Flood Control Dams in Oklahoma Conservation Commission Area 4

Oklahoma has 2,107 flood control dams in 61 counties. These dams have been constructed through local watershed project sponsors with financial and technical assistance from the USDA Natural Resources Conservation Service (NRCS) authorized through Public Law 78-534 (Washita River Watershed) and Public Law 83-566 Watershed Protection and Flood Prevention Program. Eight hundred and seventy-eight of these dams are in Oklahoma Conservation Commission Area 4.

The primary purpose of flood control dams is to reduce flooding. The secondary benefits of the dams address a myriad of public needs such as water supply, water quality, soil health, water management, wetland enhancement, fish and wildlife habitat, and recreation. Flood control dams improve public safety, contribute to a healthy economy and support a strong nation.

Watershed projects also include the installation of natural resource conservation practices such as terraces, waterways, ponds, gully repair, and pasture and rangeland plantings. These conservation practices improve water quality and soil health and reduce sedimentation into the lakes formed by the dams.

Operation and Maintenance of Dams

The annual operation and maintenance of dams is the responsibility of project sponsors (local units of governments such as conservation districts).

Operation is the administrative and management activities necessary to ensure the dams function as designed and remain safe. Operation work includes annual dam inspections and inspection immediately following heavy rains.

Maintenance work includes removing trees from dams and spillways, repairing erosion damage, repairing damage to the spillway and dams after heavy rainstorms, and keeping the principal spillway inlet towers cleared of debris.

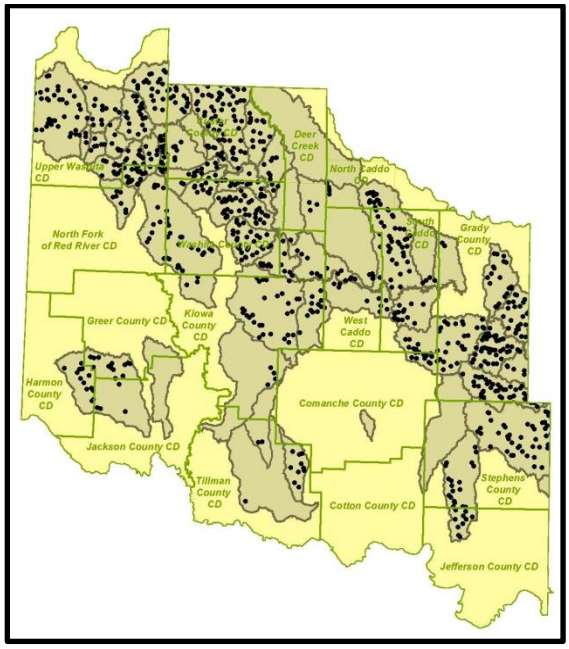
Operation and Maintenance Needs

Operation and maintenance of dams can be expensive and labor intensive. $4 million is needed to operate and maintain all 2,107 flood control each year. Only through continued investment in operation and maintenance will future generations enjoy the promise of safety these dams offer.

Annual Benefits

The 2,107 flood control dams and conservation practices in watershed projects provide $91 million in average annual benefits.

The table on the back of this page lists the annual benefits provided by watershed projects in Oklahoma Conservation Area 4.



Rehabilitation and Dam Safety

As dams age some will need rehabilitation to remain safe and protect the people that live or work downstream.

At the conclusion of 2016, 260 flood control dams in the state have been classified as high hazard. Of these 115 do not meet current state or federal safety criteria. Approximately $300 million is needed to upgrade the 115 dams.

The number of high hazard dams will continue to increase as long as residential and business development is allowed downstream of the dam in the breach flood area.

Seventy-five of the 878 dams in Oklahoma Conservation Commission Area 4 are classified as high hazard and have the potential for loss of life if they should fail.

NRCS can provide 65 percent of the rehabilitation costs and technical assistance to rehabilitate high hazard dams. Local project sponsors provide 35 percent of the cost and obtain any needed additional land rights.

As of December 2016 thirty-five dams in the state have been rehabilitated and 18 others are in various stages of planning, design or construction.

Average Annual Watershed Benefits (Entire Watershed)

