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| | Turbidity: | |
| Alabama | Public Water Supply: There shall be no turbidity of other than natural origin that will cause substantial visible contrast with the natural appearance of waters or interfere with any beneficial uses which they serve. Furthermore, in no case shall turbidity exceed 50 Nephelometric units above background. Background will be interpreted as the natural condition of the receiving waters, without the influence of man-made or man-induced causes. Turbidity levels caused by natural runoff will be included in establishing background levels. | |
| | The following uses require the same turbidity criteria as described above: swimming and other whole body water-contact sports; shellfish harvesting; fish and wildlife; agricultural and industrial water supply; industrial operations; navigation. | |
| | FRESH WATER USES: | |
| Alaska | Drinking, water supply and culinary food processing, contact recreation : turbidity units (NTU) may not exceed 5 nephelometric units 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. | Agriculture: may not cause detrimental effects on indicated use |
| | No measurable increase in concentration of settleable solids above natural conditions, measured by the volumetric Imhoff cone method. | |
| | Water Supply : aquaculture, industrial No imposed loads that will interfere with established water supply treatment levels. | |
| | Secondary Contact Recreation : Shall 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 increase of 50 NTU. For all lake waters, shall not exceed 5 NTU over natural conditions. | |
| | Aquaculture : May not exceed 25 NTU above natural conditions. For all lake waters, may not exceed 5 NTU above natural conditions. | |
| | Growth and propagation of fish, shellfish, and other aquatic life: The percent | |

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| | accumulation of fine sediment in the range of 0.1 mm to 4.0 mm in the gravel bed of waters used by anadromous or resident fish for spawning may not be increased more than 5% by weight above natural conditions (as shown from grain size accumulation graph). In no case may the 0.1 mm to 4.0 mm fine sediment range in those gravel beds exceed a maximum of 30% by weight (as shown from grain size accumulation graph). | In other surface waters no sediment loads (suspended or deposited) that can cause adverse effects on aquatic animal or plant life, their reproduction or habitat may be present. |
| | Water supply agriculture, including irrigation and stock watering: For sprinkler irrigation, water must be free of particles of 0.074 mm or coarser. For irrigation or water spreading, may not exceed 200 mg/l for an extended period of time. | |
| Arizona | Designated uses of a surface water may include full body contact, partial body contact, domestic water source, fish consumption, aquatic and wildlife (cold water fishery), aquatic and wildlife (warm water fishery), aquatic and wildlife (ephemeral), aquatic and wildlife (effluent dependent water), agricultural irrigation, and agricultural livestock watering. The following water quality standards for turbidity, expressed as a maximum concentration in nephelometric turbidity units (NTU), shall not be exceeded: Full body contact and incidental human contact: Not to exceed 50 NTU in streams, or 25 NTU in lakes. Aquatic and Wildlife (cold water fishery): Not to exceed 10 NTU in rivers, streams, other flowing waters, lakes, reservoirs, tanks and ponds. | A surface water shall be free from pollutants in amounts or combinations that: 1. Settle to form bottom deposits that inhibit or prohibit the habitation, growth, or propagation of aquatic life or that impair recreational uses; 2. Cause objectionable odor in the area in which the surface water is located; 3. Cause off-taste or odor in drinking water; 4. Cause off-flavor in aquatic organisms or waterfowl; 5. Are toxic to humans, animals, plants, or other organisms; 6. Cause the growth of algae or aquatic plants that inhibit or prohibit the habitation, growth, or propagation of other aquatic life or that impair recreational uses; 7. Cause or contribute to a violation of an aquifer water quality standard prescribed in 8. Change the color of the surface water from natural background levels of color. |

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| | and value of the streams for public wa | ommission has taken into consideration the use ater supplies, commercial, industrial and nal purposes, propagation of fish and wildlife, essed at public hearings. | Significant physical alterations of the habitat within extraordinary resource waters, ecologically sensitive waterbodies or natural and scenic waterways are not allowed. |
| Arkansas | | crease in turbidity of receiving waters attributable other waste discharges or instream activities. | |
| Ā | Waterbodies/Streams | Limit (NTU) | |
| | Ozark Highlands | 10 | |
| | Boston Mountains | 10 | |
| | Arkansas River Valley | 21 | |
| | Ouachita Mountains | 10 | |
| | Springwater-influenced Gulf Coastal | 21 | |
| | Typical Gulf Coastal | 21 | |
| | Least-Altered Delta | 45 | |
| | Channel-Altered Delta | 75 | |
| | Arkansas River | 50 | |
| | Mississippi River | 50 | |
| | Red River | 50 | |
| | St. Francis River | 75 | |
| | Trout | 10 | |
| | Lakes and Reservoirs | 25 | |

California

None listed in state regulations.

EPA doc provides some (from California Water Quality Standards by River Basins, Ca. 1975).

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| Colorado | Provide some numeric standards by major river systems, although no turbidity or other sediment-related criteria are specified. | The Commission recognizes that excessive salinity and suspended solids levels can be detrimental to the water use classifications. The Commission has established salinity standards for the Colorado River Basin ("Water Quality Standards for Salinity including Numeric Criteria and Plan of Implementation of Salinity Control", Commission Regulation No. 39) but has not established or assigned other standards for salinity or suspended solids control practices to be developed through 208 plans, coordination with agricultural agencies, and further studies of existing water quality. |
| Connecticut | Could not identify any sediment-related criteria for non-point source (EPA document lists upper turbidity limits for streams classed) | |
| Delaware | For all Fresh Waters: Turbidity shall not exceed natural levels by more than 10 Nephelometric or Formazin Turbidity Units For mixing zones, there is a limit of 10 ntu above natural background. | |
| Florida | Turbidity: Shall not exceed 29 NTUs above natural background conditions. Biological Integrity: No more than a 75% reduction of benthic macro-invertebrates using the Shannon-Weaver Index relative to established background levels measured using organisms retained by a U.S. Standard No. 30 sieve collected and composited from a minimum of three natural mini- Dendy type artificial substrate samples of 0.1 to 0.15 m², incubated for 4 weeks. Transparency shall not be reduced by more than 10% | |

