



A River Runs Thru It...

North Canadian River Watershed Traveling Educator Workshop

June 14 - 16, 2011

June 10 - 12, 2014

North Canadian River 319 Implementation Project

The North Canadian River Watershed Project is a partnership between local landowners, Conservation Districts in the project area, Oklahoma Conservation Commission, Natural Resources Conservation Service and the U.S. Environmental Protection Agency to address water quality impairments present in the watershed. Best Management Practices (BMPs) are installed on a voluntary cost-shared basis to reduce nutrient run-off, bacteria, sediments and turbidity.

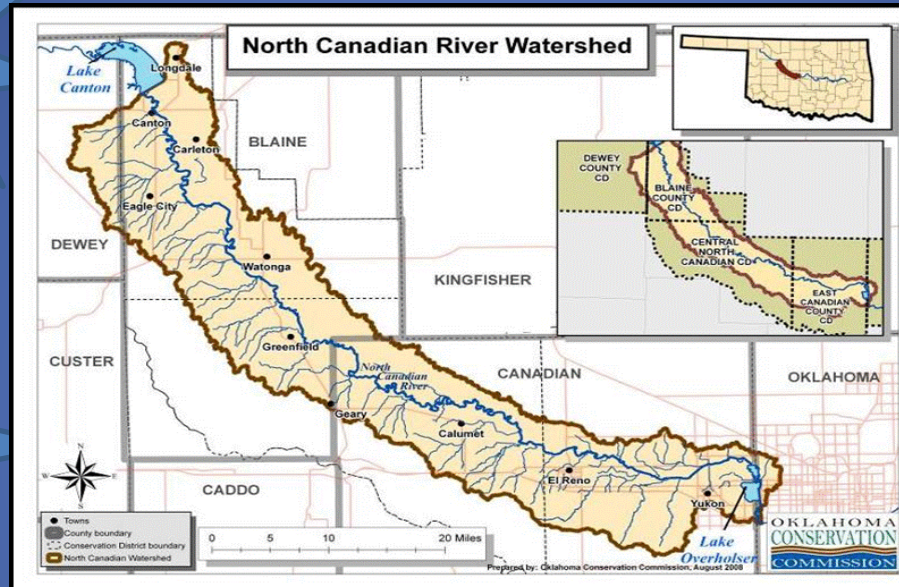
The project also incorporates educational opportunities for landowners and urban residents through workshops, field days, demonstrations, presentations, seminars, materials, tours, and stream monitoring training.

North Canadian River Watershed 319 Project

Cost-shared Practices

Alternative
Watering
Sources
26 Wells

Precision
Agriculture
2,141 acres



Septic Systems
14 replaced or
upgraded

Cropland to
Grass
1,213 Acres



Education & Outreach



Project tours
Quarterly Newsletter
Blue Thumb Curb Marking
Blue Thumb Homeowner Brochure
Blue Thumb Stream Monitoring Training
Land Application of Drill Cutting Workshop
Quality Urban Streams (LID) Workshop
Rainfall Simulator Demonstrations
Nutrient Management Workshop
Enviro-scape Demonstrations
Demonstration Farm
OSU Field Studies
No-till Seminars
Booths
AND...

