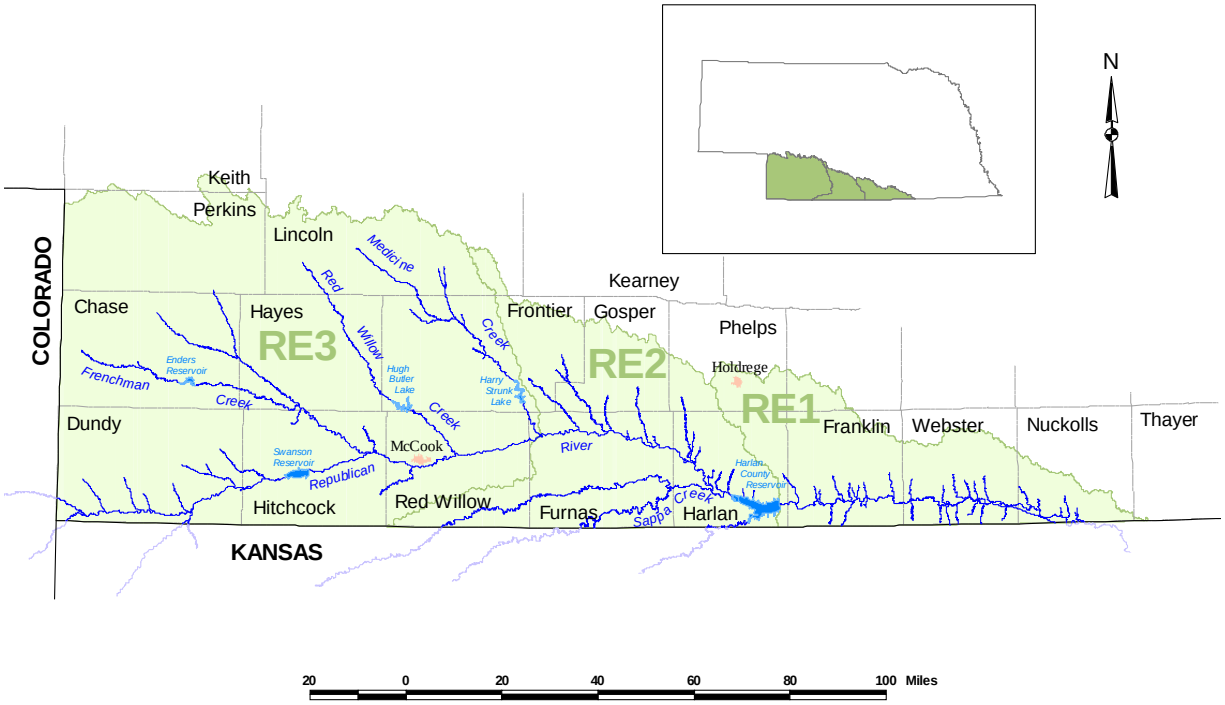
# REPUBLICAN RIVER BASIN (and Subbasins)




## Republican River Basin – Hydrologic Units 10250001, 10250002, 10250003, 10250004, 10250006, 10250007, 10250008, 10250009, 10250011, 10250014, 10250015 and 0250016

The Republican River basin includes 102 designated stream segments and 20 designated lakes/reservoirs.

| Waterbody Type | Primary Contact Recreation | Aquatic Life CA[1] | Aquatic Life CB[1] | Aquatic Life WA[1] | Aquatic Life WB[1] | Water Supply – Public Drinking | Water Supply – Ag | Water Supply-Ind. | Aesthetics |
|---|---|---|---|---|---|---|---|---|---|
| Lakes | 20 | 0 | 1 | 19 | 0 | 0 | 20 | 0 | 20 |
| Streams | 33 | 0 | 19 | 24 | 59 | 0 | 102 | 0 | 102 |

[1] CA = Coldwater Class A, CB = Coldwater Class B, WA = Warmwater Class A and WB = Warmwater Class B

**Delisting/ Changes from 2008 IR**

The following are waters and or parameters that were delisted – removed from category 5 or other significant changes from the 2008 IR.

