

3745-4-03

Qualified data collectors.**(A) Requirements to become a qualified data collector (QDC).****(1) Level 1 requirements.**

(a) An individual may obtain level 1 QDC status by documenting completion of a basic water quality monitoring program designed for public awareness and education. Successful completion of a level 1 training from a QDC trainer approved by the director shall result in automatic approval as a level 1 QDC if the trainee provides name and contact information at the training. Individuals automatically approved as level 1 QDCs shall be included on the list of approved QDCs on the credible data website at: <http://www.epa.ohio.gov/dsw/credibledata/index.aspx>.

(b) The director shall determine the acceptability of the basic water quality monitoring training based on factors including, but not limited to, the following:

(i) Whether the training is affiliated with a national, state or local organization that actively encourages and supports surface water monitoring.

(ii) Whether the training is affiliated with a program that has maintained, or intends to maintain, data collection efforts spanning more than one year.

(iii) Confirmation that the training received by participants includes basic water quality principles, the use of field instrumentation, sample collection and preservation and data recording techniques.

(2) Level 2 requirements. Four categories of level 2 QDC status are available. Applicants may apply for one or more of the following in any combination:

(a) Stream habitat assessment.

(i) The applicant shall demonstrate through education or experience a general knowledge of stream and riverine physical forms and habitat features. The director may develop training and testing for this knowledge.

(ii) Within the past one year, the applicant shall have attended training and achieved a passing mark in stream habitat assessment "Qualitative Habitat Evaluation Index" (QHEI) testing offered by Ohio EPA or a person authorized pursuant to this chapter to provide such training.

(b) Primary headwater stream habitat assessment.

- (i) The applicant shall demonstrate through education or experience a general knowledge of stream and riverine physical forms and habitat features. The director may develop training and testing for this knowledge.
- (ii) Within the past one year, the applicant shall have attended training and achieved a passing mark in ~~QHET, biocriteria and~~ "Headwater Habitat Evaluation Index" (HHEI) testing offered by Ohio EPA or a person authorized pursuant to this chapter to provide such training.

(c) Benthic macroinvertebrate biology.

[Comment: The stream habitat and biocriteria training is strongly encouraged for QDCs in the level 2 macroinvertebrate specialty. The stream habitat and biocriteria training provides a broad-based understanding of how Ohio EPA uses biology to assess stream health.]

- (i) The applicant shall demonstrate through education or experience a general knowledge of stream and riverine or lake physical forms and habitat features. The director may develop training and testing for this knowledge.
- (ii) The applicant shall demonstrate through education or experience knowledge of and the ability to accurately use macroinvertebrate taxonomic references and dichotomous keys to identify midwestern aquatic macroinvertebrates to the level of family.
- (iii) Within one hundred eighty days prior to submission of a level 2 QDC application, the applicant shall have achieved a passing mark in a macroinvertebrate taxonomic identification examination administered by Ohio EPA or a person authorized under this chapter to administer such an examination.
- (iv) The applicant shall have college-level course credit in aquatic invertebrate zoology or practical experience in the identification of aquatic macroinvertebrates.
- (v) The applicant shall have completed and achieved passing marks in undergraduate core course work in limnology, aquatic biology, environmental sciences or a related discipline, or has two years of practical experience in environmental assessment work.

- (vi) The applicant shall have one year of practical experience involving work in developing water quality sampling and analysis plans, quality assurance plans, and data quality objectives processes. The director may develop testing for this knowledge.

(d) Chemical water quality assessment.

- (i) The applicant shall demonstrate through education or experience a general knowledge of stream and riverine or lake physical forms and habitat features. The director may develop training and testing for this knowledge.
- (ii) The applicant shall have completed and achieved passing marks in undergraduate core course work in a biological, chemical, microbiological, natural or physical science, or has two years of pertinent laboratory experience performing water quality testing and analysis, or has two years of pertinent experience in chemical or microbiological water quality data analysis, interpretation and report writing. The director may develop training and testing for this knowledge.
- (iii) The applicant shall have one year of practical experience involving work in developing chemical or microbiological surface water quality sampling and analysis plans, quality assurance plans, and data quality objectives processes. The director may develop testing for this knowledge.
- (iv) The applicant shall have one year of practical experience involving surface water quality sampling techniques and water quality sampling equipment. The director may develop testing for this knowledge.

