riff/Pool	1.0	71-90%	Potential	Natural riparian vegetation with rural residential impacts alternating between both banks
26	Modified		744	Riff/Pool	1.0	71-90%	Unknown	Agricultural influence both banks; livestock access, seepage
27	Modified		334	Riff/Pool	1.0	71-90%	Unknown	Riparian area includes wetlands, field, agricultural and rural residential with bands of native veg
28	Modified		322	Riff/Pool	1.0	71-90%	Unknown	Well established left bank riparian, encroachment along right bank, seepage

Segment	Substrates (%) a						Channel (m)				Comment Substrates/Channel
	O	F	G	C	B	R	Wetted Width	Bankfull Width	Wetted Depth	Bankfull Depth	
25	0	25	55	15	5	0	4.10	5.50	0.75	0.70	Channel width variable; more confined in open grass area
26	0	20	40	35	5	0	3.80	4.80	0.24	0.75	
27	0	30	40	25	5	0	3.10	4.40	0.17	0.70	Meandering stream, not channelised
28	0	45	35	15	5	0	3.10	4.40	0.17	0.70	

a. Substrate codes: O=organic; F=fine sand; G=gravel; C=cobble; B=boulder; R=bedrock

Segment	Cover (%) b								Comment Cover
	Total Cover	B	DP	IV	LWD	OV	SWD	UC	
25	50	5	30	15	20	5	25	0	Several rainbow trout observed throughout segment
26	55	5	10	10	30	5	35	5	
27	45	5	20	5	15	10	25	20	Good recruitment bvd, svd
28	45	5	25	5	20	10	25	10	

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								Comment
Segment	Class	Qualifier	Stage	Shrub cover	Snags	Veteran Trees	Bank stability	
25	Broadleaf forest	Rural Residential	mature forest	34-66%	>=5	<5	Medium	Deciduous dominant, although Douglas fir sporadic; 10 more natural than shrub
26	Broadleaf forest	Agriculture	mature forest	5-33%	>=5	No	Low	
27	Broadleaf forest	Agriculture	mature forest	67-100%	>=5	<5	Low	Broken for most of segment, narrow riparian band, livestock access
28	Broadleaf forest	Natural	mature forest	34-66%	>=5	<5	Low	

Right Bank Riparian								Comment
Segment	Class	Qualifier	Stage	Shrub cover	Snags	Veteran Trees	Bank stability	
25	Broadleaf forest	Rural Residential	mature forest	5-33%	>=5	No	Medium	Rural residential with assoc. anthropogenic impacts along segment; native riparian as well
26	Broadleaf forest	Agriculture	mature forest	5-33%	>=5	No	Low	
27	Broadleaf forest	Agriculture	young forest	5-33%	>=5	No	Low	Erosion for much of segment, seepage livestock access, grazing, anthropogenic impacts, narrow rip
28	Broadleaf forest	Agriculture	Grass/Herb	5-33%	<5	No	Low	

Flora		Fauna	
Segment	Flora	Segment	Fauna
25	Willow, cottonwood, rose dogwood, hawthorn, water birch, doug. maple, non-native maple, reed, any grass	25	Black bear, Western red squirrel, BOH, RBNJ, deer
26	Willow, douglas fir, reed, any grass, brooklime, cattails, alder, douglas maple, dogwood, aspen	26	BOH, BOH, AMRO, beaver, RBNJ, black bear, rainbow trout, livestock
27	Aspen, willow, cottonwood, cattails, dogwood, snowberry, rose, hawthorn, nightshade, burdock	27	BOH, RTHA, WWR, RU GR, deer, pacific chorus frog, rainbow trout, pileated woodpecker, horses, cows
28	Aspen, willow, cottonwood, cattails, dogwood, snowberry, rose, hawthorn, nightshade, burdock	28	BOH, RTHA, WWR, RU GR, deer, pacific chorus frog, rainbow trout, pileated woodpecker, horses, cows

Level of Impact ^c			Enhancement Opportunity	
Segment	Score	Comment	Rating	Comment
25	2	Anthropogenic impacts with rural developments; erosion, bank stabilization, crossings	Moderate	Riparian plantings where turf/development encroaches; livestock/bioengineering, stewardship
26	1	Livestock access/anthropogenic impacts, lack of riparian, resulting erosion	Moderate	Expand riparian, limit livestock access, extend fencing further from creek
27	3	More encroachment to residential impacts, disturbed erosion	Moderate	Expand riparian, revegetate db
28	4	Erosion, lack of riparian buffer along right bank	Moderate	Expand riparian, revegetate db

c. Impact ratings: See Table 2



Segment 25



Segment 26



Segment 27



Segment 28

**Coldstream Creek
Segment(s): 29 - 32**

Segment	Primary	Secondary	Length (m)	Hydraulic	Gradient (%)	Crown Closure	Spawning Habitat	Comment Class
29	Modified		649	Riffle/Pool	1.0	71-90%	Unknown	Hydraulic character run to riffle/pool-low flows at time of assessment
30	Modified	Intermittent	325	Riffle/Pool	1.0	0	Unknown	Field, riparian bedding, livestock enclosure; dry during assessment
31	Modified		333	Slough	0.0	21-40%	Unknown	Low water, deep residual pools
32	Modified		186	Slough	0.0	41-70%	Unknown	Debris jams, erosion throughout, grazing and livestock access, several wildlife trees/mature trees

Segment	Substrates (%) a						Channel (m)				Comment Substrates/Channel
	O	F	G	C	B	R	Wetbed Width	Bankfull Width	Wetbed Depth	Bankfull Depth	
29	0	45	30	20	5	0	2.60	3.80	0.24	0.70	Wetbed varies where no flows, but generally consistent
30	0	35	50	15	0	0	0.00	2.60	0.00	0.70	No flows at time of assessment
31	0	80	15	5	0	0	2.60	3.50	0.25	0.70	
32	0	85	10	5	0	0	2.90	3.30	0.35	0.70	

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

Segment	Cover (%) b								Comment Cover
	Total Cover	B	DP	IV	LWD	OV	SWD	UC	
29	40	5	15	5	15	20	25	15	
30	20	0	25	20	0	30	5	20	Deep pools at u/s end, and cover would consist of undercut banks and overhanging grasses during flow
31	30	0	70	0	5	0	10	15	Deep water cover, lacking in-stream complexity and riparian
32	35	0	45	0	25	5	20	5	