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| 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. The upstream appearance of a body of water shall be as observed at a point immediately upstream of a turbidity-causing man-made activity. That upstream appearance shall be compared to a point which is located sufficiently downstream from the activity so as to provide an appropriate mixing zone. | All waters shall be free from material related to municipal, industrial or other discharges which produce turbidity, color, odor or other objectionable conditions which interfere with legitimate water uses. |
| Hawaii | Streams: Not to exceed the given value: <u>More than</u> Geometric 10% 2% Parameter Mean of the time the time 10.0** 30.0** 55.0** Solids (mg/L) Turbidity (N.T.U.) 5.0* 15.0* 25.0* 2.0** 5.5** 10.0** * Wet season - November 1 through April 30. ** Dry season - May 1 through October 31. Solids (mg/L) Hotom criteria for streams: (A) Episodic deposits of flood-borne soil sediment shall not occur in quantities exceeding an equivalent thickness of five millimeters (0.20 inch) over hard bottoms twenty-four hours after a heavy rainstorm. | All waters shall be free of substances attributable to domestic, industrial, or other controllable sources of pollutants, including: (1) Materials that will settle to form objectionable sludge or bottom deposits; (2) Floating debris, oil, grease, scum, or other floating materials; (3) Substances in amounts sufficient to produce taste in the water or detectable off-flavor in the flesh of fish, or in amounts sufficient to produce objectionable color, turbidity or other conditions in the receiving waters; (4) High or low temperatures; biocides; pathogenic organisms; toxic, radioactive, corrosive, or other deleterious substances at levels or in combinations sufficient to be toxic or harmful to human, animal, plant, or aquatic life, or in amounts sufficient to interfere with any beneficial use of the water; (5) Substances or conditions or combinations thereof in concentrations which produce undesirable aquatic life; (6) Soil particles resulting from erosion on land involved in earthwork, such as the construction of public works; highways; subdivisions; recreational, commercial, or industrial developments; or the cultivation and management of agricultural lands. |
| | (B) Episodic deposits of flood-borne soil sediment shall not occur in quantities exceeding an equivalent thickness of ten millimeters (0.40 inch) over soft bottoms twenty-four hours after a heavy rainstorm. (C) In soft bottom material in pool sections of streams, oxidation-reduction potential (EH) in the top ten centimeters (four inches) shall not be less than +100 millivolts. (D) In soft bottom material in pool sections of streams, no more than fifty per cent of the grain size distribution of sediment shall be smaller than 0.125 millimeter (0.005 inch) in diameter. Biological criteria for streams: The director shall prescribe the appropriate parameters, measures, and criteria for monitoring stream bottom biological communities including their habitat, which may be affected by proposed actions. Permanent benchmark stations may be required where necessary for monitoring purposes. The water quality criteria for this subsection shall be deemed to be met if time series surveys of benchmark stations indicate no relative changes in the relevant biological communities, as noted by biological community | The water quality standards (for most subsections) shall be deemed to be met if time series surveys of benchmark station indicate no relative changes in the relevant biological communities, as noted by biological community indicators or by indicator organisms which may be applicable to the specific site. |

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indicators or by indicator organisms which may be applicable to the specific site.

Coastal and Marine

Turbidity (N.T.U.) not to exceed the given value:

| | | More | than |
|----------------|-----------|-------------|----------|
| | Geometric | 10% | 2% |
| Location | Mean | of the time | the time |
| All Estuaries | 1.5 | 3.0 | 5.0 |
| Pearl Harbor | 4.0 | 8.0 | 15.0 |
| Embayments | 0.4 | 1.0 | 1.5 |
| Open Coastal | 0.5* | 1.25* | 2.0* |
| Waters | 0.02** | 0.05** | 1.0** |
| Oceanic Waters | 0.03 | 0.1 | 0.2 |
| Marine (1000m) | 0.1 | | |
| | | | |

* Wet season - November 1 through April 30.

** Dry season - May 1 through October 31.

Marine Bottom Types

Sand beaches: No more than fifty per cent of the grain size distribution of sediment shall be smaller than 0.125 millimeters in diameter

Lava rock shorelines: Episodic deposits of flood-borne sediment shall not occur in quantities exceeding an equivalent thickness of five millimeters (0.20 inch) for longer than twenty-four hours after a heavy rainstorm;

Marine pools and protected coves: no more than fifty per cent of the grain size distribution of the sediment shall be smaller than 0.125 millimeters in diameter;

Reef Flats and Reef Communities:

No more than fifty per cent of the grain size distribution of sand patches shall be smaller than 0.125 millimeters in diameter; Episodic deposits of flood-borne soil sediment shall not occur in quantities exceeding equivalent thicknesses for longer than twenty-four hours after a heavy rainstorm as follows:

Living coral surfaces: No thicker than an equivalent of two millimeters (0.08 inch) **Hard bottoms**: No thicker than an equivalent of five millimeters (0.2 inch) **Soft bottoms**: No thicker than an equivalent of ten millimeters (0.4 inch) Specific criteria to be applied to all reef flats and reef communities: No action shall be undertaken which would substantially risk damage, impairment, or alteration of the biological characteristics of the areas named herein.

