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| **APPENDIX D:**  **Complete list of suspected sources of impairment used in U.S. EPA’s Assessment Total Maximum Daily Load (TMDL) Tracking and Implementation System (ATTAINS) database.** |
| **Suspected Sources of Impairment** |
| ABOVE GROUND STORAGE TANK LEAKS (TANK FARMS) |
| ACCIDENTAL RELEASE/SPILL |
| ACID MINE DRAINAGE |
| AGRICULTURAL RETURN FLOWS |
| AGRICULTURAL WATER DIVERSION |
| AGRICULTURE |
| AIRPORTS |
| ANIMAL FEEDING OPERATIONS (NPS) |
| ANIMAL HOLDING/MANAGEMENT AREAS |
| ANIMAL SHOWS AND RACETRACKS |
| AQUACULTURE (NOT PERMITTED) |
| AQUACULTURE (PERMITTED) |
| ATMOSPHERIC DEPOSITION |
| ATMOSPHERIC DEPOSITION - ACIDITY |
| ATMOSPHERIC DEPOSITION - NITROGEN |
| ATMOSPHERIC DEPOSITION - TOXICS |
| AUCTION BARNS |
| BALLAST WATER RELEASES |
| BARGE CANAL IMPACTS |
| BASEFLOW DEPLETION FROM GROUNDWATER WITHDRAWALS |
| BROWNFIELD (NON-NPL) SITES |
| CARGO LOADING/UNLOADING |
| CERCLA NPL (SUPERFUND) SITES |
| CHANGES IN ORDINARY STRATIFICATION AND BOTTOM WATER HYPOXIA/ANOXIA |
| CHANGES IN TIDAL CIRCULATION/FLUSHING |
| CHANNEL EROSION/INCISION FROM UPSTREAM HYDROMODIFICATIONS |
| CHANNELIZATION |
| CHEMICAL LEAK/SPILL |
| COAL MINING |
| COAL MINING (SUBSURFACE) |
| COAL MINING DISCHARGES (PERMITTED) |
| COMBINED SEWER OVERFLOWS |
| COMMERCIAL DISTRICTS (INDUSTRIAL PARKS) |
| COMMERCIAL DISTRICTS (SHOPPING/OFFICE COMPLEXES) |
| COMMERCIAL HARBOR AND PORT ACTIVITIES |
| CONFINED ANIMAL FEEDING OPERATIONS - CAFOS (POINT SOURCE) |
| CONFINED ANIMAL FEEDING OPERATIONS (NPS) |
| CONSTRUCTION |
| CONSTRUCTION STORMWATER DISCHARGE (PERMITTED) |
| CONTAMINATED GROUNDWATER |
| CONTAMINATED SEDIMENTS |
| COOLING WATER INTAKE STRUCTURES (IMPINGEMENT OR ENTRAINMENT) |
| CRANBERRY PRODUCTION |
| CROP PRODUCTION (CROP LAND OR DRY LAND) |
| CROP PRODUCTION (IRRIGATED) |
| CROP PRODUCTION (NON-IRRIGATED) |
| CROP PRODUCTION WITH SUBSURFACE DRAINAGE |
| DAIRIES |
| DAM CONSTRUCTION (OTHER THAN UPSTREAM FLOOD CONTROL PROJECTS) |
| DAM OR IMPOUNDMENT |
| DEICING (STORAGE/APPLICATION) |
| DISCHARGES FROM BIOSOLIDS (SLUDGE) STORAGE, APPLICATION OR DISPOSAL |
| DISCHARGES FROM MUNICIPAL SEPARATE STORM SEWER SYSTEMS (MS4) |
| DISCHARGES FROM OFFSHORE OIL AND GAS EXPLORATION (PERMITTED) |
| DREDGE MINING |
| DREDGING (E.G., FOR NAVIGATION CHANNELS) |
| DROUGHT-RELATED IMPACTS |
| DRY WEATHER FLOWS WITH NPS POLLUTANTS |
| EROSION AND SEDIMENTATION |
| EROSION FROM DERELICT LAND (BARREN LAND) |
| FORCED DRAINAGE PUMPING |
| FOREST ROADS (ROAD CONSTRUCTION AND USE) |
| FRESHETS OR MAJOR FLOODING |
| GOLF COURSES |