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

Left Bank Riparian								Comment
Segment	Class	Qualifier	Stage	Shrub cover	Snags	Veteran Trees	Bank stability	
29	Broadleaf forest	Agriculture	young forest	34-66%	>=5	No	Low	Narrow band of trees/shrubs with wetland along left bank
30	Herb/grasses	Agriculture	Grass/Herb	<5%	<5%	No	Low	Livestock enclosure, lack of riparian vegetation and structure
31	Broadleaf forest	Agriculture	mature forest	<5%	>=5	<5	Low	Mature trees present but lacking riparian vegetation overall; grazing
32	Broadleaf forest	Agriculture	mature forest	34-66%	>=5	<5	Low	Livestock use, consistent erosion, sediment source, wetland along portion of left bank riparian

Right Bank Riparian								Comment
Segment	Class	Qualifier	Stage	Shrub cover	Snags	Veteran Trees	Bank stability	
29	Broadleaf forest	Agriculture	young forest	5-33%	<5	No	Low	Rural residential, modifications, seepage, erosion
30	Herb/grasses	Agriculture	Grass/Herb	<5%	No	No	Low	Covered back of riparian structure and habitat complexity; grasses, weeds, erosion
31	Broadleaf forest	Agriculture	mature forest	<5%	>=5	<5	Low	Grazing, disturbed riparian; some mature trees, but lacking riparian veg. cover, bank stabilization
32	Broadleaf forest	Agriculture	mature forest	34-66%	>=5	<5	Low	Farm operations, paddocks, disturbed, erosion consistent

Flora				Fauna			
Segment	Class	Qualifier	Stage	Flora	Class	Qualifier	Stage
29	Willow	cottonwood	cattails	dogwood, snowberry, rose, hawthorn, nightshade, burdock	BOH, RTHA WIVR, RUGR	deer	pacific chorus frog, rainbow trout, pileated woodpecker, house wren
30				Agronomic grasses, forbs, invasive weeds			
31	Cottonwood	thistle	reed canary grass	red-osier dogwood, cattail, grasses			
32	Willow	snags	cottonwood	thistle, reed canary grass, dogwood, cattail, alder, snowberry, rose			

Level of Impact ^c			Enhancement Opportunity		
Segment	Score	Comment	Rating	Comment	
29	3	More encroachment by residential impacts-disturbed/erosion	Moderate	Expand riparian, revegetate db	
30	0	Erosion associated with streamside grazing, livestock access and lack of riparian habitat	High	Expand riparian, revegetate, exclusion fencing, localized water access	
31	0	Livestock access throughout	High	Fence riparian and formalize local and water access for livestock, allowing riparian expansion	
32	1	Grazing, livestock access	Moderate	Fence and formalize water access/crossing, expand riparian	

c. Impact rating: See Table 2



Segment 29



Segment 30



Segment 31



Segment 32

Coldstream Creek											
Segment(s): 33 - 36											
Segment	Primary	Secondary	Length (m)	Hydraulic	Gradient (%)	Crown Closure	Spawning Habitat	Comment Class			
33	Modified	Wetland	450	Run	0.0	12.0%	Unknown	Slow moving through grasses, some cattails, sedges, rushes, willows			
34	Modified	Other	521	Run	0.0	0	Unknown	Creek primarily dry in this segment during assessment			
35	Modified	Other	276	Run	0.0	41.70%	Unknown	Highway along rb, earth berm and livestock along lb/cottonwood region, some riparian veg			
36	Modified		400	Riffle/Pool	2.0	71.62%	Unknown	Horse pasture rb/fenced; field lb; native riparian band; both banks have been bermed			
Substrates (%) a					Channel (m)						
Segment	O	F	G	C	B	R	Wetbed Width	Bankfull Width	Wetbed Depth	Bankfull Depth	Comment Substrates/Channel
33	0	88	10	2	0	0	2.10	3.00	0.25	0.77	No flow during assessment, some residual pools
34	0	70	30	0	0	0	0.00	3.40	0.00	0.70	
35	0	40	50	5	5	0	2.01	4.20	0.09	0.72	
36	0	20	70	10	0	0	3.40	5.40	0.10	0.70	Low flows to dry during assessment
a. Substrate codes: O=organic; F=silt/sand; G=gravel; C=cobble; B=boulder; R=bedrock											
Cover (%) b											Comment Cover
Segment	Total Cover	B	DP	IV	LWD	OV	SVD	UC			
33	30	0	20	15	2	30	3	30	Cover limited largely by undercut from erosion and overhanging grasses		
34	20	0	5	10	0	40	5	40	Limited cover, overhanging grasses, sedges and u/c due to erosion		
35	30	35	25	0	5	5	25	5	Boulder cover associated with rock armouring		
36	35	0	35	5	30	5	20	5			
b. Cover codes: B=boulder; DP=deep pool; IV=instream vegetation; LWD=large woody debris; OV=overstream vegetation; SVD=small woody debris; UC=undercut bank											
Left Bank Riparian											
Segment	Class	Qualifier	Stage	Shrub cover	Snags	Veteran Trees	Bank stability	Comment			
33	Disturbed Wetland	Agriculture	Grass / Herb	<5%	<5	No	Low	Some mature / young willow, grasses/forbs, cattails along left riparian area; class-disturb? KHP			
34	Herb/grasses	Agriculture	Grass / Herb	<5%	No	No	Low	Limited mature trees in segment, willow / reed; streamside grazing; wildlife habitat value			
35	Broadleaf forest	Agriculture	young forest	5-33%	>=5	No	Low	Cottonwood reed primarily, livestock grazing, access, erosion throughout			
36	Broadleaf forest	Agriculture	mature forest	34-66%	>=5	<5	Low	Narrow riparian band, field beyond top of bank			
Right Bank Riparian											
Segment	Class	Qualifier	Stage	Shrub cover	Snags	Veteran Trees	Bank stability	Comment			
33	Herb/grasses	Agriculture	Grass / Herb	<5%	<5	No	Low	Sporadic mature willow and willow reed, but mostly grasses/forbs; previously disturbed field			
34	Herb/grasses	Agriculture	Grass / Herb	<5%	No	No	Low	Streamside grazing, lack of riparian structure; wildlife habitat value			
35	Rock	Disturbed	Grass / Herb	5-33%	No	No	Medium	Highway fill slope, erosion, rock armouring, limited enhancement/riparian potential			
36	Broadleaf forest	Agriculture	mature forest	34-66%	>=5	<5	Low	Horse pasture/fence; narrow riparian band			
Flora											
Segment	Flora						Fauna				
33	Willow, bulrush, sedges, reed, canary grass, grasses, invasive weed species						Ruffed grouse, beaver, horse				
34	Willow, invasive weeds, clover, reed, canary grass, grasses, sedges, thistle						Sandpiper, beaver, horses, coyote, small mammals and avian species				
35	Willow, cottonwood, red-osier dogwood, snowberry, grasses, invasive weeds, rose, false Solomon's seal						Deer, bear, yellow rumped warbler, livestock, avian species				
36	Dogwood, cottonwood, reed, canary grass, willow, snowberry, aster, invasive weeds						Deer, bear, moose, horses, NGL, potential for avian species and wildlife movement corridor				
Level of Impact c											
Segment	Score	Comment					Rating	Enhancement Opportunity			
33	1	Disturbed with adjacent land use, lacking riparian vegetation					High	Exclusion fencing, willow livestock along entire length			
34	0	Disturbed, lack of veg, livestock access					High	Exclusion fencing with formal access, willow livestock along entire length, riparian planting			
35	2	Livestock presence, modified lb, highway rb, several discharges					Moderate	Riparian planting, exclusion fencing lb, opportunities limited on rb due to highway			
36	3	Agricultural influence, native veg, regrowth					Moderate	Allow for expansion of riparian			



