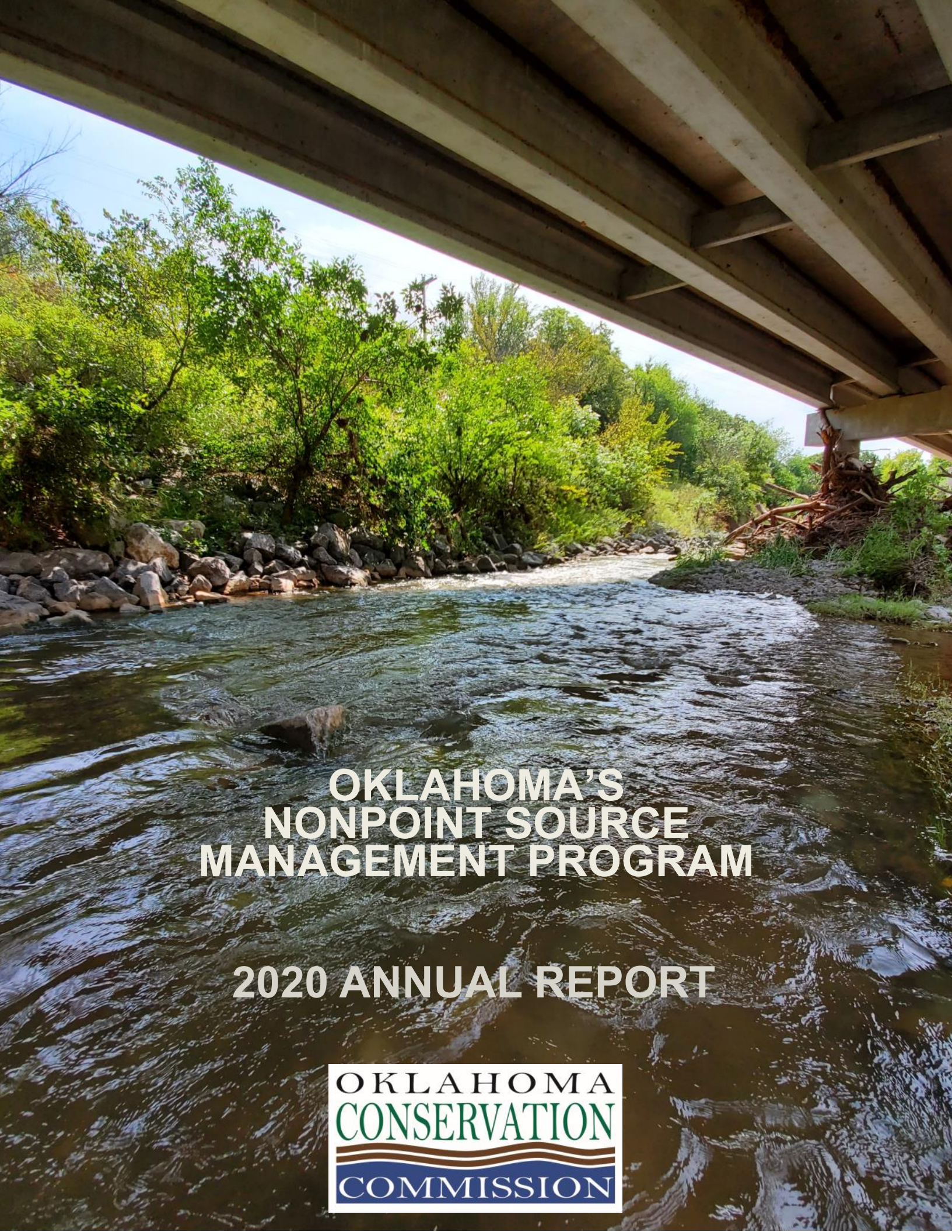

# OKLAHOMA'S NONPOINT SOURCE MANAGEMENT PROGRAM

# 2020 ANNUAL REPORT

OKLAHOMA CONSERVATION COMMISSION

The USEPA provided partial funding for activities discussed in this report through §319(h) FY 2021, C9-996100-21, Project 2, Output 2.4.1a

For more information on activities discussed in this report, visit our website:
**www.conservation.ok.gov**

**Oklahoma Conservation Commission**
**Water Quality Division**
**2800 N. Lincoln Blvd. Suite 200**
**Oklahoma City, OK 73105**

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**Cover photo: East Cache Creek, Caddo County, Oklahoma 2020**
**Back photo: Stinking Creek, Caddo County, Oklahoma 2020**

# *Oklahoma's Nonpoint Source Management Program*

## *Overview:*

Oklahoma's Nonpoint Source (NPS) Pollution Management Program is a combination of federal, state, and local agency programs. The NPS Program is supported federally by Section 319(h) of the Clean Water Act (CWA), which requires states to 1) assess and report on NPS issues in waters and 2) develop a Management Program that creates and implements objectives for addressing the problems. These core program elements are described in the **Oklahoma NPS Management Plan**.

By state statute, the Oklahoma Conservation Commission (OCC) serves as the technical lead agency of Oklahoma's NPS Program. This responsibility means monitoring and assessing waterbodies for NPS impacts and implementing programs to reduce these NPS issues, with the ultimate goal of restoring full support of the designated beneficial uses of all waterbodies. With input from the NPS Working Group, comprised of more than 30 agencies, tribes, organizations, and universities, the state follows an organized process to identify NPS threats and impairments to water resources, determine causes, extent, and sources of the problems, and prioritize the watersheds needing improvement. Solutions to the NPS problems are then planned and addressed, primarily through projects in priority watersheds to provide implementation and education.

Oklahoma's NPS Management Program is *non-regulatory*. On-the-ground conservation is the primary focus, and less than 10% of OCC funds support administrative duties. ***Planning*** and ***educating*** to address NPS problems are the backbone of OCC's program and are critical to its success. Long-term water quality ***monitoring*** and ***assessment*** are essential to help prioritize areas to target through the program and evaluate its effectiveness. ***Implementation*** of Conservation Practices (CPs) through cooperative, targeted, voluntary efforts allows improvement and protection of water quality and other resources while maintaining agricultural production goals.

Oklahoma's NPS program is largely funded through the Environmental Protection Agency (EPA) Clean Water Act Section 319(h) NPS Management Program. The Oklahoma Secretary of Energy and Environment (OSEE) is the state administrative lead and recipient of CWA program funds, disbursing Section 319 dollars to OCC and partners, insuring that all NPS activities meet appropriate state and federal guidance and priorities. Federal funds are matched by monies from the State's Conservation Infrastructure Revolving Fund, state and local partners, and most importantly, local landowners who voluntarily participate in cost-share programs to install conservation practices which facilitate agricultural production goals while protecting soil and water resources. In recent years, Oklahoma has formed strong partnerships, networking with multiple agencies to secure matching funds to increase the total amount of funding available to address NPS issues.

**In 2020:**
The OCC implemented its 2020 NPS Management Program efforts with $2.5 million in U.S. Environmental Protection Agency (USEPA) Clean Water Act Section 319(h) funding and $1.7 million in state funds. The monitoring program is allotted 23% of the budget, the Blue Thumb education program receives 15%, and the remainder is used for technical support and implementation.

Major accomplishments for the NPS Management Program in 2020 include 1) progress in partnerships and projects in watersheds including Little Beaver Creek, Illinois River, New Spiro Lake, Grand Lake, Elk City Lake, and Wister Lake, 2) developing NPS Success Stories in four new waterbody segments, along with updates to three older stories delisting additional parameters, 3) continued expansion of the soil health education program focusing on the nexus between healthy soils and water quality protection, 4) expansion of education programs in support of partners including the Grand River Dam Authority, Oklahoma tribes, USDA NRCS, General Mills, and others, and 5) continued water quality monitoring of streams across the state continuing the fourth cycle of the Rotating Basin Monitoring Program.

Highlights of Oklahoma's progress in implementing the NPS Management Program during FY2020 are included in the following pages. While efforts funded through Section 319 are emphasized, projects conducted by NPS Program partners are also included. Readers are encouraged to access more details on project and program efforts via web links where provided.

## Planning:

The long- and short-term goals of Oklahoma's NPS Management Program Plan set the course for addressing NPS pollution throughout the state and comprise the vehicle to its mission, "To conserve and improve water resources through assessment, planning, education, and implementation."

