



BLUE RIVER
— FOUNDATION OF OKLAHOMA —

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Watershed Planning for the Blue River

WaterSMART Cooperative Watershed Management Program

Phase I Grant Proposal

13 November 2019

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Technical Proposal and Evaluation Criteria

Executive Summary

The Blue River and its watershed, located in southern Oklahoma, are affected by several water quality and quantity challenges along its 140 mile course across Chickasaw and Choctaw Nations' territories. The Blue River Foundation of Oklahoma (BRFO) is a relatively new organization formed by a group of concerned landowners in response to a localized threat to our generational rights to water quality and quantity in the spring-fed, undammed headwaters that sustain the Blue River flow throughout its course. Our group promotes a sustainable Blue River and our founders represent agricultural interests, including livestock grazing and agribusiness, along with recreational, environmental and tribal interests (two BRFO Board members are Chickasaw Citizens). As we successfully mobilized and engaged other stakeholders within the Blue River watershed, our Foundation soon realized the importance of broader stakeholder outreach, collaboration and engagement to begin to solve numerous watershed issues impacting a sustainable Blue River. As a result, we seek assistance through the WaterSmart Phase I grant opportunity in management and watershed planning activities: (i) Staffing and organization, (ii) Stakeholder and public outreach and education, (iii) Identification of priority areas requiring restoration and conservation, and (iv) Developing tailored conservation plans suitable for implementation by voluntary landowners. The long-term goal of this scope of work is to produce positive impacts for the Blue River, its tributaries and the stakeholders that rely upon them.

From this start, our Foundation has begun to work closely with many others, including tribal nations, universities, municipalities, State agencies, Federal agencies, mining industry, active non-profit organizations, and other landowners to identify issues impacting the Blue River watershed and promote sustainable practices. This grant will be utilized in part to build upon our existing relationships, expand our outreach within the watershed and bring more partners into collaboration on important unifying practices to promote water quality and quantity for all users. We propose activities under all three Tasks: Task A Watershed Group Development (staffing and organization actions); Task B Watershed Restoration Planning (public engagement and input, planning, data gathering); and Task C Watershed Management Project Design (landowner/steward outreach and training, 'shovel-ready' conservation plan development). The importance of these tasks is underscored by the economic value placed on the Blue River watershed. According to a recent study, the natural capital within the Blue River watershed contributes \$855 million to \$1.6 billion in ecosystem service benefits each year.

The application information specified in the Department's Funding Opportunity Announcement (FOA) is provided below.

Date:	13 November 2019
Applicant Name:	Blue River Foundation of Oklahoma
City, County, and State:	Tishomingo, Johnston County, Oklahoma

The proposed scope of work is projected to take 24 months to complete. No work will take place on a Federal facility or Federal land.

Background Data

Blue River Foundation

The Blue River Foundation of Oklahoma (BRFO) is composed of a diverse set of stakeholders in the region who are collaborating to identify, evaluate and resolve water quantity and quality issues within the Blue River watershed. BRFO stakeholders currently include landowners, municipalities, business interests, state and federal agencies, recreational interests, educational and conservation organizations and others. In February 2018, due to expanding demands on the water resources of the Blue River, a group of concerned landowners gathered and created a grass-roots organization to protect their generational property rights and advocate for a sustainable Blue River. These citizens were specifically concerned that subsurface activities below the shallow groundwater table near the river would result in declining water quality and declining flows in springs and streams that sustain the Blue River. This group, formally organized as the Advocates for the Blue River Foundation, a 501(c)(3) entity, share a common vision of a sustainable Blue River, unchanged for future generations of property owners and stewards. In doing so, they wish to continue the long-standing, traditional use, enjoyment, and value of this unique Oklahoma riparian treasure. BRFO has sought to enlist the active participation of its members, citizens, tribal nations, municipalities, universities, elected officials and beneficiaries of the Blue River through a united, principled, and science-based approach to advocacy and stewardship.

BRFO was established on March 19, 2018 and holds a Certificate of Incorporation as an Oklahoma not-for-profit corporation. The Foundation comprises an elected Board of Directors, with officers, which meets regularly to approve past meeting minutes, provide updates on relevant outside meetings and legislative events, provide treasurer reports, and conduct new business as necessary to promote the BRFO Mission. Both the Chickasaw Nation and Choctaw Nation, within whose territory the Blue River lies, support the BRFO. BRFO has accomplished much since inception, including:

- Collaborating with all agencies that manage water quality and quantity to promote the mission.
- Proposing new rule-making for Arbuckle-Simpson spring designations and water quality status for the Blue River in partnership with the OWRB.
- Conducting five legislative field days on the Blue River with legislators, tribal leaders, municipal leaders, university researchers, Oka' Institute and concerned citizens to promote BRFO's mission.
- Engaging landowners to undertake prescribed burning to control brush infestations

Relationship with USBR

BRFO has not previously received funding from USBR.

Watershed Description

The Blue River watershed is located in the State of Oklahoma within Murray, Pontotoc, Johnston, Atoka, and Bryan counties (as shown in Figure 1), and spans a total land area of 687 square miles. The watershed, which includes Oklahoma Comprehensive Water Plan (OCWP) Basins 11 and 12 in its Blue-Boggy Planning Region, is uniquely long and narrow with a maximum width of about 14 miles. From its source near Roff in southwestern Pontotoc County at an elevation of 1,321 feet, the Blue River flows some 145 miles in a decidedly southeasterly direction to its confluence with the Red River in southwest Bryan County.



Figure 1: Location of the Blue River Watershed

The Blue River is the only major free-flowing river in the state. Much of its flow is sustained and augmented by springs. The average annual flow of the Blue River at Blue, Oklahoma is 318 cubic feet per second (cfs), or 230,232 acre-feet per year (AFY). However, directly related to water reliability, that flow is available less than 13 percent of the time.

The Blue River watershed primarily encompasses two identified ecoregions—the Cross Timbers and South Central Plains. The Blue River alternates as a gravel/cobble/bedrock/sand system as it passes through the Arbuckle Uplift (a sub-ecoregion in the upper reaches), which contains thick accumulations of Paleozoic rocks with ages ranging from 570 to 245 million years ago. Water clarity is typically good to excellent throughout the watershed, especially in its upper portion. Only about five percent of the Blue River watershed is considered developed with the vast majority of land under private ownership. Conventional agricultural land, including hay and pasture, makes up about 24 percent of its total land area. However, the watershed’s shallow, rocky soil—especially in the upper portion—has largely inhibited cultivation. Ranching is currently the predominant agricultural activity.

The Blue River watershed contains four recognized groundwater basins, as shown in Figure 2. About 34 percent of the total extent of the Arbuckle-Simpson aquifer (some 600 square miles), which supports much of the river’s flow due to a distinct surface water/groundwater connection, underlies the northern area of the watershed. The aquifer serves as the principal supply for the City of Sulphur and is the source of a number of important springs in the region, including Byrds Mill Spring (Oklahoma’s largest spring) and those in the Chickasaw National Recreation Area. Stakeholders are concerned that increased withdrawals from the aquifer will result in declining flows in streams and springs.

Exceptional Resources and Vulnerabilities

The Blue River and its watershed contain many exceptional resources and areas that make it particularly vulnerable to impacts from a variety of land use activities. Examples of these areas are the Blue River Wildlife Management Area (WMA), the Durant State Fish Hatchery, and the Oka Yanahli Preserve.

Encompassing 3,367 acres of prime wildlife habitat along and around 6.5 river miles, the Blue River WMA is located about 11 miles northeast of Tishomingo. Also classified as a public fishing and hunting area, such activities date back to the 1890s when one of Oklahoma's first fishing/hunting camps was established on private land. The Oklahoma Department of Wildlife Conservation (ODWC) established the WMA in 1967 and today facilitate opportunities to fish for native sunfish, catfish and bass as well as trout, which are stocked by the agency throughout the winter months.