"Soft bottom communities" means poorly described and "patchy" communities, mostly of burrowing organisms, living in deposits at depths between two to forty meters (approximately six to one hundred thirty feet). The particle size of sediment, depth below sea level, and degree of water movement and associated sediment turnover dictate the composition of animals which rework the bottom with burrows, trails, tracks, ripples, hummocks, and depressions.

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| Idaho | Aquatic Habitat Parameters. These parameters may include, but are not limited to, stream width, stream depth, stream shade, measurements of sediment impacts, bank stability, water flows, and other physical characteristics of the stream that affect habitat for fish, macroinvertebrates or other aquatic life; and (3-20-97) Biological Parameters. These parameters may include, but are not limited to, evaluation of aquatic macroinvertebrates including Ephemeroptera, Plecoptera and Trichoptera (EPT), Hilsenhoff Biotic Index, measures of functional feeding groups, and the variety and number of fish or other aquatic life to determine biological community diversity and functionality. | In determining whether a water body fully supports designated and existing beneficial uses, the Department shall determine whether all of the applicable water quality standards are being achieved, including any criteria developed pursuant to these rules, and whether a healthy, balanced biological community is present. The Department shall utilize biological and aquatic habitat parameters listed below and in the current version of the "Water Body Assessment Guidance", as published by the Idaho Department of Environmental Quality, as a guide to assist in the assessment of beneficial use status. These parameters are not to be considered or treated as individual water quality criteria or otherwise interpreted or applied as water quality standards. |
| Illinois | Soil Loss : Effective January 1, 1994 to January 1, 2000, all land greater than 5% slope subject to this program shall be considered in compliance with the State program if the long term annual soil losses are kept at or below one and one-half "T" value. Effective January 1, 2000, and thereafter, all land subject to the Act shall meet "T" value. The soil loss tolerance as established by the Soil Conservation Service and as published in the Soil Conservation Service Technical Guide (United States Department of Agriculture, Soil Conservation Service, Field Offices in Illinois) are adopted as the official "T" values for soils of Illinois. | Studies have not yet been able to accurately determine what part of the stream sediment load is attributable to stream bank erosion and what part comes from non-point sources of erosion. While the Department will encourage all conservation measures and practices to minimize stream bank erosion, more research needs to be done before the feasibility of and the responsibility for controlling stream bank erosion can be determined. |
| Indiana | No sediment-related criteria identified. | (1) All waters at all times and at all places, including the mixing zone, shall meet the minimum conditions of being free from substances, materials, floating debris, oil, or scum attributable to municipal, industrial, agricultural, and other land use practices, or other discharges: (A) that will settle to form putrescent or otherwise objectionable deposits; (B) that are in amounts sufficient to be unsightly or deleterious; (C) that produce color, visible oil sheen, odor, or other conditions in such degree as to create a nuisance; (D) which are in amounts sufficient to be acutely toxic to, or to otherwise severely injure or kill aquatic life, other animals, plants, or humans: |

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| lowa | Criteria applicable to all surface waters including general use and designated use waters, at all places and at all times to protect livestock and wildlife watering, aquatic life, noncontact recreation, crop irrigation, and industrial, domestic, agricultural and other incidental water withdrawal uses not protected by the specific numerical criteria. Turbidity : The turbidity of the receiving water shall not be increased by more than 25 Nephelometric turbidity units (N.T.U.) by any point source discharge. | Physical and biological integrity : The waters designated as high-quality resource waters will receive protection of existing uses through maintaining water quality levels necessary to fully protect existing uses or improve water quality to levels necessary to meet the designated use criterion. This involves the protection of such features of the water body as channel alignment, bed characteristics, water velocity, aquatic habitat, and the type, distribution and abundance of existing aquatic species. |
| Kansas | | Surface waters shall be free, at all times, from the harmful effects of substances that originate from artificial sources of pollution and that produce any public health hazard, nuisance condition, or impairment of a designated use. 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. |
| Kentucky | AQUATIC LIFE Warm water aquatic habitat. The following parameters and associated criteria shall apply for the protection of productive warm water aquatic communities, fowl, animal wildlife, arboreous growth, agricultural, and industrial uses: Total suspended solids. Total suspended solids shall not be changed to the extent that the indigenous aquatic community is adversely affected. Settleable solids. The addition of settleable solids that may alter the stream bottom so as to adversely affect productive aquatic communities is prohibited. | Surface waters shall not be aesthetically or otherwise degraded by substances that: (a) Settle to form objectionable deposits; (b) Float as debris, scum, oil, or other matter to form a nuisance; (c) Produce objectionable color, odor, taste, or turbidity; (d) Injure, are chronically or acutely toxic to or produce adverse physiological or behavioral responses in humans, animals, fish and other aquatic life; (e) Produce undesirable aquatic life or result in the dominance of nuisance species; (f) Cause fish flesh tainting. The concentration of all phenolic compounds which cause fish flesh tainting shall not exceed five (5) : g/l as an instream value; |