***OK's NPS Program areas: Planning, Implementation, Education, and Assessment.***

| Long-Term Goals | Progress Toward Attaining |
|---|---|
| By 2030...establish a Watershed Based Plan (WBP), Total Maximum Daily Load (TMDL), implementation plan, or achieve full or partial delisting based on water quality success to restore or maintain beneficial uses in all watersheds identified as impacted by NPS pollution on the 2002 303(d) list, unless the original basis for listing is no longer valid. | Oklahoma currently has:<br>• 723 TMDLs for waterbodies impaired by bacteria, turbidity, low dissolved oxygen, and nutrients. Work to address additional impairments is ongoing.<br>• Thirteen WBPs, and implementation of CPs to improve water quality is ongoing in five of these watersheds.<br>• 88 published success stories on the EPA's §319 website, indicating delisting of 129 pollutants from 88 impaired waterbodies due to CP implementation and education. |
| By 2050...attain and maintain beneficial uses in waterbodies listed on the 2002 303(d) list as threatened or impaired solely by NPS pollution. | Oklahoma has delisted more NPS impaired streams than any other state with a total of 88. Strong partnerships with other agencies, particularly the NRCS, are resulting in additional funding for implementation of practices focused on water quality improvement. |
| **Short-Term Goals** | **Progress Toward Attaining** |
| Monitor at least 250 streams, rivers, and other waterbodies every five years to determine causes and sources of NPS impairments. | The water quality of more than 14,338 stream miles has been assessed and presented in the State's biennial Integrated Report. Summary reports are written for each basin at the end of each two-year monitoring cycle. |
| Prioritize watersheds using the process described in the NPS Management Plan, then draft and update WBPs or similar planning documents for top priority watersheds. | Thirteen WBPs are currently approved. All watersheds in the state were assessed with the new prioritization scheme, and the OCC is working with partners to develop at least three additional plans. |
| Provide educational information through the statewide Blue Thumb Program. Blue Thumb staff will work with Conservation Districts as requested to develop and maintain education programs. | Oklahoma's Blue Thumb Education Program currently has active volunteers in 35 of the 77 counties of the State, with 84 active monitoring sites. Forty-seven Conservation Districts have joined the nonprofit Oklahoma Blue Thumb Association. |
| Reduce NPS loading in priority watersheds with accepted WBPs through implementation of conservation practices. Implement water quality restoration and protection efforts in additional priority watersheds annually, as identified by the Unified Watershed Assessment (UWA) in the updated NPS Management Plan. | Oklahoma's NPS program has been successful at partnering with various entities to secure funding and match federal funds to increase the total amount of funding available to address NPS issues, including EPA's Clean Water State Revolving Fund (CW-SRF), NRCS, public companies, and private landowners. Work continues that will advance NPS related programs in watersheds prioritized in the Unified Watershed Assessment. This includes support for education and training, water quality monitoring, and partnering with USDA to focus conservation dollars in high priority UWA. |

# *Implementation:*

Current OCC priority watershed implementation projects are located in two general parts of the state: the east and the west-central. The predominant agricultural practices vary between these two general areas, so the implementation focus is slightly different in each area. In the east, extensive poultry production and related land application of waste as fertilizer has contributed to the build-up of high levels of nutrients, particularly phosphorus, in the soils. Consequently, CPs focus on riparian buffers and animal waste management. In the west-central part of the state, wheat and cattle production dominate agricultural activity, often contributing to water- and wind-driven soil erosion in conventional tillage operations in the sandy soils. No-till and field conversion CPs are the focus of implementation efforts in this area. Establishing riparian buffers is an important component of all projects, as these vegetated regions act as filters to take up nutrients, and roots help stabilize streambanks to reduce erosion. Fencing livestock out of riparian areas also reduces the amount of fecal bacteria in the stream.

Despite some differences in CP focus, all OCC priority watershed implementation projects share a common design which has resulted in success both in number of participants who are implementing CPs in each area and in actual, measurable water quality improvement:

- Planning: have data/information that indicates NPS problems that can be addressed with a project
- Local leadership and buy-in: get support of local Conservation District and hire local coordinator; establish a Watershed Advisory Group (WAG) that includes all interests to drive implementation planning
- Targeting: use an effective model (e.g., SWAT) to locate pollution hotspots to target for implementation
- Effective monitoring: use a proven study design (e.g., EPA's Paired Watershed Method) and sampling method (e.g., continuous, flow-weighted sampling) to obtain sufficient data to evaluate impacts on water quality
- Demonstration/Education: establish a demo farm where landowners can see a suite of CPs in action
- Partnerships: look for creative ways to engage other agencies, leveraging hard dollars and matching funds
- Long-term commitment: commit to have multiple phases in the project (i.e., be in watershed for more than 5 years) to allow project concepts to take hold and prove their way from producer to producer

## Implementation Projects:

During FY2020, approximately $1,280,201.46 dollars in federal §319 funds, federal Clean Water State Revolving funds, Oklahoma state funds, and private landowner funds were expended for implementation of CPs in six priority watersheds (see map). The majority of these funds focused on riparian are protection.

An additional $3,021,529 in state and matching fund implementation dollars were invested statewide in NPS projects through the Locally-led Cost-Share Program to protect soil and water quality.

A brief update of implementation in each of the OCC priority watershed projects is given in the following pages. Details of each project, including reports and Watershed Based Plans, can be accessed via the OCC Water Quality Division website under Priority Watershed Projects.


# Water Quality Monitoring

The Oklahoma Conservation Commission (OCC) has an extensive and unique monitoring program assessing essential components of water quality, biology, and habitat in streams across the state. Effective monitoring and assessment are essential to determine the extent, nature, and probable sources of NPS pollution and show improvement due to conservation programs across the state.

## Implementation Monitoring Program:

Implementation monitoring is performed to determine the effects of conservation practices (CPs) on water quality in high priority watersheds. Implementation monitoring usually involves sampling streams during defined periods before and after CPs are installed in a watershed.

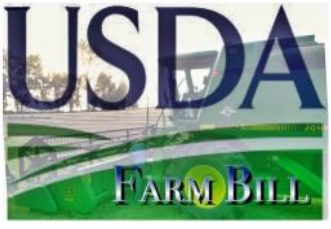
Due to budget cuts, OCC and its partners are turning to collaborative projects such as the Regional Conservation Partnership Program (RCPP) and the National Water Quality Initiative Program (NWQI) to fund implementation in priority watersheds. With these, OCC continues assistance in the technical delivery and the critical monitoring efforts needed to determine changes brought about by the prescription of CPs. OCC will remain flexible in the monitoring approach so that appropriate monitoring can determine changes in water quality in these watersheds with available funding and time constraints.

Ongoing projects include: Middle and Lower Neosho River Basin/Grand Lake RCPP Project; Elk City Lake RCPP Project; Little Beaver Creek NWQI Project; and the New Spiro Lake/Holi-Tuska Creek NWQI Project.



NRCS provides technical and financial assistance to landowners to plan and apply land treatment and structural practices on a voluntary basis to improve water quality while maintaining the essential production of food and fiber in Oklahoma's agricultural areas. NRCS has been engaged with landowners and partners on two ongoing water quality projects targeting assistance. The National Water Quality Initiative (NWQI) completed its third year of implementation in five watersheds located in eastern and SW Oklahoma. NWQI utilizes Farm Bill funding through the Environmental Quality Incentives Program (EQIP).

In FY 20, NRCS continued to assist landowners with the installation of key conservation practices addressing gully erosion and grazing management. Key practices included grade stabilization structures, watering systems and prescribed grazing. NRCS and OCC have partnered on a pilot project through NWQI to conduct watershed assessments in two HUC 12 watersheds in SW Oklahoma. The outcome of these assessments was being used to develop a watershed based plan to address water quality needs and critical acres contributing to identified impairments. Additional funding for conservation practices has been budgeted and partners are currently working to design education and outreach activities to support additional installation of CPs.

# Water Quality Monitoring

## Rotating Basin Monitoring Program:

The Rotating Basin (RB) Monitoring Program has allowed for the identification of impaired streams to target for implementation projects, the determination of high quality streams used as reference sites to gauge the health of other streams, the detection of changes in NPS pollutants following implementation of CPs by project partners, and the use of data by Oklahoma Department of Environmental Quality (ODEQ) to create total maximum daily loads for impaired streams.

