LTEF DC Fish Collection Sheet

Site Name _____ Reach [ ][ ][ ]

River _____ Site Mile [ ][ ][ ] • [ ]

Location Code [ ][ ][ ][ ][ ] • [ ][ ][ ][ ]

Start Date [ ][ ][ ][ ][ ][ ][ ][ ] Project Code: M X F

Start Time [ ][ ][ ][ ] Finish Time [ ][ ][ ][ ]

Time Period [ ] Gear [ ][ ] stratum [ ][ ][ ] – [ ]

Location data

N/S Coordinates [ ][ ][ ][ ][ ][ ][ ]

E/W Coordinates [ ][ ][ ][ ][ ][ ][ ]

Summary Code: [ ]

Gear Effort time [ ][ ][ ][ ] hh:mm Power Goal [ ][ ][ ][ ]

Power used [ ][ ][ ][ ] volts [ ][ ][ ] amps [ ][ ]

Water Data

Secchi [ ][ ][ ] cm

Conductivity [ ][ ][ ][ ] umhos

D.O. [ ][ ] • [ ] mg/L

Water Temp [ ][ ] • [ ] C

Water Velocity [ ] • [ ][ ] ft/s

Depth [ ][ ] • [ ] ft

Stage Height [ ][ ][ ] • [ ] ft

Gage Location _____

Structure

Percent cover SAV [ ]

Density SAV [ ]

Substrate [ ]

Other structure _____

number of measurement sheets [ ][ ]

total fish collected [ ][ ][ ][ ][ ]

Comments:

Summary code: 3=Sample collected under unusual environmental conditions, 4=Weighing equipment may be in error due to wind/waves 5=Normally completed sample, 6= Non-critical gear modification, 7=Pseudo-shoreline used for shoreline gear

Percent cover codes: 0=0%, 1=1-19%, 2=20-49%, 3=>50% **Density codes**: 1=sparse, 2=dense

Substrate codes: 1=silt, 2=silt/clay/little sand, 3=sand, 4=gravel, rock, hard clay

Other structure codes: 1=snags, 2=tributary, 3=inlet,outlet channel, 4=flooded terrestrial, 5=wing dam, 6=revetment, 7=weir, 8=rip rap

LTEF DC FISH MEASUREMENT SHEET

Site Name _____ Reach [ ][ ][ ][ ]

Location Code [ ][ ][ ][ ][ ][ ] • [ ][ ][ ][ ] Gear [ ][ ]

Start Date [ ][ ][ ][ ][ ][ ] Start Time [ ][ ][ ][ ]

D-Deformity(ies) **E**-Eroded Fins
L-Lesions/Ulcers **T**-Tumors
M-Multiple DELT
AL-Anchor Light **AH**-Anchor Heavy
BL-Blk Spt Light **BH**-Blk Spt Heavy
B-Blind **W**-Wound

	Species	#	Length (mm)	Weight (g)	Abnormal	Remarks
1						
2						
3						
4						
5						
6						
7						
8						
9						
10						
11						
12						
13						
14						
15						
16						
17						
18						
19						
20						
21						
22						
23						
24						
25						
26						
27						
28						
29						
30						

Total Fish [ ][ ][ ][ ][ ]

Page Number _____

CRAMER FISH SCIENCES
DRIFT SAMPLE DATASHEET

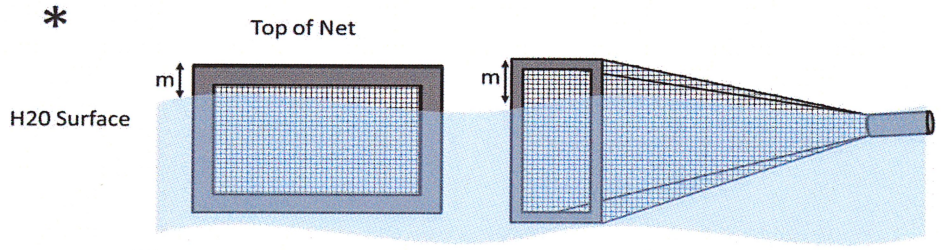
Project Name:_____ Site Name:_____ Date:_____

Temperature (c): _____
DO: _____ (mg/L) _____%
Turbidity (ntu): _____

GPS unit_____
Time: _____
Crew:_____

SAMPLES

1	2	3	4
Depth:_____m	Depth:_____m	Depth:_____m	Depth:_____m
Velocity:_____m/s	Velocity:_____m/s	Velocity:_____m/s	Velocity:_____m/s
Start_____ End_____	Start_____ End_____	Start_____ End_____	Start_____ End_____
Substrate_____	Substrate_____	Substrate_____	Substrate_____
GPS waypoint ID_____	GPS waypoint ID_____	GPS waypoint ID_____	GPS waypoint ID_____
*Dist. top of net to h20 surface _____m	*Dist. top of net to h20 surface _____m	*Dist. top of net to h20 surface _____m	*Dist. top of net to h20 surface _____m



Notes: _____

_____

_____

_____

_____

_____

Diagram:

