

**Testimony on the
LONG-TERM VISION FOR THE FUTURE OF WATER SUPPLY IN KANSAS
to
Blue Ribbon Funding Task Force for Water Resource Management on the**

April 19, 2016

Good morning members of the Blue Ribbon Funding Task Force. I appreciate the opportunity to present information on two programs aimed at reducing sediment and nutrients from the waters of Kansas.

I am Gary Satter, Executive Director, Glacial Hills Resource Conservation & Development. My nonprofit organization is the sponsoring organization for the Delaware River, Tuttle Creek, and Missouri River WRAPS, and is also a local partner in the Delaware River and Tuttle Creek Streambank Restoration Projects with the Kansas Water Office, Kansas Department of Health and Environment, Watershed Management Section, and the Kansas Department of Agriculture, Division of Conservation.

My comments will address the Water Conservation Goals and Actions in the Vision.



KANSAS
Wraps

Watershed Restoration and Protection Strategy

The Kansas Watershed Restoration and Protection Strategy (WRAPS) process offers a framework that engages citizens and other stakeholders in a teamwork environment aimed at protecting and restoring Kansas watershed (any area of land whose water drains to a single point). The WRAPS process consists of 4 stages:

- Identifying the watershed restoration and protection needs
- Establishing local watershed goals
- Creating cost effective plans to achieve the established goals
- Implementing the plans

Currently, 33 WRAPS projects have completed the first three steps of the WRAPS process and are currently implementing their KDHE/EPA approved plans. Funding for the WRAPS program comes from the federal Clean Water Act Section 319 funds through the Environmental Protection Agency (EPA) and the Kansas State Water Plan Fund; administered by a program advisory board, the WRAPS Work Group. For SFY17-19 funding years, the WRAPS Program budget is approximately **\$2.6 million** per year.

Most WRAPS watershed plans include sedimentation reduction goals that will improve water quality through sediment reduction and those WRAPS addressing federal reservoir sedimentation can preserve or enhance reservoir storage capacity. To implement each WRAPS

watershed plan in the 8 Regional Advisory Committee areas that have WRAPS projects would cost nearly **\$22 million** per year for 30 years. This figure includes the resource conservation budget needs identified in the EPA/KDHE approved WRAPS plans.

Watershed goals are characterized as “restoration” or “protection”. Watershed restoration is for surface waters that do not meet water quality standards, and for areas of the watershed that need improvement in habitat, land management, or other attributes. Watershed protection is needed for surface waters that currently meet water quality standards, but are in need of protection from future degradation.

Each WRAPS project has a sponsoring organization and a Stakeholder Leadership Team (SLT). Everyone who lives in a watershed is a stakeholder in the restoration and protection of that watershed. Everyone wants to drink clean water, swim in clean water, eat fish that came from clean water, and have a river or lake that looks and is healthy and full of life. Examples of stakeholders include urban and rural residents; local, state or federal government agencies; elected officials; agricultural producers; recreational users and wildlife enthusiasts.



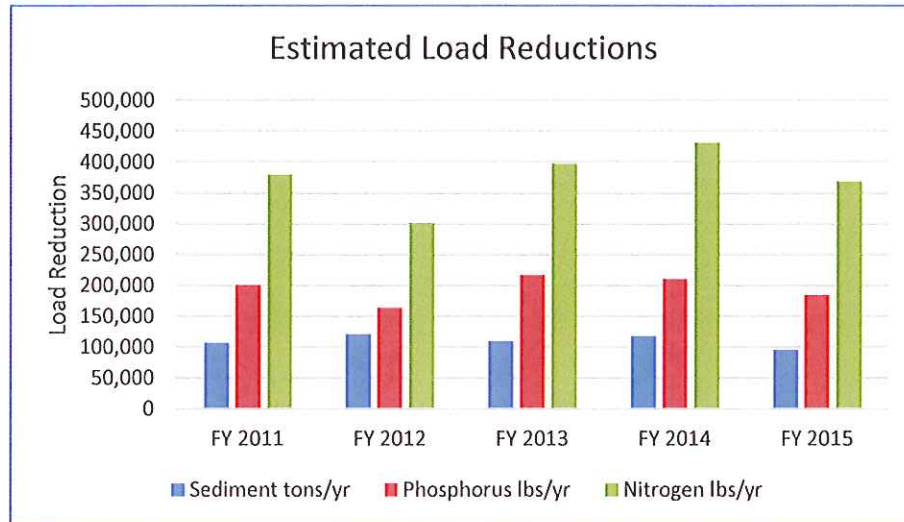
Participation from stakeholders is essential to the success of the WRAPS program and the future of Kansas’ waters.

