

Turbidity Assessment Criteria from 2000 to 2014

Year		Support	Partial Support	Non-Support
1994		≤10%	11% to 25%	>25%
1996		≤10%	11% to 25%	>25%
1998	Base Flow	≤25%	--	>25%
	Storm Flow	≤10%	>10%	>10%
2000	Base Flow	≤25%	na	>25%
	Storm Flow	≤15%	na	>15%
2002	Base Flow	≤25%	na	>25%
	Storm Flow	≤15%	na	>15%
2004	Base Flow	≤25%	na	>25%
	Storm Flow	≤15%	na	>15%
2006	Base Flow	≤25%	na	>25%
	Storm Flow	≤20%	na	>20%
2008	Base Flow	≤25%	na	>25%
	Storm Flow	≤20%	na	>20%
2010	Base Flow	≤25%	na	>25%
	Storm Flow	≤20%	na	>20%
2012	Base Flow	≤25%	na	>25%
	Storm Flow	≤20%	na	>20%
2014	Base Flow	≤25%	na	>25%
	Storm Flow	≤20%	na	>20%

1998 – First appearance of individual assessment criterion tables

2000 – The assessment category of “Partially Supporting” was eliminated because of the law suit.

2004 – First narrative for turbidity assessment:

Turbidity will be evaluated for both ‘base flow’ conditions and year-round conditions (‘all flows’). If a waterbody is not meeting either of these conditions, it will be listed as not supporting turbidity water quality standards. Base flow conditions represent the critical season when rainfall is infrequent and is applied to the months of June through October. The turbidity criterion in section 2.503 of Regulation No. 2 is applicable for base flow turbidity evaluations. If greater than 25% of the total samples for the period of record from the months of June through October exceed the base flow criterion, the waterbody will be listed on the 303(d) list as being impaired for turbidity. The year-round assessment takes into account all flows including storm flows and is therefore considered protective of

water quality year-round. The document titled "Determination of Turbidity and Suspended Solids Values for Storm Events" describes the need and justification for setting targets for use in assessing turbidity at all flows. A turbidity target for all flows has been established as the 90th percentile of ecoregion values based on 10 years of data from over 70 stations sampled monthly. Because turbidity increases significantly above the 90th percentile, the top 10% of the turbidity values are considered a rare occurrence and would not be appropriate levels to maintain during ordinary storm events. Therefore, if greater than 15% of the total samples from the period of record for all flows exceed the all flow turbidity target, the water body will be listed on the 303(d) list as being impaired for turbidity.

2006 Turbidity criterion changed to match Regulation No. 2

Turbidity will be evaluated for both primary values and storm-flows conditions. If a waterbody is not meeting either of these conditions, it will be listed as not supporting turbidity water quality standards. Primary values represent the critical season when rainfall is infrequent and is applied to June 1 through October 31. The turbidity criterion in Reg. 2.503, "Primary Values", is applicable for base flow turbidity evaluations. If four or more samples, or greater than 25% of the total samples for the period of record from June 1 through October 31 exceed the primary values criterion, the waterbody will be listed as impaired for turbidity. The storm-flows assessment takes into account all ambient monitoring network sites sampled throughout the year. If greater than 20% of the total samples from the period of record, not to be less than 24, exceed the "Storm-Flows" values, the waterbody will be listed on the 303(d) list as being impaired for turbidity.

2008 narrative

Turbidity, Reg. 2.503, will be evaluated for both base flow (primary values) and storm-flow (storm-flow values) conditions. If a waterbody is not meeting either of these conditions, it will be listed as not supporting turbidity water quality criteria.

Primary values represent the critical season when rainfall is infrequent and is applied to samples collected between June 1 and October 31. If four or more samples, or more than 25% of the total samples, whichever is greater, collected between June 1 and October 31 for the period of record exceed the primary values criterion, the waterbody will be listed as impaired.

Storm-flow assessment takes into account samples collected throughout the year. If more than 20% of the total samples collected from the AWQMN sites, not to be less than 24, exceed the Storm-Flow values, the waterbody will be evaluated as being impaired for turbidity. For data collected from sites other than the AWQMN, if five or more samples, or more that 20% of the total samples, whichever is greater, exceed the Storm-Flow criterion, the waterbody will be listed as impaired.

2010 Narrative

Turbidity, Reg. 2.503, will be evaluated for both base and all flows. If a waterbody is not meeting either of these conditions, it will be listed as not supporting the turbidity criteria.