- (3) Level 3 requirements. Five categories of level 3 QDC status are available. Applicants may apply for one or more of the following in any combination:

~~(a) Stream habitat assessment.~~

- ~~(i) The applicant shall demonstrate through education or experience a general knowledge of stream and riverine physical forms and habitat features. The director may develop training and testing for this knowledge.~~
- ~~(ii) Within the past one year, the applicant shall have attended training and achieved a passing mark in stream habitat assessment "Qualitative~~

~~Habitat Evaluation Index" (QHEI) testing offered by Ohio EPA or a person authorized pursuant to this chapter to provide such training.~~

~~(b)~~(a) Primary headwater stream habitat assessment.

- (i) The applicant shall demonstrate through education or experience a general knowledge of stream and riverine physical forms and habitat features. The director may develop training and testing for this knowledge.
- (ii) Within the past one year the applicant shall have attended training and achieved a passing mark in ~~QHEI, biocriteria and~~ "Headwater Habitat Evaluation Index" (HHEI) testing offered by Ohio EPA or a person authorized pursuant to this chapter to provide such training.

~~(e)~~(b) Fish community biology.

[Comment: Approval as a level 3 QDC in fish community biology requires training and testing in ~~stream habitat assessment and QHEI. Therefore, approval as a level 3 QDC in fish community biology implies approval for level 3 stream habitat assessment and QHEI (i.e., separate approval is not necessary).~~]

- (i) The applicant shall, within the past one year, have attended training to conduct fish assessments and habitat assessments and achieved a passing mark in a program offered by Ohio EPA or a person authorized under this chapter to administer such training.
- (ii) The applicant shall satisfy the requirements of stream habitat assessment in paragraph ~~(A)(3)(a)~~(A)(2)(a)(ii) of this rule.
- (iii) The applicant shall demonstrate knowledge of Ohio EPA electrofishing sampling protocols and data assessment procedures. This knowledge shall be tested under provisions in paragraph ~~(A)(3)(e)(i)~~(A)(3)(b)(i) of this rule.
- (iv) The applicant shall demonstrate knowledge of and the ability to accurately use fish taxonomic references and dichotomous keys to identify midwestern fish to the level of species. This knowledge shall be tested under provisions in paragraph ~~(A)(3)(e)(i)~~(A)(3)(b)(i) of this rule.

- (v) The applicant shall have college-level course credit in ichthyology or two years of experience in the identification of midwestern fish species.
- (vi) The applicant shall have completed and achieved passing marks in undergraduate core course work in limnology, aquatic biology, environmental sciences or a related discipline, or has two years of practical experience in environmental assessment work.
- (vii) The applicant shall have two years of practical experience involving work in developing biological water quality sampling and analysis plans, quality assurance plans, and data quality objectives processes. The director may develop testing for this knowledge.
- (viii) The applicant shall have two years of practical experience in using electrofishing sampling techniques.

~~(d)~~(c) Benthic macroinvertebrate biology.

- (i) The applicant shall demonstrate ~~thorough~~thorough education or experience a general knowledge of stream and riverine physical forms and habitat features. The director may develop training and testing for this knowledge.
- (ii) The applicant shall, within the last two years, have attended training to conduct macroinvertebrate assessments and achieved a passing mark in a program offered by Ohio EPA or a person authorized under this chapter to administer such training.
- (iii) The applicant shall have knowledge of Ohio EPA macroinvertebrate field sampling, laboratory analysis, and data assessment procedures. This knowledge shall be tested under provisions in paragraph ~~(A)(3)(d)(i)~~(A)(3)(c)(i) of this rule.
- (iv) The applicant shall have knowledge of and the ability to accurately use macroinvertebrate taxonomic references and dichotomous keys to identify midwestern aquatic macroinvertebrates to the level of taxonomy used by Ohio EPA. This knowledge shall be tested under provisions in paragraph ~~(A)(3)(d)(i)~~(A)(3)(c)(i) of this rule.
- (v) The applicant shall have college-level course credit in aquatic invertebrate zoology or two years of practical experience in the identification of aquatic macroinvertebrates.