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| | Turbidity other than that of natural origin shall not cause substantial visual contrast with the natural appearance of the waters of the state or impair any designated water use. Turbidity shall not significantly exceed background; background is defined as the natural condition of the water. Determination of background will be on a case-by-case basis. As a guideline, maximum turbidity levels, expressed as nephelometric turbidity units (NTU), are established and shall apply for the following named waterbodies and major aquatic habitat types of the state: | All waters shall be free from such concentrations of substances attributable to wastewater or other discharges sufficient to: a. settle to form objectionable deposits; b. float as debris, scum, oil, or other matter to form nuisances or to negatively impact the aesthetics; c. result in objectionable color, odor, taste, or turbidity 3. Floating, Suspended, and Settleable Solids. |
| Louisiana | i. Red, Mermentau, Atchafalaya, Mississippi, and Vermilion Rivers and Bayou Teche—150 NTU; ii. estuarine lakes, bays, bayous, and canals—50 NTU; iii. Amite, Pearl, Ouachita, Sabine, Calcasieu, Tangipahoa, Tickfaw, and Tchefuncte rivers—50 NTU; iv. freshwater lakes, reservoirs, and oxbows—25 NTU; v. designated scenic streams and outstanding natural resource waters not specifically listed in Subsection B.9.b.i-iv of this Section—25 NTU; and vi. for other state waters and in waterbody segments where natural background turbidity exceeds the values specified in these clauses, turbidity in NTU caused by any discharges shall be restricted to the appropriate background value plus 10 percent. This shall not apply to designated intermittent streams. | |
| | Biological and Aquatic Community Integrity . The biological and community structure and function in state waters shall be maintained, protected, and restored except where not attainable and feasible as defined in LAC 33:IX.1109.B.3. This is the ideal condition of the aquatic community inhabiting the unimpaired water bodies of a specified habitat and region as measured by community structure and function. The biological integrity will be guided by the fish and wildlife propagation use designated for that particular water body. Fish and wildlife propagation uses are defined in LAC 33:IX.1111.C. The condition of these aquatic communities shall be determined from the measures of physical, chemical, and biological characteristics of each surface water body type, according to its designated use (LAC 33:IX.1123). Reference site conditions will represent naturally attainable conditions. These sites should be the least impacted and most representative of water body types. | |
| | Such reference sites or ecoments of water bodies shall be these observed to support the | |

Such reference sites or segments of water bodies shall be those observed to support the greatest variety and abundance of aquatic life in the region as is expected to be or has been recorded during past surveys in natural settings essentially undisturbed by human

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| s, development, or discharges. This condition shall be determined by consistent ng and reliable measures of selected, indicative communities of animals and/or brates as established by the department and may be used in conjunction with able chemical, physical, and microbial water quality measurements and records ned for this purpose. | |
| diment-related criteria identified. | |
| dity . (All streams) ity in the surface water resulting from any discharge may not exceed 150 units at ne or 50 units as a monthly average. Units shall be measured in Nephelometer ity Units. | Turbidity may not exceed level detrimental to aquatic life. |
| Body Classification A - These waters are designated as a source of public water supply. B - These waters are designated as a habitat for fish, other aquatic life, and e, and for primary and secondary contact recreation. ss C - These waters are designated as a habitat for fish, other aquatic life and e, and for primary and secondary contact recreation. SA - These waters are designated as an excellent habitat for fish, other aquatic d wildlife and for primary and secondary contact recreation. In approved areas hall be suitable for shellfish harvesting without depuration (Open Shellfish . These waters are designated as a habitat for fish, other aquatic life and e and for primary and secondary contact recreation. In approved areas hall be of primary and secondary contact recreation. These waters are designated as a habitat for fish, other aquatic life and e and for primary and secondary contact recreation. In approved areas they shall able for shellfish harvesting with depuration (Restricted Shellfish Areas). These shall have consistently good aesthetic value. | CLASS A, B, C, SA, SB Solids - These waters shall be free from floating, suspended and settleable solids in concentrations or combinations that would impair any use assigned to this class, that would cause aesthetically objectionable conditions, or that would impair the benthic biota or degrade the chemical composition of the bottom. Color and Turbidity - These waters shall be free from color and turbidity in concentrations or combinations that are aesthetically objectionable or would impair any use assigned to this class. |
| | s, development, or discharges. This condition shall be determined by consistent ng and reliable measures of selected, indicative communities of animals and/or brates as established by the department and may be used in conjunction with able chemical, physical, and microbial water quality measurements and records need for this purpose. |

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| Michigan | Uses an effluent limitation system. No numeric criteria were identified. | |
| Minnesota | Turbidity: Domestic consumption Class A–5 Class B–5 Class C–24 Fisheries and recreation Class A–10 Class B–25 Class C–25 Industrial consumption Class A–5 | |
| Mississippi | The turbidity outside the limits of a 750-foot mixing zone shall not exceed the background turbidity at the time of discharge by more than 50 Nephelometric Turbidity Units (NTU). | Waters shall be free from materials attributable to municipal, industrial, agricultural or other discharges producing color, odor, taste, 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. |
| Missouri | | Turbidity and Color. 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. Solids. Water contaminants shall not cause or contribute to solids in excess of a level that will interfere with beneficial uses. The stream or lake bottom shall be free of materials which will adversely alter the composition of the benthos, interfere with the spawning of fish or development of their eggs or adversely change the physical or chemical nature of the bottom. |

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| | | Biocriteria . The biological integrity of waters, as measured by lists or numeric diversity indices of benthic invertebrates, fish, algae or other appropriate biological indicators, shall not be significantly different from reference waters. Waters shall be compared with reference waters of similar size within an ecoregion. Reference water locations are listed in a Table. |
| | Turbidity B-1 Streams | B1 B2 B-3 C-1 C-2 water bodies |
| Montana | The maximum allowable increase above naturally occurring turbidity is 5 nephelometric turbidity units. B-2 and B-3 Streams The maximum allowable increase above naturally occurring turbidity is 10 nephelometric turbidity units. C-1 Streams The maximum allowable increase above naturally occurring turbidity is 5 nephelometric turbidity units. C-2 Streams The maximum allowable increase above naturally occurring turbidity is 10 nephelometric turbidity units. | 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. |
| Nebraska | No sediment-related criteria identified. | |
| | Class A waters include waters or portions of waters located in areas of little human habitation, no industrial development or intensive agriculture and where the watershed | For some waters (not all), turbidity is included in the following statement: |
| ada | is relatively undisturbed by man's activity: | Waters must be free from high temperature, biocides, organisms pathogenic to human beings, toxic, corrosive or other deleterious substances attributable to |
| Nevada | 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. | domestic or industrial waste or other controllable sources at levels or combinations sufficient to be toxic to human, animal, plant or aquatic life or in amounts sufficient to interfere with any beneficial use of the water. Compliance with the provisions of this subsection may be determined in accordance with |
| | Specific turbidity (NTU) and suspended solids (mg/l) values given for specific rivers in the state. | methods of testing prescribed by the department. If used as an indicator, survival of test organisms must not be significantly less in test water than in control |