Segment 33



Segment 34



Segment 35



Segment 36

Coldstream Creek Segment(s): 37 - 40									
Segment	Primary	Secondary	Length (m)	Hydraulic	Gradient (%)	Crown Closure	Spawning Habitat	Comment Class	
37	Modified		231	Ruffe/Pod	2.0	7180%	Unknown	Water riparian channel less confined	
38	Modified		458	Ruffe/Pod	1.5	7180%	Unknown	Native riparian band, anthropogenic impacts associated with rural landscape	
39	Modified		304	Ruffe/Pod	1.5	7180%	Unknown	Left bank influenced from Highway 6; right bank rural residential	
40	Modified		365	Ruffe/Pod	2.0	7180%	Unknown	Highway runs parallel, but wider riparian and dense native vegetation	

Substrates (%) a									
Segment	O	F	G	C	B	R	Wetted Width	Bankfull Width	Bankfull Depth
37	0	10	55	35	0	0	3.00	5.80	0.13
38	0	20	30	50	0	0	2.40	3.50	0.16
39	0	15	30	40	15	0	2.60	4.00	0.16
40	0	10	35	50	5	0	2.90	4.40	0.11

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

Cover (%) b									
Segment	Total Cover	B	DP	IV	LWD	OV	SVD	UC	Comment Cover
37	35	5	30	0	25	10	25	5	Overstream vegetation dense in some areas-dear, dogwood
38	30	0	25	0	25	30	15	5	
39	30	30	15	0	20	15	20	0	Boulder cover associated bank armouring
40	35	0	10	0	40	20	25	5	Increasing woody debris recruitment

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

Left Bank Riparian									
Segment	Class	Qualifier	Stage	Shrub cover	Snags	Veteran Trees	Bank stability	Comment	
37	Broadleaf forest	Rural Residential	mature forest	34-66%	>=5	<5	Low	Rural residential, native riparian band	
38	Mixed forest	Rural Residential	mature forest	34-66%	>=5	No	Low	Frequent erosion throughout segment, dense but narrow riparian band	
39	Broadleaf forest	Disturbed	mature forest	5-33%	No	No	Medium	Highway 6, vegetation trimmed, led to grasses, weeds where parallel; some native veg, narrow band	
40	Mixed forest	Disturbed	mature forest	34-66%	>=5	<5	Low	Highway along lb, but wider band of mature vegetation	

Right Bank Riparian									
Segment	Class	Qualifier	Stage	Shrub cover	Snags	Veteran Trees	Bank stability	Comment	
37	Broadleaf forest	Agriculture	mature forest	34-66%	<5	<5	Low	Horse pasture, narrow riparian band	
38	Mixed forest	Rural Residential	mature forest	34-66%	>=5	No	Low	Anthropogenic impacts increase parallel to highway	
39	Broadleaf forest	Rural Residential	mature forest	34-66%	>=5	No	Low	Rural residential yards, native veg with anthropogenic influence, bridges, bank armouring erosion	
40	Mixed forest	Natural	mature forest	34-66%	>=5	<5	Low	Rural properties, natural, wide riparian band	

Flora									
Segment	Flora						Fauna		
37	Dogwood, cottonwood, reed canary grass, willow, snowberry, invasive weeds						Deer, bear, horses, several cavity nests in cottonwoods, BOON, NOFL, avian species and wildlife corridor		
38	Alder, dogwood, cedar, cottonwood, oregon grape, douglas fir, oregon grape, douglas maple						Red breasted nuthatch, squirrel, avian species, wildlife movement corridor		
39	Cottonwood, dogwood, water birch, rose, snowberry, non-native maple, douglas fir						Red-breasted nuthatch, western red squirrel, chipmunk, value for avian species and wildlife corridor		
40	Cottonwood, douglas fir, dogwood, non-native maple, oregon grape, snowberry, hawthorn						Squirrels, bear, raccoon, potential for several avian species and mammals		

Level of Impact ^c									
Segment	Score	Comment	Rating	Enhancement Opportunity					
37	2	Native riparian band, rural residential	Moderate	Expand riparian					
38	2	Anthropogenic impacts, encroachment in riparian area-erosion	Moderate	Expand riparian, livestock where banks are eroding, riparian plantings					
39	2	Channel confined by Hwy on left bank, rural residential impacts right bank	Low	Confined along highway, limited enhancement potential					
40	2	Highway impacts	Low	Confined along highway					