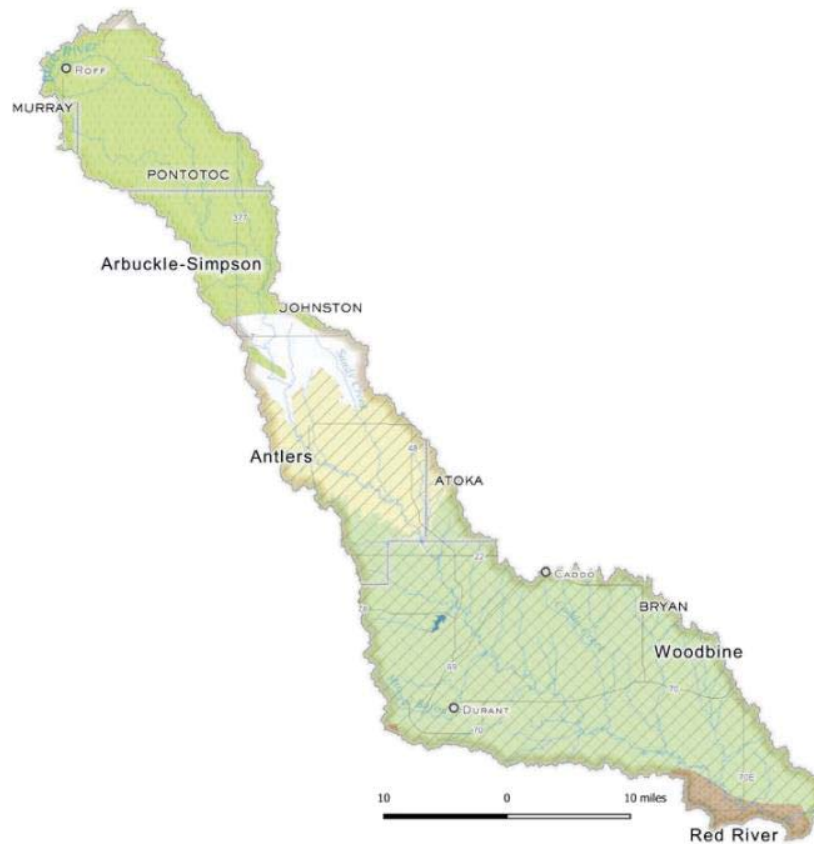


Figure 2: Aquifers within the Blue River Watershed

The Durant State Fish Hatchery, the largest fish hatchery in Oklahoma, producing millions of stocking fish each year, is situated in the lower end of Basin 12. The facility was constructed in 1917 in response to over-fishing of waters in Indian Territory. The hatchery, which is fed by the Blue River, is an integral part of ODWC's successful Florida largemouth bass production program.

Oka Yanahli Preserve is a cooperative venture of the Nature Conservancy, Chickasaw Nation and other conservation-minded organizations to protect and expand the riparian corridor along a two-mile stretch of the Blue River south of Connerville. The Preserve, which protects almost 3,600 acres of native prairie, as well as area springs and land providing essential recharge for the Arbutle-Simpson aquifer, is considered a model of collaborative land and water conservation and restoration.

Water Supply

Several rural water supply organizations and the City of Durant, which is headquarters to the Choctaw Nation, rely on the Blue River for all potable water for their citizenry. The Durant

Micropolitan Statistical Area had a population of more than 42,000 in 2010. In accordance with its Sole Source Aquifer status, the Arbuckle-Simpson Aquifer provides water resources to approximately 39,000 citizens in south central Oklahoma.¹

Water Rights

Surface water use permits in the watershed, including both the Blue River and its tributaries, appropriate almost 30,000 acre-feet per year of water, primarily for public water supply. However, approximately 22 percent of the total permitted surface water is set aside expressly for recreation, fish and wildlife purposes. Irrigation and other agricultural uses also make up a large share of surface water permits. Most of the groundwater allocated in the Blue River watershed is utilized for public supply, including virtually all of the permitted groundwater in Basin 11. Blue River streamflow also supports and sustains important non-consumptive uses of water, including habitat for an abundance of fish and wildlife species and related environmental needs, as well as recreational activities.

Watershed Issues

Unique, free-flowing and spring fed rivers like the Blue River, and the Sole Source aquifer that sustains it, are susceptible to numerous threats to existing water quality and availability. Water quality issues, mining, and the spread of invasive species are of particular concern to stakeholders within the watershed, as identified in the watershed restoration plan. Further detail on critical watershed issues, including water quantity, water quality, and invasive species concerns is provided in the Evaluation Criteria portion of this proposal.

Project Location

The proposed project activities will take place throughout the Blue River watershed in Murray, Pontotoc, Johnston, Atoka, and Bryan counties, as shown in Figure 1.

Technical Project Description and Milestones

Proposed activities include staffing and organizational development, outreach and education, data gathering and organization, and watershed project development. These activities and associated sub-activities will be distributed between Tasks A, B and C, as shown in Figure 3.



Figure 3. Overview of Proposed Project Activities

¹ <https://www.nps.gov/chic/learn/nature/arbuckle-simpson.htm>

Staffing and Organizational Development (Task A Activity)

Staffing

Within the first month following project kickoff, a watershed coordinator will be hired. This person will act as a liaison between BRFO and stakeholders, including state agencies with interest in the watershed, and other non-profit organizations, in order to find areas of collaboration and potentially develop beneficial watershed management project concepts. The watershed coordinator will formulate a work plan for the duration of the grant, and also assist with organizational development, conduct administrative functions of the foundation (including stakeholder contact, meeting minutes, reporting to BRFO Board of Directors, and communication with technical consultants), maintain overall group momentum, and prepare required project reports. The Watershed Coordinator is anticipated to stay involved in the watershed planning activities presented in this proposal throughout the two year project period. During the funding period, additional grant sources will be sought in order to provide future support for the watershed coordinator position.

Organizational Development

Under this activity, BRFO will review its existing foundational documents, including its bylaws, purpose statement and mission statement, and to evaluate the need for modification or refinement. The organization, with help from the Watershed Coordinator and a management consultant, will also conduct reviews of similar non-profit organizations to evaluate organizational options and perspectives in order to better engage stakeholders within the watershed. Finally, under this task BRFO members and the watershed coordinator will attend a national conference focused on non-profit organizations in order to gain ideas for aligning BRFO's organizational structure with its mission statement and further increasing stakeholder engagement.

Expected Outcomes.

The following outcomes are expected:

1. Watershed Coordinator hired under two-year contract
2. Work plan developed for remaining grant period
3. Updated organizational structure reviewed and approved by BRFO board
4. Updated Bylaws, Purpose Statement, and Mission Statement (as appropriate)

Public Outreach and Engagement (Task B Activity)

Foster New Partnerships between BRFO and Stakeholders

BRFO will use several methods of outreach to maintain relationships with existing stakeholders and target new stakeholders, including updating and maintaining an active website, hosting 'field days,' hosting public meetings, educational programming for youth, meeting with stakeholders one-on-one as necessary, and attending local and state conferences related to watershed restoration. This will serve to inform stakeholders currently not involved with BRFO a chance to hear about BRFO's purpose, mission, and areas in which groups might find some common ground.

In addition, the watershed coordinator will aim to further develop relationships with higher education research universities working in the watershed; identify existing and planned research impacting sustainability of the watershed; summarize existing research needs in the watershed to better understand sustainability of the resource; and identify future funding needs for watershed management implementation.

Gather stakeholder input on watershed issues and needs

This will include listing and remaining up to date on existing watershed restoration related initiatives, as well as applicable regulations/legislation/rules affecting the watershed. These meetings will help to foster relationships between stakeholders and therefore build a cohesive group of stakeholders. Through these meetings new stakeholders are also expected to be identified and new partnerships can be explored. This task will be led by the Watershed Coordinator, and will involve various methods of stakeholder outreach, including focused meetings with stakeholders and the public.

Review and update of Existing Watershed Restoration Plan

BRFO has an existing watershed restoration plan; however, based on meetings with various stakeholders and led by the Watershed Coordinator, it is expected that this plan will be updated with new information concerning activities in the watershed as well as issues of concern. This update will incorporate work/findings from other initiatives within the watershed, such as the 319 EPA watershed-based planning currently under development by Dr. Scott Stoodley at Oklahoma State University.

Expected outcomes

1. Multiple meetings convened by BRFO, open to a variety of existing and potential stakeholders.
2. A youth-focused watershed education event.
3. Sponsorship and participation in Oklahoma Governor's Water Conference.
4. Website update and maintenance.
5. Updated Watershed Restoration Plan, based on review and comments from stakeholders.

Data Gathering (Task B Activity)

This activity is divided into three sub-activities: cedar identification, identification of riparian areas for restoration, and identifying springs not previously monitored by USGS. The basis for these three activities will be a GIS shapefile which includes the Blue River and named tributary reaches, as provided by the OWRB.

Identify areas of high cedar concentration

This activity will utilize current and historical satellite imagery data to quantify the location and extent of cedar within the watershed, as well as assess changes in cedar distribution over time.

Aerial imagery will be used to identify major cedar stands in close proximity to the Blue River and its tributaries.² These stands will be identified by visual inspection and tailored algorithms and captured in a shapefile for subsequent mapping. The density of cedar, distance to riparian area, soil type and slope will be taken into account to target specific land areas for cedar removal, using a GIS-based process. Finally, these areas will be linked to landowners using parcel data, in order to aid in targeting outreach and education efforts, as outlined in Activity 4.

