Information about these data sheets
Last updated April 28, 2023 (KLP)
Designed for use by Coastal Monitoring Fish and Invertebrate Field Crews
Designed to be printed, then photocopied double-sided onto waterproof paper
Form Site-Side 2 is a Word file, CM-fldchklist-Ver5
Two copies of the Invert-WQ sheet should be printed to be photocopied back to back to allow for 4 zones per sheet
One double-sided fish sheet will be needed PER NET, so print MANY of these forms
Crews only need a couple of copies of the codes-defs and Veg-list sheet (print these back to back and then laminate)

Notes for use:
One copy of the site sheet (both sides) should be filled out per site.
Use the checklist on the back to ensure everything gets done at a site.
Water quality can be put on EITHER the invert sheet or the fish sheet (no need to duplicate).
Check boxes allow indication of which sheet is used for WQ. This allows crew flexibility
See the Fish and Invertebrate SOP for the detailed instructions on sampling sites.

Site Overview **Datasheet version: 3**

Site ID:	Site name (optional):	Crew code:	Sampling type: New
		Crew chief name:	Finishing incomplete site
Sample Date:			

Shoreline

Shoreline Structure	% of site	Landcover near shore	% of site	Photo #s
1. Sand Beach		1. Low Density Resid.		
2. Rocky Shoreline		2. High Density Resid.		
3. Cliff		3. Commercial/Indust		
4. RipRap		4. Ag		
5. Vegetated Bank		5. Upland forest		
6. Muddy Bank		6. Forested wetland		
7. Marsh		7. Marsh		
8. Other		8. Stream		
		9. Other		
		Can't see land (e.g.,cliff, hill)		

GPS Unit No.: _____

Boat launch waypoint: _____

Boat launch lat: _____

Boat launch long: _____

Camera ID: _____

Site morphometry & connectivity

Sketch cross-section of riverine sites

Braiding Index (riverine wtland only; select only one)

0 channelized river
1 unchannelized river, no meanders
2 moderate meanders, no braiding
3 multiple channels; no permanent vegetation
4 multiple channels with permanent vegetation

Hydrologic connection to lake (select only one)

0 strictly riverine connection to lake
1 fully exposed to deep water portion of lake
2 fully exposed, but partially protected from direct wave action (e.g., submerged bar)
3 partially protected by sand bar, reef; opening is a large river
4 partially protected by sand bar, reef; opening is a small stream
5 fully separated from lake, but seasonal inundation possible
6 fully separated from lake by permanent sand bar, dune, dyke (why sample?)

Water level (select as many as necessary)

1 Water level stabilized by dyke (why sample?)
2 Hydrology influenced by culvert, road
3 Evidence of recent water level change (e.g., artificial dyke pumping)
4 Evidence of long-term water level change (lake level)
5 Weather-related current (onshore wind inducing seiche)
6 Water level change not observed

WL comment:

Habitat Structure

Habitat Types (at scale of the entire wetland polygon) **(circle all present)**

riprap	shallow emergent (shrubby)	shallow emergent (herbaceous)
bedrock	floating leaf	submergent
boulder	open water	undercut bank
cobble	riverine / erosional	riverine / depositional
sand	wet meadow	muddy / unvegetated shoreline
organic detritus	island	hummock
muck		bog mat

Vegetation Zone Structure (choose only one)

1 no vegetation
2 zones by depth
3 uniform distribution (e.g., single-species stand or even distribution of taxa all mixed together)
4 patchwork mosaic (e.g., patches of cattail, bulrush, SAV, etc)

Disturbance (circle all present in site or within 250 m of site)

RipRap	Sewage Discharge	Water Diversion	Boat channels (#):
Dredging (#)	Industrial Discharge	Channelization	Mowing/veg removal (% of site):
Marina	Rec. docks (#):	Ship docks (#):	Shoreline Modification (describe below)

Shoreline modifications (describe):

Recreational activities: swimming sailing fishing motor-boating PWC

Pollution: Public Litter Commercial Refuse Petroleum Sewege
Large Equipment Household Appliances

Evidence and location of other disturbance (incl. natural disturbance such as beaver, carp, muskrat) :

Site not sampleable for bugs or fish because….