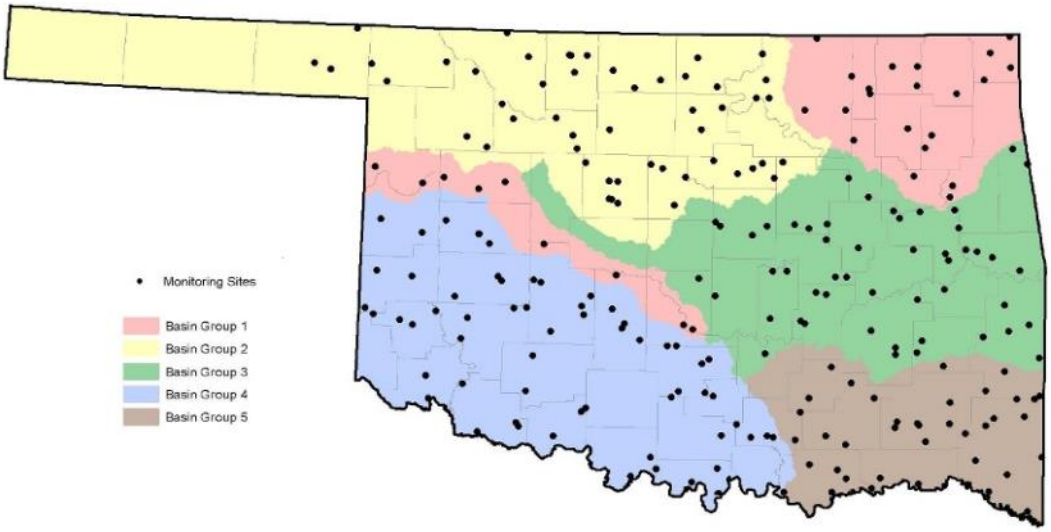
For the RB program, a total of 250 fixed sites are monitored on a rotational schedule by basin (see map). Sites within a basin are sampled every five weeks for two consecutive years to gather water quality data. In addition, a fish collection and habitat assessment is performed. Benthic macroinvertebrates are collected twice a year. Each year a new basin is sampled, meaning all sites are sampled within a five year period. This frequency of sampling allows for both broad coverage of streams across Oklahoma and the assessment of streams for attainment of beneficial uses. Approximately 100 sites are assessed each year.

In 2020, OCC finished the fourth cycle of monitoring in Basin Group 3, continued the second year of the fourth cycle of Basin Group 4 and began the fourth cycle of Basin Group 5.

Oklahoma continues to experience climatic variations which present a challenge in ambient monitoring of small and medium sized streams. OCC has revisited planning efforts and made some revisions to the RB Program site list. OCC has dropped some sites which have stopped flowing or dried during previous monitoring cycles and added some sites deemed significant and important to the determination of the effects of NPS pollution.

**Water quality parameters assessed:**

| *In field:* | *Lab:* |
|---|---|
| dissolved oxygen | ammonia |
| water temperature | nitrite |
| pH | nitrate |
| turbidity | total Kjeldahl nitrogen |
| conductivity | ortho-phosphate |
| alkalinity | total phosphorus |
| hardness | chloride |
| instantaneous discharge | sulfate |
| | total dissolved solids |
| | total suspended solids |










## *Estimating Load Reductions*


Automated Sampler

In addition to tracking change in actual stream water quality results through its extensive monitoring and assessment program, the OCC determines conservative estimates of CP impacts on reducing priority NPS pollutant loads delivered to streams. Load reductions for nitrogen, phosphorus, and sediment are determined using the EPA's Spreadsheet Tool for Estimating Pollutant Loads (STEPL) and submitted through EPA's Grants Reporting and Tracking System (GRTS) for CPs implemented during the program year. Load reductions are estimated for projects implementing CPs directly funded or supported by OCC's NPS Management Program. Project efforts include but aren't limited to the OCC's statewide Locally-Led Cost-Share Program, ongoing riparian easement efforts in the Illinois River and Eucha-Spavinaw watersheds, OCC's Soil Health program, and poultry litter transfer efforts.

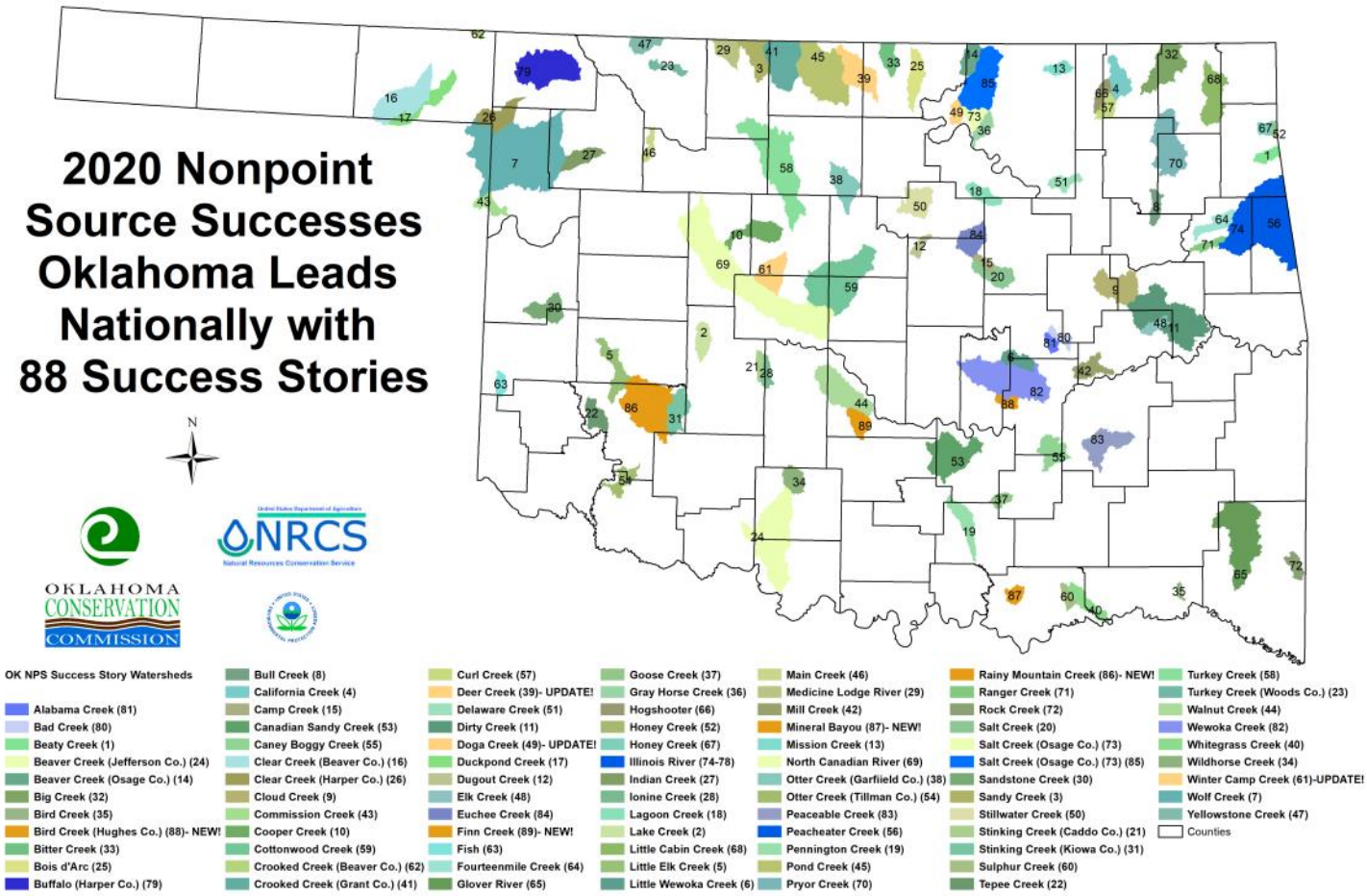
| Watershed / Program | 2020 Load Reduction Estimates* | | |
|---|---|---|---|
| | Nitrogen | Phosphorus | Sediment |
| Riparian easement (Illinois River and Eucha/ Spavinaw watersheds) and RCPP Projects | 357,065 lbs/yr | 30,857 lbs/yr | 4,110 tons/yr |
| Statewide Locally-Led Cost-Share, Soil Health Program, and Poultry litter transfer | 493,975 lbs/yr | 500,681 lbs/yr | 1,520 tons/yr |

*Estimates rendered using EPA's Spreadsheet Tool for Estimating Pollutant Loads (STEPL) Model. Totals recorded in GRTS may include additional data not available during preparation of this report.

## Documenting Success

NONPOINT SOURCE SUCCESS STORY Oklahoma

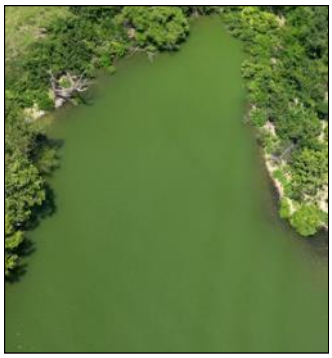
EPA approved four new Oklahoma NPS Success Stories in 2020. These stories detail the results of cooperative efforts among the NRCS, OCC, conservation districts, and landowners to implement voluntary, cost-shared conservation practices (CPs) to improve water quality and result in delisting of at least one parameter from the 303(d) impaired waters list. These practices reduced the runoff of soils, waste products, and associated nutrients and bacteria and resulted in improved turbidity.




