

Benthic Macroinvertebrate Template Instruction Sheet

Use this instruction sheet to complete the Benthic Macroinvertebrate Template (BenthicLabTemplate.xlsx) which can be downloaded from the NPS Program Sponsor website (<http://deq.wyoming.gov/wqd/non-point-source/resources/sponsors/>). Provide the following benthic macroinvertebrate sample information collected at your monitoring station(s). **Items with an asterisk (*) are required and must be included in the datasheet.** Other items are optional but recommended. An example of a populated Benthic Macroinvertebrate Template can also be found on the NPS Program Sponsor website (BenthicLabTemplateEXAMPLE.xlsx).

1. **StationCode** – Provide the unique code for the sampling site; e.g. TestCreek1
2. ***EXTSampID** – Provide the unique sample code assigned in the field
3. ***CollDate** – Sample collection date (mm/dd/yyyy)
4. ***CollMethodID** – Choose the number that corresponds with the collection method used, as shown in Table A
5. ***FinalID** – Taxonomic name provided by laboratory; e.g. Limnophyes
6. **BenTaxaID** – Leave blank, WY DEQ will assign a Benthic Taxa ID
7. ***RawCount** – Actual number of organisms identified for each taxon. This is a numerical unitless value that when multiplied by the sample correction factor is used to calculate a taxon density value, or the “number of individuals”. It will usually be found in the electronic file provided by the laboratory.
8. ***Conversion Factor** – This is a sample-specific numerical unitless value used to convert the taxon raw count to a density value. This value will usually be indicated on the electronic file provided by the laboratory.
9. ***Individuals (density value)** – The estimated number of individuals per square meter per taxon
10. **Stage** – Indicate stage of taxon development if it is reported in laboratory results. This label will vary from taxon to taxon; e.g. Larva
11. ***Grids** – This is a sample-specific numerical unitless value that identifies the number of grids used in sample identification. This will be an integer value, usually indicated on the laboratory sample benchsheet
12. **ResultComments** – Any comments provided by the lab that are specific to a particular taxon, sometimes referred to as a qualifier; e.g. Damaged
13. **SampleComments** – Any comment that is applicable to the entire sample, as indicated on the Sample Benchsheet provided by the laboratory; e.g., sample was not properly preserved
14. ***CollTime** – Sample collection time (24 hour clock, e.g. 15:30)
15. ***FieldgearID** – Choose ID number that corresponds with the type of field gear used, as shown in Table B
16. **PersonID** – Leave blank, WY DEQ will assign a personal ID
17. ***REPNUM** – Replicate number; for a normal sample, input “0”. If the sample is a duplicate, input “1”
18. ***Net Mesh Size** – Collection device mesh size in microns; e.g. 500
19. ***Number Surbers** – Number of individual Surber samples collected within the representative riffle at the monitoring site.
20. **RoleID** – Leave blank, WY DEQ will assign a Role ID
21. ***Percent_Sample** – Percent of sample that was analyzed. There will be one value per sample normally found on the laboratory sample benchsheet.
22. ***Site_Name** – “Name of waterbody – Reach name” (Reach name optional, but recommended); e.g., North Tongue River – Above Bull Creek

Table A.

CollMethod	Description	Type
1	Field and lab analytical procedures as per approved SAP.	Water Chemistry
2	Undefined Kick Net Method	Biological
3	Multi-Habitat Kick/Jab Method (Kick Net)	Biological
4	Periphyton Sample taken from emergent vegetation	Biological
5	Periphyton sample taken from Sand or Silt substrate with Petri dish method. 47 mm Diameter.	Biological
6	Periphyton sample taken gravel or larger substrate, in riffle. Number of distinct particles varies.	Biological
7	Periphyton Sample taken from Submerged vegetation	Biological
8	Periphyton Sample taken from wood material	Biological
9	Habitat Assessments	Habitat
10	Benthic Macroinvertebrate Sampling (Standard). Eight surber samples from one riffle	Biological
11	Benthic Macroinvertebrate Sampling Low Gradient	Biological
12	Water Grab Sampling	Water Chemistry
13	9 Surber Samples: 3 Separate Riffles	Biological
14	Targeted macroinvertebrate sampling for riffle/run habitat with depths greater than 1 foot. For large rivers.	Biological
15	Processed from stream periphyton sample as per approved SAP.	Water Chemistry

Table B.

FieldGearID	Type	WQXName	Description
1	Benthic Corer	Benthic Corer (Other)	Other
2	Benthic Dredge	Benthic Dredge (Other)	Other
3	Benthic Grab	Clam-Shell Grab	Clam-shell grab
4	Benthic Grab	Ekman Grab	Ekman grab
5	Benthic Grab	Benthic Grab (Other)	Other
6	Benthic Grab	Ponar Grab	Ponar grab
7	Benthic Grab	Petite Ponar Grab	Petite ponar grab
8	Electroshock	Backpack Electroshock	Backpack electroshock
9	Electroshock	Electroshock (Other)	Other
10	Electroshock	Stream-Side Electroshock	Stream-side electroshock
11	Miscellaneous/Other	Miscellaneous (Other)	Other
12	Net/Non-Tow	A-Frame Net	A-frame net
13	Net/Non-Tow	Block Net	Block net
14	Net/Non-Tow	D-Frame Net	D-frame net
15	Net/Non-Tow	Drift Gill Net	Drift gill net
16	Net/Non-Tow	Dip Net	Dip net
17	Net/Non-Tow	Kick Net	Kick net
18	Net/Non-Tow	Net/Non Tow (Other)	Other
19	Net/Non-Tow	Square-Mouth Net	Square-mouth net

FieldGearID	Type	WQXName	Description
20	Net/Non-Tow	Terminal Bag	Terminal bag
21	Net/Horizontal Tow	Net/Horizontal Tow (Other)	Other
22	Net/Vertical Tow	Net Vertical Tow (Other)	Other
23	Trap/Substrate	Artificial Substrate	Artificial substrate
24	Trap/Substrate	Hester-Dendy	Hester-dendy
25	Trap/Substrate	Hess Sampler	Hess sampler
26	Trap/Substrate	Natural Substrate	Natural substrate
27	Trap/Substrate	Trap Substrate (Other)	Other
28	Trap/Substrate	Rock Basket	Rock basket
29	Trap/Substrate	Sediment Trap	Sediment trap
30	Trap/Substrate	Stovepipe Sampler	Stovepipe sampler
31	Trap/Substrate	Surber Sampler	Surber sampler
32	Trap/Substrate	Surber Sampler	Modified Surber sampler
33	Trap/Substrate	Surber Sampler (Standard)	Original Surber sampler
34	Water Sampler	Whirl-pak bag	WhirlPak
35	Water Sampler	Bucket	Bucket
36	Water Sampler	Water Sampler (Other)	Other
37	Water Sampler	Water Bottle	Water bottle