- (vi) The applicant shall have completed and achieved passing marks in undergraduate core course work in limnology, aquatic biology, environmental sciences or a related discipline, or has two years of practical experience in environmental assessment work.
- (vii) The applicant shall have two years of practical experience involving work in developing biological water quality sampling and analysis plans, quality assurance plans, and data quality objectives processes. The director may develop testing for this knowledge.

(d) Stream salamander community assessment.

- (i) The applicant shall have knowledge of Ohio EPA primary headwater assessment field sampling protocols and data assessment procedures.
- (ii) The applicant shall satisfy the requirements of stream habitat assessment in paragraph (A)(3)(a)(ii) of this rule.
- (iii) The applicant shall have knowledge of and the ability to accurately use taxonomic references and dichotomous keys to identify larval and adult stream salamanders to the level of species.
- (iv) Within the past two years, the applicant shall have attended training to conduct stream salamander assessments and achieved a passing mark in an equivalent training program offered by Ohio EPA or a person authorized under this chapter to administer such training.
- (v) The applicant shall have college-level course credit in herpetology or two years experience in the identification of midwestern stream salamanders.
- (vi) The applicant shall have completed and achieved passing marks in undergraduate core course work in limnology, aquatic biology, environmental sciences or a related discipline, or has two years of practical experience in environmental assessment work.
- (vii) The applicant shall have two years of practical experience involving work in developing water quality sampling and analysis plans, quality assurance plans, and data quality objectives. The director may develop training and testing for this knowledge.

(e) Chemical water quality assessment.

- (i) The applicant shall demonstrate through education or experience a general knowledge of stream and riverine or lake physical forms and habitat features. The director may develop training and testing for this knowledge.
 - (ii) The applicant shall have completed and achieved passing marks in undergraduate core course work in a biological, microbiological, chemical, natural or physical science, or has four years of pertinent laboratory experience performing water quality testing and analysis, or has four years of pertinent experience in chemical or microbiological water quality data analysis, interpretation and report writing. The director may develop training and testing for this knowledge.
 - (iii) The applicant shall have two years of practical experience involving work in developing chemical or microbiological surface water quality sampling and analysis plans, quality assurance plans, and data quality objectives processes. The director may develop testing for this knowledge.
 - (iv) The applicant shall have two years of practical experience involving surface water quality sampling techniques and water quality sampling equipment. The director may develop testing for this knowledge.
- (f) In lieu of the training set forth in paragraph (A)(3) of this rule, an applicant may serve a six-month apprenticeship under the mentorship of a level 3 QDC in the same specialty. For level 3 fish and macroinvertebrate certification, field collection and taxonomic identification must be included as part of the apprenticeship. The QDC shall monitor, assess and document the apprentice and provide an interim and final written evaluation of the apprentice to the director. The director reserves the right to perform unannounced audits during the apprenticeship period. Accepting the apprenticeship as fulfillment of level 3 QDC qualifications shall be at the discretion of the director. If accepted, the applicant must take and pass the level 3 test for the specialty following the completion of the apprenticeship.
- (g) The director retains the discretion to certify an applicant as level 3 QDC based upon a demonstration by the applicant of a combination of equivalent education and experience to that set forth in paragraphs (A)(3) (a) to ~~(A)(3)(e)~~(A)(3)(f) of this rule, along with the applicant successfully

passing a test to be administered by Ohio EPA concerning the specific specialties for which the applicant is requesting QDC status.

(B) Application and initial approvals.

