# Pine Creek

<table>
<thead>
<tr>
<th>Sample Period</th>
<th>Times Visited</th>
<th>Sampling Sites</th>
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<tbody>
<tr>
<td>November 2018 – August 2019</td>
<td>4</td>
<td>5</td>
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## General
- **Location**: McCurtain County
- **Impoundment**: 1969
- **Area**: 3,750 acres
- **Capacity**: 53,750 acre-feet
- **Purposes**: Water Supply, Flood Control, Water quality Control, Fish and Wildlife, and Recreation

## Parameters

### In-Situ
- **Average Turbidity**: 23 NTU
- **Average Secchi Disk Depth**: 75.7 cm
- **Water Clarity Rating**: Average
- **Chlorophyll-a**: 9.0 mg/m³
- **Trophic State Index**: 52
  - Previous value = 62
- **Trophic Class**: Hypereutrophic

### Profile
- **Salinity**: 0.01 – 0.06 ppt
- **Specific Conductivity**: 25.6 – 123.9 µS/cm
- **pH**: 5.71 – 8.13 pH units
  - 83% of values < 6.5 pH units
- **Oxidation-Reduction Potential**: 45.1 to 557.9 mV
- **Dissolved Oxygen**: Up to 76% of water column < 2 mg/L in August

### Nutrients
- **Surface Total Nitrogen**: 0.28 mg/L to 0.67 mg/L
- **Surface Total Phosphorus**: 0.026 mg/L to 0.042 mg/L
- **Nitrogen to Phosphorus Ratio**: 15:1
  - Phosphorus limited

## Beneficial Uses

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<tr>
<th></th>
<th>Turbidity</th>
<th>pH</th>
<th>Dissolved Oxygen</th>
<th>Metals</th>
<th>TSI</th>
<th>True Color</th>
<th>Sulfates</th>
<th>Chlorides</th>
<th>Total Dissolved Solids</th>
<th>Enteroc. &amp; E. coli</th>
<th>Chlor-a</th>
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<tbody>
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<td>Fish &amp; Wildlife Propagation</td>
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<td>Primary Body Contact Recreation</td>
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<td>Public &amp; Private Water Supply</td>
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### Notes
- S = Fully Supporting
- NS = Not Supporting
- NEI = Not Enough Information

### Beneficial Uses Notes
- Slightly acidic conditions are common in this part of the state, due to relatively low soil pH and lack of soluble bedrock. Due to these conditions it is likely that the low pH values may be due to natural causes; therefore the Water Board is looking at the applicability of developing site-specific criteria for waters in the southeastern portion of the state.

### Terminology
- **NTU** = nephelometric turbidity units
- **OWQS** = Oklahoma Water Quality Standards
- **mg/L** = milligrams per liter
- **µS/cm** = microsiemens per centimeter
- **mV** = millivolts
- **En** = Enterococci

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