The North Canadian River Travelling Educator's Workshop

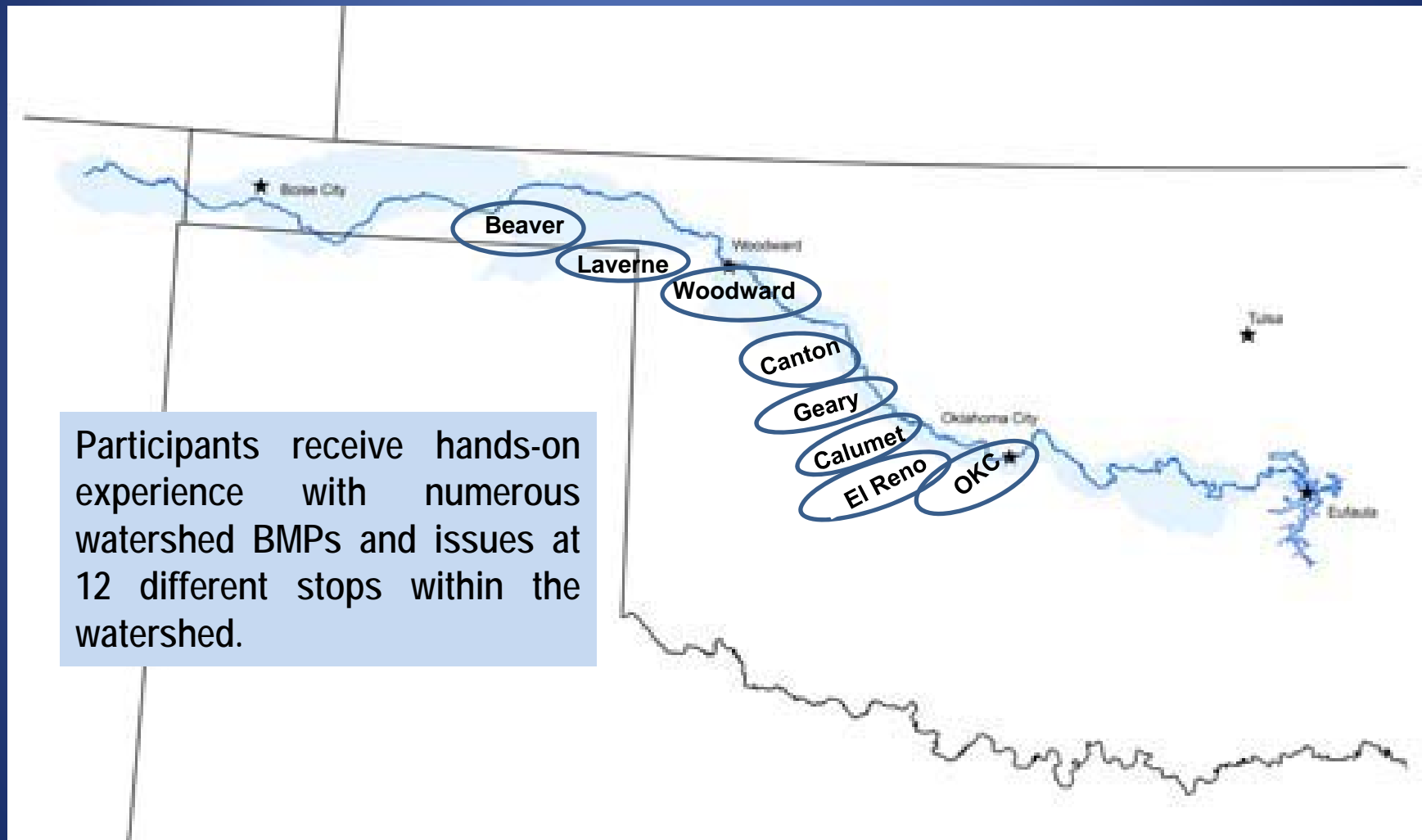
We are on a mission!

Our goal is to give participants a sense of stewardship and personal ownership in the watershed by creating a greater awareness of how individual actions and choices impact the overall water quality and quantity of the North Canadian River.

It is our hope that each educator will take with them the skills, materials and confidence to incorporate watershed stewardship into their classroom.



Our path of exploration...

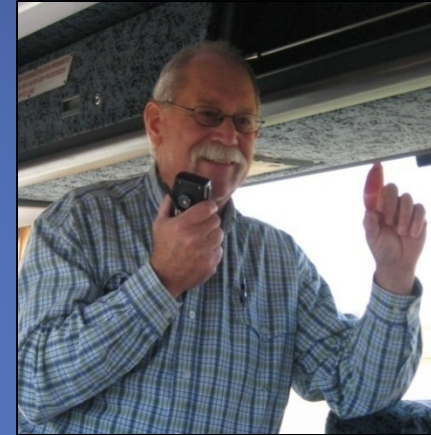


Tour Highlights...



We talk about....