***RE3-L0110: Champion Mill Pond –*** This waterbody was listed as impaired for nutrients in the 2006 Integrated Report. EPA indicated that the nutrient values NDEQ used for the 2006 assessments were not acceptable and not suitable for Clean Water Act purposes. In February 2009 EPA deferred taking action on this waterbody until the 2010 Integrated Report when a mutually agreed upon nutrient criteria would be used to assess for nutrient impairments. Following the agreed upon nutrient translators and the 2010

assessment methodologies, the nutrient data and information for this waterbody does not meet the requirements for assessment. Additional parameters designed to protect aquatic life indicate this waterbody is supporting the aquatic life beneficial use. Additionally, the 2010 aesthetics beneficial use assessment for this waterbody demonstrates full support; therefore this waterbody will be placed in category 2.

| Waterbody ID | Waterbody Name | **Recreation** | **Aquatic Life** | **Public Drinking Water** | **Agriculture Water Supply** | **Industrial Water Supply** | **Aesthetics** | **Overall Assessment** | **2010 IR** | Impairments | Parameters of Concern | Comments/Action |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **Lakes** | | | | | | | | | | | | |
| RE1-L0005 | Big Indian Pond (WMA) | NA | NA | | NA | | NA | | 3 | | | |
| RE1-L0010 | Sacramento-Wilcox Lake No. 1 | NA | S | | S | | S | S | 2 | | | |
| RE1-L0020 | Sacramento-Wilcox Lake No. 2 | NA | NA | | NA | | NA | | 3 | | | |
| RE1-L0030 | Sacramento-Wilcox Lake No. 3 | NA | NA | | NA | | NA | | 3 | | | |
| RE1-L0040 | Holdrege Park Lake | NA | I | | S | | S | I | 5 | High pH | Unknown | |
| RE1-L0050 | Limestone Bluffs Lake (WMA) | NA | NA | | NA | | NA | | 3 | | | |
| RE2-L0010 | Harlan County Reservoir | S | I | | S | | S | I | 5 | Nutrients | Total phosphorus, Total nitrogen | Fish consumption assessment |
| RE2-L0020 | Oxford City Lake | NA | NA | | NA | | I | I | 5 | Algal blooms | Nutrients | |
| RE3-L0010 | Harry Strunk Lake (Medicine Creek Reservoir) | S | I | | S | | S | I | 5 | Nutrients | Total phosphorus, Total nitrogen, Chlorophyll a | Fish consumption assessment |
| RE3-L0020 | Bartley Diversion Dam Lake (WMA) | NA | NA | | NA | | NA | | 3 | | | |
| RE3-L0030 | Hansen Memorial Reserve Lake | NA | I | | S | | S | I | 4r | Nutrients | Total phosphorus, Total nitrogen | Lake recently renovated |
| RE3-L0040 | Red Willow Diversion Dam Lake (WMA) | NA | NA | | NA | | NA | | 3 | | | |
| RE3-L0050 | Barnett Park Lake (McCook) | NA | NA | | NA | | S | S | 2 | | | |
| RE3-L0060 | Hugh Butler Lake (Red Willow Reservoir) | S | I | | S | | S | I | 5 | Fish consumption advisory, Nutrients, Low dissolved oxygen | Mercury, Total phosphorus, Total nitrogen | Fish consumption assessment |
| RE3-L0070 | Wellfleet Lake | S | I | | S | | S | I | 5 | Low dissolved oxygen | Unknown | Fish consumption assessment, Delist nutrients- insufficient data for assessment procedures |