Field QC_____ Entered by_____ Date_____ QC1_____ Date_____

Event ID: _____ QC2_____ Date_____

CRAMER FISH SCIENCES
BENTHIC SAMPLE DATASHEET

Project Name:_____ Site Name:_____ Date:_____

GPS unit_____
Time: _____
Crew:_____

SAMPLES

1	2	3	4
Depth:_____m	Depth:_____m	Depth:_____m	Depth:_____m
Velocity:_____m/s	Velocity:_____m/s	Velocity:_____m/s	Velocity:_____m/s
Substrate 1:_____2:_____	Substrate 1:_____2:_____	Substrate 1:_____2:_____	Substrate 1:_____2:_____
GPS waypoint ID_____	GPS waypoint ID_____	GPS waypoint ID_____	GPS waypoint ID_____

Notes:_____

Diagram:

Field QC_____ Entered by_____ Date_____
QC1_____ Date_____
QC2_____ Date_____

CRAMER FISH SCIENCES
PEBBLE COUNT DATASHEET

Date:	Survey Type:	Comments:
Stream:	Time:	
Site:	Crew:	
	GPS unit:	**Ensure all GPS data in WGS84 / decimal degrees. Any GIS data "point or line file" should be noted herein

Transect (e.g. T1, T2 etc.):	<5/16"	5/16"	5/8"	7/8"	1 1/4"	1 3/4"	2 1/2"	3 1/2"	5"	7"	Bedrock	Aquatic veg
GPS waypoint ID (**Polygon**):												
Boulder (inches):						Wood (ft length / inches DBH):						
Comments:												

Transect (e.g. T1, T2 etc.):	<5/16"	5/16"	5/8"	7/8"	1 1/4"	1 3/4"	2 1/2"	3 1/2"	5"	7"	Bedrock	Aquatic veg
GPS waypoint ID (**Polygon**):												
Boulder (inches):						Wood (ft length / inches DBH):						
Comments:												

Transect (e.g. T1, T2 etc.):	<5/16"	5/16"	5/8"	7/8"	1 1/4"	1 3/4"	2 1/2"	3 1/2"	5"	7"	Bedrock	Aquatic veg
GPS waypoint ID (**Polygon**):												
Boulder (inches):						Wood (ft length / inches DBH):						
Comments:												

Field QC________

Entered by________ Date________
QC1____________ Date________
QC2____________ Date________

Site Map

Cramer Fish Sciences
Snorkel Survey

Page _____ of _____

Date:____________________ Snorkel Transect #/Bank:_________ Start time: ________

Project:____________________ Transect Length: ____m End time:_________

River:____________________ Snorkeler(s)________ GPS Start/End: ☐

Site name:________________ Recorder__________ GPS Start/End:___/___

CONDITIONS Visibility: _____m Avg. Depth: _____m

Temp:_______C D.O.: ______mg/L _______% Turbidity:______NTUs

Notes____

____

Depth/Velocity Transects

* If no transects taken, record reason below

D/V Transect 1		
Depth (m)	Velocity 1 (m/s)	Velocity 2 (D >0.6m)

D/V Transect 2		
Depth (m)	Velocity 1 (m/s)	Velocity 2 (D >0.6m)

Fish Observation Data

- Write 0 in daily obs # if no fish observed
- Write 0 in GPS wpt # if no points taken

Area Codes: 0 = < 0.5 m^2 1 = 0.5 – 1 m^2 2 = 1 – 1.5 m^2 3 = 1.5 – 2 m^2 4 = 2 – 2.5 m^2 5 = 2.5 – 3 m^2 6 = 3 – 3.5 m^2 7 = 3.5 – 4 m^2 8 = 4 – 4.5 m^2 9 = 4.5 – 5 m^2 10 = > 5 m^2 11 = Entire Transect

GPS wpt #	Daily Obs. #	Depth (m)	Velocity (m/s)	Snork-eler	Area code		0-50mm	51-80mm	81-100mm	101-120mm	121-150mm	Other length
						CHN						
						STH						
						CHN						
						STH						
						CHN						
						STH						
						CHN						
						STH						
						CHN						
						STH						
						CHN						
						STH						

Field QC ________ TransectRowID: _____ Entered/Date: __________ QC1/Date: ___________ QC2/Date: __________

GPS wpt #	Daily Obs. #	Depth	Velocity	Snork-eler	Area code		0-50mm	51-80mm	81-100mm	101-120mm	121-150mm	Other length
						CHN						
						STH						
						CHN						
						STH						
						CHN						
						STH						
						CHN						
						STH						
						CHN						
						STH						
						CHN						
						STH						
						CHN						
						STH						
						CHN						
						STH						
						CHN						
						STH						
						CHN						
						STH						

Area Codes: 0 = < 0.5 m^2 1 = 0.5 – 1 m^2 2 = 1 – 1.5 m^2 3 = 1.5 – 2 m^2 4 = 2 – 2.5 m^2 5 = 2.5 – 3 m^2 6 = 3 – 3.5 m^2 7 = 3.5 – 4 m^2 8 = 4 – 4.5 m^2 9 = 4.5 – 5 m^2 10 = > 5 m^2 11 = Entire Transect