- Land use changes.
- Eco-region changes.
- Invasive plant species.
- Urban areas and impacts.
- Agricultural practices and impacts.
- Macro-invertebrates and NCR fish.
- Effects of agricultural BMP's on NPSP.
- Groundwater, surface water and NPSP.
- Uniqueness of the N. Canadian River WS.



Presentations are given on...

- Headwaters and history of the Beaver/North Canadian River watershed.
- Unique characteristics of the North Canadian River watershed.
- Farming and ranching BMPs by the landowners themselves.
- Geology and History of Boiling Springs State Park.
- North Canadian River Watershed 319 Project.
- Canton Dam and lake management.
- The Dust Bowl.

Demonstrations are given on...

- NPSP with the Enviro-scape.
- Interaction with the land, landowners and BMP's.
- Effects of land-use on run-off using the Rainfall Simulator.
- Stream flow dynamics and dam safety using a stream flow model.
- Transpiration rates of native and invasive species using the *highly* technical “plastic baggie method”.
- Channel changes and potential causes using archived aerial photos.
- Groundwater recharge and withdrawal dynamics; potential contamination sources; “cones of depression”, etc. with the groundwater flow model.
- And much, much more.....



We utilize...

- Project WET curriculum.
- Corps of Engineers – Canton Lake Staff.
- Conservation District staff and resources.
- USDA – NRCS professionals and materials.
- OK Conservation Commission professionals.
- Farmers, ranchers, their spouses and equipment!
- Blue Thumb Stream Monitoring staff and materials.
- *And anything (or anyone) else we can get our hands on!*

We introduce them to.....

- Ranchers, native grasses and cattle.
- Farmers, farm equipment and soil health.
- Best management practices that reduce NPSP.
- State park and natural resource professionals.
- Astronomers.
- Historians.
- Wetlands.
- *And.....*



They get their feet wet!

This is where the “magic” happens!

- They wade in the River.
- They hold fish and “bugs”.
- They can pull a seine.
- They use kick nets.
- And they *love it!*



For a \$100.00 registration fee, participants receive...

- KIDS booklets, samplers and brochures from Project WET.
- Watershed Manager Educator Guide from Project WET.
- North Canadian River Watershed poster.
- Fishes of the North Canadian River.
- Oklahoma Eco-regions poster.
- OU Biological Survey posters.
- Out of the Dust books.
- Three day's transportation, food and lodging.
- 36 hours of professional development credit!
- Instruction in methods for classroom incorporation.
- Thumb drive with resource materials, 3-ring binders, etc.
- North Canadian River Watershed Educator's Tour T-shirt.
- The experience of a lifetime!



I'm *sure* you're wondering...

How much did it cost?



North Canadian River Watershed Teacher Workshop

MMCO LINE			BUDGETED	ACTUAL	BUDGETED	ACTUAL
	Registrations		24 @ \$100 each	13 @ \$100/1 @ \$50/1 comped	\$2,400	\$1,350
	OK Project WET				\$1,500	\$1,500
	OCC Conservation Education				\$2,500	\$2,500
	OCC Water Quality				\$4,000	\$3,725
	Kirkpatrick Foundation				\$5,000	\$5,000
				TOTAL INCOME	\$15,400	\$14,075

