



State of New Mexico
Water Quality Control Commission



**2012 – 2014
State of New Mexico
Clean Water Act
§303(d)/§305(b)
Integrated Report**

- Appendix B -

**Water Quality
Impairment
Causes & Sources**

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Appendix B

New Mexico Water Quality Impairment Causes and Sources

Cause Summary for New Mexico's Rivers and Streams

Cause of Stream/River Water Quality Impairments	Total Size (miles)
PATHOGENS E. coli Fecal Coliform	1,023.56 984.96 38.6
BIOLOGIC INTEGRITY (BIOASSESSMENTS) Benthic-Macroinvertebrate Bioassessments (Streams) Nutrient/Eutrophication Biological Indicators	1,175.33 228.11 962.22
BIOASSAYS Ambient Bioassays -- Acute Aquatic Toxicity	11.91 11.91
OXYGEN DEPLETION Oxygen, Dissolved	446.65 446.65
FLOW ALTERATIONS Low flow alterations	146.07 146.07
THERMAL IMPACTS Temperature, water	1,406.61 1,406.61
NUTRIENTS Ammonia (Un-ionized) Ammonia (Total) Nutrient/Eutrophication Biological Indicators Phosphorus (Total)	985.01 21.88 3.81 962.22 19.6
TOXIC INORGANICS Aluminum Ammonia (Un-ionized) Arsenic Boron Cadmium Copper Lead Mercury Selenium Silver Sulfates Zinc	912.33 605.81 21.88 72.32 66.24 9.71 34.46 9.71 160.62 8.66 1.51 56 6.69
TOXIC ORGANICS PCBs in Fish Tissue PCBs	357.09 238.28 148.72
METALS Aluminum	825.85 605.81

Boron	66.24
Cadmium	9.71
Copper	34.46
Lead	9.71
Mercury	160.62
Radium 226	7.03
Radium 228	7.03
Selenium	8.66
Silver	1.51
Zinc	6.69
PESTICIDES	132.23
DDT in Fish Tissue	132.23
MINERALIZATION	1,046.51
Specific Conductance	332.57
Sulfates	56
Total Dissolved Solids	77.65
Turbidity	718.85
pH/ACIDITY/CAUSTIC CONDITIONS	73.76
pH	73.76
RADIATION	128.88
Radium 226	7.03
Radium 228	7.03
Gross Alpha - Adjusted	128.88
SEDIMENTATION	378.16
Sedimentation/Siltation	378.16
OTHER	718.85
Turbidity	718.85

*This information is generated using EPA's Assessment Database Software.

**In some instances, more than a single cause of water quality impairment was identified for a particular waterbody. Where waterbodies have more than one cause of impairment, the appropriate waterbody length is entered in each category.

Source Summary for New Mexico's Rivers and Streams

Sources of Stream/River Water Quality Impairments	Total Size (miles)
AGRICULTURE-ANIMAL FEEDING/HANDLING OPERATIONS (NPS - NOT REGULATED) Animal Feeding Operations (NPS) Aquaculture (Permitted) Concentrated Animal Feeding Operations (CAFOs) Agriculture	282.74 127.75 28.31 96.05 30.63
AGRICULTURE-CROP PRODUCTION Irrigated Crop Production Crop Production (Crop Land or Dry Land) Agriculture	306.17 186.29 89.25 30.63
AGRICULTURE-GRAZING-RELATED SOURCES Rangeland Grazing Livestock (Grazing or Feeding Operations) Agriculture	1,929.5 1,898.87 148.92 30.63
ATMOSPHERIC DEPOSITION Atmospheric Deposition - Toxics	258.12 258.12
CONSTRUCTION Highways, Roads, Bridges, Infrastructure (New Construction) Site Clearance (Land Development or Redevelopment) Low Water Crossing	209.13 66.12 112.9 30.11
GROUNDWATER LOADINGS Landfills	2.21 2.21
GROUNDWATER WITHDRAWALS Baseflow Depletion from Groundwater Withdrawals	53.03 53.03
HABITAT ALTERATIONS (NOT DIRECTLY RELATED TO HYDROMODIFICATION) Channelization Dredging (E.g., for Navigation Channels) Loss of Riparian Habitat Streambank Modifications/destablization Upstream Impoundments (e.g., PI-566 NRCS Structures) Habitat Modification - other than Hydromodification	1,036.68 125.43 9.72 822.1 708.03 8.66 152.03
HYDROMODIFICATION Baseflow Depletion from Groundwater Withdrawals Channelization Dredging (E.g., for Navigation Channels) Flow Alterations from Water Diversions Highway/Road/Bridge Runoff (Non-construction Related) Upstream Impoundments (e.g., PI-566 NRCS Structures)	1,136.61 53.03 125.43 9.72 610.42 538.3 8.66