² A research group at Oklahoma University, led by Dr. Xiangming Xiao (<http://www.ou.edu/cas/mpbio/people/faculty/xiao>), has already proven these methods and has provided a letter of support for the proposed project. For more information on their methods, see: J. Wang et al. Remote Sensing of Environment 205 (2018) 166-179 and M. Mirik et al. Advances in Remote Sensing 2 (2013) 181-192.

Identify areas for riparian restoration along Blue River and tributaries

Publicly available National Agriculture Imagery Program (NAIP) aerial imagery will also be used to classify the Blue River and its major tributaries into reaches of stream restoration, using the following GIS-based process:

1. The stream shapefile will be buffered by 200 ft (in each direction).
2. Each stream segment (approximately 150 total) will be visually inspected for areas in need of riparian restoration, and these will be identified in a shapefile. Segments with 200 ft or less of riparian buffer will be identified. Figure 4 provides examples of areas requiring riparian restoration.
3. Any stands of rivercane along the river and its major tributaries will be identified and mapped. River cane used to be found in large ‘cane brakes’ across the region. This grass species diminished in extent due to agricultural practices and wildfire suppression, etc. It remains an important historical and cultural resource for both the Chickasaw and Choctaw Nations.³

Areas identified as requiring riparian buffer restoration or containing rivercane stands will be mapped and linked to landowners by using parcel data, in order to aid in targeting outreach and education efforts. This mapping will also be combined with the cedar mapping described above, in order to identify areas along the Blue River where both riparian restoration and cedar removal should be prioritized.

Identify springs not already listed by the USGS

Oklahoma Water Resources Board (OWRB) regulations protect a list of the largest of these springs – those flowing more than 50 GPM and 500 GPM as measured by the USGS – through quarter-mile and two-mile setbacks, respectively, to new well installation.⁴ This activity proposes to identify additional known, but unmeasured, high-volume springs on private lands, seek permission for access, and have them measured for inclusion in the OWRB rules.

Expected outcomes

Cedar Identification

1. A map showing areas of existing cedar concentration. This map will also set a baseline for monitoring future cedar growth and assessing effectiveness of control activities.
2. A map showing river reaches to be targeted for cedar removal.
3. A map showing parcels to be targeted for landowner outreach for brush clearance, based on analysis results and the subsequent stakeholder meeting.

Riparian Restoration

1. A map showing OWRB reaches requiring restoration.
2. A map showing OWRB reaches requiring restoration with priority areas for cedar removal.

Springs Identification

1. A map showing potential high volume springs (i.e. greater than 50 gallons per minute) within the Blue River watershed not already listed by USGS.

³ See: <https://www.chickasaw.tv/videos/river-cane> and <https://www.youtube.com/watch?v=beHnNCHf7BU> for more information.

⁴ Title 785 OWRB, Ch 32 Aquifer Storage and Recovery, Appendix D - Identified Springs that Emanate From a Sensitive Sole Source Groundwater Basin. <https://www.owrb.ok.gov/rules/pdf/current/Ch302019.pdf>

2. A map showing springs identified through activities associated with this project.
3. Identified springs to be shared with OWRB for setback protection under existing state rules.



Figure 4: Example Riparian Buffer Areas in the Blue River Watershed

Watershed Project Development (Task C Activity)

Due to the overwhelming ratio of private to public land in the Blue River watershed, successful implementation of the restoration plan's land management strategies will require broad landowner participation.

Landowner Outreach and Training

An integral source of BRFO engagement with landowners will be through training and educational workshops hosted in connection with local community groups, elected officials and local conservation organizations. BRFO will also take advantage of existing opportunities and programs to disseminate information related to effective land use practices. Educational opportunities will be designed specifically to promote Best Management Practices (BMP), to be performed in cooperation with the Noble Research Institute (NRI). NRI provides ranchers and land managers with no-cost consultation services that engage them in both science-based BMPs for achieving specific goals and creating sustainable outcomes for agriculture and overall watershed health. A proposed organizational chart for the overall project is shown in Figure 5.

Conservation Plan Development

After priority areas and interested landowners have been identified, through educational outreach and otherwise, conservation plans will be developed on an individual landowner basis, based on interest. These conservation plans will be developed in cooperation with a third party, which could

include Oaks and Prairies Joint Venture (OPJV), NRI, or the Oklahoma Conservation Commission (OCC), among others. These institutional partners have extensive experience and offer complementary technical assistance related to the development and funding beneficial land management strategies.

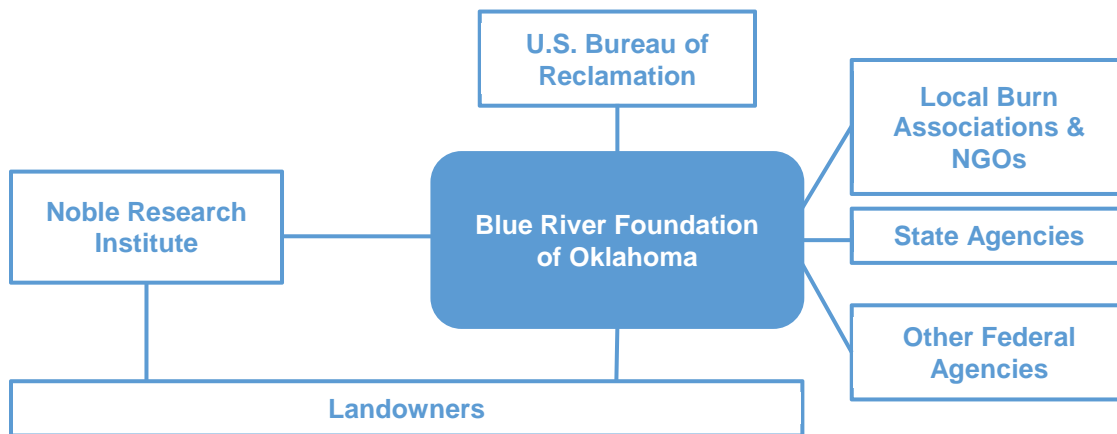


Figure 5: Proposed Organization Chart

Expected outcomes

1. A landowner workshop providing specific BMP information and training.
2. An educational event conducted in cooperation with NRI.
3. A land management demonstration workshop convened by BRFO and its partners.
4. List of potential funding sources for BMP implementation for distribution to landowners
5. Two-page document describing example BMPs for distribution to individual land managers
6. Document describing process for assessing land and recommending BMPs

Evaluation criteria

Evaluation Criterion A — Watershed Group Diversity and Geographic Scope

A1 Watershed Group Diversity

The Blue River Foundation of Oklahoma is a new organization originally formed by a group of landowners in response to a localized threat to our generational rights to water quality and quantity in the base-flow generating, spring-fed upper reaches that sustain Blue River flow downstream (some 70% of the Blue River flow regime is thought to emanate from these upper reaches in the Arbuckle-Simpson Aquifer). Our group promotes generational rights to a sustainable Blue River and our private property owner-founders represent predominate agricultural interests, including livestock grazing and agribusiness, along with recreational, environmental and tribal interests. As we successfully mobilized and engaged other stakeholders within the Blue River watershed and the Arbuckle-Simpson Aquifer that feeds it, our Foundation realized the importance of broad stakeholder outreach, collaboration and engagement to begin to solve watershed issues impacting a sustainable Blue River. Two of our Board members are citizens of the Chickasaw Nation and the Chickasaws were one of the first stakeholders with which we engaged and whom we have already collaborated on best management practice planning for a healthy watershed. From this start, our Foundation has begun to work closely with many others, including the downstream Choctaw Nation, universities, municipalities, State agencies, Federal agencies, mining industry, active non-profit organizations, and other landowners to identify issues impacting the Blue River watershed and promote sustainable practices. The WaterSmart Phase I grant will be utilized in part to further cement our existing relationships, expand our outreach within the watershed and bring more partners into collaboration on important unifying practices to promote water quality and quantity for all users. The importance of these tasks can be underscored in the value placed on the Blue River watershed.

According to a recent study, the natural capital within the Blue River watershed contributes \$855 million to \$1.6 billion in ecosystem service benefits each year.⁵ Similar to certain infrastructure, the watershed's ecosystems can also be viewed as a natural capital asset that provides a flow of benefits over time. When measured like an asset with a lifespan of 100 years and using a three-percent discount rate, the watershed's natural capital has an asset value between \$30 billion and \$53 billion. With sufficient stewardship to maintain the health and function of the watershed, this economic contribution should continue in perpetuity.

Description of Stakeholders

Table 1 lists the stakeholders within the watershed that affected or are affected by the quantity or quality of water within the Blue River watershed.