Common Species/Codes: CHN= Chinook Salmon STH= Steelhead/Rainbow Trout TSS= Three Spined Stickleback SASQ = Sacramento Pike Minnow SASU= Sacramento Sucker SMB= Small Mouth Bass STB= Striped Bass LMB= Large Mouth Bass LAM= Unidentified Lamprey MQK= Mosquito Fish MIN= Unidentified Minnow SCP= Unidentified Sculpin

Additional Length Categories: 151-200mm 201-300mm 301-400mm >400mm

Field QC _______ Entered by______ Date_________ QC1____________Date______

QC2____________Date______

Yurok Tribe Fisheries Program

NET HARVEST MONITORING

BIODATA FOR MARK SAMPLED CLIPPED SALMON

DATE _____
M T W TH F S SU

AREA _____

CREW _____
_____
_____
_____

NET TYPE:
S = SET H = EEL HOOK
D = DRIFT B = EEL BASKET
P = DIP T = TRIGGER
A = POLE

RECORD #	LENGTH						NET TYPE	FIN CLIP	HEAD TAKEN Y/N	SCALE SMPL Y/N	SEAL BITE Y/N	OTTER BITE Y/N	LMPRY BITE Y/N	HOOK SCAR Y/N	SCUTE COUNT	WEIGHT	SEX	HEAD TAG #
	FORK			TOTAL														
	CHIN	COHO	STHD	G STRG	W STRG	LMPRY												
01								AD	Y	Y								
02								AD	Y	Y								
03								AD	Y	Y								
04								AD	Y	Y								
05								AD	Y	Y								
06								AD	Y	Y								
07								AD	Y	Y								
08								AD	Y	Y								
09								AD	Y	Y								
10								AD	Y	Y								
11								AD	Y	Y								
12								AD	Y	Y								
13								AD	Y	Y								
14								AD	Y	Y								
15								AD	Y	Y								
16								AD	Y	Y								
17								AD	Y	Y								
18								AD	Y	Y								
19								AD	Y	Y								
20								AD	Y	Y								
21								AD	Y	Y								
22								AD	Y	Y								
23								AD	Y	Y								
24								AD	Y	Y								
25								AD	Y	Y								
26								AD	Y	Y								
27								AD	Y	Y								
28								AD	Y	Y								
29								AD	Y	Y								
30								AD	Y	Y								

Release Site Predation Project 2019 Tether Sampling

Date:____________ **Location:**________________ **Page** ______ **of** _______ **Write full names*

Boat ID:______________ **Prey type:**_____________ **T=Top, M=Middle, B=Bottom** **Crew:**____________________________

Buoy #	Sample ID	Prey size (tl, mm)	Position (T,M,B)	Tether length	Water depth	Start time	End time	Fate (A = absent, P = present)	Damage?	Trig.?	Hook Timer (min:sec)	Comments
								A - P	Y - N	Y - N		
								A - P	Y - N	Y - N		
								A - P	Y - N	Y - N		
								A - P	Y - N	Y - N		
								A - P	Y - N	Y - N		
								A - P	Y - N	Y - N		
								A - P	Y - N	Y - N		
								A - P	Y - N	Y - N		
								A - P	Y - N	Y - N		
								A - P	Y - N	Y - N		
								A - P	Y - N	Y - N		
								A - P	Y - N	Y - N		
								A - P	Y - N	Y - N		
								A - P	Y - N	Y - N		
								A - P	Y - N	Y - N		
								A - P	Y - N	Y - N		
								A - P	Y - N	Y - N		
								A - P	Y - N	Y - N		
								A - P	Y - N	Y - N		
								A - P	Y - N	Y - N		
								A - P	Y - N	Y - N		
								A - P	Y - N	Y - N		
								A - P	Y - N	Y - N		
								A - P	Y - N	Y - N		
								A - P	Y - N	Y - N		
								A - P	Y - N	Y - N		
								A - P	Y - N	Y - N		
								A - P	Y - N	Y - N		
								A - P	Y - N	Y - N		
								A - P	Y - N	Y - N		

MONTEREY PENINSULA WATER MANAGEMENT DISTRICT

ADULT STEELHEAD/REDD SURVEY - CARMEL RIVER/TRIBUTARIES

Stream: _____ Date of Survey: _____/_____/_____ Sheet ____ of _____

Starting Location: _____ GPS Coords: _____

Ending Location: _____ GPS Coords: _____

Weather: clear _____ overcast _____ rain _____ Water Clarity: 0 - 2 ft _____ 2- 4 ft _____ >4 ft _____

Water Temp (F): _____ Air Temp (F): _____ Time _____

Crew: _____ Start/Stop Time _____

GPS Loc. (UTM)	Time of Sighting	#New Redds (Area)	#Spawning Pairs (FL)	#Single Adults (M/F) (>16")	# Kelts (M/F) (FL)	#Carcasses (M/F) (FL)	Notes Site Description

