Compilation of Surface Water Quality Criteria for Turbidity, Total Suspended Solids, and Sediment Adopted by Other States[1]

Summary of Turbidity Criteria (See Table 1)

- 21 states with only numeric criteria for turbidity
- 7 states with only narrative criteria
- 6 states with both narrative and numeric criteria
- 15 states with turbidity impairments or TMDLs in their Integrated Report
- Most of the narrative criteria is a variation of "no substantial visible contrast from the natural appearance of water"
- Numeric criteria vary between 5, 10, 15, 25, or 50 NTU or 10% or 20% increase

Summary of Total Suspended Solids Criteria (See Table 2)

- 12 states with only narrative criteria for Total Suspended Solids
- 5 states with only numeric criteria
- 1 state with both narrative and numeric criteria
- 8 states with total maximum daily loads (TMDLs) for TSS
- Most narrative criteria are a variation of "not present in concentrations that would could adverse effects to designated uses or aquatic life"

Summary of Sediment Criteria (See Table 3)

- 11 states with only narrative sediment criteria
- 1 state with only numeric criteria
- 0 states with both
- 7 states with sediment impairments in their Integrated Report

[1] Summary was compiled by reviewing a subset of Surface Water Quality Standards from other states. The summary is not comprehensive, but is intended to provide a cross-section of different approaches.

Table 1. Summary of state turbidity criteria.

State	Designated Use	Narrative Criteria	Numeric Criteria	Impairments in Integrated Report
Arizona	Aquatic and Wildlife cold water		10 NTU	7
Arizona	Aquatic and Wildlife warm water		50 NTU in rivers streams, 25 NTU in lakes and reservoirs	
Alabama	Public water supply, swimming and other whole body water-contact sports; shellfish harvesting; fish and wildlife; agricultural and industrial water supply; industrial operations; navigation.	no turbidity that will interfere with natural appearance or uses	can not exceed 50 NTU above background	1
Alaska	Drinking water, primary recreation		Turbidity may not exceed 5 NTU above natural conditions when the natural turbidity is 50 NTU or less, and may not have more than 10% increase in turbidity when the natural turbidity is more than 50, not to exceed a maximum increase of 25 NTU.	3
Alaska	Secondary recreation		Turbidity may not exceed 5 NTU above natural conditions when natural turbidity is 50 NTU or less, and not have more than 20% increase in turbidity when the natural condition is more than 50 NTU, not to exceed a maximum	

State	Designated Use	Narrative Criteria	Numeric Criteria	Impairments in Integrated Report
			increase of 50 NTU. For all lake waters, shall not exceed 5 NTU over natural conditions.	
Alaska	Aquaculture		May not exceed 25 NTU above natural conditions. For all lake waters, may not exceed 5 NTU above natural conditions.	
Arkansas	public water supplies, commercial, industrial and agricultural uses, aesthetics, recreational purposes, propagation of fish and wildlife, other beneficial uses	There shall be no distinctly visible increase in turbidity of receiving waters attributable to municipal, industrial, agricultural, other waste discharges or instream activities.		10
Colorado			Provide some numeric standards by major river systems, although no turbidity or other sediment-related criteria are specified.	0
Delaware	All fresh waters		Turbidity shall not exceed natural levels by more than 10 NTU	0

State	Designated Use	Narrative Criteria	Numeric Criteria	Impairments in Integrated Report
Florida			Shall not exceed 29 NTUs above natural background conditions.	10
Georgia		All waters shall be free from turbidity which results in a substantial visual contrast in a water body due to a man-made activity.		0
Hawaii	Streams wet season		5-25 NTU	15
	streams dry season		2-10 NTU	
Iowa	All surface waters		The turbidity of the receiving water shall not be increased by more than 25 NTU by any point source discharge.	30
Louisiana	Estuarine lakes, bays, bayous, canals		50 NTU	32
	Lakes, reservoirs, scenic streams, outstanding waters		25 NTU	
		Turbidity other than that of natural origin shall not cause substantial visual contrast with the		

State	Designated Use	Narrative Criteria	Numeric Criteria	Impairments in Integrated Report
		natural appearance of the waters of the state or impair any designated water use		
Maryland	All streams		Turbidity in the surface water resulting from any discharge may not exceed 150 units at any time or 50 units as a monthly average. Turbidity may not exceed level detrimental to aquatic life	0
Massachusetts	Drinking water, fish, other aquatic life, recreation, coastal and marine classes	Free from turbidity that impairs aesthetics or uses		0
Minnesota	Domestic consumption		5-24 NTU	0
Minnesota	Fisheries and recreation		10-25 NTU	
Minnesota	Industrial Consumption		5 NTU	
Mississippi			The turbidity outside the limits of a 750-foot mixing zone shall not exceed the	0