**Oklahoma's 2020 Success Stories:**
*With the submission of the 2020 stories, Oklahoma has 88 streams that are recognized as EPA NPS Success Stories, detailing removal of 129 pollutants. Oklahoma is now second in the nation for documenting NPS pollution reduction, and the lead in the nation in the number of independent watersheds where our program has documented successful water quality restoration through voluntary NPS programs.*

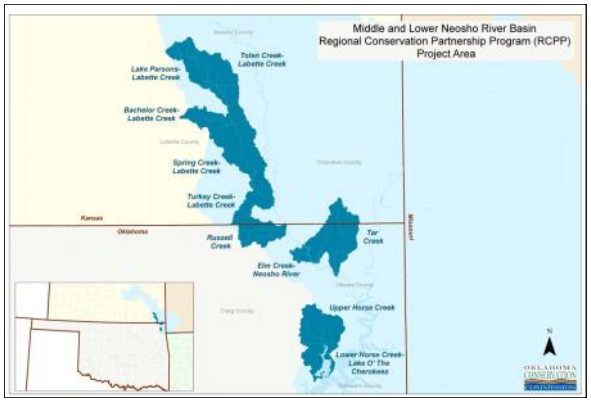
# Regional Conservation Partnership Program Project

# Middle and Lower Neosho River Basin/Grand Lake



**Grand Lake is an important water supply, flood water retention, electrical power generation, and recreation source for the region. Eutrophication in the lake led to severe blue-green algae blooms in 2011 and bacteria outbreaks at beaches in 2014.**

- The Neosho River Watershed is a high priority for both Kansas and Oklahoma and each state has devoted significant effort towards diagnosing and solving water quality degradation in the watershed.
- The Regional Conservation Partnership Program (RCPP), created by the farm bill of 2014, promotes coordination between NRCS and its partners to deliver conservation assistance to producers and landowners.
- Many of the streams, rivers, and reservoirs in the watershed have water quality problems and impairments related to excess nutrients, sedimentation, and bacteria. Of particular concern to both states are watersheds in the Middle and Lower Neosho Basin, because of concerns raised by stakeholders in the watershed and, in part, because these watersheds contribute directly to water quality degradation in Grand Lake.




**In FY 2020:**

- Water monitoring continues in five streams on a monthly basis.
- Continued education and outreach.
- Four active federal contracts obligated for $391,835.
- State contract agreements for $527,202, which included 317.5 acres of riparian area exclusion.

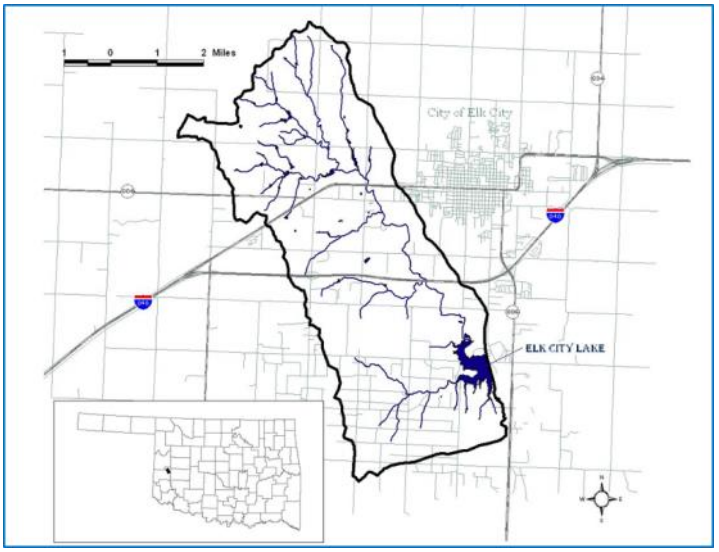
Cover crop planted in Ottawa Co. to improve soil health and water quality.

# Regional Conservation Partnership Program Project

# Elk City Lake


**Partners in the Elk City Lake Watershed RCPP will work cooperatively with landowners to install conservation practices on cropland and rangeland in the watershed that contribute to nutrient and sediment related water quality impairments in downstream waterbodies.**

- The Elk City Lake was constructed in 1970 primarily for flood control but is now operated by the City of Elk City for recreation.
- Elk City Lake has had both water quantity and quality problems related to excess nutrients, sediment, and bacteria.
- The primary purpose for the project is to restore water quality and protect West Elk Creek, and downstream Elk City Lake from future degradation.
- Land use in the watershed is primarily range, pasture, and cropland with little to no riparian buffer along much of the stream courses and direct access by livestock.




**In FY 2020:**

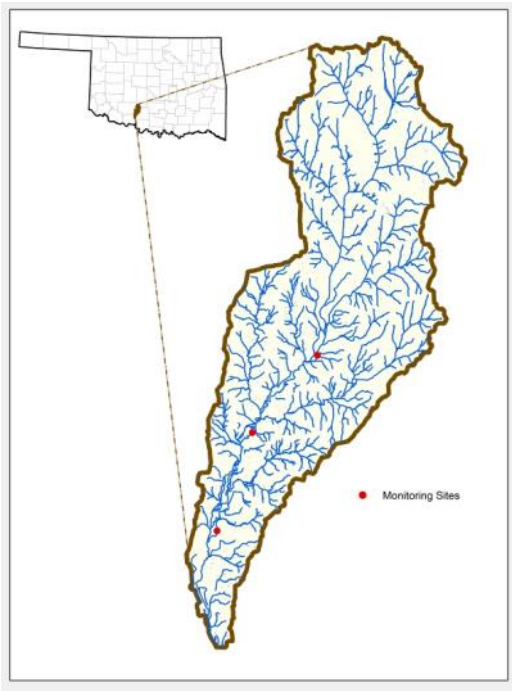
- Monitoring continued on West Elk Creek with monthly grab samples and additional runoff samples after rain events.
- Conservation Practices installed:
  - Riparian Livestock Exclusion (32.2 acres excluded)
  - 136 acres forage and biomass planting
- Conservation practices planned:
  - 2 acres critical planting area, 2 grade stabilization structures, 7,293 ft. fencing, 14.2 acres riparian protection, 40 acres forage and biomass planting

# National Water Quality Initiative Program Project

# Little Beaver Creek


USDA NRCS
United States Department of Agriculture
Natural Resources Conservation Service

- In 2015, four sub-watersheds of the Little Beaver Watershed were chosen as NRCS National Water Quality Initiative (NWQI) watersheds. Through NWQI, NRCS provides technical and financial assistance to help farmers and ranchers install conservation practices that will improve downstream water quality.
- Little Beaver Creek was listed as impaired on Oklahoma's 2012 Integrated Report for high levels of *E. coli* bacteria. Waurika Lake is listed as impaired for chlorophyll–*a* and turbidity.
- The Little Beaver NWQI project builds on a 2011 local emphasis area (LEA) project in Cotton, Stephens and Jefferson counties that includes the lower half of the Little Beaver Creek watershed. This program provided extra funding to install practices which protect water quality and quantity. Emphasis was given to adoption of renewable energy resources, exclusion of livestock from streams, and cedar removal.
- The OCC began collecting water quality data on Little Beaver Creek in 2015, sampling at three locations (as shown on map) approximately once per month.
- The project received additional funding in 2016 through the NWQI Pilot Program to develop a watershed plan that would eventually allow implementation to spread into the two remaining HUCs in the Little Beaver watershed.
- In 2019, modeling, riparian assessments and critical area rankings were completed for the all six HUC 12's in the Little Beaver Creek watershed. The NRCS/NWQI report was accepted and a little over a million dollars per year was granted to spend on targeted conservation practices that are designed to have a positive effect on water quality in the watershed. In addition to NWQI, the 319 Watershed-Based Plan was submitted and accepted by EPA in May.