Acceptable reasons: no access, wetland no longer exists, water too deep/shallow, vegetation too dense (name it). Please describe below.

Version 2 Site ID: Site Name: Date:

Pre-launch Checklist:	☐ Download GPS points
☐ Calibrate meters _____ (signature)	☐ Download site information
☐ Notify DNR, others for sampling permission	☐ Upload GPS points to NRRI
☐ Nets intact, no holes	☐ Update site information in site database

Crew names:
Field crew chief:

Weather: Dry Damp/Haze/Fog Drizzle Rain **Air Temp (F):** **% Cloud Cover:** **Wind:** onshore offshore alongshore
Past 24 hr weather notes:
Seiche Evidence: onshore offshore none

Important reminders about this site:

Site characterization form	**Invertebrate forms**	**Fish forms**	**Water Quality**
☐ Photos of site	Zones sampled (list):	Number of nets per zone:	Zones sampled (list):
☐ Sketch of riverine site	☐ Zone:	____ Zone:	☐ Zone:
☐ Boat launch GPS waypoint	☐ Zone:	____ Zone:	☐ Zone:
	☐ Zone:	____ Zone:	☐ Zone:
	☐ Zone:	____ Zone:	☐ Zone:
	☐ Samples labeled	☐ Fish length & anomalies	*In Situ* WQ samples by:
	☐ Sediment characterization	☐ Unidentified fish preserved & labeled	☐ Zone
	☐ Water depth		☐ Replicate
Overall site info	**Invertebrate Habitat**	**Fyke net habitat**	
☐ Shoreline & landcover	☐ Plant quadrats	☐ Plant quadrats	☐
☐ Site morphometry/hydrology	☐ Secchi depth/turbidity tube	☐ Secchi depth/turbidity tube	
☐ Habitat & vegetation patches	☐ Sediment characterization	☐ Sediment characterization	
☐ Disturbance and pollution	☐	☐	
☐ River cross-section sketch			

Notes: List broken equipment, supplies needed, notes for the next crew

I verify that the datasheets for this site are complete and accurate: _____ (field crew chief signature)

Macroinvertebrate / Water Quality Field Data Sheet

Crew code:

Site ID:	Crew leader:
Date:	Signature:
Sheet_____ of _____ for site	

Camera ID: _____Finishing incomplete site (check)

Zone name (veg type)						
Start/end time						
Zone contiguous or patches?						
Zone or patch size (m x m)						
Photos of zone						

Replicate Number	**1**	**2**	**3**	**1**	**2**	**3**
Latitude						
Longitude						
Waypoint ID						
Depth (m)						
Direction & dist to depth 0						
Quadrat photo #'s						
Coverage at water surface (sum to 100%)						
% Emergent						
dominant sp. or gen.						
% Floating leaved						
dominant sp. or gen.						
% SAV floating at the surface						
dominant sp. or gen.						
% Floating filamentous algae						
% Open water						
Coverage at sediment surface (sum to 100%)						
% Standing emergent stems (living or dead)						
dominant sp. or gen.						
% SAV stems						
dominant sp. or gen.						
% Course detritus (lying on bottom)						
% Filamentous algae						
% Bare sed. (no veg or detritus)						
Check box if unable to assess:						
Reason for not assessing:						
Organics Depth (cm)						
Substrate texture (dom/sub)						
Sample for % organic sed						
Number of 1m net sweeps						
Person-minutes picking						
Number of organisms						
Number of vials per rep						