State	Designated Use	Narrative Criteria	Numeric Criteria	Impairments in Integrated Report
			background turbidity at the time of discharge by more than 50 NTU	
Missouri		Water contaminants shall not cause or contribute to turbidity or color that will cause substantial visible contrast with the natural appearance of the stream or lake or interfere with beneficial uses		0
Montana	B1 streams		The maximum allowable increase above naturally occurring turbidity is 5 NTU	2
Montana	B2 and B3 streams		The maximum allowable increase above naturally occurring turbidity is 10 NTU	
Montana	C1 streams		The maximum allowable increase above naturally occurring turbidity is 5 NTU	
Montana	C2 streams		The maximum allowable increase above naturally occurring turbidity is 10 NTU	

State	Designated Use	Narrative Criteria	Numeric Criteria	Impairments in Integrated Report
Nevada	waters located in areas of little human habitation, no industrial development or intensive agriculture and where the watershed is relatively undisturbed by man's activity		Specific turbidity (NTU) values given for specific rivers in the state.	15
Nevada	Aquatic Life	The water must be suitable as a habitat for fish and other aquatic life existing in a body of water. This does not preclude the reestablishment of other fish or aquatic life.		
New Hampshire	Class A Waters	shall contain no turbidity, unless naturally occurring.		0
New Hampshire	Class B and C waters		shall not exceed naturally occurring conditioning by more than 10 NTUs.	
New Jersey	Fresh waters that are not designated as FW1 or Pineland waters		Maximum 30-day average of 15 NTU, a maximum of 50 NTU at any time.	0
New Jersey	Coastal saline waters		Levels shall not exceed 10.0 NTU	

State	Designated Use	Narrative Criteria	Numeric Criteria	Impairments in Integrated Report
New Jersey	Saline estuaries		Maximum 30-day average of 10 NTU, a maximum of 30 NTU at any time.	
New Mexico		Turbidity attributable to other than natural causes shall not reduce light transmission to the point that the normal growth, function, or reproduction of aquatic life is impaired or that will cause substantial visible contrast with the natural appearance of the water.	Activities or discharges shall not cause turbidity to increase more than 10 NTU over background turbidity when the background turbidity, measured at a point immediately upstream of the activity, is 50 NTU or less, nor to increase more than twenty percent when the background turbidity is more than 50 NTU. However, limited-duration turbidity increases caused by dredging, construction or other similar activities may be allowed provided all practicable turbidity control techniques have been applied and all appropriate permits, certifications and approvals have been obtained.	38- TMDLs for Turbidity listed as TSS values
New York	Water Body Types AA, A, B, C, D, SA, SB, SC, SD, I:	No increase except from natural sources that will cause a substantial		0

State	Designated Use	Narrative Criteria	Numeric Criteria	Impairments in Integrated Report
		visible contrast to natural conditions.		
New York	water body type GA		turbidity shall not exceed 5 NTU	
North Carolina	streams not designated as trout water		shall not exceed 50 NTU	5
North Carolina	streams, lakes, or reservoirs designated as trout waters		shall not exceed 10 NTU	
North Carolina	Lakes or reservoirs not designated as trout waters		shall not exceed 25 NTU	
Oklahoma	Cool Water aquatic community/trout fisheries		Turbidity from other than natural sources shall be restricted to not exceed 10 NTU	32
Oklahoma	Lakes		Turbidity from other than natural sources shall be restricted to not exceed 25 NTU	
Oklahoma	Other surface waters		Turbidity from other than natural sources shall be restricted to not exceed 50 NTU	
Oregon			No more than a ten percent cumulative increase in natural stream turbidities shall be allowed, as measured relative to a control point immediately	4

State	Designated Use	Narrative Criteria	Numeric Criteria	Impairments in Integrated Report
			upstream of the turbidity causing activity	
Rhode Island	Potable Water Supply, highest use		Turbidity not to exceed 5 NTU over background	0
Rhode Island	fish and wildlife habitat and primary and secondary contact recreational activities		Turbidity not to exceed 10 NTU over background	
South Carolina	Freshwater other than lakes		50 NTU	0
South Carolina	Lakes and shellfish harvesting		25 NTU	
South Carolina	Put, Grow, and Take (TPGT) are freshwaters suitable for supporting growth of stocked trout populations and a balanced indigenous aquatic community of fauna and flora		Turbidity not to exceed 10% above natural conditions, provided existing uses are maintained. Trout waters can not exceed 10 NTU	
Tennessee		There shall be no turbidity or color in amounts or characteristics that cannot be reduced to acceptable concentrations by conventional water treatment processes.		0