TOTAL #	TOTAL #	TOTAL #	TOTAL #	TOTAL #

/u/beverly/excel/reddsurveys/srvyform

Date	Area Code	Transect #	Camera	Video #	Video Time (UTC)	Actual Time	Amberjack sp	Greater Amberj	Parrotfish spp	Eel Spp.	Large NoID	Small NoID	Habitat	Comments	Total Count
2/19/2016		T2	BLACKFLY	0	13:19:16	1:19 PM									
2/19/2016		T2	BLACKFLY	0	13:19:31	1:19 PM									
2/19/2016		T2	BLACKFLY	0	13:19:46	1:19 PM									
2/19/2016		T2	BLACKFLY	0	13:20:01	1:20 PM									
2/19/2016		T2	BLACKFLY	1	13:20:16	1:20 PM									
2/19/2016		T2	BLACKFLY	1	13:20:31	1:20 PM									
2/19/2016		T2	BLACKFLY	1	13:20:46	1:20 PM									
2/19/2016		T2	BLACKFLY	1	13:21:01	1:21 PM									
2/19/2016		T2	BLACKFLY	2	13:21:16	1:21 PM									
2/19/2016		T2	BLACKFLY	2	13:21:31	1:21 PM									
2/19/2016		T2	BLACKFLY	2	13:21:46	1:21 PM									
2/19/2016		T2	BLACKFLY	2	13:22:01	1:22 PM									
2/19/2016		T2	BLACKFLY	3	13:22:16	1:22 PM									
2/19/2016		T2	BLACKFLY	3	13:22:31	1:22 PM									
2/19/2016		T2	BLACKFLY	3	13:22:46	1:22 PM									
2/19/2016		T2	BLACKFLY	3	13:23:01	1:23 PM									
2/19/2016		T2	BLACKFLY	4	13:23:16	1:23 PM									
2/19/2016		T2	BLACKFLY	4	13:23:31	1:23 PM									
2/19/2016		T2	BLACKFLY	4	13:23:46	1:23 PM									
2/19/2016		T2	BLACKFLY	4	13:24:01	1:24 PM									
2/19/2016		T2	BLACKFLY	5	13:24:16	1:24 PM									
2/19/2016		T2	BLACKFLY	5	13:24:31	1:24 PM									
2/19/2016		T2	BLACKFLY	5	13:24:46	1:24 PM									
2/19/2016		T2	BLACKFLY	5	13:25:01	1:25 PM									
2/19/2016		T2	BLACKFLY	6	13:25:16	1:25 PM									
2/19/2016		T2	BLACKFLY	6	13:25:31	1:25 PM									
2/19/2016		T2	BLACKFLY	6	13:25:46	1:25 PM									
2/19/2016		T2	BLACKFLY	6	13:26:01	1:26 PM									
2/19/2016		T2	BLACKFLY	7	13:26:16	1:26 PM									
2/19/2016		T2	BLACKFLY	7	13:26:31	1:26 PM									
2/19/2016		T2	BLACKFLY	7	13:26:46	1:26 PM									
2/19/2016		T2	BLACKFLY	7	13:27:01	1:27 PM									
2/19/2016		T2	BLACKFLY	8	13:27:16	1:27 PM									
2/19/2016		T2	BLACKFLY	8	13:27:31	1:27 PM									
2/19/2016		T2	BLACKFLY	8	13:27:46	1:27 PM									
2/19/2016		T2	BLACKFLY	8	13:28:01	1:28 PM									
2/19/2016		T2	BLACKFLY	9	13:28:16	1:28 PM									
2/19/2016		T2	BLACKFLY	9	13:28:31	1:28 PM									
2/19/2016		T2	BLACKFLY	9	13:28:46	1:28 PM									
2/19/2016		T2	BLACKFLY	9	13:29:01	1:29 PM									
2/19/2016		T2	BLACKFLY	10	13:29:16	1:29 PM									
2/19/2016		T2	BLACKFLY	10	13:29:31	1:29 PM									
2/19/2016		T2	BLACKFLY	10	13:29:46	1:29 PM									
2/19/2016		T2	BLACKFLY	10	13:30:01	1:30 PM									
2/19/2016		T2	BLACKFLY	11	13:30:16	1:30 PM									
2/19/2016		T2	BLACKFLY	11	13:30:31	1:30 PM									
2/19/2016		T2	BLACKFLY	11	13:30:46	1:30 PM									
2/19/2016		T2	BLACKFLY	11	13:31:01	1:31 PM									
2/19/2016		T2	BLACKFLY	12	13:31:16	1:31 PM									
2/19/2016		T2	BLACKFLY	12	13:31:31	1:31 PM									
2/19/2016		T2	BLACKFLY	12	13:31:46	1:31 PM									
2/19/2016		T2	BLACKFLY	12	13:32:01	1:32 PM									
2/19/2016		T2	BLACKFLY	13	13:32:16	1:32 PM									
2/19/2016		T2	BLACKFLY	13	13:32:31	1:32 PM									

SWAMP Stream Habitat Characterization Form **FULL VERSION** Revision Date: March 26th, 2015

REACH DOCUMENTATION

Standard Reach Length (wetted width ≤ 10 m) = 150 m Distance between transects = 15 m
Alternate Reach Length (wetted width >10 m) = 250 m Distance between transects = 25 m