designated in N.J.A.C. 7:9B-1.15(h) Table 6, that are to be maintained in their natural state of quality (set aside for posterity) and not subjected to any man-made wastewater discharges or increases in runoff from anthropogenic activities) or Pinelands Waters:

Saline Estuaries: Maximum 30-day average of 10 NTU, a maximum of 30 NTU at any

Maximum 30-day average of 15 NTU, a maximum of 50 NTU at any time.

Coastal saline waters: Levels shall not exceed 10.0 NTU.

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| | 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. | water. |
| New Hampshire | Deposits (a) Class A waters shall contain no benthic deposits, unless naturally occurring. (b) Class B waters shall contain no benthic deposits that have a detrimental impact on the benthic community, unless naturally occurring. Turbidity Class A waters shall contain no turbidity, unless naturally occurring. Class B waters shall not exceed naturally occurring conditioning by more than 10 NTUs. Waters identified in RSA 485-A:8, III shall contain no turbidity of unreasonable kind or quality. Class C is the same as class B. Aquatic Life (a) The surface waters shall support and maintain a balanced, integrated, and adaptive community of organisms having a species composition, diversity, and functional organizational comparable to that of similar natural habitats of a region. (b) Differences from naturally occurring conditions shall be limited to non-detrimental differences in community structure and function. | (1) All surface waters shall be free from substances in kind or quantity which: a. Settle to form harmful deposits; b. Float as foam, debris, scum or other visible substances; c. Produce odor, color, taste or turbidity which is not naturally occurring and would render it unsuitable for its designated uses; d. Result in the dominance of nuisance species; or e. Interfere with recreational activities; |
| ey | Solids, Suspended25.0 (mg/L)Turbidity:Fresh waters that are not designated as FW1(those fresh waters, as | |

New Jersey

time.

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| New Mexico | | Turbidity : 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. |
| New | | Bottom Deposits: 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. |
| ¥ | Turbidity | Suspended, Colloidal and Settleable Solids |
| 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 visible contrast to natural conditions. | AA, A, B, C, D, SA, SB, SC, I, SD, A-Special None from sewage, industrial colloidal and wastes or other wastes that will |
| Nev | In water body type GA, turbidity shall not exceed 5 nephelometric units. | settleable solids cause deposition or impair the waters for their best usages. |
| | Turbidity : the turbidity in the receiving water shall not exceed: | Water Body Classification |
| olina | 50 Nephelometric Turbidity Units (NTU) in streams not designated as trout waters;10 NTU in streams, lakes or reservoirs designated as trout waters;25 NTU for lakes and reservoirs not designated as trout waters;If turbidity exceeds these levels due to natural background conditions, the existing turbidity level cannot be increased. | Class C: freshwaters protected for secondary recreation, fishing, aquatic life including propagation and survival, and wildlife. All freshwaters shall be classified to protect these uses at a minimum. |
| North Carolina | Compliance with this turbidity standard can be met when land management activities employ Best Management Practices (BMPs) [as defined by Rule .0202(6) of this | Class B: freshwaters protected for primary recreation which includes swimming on a frequent or organized basis and all Class C uses. |
| North | Section] recommended by the Designated Nonpoint Source Agency [as defined by Rule .0202 of this Section]. BMPs must be in full compliance with all specifications governing the proper design, installation, operation and maintenance of such BMPs; | Class WS: waters protected as water supplies. (There are five sub-categories depending on degree of development in the watershed.) The following are supplemental classifications: |
| | Nonpoint Source and Stormwater Pollution Control Criteria For Entire Watershed | (1) Trout waters (Tr): freshwaters protected for natural trout propagation and survival of stocked trout. |
| | WS-II Waters | (2) Swamp waters (Sw): waters which have low velocities and other natural |
| | (i) Nonpoint Source and Stormwater Pollution Control Criteria For Entire Watershed:(A) Low Density Option: Development density must be limited to either no more than | characteristics which are different from adjacent streams. |
| | one dwelling unit per acre of single family detached residential development (or 40,000 square foot lot excluding roadway right-of-way) or 12 percent built-upon area | (3) Nutrient Sensitive Waters (NSW): waters subject to growths of microscopic or macroscopic vegetation requiring limitations on nutrient inputs. |