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|---|---|---|---|---|---|---|---|---|---|---|---|---|
| RE3-L0080 | Camp Hayes Lake (WMA) | NA | S | | S | | S | S | 2 | | | |
| RE3-L0090 | Swanson Reservoir | S | I | | S | | S | I | 5 | Nutrients | Total phosphorus, Total nitrogen, Chlorophyll a | Fish consumption assessment |
| RE3-L0100 | Enders Reservoir | S | I | | S | | S | I | 5 | Fish consumption advisory, Nutrients | Mercury, Total phosphorus, Chlorophyll a | Fish consumption assessment |
| RE3-L0110 | Champion Mill Pond (SRA) | NA | S | | S | | S | S | 2 | | | |
| RE3-L0120 | Rock Creek Lake (SRA) | NA | I | | S | | S | I | 5 | Fish consumption advisory | Mercury | Fish consumption assessment |
| **Streams** | | | | | | | | | | | | |
| RE1-10000 | Republican River | I | S | | S | | S | I | 4a | E. coli | E. coli | E. coli TMDL approved 3/05, Aquatic community & Fish consumption assessment |
| RE1-10100 | Blakely Creek | | NA | | NA | | NA | | 3 | | | |
| RE1-10110 | Oak Creek | | NA | | NA | | NA | | 3 | | | |
| RE1-10200 | Lost Creek | I | I | | NA | | NA | I | 5 | E. coli, Low dissolved oxygen | E. coli, unknown | |
| RE1-10300 | Unnamed Creek | | NA | | NA | | NA | | 3 | | | |
| RE1-10400 | Cottonwood Creek | | NA | | NA | | NA | | 3 | | | |
| RE1-10500 | Beaver Creek | | NA | | NA | | NA | | 3 | | | |
| RE1-20000 | Republican River | I | S | | S | | S | I | 4a | E. coli | E. coli | E. coli TMDL approved 3/05 |
| RE1-20100 | Rankin Creek | | NA | | NA | | NA | | 3 | | | |
| RE1-20200 | Willow Creek | | NA | | NA | | NA | | 3 | | | |
| RE1-20300 | Courtland Canal | I | NA | | NA | | NA | I | 5 | E. coli | E. coli | |
| RE1-30000 | Republican River | I | S | | S | | S | S | 5 | E. coli | E. coli | |

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|---|---|---|---|---|---|---|---|---|---|---|---|---|
| RE1-30100 | Elm Creek | | S | | S | | S | S | 1 | | | |
| RE1-30200 | Lost Creek | | NA | | NA | | NA | | 3 | | | |
| RE1-30300 | Hicks Creek | | S | | NA | | NA | S | 2 | | | Aquatic community assessment |
| RE1-30400 | Dry Creek | | NA | | NA | | NA | | 3 | | | |
| RE1-30500 | Crooked Creek | | NA | | NA | | NA | | 3 | | | |
| RE1-30600 | Cedar Creek | | NA | | NA | | NA | | 3 | | | |
| RE1-30700 | Indian Creek | | NA | | NA | | NA | | 3 | | | |
| RE1-30800 | East Penny Creek | | S | | NA | | NA | S | 2 | | | Aquatic community assessment |
| RE1-30900 | Louisa Creek | | NA | | NA | | NA | | 3 | | | |
| RE1-31000 | Walnut Creek | | NA | | NA | | NA | | 3 | | | |
| RE1-31100 | Farmers Creek | | S | | NA | | NA | S | 2 | | | Aquatic community assessment |
| RE1-31200 | Thompson Creek | I | I | | S | | S | I | 5 | E. coli, High temperature | E. coli, Temperature | |
| RE1-40000 | Republican River | I | S | | S | | S | I | 5 | E. coli | E. coli | Aquatic community & Fish consumption assessment |
| RE1-40100 | Wortham Creek | | NA | | NA | | NA | | 3 | | | |
| RE1-40200 | Lovely Creek | | NA | | NA | | NA | | 3 | | | |
| RE1-40300 | Reams Creek | | NA | | NA | | NA | | 3 | | | |
| RE1-40400 | Coates Creek | | NA | | NA | | NA | | 3 | | | |
| RE1-40410 | Wasp Creek | | NA | | NA | | NA | | 3 | | | |
| RE1-40500 | Calumet Creek | | NA | | NA | | NA | | 3 | | | |
| RE1-40600 | Walnut Run | | NA | | NA | | NA | | 3 | | | |
| RE1-40700 | Center Creek | | S | | NA | | NA | S | 2 | | | Aquatic community assessment |