| GRAZING IN RIPARIAN OR SHORELINE ZONES |
| GROUNDWATER LOADINGS |
| HABITAT MODIFICATION - OTHER THAN HYDROMODIFICATION |
| HARDROCK MINING DISCHARGES (PERMITTED) |
| HARVESTING/RESTORATION/RESIDUE MANAGEMENT |
| HEAP-LEACH EXTRACTION MINING |
| HIGHWAY/ROAD/BRIDGE RUNOFF (NON-CONSTRUCTION RELATED) |
| HIGHWAYS, ROADS, BRIDGES, INFRASTRUCTURE (NEW CONSTRUCTION) |
| HISTORIC BOTTOM DEPOSITS (NOT SEDIMENT) |
| HISTORICAL SOURCE, NO LONGER PRESENT |
| HYDROSTRUCTURE IMPACTS ON FISH PASSAGE |
| ILLEGAL DUMPS OR OTHER INAPPROPRIATE WASTE DISPOSAL |
| ILLICIT CONNECTIONS/HOOK-UPS TO STORM SEWERS |
| IMPACTS FROM ABANDONED MINE LANDS (INACTIVE) |
| IMPACTS FROM GEOTHERMAL DEVELOPMENT |
| IMPACTS FROM HYDROSTRUCTURE FLOW REGULATION/MODIFICATION |
| IMPACTS FROM LAND APPLICATION OF WASTES |
| IMPACTS FROM RESORT AREAS |
| IMPERVIOUS SURFACE/PARKING LOT RUNOFF |
| INADEQUATE INSTREAM HABITAT |
| INDUSTRIAL LAND TREATMENT |
| INDUSTRIAL POINT SOURCE DISCHARGE |
| INDUSTRIAL THERMAL DISCHARGES |
| INDUSTRIAL/COMMERCIAL SITE STORMWATER DISCHARGE (PERMITTED) |
| INTERNAL NUTRIENT RECYCLING |
| INTRODUCTION OF NON-NATIVE ORGANISMS (ACCIDENTAL OR INTENTIONAL) |
| LAKE FERTILIZATION |
| LANDFILLS |
| LEAKING UNDERGROUND STORAGE TANKS |
| LEGACY/HISTORICAL POLLUTANTS |
| LITTORAL/SHORE AREA MODIFICATIONS (NON-RIVERINE) |
| LIVESTOCK (GRAZING OR FEEDING OPERATIONS) |
| LOSS OF RIPARIAN HABITAT |
| LOSS of WETLANDS |
| LOW HEAD DAMS |
| LOW WATER CROSSING |
| MANAGED PASTURE GRAZING |
| MANURE LAGOONS |
| MANURE RUNOFF |
| MARINA BOAT CONSTRUCTION |
| MARINA BOAT MAINTENANCE |
| MARINA DREDGING OPERATIONS |
| MARINA FUELING OPERATIONS |
| MARINA RELATED SHORELINE HABITAT DEGRADATION |
| MARINA/BOATING PUMPOUT RELEASES |
| MARINA/BOATING SANITARY ON-VESSEL DISCHARGES |
| MARINAS AND RECREATIONAL BOATING |
| MILL TAILINGS |
| MINE TAILINGS |
| MINING |
| MOTORIZED WATERCRAFT |
| MOUNTAINTOP MINING |
| MUNICIPAL (URBANIZED HIGH DENSITY AREA) |
| MUNICIPAL POINT SOURCE DISCHARGES |
| MUNICIPAL POINT SOURCE IMPACTS FROM INADEQUATE INDUSTRIAL/COMMERCIAL PRETREATMENT |
| NATURAL CONDITIONS - WATER QUALITY STANDARDS USE ATTAINABILITY ANALYSES NEEDED |
| NATURAL SOURCES |
| NATURAL-BEAVER DAMS/LOG JAMS |
| NATURAL-DROUGHT |
| NATURAL-FLOOD |
| NATURALLY OCCURRING ORGANIC ACIDS |
| NATURAL-SNOWMELT |
| NON-METALS MINING DISCHARGES (PERMITTED) |
| NON-POINT SOURCE |
| NPS POLLUTION FROM MILITARY BASE FACILITIES (OTHER THAN PORT FACILITIES) |
| NPS POLLUTION FROM MILITARY PORT FACILITIES |
| OFF-ROAD VEHICLES |
| ON-SITE TREATMENT SYSTEMS (SEPTIC SYSTEMS AND SIMILAR DECENTRALIZED SYSTEMS) |
| OPEN PIT MINING |