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| | for all other residential and non-residential development in the watershed outside of the critical area; Stormwater runoff from the development shall be transported by vegetated conveyances to the maximum extent practicable; (B) High Density Option: If new development exceeds the low density option requirements as stated in Sub-Item (3)(b)(i)(A) of this Rule, then engineered stormwater controls must be used to control runoff from the first inch of rainfall; new residential and non-residential development shall not exceed 30 percent built-upon area; (C) Land within the watershed shall be deemed compliant with the density requirements if the following condition is met: The density of all existing development at the time of reclassification does not exceed the density requirement when densities are averaged throughout the entire watershed area at the time of classification; (D) Cluster development is allowed on a project-by-project basis. (G) Minimum 100 foot vegetative buffer is required for all new development activities that exceed the low density option requirements as specified in Sub-Items (3)(b)(i)(A) and Sub-Item (3)(b)(i)(A) of this Rule; otherwise a minimum 30 foot vegetative buffer for development activities is required along all perennial waters indicated on the most recent versions of U.S.G.S. 1:24,000 (7.5 minute) scale topographic maps or as determined by local government studies; nothing in this Section shall stand as a bar to desirable artificial streambank or shoreline stabilization; (H) No new development is allowed in the buffer; water dependent structures, or other structures such as flag poles, signs and security lights, which result in only diminimus increases in impervious area and public projects such as road crossings and greenways may be allowed where no practicable alternative exists; these activities shall minimize built-upon surface area, direct runoff away from the surface waters and maximize the utilization of BMPs; | (4) Outstanding Resource Waters (ORW): unique and special waters of exceptional state or national recreational or ecological significance which require special protection to maintain existing uses. |
| | (Other water classes have similar BMP type rules with some of the numbers changed slightly.) | |
| | Critical Area Nonpoint Source and Stormwater Pollution Control Criteria: Total dissolved solids: not greater than 500 mg/l; | |

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| North Dakota | Class I streams: Suspended solids: Thirty milligrams per liter consecutive thirty-day average. Class II :none | |
| Ohio | Water quality standards are specified as deviation from biotic indices for each ecoregion. Values of the index are specified in detail by waterbody or ecoregion. [not reproduced here.] | |
| Oklahoma | Classification: The narrative and numerical criteria in this section are designated to promote fish and wildlife propagation for the fishery classifications of Habitat Limited Aquatic Community, Warm Water Aquatic Community, Cool Water Aquatic Community (Excluding Lake Waters), and Trout Fishery (Put and Take). (c) Cool Water Aquatic Community subcategory. Cool Water Aquatic Community means a subcategory of the beneficial use category "Fish and Wildlife Propagation" where the water quality, water temperature and habitat are adequate to support warm water intolerant climax fish communities and includes an environment suitable for the full range of cool water benthos. Typical species may include smallmouth bass, certain darters and stoneflies. Turbidity from other than natural sources shall be restricted to not exceed the following numerical limits: Cool Water Aquatic Community/Trout Fisheries: 10 Nephelometric Turbidity Units (N.T.U.) Lakes: 25 N.T.U. Other surface waters: 50 N.T.U In waters where background turbidity exceeds these values, turbidity from point sources shall be restricted to not exceed ambient levels. | |

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| | Numerical criteria listed above apply only to normal stream flow conditions. Elevated turbidity levels may be expected during, and for several days after, a runoff event. | |
| | Biological Criteria Aquatic life in all waterbodies designated Fish and Wildlife Propagation (excluding waters designated "Trout, put-and-take") shall not exhibit degraded conditions as indicated by one or both of the following: (i) comparative regional reference data from a station of reasonably similar watershed size or flow, habitat type and Fish and Wildlife beneficial use subcategory designation or (ii) by comparison with historical data from the waterbody being evaluated. | |
| Oregon | Turbidity (Nephelometric Turbidity Units, NTU): No more than a ten percent cumulative increase in natural stream turbidities shall be allowed, as measured relative to a control point immediately upstream of the turbidity causing activity. However, limited duration activities necessary to address an emergency or to accommodate essential dredging, construction or other legitimate activities and which cause the standard to be exceeded may be authorized provided all practicable turbidity control techniques have been applied and one of the following has been granted. | Notwithstanding the water quality standards contained below, the highes and best practicable treatment and/or control of wastes, activities, and flows shall in every case be provided so as to maintain dissolved oxygen and overall water quality at the highest possible levels and water temperatures, coliform bacteria concentrations, dissolved chemical substances, toxic materials, radioactivity, turbidities, color, odor, and other deleterious factors at the lowest possible levels. |
| | 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; [some modifications to standards for specific rivers.] | |
| ania | No statewide criteria. The following turbidity criteria are specific to waters in the Neshaminy Creek Basin where indicated, based on special studies: | (a) Water may not contain substances attributable to point or nonpoint source discharges in concentration or amounts sufficient to be inimical or harmful to the water uses to be protected or to human, animal, plant or aquatic life.(b) In addition to other substances listed within or addressed by this chapter, |
| Pennsylvania | Potable water supply, warm water fishes, migratory fish: Not more than 100 NTU. | specific substances to be controlled include, but are not limited to, floating materials, oil, grease, scum and substances which produce color, tastes, orders, turbidity or settle to form deposits. |
| Per | Potable water supply and Cold Water Fishes (Maintenance or propagation, or both, of fish species including the family Salmonidae and additional flora and fauna which are | |