⁵ Tucker, Jona. (2017). *Ecosystem Services of the Oklahoma Blue River*, presented at the Oka Institute Sustainability Conference, East Central University, Ada, OK, 11 October 2017

Table 1. List of Stakeholders affecting or affected by Water Quality/Quantity in the Watershed

Category	Stakeholder
Tribal	Chickasaw Nation
Tribal	Choctaw Nation
Federal	Chickasaw National Recreation Area/National Park Service
Federal	South Central Climate Adaptation Science Center
Federal	Environmental Protection Agency
Federal	US Fish & Wildlife Survey
Federal	US Geological Survey
Federal	National Resource Conservation Service
Federal	US Army Corps of Engineers
Federal	US Department of Agriculture
Federal	Bureau of Indian Affairs
State	Oklahoma Conservation Commission
State	Oklahoma Climatological Survey
State	Oklahoma Corporation Commission
State	Oklahoma Department of Environmental Quality
State	Oklahoma Department of Mines
State	Oklahoma Department of Wildlife Conservation
State	Oklahoma Rural Water Association
State	Oklahoma Water Resource Board
NGO	Nature Conservancy Oklahoma Chapter
NGO	Noble Research Institute
NGO	Oaks & Prairies Joint Venture
NGO	Wild Turkey Federation
Education	East Central University
Education	Oka' Institute
Education	Murray State College
Education	Oklahoma State University
Education	University of Oklahoma
Local	City of Ada
Local	City of Connerville
Local	City of Durant
Local	City of Milburn
Local	OCC Blue Thumb Program Monitors
Local	Local Landowners
Local	Local Business
Local	Citizens for the Protection of the Arbuckle Simpson Aquifer (CPASA)

Affected Stakeholders that support BRFO

Numerous stakeholders within the Blue River watershed support BRFO's formation and continued growth and activity including tribal, State and local governments, Federal agencies, Oklahoma's second and third leading industries (agriculture and tourism) and nonprofit organizations. Notable supporters are the Chickasaw and Choctaw Nations, with whom we met jointly after our formation to discuss our group's Mission and science-based approach. From that initial meeting, BRFO has developed a strong working relationship with both Nations on BMPs, watershed group planning and future implementation activities. Our collaboration fits within the Choctaw and Chickasaw Regional Water Plan (CCRWP), which includes seven essential principles of focus: Urban, Towns & Rural, Agriculture, Tourism, Drought Preparedness, Sustainability and Unity. Each Nation has provided support letters for this grant. Recently, the Chickasaw Nation awarded the BRFO with a "Visionary Conservation Partnership Award" recognizing our early collaborative efforts in Blue River conservation.

State Government supporters include the Oklahoma Department of Wildlife Conservation (ODWC) that manages the 3,300+ acre, Blue River Wildlife Management Area (WMA) in the upper reaches of the watershed, and the Durant State Fish Hatchery downstream. The WMA sponsors recreation-tourism where more than 100,000 persons per year visit to fish, hunt, camp and enjoy this unique ecological area on Blue River. ODWC has provided a letter of support for this grant. Other State agencies that support our formation include the Oklahoma Conservation Commission, the Oklahoma Water Resource Board, the Oklahoma Rural Water Association and the Oklahoma Department of Environmental Quality.

State universities and colleges also support the BRFO, and we expect to work with many of these institutions in public outreach and in future implementation of BMPs within the watershed. The Oka' Institute of East Central University in Ada seeks to create practical water solutions that are directed by scientific data and result in sustainable ecological management and economic development. Oka' provided a support letter for this grant and BRFO works closely with the Institute, with two Board members serving on their Arbuckle-Simpson Aquifer hydrology technical committee (along with the tribal nations, State and Federal agencies, other universities, mining industry and agribusiness). Murray State College in Tishomingo also provided a support letter to the BRFO; the college owns and operates a working agricultural teaching facility on the Blue River near Milburn and wishes to engage with us on future BMP implementation. Both Oklahoma State University and the University of Oklahoma, who has provided a support letter, have begun collaborative work with BRFO.

Synergy between Federal agencies and the BRFO has begun and is expected to continue with assistance from the WaterSmart Phase I grant opportunity. For example, the BRFO was invited to participate in the Arbuckle-Simpson Aquifer Drought Contingency Plan Task Force, as outlined in the USBR-funded 2017 plan⁶ and we will be participating in the upcoming Environmental Protection Agency (EPA)-led Decision Analysis for a Sustainable Environment, Economy, and Society Workshop to identify approaches to regional drought contingency. In another example, the Bureau of Indian Affairs (BIA) and the BRFO met recently at several sites where we have identified private landowners interested in participating in BIA's new Reserve Treaty Rights Land Program (RTRL) which provides BIA resources for prescribed burns to reduce fuel loads in the

⁶ https://okainstitute.org/page_images/1514914209.pdf

watershed. The BIA will rely on the BRFO to coordinate participating landowners over the course of the four-year federal program.

Important growing cities in the region, Durant and Ada, have provided past support for BRFO. Importantly, Durant, Oklahoma's fastest growing city, derives 90% of its raw water for its municipal and industrial customers from its intake structure on the Blue River. Durant is home to the Choctaw's largest casino, a vital tribal revenue generator; and Durant and the rural water districts it serves supply water to more than 50,000 customers. Ada, center of the Chickasaw Nation's business holdings and tribal organization structure, owns substantial water rights in the Blue River watershed and recently approved the drilling of two additional deep wells for future municipal and industrial customer use.

The BRFO has collaborated with industrial mining stakeholders on State legislative matters, obtaining consensus on a proposed House bill addressing mine expansion that was signed by the Governor in May 2019. We anticipate other opportunities for outreach and engagement in the future. The BRFO enjoys support from other local industry, primarily small businesses within the tourism sector and agribusinesses. Both the agriculture and recreation sectors rely heavily on water quantity and quality in the watershed.

The last group of affected stakeholders to be discussed are nonprofit organizations that support the BRFO. Significant among these is the Noble Research Institute (NRI), an independent nonprofit institute with a mission to deliver proven solutions to agricultural challenges; its presence in the region brings a wealth of planning and implementation expertise to landowners who wish to implement BMPs that can improve soil health on agricultural lands and in natural environments. NRI supports the activities of the BRFO and has pledged their experts to assist with conservation plans for BRFO-engaged landowners interested in improving rangelands and restoring riparian habitats. Another nonprofit public supporter of BRFO is The Nature Conservancy (TNC), who operates the Oka' Yanahli Preserve in the watershed, as a cooperative venture with the Chickasaw Nation and other conservation-minded organizations to protect vital base flow-producing springs and to expand a healthy riparian corridor in the upper headwaters. The Preserve encompasses about 3,600 acres of native prairie, as well as area springs and land, providing essential recharge to the Arbuckle-Simpson Aquifer and the Blue River itself.

BRFO Stakeholder Targets and Diversity

BRFO will utilize the WaterSmart Phase I grant to continue existing relationships with affected stakeholders and to outreach to new ones within the watershed. A key component to our plan is to hire a part-time Watershed Coordinator (and consultants where needed) to accomplish the following:

- Gather pertinent information about issues and needs in the watershed; and understand major issues and monitor legislation affecting stakeholders;
- Meet with stakeholders individually or in groups to foster relationships and inform these groups of the Foundation's Mission and goals; learn of their Watershed issues and concerns, as well as their priorities for potential corrective-action projects;
- Further develop relationships with higher education research universities working in the Watershed; identify existing and planned research impacting stakeholders and the sustainability of the Watershed; identify future funding needs for Watershed Management implementation by stakeholders;

- Participate in the Governor’s annual Water Conference in Oklahoma City to engage interested parties/stakeholders and share pertinent information on Watershed issues.
- Enhance existing marketing materials and utilize these for planned stakeholder events such as BRFO Field Days on Blue River.

Other Supporting Details

Other demonstrations of the BRFO diversity of engagement include the following planned activities, some of which will be funded by the USBR Phase I grant:

- Request from the Oklahoma Department of Mines on implementation of HB 2472 (Mining expansion over the Arbuckle-Simpson Aquifer);
- Collaboration with OWRB on designation of Outstanding Resource Water in the upper Blue River Watershed;
- Technical Committee participation in the ongoing, multi-year USGS-led Arbuckle-Simpson Aquifer Phase II Hydrology Study (multiple stakeholders participating);
- Participation in the Arbuckle-Simpson Aquifer Drought Contingency Plan Task Force;
- Liaison with NRI on unmanned aerial systems for collection of data within the watershed, such as identification of high-volume springs that contribute to flow regimes utilized by numerous diverse stakeholders;

Sub-criterion No. A2. Geographic Scope

The geographic extent of major stakeholders currently connected with BRFO is shown in Figure 6. Landowners are scattered throughout the basin. Current stakeholders are fairly evenly spread across the watershed, with the two largest municipalities (City of Ada and City of Durant) located at the north and south ends of the watershed, respectively. Furthermore, additional stakeholders, still to be targeted, will be incorporated into Blue River activities during the course of the proposed project, as presented in Evaluation Criteria A1.

