

**COVE CREEK
BEDFORD COUNTY**

**STREAM REDESIGNATION EVALUATION
WATER QUALITY STANDARDS REVIEW**

**Segment: Basin, T-433 Bridge To Mouth
Drainage List: N
Stream Code: 14462**

**DIVISION OF WATER QUALITY ASSESSMENT AND STANDARDS (RFF)
BUREAU OF WATER SUPPLY AND WASTEWATER MANAGEMENT
DEPARTMENT OF ENVIRONMENTAL PROTECTION**

**JUNE 2000
REVISED JULY 2001
REVISED MARCH 2003**



**EXECUTIVE SUMMARY REPORT
COVE CREEK (14462)
BEDFORD COUNTY
DRAINAGE LIST N**

BACKGROUND

The Department surveyed the Cove Creek basin in February 1995 in response to a rulemaking petition submitted to the Environmental Quality Board (EQB) by the Friends of Cove Creek. As a result of that evaluation, the Department recommended that the Cove Creek basin from its source to the Juliet Lane bridge (T-433, RMI 2.0) be redesignated as Exceptional Value Waters (EV). The lower two miles of Cove Creek, represented by Station 7CC (Figure 1), was recommended to retain its Cold Water Fishes (CWF) use designation. This was done because its total biological condition score in comparison to the reference station was 73%. This score did not qualify this segment for either High Quality (at least 83%) or EV (92% or greater). The EQB approved these recommendations as final rulemaking at its May 21, 1998 meeting. The rulemaking was published in the Pennsylvania Bulletin September 5, 1998.

The 73% comparison for Station 7CC was primarily the result of the score assigned to the percent dominant taxon metric. The subsample for Station 7 contained 130 Ephemerella, a pollution-sensitive mayfly. This resulted in a percent dominant taxon metric of 65%. When compared to the 35% percent dominant taxon metric at the Fishing Creek (Clinton County) reference station, Station 7CC received a score of zero. The Pennsylvania Fish and Boat Commission, EPA Region III, and the Independent Regulatory Review Commission questioned the basis for scoring this metric when the dominant taxon is a sensitive one, an indicator of excellent water quality. The Department agreed to reevaluate scoring of the percent dominant taxon metric and obtain public review and comment on a change to the scoring.

DISCUSSION

The Department developed a modification to the application of the percent dominant taxon and published a notice of availability and request for public comment in the July 24, 1999 Pennsylvania Bulletin. The proposed revision can be summarized as follows:

Generally, healthy aquatic systems are not dominated by any single type or group of organisms but, rather, are well balanced. An invertebrate collection dominated by a single taxon is normally an indication that an outside stress has altered the system and created conditions that favor the proliferation of one group of invertebrates (usually pollution tolerant). The percent dominant taxon metric detects this condition and, when compared to a healthy, balanced reference condition, results in a poor score for the candidate water body. However, natural systems are varied and, when applied literally, this metric can yield misleading results in aquatic systems naturally dominated by one or two taxa or where the biological community is temporarily dominated by one or two taxa because their reproductive cycle has yielded large numbers of individuals over a very brief interval. In order to reflect the science, the Department proposed to consider the Hilsenhoff Index number for the dominant group of invertebrates. This index (on a

scale of 1-10) reflects the sensitivity of the organism to pollution. Low Hilsenhoff Index numbers are assigned to invertebrates that are sensitive to pollution. If the Hilsenhoff Index for the dominant taxon in a sample is 0, 1 or 2 (indicative of a pollution-sensitive organism) the maximum score of 6 will be assigned for the percent dominant taxon metric. This will recognize that a sensitive biological community exists at the site even though it is dominated by a single taxon.

All of the 18 comments received were in support of the change in implementation. They came from the Pennsylvania Fish and Boat Commission, the U.S. Fish and Wildlife Service, PA Trout/Trout Unlimited, the Berks County Conservancy, the Raymond Proffitt Foundation, and ten individuals. They indicated that using the Hilsenhoff pollution tolerance index will provide more meaning to the percent dominant taxon score and assist in interpreting the metric. Based on these supportive comments, the Department published a notice of implementation of this revised method in the Pennsylvania Bulletin on October 2, 1999 (29 Pa.B, 5149).

The Department has applied this revised implementation method to Cove Creek Station 7CC. The attached modified Table 7 from the Cove Creek evaluation report shows a score of 6 assigned to the percent dominant taxon metric because the mayfly Ephemerella has a Hilsenhoff Index value of 1. The total biological condition score for Station 7CC is 28, which is 93% of the reference station score. This comparison qualifies for EV protection under the Department's regulatory criteria.

PUBLIC RESPONSE AND PARTICIPATION SUMMARY

The Department provided public notification of this redesignation and requested any technical data on Cove Creek from the general public through publication in the *Pennsylvania Bulletin* on December 25, 1999 (29 Pa.B 6524). A similar notice was published in the Bedford Daily Gazette on December 27, 1999. In addition, Snake Spring Township and the Bedford County Planning Commission were notified of the evaluation by letters dated December 23, 1999. No data on water chemistry, instream habitat or the aquatic community were received in response to these notifications.

The Department provided a copy of the draft stream evaluation report and recommendation to the petitioner (Friends of Cove Creek), Snake Spring Township, and the Bedford County Planning Commission by letters dated May 17, 2001. Comments were requested within 30 days of that date. No comments were received on the Cove Creek report or the Department's recommendation as a result of this notification.

RECOMMENDATION

The Department recommends that the Cove Creek basin from the T-433 bridge to the mouth be redesignated as Exceptional Value Waters (EV). This recommendation is based on scoring greater than 92% in comparison to the reference.