Watershed Name	Dams in Watershed	Dams in OCC Area 4	*Monetary Benefits	Farm / Ranches Benefited	Bridges Benefited	Wetlands Enhanced/Created (acres)	Reduced Sedimentation (tons of soil)
Barnitz Creek	76	56	$716,340	225	25	1,734	520,184
Bear Creek	10	10	$52,432	17	3	94	28,566
Beaver Creek	15	15	$398,192	77	11	475	63,234
Beaver Dam Creek	6	6	$62,590	25	5	117	59,972
Big Kiowa Creek	6	6	$70,637	23	5	151	108,135
Bitter Creek	1	19	$384,570	150	13	217	49,257
Boggy Creek	36	36	$547,980	127	18	769	105,507
Broken Leg Ck.	3	3	$45,006	9	2	76	21,175
Butler Laterals	9	9	$82,639	23	2	56	11,360
Cavalry Creek	30	30	$709,880	121	70	555	122,684
Cobb Creek	12	12	$262,273	365	34	420	160,186
Cow Creek	29	29	$830,151	106	10	434	63,513
Deep Red Run-Coffin	2	2	$3,730,578	83	5	365	95,771
Cowden Laterals	13	13	$285,316	74	4	136	37,548
Dead Indian-Wildhorse Creek	12	12	$418,312	59	8	346	121,278
Delaware Creek	2	2	$41,875	23	2	5	974
Fort Cobb Laterals	9	9	$213,306	61	3	126	26,463
Gyp Creek	1	1	$30,640	23	2	9	2,717
Ionine Creek	3	3	$13,401	5	2	0	80,722
Jack Creek	10	10	$534,221	71	15	402	62,691
Little Washita	45	45	$1,327,736	492	69	748	171,836
Middle Deep Run Ck.	1	1	$172,723	19	4	149	16,888
Nine Mile Creek	18	18	$222,738	49	28	225	54,605
Oak Creek	14	14	$594,362	62	8	221	63,822
Otter Creek	4	4	$197,496	161	15	180	26,901
Panther Creek	6	6	$137,646	68	5	119	22,286
Quartermaster Creek	36	34	$666,760	134	19	743	154,228
Rainy Mountain Creek	29	29	$1,138,210	315	20	1,706	271,117
Roaring Ck.	40	40	$1,004,906	199	12	290	59,373
Round Ck.	9	6	$312,263	148	10	208	40,426
Rush Creek	55	39	$2,819,293	570	9	778	181,337
Saddle Mountain Ck.	12	12	$270,273	109	18	277	49,420
Sandstone Creek	42	42	$370,141	60	8	809	296,123
Sergeant Major Creek	6	6	$55,684	15	2	77	50,162
Soldier Creek	12	12	$304,360	74	5	286	37,612
S. Clinton Laterals	16	16	$208,527	51	8	231	48,078
Spring Creek	4	4	$59,143	113	2	8	1,851
Sugar Creek	51	51	$2,877,189	443	28	1,083	226,636
Timber Creek	7	7	$194,634	50	12	163	36,095
Tonkawa Creek	13	13	$503,615	55	6	143	20,805
Tri-County Turkey Ck.	31	31	$657,507	243	27	1,304	224,704
Turkey Creek	12	12	$464,162	74	5	418	56,270
Upper Elk Creek	35	35	$1,312,793	251	27	925	192,226
Upper Washita Ck.	35	35	$784,376	148	4	750	186,995
Whiteshield Creek	19	19	$146,522	21	11	131	23,847
Wildhorse Creek	107	41	$5,631,557	629	31	1,250	509,141
Winter Ck.	24	23	$524,972	204	10	356	62,267
Total	**968**	**878**	**$32,389,927.**	**6,424**	**642**	**20,065**	**4,826,988**

*Monetary benefits include reduction in flood damages to crops, roads, bridges, fences, etc. and may include other benefits such as irrigation, municipal and industrial water supply and recreation.

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OKLAHOMA CONSERVATION COMMISSION

Oklahoma Watershed Program Facts

The state has always been a leader in flood control beginning with the construction of the first upstream flood control dam in the nation in 1948, Cloud Creek Dam Number 1. The dam located near Cordell, Oklahoma, is in the Cloud Creek Watershed, a tributary to the Washita River.

The Flood Control Act of 1944 (Public Law 78-534) authorized funding and technical assistance from the USDA Soil Conservation Service. This law authorized pilot watershed projects in eleven watersheds in the nation, including the Washita River Watershed in Oklahoma.

Congress saw the success and benefits of these eleven watershed projects and in 1954 passed the Watershed Protection and Flood Prevention Act of 1954 (Public Law 83-566) that expanded the program to other approved watersheds.

1,107 dams have been constructed under the PL-78-534 program; 987 dams under the 83-566 Program; 7 under the Resource Conservation and Development (RC&D) Program; and 6 under a Pilot Program (Double Creek).

Oklahoma has the first completed watershed project in the nation, Sandstone Creek Watershed Project in Roger Mills County. Twenty-four dams were constructed in the watershed between 1950 and 1953.

Oklahoma was the first state to construct a multi-purpose dam (Wildhorse Creek Dam No. 22 in Stephens County) in 1957.Oklahoma was the first state to rehabilitate a dam (Sergeant Major Creek Watershed Dam No. 2 in the Upper Washita Conservation District, Roger Mills County in 2000).

Oklahoma was the first state to rehabilitate all the dams in a watershed project: Double Creek Watershed Dams 1-6 in the Caney Valley Conservation District, Washington County. The dams were rehabilitated in 2004-2009. Oklahoma has rehabilitated more dams than any other state (35).

Oklahoma has more flood control dams than any other state with 2,107. Texas is second in number of dams with approximately 2,000.

1,218 of Oklahoma's watershed dams reached the end of their designed life in 2016. In 2017, one dam every three days will reach the end of their design life. Most dams were designed for a 50-year life span.

The 2,107 watershed dams represent a $2 billion public infrastructure for Oklahoma (just like roads, bridges, interstates, water systems, etc.).

If the remaining 320 planned dams were constructed they would provide an additional $33 million in average annual benefits.

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