Base flow values represent the critical season, June 1 to October 31, when rainfall is infrequent. If four or more samples, or more than 25 percent of the total samples, whichever is greater, collected between June 1 and October 31 for the period of record exceed the base flows values, the stream segment will be listed as not attaining the turbidity standard.

All flows assessment takes into account samples collected throughout the year. If more than 20 percent of the total samples (not to be less than 24) collected from the Ambient Water Quality Monitoring Network (AWQMN) sites exceed the all flows values, the waterbody will be listed as not attaining the turbidity standard. For data collected from sites other than the AWQMN, if five or more samples, or more than 20 percent of the total samples, whichever is greater, exceed the all flows values, the waterbody will be listed as not attaining the turbidity standard.

2012 Narrative

Turbidity, Reg. 2.503, will be evaluated for both base and all flows. If a waterbody is not meeting either of these conditions, it will be listed as non-supporting the turbidity criteria.

Base flow values represent the critical season, June 1 to October 31, when rainfall is infrequent. If four or more samples, or more than 25 percent of the total samples, whichever is greater, collected between June 1 and October 31 for the period of record exceed the base flows values, the stream segment will be listed as not attaining the turbidity standard.

All flows assessment takes into account samples collected throughout the year. If more than 20 percent of the total samples (not to be less than 24) collected from the Ambient Water Quality Monitoring Network (AWQMN) sites exceed the all flows values, the waterbody will be listed as not attaining the turbidity standard. For data collected from sites other than the AWQMN, if five or more samples, or more than 20 percent of the total samples, whichever is greater, exceed the all flows values, the waterbody will be listed as not attaining the turbidity standard.

2014 Narrative

As established by APC&EC Reg. 2.503, turbidity will be evaluated for both base flows and all flows values. Base flows values represent the critical season, June 1 to October 31, when rainfall is infrequent; all flows values take into account samples collected throughout the year (including samples collected between June 1 to October 31). APC&EC Reg. 2.503 states:

There shall be no distinctly visible increase in turbidity of receiving waters attributable to discharges or instream activities. The values below should not be exceeded during base flow (June to October) in more than 20% of samples. The values below should not be exceeded during all flows in more than 25% of samples taken in not less than 24 monthly samples.

ASSESSMENT METHODOLOGY FOR TURBIDITY

Base Flows Values

Base flow values apply to data collected between June 1 and October 31.

STREAMS AND RIVERS LISTING METHODOLOGY:

Stream and river monitoring segments will be listed as non-support when more than 20 percent of the total samples in the period of record exceed the applicable base flows values, listed in APC&EC Reg. 2.503.

LAKES AND RESERVOIRS LISTING METHODOLOGY:

Lakes and reservoirs will be listed as non-support when more than 20 percent of the total samples for the period of record (collected approximately 1 meter below the surface of the water) exceed the turbidity standard of 25 NTU.

STREAMS AND RIVERS DELISTING METHODOLOGY:

Stream and river monitoring segments will be listed as support when 20 percent or less of the total samples in the period of record exceed the applicable base flows values, listed in APC&EC Reg. 2.503.

LAKES AND RESERVOIRS DELISTING METHODOLOGY:

Lakes and reservoirs will be listed as support when 20 percent or less of the total samples for the period of record (collected approximately 1 meter below the surface of the water) exceed the turbidity standard of 25 NTU.

All Flows Values

All flows values apply to data collected throughout the year, including data collected between June 1 and October 31.

STREAMS AND RIVERS LISTING METHODOLOGY:

Stream and river monitoring segments will be listed as non-support when more than 25 percent of the total samples (sample set not to be fewer than 24 data points) for the period of record exceed the applicable all flows values, listed in APC&EC Reg. 2.503.

LAKES AND RESERVOIRS LISTING METHODOLOGY:

Lakes and reservoirs will be listed as non-support when more than 25 percent of the total samples (sample set not to be fewer than 24 data points) for the period of record (collected approximately 1 meter below the surface of the water) exceed the turbidity standard of 45 NTU.

STREAMS AND RIVERS DELISTING METHODOLOGY:

Stream and river monitoring segments will be listed as support when 25 percent or less of the total samples (sample set not to be fewer than 24 data points) for the period of record exceed the applicable all flows values listed in APC&EC Reg. 2.503.

LAKES AND RESERVOIRS DELISTING METHODOLOGY:

Lakes and reservoirs will be listed as support when 25 percent or less of the total samples (sample set not to be fewer than 24 data points) for the period of record (collected approximately 1 meter below the surface of the water) exceed the turbidity standard of 45 NTU.

If a monitoring segment is assessed as not meeting either the base flows or all flows values, or both, it will be listed as non-support for turbidity.