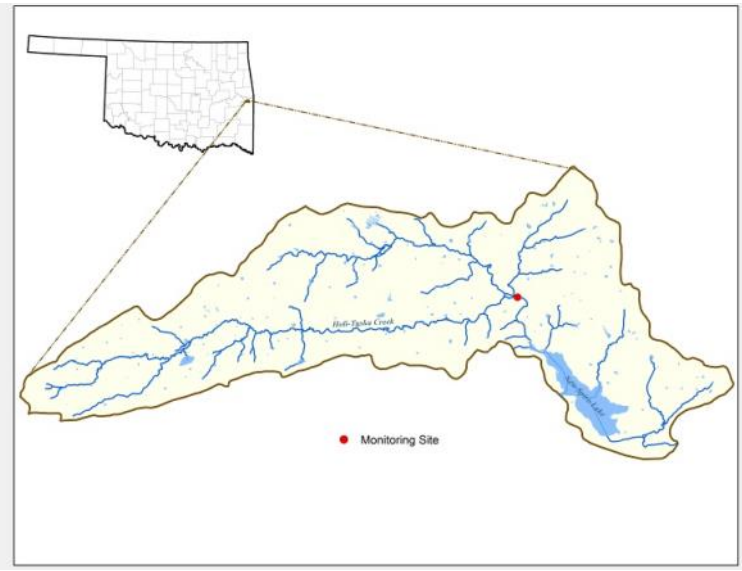



**In FY 2020:**

- Water Quality monitoring continued on Little Beaver Creek.
- Conservation Practice implementation continued to be strong in 2020. Many contracts include some component of reducing livestock access to streams.
- NRCS field staff continued to use a GIS based tool developed for targeting landowners/producers for conservation programs.
- A Watershed Advisory Group was established in 2019 however, all meetings scheduled for 2020 were postponed due to the ongoing COVID-19 crisis. Dates and ways to safely meet are being considered for 2021.

# New Spiro Lake/Holi-Tuska Creek

- The water quality of New Spiro Lake has deteriorated over recent decades. The lake has excessive chlorophyll-*a*, too little dissolved oxygen, and high turbidity impairing its beneficial uses as a public water supply and warm water aquatic community.
- In 2015, through the collaboration of NRCS, the OCC, the Oklahoma Department of Environmental Quality and local input, Holi-Tuska Creek was selected for the National Water Quality Initiative (NWQI) Program. NRCS is providing financial and technical assistance to the landowners and farmers to work the land in a sustainable way which provides cleaner water.
- The New Spiro Lake Monitoring Program has three components: watershed load monitoring, volunteer creek monitoring, and lake monitoring. Monitoring is being conducted by the private consulting firm Bio x Design, with the assistance of the Town of Spiro and the Oklahoma Conservation Commission.




**In FY 2020:**

- Water quality monitoring on Holi-Tuska Creek began in 2015 and continues through 2021. Water quality monitoring has been maintained in New Spiro Lake for more than a decade.
- Installation of conservation practices has been slow to begin in the watershed. Many producers were interested in conservation practices that weren't appropriate for their natural resource concerns. As a result, OCC, the Choctaw Nation, and the City of Spiro are beginning work on eroding, unpaved roads in the watershed to address an additional source of NPS pollution. This will involve a watershed survey and prioritization of eroding roads, as well as at least one restoration site in partnership with the Oklahoma Department of Transportation and LeFlore County Commissioners to be completed in 2021.

# Blue Thumb Education Program

The Blue Thumb Program provides education and outreach on behalf of the Oklahoma Conservation Commission's Water Quality Division. Blue Thumb is a statewide citizen science effort focused on training volunteers to collect water quality data and share their knowledge with others. The Blue Thumb Program strives to achieve stream protection through education. Blue Thumb aims to inspire and empower people across the state to use education and monitoring to protect water in their region from nonpoint source pollution.

In 2020, the Blue Thumb program achieved the following:

- Supported approximately 138 active monitoring volunteers. We also have a number of volunteers who do education and outreach on behalf of Blue Thumb, but do not monitor and many volunteers do both.
- Logged 4,556 volunteer hours (monitoring and education volunteers)
- Collected water quality data at 86 stream sites across Oklahoma
- Collected 144 macroinvertebrate samples and completed 16 fish collections in coordination with volunteers

*Photo: Blue Thumb staff and a volunteer complete a fish collection at Clear Boggy Creek (7/15/2020)*

**Highlights from 2020 include:**

- Published a monthly e-newsletter e-newsletter for volunteers
- Produced 55 educational videos
- Launched a virtual H2Oklahoma
- Developed a mobile data entry application
- Worked with the Illinois River Watershed Partnership to collect chemical, biological and habitat data at 12 sites in the Oklahoma portion of the watershed
- Expanded our website to include a webpage for teachers
- Published 2021 Blue Thumb calendar

*Photo: Volunteers process macroinvertebrate samples (10/28/2020)*

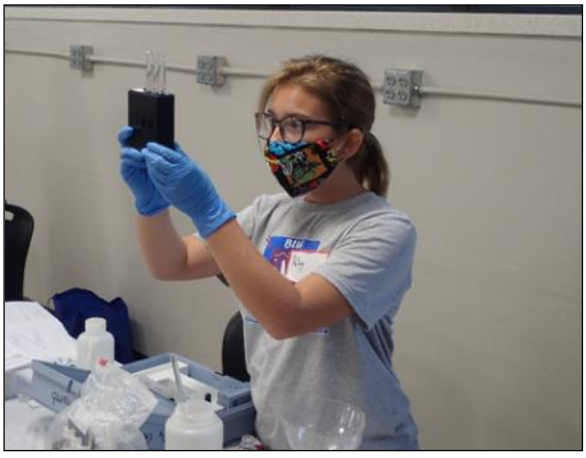


*Photo: Volunteer reading the results of an orthophosphate analysis (8/28/2020)*

*Photo: Stillwater Blue Thumb Training (1/25/2020)*

# Soil Health Education Program

The Soil Health program is one of the educational arms of the Water Quality Division housed in the Oklahoma Conservation Commission. The Commission collaborates with other state, federal, tribal, and private partners to provide education assistance to the 84 conservation districts, and to tribal groups and city organizations across Oklahoma to further soil health and pollinator habitat education. The soil health team uses educational tools like the rainfall simulator (both table top and trailer version), plant ID workshops, backyard pollinator plot conversion classes, and cover crop and grazing land field days to provide hands on experiences to communities to expand knowledge about land and water quality.

**Highlights from 2020:**

- The Soil Health program has continued education and outreach efforts across the state. Specifically, Soil Health has partnered with American Farmland Trust to complete studies showing the economic benefits of soil health practices. We know these practices improve water quality and provide benefits to communities downstream, but we have never studied the direct economic benefit to farmers. Actual producers will be interviewed, and case studies will be published. Following this project, a predictive tool will be designed to help producers estimate the benefits derived from soil health practices.

- The Soil Health team and four of our conservation districts are working with General Mills to expand conservation, namely soil health practices, in north central Oklahoma. A MOU was established between the Chickasaw Nation, Oka' Institute, NRCS, and OCC to show our dedication to work together and expand resources devoted to soil health within the Lake of the Arbuckle's Watershed and much of the Chickasaw Territory of Southeastern Oklahoma.

- Although the Soil Health team was unable to have traditional field days, they continued to work towards engaging and educating citizens through nontraditional means. This has included Zoom webinars and YouTube educational videos, which reached over 1,500 people. In addition, Facebook posts continue to reach hundreds. Lastly, over 8,000 people have subscribed to receive Soil Health emails and text messages.

- The Yard by Yard program, designed to reach urban citizens, was developed by the Oklahoma County Conservation District Urban Soil Health Specialist. This program provides a unique, safe approach to educate urban citizens about their lawn management. OCC staff provided necessary guidance and technical assistance to get this program developed and launched in Oklahoma and Tulsa Counties.

- Research and data collection have expanded across Oklahoma with the assistance of trained partners. The Soil Health Team traveled to Emmon's Farms to revisit eight year old soils field data. The preliminary results from the field implementing soil health practices gathered during Summer 2020 shows that the soil has potentially changed classification over the past eight years. The soil has increased the depth and percentage of organic matter to cause the soil to be reclassified from Untisol (very young soil lacking organic matter accumulation) to a Mollisol (old soil with deep organic matter).

# Other OCC Programs

Oklahoma's NPS Management Program is a cooperative effort, blending partners from multiple state and federal programs to accomplish water quality protection and improvements. Each of the programs described here is coordinated by the OCC and works to complement NPS efforts of the agency. With support from EPA §319 funds, OCC staff have been able to engage relevant partners, generate interest, and obtain grants to leverage additional match for non-EPA grants.

## *Wetlands Program*

Wetland activities initiated by the OCC provide demonstration, restoration, and protection of wetland resources. Every wetland project the OCC pursues has the potential to improve water quality, particularly with regard to NPS pollution. The program is primarily funded through EPA §104(b)(3) Wetlands Program Development Grants (WPDG) with matching funds from state and local sources.

In 2020, approximately $123,502 in non-§319 EPA funds were used to accomplish the activities below:

- Continued development of the Oklahoma Rapid Assessment Method (OKRAM) in collaboration with Oklahoma State University (OSU). OKRAM was applied and calibrated in 58 floodplain wetlands statewide from 2018 to 2019, along with the collection of vegetation and soil data. In 2020, plant and soil data were analyzed to evaluate the ability of OKRAM to determine the condition of riverine wetlands.