c. Impact rating: See Table 2



Segment 37



Segment 38

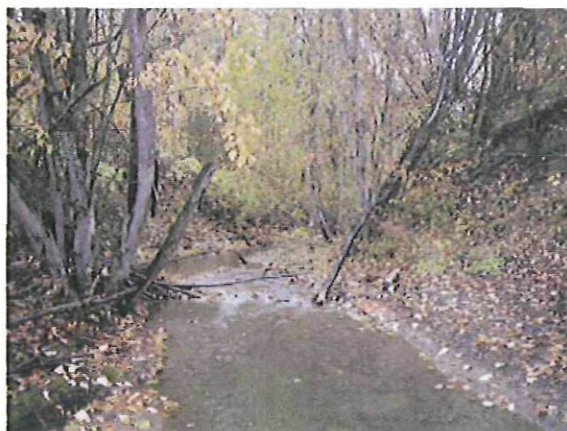


Segment 39



Segment 40

Coldstream Creek											
Segment(s): 41 - 42											
Segment	Primary	Secondary	Length (m)	Hydraulic	Gradient (%)	Crown Closure	Spawning Habitat	Comment Class			
41	Natural		353	Rifle Pool	2.0	>90%	Unknown	Natural, private driveway by, rural residential			
42	Natural		623	Rifle Pool	2.5	71-90%	Unknown	Cedar forest, erosion both banks consistent			
Substrates (%) a											
Segment	O	F	G	C	B	R	Wetted Width	Bankfull Width	Wetted Depth	Bankfull Depth	Comment Substrates/Channel
41	0	20	35	40	5	0	3.50	5.70	0.15	0.75	
42	0	20	30	35	5	5	2.60	4.30	0.15	0.80	
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		
41	35	5	10	0	30	25	25	5			
42	35	10	20	0	30	15	20	5			
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			
41	Mixed forest	Rural, Residential	mature forest	34-66%	>=5	No	Low	Driveway along most of segment, band of native vegetation			
42	Coniferous forest	Natural	mature forest	34-66%	>=5	No	Low	Native vegetation, free range cattle, clearing with field area towards upstream end			
Right Bank Riparian											
Segment	Class	Qualifier	Stage	Shrub cover	Snags	Veteran Trees	Bank stability	Comment			
41	Mixed forest	Rural, Residential	mature forest	34-66%	>=5	<5	Low	Native vegetation throughout most of segment, anthropogenic impacts assoc. with house, trail			
42	Coniferous forest	Natural	mature forest	34-66%	>=5	<5	Low	Rural, cattle access, logged previously			
Flora											
Segment	Flora						Fauna				
41	Cedar, Douglas fir, cottonwood, dogwood, hawthorn, snowberry, oregon grape, horsetail, paper birch, dou						Chipmunk, deer, rainbow trout, squirrel, bear				
42	Cedar, cottonwood, alder, douglas maple, false solomon's seal, red-osier dogwood						Rainbow trout, deer, bear, hairy woodpecker, squirrel, chipmunk, cattle, pot. avian sp. and mammals				
Level of Impact ^c											
Segment	Score	Comment					Rating	Enhancement Opportunity			
41	3	Erosion assoc. with anthropogenic activities within riparian area-driveway, trail, rural residence					Low	Likely to be and planting where erosion			
42	5	Impacts associated with livestock access					Moderate	Formalize access point for cattle, restore heavily disturbed area near field towards u/s end of seg			
c. Impact rating: See Table 2											



Segment 41



Segment 42

Brewer Creek
Segment(s): 1 - 4

Segment	Primary	Secondary	Length (m)	Hydraulic	Gradient (%)	Crown Closure	Spawning Habitat	Comment/Class
1	Modified	Wetland	346	Run	1.0	71-90%	Unknown	Stream channelized along field-earth berm; dense riparian on left, field/wetland on right
2	Modified		165	Run	1.0	71-90%	Unknown	Stream historically channelized along field-earth berm, wetland down rd and Goldstream Creek
3	Modified		296	Riffle/Pool	1.0	71-90%	Unknown	Native vegetation, agricultural/rural landuse both riparian areas
4	Modified		94	Riffle/Pool	1.0	41-70%	Unknown	Narrow riparian band, encroachment to top of bank

Segment	Substrates (%) a						Channel (m)				Comment Substrates/Channel
	O	F	G	C	B	R	Wetted Width	Bankfull Width	Wetted Depth	Bankfull Depth	
1	0	55	40	5	0	0	1.60	2.30	0.03	0.50	Portions of stream dry during assessment; residual pools and wetted at d/s end of segment
2	0	55	40	5	0	0	0.00	2.50	0.00	0.70	Channel low to dry through most of segment
3	0	40	50	10	0	0	0.70	2.70	0.05	0.80	Stream dry through most of segment, some residual pool
4	0	20	45	30	5	0	0.00	3.30	0.00	0.70	Channel dry during assessment

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

Segment	Cover (%) b								Comment Cover
	Total Cover	B	DP	IV	LWD	OV	SWD	UC	
1	35	0	15	20	30	20	15	0	Grasses in channel
2	35	0	10	10	25	35	20	0	Overstream vegetation dense in areas, grasses in channel
3	40	0	20	0	30	35	15	0	Dense riparian shrubs
4	25	15	5	0	0	65	15	0	Dense shrubs, overstream vegetation

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								Comment
Segment	Class	Qualifier	Stage	Shrub cover	Snags	Veteran Trees	Bank stability	
1	Broadleaf forest	Natural	mature forest	67-100%	>=5	<5	Medium	Wide cottonwood riparian shrub thickets; more dense at downstream end
2	Broadleaf forest	Agriculture	young forest	34-66%	>=5	No	Medium	Narrow riparian band, field/sheep beyond top of bank
3	Broadleaf forest	Rural Residential	mature forest	34-66%	>=5	No	Medium	Narrow riparian band
4	Broadleaf forest	Rural Residential	mature forest	34-66%	>=5	No	Low	Narrow riparian band, erosion, encroachment beyond top of bank

Right Bank Riparian								Comment
Segment	Class	Qualifier	Stage	Shrub cover	Snags	Veteran Trees	Bank stability	
1	Disturbed wetland	Agriculture	young forest	5-30%	>=5	No	Medium	Wetland field
2	Broadleaf forest	Agriculture	young forest	34-66%	>=5	No	Medium	Narrow riparian band, wetland, apples, field beyond right bank
3	Broadleaf forest	Agriculture	mature forest	34-66%	>=5	No	Medium	Narrow riparian band, apples, agricultural landuse
4	Broadleaf forest	Rural Residential	old shrubs 2-10m	34-66%	No	No	Low	Narrow riparian band, rural residential, encroachment to top of bank