EXPENSES			BUDGETED	ACTUAL	BUDGETED	ACTUAL
	Transportation	Charter Bus	Red Carpet Charters		\$3,600	\$3,560
		Chase Vehicles	Fuel		\$400	\$250
	Lodging	NW Inn, Woodward on 6/14/11	18 rooms @ \$77	12 @ \$77 + 3 @ \$95	\$1,386	\$1,209
		Roman Nose SP on 6/15/11	20 rooms @ \$89	11 @ \$89 + 4 @ \$77	\$1,780	\$1,287
	Meals	breakfast on 6/14 & 16/11 + snacks	grab-n-go		\$400	\$280
		breakfast on 6/15/11	provided @ hotel		\$0	\$0
		boxed lunches on 6/14 & 15/11	80 @ \$10 each	60 @ \$8.75 each	\$800	\$525
		lunch @ Fort Reno	40 @ \$16 each	35 @ \$16 each	\$640	\$560
		dinner @ Museum	40 @ \$20 each	35 @ \$18.38 each	\$800	\$643
		dinner @ Roman Nose	40 @ \$23.55 each	30 @ \$20.40 each	\$942	\$612
	Activity/Admission Fees	Plains Museum	40 @ \$10 each	40 @ \$10 each	\$400	\$400
		Fort Reno	35 @ \$5 each	27 @ \$5 each	\$175	\$135
	Educational Materials	Watershed Ed Guide	34 @ \$30 each	24 @ \$23 each	\$1,020	\$552
		binders, notepads, etc	34 @ \$25 each	24 @ 27.08 each	\$850	\$650
		Landowner resources				\$146
	Other	t-shirts	48 @ \$20 each	37 @ \$15.50/11 @ \$16.50 + setup	\$1,000	\$864
		misc.				\$152
	Post-workshop	KIDS booklets	24 @ \$1 each	15 @ \$1 each	\$24	\$15
		watershed posters	24 @ \$6 each	15 @ \$6 each	\$144	\$90
		watershed educational materials	24 @ \$25 each	15 @ \$25 each	\$600	\$375
				TOTAL EXPENSES	\$14,968	\$12,398

2014 Budget

North Canadian River Watershed Teacher Workshop - June 10-12, 2014

BUDGET

INCOME		BUDGETED	ACTUAL	BUDGETED	ACTUAL
	Registrations	24 @ \$100 each		\$2,400	
	OCC Con Ed	GR funds		\$3,000	
		PWET funds		\$2,500	
	OCC Water Quality	NCR 319 project			
		Blue Thumb			
			TOTAL INCOME	\$7,900	\$0
EXPENSES		BUDGETED	ACTUAL	BUDGETED	ACTUAL
	Transportation	Charter Bus	Red Carpet Charters	\$3,774	
		Chase Vehicles	fuel	\$300	
	Lodging	NW Inn, Woodward on 6/14/11	18 rooms @ \$83	\$1,494	
		Roman Nose SP on 6/15/11	22 rooms @ \$89	\$1,922	
	Meals	breakfast on 6/14 & 16/11 + snacks	grab-n-go	\$400	
		breakfast on 6/15/11	provided @ hotel	\$0	
		boxed lunches (3 days)	114 @ \$10	\$1,140	
		dinner @ Musuem	38 @ \$20	\$760	
		dinner @ Roman Nose	38 @ \$20	\$760	
	Activity/Admission Fees	Plains Museum	38 @ \$10 each	\$380	
	Educational Materials	PWET Guide/KIDS booklets	24 @ \$25 each	\$600	
		binders, notepads, etc	24 @ \$25 each	\$600	
	Other	t-shirts	48 @ \$20 each	\$960	
		misc		\$200	
			TOTAL EXPENSES	\$13,290	\$0

Participant Feedback

"You can sit in a classroom watching a PowerPoint presentation about water, watersheds, water quality, etc. and get the basic concepts. But when you stand in the middle of the river, with the sun shining and the birds singing, those concepts take on life and are infused in your soul."



"We have all attended workshops in which we sit and listen and fill our heads with abstractions. However, this workshop plugged us into the system. We walked away forever thinking differently about our environment. "

"Oklahoma is a land of great geographic and environmental diversity. The North Canadian River Watershed Workshop highlighted both the macro and micro view of the watershed as well as the human impact and responsibility of living within that system. I walked away from this workshop with a unique understanding of how human and natural systems are interrelated. "

Quotes are from 2011 North Canadian River Watershed Workshop participants

6 MONTH FOLLOW-UP

- 7 of the 15 participants returned the survey.
- Participants reported a better understanding of the North Canadian River Watershed, it's importance as a major drinking water source for OKC metro areas and groundwater recharge source for upstream communities.
- Participants reported using activities and other materials from the workshop in their classrooms or other educational settings.
- Participants reported that they appreciated learning what private landowners upstream are doing to help improve and protect the water quality of the river.
- Participants reported a greater confidence in educating their students about the importance of watershed stewardship and ways they can help protect their own drinking water supply.

Questions?