- Continued application and refinement of the Restorable Wetland Identification Protocol (RWIP) statewide. We field verified 30 sites across five ecoregions, and an additional 10 sites were verified from the roadside. Of these sites, the large majority (upwards of 90%) exhibited evidence of restoration potential.

- Worked in partnership with the Oklahoma Wetlands Technical Workgroup (OWTWG) to update Oklahoma's Wetland Program Plan (WPP) for 2020-2025, which will guide and focus wetland related activities within the state to ensure that programmatic goals are met. The WPP was accepted by USEPA in December 2020.

- Continued work on our project titled "Improving Wetland Maps for Floodplains of the Canadian and Arkansas Rivers and Associated Tributaries" in collaboration with OSU. This project will focus on utilizing satellite imagery specifically timed to coincide with flood events to better understand the spatial extent of floodplain wetlands. Several iterations of models were developed to identify floodplain wetlands using satellite imagery. Field visits were used to estimate the accuracy of the model output.

- Received funding through a USEPA 104(b)(3) grant to commence a new project developing a guidebook and training modules for OKRAM in partnership with OSU.

- Continued to manage the Oklahoma Wetland Website, which hosts information on wetland activities and programs from government agencies (all levels), academia, tribes, and non-governmental organizations.

- Participated on the US Army Corps of Engineers Interagency Review Team to review activities of an in-lieu fee mitigation program and consider a proposed mitigation bank.

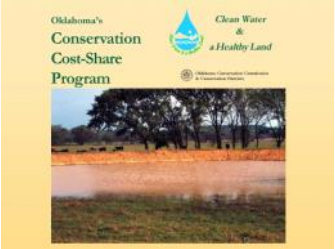
- Attended the Association of State Wetland Managers virtual meeting in April 2020.

- Completed desktop wetland determinations on projects that utilize state and/or federal monies.

- Met with numerous potential future partners in efforts to build collaborations to serve the needs of Oklahoma in the conservation of wetland and stream resources.

# Other OCC Programs

## Oklahoma Locally-Led Cost-Share Program




OCC's Locally-Led Cost-Share Program (LLCP) is a state-funded program providing technical and financial assistance to landowners and producers to install conservation practices to protect soil and water resources and reduce NPS pollution. The program is administered by OCC personnel and is implemented locally through the conservation districts who interact directly with landowners, NRCS, and other entities to draft the necessary conservation plans.

Landowners and producers participate voluntarily and contribute a minimum of 40% match based on pre-established cost-share rates by practice. OCC's LLCP is a critical mechanism to promote voluntary implementation of NPS controls statewide and serves as primary match for federal §319 funds.

Contracts for FY2020 totaled $2.84 million and were completed in 73 conservation districts. Conservation practices installed are shown in the table on the right.

| | |
|---|---|
| Alternative water (units) | 98 |
| Ponds (units) | 130 |
| Cover crop planting (ac) | 6,535 |
| Forage/biomass planting (ac) | 5,993 |
| Fencing (ft) | 95,033 |
| Grassed waterways (ac) | 3,200 |
| Conservation tillage (ac) | 580 |
| Pasture/hayland planting (ac) | 5,993 |
| Range seeding (ac) | 634 |

## Crow Creek Watershed Community

Crow Creek is a small urban stream running through one of the older parts of Tulsa. Residential properties, schools and parks border the stream. The stream is enjoyed by many for its aesthetic value. Although the portion of the stream monitored by the Blue Thumb Program has excellent habitat, the macroinvertebrate and fish communities are impaired. The stream is on the 303(d) list for *E. coli* and has been for many years. Data suggest that domestic pets are the primary source of bacteria.

In 2015 the Crow Creek Community was organized by Blue Thumb volunteers who had monitored in the watershed for 20 years. The Crow Creek Community continues to be actively involved in education and outreach in the community. The group includes representatives of the City of Tulsa, the Metropolitan Environmental Trust, the Tulsa County Conservation District, the Tulsa Zoo, Blue Thumb and local residents. The group maintains Crow Creek Meadow, a water quality demonstration site located at 1025 East 33rd Place.

Crow Creek Community, in cooperation with OCC, accomplished the following tasks in 2020:

- Submitted a revised watershed based plan to EPA
- Held four maintenance events at Crow Creek Meadow
- Hosted Monarchs on the Mountain "Mobile Monarchs" at the Meadow
- Updated the Crow Creek Community contact list
- Supported the new "Yard by Yard" community resiliency project in coordination with partners from OCC Soil Health, Friends of Blue Thumb and the Oklahoma Association of Conservation Districts
- Worked with a group of students from the Oklahoma School of Innovation and Experiential Learning on a project about Crow Creek



# NPS Program Partner Activities

Oklahoma's NPS Management Program is a collaborative effort of federal, state, and local agencies, as well as nonprofits and citizen groups. Here are just a few examples of partner agencies which usually do not receive federal §319 funds yet have programs that mitigate NPS pollution and improve and protect water quality in the state.

## *Oklahoma Department of Agriculture, Food, and Forestry (ODAFF)*

In December 2012, the Oklahoma Department of Agriculture, Food, and Forestry (ODAFF) received authorization from the U.S. Environmental Protection Agency to administer agriculture -related Clean Water Act discharge permits. This is a permitting program and under certain conditions, it authorizes discharges to Waters of the U.S. from three agriculture related programs. Upon authorization, ODAFF referred to this program as the Agriculture Pollutant Discharge Elimination System (AgPDES) program. One of those programs is the AgPDES Construction General Permit (CGP). The CGP addresses storm water discharges associated with construction activities on some agriculture construction activities. One of the requirements is for construction operators or owners to develop a Storm Water Pollution Prevention Plan (SWPPP). The SWPPP includes a description of the Best Management Practices (BMPs) that will be used to reduce pollutants in storm water discharges. The CGP also requires operators to conduct regular site inspections to ensure BMPs are performing as designed and to monitor and maintain BMPs throughout the project. Since authorization of the program, the AEMS Division has issued 170 CGP authorizations associated with Ag related construction sites.


Settling basin to retain stormwater runoff


Using vegetation as a buffer strip

The AEMS Division has an educational flyer to help educate the public on who may need coverage under the AgPDES CGP program. For additional information on the program, and a full glimpse at the flyer please see http://www.oda.state.ok.us/aems/agpdes.htm

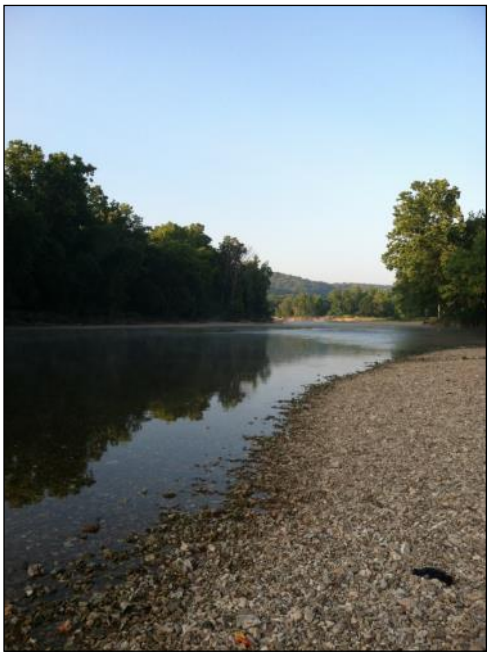
## *Oklahoma Department of Transportation (ODOT)*

The Oklahoma Department of Transportation (ODOT) continues to utilize best management practices to manage storm water on our projects. Our storm water personnel and Storm Water Action Team (SWAT) continue to work to add new BMPs to our toolbox. The Oklahoma Water Survey is currently doing research on how our agency can utilize compost filter socks on our projects. As every year, we have held our field a priority and continue to aid in ways we can assist reduce sediment transport and maintain compliance with our state and federal regulations while safely building roads and bridges.

In 2020, ODOT has continued the process to obtain a Non-Traditional MS4 permit. We have worked to map our permit areas and better manage our storm water data for the state. SWAT has continued to finalize standard drawings and is currently focused on finding solutions and innovative ways to stabilize projects as they are completed.

## Long-term Riparian Conservation Protection Programs

The Grand River Dam Authority (GRDA) and OCC have a long-term partnership to protect water quality in northeastern Oklahoma through riparian area conservation. These efforts include a variety of easement and contract terms and formats, ranging from 10 year agreements up to perpetual easements. These contracts have focused on protection of the Illinois River Watershed but this year expanded to the Grand Lake Watershed. GRDA maintains a program of 30 year or longer easements. At the same time, the OCC, Adair, Cherokee, and Delaware county conservation districts maintain annually-renewed 10 to 15 year riparian protection contracts.