Flora				Fauna			
1	Cottonwood, dogwood, catclaws, grasses, snowberry, skunk cabbage			Black bear, BOB, AMOR, ring-necked pheasant, potential for diversity of wildlife			
2	Cottonwood, dogwood, grasses, snowberry, invasive weeds, willow			Black bear, BOB, AMOR, pheasant; wildlife movement corridor, pot. for avian species			
3	Cottonwood, dogwood, grasses, snowberry, invasive weeds, willow			Black bear, BOB, AMOR, ring-necked pheasant, potential for wildlife, avian nesting			
4	Cottonwood, dogwood, grasses, snowberry, invasive weeds, willow, Douglas maple, Douglas fir, rose			Black bear sign (scat), potential for avian species, wildlife movement			

Level of Impact ^c			Enhancement Opportunity		
Segment	Score	Comment	Rating	Comment	
1	3	Historically modified, natural riparian ls, agricultural landuse right bank	Low	Widen riparian band along right bank, remove trees from left bank	
2	3	Historically modified, natural, agricultural landuse	Moderate	Expand riparian both banks	
3	4	Historically modified, native riparian band, agricultural landuse	Moderate	Expand riparian	
4	2	Residential	Moderate	Expand riparian, grade back banks and naturalize-address erosion, yard waste	

c. Impact ratings: See Table 2



Segment 1



Segment 2



Segment 3



Segment 4

Brewer Creek Segment(s): 5 - 8							
Segment	Primary	Secondary	Length (m)	Hydraulic	Gradient (%)	Crown Closure	Spawning Habitat
5	Modified		496	Riffle/Pool	1.0	41-70%	Unknown
6	Modified		191	Riffle/Pool	1.0	41-70%	Unknown
7	Modified		441	Riffle/Pool	1.0	41-70%	Unknown
8	Modified		167	Riffle/Pool	2.5	71-92%	Unknown
Comment Class							
Residential, anthropogenic impacts throughout; retaining walls, minor erosion, lack of native veg							
Rural residential, lawn, farming short segment before re-entering neighborhood							
Rural/urban residential, narrow riparian band in places, mostly landscaped, confined							
Anthropogenic impacts							

Substrates (%) a							
Segment	O	F	G	C	B	R	Wetted Width
5	0	10	40	45	5	0	0.00
6	0	5	35	55	5	0	0.00
7	0	5	30	55	10	0	0.00
8	0	5	30	50	15	0	0.90
Channel (m)							
							Bankfull Width
							Wetted Depth
							Bankfull Depth
5							1.80
6							2.20
7							2.50
8							0.03
Comment Substrates/Channel							
Channel dry during assessment; no wetted measurements							
Stream channel dry during assessment; no wetted measurements							
Channel dry during assessment; no wetted measurements							
Stream dry at d/s end of segment; wetted with varied 0.2-1m							

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

Cover (%) b							
Segment	Total Cover	B	DP	IV	LWD	OV	SWD
5	15	25	15	5	0	40	10
6	15	5	0	20	0	60	0
7	10	20	5	0	0	30	35
8	25	15	5	0	0	55	10
Comment Cover							
Fish habitat limited with inconsistent flows and modifications							
Limited cover							
Limited cover, several bridges, lacking year long flows							
Limited cover							

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
5	Broadleaf forest	Rural Residential	young forest	5-33%	<5	No	Medium
6	Mixed forest	Agriculture	Grass / Herb	<5%	No	No	Medium
7	Mixed forest	Urban Residential	young forest	5-33%	>=5	No	Medium
8	Coniferous forest	Rural Residential	mature forest	34-66%	<5	No	Low
Comment							
Bank armouring frequent, lack of riparian veg, residential yards							
Manicured yard, sporadic trees, farming, lacking riparian, no livestock access							
Bank armouring frequent, manicured landscaping, sporadic trees, impacts associated with road, yards							
Rural residential impacts, erosion, bank armouring							

Right Bank Riparian							
Segment	Class	Qualifier	Stage	Shrub cover	Snags	Veteran Trees	Bank stability
5	Broadleaf forest	Rural Residential	young forest	5-33%	<5	No	Medium
6	Mixed forest	Rural Residential	Grass / Herb	5-33%	No	No	Medium
7	Mixed forest	Urban Residential	young forest	5-33%	No	No	Medium
8	Coniferous forest	Rural Residential	mature forest	34-66%	<5	No	Low
Comment							
Bank armouring frequent, lack of riparian							
Rural residential, manicured landscaping, some mature trees, minor erosion, bank armouring							
Manicured landscaping, frequent bank armouring, bridges, sporadic trees-native and non-native							
Consistent erosion, bank armouring, rural modifications							

Segment		Flora		Fauna	
5		Cottonwood, ash, dogwood, tulip, rose, horticultural species of shrubs, trees, Oregon grape, doug fir		BOH, RBNU, DEU, STA, NORL, bear, domestic animals	
6		Cottonwood, Douglas fir, rose, tulip, non-native maple, limber poplar		RTHA, BOH, RBNU, DEU, STA, NORL, domestic animals	
7		Cottonwood, Douglas fir, rose, tulip, invasive weeds, flag, horticultural species		BOH, RBNU, DEU, STA, NORL, domestic animals	
8		Cedar, dogwood, thimbleberry, Douglas maple, snowberry, rose		Squirrel, Stellers Jay, bear	

Level of Impact ¹			Enhancement Opportunity	
Segment	Score	Comment	Rating	Comment
5	2	Rural/urban impacts, bank armouring, lack of native vegetation, encroachment	Moderate	Expand riparian, stewardship, naturalization of riparian area
6	2	Anthropogenic impacts	Moderate	Expand riparian, stewardship, naturalization of riparian area, move fencing further from creek
7	0	Anthropogenic impacts	Moderate	Expand riparian, stewardship, naturalization of bank/retaining wall removal
8	5	Rural residential, encroachment to top of bank	Low	Riparian planting, bank stabilization using bioengineering

