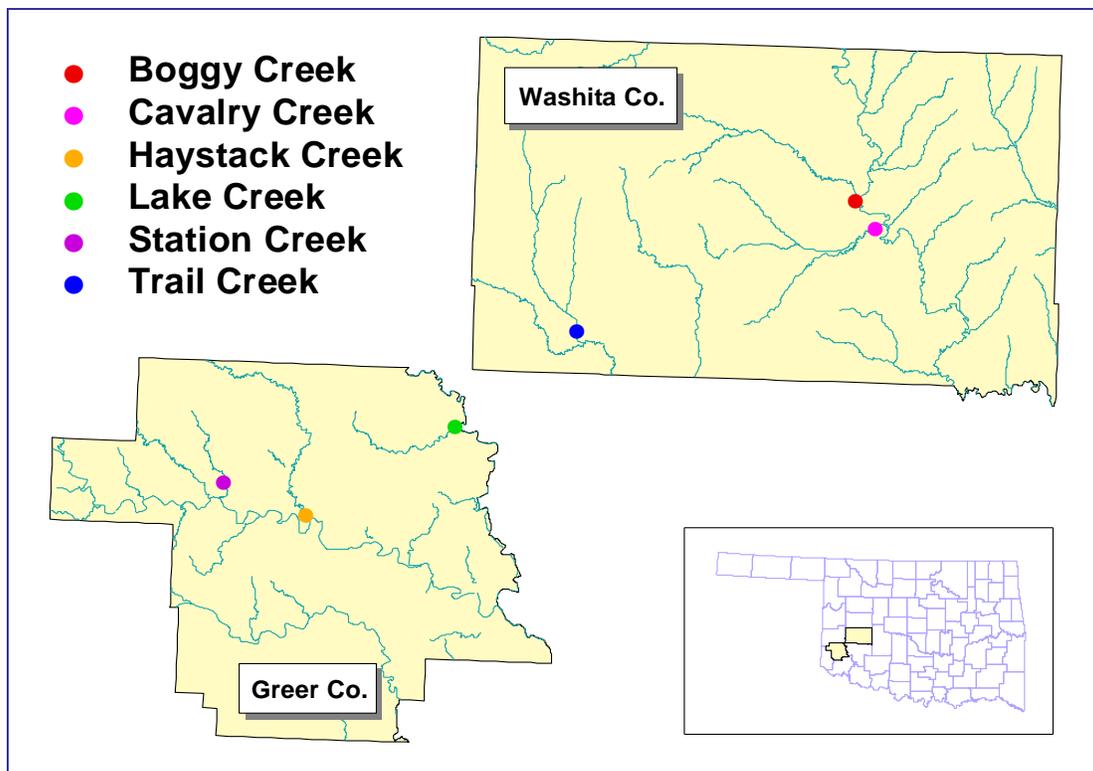




Rotating Basin Site Summary Central Great Plains Level 3 Ecoregion: Greer and Washita Counties

The Oklahoma Conservation Commission (OCC) has the statutory responsibility of monitoring streams across the state in order to identify healthy streams as well as those which may be impacted by non-point source (NPS) pollution. NPS pollution is pollution which runs off the land from diffuse sources rather than being discharged from a specific source. If a stream is found to be impaired by NPS pollution, the OCC may be able to implement a voluntary cost-share program to address the identified problems; however, streams must be monitored in order to select the best management practices necessary for improvement. The OCC's "Rotating Basin Monitoring Program" provides the tools to assess and then restore water quality in Oklahoma.

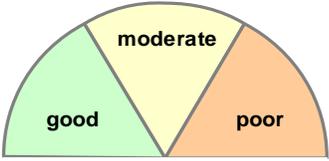
This leaflet gives a brief summary of the assessment results for the first cycle of the monitoring program for streams in Greer and Washita Counties. The full report can be accessed online at: http://www.ok.gov/okcc/Agency_Divisions/Water_Quality_Division/WQ_Reports/WQ_Assessment_Reports or by calling (405) 522-4500 and requesting a copy of the "Rotating Basin Year 4 Final Report."



OCC Rotating Basin monitoring sites within Greer and Washita Counties.

Through the Rotating Basin Program, three streams in Greer Co. and three streams in Washita Co. were sampled approximately every five weeks from June 2004-June 2006. Nineteen water quality parameters were measured or analyzed at each site visit. In addition, OCC staff conducted one fish and habitat assessment and up to four macroinvertebrate collections during this time. Summer samples were also analyzed for *E. coli* and *Enterococcus* bacteria. Each site was compared to "high quality" streams in the ecoregion, streams known to have high quality fish populations, benthic macroinvertebrate populations, instream and riparian habitat, and water quality. All of the data collected has been distilled into a few key components in order to produce an index score of general, overall stream health, shown on the next page.

Summary of general stream health as determined by comparison to high quality streams in the Central Great Plains ecoregion and by assessment using Oklahoma State Water Quality Standards†.

	<i>Good</i>		<i>Moderate</i>			<i>Poor</i>
	Cavalry Creek	Trail Creek	Lake Creek	Station Creek	Boggy Creek	Haystack Creek
Overall Stream Health	49	47	43	43	35	25
Phosphorus	5	5	5	5	5	5
Nitrogen	5	5	5	5	5	5
Ammonia	5	5	5	5	5	5
Dissolved Oxygen	5	5	5	5	5	5
pH	5	5	5	5	5	5
Turbidity	5	5	5	5	5	-5
Salts (chloride, sulfate, TDS)	5	5	5	5	-5	-5
Fish	3	5	5	3	5	5
Macroinvertebrates	3	3	3	5	5	5
Instream/Riparian Habitat	5	1	5	5	5	5
Bacteria	3	3	-5	-5	-5	-5
<i>Scale of 1-5 with 5 being the best</i>						
KEY: 1=significantly lower than high quality sites 3=not as good as high quality sites but not impaired 5=equal to or better than high quality sites in the area -5=impaired by state standards						

Boggy Creek (OK310830-03-0100C): This stream is on the state’s 303(d) list† as impaired for sulfates, an indicator of high mineral content, and for bacteria. All other values were good.

Cavalry Creek (OK310830-03-0070D): This stream is not impaired and is comparable to high quality sites in the ecoregion for most parameters. The fish and macroinvertebrates were not as good as the high quality streams in the ecoregion, but they were not significantly worse. The bacteria were elevated but not high enough for impairment.

Haystack Creek (OK311800-00-0040D): This stream is on the state’s 303(d) list† as impaired for sulfates, bacteria, and turbidity.

Lake Creek (OK311510-01-0040D): This stream is impaired for bacteria†, as are many streams across the state. The macroinvertebrate community was slightly impaired relative to high quality streams in the ecoregion. All other values were good.

Station Creek (OK311800-00-0060G): This stream is impaired for bacteria†, as are many streams across the state. The fish were not as good as the high quality streams in the ecoregion, but they were not significantly worse. All other values were good.

Trail Creek (OK311500-03-0070D): This stream is not impaired and is comparable to high quality sites in the ecoregion for most parameters. The habitat was significantly worse than high quality sites in the ecoregion, and the macroinvertebrates were slightly impaired relative to high quality streams in the ecoregion. All other parameters were good.

† The use of Oklahoma Water Quality Standards to assess streams and the 2008 results are described in the DEQ’s 2008 Integrated Report, accessible online at http://www.deq.state.ok.us/wqdnew/305b_303d/2008_integrated_report_entire_document.pdf