- (1) An applicant seeking to become a QDC shall submit to the director a complete and current application on forms provided by the director. The application shall include documentation demonstrating that the applicant completed water quality monitoring training described in paragraph (A) of this rule. Applications must be submitted within the time limits provided in paragraph (A) of this rule. The director may grant a waiver extending the period during which the applicant must apply for QDC status if the applicant can document that extenuating circumstances prevented a timely submission. The director may require the applicant to furnish additional documentation pertaining to the application.
- (2) An applicant shall submit copies of official transcripts from the appropriate educational institution and official training certifications or alternate required documentation to verify that the applicant meets the educational and training requirements set forth in paragraph (A) of this rule.
- (3) The level 2 and level 3 applicants shall certify that all information submitted in support of the application is true, accurate, and complete and that the applicant has not been convicted of or pleaded guilty to a violation of section 2911.21 of the Revised Code (criminal trespass) or a substantially similar municipal ordinance within the previous five years. Failure to include the certification shall render the application incomplete.
- (4) Ohio EPA shall conduct a completeness review of the application and shall notify the applicant in the event the application is incomplete. Ohio EPA shall not consider an incomplete application and shall notify the applicant of the reasons the application is incomplete and of any additional information required for further consideration.
- (5) The director shall either approve or deny a complete application by sending a letter to the applicant. If the director denies the application, the director shall identify the deficiencies upon which the denial of the application is based.
- (6) The director shall maintain a list of approved, active QDCs. The active QDC list shall provide the organization with which the QDC is affiliated, the approval level and specialty, the QDC number, and expiration date of the status. The current QDC list shall be displayed on the credible data web page at: http://www.epa.ohio.gov/dsw/credibledata/current_QDCs.aspx.

(C) Expiration and renewals.

- (1) Status as level 1 QDC shall not expire and a renewal application is not required.
- (2) Status as a level 2 QDC shall automatically expire five years after the date of approval of the application unless the approval has been renewed.
- (3) Status as a level 3 QDC shall automatically expire two years after the date of approval of the application unless the approval has been renewed or a timely renewal application has been submitted in accordance with this rule. Notwithstanding the above, status as a level 3 QDC shall automatically be renewed for a period of three years without submission of an application, where the QDC has submitted data while in the status of a level 3 QDC and the director has determined the data to be level 3 data. The automatic renewal process can proceed on a rolling basis and each three-year renewal period shall be deemed effective beginning on the date the last sample was collected, or for taxonomic identification of benthic macroinvertebrates the date the last sample was processed, under the confines of an approved study plan. The data shall have been submitted to the agency.
- (4) Renewal applications. Except as provided in paragraph (C)(3) of this rule, an applicant seeking renewal of the applicant's status as a level 2 or level 3 QDC shall submit to the director a renewal application prior to the date of expiration of the applicant's status as a level 2 or level 3 QDC.

(a) Renewal application and requirements.

- (i) Renewal applications shall be on forms for that purpose available from Ohio EPA.
- (ii) The renewal application shall provide a means to re-submit the original application, if appropriate, or to update and amend the original application as necessary.
- (iii) Ohio EPA shall approve or deny the renewal application in accordance with the procedures set forth in paragraphs (B)(4) and (B)(5) of this rule.
- (iv) Renewal of level 2 QDC status is contingent upon the applicant's demonstration of active participation, in that specialty, in the credible data water quality monitoring program within the last two years. The director may develop and offer refresher QDC training. Successful completion of refresher training can substitute for active participation.

- (v) Renewal of level 3 QDC status is contingent upon the applicant's demonstration of active participation (at that level and in that specialty) in the credible data water quality monitoring program within the prior two years. The director may develop and offer refresher QDC training. Successful completion of refresher training can substitute for active participation.
- (vi) Active participation means that the QDC has participated in activities under this program at the level and specialty of the applicant's QDC certification during the period the applicant's certification was valid including, for level 3 fish, ~~and~~ macroinvertebrate, and salamander certification, field collection and taxonomic identification, and including the submission of data approved at the appropriate level, collected under an approved project study plan.