Project Name:	Date: / / 2015	Sample Collection Time:
Stream Name:	Site Name/ Description:	
Site Code:	Crew Members:	
Latitude (actual – decimal degrees): °N	datum: NAD83	
Longitude (actual – decimal degrees): °W	*other:*	GPS Device:

AMBIENT WATER QUALITY MEASUREMENTS

** Turbidity, silica, oxygen saturation, and air temp are optional; calibration date required on page 24*

Water Temp (Deg C)	pH	Alkalinity (mg/L)	Turbidity (ntu)*	Oxygen Sat. (%)*
Dissolved O^2 (mg/L)	**Specific. Conduct (uS/cm)**	**Salinity (ppt)**	**Silica (mg/L)***	**Air Temp (Deg C)***

Actual Reach Length (m)
(see reach length guidelines at top of form)

Explanation:

DISCHARGE MEASUREMENTS

1st measurement = left bank (looking downstream)

check if discharge measurements not possible (explain in field notes section) ☐

VELOCITY AREA METHOD (preferred)

cal. date

Transect Width (m):

	Distance from Left Bank (cm)	Depth (cm)	Velocity (ft/sec)		Distance from Left Bank (cm)	Depth (cm)	Velocity (ft/sec)
1				11			
2				12			
3				13			
4				14			
5				15			
6				16			
7				17			
8				18			
9				19			
10				20			

BUOYANT OBJECT METHOD (use ONLY if velocity area method not possible)

	Float 1	Float 2	Float 3
Distance (m)			
Float Time (sec)			

Float Reach Cross Section

width (m) depth(cm)	Upper Section	Middle Section	Lower Section
Width			
Depth 1			
Depth 2			
Depth 3			
Depth 4			
Depth 5			

NOTABLE FIELD CONDITIONS (check one box per topic)

Evidence of recent rainfall (enough to increase surface runoff)	NO	☐	minimal	☐	>10% flow increase	☐
Evidence of fires in reach or immediately upstream (<500 m)	NO	☐	< 1 year	☐	< 5 years	☐
Dominant landuse/ landcover in area surrounding reach	Agriculture	☐	Forest	☐	Rangeland	☐
	Urban/ Industrial	☐	Suburb/Town	☐	Other	☐

ADDITIONAL COBBLE EMBEDDEDNESS MEASURES

(carry over from transect forms if needed to attain target count of 25; measure in %)

1	2	3	4	5	6	7	8	9	10	11	12	13
14	**15**	**16**	**17**	**18**	**19**	**20**	**21**	**22**	**23**	**24**	**25**	

Site Code: | Date: ___ / ___ / 2015

SLOPE and BEARING FORM (transect based - for Full PHAB only)

AUTOLEVEL ☐ CLINOMETER ☐ HANDLEVEL ☐ OTHER ☐

Starting Transect	MAIN SEGMENT (record percent of inter-transect distance in each segment if supplemental segments are used)					SUPPLEMENTAL SEGMENT (record percent of inter-transect distance in each segment if supplemental segments are used)				
	Stadia rod measurements	Slope (%) or Elevation Difference cm ☐ % ☐	Segment Length (m)	Bearing (0°-359°)	Percent of Total Length (%)	Stadia rod measurements	Slope or Elevation Difference cm ☐ % ☐	Segment Length (m)	Bearing (0°-359°)	Percent of Total Length (%)
K										
J										
I										
H										
G										
F										
E										
D										
C										
B										
A										
additional calculation area										

ADDITIONAL HABITAT CHARACTERIZATION

High Gradient ☐ Low Gradient ☐

Parameter	Optimal	Suboptimal	Marginal	Poor
Epifaunal Substrate/ Cover	Greater than 70% of substrate favorable for epifaunal colonization and fish cover (50% for low-gradient streams); mix of submerged logs, undercut banks, cobble or other stable habitat	40-70% mix of stable habitat (30-50% for low-gradient streams); well-suited for full colonization potential	20-40% mix of stable habitat (10-30% in low-gradient streams); substrate frequently disturbed or removed	Less than 20% stable habitat (10% in low-gradient streams); lack of habitat is obvious; substrate unstable or lacking
Score:	20 19 18 17 16	15 14 13 12 11	10 9 8 7 6	5 4 3 2 1 0
Sediment Deposition	Little or no enlargement of islands or point bars and less than 5% of the bottom affected by sediment deposition (<20% in low-gradient streams)	Some new increase in bar formation, mostly from gravel, sand, or fine sediment; 5-30% of the bottom affected (20-50% in low-gradient streams)	Moderate deposition of new gravel, sand, or fine sediment on bars; 30-50% of the bottom affected (50 - 80% in low-gradient streams)	Heavy deposits of fine material, increased bar development; more than 50% of the bottom changing frequently (>80% in low-gradient streams)
Score:	20 19 18 17 16	15 14 13 12 11	10 9 8 7 6	5 4 3 2 1 0
Channel Alteration	Channelization or dredging absent or minimal; stream with normal pattern	Some channelization present, (e.g., bridge abutments); evidence of past channelization (> 20yrs) may be present but recent channelization not present	Channelization may be extensive; embankments or shoring structures present on both banks; 40 to 80% of stream reach disrupted	Banks shored with gabian or cement; Over 80% of the stream reach channelized and disrupted. Instream habitat greatly altered or removed entirely
Score:	20 19 18 17 16	15 14 13 12 11	10 9 8 7 6	5 4 3 2 1 0