c. Impact rating: See Table 2



Segment 5



Segment 6

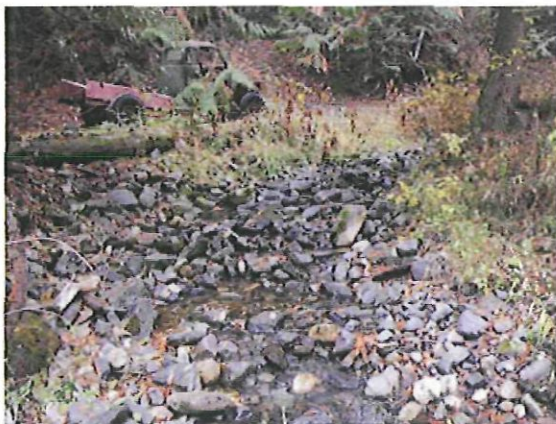


Segment 7

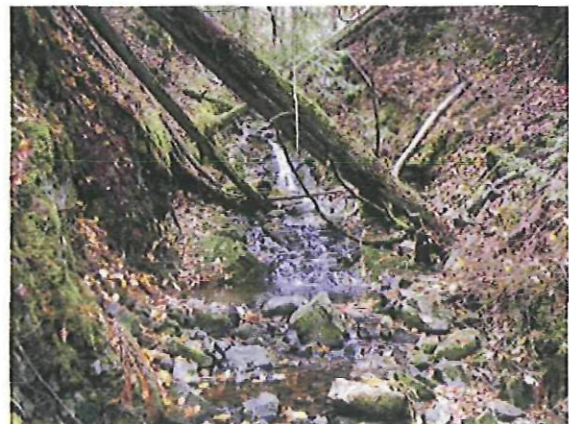


Segment 8

Brewer Creek Segment(s): 9 - 11											
Segment	Primary	Secondary	Length (m)	Hydraulic	Gradient (%)	Crown Closure	Spawning Habitat	Comment Class			
9	Natural		109	Riff/Pool	5.0	7150%	Unknown	Steeper banks, leaving trail residential, steeper gradient			
10	Natural		90	Casca de Pool	18.0	7150%	Unknown	Short falls towards upstream end, steep pool throughout segment			
11	Natural		1099	Riff/Pool	5.0	7150%	Unknown	Upstream of falls, LWD and SVD frequent, trail along left bank			
Substrates (%) a							Channel (m)				
Segment	O	F	G	C	B	R	Wetted Width	Bankfull Width	Wetted Depth	Bankfull Depth	Comment Substrates/Channel
9	0	5	30	50	15	0	1.50	3.20	0.09	0.50	0
10	0	0	5	20	50	25	1.70	3.60	0.15	0.80	0
11	0	5	30	50	15	0	1.90	3.50	0.10	0.50	0
a. Substrate codes: O=organic; F=fine sand; G=gravel; C=cobble; B=boulder; R=bedrock											
Cover (%) b											
Segment	Total Cover	B	DP	IV	LWD	OV	SVD	UC	Comment Cover		
9	40	15	10	0	30	25	15	5	0		
10	45	50	15	0	30	5	0	0	0		
11	55	5	15	0	40	10	25	5	Frequent cover: woody debris throughout segment		
b. Cover codes: B=boulder; DP=deep pool; IV=instream vegetation; LWD=large woody debris; OV=ovestream vegetation; SVD=small woody debris; UC=undercut bank											
Left Bank Riparian											
Segment	Class	Qualifier	Stage	Shrub cover	Snags	Veteran Trees	Bank stability	Comment			
9	Coniferous forest	Natural	young forest	34-66%	<5	No	Medium	Previously logged, relatively young cedar			
10	Coniferous forest	Natural	mature forest	34-66%	>=5	No	High	Some exposed soil and eroding banks, but largely bedrock, natural steep ravine			
11	Coniferous forest	Natural	mature forest	34-66%	>=5	<5	Medium	Residential beyond top of ravine, natural, some disturbance with trail			
Right Bank Riparian											
Segment	Class	Qualifier	Stage	Shrub cover	Snags	Veteran Trees	Bank stability	Comment			
9	Coniferous forest	Natural	young forest	34-66%	<5	No	Medium	Previously logged, young cedar			
10	Coniferous forest	Natural	mature forest	34-66%	>=5	No	High	Natural steep ravine, largely bedrock banks			
11	Coniferous forest	Natural	mature forest	34-66%	>=5	<5	Medium	Natural, steep bank most of segment			
Flora											
Segment	Flora							Fauna			
9	Western red cedar, dogwood, thimbleberry, douglas maple, snowberry, rose, black gooseberry							Bear, deer, potential for diversity of wildlife			
10	Western red cedar, mosses, red-osier dogwood, thimbleberry							American dipper, black bear, potential for diversity of wildlife			
11	Cedar, devil's club, falsebox, thimbleberry, black gooseberry, birch, birch, spruce							Wren, American crow, bear, squirrel, belted kingfisher, Northern flicker, American dipper			
Level of Impact ^c											
Segment	Score	Comment					Rating	Enhancement Opportunity			
9	5	Erosion					Low	Relatively natural			
10	6	Natural segment					NH	No enhancement recommended			
11	6	Natural segment, low with trail to trail					NH	No enhancement needed; poss. rmv of concrete/pipe assoc. with relic dam			
c. Impact ratings: See Table 2											