_____ SEE FISH FORM FOR WQ DATA (CHECK)

***In situ* water quality**	**1**	**2**	**3**	**1**	**2**	**3**
Primary						
Secchi tube (cm)						
Temperature (°C)						
Specific cond. (µS cm-1)						
DO (% Saturation)						
DO (mg/L)						
pH						
Duplicate						
Secchi tube (cm)						
Temperature (°C)						
Specific cond. (µS cm-1)						
DO (% Saturation)						
DO (mg/L)						
pH						

WQ meter data file ID:	Prim	Dup	Prim	Dup	Prim	Dup	Prim	Dup	Prim	Dup	Prim	Dup
Tot. Diss. Solids (g L^{-1})†												
Turbidity (NTU)†												
Turbidity below detection limit? (Y/N)												
Redox pot. (mv)†												
In situ chloro. a (µg/L)†												
Total Alk. (mg $CaCO_3$ L^{-1})												
Pheno. Alk. (mg $CaCO_3$ L^{-1})												

†=optional parameters

Site ID: **Sampling: initial reset** | **Orientation to zone (parallel/perp/angle):** | **Crew code:**

Site name (opt): | **Net-rep #:** | **Date set:** | **Date ck:** | **Unkn/Vouch Jars**

Zone name (veg type): | **Fyke size: small large** | **Time set:** | **Time ck:** | **Collectors:**

Taxa (length in mm)		1	2	3	4	5	6	7	8	9	10	11	12	13		Comments
	TL															
	TL															
	#														Total	
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Anomalies: A=anchor worm B=black spot C=leeches D=deformities E=eroded fin F=fungus I=ich L=lesions N=blind P=parasites Y=popeye S=emaciated W=swirl scales T=tumor X=dead Z=other

Water depth at net frame (m):

Set Depth (m): __________ Pull Depth (m): __________

Underwater Set? (circle): Yes No

Water depth above net frame: Set (m): _______ Pull (m):_______

Water/Weather/Wind/Net Conditions:

Net sample efficiency (check, and indicate any problems below):

Fished OK ____ Had Minor Problem_____ DID NOT FISH_____

Conditions: Net twisted, caught, obstructed, torn open, disturbed, Other:

Taxa (length in mm)		1	2	3	4	5	6	7	8	9	10	11	12	13	Comments
	TL														
	TL														
	#														Total
	TL														
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General info

Veg Zone: Contig. or patch?

Zone or patch size (m x m):

Direction & distance (m) to depth 0:

Organics depth (cm):

GPS# Lat: Long:

GPS Unit ID:

Camera ID:

Quadrat Photo #'s:

Zone Photos:

Sample Vol for lab WQ:
SRP
TP (opt)
NO_3
NH_4
TN (opt)
Other:
Chlorophyll filter (y/n)

Vegetation/Quadrat

Coverage at water surface (sum to 100%)	
% Emergent	
dominant sp. or gen.	
% Floating leaved	
dominant sp. or gen.	
% SAV floating at the surface	
dominant sp. or gen.	
% Floating filamentous algae	
% Open water	

Coverage at sediment surface (sum to 100%)	
% Standing emergent stems	
dominant sp. or gen.	
% Floating leaved stems	
dominant sp. or gen.	
% SAV stems	
dominant sp. or gen.	
% Course detritus (lying on bottom)	
% Filamentous algae	
% Bare sed. (no veg or detritus)	
Check box if unable to assess quadrat sediment surface:	

In situ Water Quality

	Primary	Duplicate
Temp (C)		
Scond(uS)		
DO(%)		
DO(mg/L)		
Tot Alk		
pH		
Secchi Tube (cm)		

Meter data file ID:

	Primary	Duplicate
Redox(mV)		
Chl a		
Pheno Alk		
Turbidity(ntu)		
T below DL?		
TDS		

Substrate texture: 1_________________2__________________

_____**SEE BUG FORM FOR WQ DATA**

_____ Sample for %organic sed (optional)

Notes:

Reason for not assessing:

