

Low Impact Hydropower Institute Certification Questionnaire
Mahoning Creek Hydroelectric Project
B. Water Quality
Response Narrative

B. WATER QUALITY

The Water Quality Criterion is designed to ensure that water quality in the river is protected. The Water Quality Criterion has two parts. First, an Applicant must demonstrate that the facility is in compliance with state water quality standards, either through producing a recent Clean Water Act Section 401 certification or providing other demonstration of compliance. Second, an applicant must demonstrate that the facility has not contributed to a state finding that the river has impaired water quality under Clean Water Act Section 303(d).

Current Water Quality Conditions

The water quality of Mahoning Creek Lake and its tailwaters has consistently been found to be excellent and to exceed applicable Pennsylvania chapter 93 water quality standards. This is documented by the *Mahoning Creek Lake Reservoir Limnology, Aquatic Life and Water Quality Report* (USACE, 1993) and the *Water Quality Report (AHS, 2007)* and is confirmed by water quality data collected continuously since 2007 by the USGS (gage number 03036000).

In addition, the facility area and downstream reach are not currently identified by Pennsylvania as not meeting water quality standards pursuant to Section 303(d) of the Clean Water Act. This is documented in the *2012 Pennsylvania Integrated Water Quality Monitoring and Assessment Report*, which satisfies the requirements of section 303(d) and 305(b) of the Clean Water Act.

The project area and downstream reach (which extends to the confluence of the Allegheny River) are included in the following assessment ID's (shown in the attached map):

- **Assessment ID 12787** Extends from the Mahoning Creek Dam 15.5 miles downstream. This section was listed as 303(d) attaining for Aquatic Life Use in the 2012 Integrated List of All Waters.
- **Assessment ID 12782** Extends 8.5 miles downstream from the edge of Assessment ID 12787 to the confluence with the Allegheny River. This section was also listed as 303(d) attaining for Aquatic Life Use in the 2012 Integrated List of All Waters.

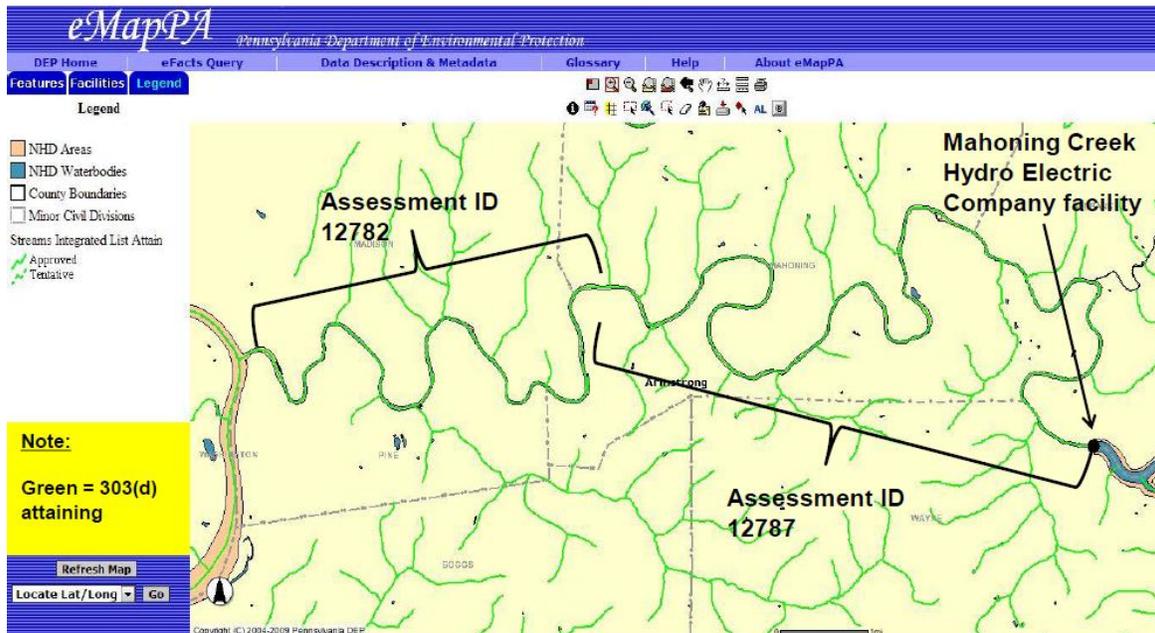
Additional details regarding assessment results can be found here:

<http://files.dep.state.pa.us/Water/Drinking%20Water%20and%20Facility%20Regulation/WaterQualityPortalFiles/2012%20Integrated%20List/2012%20Streams%20Category%202.pdf>

Additional details regarding methodology can be found here:

http://www.portal.state.pa.us/portal/server.pt/community/water_quality_standards/10556/2009_assessment_methodology/666876

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Water Quality During Hydropower Operations

Water quality during hydropower operations is regulated by the Clean Water Act Section 401 permit, issued on February 19, 2013.

Although the Clean Water Act Section 401 permit is not a binding requirement of the FERC license because of the state's failure to act on MCHC's request for certification within one year of the issuance of the FERC license, it is nonetheless a binding document under the State of Pennsylvania. The legal authority that the PA DEP relied on to issue the certification is detailed in paragraph one of the Clean Water Act Section 401 permit. For example, General Condition 1 of the Clean Water Act 404 Permit states:

The permittee shall comply with all terms and conditions set forth in the PADEP authorization for use of this permit, including all conditions of Section 401 Water Quality Certification, and any subsequent amendment of modification to such authorization.

In regards to water quality, paragraph 2 of page 2 of the Clean Water Act Section 401 permit states:

Except as otherwise noted below, the Department of Environmental Protection, pursuant to Section 401(a) of the Federal Clean Water Act, as amended, 33 U.S.C.A. Section 1341(a), certifies that the construction and operation herein described will comply with the applicable provisions of Sections 301, 302, 303, 306, and 307 of that Act, and that the construction will not violate applicable Federal and State water quality standards.

Specifically, Special Condition F of the Clean Water Act Section 401 permit states:

Operation of the Mahoning Creek Hydroelectric Project facility shall be in accordance with the submitted Adaptive Management Plan, which is a component of the Operations Plan

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(dated November 2012), to insure that water quality is maintained within the reservoir, stilling basin, and within Mahoning Creek below the stilling basin. While the Department recognizes that the Adaptive Management Plan is designed to comply with the minimum water quality standards that are outlined in a U.S. Army Corps of Engineers letter, dated 10/22/2012, water quality standards shall also satisfy the applicable specific water quality criteria that is listed in the Department's Chapter 93 rules and regulations. Any changes to the Adaptive Management Plan document must be reported to the Department, and may require the Department's approval, prior to implementing any changes.

In accordance with the AMP, MCHC has installed a real time water quality monitoring network with monitoring locations in the reservoir, stilling basin, and directly downstream of the hydropower outfall. When water quality parameters violate the required non-degradation criteria established by the USACE (based on site specific worst-case pre-hydropower conditions), which exceed relevant PA state standards, hydropower operations will be reduced and bypass flows will be increased until required parameters are met.