All proposed activities are supported by entities responsible for managing resources within the Blue River watershed. Both tribal nations manage land, water, commercial enterprises and recreation in the region, and are active public supporters. The cities of Durant and Ada also manage resources in the watershed. Last, landowners, some of whom have provided support letters included in this application, manage land, water and recreation in the watershed. The map shown conveys this diversity through color-coding.

Evaluation Criterion B — Addressing Critical Watershed Needs

Sub-criterion No. B1. Critical Watershed Needs or Issues

Unique, free-flowing and spring fed rivers like the Blue River, and the sole source aquifer that sustains it, are susceptible to numerous threats to existing water quality and availability. Water quantity and quality issues and the spread of invasive species are of particular concern to stakeholders within the watershed, as identified in the existing BRFO watershed restoration plan. Furthermore, these issues are likely to be exacerbated in the future due to increased water demands and shifting climactic conditions in the region. These issues are outlined in the sections below.

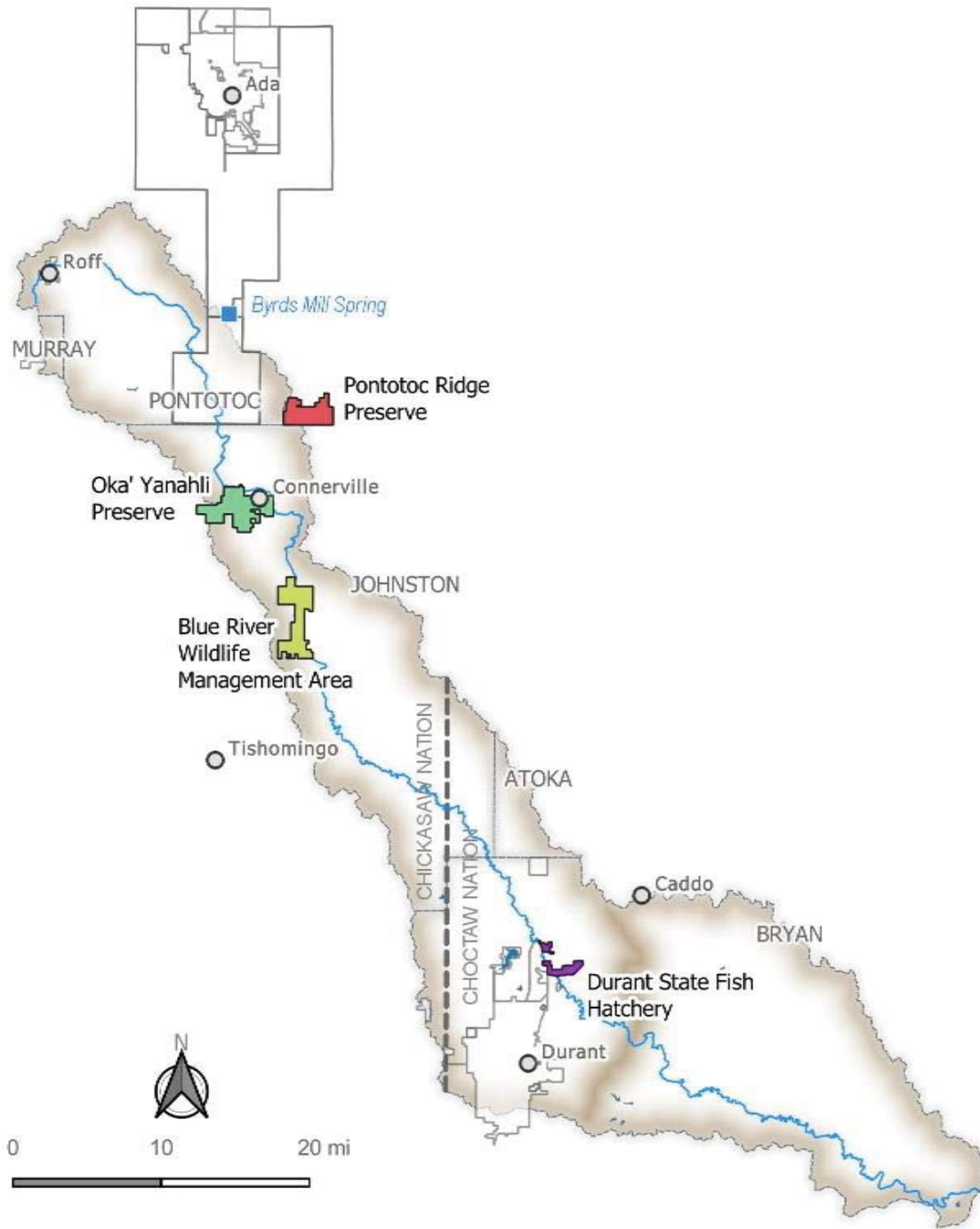


Figure 6: Map of Selected Stakeholders in the Blue River Watershed

Water Quantity

The Blue River originates in Pontotoc and Murray Counties, primarily from spring flows within the Arbuckle-Simpson Sole Source Aquifer, which makes up a third of the basin land area and accounts for the water clarity and moderate temperatures in the upper watershed, in a region where most rivers are highly turbid. Additional springs contribute to the flow regime as the River flows

southeasterly through Pontotoc and Johnston Counties within the Arbuckle-Simpson Aquifer; some hydrologists have opined that as much as 70% of Blue River flow is derived from this connectivity within the Arbuckle-Simpson Aquifer. OWRB regulations protect a list of the largest of these springs, those flowing more than 50 GPM and 500 GPM as measured by the USGS, through quarter-mile and two-mile setbacks, respectively, to new well installation.

Water Quality

Water quality impairments impact the lower reaches of the Blue River, which is dominated by silt. A Total Maximum Daily Load (TMDL) study has been completed in this area to establish pollution sources and address potential mitigation of Enterococcus bacteria. Elevated levels of such bacteria in aquatic environments indicate that a waterbody is contaminated with human or animal feces and that a potential health risk exists for individuals exposed to the water.

Tributaries to the lower Blue River—Caddo Creek, Bokchito Creek and Sulphur Creek—are also impaired for Primary Body Contact Recreation because of elevated bacteria levels. Much of the watershed is oligotrophic indicating low primary productivity and/or low nutrient levels. In general, trends indicate that nutrient (nitrogen and phosphorus) contributions are decreasing over time. Turbidity has also become an issue, with a possible link to county road erosion and sand mining in the area.⁷ Additional data is required to determine mining impacts not only to groundwater supplies but also to the overlying surface waters. More recently, concerns have focused on a new area of development along the Blue River where Simpson Formation sand resources may be utilized for oil/gas fracking purposes.

Habitat Loss

Endangered species identified in Murray County by the U.S. Fish & Wildlife Service include the threatened piping plover (*Charadrius melodus*), endangered whooping crane (*Grus americana*), endangered least tern (*Sterna antillarum*), and the candidate species Sprague's pipit (*Anthus spragueii*). These species will benefit from habitat restoration of the proposed projects and improved water quality. The endangered seaside alder (*Alnus maritima*), described above, is another beneficiary of riparian restoration projects.

The upper Blue River segment that is designated as high quality water is considered a biodiversity hotspot and contains unique habitat and a highly diverse fish community that depends upon the continued existence of strong spring-fed inflows. At least seven species are worthy of special attention for their unique taxonomy and/or population status. Specifically, the Striped Shiner population may be at risk. Recent sampling in the upper Blue River near Connerville indicated a marked decline in historical populations, perhaps related to noted increases in silt or turbidity to which the Shiner is particularly vulnerable. More information and research is required to determine impacts to the Striped Shiner and other at risk fish species as well as to design protective measures to mitigate siltation.

⁷ More than 28,000,000 tons of sand, aggregate and minerals were extracted from Johnston, Murray, Atoka, Bryan and Pontotoc counties in 2017. For more information, see <http://mines.ok.gov/Websites/mines1/images/Production/2017%20Minerals%20Charts.pdf>

Invasive Cedar

Cedar tree (i.e. *Juniperus virginiana* and *Juniperus ashei*) invasion and spread in the south-central United States has long been identified as a problem, with negative effects on water quality and potential aquifer recharge, as well as on forage production, air quality, and fragile ecosystems.⁸ The spread of invasive cedar has been particularly rapid in southern Oklahoma in recent years. A study published in 2002 estimated juniper growth at over 700 acres per day across the state, and in the same year the State Technical Committee for the NRCS cost-share programs identified juniper encroachment as the number one conservation concern in Oklahoma.⁹ The rapid growth of individual trees is well documented, with some species able to grow at the rate of one foot in height and one foot in width per year.^{10,11}

Feral Hogs

Feral hogs have successfully spread across Oklahoma, but are particularly concentrated in the southeastern part of the state. Native to Europe, these animals are opportunistic omnivores and cause a variety of environmental concerns, including decreases in livestock and wildlife forage, soil erosion, reduction in native seed crops, and reduction of overall species diversity. Feral hogs can also spread disease and parasites. Relevant to this proposal and the Blue River in particular, feral hogs can also degrade water quality and cause damage to riparian areas through erosion and reduced aquatic vegetation, as well as excessive algal blooms. Water quality is negatively affected by E. coli bacteria which in turn has effects on recreational and livestock uses.¹² Feral hog control best management practices include the use of mechanical traps, hunting, and fencing.