Dam or Impoundment	32.43
INDUSTRIAL PERMITTED DISCHARGES	34.46
Industrial Point Source Discharge	9.44
Industrial/Commercial Site Stormwater Discharge (Permitted)	3.58
Petroleum/natural Gas Production Activities (Permitted)	21.44
LAND APPLICATION/WASTE SITES	751.21
Landfills	2.21
On-site Treatment Systems (Septic Systems and Similar Decentralized Systems)	676.8
Inappropriate Waste Disposal	74.41
LEGACY/HISTORICAL POLLUTANTS	123.89
Acid Mine Drainage	8.32
Contaminated Sediments	34.61
Dredging (E.g., for Navigation Channels)	9.72
Impacts from Abandoned Mine Lands (Inactive)	17.31
Mill Tailings	29.49
Mine Tailings	3
Petroleum/natural Gas Activities	21.44
MUNICIPAL PERMITTED DISCHARGES (DIRECT AND INDIRECT)	660.7
Discharges from Municipal Separate Storm Sewer Systems (MS4)	15
Municipal (Urbanized High Density Area)	216.68
Municipal Point Source Discharges	599.44
Post-development Erosion and Sedimentation	26.66
STORMWATER PERMITTED DISCHARGES (DIRECT AND INDIRECT)	927.09
Highway/Road/Bridge Runoff (Non-construction Related)	538.3
Highways, Roads, Bridges, Infrastructure (New Construction)	66.12
Industrial/Commercial Site Stormwater Discharge (Permitted)	3.58
Municipal (Urbanized High Density Area)	216.68
Petroleum/natural Gas Production Activities (Permitted)	21.44
Post-development Erosion and Sedimentation	26.66
Site Clearance (Land Development or Redevelopment)	112.9
NATURAL	1,606.94
Drought-related Impacts	481.96
Avian Sources (waterfowl and/or other)	430.41
Wildlife Other than Waterfowl	468.31
Natural Sources	960.98
RECREATION AND TOURISM (NON-BOATING)	517.07
Off-road Vehicles	154.65
Other Recreational Pollution Sources	407.23
Low Water Crossing	30.11

RESOURCE EXTRACTION	94.43
Impacts from Abandoned Mine Lands (Inactive)	17.31
Mill Tailings	29.49
Mine Tailings	3
Surface Mining	47.63
SILVICULTURE-LARGE-SCALE (INDUSTRIAL) FORESTRY	530.83
Forest Roads (Road Construction and Use)	79.25
Silviculture Harvesting	74.68
Silviculture, Fire Suppression	261.14
Watershed Runoff following Forest Fire	147.64
SILVICULTURE-NON-INDUSTRIAL FORESTRY (WOODLOTS)	408.78
Silviculture, Fire Suppression	261.14
Watershed Runoff following Forest Fire	147.64
SPILLS AND UNPERMITTED DISCHARGES	74.41
Other Spill Related Impacts	9
Inappropriate Waste Disposal	74.41
URBAN-RELATED RUNOFF/STORMWATER (OTHER THAN REGULATED DISCHARGES)	1,079.33
Highway/Road/Bridge Runoff (Non-construction Related)	538.3
Highways, Roads, Bridges, Infrastructure (New Construction)	66.12
Industrial/Commercial Site Stormwater Discharge (Permitted)	3.58
Municipal (Urbanized High Density Area)	216.68
Post-development Erosion and Sedimentation	26.66
Site Clearance (Land Development or Redevelopment)	112.9
Wastes from Pets	352.49
Impervious Surface/Parking Lot Runoff	326.84
Rural (Residential Areas)	21.64
Urban Runoff/Storm Sewers	32.52
OTHER	2,928.53
Source Unknown	1,999.8
Natural Sources	960.98
Agriculture	30.63
Habitat Modification - other than Hydromodification	152.03
Silviculture, Fire Suppression	261.14
Watershed Runoff following Forest Fire	147.64
Low Water Crossing	30.11