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| | indigenous to a cold water habitat.): For the period May 15—September 15 of any year, not more than 40 NTU Warm Water Fish, Migratory fish: for the period September 16—May 14 of any year, not more than 100 NTU | |
| Rhode Island | Class A (Potable water supply highest use): Turbidity not to exceed 5 NTU over background. Class B and C (fish and wildlife habitat and primary and secondary contact recreational activities. They shall be suitable for compatible industrial processes and cooling, hydropower, aquacultural uses, navigation, and irrigation and other agricultural uses: Turbidity not to exceed 10 NTU over background. | |
| South Carolina | Biological assessment methods may be employed in appropriate situations to determine abnormal nutrient enrichment, median tolerance limits (TLm), concentration of toxic substances, acceptable instream concentrations, or acceptable effluent concentrations for maintenance of a balanced indigenous aquatic community. 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. Suitable also for uses listed in Freshwaters. For this class: Turbidity: Not to exceed 10% above natural conditions, provided existing uses are maintained. (Other water classes do not have specific criteria for turbidity.) | 4. All ground waters and surface waters of the State shall at all times, regardless of flow, be free from: a. Sewage, industrial waste, or other waste that will settle to form sludge deposits that are unsightly, putrescent, or odorous to such degree as to create a nuisance, or interfere with classified water uses or existing water uses; b. Floating debris, oil, grease, scum, and other floating material attributable to sewage, industrial waste, or other waste in amounts sufficient to be unsightly to such a degree as to create a nuisance or interfere with classified water uses or existing water uses; c. Sewage, industrial, or other waste which produce taste or odor or change the existing color or physical, chemical, or biological conditions in the receiving waters or aquifers to such a degree as to create a nuisance, or interfere with classified water uses (except classified uses within mixing zones as described in this regulation) or existing water uses; and, d. High temperature, toxic, corrosive, or deleterious substances attributable to sewage, industrial waste, or other waste in concentrations or combinations which interfere with classified water uses (except classified uses within mixing zones as described in this regulation), existing water uses, or which are harmful to human, animal, plant or aquatic life. |

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| South Dakota | Coldwater permanent fish life propagation waters: Total suspended solids (TSS) less than 30 mg/L as a 30 day average and 53 mg/L as a daily maximum. 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. 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. Warmwater marginal fish life propagation waters: TSS less than 150 mg/L as a 30 day average and 263 mg/L as a daily maximum. | Raw or treated sewage, garbage, rubble, unpermitted fill materials, municipal wastes, industrial wastes, or agricultural wastes which produce floating solids, scum, oil slicks, material discoloration, visible gassing, sludge deposits, sediments, slimes, algal blooms, fungus growths, or other offensive effects may not be discharged or caused to be discharged into surface waters of the state. All waters of the state must be free from substances, whether attributable to human-induced point source discharges or nonpoint source activities, in concentrations or combinations which will adversely impact the structure and function of indigenous or intentionally introduced aquatic communities. |
| | Effluent Criteria : Effluents discharged from water pollution control facilities into waters classified for the beneficial use of coldwater permanent fish life propagation and coldwater marginal fish life propagation must be of high quality. In order to protect these uses, the effluent may not exceed 10 mg/L of suspended solids and 10 mg/L of 5-day biochemical oxygen demand. | |
| Tennessee | Turbidity or Color - There shall be no turbidity or color in amounts or characteristics that cannot be reduced to acceptable concentrations by conventional water treatment processes. | For all beneficial uses: Solids, Floating Materials and Deposits - 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. |
| Texas | Five subcategories of aquatic life use are established. They include limited, intermediate, high, and exceptional aquatic life and oyster waters. No specific criteria for a sediment-related number. | 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. (3) 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. Waste discharges shall not cause substantial and persistent changes from ambient conditions of turbidity or color. |
| | | Aquatic life uses and habitat. Vegetative and physical components of the |

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| | | aquatic environment will be maintained or mitigated to protect aquatic life uses. |
| | | Waste discharges shall not cause substantial and persistent changes from ambient conditions of turbidity or color. |
| Utah | Turbidity Increase: 10 ntu for coldwater and warmwater game fish and other cold water aquatic life, including the necessary aquatic organisms in their food chain: 15 ntu for non-game fish and waterfowl, shore birds and other water-oriented wildlife. Total Suspended Solids: 35 mg/L for coldwater game fish and other cold water aquatic life, including the necessary aquatic organisms in their food chain; 90 mg/L for warmwater game and non-game fish. | It shall be unlawful, and a violation of these regulations, for any person to discharge or place any waste or other substance in such a way as will be or may become offensive such as unnatural deposits, floating debris, oil, scum or other nuisances such as color, odor or taste; or cause conditions which produce undesirable aquatic life or which produce objectionable tastes in edible aquatic organisms; or result in concentrations or combinations of substances which produce undesirable physiological responses in desirable resident fish, or other desirable aquatic life, or undesirable human health effects, as determined by bioassay or other tests performed in accordance with standard procedures. |
| Vermont | The following water quality criteria shall be achieved in all Class A(1) ecological waters. Turbidity - Not to exceed 10 NTU (nepholometric turbidity units). Aquatic Biota, Wildlife, and Aquatic Habitat - Change from the natural condition limited to minimal impacts from human activity. Measures of biological integrity for aquatic macroinvertebrates and fish assemblages are within the range of the natural condition. Uses related to either the physical, chemical, or biological integrity of the aquatic habitat or the composition or life cycle functions of aquatic biota or wildlife are fully supported. All life cycle functions, including overwintering and reproductive requirements are maintained and protected. Water Quality Criteria for Class B waters Turbidity - The following criteria shall be achieved: In Cold Water Fish Habitat waters - Not to exceed 10 NTU; and In Warm Water Fish Habitat waters - Not to exceed 25 NTU. | Settleable solids, floating solids, oil, grease, scum, or total suspended solids: None in such concentrations or combinations that would prevent the full support of uses. In addition to other applicable provisions of these rules and other appropriate methods of evaluation, the Secretary may establish and apply numeric biological indices to determine whether there is full support of aquatic biota and aquatic habitat uses. These numeric biological indices shall be derived from measures of the biological integrity of the reference condition for different water body types. In establishing numeric biological indices, the Secretary shall establish procedures that employ standard sampling and analytical methods to characterize the biological integrity of the appropriate reference condition. Characteristic measures of biological integrity include but are not limited to community level measurements such as: species richness, diversity, relative abundance of tolerant and intolerant species, density, and functional composition. |
| | In addition, the Secretary may determine whether there is full support of aquatic biota and aquatic habitat uses through other appropriate methods of evaluation, including habitat assessments | |

