

**MBSS Benthic Macroinvertebrate Sampling and
Laboratory Processing /Subsampling Certifications
Frequently Asked Questions**

I want to collect, process, and identify stream benthic macroinvertebrates in Maryland and have been asked to comply with the MBSS certification process. What is required?

The requirements are:

1. The *person* sampling benthos is certified in MBSS benthic macroinvertebrate sampling.
2. The *person* processing and subsampling the benthic macroinvertebrate sample is certified in MBSS laboratory processing and subsampling.
3. The taxonomist identifying the macroinvertebrates is Society for Freshwater Science (SFS) certified in Group 2 (Ephemeroptera, Plecoptera, and Trichoptera) genera and Group 3 (Chironomidae) genera.

What is MBSS Benthic Macroinvertebrate Sampling certification?

Benthic macroinvertebrate sampling certification qualifies a person to collect benthic macroinvertebrate samples from streams following MBSS sampling protocols. This certification is good for three field seasons (through April 30 of the third year), inclusive of the season in which the certification was earned.

For each of the three seasons that the certification is valid, you must:

- a) register for and attend MBSS spring training,
- b) be present during the presentations and field demonstrations covering benthic macroinvertebrate sampling protocols at MBSS spring training, and
- c) pass a written Benthic Macroinvertebrate Sampling certification test given during MBSS spring training following the presentations and field demos.

On the first season of certification, in addition to the requirements described above, you must undergo and pass one field audit by:

- a) scheduling this audit before March 15,
- b) assembling your own equipment and supplies (not MBSS-provided) to collect a benthic macroinvertebrate sample following MBSS protocols at a field site (your own site or one that is MBSS-provided),
- c) successfully collecting a benthic macroinvertebrate sample from this site using standard MBSS protocols with oversight from a MBSS Quality Control Officer while that MBSS Quality Control Officer concurrently collects a duplicate sample, and
- d) ensuring that the difference between the Benthic Index of Biotic Integrity (BIBI) scores calculated for your sample and MBSS Quality Control Officer's duplicate sample is no greater than 1.0.

Field audit benthic macroinvertebrate samples are processed and BIBI scores are calculated by the MBSS as a part of the audit.

What is MBSS Benthic Macroinvertebrate Laboratory Processing and Subsampling Certification?

Benthic macroinvertebrate laboratory processing and subsampling certification qualifies a person to process and subsample benthic macroinvertebrate samples collected from streams in a benthic laboratory following MBSS protocols. This certification is valid for three years from the date on which the certification was earned. To earn this certification, you must:

- a) attend a brief training on MBSS benthic macroinvertebrate processing administered at the MBSS Benthic Lab in Annapolis,
- b) complete and pass a written laboratory processing and subsampling test,
- c) demonstrate proficiency in benthic sample processing and subsampling, and
- d) complete a hands-on subsampling test by completing a benthic subsample that will be compared to a subsample completed by MBSS benthic laboratory staff.

NOTE: Requirements a) – d) will be completed on the same day at the DNR field office in Annapolis. The applicant and DNR staff will schedule the certification at a mutually-agreed upon time.

There are several types of benthic macroinvertebrate subsampling trays. Must I use the MBSS-style tray to conduct MBSS-certified benthic lab work?

Yes. Plans for constructing the MBSS subsampling tray are available from DNR (Email Neal Dziepak, neal.dziepak@maryland.gov).

How much will the certification cost?

*****NEW FOR 2024***** In addition to the annual MBSS spring training registration fee, the MBSS Benthic Macroinvertebrate Sampling certification will cost \$750. The laboratory processing and subsampling certification will cost \$425.

Is certification intended for an entire sampling crew or an individual?

Only individuals can be certified in MBSS benthic macroinvertebrate-associated protocols.

Must I pursue certification in both field and lab protocols?

No. MBSS certification is *a la carte*. You can choose which MBSS certifications to pursue.

How do I get certified in MBSS benthic macroinvertebrate taxonomy?

DNR will consider you certified in taxonomy if you've passed and are currently certified in genus level EPT (East) and North American Chironomidae taxonomy by the Society for Freshwater Science certifications. Click [HERE](#) for more information.

How can I pay for certification?

Payment for MBSS trainings and certifications may be made via credit card on DNR's online store. Payment for training must be made in advance (see website for deadlines). No registration payments will be accepted at the door and we cannot admit walk-ins. Do not submit certification payments prior to your audit. Payments for certifications are due one week from the audit, which will only be scheduled after you have passed your written test. If you do not pass the written test and are not eligible for an audit there is no certification payment required.

Can I attend MBSS training without certification? If so, what are the costs?

Yes. MBSS training will continue, as in previous years, to be open to those who are not seeking certifications. Please check the MBSS training website for current registration costs.

Will MBSS trainings continue to be open to non-professionals, as well as professionals?

Yes. However, MBSS training registrations will continue to be accepted on a first come-first served basis.

If I submit payment for registration or certification but then cannot attend the training (field or lab), can I get a refund?

Training fee refunds will be approved on a case-by-case basis. To eliminate the need for certification fee refunds, DNR will only accept payment for certifications after written certification tests are passed and a field or lab audit is complete.

How long is the certification valid?

Benthic Macroinvertebrate Sampling certification is valid for three field seasons (years), inclusive of the season in which the certification was earned. Attendance at annual MBSS spring training each year is required to maintain this certification. The Lab certification is valid for three years from the date on which the certification was earned.

What will I receive if I pass all requirements for certification?

Following completion of the MBSS Benthic Macroinvertebrate Certification, with your permission, your name and affiliation will be posted on the MBSS Certification Registry on the DNR website <http://dnr.maryland.gov/streams/Pages/mbsregistry.aspx>.

Does DNR offer certification for other MBSS protocols besides benthos (e.g., fish, physical habitat, herpetofauna)?

Yes. Fish Crew Leader, Fish Taxonomy and Physical Habitat Assessment certifications are also being offered. Other MBSS protocol certifications may be phased in during future years.

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