In 2020, GRDA added 563.91 acres in the Illinois River Watershed and 236.86 acres (ac.) in the Grand Lake Watershed of 30 year or perpetual easements at a cost of $1,768,408. This included $1,147,765 in EPA Clean Water Act Section 319 funds and $620,643 in funds from GRDA and the Oklahoma Secretary of Energy and Environment. This increased the acreage to a total of 1,590.17 ac. at a cost of approximately $111,000 per year.

The OCC and conservation districts currently have fifteen-year riparian agreements with 36 landowners in the Illinois River Watershed. These total 1,631.1 ac. in Adair (1,133.8 ac.), Cherokee (421.4 ac.), and Delaware (75.9 ac.) counties at a cost of $96,219.60 per year.

## City of Oklahoma City

The purpose of the Oklahoma City Storm Water Quality Division (SWQ) is to provide inspections, water quality assessments, household hazardous waste services, and public outreach to residents, schools, businesses, and government agencies.

In 2020, Storm Water Quality outreach programs reached an estimated 8.3 million contacts through press releases, news coverage, radio and printed advertisements, interviews, workshops, webinars and presentations. Through the floatable debris management programs, over 226,481 pounds of debris was removed and properly disposed from the Oklahoma River. The Household Hazardous Waste Collection Facility had over 11,088 facility participants delivering 775,631 pounds of household waste such as paint, used oil, and pesticides. 300,359 pounds of the collected household hazardous waste was separated and either recycled or released for public reuse. Storm Water Quality inspectors completed 10,728 construction site and industrial facility inspections. Staff managed 158 pollution incident reports ensuring proper cleanup of spills and illicit discharges.

# NPS Program Partner Activities

## *City of Norman*

The City of Norman's Environmental Services Division oversees many environmental programs including the Industrial Pretreatment Program; Fats, Oils and Grease (FOG) Program; the annual household hazardous waste (HHW) collection event; the staff liaison for the Environmental Control Advisory Board and Earth Day. In 2020, approximately 25,000 pounds of electronics were collected at a one-day event and 230,000 gallons of grease were kept out of the sanitary collection system through the FOG Program, helping to prevent sanitary sewer overflows. In addition, year-round collection for oil, antifreeze, oil filters, kitchen grease and tires was provided at no charge to citizens at the City of Norman's transfer station. The Sanitation Division provides curbside recycling and yard waste collection that helps keep our streams and creeks clean. In 2020, over 3,668 tons of recyclables and 34,373 tons of yard waste were collected.

Though 2020 was a challenging year for everyone, the City of Norman Stormwater Division was still able to plan and implement some wonderful activities, both for educational purposes and public participation purposes, including distributing over 130 rain barrels in May as part of their annual rain barrel promotion with the Central Oklahoma Stormwater Alliance. In fact, in 2020, the Stormwater Division was able to plan and implement several clean-up events, host workshops for targeted and general audience members, and facilitate the installation of the Second Annual Artful Inlets pieces.

**Workshops and Activities for the Construction Industry Stakeholders**

The Stormwater Division works closely with building and development stakeholders throughout the year. In March, staff hosted a table at the Builders Association of South Central Oklahoma's Associate Showcase. They spoke with stakeholders about how these stakeholders could help protect Norman's water quality with a few management practices on their sites. Stakeholders were presented with information about permitting, compliance and pollution prevention. In addition, a virtual Builders Workshop was held on August 18, 2020. The topic was Stormwater Inspections and Common Issues, and though the meeting was virtual, feedback was positive from participants.

**General Clean-up Events**

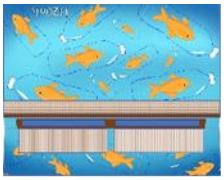
Clean-up Events were scheduled in March, September and October of 2020. In March, the Stormwater Division partnered with Earth Rebirth to hold an event at Colonial Estates Park, which is located within the Canadian River watershed. Over 20 participants removed more than 950 pounds of material that could have otherwise ended up in the Canadian River and perhaps even Lake Eufaula. In September, Hitachi's Green Team and Blue Thumb volunteers came together for a clean-up event held at Griffin Community Park. Almost 60 pounds of lightweight floatable material was removed from the dual-watershed park. In October, City residents cleaned along the right-of-way of 12th Ave SE between Boyd and Lindsey and removed almost 40 pounds of lightweight material.

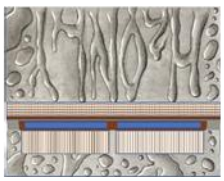
**5th Annual Lake Thunderbird Workshop and Clean-up Event**

On November 15, 2020, the Stormwater Division hosted the 5th Annual Lake Thunderbird Workshop and Clean-up Event at Lake Thunderbird State Park. With a beautiful setting and wonderful weather, forty-seven (47) volunteers discussed the lake and ways to help its water quality, enjoyed a rainfall simulator demonstration by the Assistant Director of the Soil Health Program at Oklahoma Conservation Commission, and then helped remove over 640 pounds of material from the Lake Thunderbird State Park.

**2nd Annual Artful Inlets Installation**

The Artful Inlets program was developed and implemented as a way to combine education and art in a wonderful way to help people realize how they impact their environment in general, and stormwater quality in particular, every day. On October 2 and 3, 2020, six artists installed their pieces around five storm drains located along Main Street during the 2nd Annual Artful Inlets installation. These canvases join the original five designs, also along Main Street from Porter Avenue to Webster Avenue. Eventually, the Stormwater Division hopes to bring Artful Inlets works to areas throughout the City of Norman, highlighting the importance of protecting stormwater quality. The selected pieces for 2020 were "Bottled Up" by Kody Montana Haskins, "Balance" by Kris Wilson, "Down the Drain" by Laura Nelsen, "Ribbit" by Ken Hall, and "Mermaids" by Michael Wilson and Bonnie Amspacher, as shown below, respectively:




# NPS Program Partner Activities

## City of Norman cont.

**Lake Thunderbird Watershed Blitz Park Clean-ups**

As part of the Stormwater Division's ongoing public education and outreach efforts, the Fourth Annual Lake Thunderbird Watershed Clean-up Blitz was held in parks across the watershed. The kickoff event was held on October 4, 2020. On a beautiful day, eight volunteers removed almost 235 pounds of trash from Crestland Park! The Watershed Blitz continued on Sunday, October 25, 2020 at John H. Saxon Park. While the temperature was considerably lower, almost 40 volunteers braved the weather and helped make the Lake Thunderbird watershed better by removing over 275 pounds from the Lake Thunderbird watershed!

## City of Tulsa

The City of Tulsa's Stormwater Quality Program includes monitoring, enforcement, and education programs, all aimed at keeping Tulsa's waterways pollutant free. Tulsa has continued its robust outreach program, including media such as billboards, radio, TV and mobile advertising. The goal of our outreach is to simply make Tulsans more aware of stormwater issues and help them to realize how everyone has an impact on our watersheds and streams.

Tulsa opened a Household Pollutant Collection Facility in Jan. of 2016 which has proven very successful. Last year over 230,000 lbs. of pollutants were properly disposed of, keeping our streams and lakes cleaner and healthier.

Tulsa's Watershed Characterization Program continues rotating through all our major watersheds over our 5 year Permit cycle. Information from this program is insightful to stop illicit discharges and identify better best management practices. Tulsa is also developing a Low Impact Development Manual as a way to slow and sink stormwater runoff into the ground as opposed to running off properties carrying pollutants and eroding streams. Information on Tulsa's Stormwater Quality Program from the past fiscal year can be found at www.cityoftulsa.org/sos.