Aquatic Biota, Wildlife and Aquatic Habitat - No change from the reference condition that would prevent the full support of aquatic biota, wildlife, or aquatic

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| | habitat uses. Biological integrity is maintained and all expected functional groups are present in a high quality habitat. All life-cycle functions, including overwintering and reproductive requirements are maintained and protected. In addition, the following criteria shall be achieved: | |
| | In Water Management Type One waters - change from the reference condition for aquatic macroinvertebrate and fish assemblages shall be limited to minor changes in the relative proportions of taxonomic and functional components; relative proportions of tolerant and intolerant components are within the range of the reference condition. Changes in the aquatic habitat shall be limited to minimal differences from the reference condition consistent with the full support of all aquatic biota and wildlife uses. | |
| | In Water Management Type Two waters - change from the reference condition for aquatic macroinvertebrate and fish assemblages shall be limited to moderate changes in the relative proportions of tolerant, intolerant, taxonomic, and functional components. Changes in the aquatic habitat shall be limited to minor differences from the reference condition consistent with the full support of all aquatic biota and wildlife uses. | |
| | In Water Management Type Three waters - change from the reference condition for aquatic macroinvertebrate and fish assemblages shall be limited to moderate changes in the relative proportions of tolerant, intolerant, taxonomic, and functional components. Changes in the aquatic habitat shall be limited to moderate differences from the reference condition consistent with the full support of all aquatic biota and wildlife uses. When such habitat changes are a result of hydrological modification or water level fluctuation, compliance may be determined on the basis of aquatic habitat studies. | |
| Virginia | None identified for standards. Turbidity and suspended solid criteria provided as effluent limits on specific water bodies. | All state waters, including wetlands, shall be free from substances attributable to sewage, industrial waste, or other waste in concentrations, amounts, or combinations which contravene established standards or interfere directly or indirectly with designated uses of such water or which are inimical or harmful to human, animal, plant, or aquatic life. |
| - | | Specific substances to be controlled include, but are not limited to: floating debris, oil, scum, and other floating materials; toxic substances (including those which bioaccumulate); substances that produce color, tastes, turbidity, odors, or settle to form sludge deposits; and substances which nourish undesirable or nuisance aquatic plant life. Effluents which tend to raise the temperature of the |

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| | | receiving water will also be controlled. |
| ngton | 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 background turbidity is more than 50 NTU. | |
| Washington | Class B (Good) and 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. | |
| | Lake Class: Turbidity shall not exceed 5 NTU over background conditions. | |
| West Virginia | Categories 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 turbidity (plus 10 NTU minimum) when the background turbidity is more than 50 NTUs. This limitation shall apply to all earth disturbance activities and shall be determined by measuring stream quality directly above and below the area where drainage from such activity enters the affected stream. Any earth disturbing activity continuously or intermittently carried on by the same or associated persons on the same stream or tributary segment shall be allowed a single net loading increase. | |
| Wisconsin | | Practices attributable to municipal, industrial, commercial, domestic, agricultural, land development or other activities shall be controlled so that all waters including the mixing zone and the effluent channel meet the following conditions at all times and under all flow conditions: (a) Substances that will cause objectionable deposits on the shore or in the bed of a body of water, shall not be present in such amounts as to interfere with public rights in waters of the state. (b) Floating or submerged debris, oil, scum or other material shall not be present in such amounts as to interfere with public rights in vaters of the state. (c) Materials producing color, odor, taste or unsightliness shall not be present in such amounts as to interfere with public rights in waters. |
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| | | (d) Substances in concentrations or combinations which are toxic or harmful to humans shall not be present in amounts found to be of public health significance, nor shall substances be present in amounts which are acutely harmful to animal, plant or aquatic life. |
| Wyoming | (a) In all Class 1 and 2 waters which are cold-water fisheries, 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 nephelometric turbidity units (NTUs). (b) In all Class 3 waters and in Class 1 and 2 waters which are warm-water fisheries, 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 NTUs. | In all Wyoming 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. In all Wyoming 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. |
| District of Columbia | No turbidity increase over 20 NTU for waterbody classes A, B, C | The surface waters of the District shall be free from substances attributable to point or nonpoint sources discharged in amounts that do any one of the following: (a) Settle to form objectionable deposits; (b) Float as debris, scum, oil or other matter to form nuisances; (c) Produce objetionable odor, color, taste or turbidity; (d) Cause injury to, are toxic to or produce adverse physiological or behavioral changes in humans, plants or animals; (e) Produce undesirable aquatic life or result in the dominance of nuisance species; or (f) Impair the biological community which naturally occurs in the waters or depends on the waters for their survival and propagation. |
| Puerto Rico | Coastal waters and estuarine waters of high quality and/or exceptional ecological or recreational value whose existing characteristics shall not be altered, except by natural causes, in order to preserve the existing natural phenomena. Coastal waters and estuarine waters intended for use in primary and secondary contact recreation, and for propagation and preservation of desirable species Turbidity shall not exceed 10 nephelometric turbidity units (NTU), except by natural causes. Surface waters intended for use as a raw source of public water supply, propagation | The waters of Puerto Rico shall not contain floating debris, scum and other floating materials attributable to discharges in amounts sufficient to be unsightly or deleterious to the existing or designated uses of the waterbody. Color, Odor, Taste and Turbidity: The waters of Puerto Rico shall be free from color, odor, taste and turbidity attributable todischarges in such a degree as to create a nuisance to the enjoyment of the existing or designated uses of the waterbody. |

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| | and preservation of desirable species as well as primary and secondary contact recreation: Turbidity shall not exceed 50 nephelometric turbidity units (NTU), except when due to natural phenomena. | |
| | None | |

Virgin Islands