| OTHER MARINA/BOATING ON-VESSEL DISCHARGES |
| OTHER RECREATIONAL POLLUTION SOURCES |
| OTHER SHIPPING RELEASES (WASTES AND DETRITUS) |
| OTHER SPILL RELATED IMPACTS |
| OTHER TURF MANAGEMENT |
| PACKAGE PLANT OR OTHER PERMITTED SMALL FLOWS DISCHARGES |
| PESTICIDE APPLICATION |
| PETROLEUM/NATURAL GAS ACTIVITIES |
| PETROLEUM/NATURAL GAS PRODUCTION ACTIVITIES (PERMITTED) |
| PIPELINE BREAKS |
| PLACER MINING |
| POINT SOURCE(S) - UNSPECIFIED |
| POLLUTANTS FROM PUBLIC BATHING AREAS |
| POST-DEVELOPMENT EROSION AND SEDIMENTATION |
| POTASH MINING |
| RANGELAND GRAZING |
| RCRA HAZARDOUS WASTE SITES |
| RECREATION AND TOURISM (NON-BOATING) |
| REDUCED FRESHWATER FLOWS |
| REDUCTION IN BASEFLOW |
| RELEASES FROM WASTE SITES OR DUMPS |
| REMOVAL OF RIPARIAN VEGETATION |
| RESIDENTIAL DISTRICTS |
| RUNOFF FROM FOREST/GRASSLAND/PARKLAND |
| RURAL (RESIDENTIAL AREAS) |
| SALT STORAGE SITES |
| SALTWATER INTRUSION |
| SAND/GRAVEL/ROCK MINING OR QUARRIES |
| SANITARY SEWER OVERFLOWS (COLLECTION SYSTEM FAILURES) |
| SEAFOOD PROCESSING OPERATIONS |
| SEDIMENT RESUSPENSION (CLEAN SEDIMENT) |
| SEDIMENT RESUSPENSION (CONTAMINATED SEDIMENT) |
| SEPTAGE DISPOSAL |
| SEWAGE DISCHARGES IN UNSEWERED AREAS |
| SHALLOW LAKE/RESERVOIR |
| SHIPBUILDING, REPAIRS, DRYDOCKING |
| SILVICULTURE ACTIVITIES |
| SILVICULTURE HARVESTING |
| SILVICULTURE, FIRE SUPPRESSION |
| SITE CLEARANCE (LAND DEVELOPMENT OR REDEVELOPMENT) |
| SOURCE UNKNOWN |
| SOURCES OUTSIDE STATE JURISDICTION OR BORDERS |
| SPECIALITY CROP PRODUCTION |
| SPILLS FROM TRUCKS OR TRAINS |
| STREAMBANK EROSION |
| STREAMBANK MODIFICATIONS/DESTABILIZATION |
| SUBSURFACE (HARDROCK) MINING |
| SURFACE MINING |
| SURFACE WATER DIVERSIONS |
| SURFACE WATER WITHDRAWALS |
| TOTAL RETENTION DOMESTIC SEWAGE LAGOONS |
| TRANSFER OF WATER FROM AN OUTSIDE WATERSHED |
| UIC WELLS (UNDERGROUND INJECTION CONTROL WELLS) |
| UNKNOWN POINT SOURCE |
| UNPERMITTED DISCHARGE (DOMESTIC WASTES) |
| UNPERMITTED DISCHARGE (INDUSTRIAL/COMMERCIAL WASTES) |
| UNRESTRICTED CATTLE ACCESS |
| UNSPECIFIED DOMESTIC WASTE |
| UNSPECIFIED LAND DISTURBANCE |
| UNSPECIFIED UNPAVED ROAD OR TRAIL |
| UNSPECIFIED URBAN STORMWATER |
| UPSTREAM SOURCE |
| UPSTREAM/DOWNSTREAM SOURCE |
| URBAN RUNOFF/STORM SEWERS |
| WASTES FROM PETS |
| WATER DIVERSIONS |
| WATERFOWL |
| WATERSHED RUNOFF FOLLOWING FOREST FIRE |
| WET WEATHER DISCHARGES (NON-POINT SOURCE) |
| WET WEATHER DISCHARGES (POINT SOURCE AND COMBINATION OF STORMWATER, SSO OR CSO) |
| WETLAND DRAINAGE |
| WILDLIFE OTHER THAN WATERFOWL |
| WOODLOT SITE CLEARANCE |
| WOODLOT SITE MANAGEMENT |
| YARD MAINTENANCE |