(b) Renewal grace period.

- (i) A QDC with expired level 2 status may submit a renewal application for a period of one year after the expiration date.
- (ii) A QDC with expired level 3 status may submit a renewal application for a period of three months after the expiration date.
- (iii) A QDC with expired status may submit data if the project was initiated prior to the expiration date, providing the QDC submits an approvable renewal application within the time periods indicated by paragraph (C)(4) of this rule.
- (iv) A QDC with a lapsed status extending beyond these time periods shall submit a full application as specified in paragraph (B) of this rule.

(D) Revocation.

- (1) The director may revoke an individual's status as a QDC upon finding that the QDC has taken any of the following actions:
 - (a) Fraudulently obtained or attempted to obtain QDC status or renewal thereof.
 - (b) Knowingly or negligently submitted misleading, inaccurate, or false data to Ohio EPA.
 - (c) Consistently failed to attain the necessary standards for study design, field collection methods, laboratory techniques, or quality assurance and

quality control procedures for the collection of credible data under this chapter.

- (2) Upon making a finding under paragraph (D)(1) of this rule, the director shall first issue a proposed action revoking QDC status in accordance with Chapter 3745-49 of the Administrative Code.
- (3) The director shall notify the QDC of a proposed action under paragraph (D)(2) of this rule. The notice shall be by certified mail and shall set forth the period of ineligibility proposed by the director, the proposed effective date thereof, the reason therefor, ~~the length of the proposed period of ineligibility,~~ and the procedure for appealing the action.
- (4) Revocation of QDC status shall state a period during which the individual shall not apply for such status. After the period of ineligibility has expired, the former QDC may apply for status as a QDC under this chapter.

(E) Trainers and testing.

- (1) An individual seeking to become a QDC trainer for level 1 credible data shall include with the application to become a level 1 QDC trainer, documentation demonstrating all of the following:
 - (a) The applicant has successfully completed training offered through an educational monitoring program or a citizen monitoring program designed specifically for teaching the technical and leadership skills to group leader candidates.
 - (b) The applicant has credentials establishing that the individual is a qualified instructor in an organization that operates or participates in an educational monitoring program or a citizen monitoring program.
 - (c) The applicant agrees to submit to Ohio EPA information provided by trainees seeking level 1 QDC status at the time of the level 1 training activity.
- (2) Training required for level 2 or level 3 QDC status shall be performed by Ohio EPA, Ohio EPA's contractors or a third-party trainer having qualifications as a subject matter expert.
 - (a) Qualification as a subject matter expert. A person interested in offering the training required for level 2 or level 3 QDC shall have the following qualifications:

- (i) Technical competence in the pertinent subject matter.
 - (ii) Five or more years of practical experience performing the full set of skills required for the QDC level and specialty.
 - (iii) A post-secondary educational degree in a scientific field related to the specialty.
 - (iv) Documented experience in presenting technical training offered through classes, field trips, seminars, workshops or conferences.
- (b) Third party trainer requirements. A person interested in offering training shall submit a written application to the director with the following information:
- (i) A resume that documents technical competence, education and employment history.
 - (ii) A basic description of the expected training and testing services to be provided.
 - (iii) A detailed training content manual for the specialty offered.
- (c) The director shall either approve or deny the application by sending a letter to the applicant. If the director denies the application, the director shall identify the deficiencies upon which the denial of the application is based.
- (3) Testing.
- (a) Third party trainers may test level 2 QDCs provided the trainers coordinate with Ohio EPA on test content, scoring and test result notification.
 - (b) All level 3 QDC trainees shall be tested by Ohio EPA or Ohio EPA's contractors.
- (F) Notwithstanding paragraph (E) of this rule, an individual, or an individual who works for an organization, contracted by Ohio EPA to conduct QDC training shall be an approved QDC trainer for the life of that contract. Trainers' qualifications shall be evaluated by Ohio EPA staff as part of the contract process.

Effective:

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Certification

Date

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