OKLAHOMA CONSERVATION COMMISSION

# Responsible Care for Oklahoma's Natural Resources

**Through extensive partnerships, education programs, and effective monitoring, assessment, and implementation, Oklahoma's NPS Management Program continues to demonstrate its success in improving water quality. Oklahoma has ranked in the top five states for documented NPS success stories and reported priority nutrient load reductions over the last several years.**

**The achievements of Oklahoma's NPS Management Program would not be possible without the funding and support of the USEPA, local conservation districts, USDA-NRCS, Oklahoma Legislature, and hundreds of private landowners whose voluntary participation is paramount to the conservation, restoration, and management of Oklahoma's natural resources. The OCC will continue to strive for fishable, swimmable waters statewide with the vision that one day all Oklahoma waterbodies will fully meet their designated uses.**

# Addendum to 2020 Oklahoma Nonpoint Source Program Annual Report:

## Update on Annual Nonpoint Source Management Program Milestones

**FY 2021/2022 319(h)**

**EPA Grant # C9-996100-21**

**Project 2, Output 2.4.1a**

Submitted by:


**Oklahoma Conservation Commission**

**Water Quality Division**

2800 N. Lincoln Blvd., Suite 200

Oklahoma City, Oklahoma 73105

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## Table 1. 2020 Progress Toward OK Nonpoint Source Management Program Annual Milestones

| Assessment Milestone | 2020 Progress Toward Milestone |
|---|---|
| Oklahoma's Nonpoint Source Program will monitor at least 250 streams every five years through its Small Watersheds Rotating Basin Monitoring Program, collecting physicochemical, biological, and habitat data to identify causes and sources of nonpoint source pollution as well as to identify waterbodies meeting assigned beneficial uses. Each year the State will monitor between 75 and 100 waterbodies to complete the fourth cycle of the program in 2023 and the fifth cycle of the program in 2025. | In 2020, OCC monitored 71 streams in Basin IV (Upper Red River) and began monitoring 49 streams in Basin V (Lower Red River) as part of the fourth cycle of our rotating basin program |
| Annually, the NPS Program will produce a summary report of the most recent Rotating Basin Monitoring Program Basins completed. | In March 2020, OCC submitted the final report for project 17/18 Co-996100-19 Project 3 output 3 1 4 RB 2.4 to OSEE and then submitted to EPA in April 2020. |
| Annually, the NPS Program will produce abbreviated reports of the recently completed Rotating Basin Monitoring Program that can be distributed to landowners, conservation districts, and the general public, summarizing stream health | OCC completed and distributed to districts all updated summaries for associated with the report listed above. OCC is in the process of completely overhauling our website and therefore, these updates have not yet been uploaded to the website. |
| Combined Oklahoma monitoring efforts will fully or partially assess a representative sample of at least 24% (991 of 4,203) of the State's waterbodies to be reported in the Integrated Report (IR) in 2020, 2022, 2024, 2026, and 2028. | In 2020, OCC, OWRB, and partnering agencies completed draft assessments for the 2020 IR that were due to ODEQ by June 25th. The 2018 IR was approved, in March 2020, with assessments on 1,121 or 27% of Oklahoma's 4,203 waterbodies. |

| **Assessment Milestone (Continued)** | **2020 Progress Toward Milestone** |
|---|---|
| In 2020 and subsequent years as defined in future workplans, Oklahoma will review monitoring results from implementation efforts to document water quality results due to conservation practices installed. | OCC reviewed water quality monitoring results from the rotating basin program and also reviewed assessment results reported in the 2018 303(d) list and compared to previous 303(d) lists and implementation data. Streams with sufficient, lasting improvement tied to significant implementation were documented in EPA success stories. OCC produced 4 NPS success stories in 2020. |
| **Planning Milestone** | **2020 Progress Toward Milestone** |
| Review and update as needed to the UWA prioritization when new data becomes available and when major changes have occurred in the number, or primary causes or sources of impaired waterbodies, or otherwise as some change in guidance requires an update. | The 2018 303(d) list was not significantly different from the 2016 list, at least in terms of NPS pollutants. Therefore, no update of the UWA is required at this time. |
| Each year, the NPS Program will draft or update one to two watershed based plans as prioritized by the UWA | OCC and partners submitted watershed plans to EPA for review in the Lake Hudson and Crow Creek Watersheds. OCC Is working with partners on watershed plan updates in the Illinois River, Lake Thunderbird, Spring Creek, and Grand Lake Watersheds |
| At least every two years (2019, 2021, 2023, 2025, 2027, 2029), the State will submit two grant years' worth of workplans to EPA for consideration for §319 funding. | OCC submitted FY 2021/2022 workplans to OSEE for review in November 2020. |
| Annually, the NPS program will produce a NPS Program annual report detailing significant accomplishments and progress toward NPSMP goals, which EPA can utilize to make a determination of satisfactory progress. | OCC submitted its 2019 annual report to OSE/EPA in March of 2020 and received satisfactory progress determination from EPA in November 2020. |
| Annually, the NPS program will exceed the §319 match requirements by at least 20%. | OCC documented at least $3,822,110.68 of match in 2020 or 128% greater than the required match of $1,676,333. |

| Education Milestone | 2020 Progress Toward Milestone |
|---|---|
| Hold at least 4 BT trainings Annually | Blue Thumb held 5 two day trainings and 4 mini academies for monitoring where they trained new students of existing volunteers who are teachers. They also held 4 mini academies for education |
| Maintain a network of at least 75 stream sites that are actively monitored by citizen scientists | In 2020, 138 active volunteers monitored at 86 sites in 30 counties |
| Participate in an average of at least five NPS education and outreach events each month | BT staff participated in at least 101 education events in 2020 for an average of at least 8 per month. Due to COVID-19 (COVID), more of these were virtual events than in the past, but nonetheless, BT engaged with over 8000 people in 2020 in educational programs |
| Provide educational support and guidance to active watershed groups | OCC staff worked with watershed groups in the Spring Creek, Lake Hudson, Illinois River, Crow Creek and Little Beaver Creek. |
| Hold at least two groundwater screening events annually | Blue Thumb held four groundwater screenings in 2020: one each in Oklahoma County, North Caddo, West Caddo, and Central North Canadian conservation districts |
| Facilitate quarterly meetings of an interagency groundwater education committee in 2020 and as needed thereafter | One meeting of the interagency group was held in early 2020, but COVID delayed further meetings. Group will reconsider meeting after in person meetings are possible. |
| Promote NPS education on social media platforms | COVID response meant that OCC used social media and virtual meetings even more than in past years. OCC made an extra focus to expand their social media presence with new efforts like “macroinvertebrate Monday” along with producing 55 short educational videos that we published on social media and stored on the www.Bluethumok.com website. |
| Develop and support a network of Soil Health Champions who mentor agriculture producers in their area | OCC continued to provide support to the soil health champions and in 2020, secured funding from General Mills to support Soil Health Mentors in the north central Oklahoma area |

| **Education Milestone (Continued)** | **2020 Progress Toward Milestone** |
|---|---|
| Coordinate with other partners to deliver soil health education state wide | In addition to conservation districts and the association of conservation districts, OCC worked with the NRCS, the Noble Foundation, the Nature Conservancy, the City of Oklahoma City, the City of Edmond, the Chickasaw Nation, the Choctaw Nation, Oklahoma State University, General Mills, and many other groups to deliver soil health education programs in 2020. |
| **Implementation Milestone** | **2020 Progress Toward Milestone** |
| Oklahoma will contribute to the National §319 program by achieving at least 1.5% of the national goal for nitrogen, phosphorus, and sediment load reductions (based on the State receiving approximately 1.5% of the national program funding) | In 2020, OCC contributed 24% of the national total phosphorus load reduction, 13% of the national total nitrogen load reduction, and 1% of the national total sediment load reduction. |
| Oklahoma will annually submit at least three NPS success stories to EPA | Oklahoma submitted 4 NPS success stories in 2020. |
| Implementation will occur in at least 20 impaired waterbody segments as listed on the impaired waterbodies list (2020, 2022, 2024, 2026, 2028, 2030) | Although the OCC and partners completed implementation statewide through the locally-led cost-share program and NRCS conservation programs, OCC and partners installed implementation in the watersheds of at least 33 impaired segments with EPA approved watershed based plans. |
| Install conservation practices in partnership with at least 100 cooperators, annually | Installed conservation practices on at least 626 producer's operations |

| Implementation Milestone (Cont) | 2020 Progress Toward Milestone |
|---|---|
| Annual implementation of conservation practices will include at least<br>• 20 critical area plantings<br>• 35 grassed waterways<br>• 100 alternative water supplies<br>• 150 pasture or range management (seeding, planting, rotational grazing, etc.)<br>• 20 terraces<br>• 50 ponds<br>• 100 tons of poultry litter transferred out of sensitive watersheds<br>• 200 abandoned oil and gas extraction/exploration sites remediated | In 2020, Conservation Practice Implementation included:<br>• 0 critical area plantings<br>• 99.85 acres of grassed waterways for 40 producers<br>• 98 alternative water supplies<br>• 6,628 acres of pasture or range management and planting for 195 producers<br>• 8,577 linear feet of terrace for 3 producers<br>• 131 ponds<br>• 51,186 tons of litter transferred out of the sensitive watersheds<br>• 331 abandoned oil and gas extraction/exploration sites remediated<br>• 4,609 acres of cover crop<br>• 95,319 linear feet of fencing for 56 producers<br>• 1 grade stabilization structure<br>• 580 acres of no-till<br>• 4,074 acres riparian area protected |