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|---|---|---|---|---|---|---|---|---|---|---|---|---|
| RE1-40800 | Lost Creek | | NA | | NA | | NA | | 3 | | | |
| RE1-40900 | Little Cottonwood Creek | | NA | | NA | | NA | | 3 | | | |
| RE1-41000 | Cottonwood Creek | | S | | NA | | NA | S | 2 | | | Aquatic community assessment |
| RE1-41100 | Turkey Creek | | NA | | NA | | NA | | 3 | | | |
| RE1-50000 | Republican River | S | I | | S | | S | I | 5 | E. coli, May-June atrazine, Low dissolved oxygen | E. coli, atrazine, unknown | |
| RE2-10000 | Republican River | I | S | | S | | S | I | 4a | E. coli | E. coli | E. coli TMDL approved 3/05 |
| RE2-10100 | Methodist Creek | I | S | | S | | S | I | 5 | E. coli | E. coli | |
| RE2-10200 | Cook Creek | I | S | | S | | S | I | 5 | E. coli | E. coli | |
| RE2-10300 | Prairie Dog Creek | I | S | | S | | S | I | 5 | E. coli | E. coli | Aquatic community assessment |
| RE2-10400 | Rope Creek | | NA | | NA | | NA | | 3 | | | |
| RE2-10500 | Flag Creek | | S | | NA | | NA | S | 2 | | | Aquatic community assessment |
| RE2-10600 | Sappa Creek | | I | | S | | S | I | 5 | Low dissolved oxygen | Unknown | Aquatic community assessment |
| RE2-10610 | Beaver Creek | I | I | | S | | S | I | 5 | E. coli, Low dissolved oxygen | E. coli, Unknown | Aquatic community assessment |
| RE2-10620 | Sheep Creek | | NA | | NA | | NA | | 3 | | | |
| RE2-10630 | Dutch Creek | | NA | | NA | | NA | | 3 | | | |
| RE2-10700 | Milrose Creek | | NA | | NA | | NA | | 3 | | | |
| RE2-10800 | Foster Creek | | NA | | NA | | NA | | 3 | | | |
| RE2-10900 | Spring Creek | | NA | | NA | | NA | | 3 | | | |
| RE2-10910 | Deep Creek | | NA | | NA | | NA | | 3 | | | |
| RE2-11000 | Swartz Creek | | NA | | NA | | NA | | 3 | | | |

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|---|---|---|---|---|---|---|---|---|---|---|---|---|
| RE2-11100 | Turkey Creek | | S | | S | | S | S | 1 | | | |
| RE2-11200 | Dry Creek | | NA | | NA | | NA | | 3 | | | |
| RE2-11300 | Elk Creek | | NA | | NA | | NA | | 3 | | | |
| RE2-11400 | Muddy Creek | | I | | S | | S | I | 5 | Fish consumption advisory | Hazard Index compounds, Mercury | Aquatic community & Fish consumption assessment |
| RE2-11410 | West Muddy Creek | | NA | | NA | | NA | | 3 | | | |
| RE2-11500 | Muddy Creek | | S | | NA | | NA | S | 2 | | | Aquatic community assessment |
| RE2-11600 | Deer Creek | | S | | NA | | NA | S | 2 | | | Aquatic community assessment |
| RE3-10000 | Republican River | I | I | | S | | S | S | 5 | E. coli, Selenium | E. coli, Selenium | E. coli TMDL approved 3/05 |
| RE3-10100 | Medicine Creek | S | I | | S | | S | I | 5 | Low dissolved oxygen | | Aquatic community assessment, ICI score influenced by low water |
| RE3-10200 | Medicine Creek | I | S | | S | | S | I | 5 | E. coli | E. coli | Fish consumption assessment |
| RE3-10210 | Cedar Creek | | NA | | NA | | NA | | 3 | | | |
| RE3-10220 | Spring Creek | | NA | | NA | | NA | | 3 | | | |
| RE3-10230 | Curtis Creek | | NA | | NA | | NA | | 3 | | | |
| RE3-10240 | Fox Creek | | NA | | NA | | NA | | 3 | | | |
| RE3-10241 | Cut Canyon | | NA | | NA | | NA | | 3 | | | |
| RE3-10300 | Medicine Creek | I | S | | S | | S | I | 5 | E. coli | E. coli | |
| RE3-10310 | Brushy Creek | | NA | | NA | | NA | | 3 | | | |
| RE3-10400 | Medicine Creek | I | S | | S | | S | I | 5 | E. coli | E. coli | Aquatic community assessment |
| RE3-10500 | Red Willow Creek | I | S | | S | | S | I | 5 | E. coli | E. coli | |