Sub-criterion No. B2. Developing Strategies to Address Critical Watershed Needs or Issues

As a new watershed organization, the BRFO has made significant progress to date in liaison with other Blue River watershed stakeholders and identifying critical watershed issues. These preliminary successes can be attributed in part to our group adherence to our *Purpose Statement*: to follow ‘a united, principled, and science-based approach to advocacy and stewardship for Oklahoma’s only spring fed and undammed river.’

Task A: Watershed Group Development

The BRFO has an opportunity to springboard our early organizational successes into positive and measurable contributions to the long-term management of the issues and needs of the watershed through our proposed Watershed Group Development activities. Utilizing WaterSmart Phase I grant funds, we propose to hire a part-time Watershed Coordinator to work with volunteer BRFO members in uniformly engaging State agencies, tribal nations, higher education/research entities, municipalities, other nonprofits and industry leaders reliant upon, or impacting, water quantity and quality in the Blue River watershed. The Watershed Coordinator will add needed capacity and coverage to address multiple stakeholders and activities, to find areas of collaboration, to develop

⁸ pods.dasnr.okstate.edu/docushare/dsweb/Get/Document-6627/E-947.pdf

⁹ <http://www.forestry.ok.gov/Websites/forestry/Images/rcstf.pdf>

¹⁰

<https://www.ok.gov/conservation/documents/Eastern%20Redcedar%20Invading%20the%20Landscape%20publication.pdf>

¹¹ <http://factsheets.okstate.edu/documents/1-439-water-use-by-eastern-redcedar/>

¹² <https://www.usda.gov/media/blog/2016/07/08/happier-pig-mud-feral-swine-damage-water-quality>

beneficial watershed management project concepts, and to complete administrative and reporting duties.

The BRFO will also evaluate our existing Bylaws, Mission and Purpose Statements to determine best alignment for the organization as we mature, engage additional stakeholders, and continue our work in the watershed. With additional bandwidth derived from our group development, we can establish relationships with other identified organizations, such as Trout Unlimited, and inform and advocate for balanced stewardship to the benefit of tourism-related watershed users (such as the 100,000+ visitors to the Blue River WMA each year).

Task B: Watershed Restoration Planning

While BRFO has an existing watershed plan, approved by its board and contributing stakeholders, there is a need to take this plan to more stakeholders and update it with new information. Under the proposed project, BRFO (led by the Watershed Coordinator) will gather information using a variety of methods, including focused interviews with key organizations, remote sensing data, and a limited number of 'field trips.' Science-based decision-making will be used throughout the project. Tailored BMP plans for landowners will be built around research-based principles identified by the Noble Research Institute. More detail on information gathering activities is provided below.

The proposed projects are designed to work within the predominately private ownership structure of the Blue River watershed and address multiple issues of water quality, quantity, and temperature, habitat restoration/conservation, spring protection (physical/regulatory), damaging invasive species mitigation (e.g., cedar and feral swine) and landowner education and outreach on BMPs that can implemented long after the grant projects are concluded. Examples include cedar removal and implementation of other BMPs designed to improve soil health that will, in turn, contribute to an improved water supply for those users that depend on the Blue River; and, improving the water quality of the river and contributing streams will be beneficial to aquatic species, including ODWC-raised and -stocked game fishes, as well as their habitat.

Based on past meetings and the existing watershed plan, which incorporated input from a variety of stakeholders within the watershed, BRFO expects broad agreement to remain among existing and new stakeholders on the major issues affecting the watershed (e.g. invasive species or water quality concerns). However, any conflicting opinions and views will be addressed and resolved by consensus within the group; this process will be mediated to the extent possible by science-based data as well as expert opinion (e.g. from government agencies such as USGS). These consensus-building opportunities will go hand in hand with the stakeholder outreach activities described elsewhere in this proposal.

BRFO and its stakeholders will build upon several previous efforts, both originating from BRFO as well as other groups. The starting point will be the existing watershed restoration plan already produced by the BRFO and its stakeholders. The group will also make use of previous planning efforts from the Chickasaw and Choctaw Nations. In particular, BRFO will be work closely with the Chickasaw Nation and Oklahoma State University on a separate watershed-based plan currently in progress, making sure that the two plans are aligned and able to work synergistically to best conserve water resources in the watershed.

Task C Watershed Management Project Design

BRFO will utilize a desktop review protocol to evaluate existing aerial imagery in developing design projects that will contribute to the management of key watershed issues and needs. The design of three projects is anticipated with WaterSmart Phase I funding. In the first project, invasive cedar infestations within the watershed will be quantified using data from OU's Center for Spatial Analysis, followed by aerial imagery analysis, then mapped over landowner parcel data to target outreach and education efforts. This project builds upon collaboration currently in place with the NRI, who has volunteered to prepare site-specific conservation plans for participating landowners based on their long-term land management goals.

In the second project, a similar aerial imagery methodology will be followed to identify areas of needed riparian restoration along the Blue River and its tributaries. A stream shapefile will be buffered 200 feet in each direction and then visually inspected for riparian restoration opportunities. As before, these areas will be mapped to landowner parcels to target outreach and education activities. While performing this work, rivercane stands, culturally significant to tribal nations, will also be identified and mapped.

The third design project is the mapping of major springs, flowing more than 50 GPM and 500 GPM, as defined and protected by OWRB regulations; the focus is springs in the watershed not currently known to USGS and unregulated. The two-step approach includes soliciting tribal elders and historical landowners in identifying these springs; then, drone technology, as used by Oka' Institute researchers in this watershed, will be employed to locate the springs aerially. Then springs will be visited and measured to determine flow rates and subsequent inclusion in the OWRB regulations. This spring identification project builds upon work underway by BRFO members in identifying additional major springs for the USGS-led Arbuckle-Simpson Phase II Aquifer Study begun in 2019.

A workplan, including a detailed work breakdown structure, will be developed for each of these design activities and the work will be scheduled using traditional scheduling software based on input from the participants responsible for each segment of work. Key milestones will be identified in the schedule. Environmental and cultural resource considerations will be included in the work breakdown structure, and experts with the USBR and the tribal nations will be consulted prior to execution to ensure site-specific compliance with Federal and State laws.

Ultimately, the proposed activities will align with the vision of our partnership by creating new joint conservation philosophies and practices across diverse user groups within the watershed and tribal nations, for the long-term sustainability of land and water resources in the watershed; emphasizing a science-based approach to resource sharing against pressures of population and increased water needs in the region.

Evaluation Criterion C — Implementation and Results

Sub-criterion No. C1—Understanding of and Ability to Meet Program Requirements

The Blue River Foundation of Oklahoma watershed group will carry out the proposed project activities within a 24-month period. Table 2 shows a proposed schedule of activities under this timeframe. Related milestones are presented in the sections above on Technical Approach. A budget for all proposed tasks is provided in Table 3 in a following section.

Sub-criterion No. C2—Building on Relevant Federal, State, or Regional Planning Efforts

The proposed BRFO activities under the WaterSmart Phase I grant application will address both water quality and quantity in the Blue River watershed. To that end, these proposed actions will complement the planning and implementation goals of local, State and Federal entities active in the watershed. First, the activities proposed complement the historic 2016 water rights settlement between the Chickasaw and Choctaw Nations, the State of Oklahoma and Oklahoma City, which resolved long-standing water rights ownership and regulatory authority over waters on the Nations' historic treaty territories, an area that spans 22 counties in south-central and southeastern Oklahoma, including the Blue River watershed. Our proposed activities also align with the Choctaw and Chickasaw Regional Water Plan (CCRWP), which is focused on the needs and principles of: Urban, Towns & Rural, Agriculture, Tourism, Drought Preparedness, Sustainability and Unity.

BRFO proposed activities also complement the USBR-and Nations-funded Arbuckle-Simpson Aquifer Drought Contingency Plan completed in 2017. The goals of this Plan are to prepare for and mitigate the impacts of drought that preclude economic benefits of the aquifer; and to implement protective strategies for long-term sustainability. (Note: one of the five trigger points for drought response actions is flow in the Blue River near Connerville drops below 33 cfs).