Codes for Data Sheets:

Label Protocol:

Site ID (from map)	Date (month DD, YY)
Zone name	Jar x of X (if multiple jars per sample or net)
Rep number & net size	Crew code
Waypoint #	Crew chief name

Part II

1 Vegetation zones

Typha: Typha (cattail)
Lily: Nuphar-Nyphaea (water lily, combined)
In Schoen: Inner (dense) Schoenoplectus (bulrush)
Out Schoen: Outer (sparse) Schoenoplectus (bulrush)
Pelt-Pont: Peltandra-Sagittaria-Pontederia (arrow-arum-arrowhead-pickerel weed)
OW: open water
Sparg: Sparganium (bur-reed)
Mead: Wet meadow
SAV: Submersed aquatic vegetation
Bog: Floating bog mat

2 Substrate Composition *Choose dominant, subdominant, sub-sub dominant (if necessary)*

Mineral substrates
CL: Clay (sticky)
SL: Silt (silky smooth)
SD: Sand (gritty, grainy)
GR: Gravel (4 mm to quarter)
PB: Pebble (quarter to fist-size)
CB: Cobble (fist-size to basketball)
BL: Boulder (> basketball to small car size)

Organic substrates
MU: Muck (black ooze, plant particles not discernable)
PT: Peat (thick mat of partially-broken-down plant particles of bog plants)
DT: Detritus (plant remains from previous winter, typically reeds, cattails)
WD: Wood (write note if thick wood chips)

Common Vegetation Taxa

Genus	Common	Genus	Common
Alisima	Water Plantain	*Phalaris*	Canary Reed Grass
Bidens beckii	Water Marigold	*Phragmites*	Cane Grass
Brasenia schreberei	Water Shield	*Pistia*	Water Lettuce
Calla	Water Arum	*Pontederia*	Pickerelweed
Caltha	Marsh Marigold	*Potamogeton*	Pond Weed
Carex	Sedge	*P. amplifolius*	
Ceratophyllum	Coon Tail	*P. crispus*	
Chara	Water Cabbage	*P. natans*	
Eleocharis	Spike Rush	*P. pectinatus*	
Elodea	Water weed	*P. richardsonii*	
Equisetum	Horse Tail Fern	*Ranunculus*	Buttercup
Hippuris	Water Mare's Tail	*Sagittaria*	Arrowhead
Iris	Iris (blue flag), yellow flag is non-native	*Schoenoplectus/Scirpus*	Bulrush
Juncus	Rush	*Sium*	Water Parsnip
Lemna	Duck Weed	*Sparganium sp.*	Bur Reed
Lythrum	Loosestrife (purple loosestrife is non-native)	*Spiriodela*	Great Duck Weed
Myriophyllum	Water Milfoil	*Typha*	Cattail
Naias	Bushy Pondweed	*Utricularia*	Bladderwort
Nulumbo	Lotus lily	*Vallisenaria*	Water Celery
Nuphar	Water Lily	*Zizania*	Wild Rice
Nymphaea	Pond Lily		

Fyke net problem codes:

A: Depth: A1 too deep; A2 too shallow
B: Sediment: B1 unconsolidated; B2 rocky; B3 bedrock; B4 unsafe bog
D: Nets damaged or missing
H: No habitat available
M: Mechanical problems: M1 vehicle; M2 boat
R: Rough surf
S: Size of site too small
W: Weather not permitting
O: Other, please specify
P: Permission lacking

Water quality problem codes:

A: Depth: A2 too shallow
B: Sediment: B2 rocky; B3 bedrock; B4 unsafe bog
M: Mechanical problems: M2 boat; M3 meters
O: Other; please specify
W: Weather not permitting

Invertebrate problem codes:

A: Depth: A2 too shallow
B: Sediment: B4 unsafe bog
N: Not done; explain on data sheet
O: Other; please specify
W: Weather not permitting