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|---|---|---|---|---|---|---|---|---|---|---|---|---|
| RE3-10600 | Red Willow Creek | I | S | | S | | S | I | 5 | E. coli | E. coli | Aquatic community assessment |
| RE3-10700 | Red Willow Creek | | NA | | NA | | NA | | 3 | | | |
| RE3-10800 | Driftwood Creek | | S | | S | | S | S | 1 | | | |
| RE3-20000 | Republican River | I | I | | S | | S | I | 5 | E. coli, Low dissolved oxygen | E. coli, unknown | Aquatic community assessment |
| RE3-20100 | Blackwood Creek | | NA | | NA | | NA | | 3 | | | |
| RE3-20200 | Frenchman Creek | I | I | | S | | S | I | 5 | E. coli, Selenium | E. coli, Selenium | Aquatic community assessment |
| RE3-20210 | Bobtail Creek | | NA | | NA | | NA | | 3 | | | |
| RE3-20220 | Stinking Water Creek | I | I | | S | | S | I | 5 | E. coli, High Temperature | E. coli, Temperature | Aquatic community & Fish consumption assessment |
| RE3-20221 | Spring Creek | | S | | NA | | NA | S | 2 | | | Aquatic community assessment |
| RE3-20300 | Frenchman Creek | I | I | | S | | S | I | 4a,c | E. coli, High Temperature | E. coli, Temperature | E. coli TMDL approved 3/05 |
| RE3-20400 | Frenchman Creek | I | I | | S | | S | I | 5 | E. coli, High temperature | E. coli, Temperature | Aquatic community assessment |
| RE3-20410 | Sand Draw | | NA | | NA | | NA | | 3 | | | |
| RE3-20500 | Frenchman Creek | NA | S | | NA | | NA | S | 2 | | | Fish consumption assessment |
| RE3-30000 | Republican River | NA | S | | NA | | NA | S | 2 | | | Aquatic community assessment |
| RE3-40000 | Republican River | I | S | | S | | S | I | 5 | E. coli | E. coli | |
| RE3-40100 | Muddy Creek | | | | | | | | 3 | | | |
| RE3-40200 | Burntwood Creek | | | | | | | | 3 | | | |
| RE3-40300 | Indian Creek | | | | | | | | 3 | | | |
| RE3-40310 | Rock Canyon | | | | | | | | 3 | | | |

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|---|---|---|---|---|---|---|---|---|---|---|---|---|
| RE3-40400 | Indian Creek | | | | | | | | 3 | | | |
| RE3-40500 | South Fork Republican River | I | S | | S | | S | I | 5 | E. coli | E. coli | |
| RE3-40510 | Big Timber Creek | | | | | | | | 3 | | | |
| RE3-40600 | Spring Creek | | | | | | | | 3 | | | |
| RE3-40700 | Horse Creek | | | | | | | | 3 | | | |
| RE3-40800 | Rock Creek | S | I | | S | | S | I | 4c | High Temperature | Temperature | |
| RE3-50000 | Republican River | I | S | | S | | S | I | 5 | E. coli | E. coli | Aquatic community assessment |
| RE3-50100 | Buffalo Creek | | S | | S | | S | S | 1 | | | |
| RE3-50200 | Buffalo Creek | | NA | | NA | | NA | | 3 | | | |
| RE3-50300 | North Fork Republican River | I | S | | S | | S | I | 5 | E. coli | E. coli | |
| RE3-50400 | Arikaree River | I | S | | S | | S | S | 5 | E. coli | E. coli | |
| **Wetlands** | | | | | | | | | | | | |
| RE1-Undesg. | Killdeer WPA | | NA | | NA | | NA | | 3 | | | |
| RE1-Undesg. | Prairie Dog WPA | | NA | | NA | | NA | | 3 | | | |
| RE2-Undesg. | Atlanta WPA | | NA | | NA | | NA | | 3 | | | |
| RE2-Undesg. | Jones WPA | | NA | | NA | | NA | | 3 | | | |