State	Designated Use	Narrative Criteria	Numeric Criteria	Impairments in Integrated Report
Texas	Surface waters, aquatic life uses and habitat	Waste discharges shall not cause substantial and persistent changes from ambient conditions of turbidity or color.		0
Utah	coldwater and warmwater game fish and other cold water aquatic life, including the necessary aquatic organisms in their food chain, recreation and aesthetics		10 NTU	0
Utah	non-game fish and waterfowl, shore birds and other water-oriented wildlife		15 NTU	
Vermont	Class A Waters		Can not exceed 10 NTU	
Vermont	Class B Waters		Cold water not to exceed 10 NTU, warm water not to exceed 25 NTU	
Washington	Class AA (extraordinary) Class A (excellent)		Turbidity shall not exceed 5 NTU over background turbidity when the background turbidity is 50 NTU or less, or have more than a 10 percent increase in turbidity when the	31

State	Designated Use	Narrative Criteria	Numeric Criteria	Impairments in Integrated Report
			background turbidity is more than 50 NTU.	
Washington	Class B (good) class C (fair)		Turbidity shall not exceed 10 NTU over background turbidity when the background turbidity is 50 NTU or less, or have more than a 20 percent increase in turbidity when the background turbidity is more than 50 NTU	
Washington	Lake Class		Turbidity shall not exceed 5 NTU over background conditions.	
Washington DC	Class A, B and C		20 NTU	
West Virginia	A, B and C		No point or non-point source to West Virginia's waters shall contribute a net load of suspended matter such that the turbidity exceeds 10 NTU's over background turbidity when the background is 50 NTU or less, or have more than a 10% increase in	0

State	Designated Use	Narrative Criteria	Numeric Criteria	Impairments in Integrated Report
			turbidity (plus 10 NTU minimum) when the background turbidity is more than 50 NTUs	
Wyoming	Class 1 and Class 2 cw		the discharge of substances attributable to or influenced by the activities of man shall not be present in quantities which would result in a turbidity increase of more than 10 NTU	
Wyoming	Class 2 ww and Class 3		the discharge of substances attributable to or influenced by the activities of man shall not be present in quantities which would result in a turbidity increase of more than 15 NTU	

Table 2. Total suspended solids criteria summary.

State	Designated Use	Narrative Criteria	Numeric Criteria	TMDLs
Hawaii	streams:wet season		20-80 mg/L	11
Hawaii	streams:dry season		10-55 mg/L	
Massachusetts	Drinking water, fish, other aqutic life, recreation, coastal and marine classes	free from suspended solids in concentrations that would impair uses or aesthetics		
Kansas		Suspended solids added to surface waters by artificial sources shall not interfere with the behavior, reproduction, physical habitat, or other factors related to the survival and propagation of aquatic or semiaquatic life or terrestrial wildlife.		89
Kentucky	Warm water aquatic habitat	Total suspended solids shall not be changed to the extent that the indigenous aquatic community is adversely affected.		0
Mississippi		Waters shall be free from total suspended solids, or other conditions in such degree as to create a nuisance, render the waters injurious to public health, recreation or to aquatic life and wildlife or adversely affect the palatability of fish, aesthetic quality, or impair the waters for any designated uses.		0

State	Designated Use	Narrative Criteria	Numeric Criteria	TMDLs
Missouri		Water contaminants shall not cause or contribute to solids in excess of a level that will interfere with beneficial uses		21
Montana	B1 B2 B-3 C-1 C-2 water bodies	No increases are allowed above naturally occurring concentrations of sediment, settleable solids, oils, or floating solids, which will or are likely to create a nuisance or render the waters harmful, detrimental, or injurious to public health, recreation, safety, welfare, livestock, wild animals, birds, fish, or other wildlife.		6
Nevada	waters located in areas of little human habitation, no industrial development or intensive agriculture and where the watershed is relatively undisturbed by man's activity		Suspended solids (mg/l) values given for specific rivers in the state.	15
Nevada	Aquatic Life	The water must be suitable as a habitat for fish and other aquatic life existing in a body of water. This does not preclude the reestablishment of other fish or aquatic life.		
New Jersey			25.0 (mg/L)	14
New Mexico		Suspended or settleable solids from other than natural causes shall not be present in surface waters of the state in quantities that damage or impair the normal growth, function or reproduction of aquatic life or adversely affect other designated uses.		