SWAMP Stream Habitat Characterization Form *FULL VERSION* *Revision Date: March 26th, 2015*

Site Code:	Site Name:	Date: __ __ / __ __ / 2015
Wetted Width (m):	Bankfull Width (m): / Bankfull Height (m):	**Transect A**

Transect Substrates

Position	Dist from LB (m)	Depth (cm)	mm/ size class	% Cobble Embed.	CPOM	Microalgae Thickness Code	Macroalgae Attached	Macroalgae Unattached	Macrophytes
Left Bank					P A D		P A D	P A D	P A D
Left Center					P A D		P A D	P A D	P A D
Center					P A D		P A D	P A D	P A D
Right Center					P A D		P A D	P A D	P A D
Right Bank					P A D		P A D	P A D	P A D
	Note: Substrate sizes can be recorded either as direct measures of the median axis of each particle or one of the size class categories listed on the supplemental page (direct measurements preferred)								

Microalgae Thickness Codes
0 = No microalgae present. Feels rough, not slimy;
1 = Present but not visible. Feels slimy;
2 = Present and visible but <1mm; Rubbing fingers on surface produces a brownish tint on them, scraping leaves visible trail.
3 = 1-5mm;
4 = 5-20mm;
5 = >20mm;
UD = Cannot determine if microalgae present, substrate too small or covered with silt (formerly Z code).
D = Dry, not assessed

Riparian Vegetation
(facing downstream, 5 m u/s, 5 m d/s, 10 m from wetted width)

0 = Absent (0%) 3 = Heavy (40-75%)
1 = Sparse (<10%) 4 = Very Heavy (>75%)
2 = Moderate (10-40%)

Vegetation Class	Left Bank	Right Bank
Upper Canopy (>5 m high)		
Trees and saplings >5 m high	0 1 2 3 4	0 1 2 3 4
Lower Canopy (0.5 m-5 m high)		
All vegetation 0.5 m to 5 m	0 1 2 3 4	0 1 2 3 4
Ground Cover (<0.5 m high)		
Woody shrubs & saplings <0.5 m	0 1 2 3 4	0 1 2 3 4
Herbs/ grasses	0 1 2 3 4	0 1 2 3 4
Barren, bare soil/ duff	0 1 2 3 4	0 1 2 3 4

Instream Habitat Complexity
(5 m u/s, 5 m d/s)

0 = Absent (0%)
1 = Sparse (<10%)
2 = Moderate (10-40%)
3 = Heavy (40-75%)
4 = Very Heavy (>75%)

Filamentous Algae	0 1 2 3 4
Aquatic Macrophytes/ Emergent Vegetation	0 1 2 3 4
Boulders	0 1 2 3 4
Woody Debris >0.3 m	0 1 2 3 4
Woody Debris <0.3 m	0 1 2 3 4
Undercut Banks	0 1 2 3 4
Overhang, Vegetation	0 1 2 3 4
Live Tree Roots	0 1 2 3 4
Artificial Structures	0 1 2 3 4

Densiometer Readings (0-17)
count covered dots

Center Left	
Center Upstream	
Center Right	
Center Downstream	
Optional	
Left Bank	
Right Bank	

Human Influence
(circle only the closest to wetted channel; assess 5 m u/s, 5 m d/s)

0 = Not Present;
B = On Bank;
C = Between Bank & 10m from Channel;
P = >10m+<50m from Channel;
Channel (record Yes or No; if Y for an analyte, do not assess banks)

	Left Bank	Channel	Right Bank
Walls/ Rip-rap/ Dams	P C B 0	Y N	0 B C P
Buildings	P C B 0	Y N	0 B C P
Pavement/ Cleared Lot	P C B 0		0 B C P
Road/ Railroad	P C B 0	Y N	0 B C P
Pipes (Inlet/ Outlet)	P C B 0	Y N	0 B C P
Landfill/ Trash	P C B 0	Y N	0 B C P
Park/ Lawn	P C B 0		0 B C P
Row Crop	P C B 0		0 B C P
Pasture/ Range	P C B 0		0 B C P
Logging Operations	P C B 0		0 B C P
Mining Activity	P C B 0	Y N	0 B C P
Vegetation Management	P C B 0		0 B C P
Bridges/ Abutments	P C B 0	Y N	0 B C P
Orchards/ Vineyards	P C B 0		0 B C P

Bank Stability
(score zone 5m upstream and 5m downstream of transect between bankfull - wetted width)

Left Bank	eroded	vulnerable	stable
Right Bank	eroded	vulnerable	stable

TAKE PHOTOGRAPHS
(check box if taken & record photo code)