Segment 9



Segment 10



Segment 11

Craster Creek Segment(s): 1 - 4											
Segment	Primary	Secondary	Length (m)	Hydraulic	Gradient (%)	Crown Closure	Spawning Habitat	Comment/Class			
1	Channelized		192	Run	1.0	41-70%	Unknown	Earth berm to railway riparian, channelized run, hydrology may differ when stream flowing			
2	Channelized		106	Riffle/Pool	1.0	41-70%	Unknown	Railway riparian, narrow riparian band, field/rural residential b			
3	Modified		219	Riffle/Pool	1.0	41-70%	Unknown	Native riparian vegetation d/s end of segment, increasing non-native and modifications towards homes			
4	Modified		481	Riffle/Pool	1.0	71-92%	Unknown	Rural residential, native vegetation, but encroachment to tob, frequent erosion			
Substrates (%) a											
Segment	O	F	G	C	B	R	Wetted Width	Bankfull Width	Wetted Depth	Bankfull Depth	Comment Substrates/Channel
1	0	5	70	25	0	0	0.00	2.60	0.00	0.50	No flows during assessment; channel uniform
2	0	5	60	25	10	0	0.00	2.80	0.00	0.50	No flows during assessment
3	0	5	60	25	10	0	0.00	2.70	0.00	0.60	No flows during assessment
4	0	5	55	35	5	0	0.00	3.10	0.00	0.60	No flows during assessment
a. Substrate codes: O=gravel; F=slit/sand; G=gravel; C=cobble; B=boulder; R=bedrock											
Cover (%) b											
Segment	Total Cover	B	DP	IV	LWD	OV	SWD	UC	Comment Cover		
1	10	0	0	0	0	75	25	0	Limited cover		
2	25	10	5	0	5	50	30	0	Cover limited, some dense shrub growth and boulder cover associated with armouring		
3	20	15	15	5	20	25	20	0	Limited complexity		
4	35	20	10	0	40	20	10	0	Increasing cover up end, low recruitment, boulder cover associated with armouring		
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	Herb/grasses	Agriculture	Grass / Herb	<5%	No	No	Medium	Earth berm along left bank, grazed, invasive weeds			
2	Broadleaf forest	Rural Residential	mature forest	34-66%	>=5	No	Medium	Riparian band widening, rural residential beyond top of bank			
3	Broadleaf forest	Rural Residential	mature forest	5-33%	>=5	No	Medium	Rural residential, open field and homes beyond narrow riparian band			
4	Broadleaf forest	Rural Residential	mature forest	34-66%	>=5	No	Low	Encroachment to tob in most areas, narrow riparian band, frequent erosion			
Right Bank Riparian											
Segment	Class	Qualifier	Stage	Shrub cover	Snags	Veteran Trees	Bank stability	Comment			
1	Broadleaf forest	Disturbed	young forest	34-66%	No	No	Medium	Narrow vegetated band between creek and railway			
2	Broadleaf forest	Disturbed	tall shrubs 2-10m	5-33%	No	No	Medium	Close proximity to railway-vegetation maintained-currently no mature trees			
3	Broadleaf forest	Rural Residential	mature forest	34-66%	>=5	No	Medium	Rural residential, natural riparian band, more altered at up end-to-if			
4	Broadleaf forest	Rural Residential	mature forest	34-66%	>=5	No	Low	Rural residential, natural riparian band, encroachment to tob			
Flora											
1	Willow, rose, snowberry, dogwood, cottonwood, hawthorn, grasses, invasive species										
2	Willow, rose, snowberry, dogwood, cottonwood, hawthorn, douglas maple, grasses, invasive species										
3	Rose, snowberry, dogwood, cottonwood, grasses, aspen, paper birch, cedar, oak, maple, spruce										
4	Rose, snowberry, dogwood, cottonwood, grasses, douglas maple, non-native deciduous trees/shrubs										
Fauna											
1	California quail, bear										
2	quail, bear, potential wildlife movement corridor, avian nesting, foraging										
3	BOON, AMOR, CAQU										
4	NORL, squirrel, coyote, good band for wildlife movement but restricted with fencing										
Level of Impact ^c											
Segment	Score	Comment	Rating	Enhancement Opportunity							
1	0	Channelized, riparian cleared, railway/agricultural impacts	Moderate	Fence setback area along left bank; re-establish riparian band; limited by railway rb							
2	1	Channelized, railway, riparian cleared	Low	Expand riparian area along left bank, limited by railway on right bank							
3	3	Modified with natural areas	Moderate	Expand riparian band; riparian planting							
4	2	Frequent erosion, armouring, encroachment to tob	Moderate	Widen riparian band, native planting, livestock							



Segment 1



Segment 2



Segment 3



Segment 4

Craster Creek
Segment(s): 5 - 8

Segment	Primary	Secondary	Length (m)	Hydraulic	Gradient (%)	Crown Closure	Spawning Habitat	Comment Class
5	Channelled		296	Rifle	1.0	21-40%	Unknown	Concrete flume under building in fenced enclosure, field
6	Mod/fed		110	Rifle/Pool	1.0	41-70%	Unknown	Constricted by adjacent land use, frequent erosion, narrow riparian band
7	Mod/fed	Non-channelized	342	Rifle/Pool	2.0	71-90%	Unknown	Rural residential, riparian band with field, rural yards
8	Mod/fed		159	Rifle/Pool	2.0	71-90%	Potential	Rural residential, entering mixed forest, wider riparian

Segment	Substrates (%) a						Channel (m)				Comment Substrates/Channel
	O	F	G	C	B	R	Wetted Width	Bankfull Width	Wetted Depth	Bankfull Depth	
5	0	5	35	60	0	0	0.00	1.70	0.00	0.50	No flows during assessment
6	0	10	35	50	5	0	0.00	3.00	0.00	0.70	No flows during assessment
7	0	5	30	65	0	0	2.20	4.10	0.10	0.50	Lower portion of the segment was dry, wetted width and depths account for upper segment
8	0	5	35	55	5	0	2.00	3.70	0.20	0.60	Creek flowing consistently

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

Segment	Cover (%) b								Comment Cover
	Total Cover	B	DP	IV	LWD	OV	SWD	UC	
5	25	0	0	0	0	65	5	30	Building, overhanging grasses
6	35	5	10	0	35	35	15	0	Overstreamed, woody debris
7	40	0	20	0	30	35	15	0	Dense ov with shrub growth, accumulation of silt and silt
8	30	5	15	0	35	20	10	15	

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									Comment
Segment	Class	Qualifier	Stage	Shrub cover	Snags	Veteran Trees	Bank stability		
5	Herb/Grasses	Agriculture	Grass/Herb	<5%	No	No	Medium		Concrete flume under building, natural substrates silt, some trees, but riparian area largely grasses
6	Broadleaf forest	Disturbed	young forest	34-66%	No	No	Medium		Road, narrow riparian band, surrounding frequent erosion
7	Broadleaf forest	Rural Residential	young forest	67-100%	<5	No	Medium		Dense shrub growth, field, riparian band dense, but not wide
8	Mixed forest	Rural Residential	mature forest	34-66%	<5	No	Medium		Anthropogenic impacts with housing, reduced riparian, erosion; native vegetation - increasing cedars

Right Bank Riparian									Comment
Segment	Class	Qualifier	Stage	Shrub cover	Snags	Veteran Trees	Bank stability		
5	Herb/Grasses	Agriculture	herb/grasses	<5%	No	No	Medium		Concrete flume as creek flows under building, dry/dry to field, till
6	Broadleaf forest	Disturbed	young forest	34-66%	No	No	Low		Tillage operations beyond toby, narrow riparian band, frequent erosion
7	Broadleaf forest	Rural Residential	young forest	34-66%	<5	No	Medium		Field, road, rural residential, dense shrub, overstream vegetation
8	Mixed forest	Rural Residential	mature forest	34-66%	<5	No	Medium		Rural residential with reduced riparian, associated erosion; native vegetation