State	Designated Use	Narrative Criteria	Numeric Criteria	TMDLs
New York		None from sewage, industrial colloidal and wastes or other wastes that will settleable solids cause deposition or impair the waters for their best usages		0
North Dakota	Class 1 streams		Thirty milligrams per liter consecutive thirty-day average	0
South Dakota	Coldwater permanent fish life propagation waters		(TSS) less than 30 mg/L as a 30 day average and 53 mg/L as a daily maximum.	26
South Dakota	Coldwater semipermanent fish life propagation waters		TSS less than 90 mg/L as a 30 day average and 158 mg/L as a daily maximum.	
South Dakota	Warmwater permanent and semi-permanent fish life propagation waters		TSS less than 90 mg/L as a 30 day average and 158 mg/L as a daily maximum.	
South Dakota	Warmwater marginal fish life propagation water		TSS less than 150 mg/L as a 30 day average and 263 mg/L as a daily maximum.	
Tennessee		There shall be no distinctly visible solids, scum, foam, oily slick, or the formation of slimes, bottom deposits or sludge banks of such size or character as may impair the usefulness of the water as a source of domestic water supply.		0
Texas	surface waters	Surface water shall be essentially free of floating debris and suspended solids that are conducive to producing adverse responses in aquatic organisms or putrescible sludge deposits or sediment layers which adversely affect benthic biota or any lawful uses.		0

State	Designated Use	Narrative Criteria	Numeric Criteria	TMDLs
Utah	coldwater game fish and other cold water aquatic life, including the necessary aquatic organisms in their food chain		35 mg/L	2
Utah	warmwater game and non-game fish		90 mg/L	
Vermont	Class B waters	No concentrations of TSS that would prevent the full support of uses		
Wyoming	all surface waters	floating and suspended solids attributable to or influenced by the activities of man shall not be present in quantities which could result in significant aesthetic degradation, significant degradation of habitat for aquatic life, or adversely affect public water supplies, agricultural or industrial water use, plant life or wildlife.		0

Table 3. Sediment criteria summary.

State	Designated Use	Narrative Criteria	Numeric Criteria	Summary of Impairments for Sediment in Integrated Report
Arizona	Aquatic & Wildlife cold water		25 mg/L	3
Arizona	Aquatic & Wildlife warm water		80 mg/L	
Montana	B1 B2 B-3 C-1 C-2 water bodies	No increases are allowed above naturally occurring concentrations of sediment, settleable solids, oils, or floating solids, which will or are likely to create a nuisance or render the waters harmful, detrimental, or injurious to public health, recreation, safety, welfare, livestock, wild animals, birds, fish, or other wildlife.		255
Nevada	waters located in areas of little human habitation, no industrial development or intensive agriculture and where the watershed is relatively	Settleable solids. Only amounts attributable to man's activities which will not make the waters unsafe or unsuitable as a drinking water source or which will not be detrimental to aquatic life or for any other beneficial use established for this class		1

State	Designated Use	Narrative Criteria	Numeric Criteria	Summary of Impairments for Sediment in Integrated Report
	undisturbed by man's activity			
Nevada	Aquatic Life	The water must be suitable as a habitat for fish and other aquatic life existing in a body of water. This does not preclude the reestablishment of other fish or aquatic life.		
New Hampshire		Class A waters shall contain no benthic deposits, unless naturally occurring. Class B waters shall contain no benthic deposits that have a detrimental impact on the benthic community, unless naturally occurring.		0
New Mexico		Surface waters of the state shall be free of water contaminants from other than natural causes that will settle and damage or impair the normal growth, function, or reproduction of aquatic life or significantly alter the physical or chemical properties of the bottom.		8

State	Designated Use	Narrative Criteria	Numeric Criteria	Summary of Impairments for Sediment in Integrated Report
New York		None from sewage, industrial colloidal and wastes or other wastes that will settleable solids cause deposition or impair the waters for their best usages		0
Oregon		The formation of appreciable bottom or sludge deposits or the formation of any organic or inorganic deposits deleterious to fish or other aquatic life or injurious to public health, recreation, or industry shall not be allowed		39
Tennessee		There shall be no distinctly visible solids, scum, foam, oily slick, or the formation of slimes, bottom deposits or sludge banks of such size or character as may impair the usefulness of the water as a source of domestic water supply.		7
Texas	surface waters	Surface waters shall be essentially free of settleable solids conducive to changes in flow characteristics of stream channels or the untimely filling of surface water in the state.		0
Vermont	Class B waters	no concentrations that would prevent the full support of uses		2

State	Designated Use	Narrative Criteria	Numeric Criteria	Summary of Impairments for Sediment in Integrated Report
Wyoming	all surface waters	substances attributable to or influenced by the activities of man that will settle to form sludge, bank or bottom deposits shall not be present in quantities which could result in significant aesthetic degradation, significant degradation of habitat for aquatic life or adversely affect public water supplies, agricultural or industrial water use, plant life or wildlife.		0