Downstream (**optional**) ☐

Upstream (**required**) ☐

Inter-Transect: AB	Wetted Width (m):

Inter-Transect Substrates

Position	Dist from LB (m)	Depth (cm)	mm/ size class	% Cobble Embed.	CPOM	Microalgae Thickness Code	Macroalgae Attached	Macroalgae Unattached	Macrophytes
Left Bank					P A D		P A D	P A D	P A D
Left Center					P A D		P A D	P A D	P A D
Center					P A D		P A D	P A D	P A D
Right Center					P A D		P A D	P A D	P A D
Right Bank					P A D		P A D	P A D	P A D
	Note: Substrate sizes can be recorded either as direct measures of the median axis of each particle or one of the size class categories listed on the supplemental page (direct measurements preferred)								

Microalgae Thickness Codes
0 = No microalgae present, Feels rough, not slimy;
1 = Present but not visible, Feels slimy;
2 = Present and visible but <1mm; Rubbing fingers on surface produces a brownish tint on them, scraping leaves visible trail.
3 = 1-5mm;
4 = 5-20mm;
6 = >20mm;
UD = Cannot determine if microalgae present, substrate too small or covered with silt (formerly Z code).
D = Dry, not assessed

FLOW HABITATS (% between transects, total=100%)	
Channel Type	%
Cascade/ Falls	
Rapid	
Riffle	
Run	
Glide	
Pool	
Dry	

GENERAL INFORMATION

Mo. | Day | Yr. | GPS Unit | Clerk ID

Valentine National Wildlife Refuge Study

ROUTE INFORMATION

Page ☐ of ☐

Start time | End time | Start location | End location

SURVEY INFORMATION

TIME	GPS or PARKING LOT		VEHICLE		TRAILER		COMMENTS
	Waypoint	UTM	License	State	License	State	
		T					
Survey left Y N			Type Color		Type No trailer		

Survey left Y N | Type Color | Type No trailer

Survey left Y N | Type Color | Type No trailer

Survey left Y N | Type Color | Type No trailer

Survey left Y N | Type Color | Type No trailer

Survey left Y N | Type Color | Type No trailer

Survey left Y N | Type Color | Type No trailer

DATA ENTRY

First Entry: ____ / / (ID / Date)

Second Entry: ____ / / (ID / Date)

GENERAL INFORMATION

Mo. Day Yr. GPS Unit Clerk ID

Valentine National Wildlife Refuge Study

NEBRASKA COOPERATIVE FISH & WILDLIFE RESEARCH UNIT

ROUTE INFORMATION

Start time End time Start location End location

VEHICLE COUNT INFORMATION

Lake and parking lot	Time	Lot full	Number of vehicles	Number of surveys left	Comments
Clear #1		Y N			
Dewey #1		Y N			
Dewey #2		Y N			
Dewey #3		Y N			
Dewey #4		Y N			
Dewey #5		Y N			
Duck #1		Y N			
Hackberry #1		Y N			
Hackberry #2		Y N			
Hackberry #3		Y N			
Pelican #1		Y N			
Pelican #2		Y N			
Pelican #3		Y N			
Pelican #4		Y N			
Pelican #5		Y N			
Pelican #6		Y N			
Rice #1		Y N			
Watts #1		Y N			
Watts #2		Y N			
West Long #1		Y N			
West Long #2		Y N			
West Long #3		Y N			
Willow #1		Y N			

DATA ENTRY

First Entry: ____ / / ID Date

Second Entry: ____ / / ID Date

GENERAL INFORMATION

Mo. Day Yr. Clerk ID

Valentine National Wildlife Refuge Study

ROUTE INFORMATION

Start time End time Start location End location

ENTERED REFUGE

VEHICLE and TRAILER INFORMATION

EXITED REFUGE

ENTERED REFUGE		VEHICLE				TRAILER		EXITED REFUGE		
TIME	CAMERA	License or ID	Type	Color		License or ID	Type	TIME	CAMERA	Survey left
					Y N					Y N
					Y N					Y N
					Y N					Y N
					Y N					Y N
					Y N					Y N
					Y N					Y N
					Y N					Y N
					Y N					Y N
					Y N					Y N
					Y N					Y N
					Y N					Y N
					Y N					Y N

DATA ENTRY

First Entry: ____ / / (ID / Date)

Second Entry: ____ / / (ID / Date)

Vehicle types

1 - Motorcycle
2 - Sedan
3 - Station wagon
4 - Small Pickup Trucks 2WD
5 - Small Pickup Trucks 4WD
6 - Standard Pickup Trucks 2WD
7 - Standard Pickup Trucks 4WD
8 - Standard SUV 2WD
9 - Standard SUV 4WD
10 - Large SUV 2WD (Suburban & Expedition)
11 - Large SUV 4WD (Suburban & Expedition)
12 - Minivan
13 - Van (same capacity as Suburban)
14 - Motorhome - 2 axles
15 - Motorhome - 3 axles
16 - Other (provide number of axles and tires in comments)

Vehicle color

1 - Black
2 - Blue
3 - Green
4 - Orange
5 - Red
6 - White
7 - Yellow

Trailer type and number of axles (boat + 2 axle = "12")