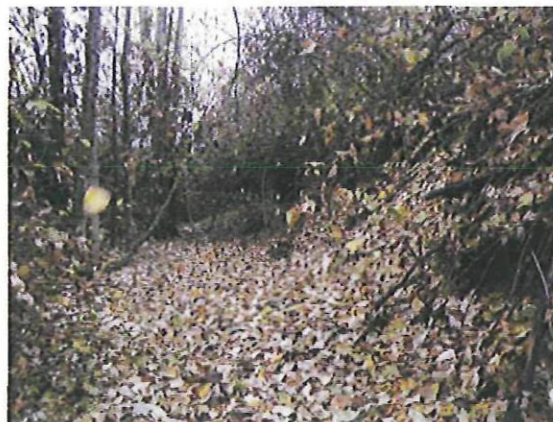
Flora					Fauna				
Segment									
5				timberly poplar, ash, red cedar any grass, cottonwoods					DEU, potential for avian species, small mammals, reptiles, amphibians
6				Cottonwood, water birch, dogwood, rose, snowberry, grasses, Douglas maple					RENU, bear, potential for avian species, wildlife movement corridor
7				Cottonwood, dogwood, Douglas maple, hawthorn, rose, snowberry					RENU, bear, potential for avian species, wildlife movement corridor
8				Douglas fir, cedar, chokecherry, cottonwood, red-oxer dogwood, thimbleberry					RENU, bear, potential for avian species, wildlife movement corridor, BOCH

Level of Impact ^c				Enhancement Opportunity			
Segment	Score	Comment	Rating	Segment	Score	Comment	Rating
5	0	Flumed within enclosure, field-lack of riparian, minor erosion	Moderate	5	0	Could daylight stream where under building, naturalize banks, riparian plantings throughout	Moderate
6	1	Constrained by adjacent land use, encroachment to left	Low	6	1	Limited by road, possibly expand riparian along right bank	Low
7	3	Rural residential modifications	Moderate	7	3	Expand riparian	Moderate
8	4	Rural residential modifications	Low	8	4	Expand riparian	Low

c. Impact rating: See Table 2



Segment 5



Segment 6



Segment 7



Segment 8

Craster Creek
Segment(s): 9 - 12

Segment	Primary	Secondary	Length (m)	Hydraulic	Gradient (%)	Crown Closure	Spawning Habitat	Comment/Class
9	Natural		159	Riff/Pool	3.0	71-92%	Unknown	Natural, ravine, cedar somewhat residential beyond top of right bank
10	Mod/Fed		423	Riff/Pool	3.0	71-92%	Unknown	Livestock access, rural modifications, intermittent erosion, natural character
11	Natural		264	Riff/Pool	4.5	>90%	Unknown	Ravine left bank; cedar, natural character
12	Natural		264	Riff/Pool	4.0	71-92%	Unknown	Steep ravine both banks, natural

Segment	Substrates (%) a						Channel (m)				Comment Substrates/Channel
	O	F	G	C	B	R	Wetted Width	Bankfull Width	Wet bed Depth	Bankfull Depth	
9	0	5	30	55	10	0	2.10	3.20	0.11	0.50	
10	0	10	25	55	10	0	3.60	7.30	0.09	0.60	
11	0	5	30	50	15	0	3.80	6.20	0.14	0.60	
12	0	5	45	35	10	0	2.90	5.40	0.09	0.20	

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

Segment	Cover (%) b								Comment Cover
	Total Cover	B	DP	IV	LWD	OV	SWD	UC	
9	35	5	15	0	40	5	25	10	
10	40	15	10	0	45	5	15	10	
11	40	20	10	0	35	5	20	10	Good lwd recruitment
12	35	10	25	0	35	5	20	5	

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

Left Bank Riparian								Comment
Segment	Class	Qualifier	Stage	Shrub cover	Snags	Victorian Trees	Bank stability	
9	Mixed forest	Natural	mature forest	34-66%	>=5	No	Medium	Ravine, native vegetation, intermittent erosion
10	Coniferous forest	Natural	mature forest	34-66%	>=5	No	Medium	Natural with rural modifications, livestock enclosure, intermittent bank erosion
11	Coniferous forest	Natural	mature forest	34-66%	>=5	No	Medium	Steep ravine, dominant cedar, reed, shrub layer limited
12	Coniferous forest	Natural	mature forest	34-66%	>=5	No	Medium	Steep ravine, natural, cedar regrowth, recruitment of lwd

Right Bank Riparian								Comment
Segment	Class	Qualifier	Stage	Shrub cover	Snags	Victorian Trees	Bank stability	
9	Mixed forest	Natural	mature forest	34-66%	>=5	No	Medium	Rural residential/agriculture beyond top of bank
10	Coniferous forest	Agriculture	mature forest	34-66%	>=5	No	Medium	Rural modifications, livestock grazing, fence enclosure, native vegetation
11	Coniferous forest	Natural	mature forest	34-66%	>=5	No	Medium	Ravine, Douglas fir riparian, cedar
12	Coniferous forest	Natural	mature forest	34-66%	>=5	<5	Medium	Steep ravine, cedar riparian

Flora				Fauna			
Segment							
9	Cedar, Douglas fir, Douglas maple, birch, douglas alder, red-oak dogwood, ferns			Bear, squirrel, rainbow trout, movement corridor, concealment cover, feeding, nesting value			
10	Cedar, Douglas fir, Douglas maple, birch, red-oak dogwood, invasive weeds, grasses			Bear, squirrel, wildlife habitat value			
11	Cedar, alder, Douglas fir, Douglas maple, birch, red-oak dogwood			Squirrel, bear, red-breasted nuthatch, trees with cavities			
12	Cedar, mosses, paper birch, black gooseberry, Douglas fir			Bear, squirrel, red-breasted nuthatch, rainbow trout, fish/wildlife habitat			

Level of Impact			Enhancement Opportunity	
Segment	Score	Comment	Rating	Comment
9	5	Past disturbance, but relatively natural and low impact	Low	Natural
10	4	Livestock access-grazing, intermittent erosion; sediment and impacts would increase with more cattle	Low	Relatively natural; enhancements could include formalized livestock access with exclusion fencing.
11	5	Livestock exclusion noted in stream channel	Low	Natural, minimizing livestock access
12	6	Natural character, past disturbance, logging, evidence of some cattle access	Nil	Limit cattle access

c. Impact rating: See Table 2



Segment 9



Segment 10



Segment 11



Segment 12