Lake Red Rock
1105 Highway T15, Knoxville, IA 50138
Des Moines River

U.S. ARMY CORPS OF ENGINEERS

Location 45 miles southeast and downriver from Des Moines, Iowa

Construction
Began: 1960
Completed: 1969

Cost Federal: $88,838,600 / Non Federal: $0

Dam
Watershed: 12,323 square miles
Type: Earth Filled Embankment (6.5 million cubic yards)
Length: 5,676 feet
Height: 110 feet
Top Width: 44 feet
Spillway Elevation: 736’ NGVD29 ¹ gated
780’ NGVD29 top of closed gate
Dam Elevation: 797’ NGVD29

Reservoir
Normal Pool:
Length: 18 miles
Area: 15,250 acres
Storage: 189,020 acre-feet ² (61.59 billion gallons)
Water Surface Elevation: 742’ NGVD29

Flood Storage Pool:
Length: 33.5 miles
Area: 65,500 acres
Storage: 1,436,000 acre-feet (467.92 billion gallons)
Water Surface Elevation: 780’ NGVD29

Average Normal Inflow
June: 14,100 cubic feet per second (cfs ³ )
July: 11,100 cfs

Highest Recorded Inflow
134,900 cfs (July 11, 1993)

Maximum Capable Outflow
(Sluice Gates)
37,700 cfs

Average Normal Outflow
13,500 cfs (June) / 13,400 cfs (July)

Highest Recorded Outflow
(Spillway)
104,500 cfs (July 13, 1993)
Previous Highest Recorded Outflow  40,000 cfs (1984)

Record High Pool Elevations

<table>
<thead>
<tr>
<th>Year</th>
<th>Elevations</th>
</tr>
</thead>
<tbody>
<tr>
<td>1993</td>
<td>782.67'</td>
</tr>
<tr>
<td>1984</td>
<td>779.61'</td>
</tr>
<tr>
<td>1991</td>
<td>779.32'</td>
</tr>
<tr>
<td>2008</td>
<td>779.10'</td>
</tr>
<tr>
<td>2010</td>
<td>778.81'</td>
</tr>
<tr>
<td>1973</td>
<td>777.95'</td>
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<tr>
<td>1993</td>
<td>777.72'</td>
</tr>
</tbody>
</table>

Facilities

- 29 Recreation Areas
- 9 Campgrounds (644 Campsites)
- 2 Beaches
- 1 Marina (168 Slips)
- 10 Trails (31 Trail Miles)
- 10 Picnic Shelters
- 12 Playgrounds
- 13 Boat Ramps

Visits (2012)

- 619,427 Total (42,514 picnickers, 41,198 campers, 20,251 swimmers, 12,462 water skiers, 56,080 boaters, 197,021 sightseers, 140,337 fishermen, 227 hunters, 393,403 others)

Economic Data (2012)

- 619,427 visits resulted in:
  - $20,968,000 visitor spending within 30 miles of Lake Red Rock
  - $11,616,000 sales within 30 miles of Lake Red Rock
  - 198 jobs within 30 miles of Lake Red Rock
  - $4,810,000 labor income within 30 miles of Lake Red Rock
  - $7,159,000 value added within 30 miles of Lake Red Rock

- With multiplier effects, visitor trip spending resulted in:
  - $19,691,000 total sales
  - 270 jobs
  - $7,869,000 labor income
  - $12,293,000 value added (wages, salaries, payroll benefits, profits, rents & indirect business taxes)

Damages Prevented (estimated) 4

<table>
<thead>
<tr>
<th>Year</th>
<th>Amount</th>
<th>Year</th>
<th>Amount</th>
</tr>
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<tbody>
<tr>
<td>1969-2014</td>
<td>$616,975,000</td>
<td>2010</td>
<td>$18,996,500</td>
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<td>2014</td>
<td>$17,844,300</td>
<td>2008</td>
<td>$7,150,100</td>
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<td>2013</td>
<td>$8,129,700</td>
<td>1993</td>
<td>$76,679,400</td>
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</table>


1 National Geodetic Vertical Datum of 1929. The Sea Level Datum of 1929 was the vertical control datum established for vertical control surveying in the United States of America by the General Adjustment of 1929.

2 One acre-foot is one acre of water one foot deep. One acre-foot is equivalent to 325,851.4 U.S. gallons.

3 Cubic feet per second (cfs). The rate of flow past a given point, measured in cubic feet per second. One cubic foot of water equals about 7.5 gallons and weighs 62 pounds.

4 $ estimates are price leveled to their respective years and are not recalculated to current-year $ equivalents.