1 - Boat
2 - Camper
3 - Horse
4 - Utility

Additional equipment (on trailer, mounted, back of truck)

1 - Watercraft (kayak, canoe, float tube)
2 - Bicycles
3 - Dog kennel or trailer
4 - Decoys, wearing hunter orange (hunting activity)

Valentine National Wildlife Refuge Study Cheat Sheet

NEBRASKA COOPERATIVE FISH & WILDLIFE RESEARCH UNIT

Ben

KANSAS DEPARTMENT OF WILDLIFE AND PARKS
FISHERIES DATA SYSTEM

1. Water Body: _____
2. Project: _____
3. Gear: Kind _____
   Size _____
   Number _____
4. Date: Mo ___ Day ___ Yr ___
5. Location: _____
6. Effort: Hours _____
   Elapsed time from _____ to _____
   Distance/Area _____
7. Collector: _____

Comments

Water: Temp. (at 1 ft.) _____
Transparency _____
Weather:
Air Temp. _____
Wind Direction _____
Wind speed (mph) _____
Other: _____
_____

		Group Data								Group Data								Group Data							
Indivi. Length	Weight	Count	Lower Length	Higher Length	Sex	Tag No.	Spine/ Scale	Indivi. Length	Weight	Count	Lower Length	Higher Length	Sex	Tag No.	Spine/ Scale	Indivi. Length	Weight	Count	Lower Length	Higher Length	Sex	Tag No.	Spine/ Scale

VALENTINE NATIONAL WILDLIFE REFUGE
RECREATIONAL EXPERIENCE SURVEY

NEBRASKA COOPERATIVE FISH & WILDLIFE RESEARCH UNIT

Hello! We left this **voluntary** survey on ____/____/____ at ____:____. Your participation will help us understand use of Valentine National Wildlife Refuge. Participant information is available at *http://FishHunt.unl.edu*.

PLEASE TELL US ABOUT YOUR VISIT TODAY.

Your responses on **today's activities** are valued, *even if you completed this survey on a* ***prior*** *visit.*

INFORMATION ABOUT YOUR GROUP

❶ **Recreational activities** today at this refuge (*check all that apply*)
☐ Fishing ☐ Hiking ☐ Wildlife Watching ☐ Other_____
☐ Hunting ☐ Touring ☐ Photography ☐ Environmental Education

❷ **Refuge lakes** visited today? (*check all that apply*)

☐ No lake visited

open to waterfowl hunting and fishing
☐ Duck ☐ Rice ☐ Watts

open to fishing
☐ Clear ☐ Dewey ☐ Hackberry ☐ Pelican ☐ West Long ☐ Willow

☐ Baker	☐ Devils Punch Bowl	☐ Lee	☐ North Marsh
☐ Center	☐ East Long	☐ Little Hay	☐ Middle Marsh
☐ Coleman	☐ East Sweetwater	☐ Lost	☐ South Marsh
☐ Cow	☐ West Sweetwater	☐ McKeel	☐ School
☐ Crooked	☐ East Twin	☐ Mule	☐ Tom's
☐ Dads	☐ West Twin	☐ Pony	☐ Whitewater

❸ Number of **people** in your group (*1 = you alone*)? _____

❹ **Number** of group members: 17 years or younger? _____ 18-64 years? _____ 65 years or older? _____

❺ **Zip codes** of home residences for group members? _____ _____ _____ _____

INFORMATION ABOUT FISHING, HUNTING AND WILDLIFE WATCHING

❻ If you **fished** on this refuge today:

Lake Name:	1._____		2._____		3._____	
Time fished:	___hrs	___mins	___hrs	___mins	___hrs	___mins
Number of people:	_____		_____		_____	
Number of fish:	**Released**	**Kept**	**Released**	**Kept**	**Released**	**Kept**
Black crappie	_____	_____	_____	_____	_____	_____
Bluegill	_____	_____	_____	_____	_____	_____
Largemouth bass	_____	_____	_____	_____	_____	_____
Northern pike	_____	_____	_____	_____	_____	_____
Yellow perch	_____	_____	_____	_____	_____	_____
Common carp	_____	_____	_____	_____	_____	_____
Other _____	_____	_____	_____	_____	_____	_____

❼ If you **hunted** on this refuge today:
Time hunted: ____hrs ____mins
Number of people: _____
Number of animals harvested?
(*0 = hunted but none harvested; NA = did not hunt*)
Waterfowl _____
Prairie grouse _____
Pheasants _____
Dove _____
Deer _____
Coyote _____

❽ If you **watched wildlife** on this refuge today: Time spent: ____ hrs ____mins Number of people: _____
Rank, in order of preference, the groups of animals that you watched? (*1 = most preferred; NA = did not watch*)
Insects _____ Fish _____ Amphibians _____ Reptiles _____ Birds _____ Mammals _____

COMMENTS

PLACE COMPLETED SURVEY IN DESIGNATED BOX — look for gold star ★ — **OR IN THE U.S. MAIL.**
Thank you for completing this survey! Your responses will help improve management of our natural resources.