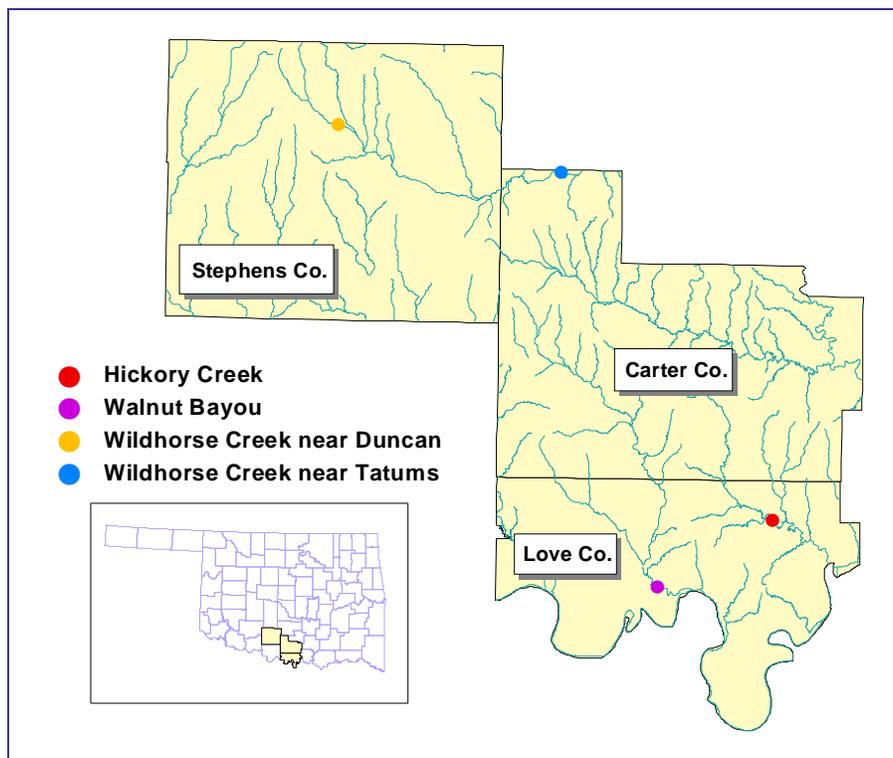




Rotating Basin Site Summary Cross Timbers Level 3 Ecoregion: Stephens, Carter, and Love Counties

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 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.

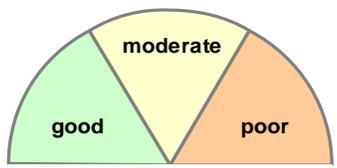
This leaflet gives a brief summary of the assessment results for the first cycle of the monitoring program for streams in Stephens, Carter, and Love Counties. The full report can be accessed online at: http://www.ok.gov/okcc/Agency_Divisions/Water_Quality_Division/WQ_Reports/WQ_Assessment_Reports or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



OCC Rotating Basin monitoring sites within Stephens, Carter, and Love Counties (Cross Timbers ecoregion).

Through the Rotating Basin Program, one stream in Stephens Co., one stream in Carter Co., and two streams in Love 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 Cross Timbers ecoregion and by assessment using Oklahoma State Water Quality Standards†.

	<i>Moderate</i>			
	Wildhorse Creek (near Tatums)	Wildhorse Creek (near Duncan)	Hickory Creek	Walnut Bayou
Overall Stream Health	33	35	43	45
Phosphorus	5	5	5	5
Nitrogen	5	5	5	5
Ammonia	5	5	5	5
Dissolved Oxygen	5	5	5	5
pH	5	5	5	5
Turbidity	5	-5	5	5
Salts (chloride, sulfate, TDS)	5	5	5	5
Fish	-5	5	5	5
Macroinvertebrates	3	5	3	5
Instream/Riparian Habitat	5	5	5	5
Bacteria	-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

Hickory Creek (OK311100-02-0010M): This stream is listed on the state’s 303(d) list† as impaired for bacteria, as are many streams in the state. The macroinvertebrate community is slightly impaired relative to high quality streams in the ecoregion. All other values are good.

Walnut Bayou (OK311100-03-0010G): This stream is listed on the state’s 303(d) list† as impaired for bacteria, as are many streams in the state. All other values are good.

Wildhorse Creek near Duncan (OK310810-04-0140D): This stream is listed on the state’s 303(d) list† as impaired for bacteria and for turbidity. All other values are good.

Wildhorse Creek near Tatums (OK310810-03-0010R): This stream is listed on the state’s 303(d) list† as impaired for bacteria, as are many streams in the state. In addition, the fish community is impaired and not attaining state standards. The macroinvertebrate community is slightly impaired relative to high quality sites in the ecoregion. All other values 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