Our planned activities meet many of the criteria identified in the EPA's Nonpoint Source Management Program and the EPA criteria for watershed-based plans. The BRFO plans address strategies to restore and protect surface water and ground water; they strengthen diverse working partnerships, they utilize on-the-ground projects to achieve benefits, they address the protection of high quality waters, and they promote functional and environmental measures of success. The BRFO will work with OSU scientists during the Phase I grant period to enhance the existing Blue River Watershed Plan and to ensure the most current available data are utilized to meet the EPA criteria for a watershed-based plan.

Table 2: Proposed Project Schedule

Activities		Q1	Q2	Q3	Q4	Q5	Q6	Q7	Q8	
Project Management		BRFO Project kickoff meeting with key stakeholders (schedule, budget, reporting, final resource commitments)							Final metrics evaluations / reporting	
		Quarterly reporting								
Staffing and Organizational Development		Hire Watershed Coordinator		Work with management consultant to review organizational structure, bylaws, purpose statement, and mission statement						
Public Outreach and Engagement		Develop BRFO website	Begin website modifications announcing the projects; begin set up of landowner registration platform		Maintain website support to activities					
		Planning for major outreach events with stakeholder partners and speakers	Major/minor outreach events (sign up landowners on spot)		Continue minor outreach events					
(1) Identify target areas for conservation measures	a. High cedar concentration	Spatial data screening/analysis of OWRB designated stream reaches for invasive plant species/riparian impairments								
	b. Riparian buffer restoration									
	c. Unmeasured springs	Complete spring mapping desktop reviews								
		Spring mapping activity with Tribal Elder engagement and GIS support								
					Notify USGS of high-volume springs					
								Write final report on activity		
(3) Watershed Project Development				Contact landowners in high density invasive species areas/riparian impaired areas and market program offerings						
		Negotiations with contracted entities; developing MOUs with in-kind providers								
		As landowners are registered, engage land management practitioners/planners for specific practices on specific acreages								
Environmental Compliance		Address environmental/regulatory compliance on case by case basis								

Evaluation Criterion D — Department of the Interior Priorities

Creating a conservation stewardship legacy second only to Teddy Roosevelt

Utilize science to identify best practices to manage land and water resources and adapt to changes in the environment;

Science-based decision-making will be used throughout the project. Remote sensing data will be utilized to identify where invasive species are the most abundant in the watershed and to guide BMP implementation. Tailored BMP plans for landowners will be built around research-based principles identified by the Noble Research Institute and other similar stakeholders. Monitoring and evaluation of project activities (both short- and long-term) will make use of all available water quality data. Science-based decision-making is memorialized in the BRF's bylaws, where, under Purpose, BRFO promotes "a united, principled, and science-based approach to advocacy and stewardship for Oklahoma's only spring fed and undammed river."

Examine land use planning processes and land use designations that govern public use and access;

Proposed project activities will take place on private land; however, planning processes (and execution) will be similar to those used in the public domain.

Revise and streamline the environmental and regulatory review process while maintaining environmental standards.

No changes are proposed for the environmental and regulatory review process.

Review DOI water storage, transportation, and distribution systems to identify opportunities to resolve conflicts and expand capacity;

The Chickasaw and Choctaw Nations routinely meet with municipalities and rural water districts in their regions that rely on the Blue River. These tribes and local water managers have discussed ways for water providers to increase their available supply, including reuse, and incorporate alternative water supplies.

Foster relationships with conservation organizations advocating for balanced stewardship and use of public lands;

The Oklahoma Conservation Commission, Nature Conservancy, ODWC, OWRB, OPJV, Oka' Institute and Noble Research Institute are all stakeholders in the watershed; all have expressed support to the BRFO either formally with letters or informally

Identify and implement initiatives to expand access to DOI lands for hunting and fishing;

Since any on-the-ground project activities will take place on private lands, there are no opportunities to address this priority.

Shift the balance towards providing greater public access to public lands over restrictions to access.

Any on-the-ground activities will take place on private land, therefore no opportunities exist to address this priority.

Utilizing our natural resources

Ensure American Energy is available to meet our security and economic needs;

Proposed project activities do not address energy availability.

Ensure access to mineral resources, especially the critical and rare earth minerals needed for scientific, technological, or military applications;

Proposed project activities do not address access to mineral resources.

Refocus timber programs to embrace the entire ‘healthy forests’ lifecycle;

The goals of these proposed projects are consistent with the ‘healthy forests’ lifecycle.

Manage competition for grazing resources.

Increasing the amount of grazing acreage by reducing invasive canopy-dominating species will benefit both cattle producers and wildlife by returning vegetation regimes towards pristine ecosystems (sustained by fire and intermittent herbivore grazing).

Restoring trust with local communities

Be a better neighbor with those closest to our resources by improving dialogue and relationships with persons and entities bordering our lands;

The Blue River watershed consists of a mixture of land uses, including ranches, growing municipalities, industry, tribal and public lands. BRFO outreach and education activities, along with the Watershed Restoration Plan are integral tools in incentivizing land users to work together for the benefit of the watershed. An excellent example of community engagement is BRF participation on the Oka’ Institute Phase II Arbuckle-Simpson Aquifer study steering committee, which represents all watershed stakeholders.

Expand the lines of communication with Governors, state natural resource offices, Fish and Wildlife offices, water authorities, county commissioners, Tribes, and local communities.

BRFO has actively met and communicated watershed issues with all state agencies which issue various permits within the watershed, including OWRB, ODEQ, and the ODM. BRFO has sponsored five Legislative/Stakeholder Field Days on the Blue River to highlight the importance of the resource and to discuss conservation practices necessary to sustain water quality and quantity. Valuable input to the Watershed Restoration Plan was received from many of these stakeholders. BRFO communication activities will continue throughout 2019.

Striking a regulatory balance

Reduce the administrative and regulatory burden imposed on U.S. industry and the public;

Any on-the-ground activities will be performed on private lands and therefore no opportunities exist to reduce regulatory burden.

Ensure that Endangered Species Act decisions are based on strong science and thorough analysis.

Project activities are not expected to negatively affect endangered species, and habitat restoration is expected to benefit these species in both prairie and riparian ecozones.

Modernizing our infrastructure

Support the White House Public/Private Partnership Initiative to modernize U.S. infrastructure;

The proposed project does not include construction or infrastructure-related activities.

Remove impediments to infrastructure development and facilitate private sector efforts to construct infrastructure projects serving American needs;

The proposed project does not include construction or infrastructure-related activities.

Prioritize DOI infrastructure needs to highlight:

1. Construction of infrastructure;
2. Cyclical maintenance;
3. Deferred maintenance.

The proposed project does not include construction or infrastructure-related activities.

Budget Proposal

A budget proposal is included in Table 3. A total of \$99,536 in federal funding is requested.

Budget Narrative

Salaries and Wages

The BRFO will recruit/hire a part-time Watershed Coordinator with experience in regional water issues who will work up to 750 hours per year at a pay rate of \$30 per hour. The duties of this position will relate to all activities, including compliance with USBR grant reporting requirements. Approximately 16 hours per year of the Coordinator's time will be budgeted for compliance and reporting.

Fringe Benefits

Fringe costs are for the employer portion of payroll taxes and worker's compensation insurance based on an estimated rate of \$3 per hour worked and an employee pay wage of \$30 per hour. No other fringe benefits, such as health insurance or paid leave, are included for this part-time position. Fringe will be calculated based on the current federally approved rate agreement.

Travel

This budget item includes mileage for various contributors, including the Watershed Coordinator, and accommodation costs. The Coordinator will utilize most of this budget in site visits, participation in meetings, events and conferences throughout the watershed as well as locations in Oklahoma City and Tulsa as needed. The mileage reimbursement rate is the 2019 Federal rate of 58¢ per mile. Some mileage costs will cover travel expenses for tribal elders as well as BRFO volunteers in order to participate in meetings with landowners and identify/confirm springs. The accommodation costs are associated with event speakers for the planned education and outreach events. Airfare will be paid at competitive rates from standard internet sources; federal per diem rates by city will be utilized for accommodations and subsistence reimbursements.

Materials and Supplies

This budget category covers a variety of materials and supplies needed for the Watershed Coordinator and others to carry out the proposed activities.

Materials and supplies included in the budget are:

- Laptop computer and accessories, and a printer/scanner for use by the Coordinator.
- Office Supplies for use by the Coordinator in conducting their work, including printer paper, ink cartridges, and office incidentals.
- Marketing materials for promotional use and at events.
- Canopy Tent with the (existing) BRFO logo for use at events.
- Incidental expenses required by the Coordinator to facilitate their work. These items will be identified in advance of expenditure by the Board and the Coordinator.
- Printing maps/data for use in landowner outreach activities.
- Purchase of landowner parcel data from a commercial vendor for all pertinent counties.
- Event meeting supplies and catering costs associated with proposed outreach activities.
- Event advertising in local publications and printing of flyers and notices for outreach.