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**In most instances, more than a single source contributed to water quality impairment. Where waterbodies have more than one source of impairment, the appropriate waterbody length is entered in each category

Cause Summary for New Mexico's Lakes and Reservoirs

Causes of Lake Reservoir Water Quality Impairments	Total Size(acres)
BIOLOGIC INTEGRITY (BIOASSESSMENTS) Nutrient/Eutrophication Biological Indicators	4,322.49 4,322.49
OXYGEN DEPLETION Oxygen, Dissolved	11,413.87 11,413.87
THERMAL IMPACTS Temperature, water	13,646.1 13,646.1
NUTRIENTS Nutrient/Eutrophication Biological Indicators	4,322.49 4,322.49
TOXIC INORGANICS Aluminum Arsenic Copper	5,445.67 3,767.75 1,666.76 11.16
TOXIC ORGANICS PCBs in Fish Tissue	17,680.33 17,680.33
METALS Aluminum Copper Mercury in Fish Tissue	52,405.07 3,767.75 11.16 52,386.91
PESTICIDES DDT in Fish Tissue	3,058.67 3,058.67
pH	90.94
OTHER Mercury in Fish Tissue	52,386.91 52,386.91
BIOLOGIC INTEGRITY (BIOASSESSMENTS) Nutrient/Eutrophication Biological Indicators	4,322.49 4,322.49

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Source Summary for New Mexico's Lakes and Reservoirs

Source of Lake Reservoir Water Quality Impairments	Total Size (acres)
AGRICULTURE-CROP PRODUCTION Pesticide Application	11.16 11.16
AGRICULTURE-GRAZING-RELATED SOURCES Rangeland Grazing	5,632.61 5,632.61
ATMOSPHERIC DEPOSITION Atmospheric Deposition - Toxics	44,816.01 44,816.01
HABITAT ALTERATIONS (NOT DIRECTLY RELATED TO HYDROMODIFICATION) Loss of Riparian Habitat Streambank Modifications/destablization Habitat Modification - other than Hydromodification	4,250.61 4,250.61 4,218.17 23.81
HYDROMODIFICATION Highway/Road/Bridge Runoff (Non-construction Related)	23.81 23.81
LAND APPLICATION/WASTE SITES On-site Treatment Systems (Septic Systems and Similar Decentralized Systems) Inappropriate Waste Disposal	8,165.41 1,355.81 6,809.6
LEGACY/HISTORICAL POLLUTANTS Contaminated Sediments	6,809.6 6,809.6
STORMWATER PERMITTED DISCHARGES (DIRECT AND INDIRECT) Highway/Road/Bridge Runoff (Non-construction Related)	23.81 23.81
NATURAL Wildlife Other than Waterfowl Natural Sources	6,184.75 1,332 6,184.75
RECREATION AND TOURISM (NON-BOATING) Other Recreational Pollution Sources	50 50
RESOURCE EXTRACTION Subsurface (Hardrock) Mining	1,332 1,332
SILVICULTURE-LARGE-SCALE (INDUSTRIAL) FORESTRY Silviculture Harvesting	50 50
SPILLS AND UNPERMITTED DISCHARGES	6,809.6

Inappropriate Waste Disposal	6,809.6
TURF MANAGEMENT Pesticide Application	11.16 11.16
URBAN-RELATED RUNOFF/STORMWATER (OTHER THAN REGULATED DISCHARGES) Highway/Road/Bridge Runoff (Non-construction Related) Impervious Surface/Parking Lot Runoff	3,795.5 23.81 3,771.69
OTHER Source Unknown Natural Sources Habitat Modification - other than Hydromodification	57,431.84 56,065.09 6,184.75 23.81
AGRICULTURE-CROP PRODUCTION Pesticide Application	11.16 11.16

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