The cost estimates for materials and supplies were derived from past experience for similar items and uses.

Contractual Expenses

This budget category includes fees for consultant tasks (including GIS data analysis and consultation, organizational consultation, payroll and website development and maintenance).

Contractual expenses included in the budget are:

- The BRFO will contract with technical consultants as needed to order and review imagery data, provide data analysis and reporting and provide support for the Coordinator and Board in carrying out the proposed activities. This cost is based on reasonable and customary rates and ratios for junior and senior level consultants.
- The BRFO will contract with a nonprofit organizational management consultant to evaluate bylaws, purpose and mission statements and work with the Board to revise current documents, as needed to reflect long-term Foundation vision.
- The BRFO will contract with a freelance website developer to enhance the Foundation's website functionality based on input from the Board and Watershed Coordinator.
- The BRFO will contract with a payroll accountant to manage payroll for the Watershed Coordinator position. The Board Treasurer will oversee this position, which will issue paychecks, and remit payroll taxes and reports, including W-2's, as required by the IRS.

Each procurement of contractual services will be at a cost value below the Simplified Acquisition Threshold. These services will be procured utilizing a detailed technical scope of work, and the level of effort, rates, expenses and work products will be negotiated with each successful party.

Other Expenses

Other expenses will include conference participation, conference sponsorship and outreach venue setup and rental.

Other expenses included in the budget are:

- The BRFO will have two members, or one member and the Watershed Coordinator, participate in a national nonprofit organization conference and meeting to train and network on organization structure/future activities pertinent to the Foundation's long-term Mission.
- The BRFO will sponsor and participate in the 41st annual Oklahoma Governor's Water Conference in 2020, report on BRFO activities and network with pertinent participants.
- The BRFO will rent and setup suitable venues for outreach events planned in the watershed.

Table 3: Budget Proposal

Budget Item Description	Computation		Quantity Type	Total Cost
	\$/Unit	Quantity		
Salaries and Wages				
Watershed Coordinator	\$ 30.00	1500	Hours	\$ 45,000
TOTAL				\$ 45,000
Fringe Benefits				
Employer Payroll Taxes/Worker's Compensation (Watershed Coordinator)	\$ 3.00	1500	Hours	\$ 4,500
TOTAL				\$ 4,500
Travel				
Mileage (spring identification; site visits; landowner meetings; project management)	\$ 0.58	9200	Miles	\$ 5,336
Overnight accommodation for event speakers	\$ 400	3	Events	\$ 1,200
TOTAL				\$ 6,536
Materials and Supplies				
Computer, Printer, and Scanner (Watershed Coordinator)	\$ 1,200.00	1	Each	\$ 1,200
Office supplies	\$ 500.00	1	Lot	\$ 500
Marketing materials	\$ 1,000.00	1	Lot	\$ 1,000
Canopy tent	\$ 500.00	1	Each	\$ 500
Incidentals (Watershed Coordinator)	\$ 50	12	Months	\$ 600
Printing maps/data for distribution to stakeholders	\$ 1,000	1	Lot	\$ 1,000
Obtain parcel data for all counties	\$ 100	5	Shapefile	\$ 500
Meeting supplies (catering)	\$ 1,000	3	Event	\$ 3,000
Event advertising and printing	\$ 200	3	Event	\$ 600
TOTAL				\$ 8,900
Contractual Expenses				
Technical Consultants (cedar/riparian buffer/springs data gathering)	\$ 18,800	1	Lump Sum	\$ 18,800
Organizational Management Consultant	\$ 200	15	Hours	\$ 3,000
Website Developer	\$ 50	104	Hours	\$ 5,200
Payroll Accountant	\$ 75	24	Hours	\$ 1,800
TOTAL				\$ 28,800
Other Expenses				
Conference attendance	\$ 1,500	2	Event	\$ 3,000
Conference sponsorship	\$ 500	2	Event	\$ 1,000
Event venue rental/setup	\$ 600	3	Event	\$ 1,800
TOTAL				\$ 5,800
GRAND TOTAL				\$ 99,536

Environmental and Cultural Resources Compliance

Will the proposed project impact the surrounding environment (e.g., soil [dust], air, water [quality and quantity], animal habitat)? Please briefly describe all earth-disturbing work and any work that will affect the air, water, or animal habitat in the project area. Please also explain the impacts of such work on the surrounding environment and any steps that could be taken to minimize the impacts.

No ground disturbance or other activities that would require environmental compliance are anticipated.

Are you aware of any species listed or proposed to be listed as a Federal threatened or endangered species, or designated critical habitat in the project area? If so, would they be affected by any activities associated with the proposed project?

Endangered species identified in Murray County by the U.S. Fish & Wildlife Service include the threatened piping plover (*Charadrius melodus*), endangered whooping crane (*Grus americana*), endangered least tern (*Sterna antillarum*), and the candidate species Sprague's pipit (*Anthus spragueii*). The endangered seaside alder (*Alnus maritima*), also described above, would be a beneficiary of riparian restoration projects. No proposed activities affecting any of these species is anticipated under the proposed project.

Are there wetlands or other surface waters inside the project boundaries that potentially fall under CWA jurisdiction as "Waters of the United States?" If so, please describe and estimate any impacts the proposed project may have.

No proposed activities will take place in any wetlands or other surface waters during the project.

When was the water delivery system constructed?

No water delivery system will be constructed or improved during the proposed project.

Will the proposed project result in any modification of or effects to, individual features of an irrigation system (e.g., headgates, canals, or flumes)? If so, state when those features were constructed and describe the nature and timing of any extensive alterations or modifications to those features completed previously.

No modifications to irrigation systems will be made during the proposed project.

Are any buildings, structures, or features in the irrigation district listed or eligible for listing on the National Register of Historic Places? A cultural resources specialist at your local Reclamation office or the State Historic Preservation Office can assist in answering this question. Proposed activities will not disturb any buildings, structures, or features.

Are there any known archeological sites in the proposed project area?

Proposed activities will not disturb any archeological sites.

Will the proposed project have a disproportionately high and adverse effect on low income or minority populations?

The proposed project activities will both directly and indirectly benefit ranchers and other stakeholders in the watershed, regardless of income.

Will the proposed project limit access to and ceremonial use of Indian sacred sites or result in other impacts on tribal lands?

The proposed project activities are not expected to limit access to any Indian sacred sites or have any negative impacts on tribal lands.

Will the proposed project contribute to the introduction, continued existence, or spread of noxious weeds or non-native invasive species known to occur in the area?

No noxious weeds or non-native species will be introduced or spread due to proposed project activities.

Required Permits or Approvals

No required permits or approvals are anticipated for any of the activities proposed under this project.

Letters of Project Support

Letters of support are provided in Attachment 1, from the following organizations and landowners:

1. Choctaw Nation of Oklahoma
2. Chickasaw Nation
3. Oklahoma Department of Wildlife Conservation
4. City of Durant
5. Oka' Institute
6. The Nature Conservancy
7. University of Oklahoma
8. Murray State College
9. Bobbie Coffman (landowner)
10. Dakota Cole (landowner)
11. Margie Ross (landowner)
12. Rosanna Easterling (landowner)
13. Whitney Hansen (landowner)
14. David Mullens (landowner)
15. C&L Kirsch LLC (landowner)

Official Resolution

An official, signed resolution is provided in Attachment 2.

Attachments

The following documents are attached to this application:

1. Letters of Support
- 2.
- 3.
- 4.
5. Official Resolution

Attachment 2: Official Resolution

P.O. Box 971
Tishomingo, OK 73460
John Moody, Chairman
512.289.4676
info@blueriverfoundationokla.com



Advocates for Blue River Foundation

(DBA Blue River Foundation of Oklahoma)

Board of Directors Resolution

TO: United States Bureau of Reclamation

This is a certified copy of resolution passed by Advocates for Blue River Foundation (DBA Blue River Foundation of Oklahoma) Board of Directors, via a vote held at the Board Meeting on November 11, 2019.

RESOLVED, this Board of Directors hereby authorizes and directs John Moody, Board Chairperson, and Colley Dakota Cole, Treasurer to enter into a Cooperative Watershed Management Program Grant agreement upon receipt of financial assistance award, to support watershed restoration planning efforts in the Blue River of Oklahoma Watershed, on behalf of Advocates for Blue River Foundation Board of Directors.

RESOLVED, this Board of Directors has reviewed the grant application and support the application as submitted.


RESOLVED, the applicant will work with the Bureau of Reclamation to meet established deadlines for entering into a grant or cooperative agreement.



John Moody, Chairman

11/11/2019

Date



Colley Dakota Cole, Treasurer

11/11/2019

Date