During the plan development phase Best Management Practices (BMPs) to address nutrients, sediment, and bacteria pollutants in the watershed are chosen by the SLT based on local acceptance/adoption rates and amount of load reduction gained per dollar spent. The WRAPS plan is intended to serve as an overall strategy to guide WRAPS efforts by individuals, local, state, and federal agencies and organizations and they assist landowners with their conservation goals. During plan implementation the SLT as they assist landowners has the capability, capacity and confidence to make decisions that will restore and protect the water quality and watershed conditions of the watershed.



The WRAPS program is unique because the partner natural resource agencies of Kansas seek citizen and stakeholder input on how to best manage and protect our watersheds. Through WRAPS, local, state and federal program resources are being streamlined and leveraged. These partnerships have led to years of successful BMP implementation totaling approximately **\$5.5 million** per year, with the WRAPS budget contributing approximately **\$1.5 million** per year. This BMP implementation has led to great successes in pollutant load reductions over the last several years.

In Federal Fiscal Year 2014 Kansas ranked #2 in the Nation for sediment reduction, and #6 in the Nation for nitrogen and phosphorus reduction as compared to other state EPA 319 programs.



Federal reservoirs are an important source of water supply in Kansas, providing water in some manner to roughly two-thirds of Kansas' citizens. The State of Kansas owns storage in thirteen federal reservoirs operated by the U.S. Army Corps of Engineers. The ability of the reservoir to store water over time is diminished as the capacity is reduced through sedimentation. In some cases reservoirs are filling with sediment faster than anticipated. Whether sediment is filling the reservoir on or ahead of schedule, it is beneficial to take efforts to extend the life of the reservoir now.

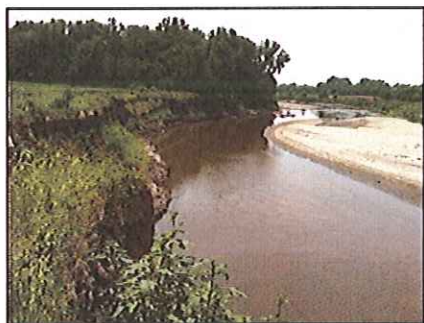
The protection of riparian areas along streambanks, when systematically implemented and targeted above water supply reservoirs, significantly reduces future sediment loads, extending the storage capacity of the reservoir. By targeting entire reaches in the highest priority areas for stabilization, instead of individual scattered sites, it becomes very effective at reducing sediment loads. The Kansas Water Office has conducted numerous assessments using Geographical Information Systems (GIS) and stream water quality monitoring data to identify the highest priority stream reaches in the watersheds above water supply reservoirs. The assessments are utilized by the WRAPS project SLTs and other agencies to guide prioritization of streambank restoration to reaches where erosion is most severe.

Restoration and protection of the landscape within watersheds above reservoirs can also be an effective tool in reducing erosion. One of the primary tools in reducing erosion within watersheds is installation of BMPs. Once established, BMPs can produce sediment and nutrient load reductions which can result in reductions in sedimentation rates within reservoirs over time.

Streambank protection projects in Kansas are now being implemented through a collaborative agreement between the Kansas Department of Agriculture's Division of Conservation, the Kansas Water Office, the Kansas Department of Health and Environment, and the Kansas Forest Service. By pooling available funding for design, construction, and vegetation plantings and by meeting on a regular basis, the state agencies are making the streambank stabilization process consistent and efficient. WRAPS groups provide assistance by building landowner relationships and obtaining landrights, and several other conservation agencies in Kansas are involved with technical assistance and planning. Streambank sites in Tuttle Creek, Delaware, and Cottonwood watersheds are prioritized based on their estimated contribution of sediment to the river system and reservoirs. Each project requires additional stabilization work through bank shaping and plantings and an adjacent riparian forest buffer. The new streambank program provides 100% of the engineering and construction costs and includes 3-years of maintenance for each riparian forest buffer that is installed. For fiscal years 2016-2017, six projects are being planned in the Cottonwood; five in the Delaware; and six in Tuttle Creek for a total of approximately \$1,952,000. This includes pooled agency funding of approximately \$650,000 that without extra dedicated funding in 2018, future amounts will be lower.

The total funding needed to address all streambank restoration sites identified in these three watersheds is approximately **\$45 million**; or **\$1.5 million** per year for 30 years.

A funding recommendation for the two program needs discussed above, and additional needs identified in The Vision, would be to restore full funding to the State Water Plan Fund, specifically the \$6 million transfer from the state general fund and \$2 million from EDIF funds each year, and that these funds be included in future state budgets for purposes and activities the State Water Plan was developed to accomplish.





Testimony of Wolf Creek Nuclear Operating Corporation
REGARDING FUNDING DEMANDS PERTAINING
TO THE LONG-TERM VISION FOR THE FUTURE OF WATER SUPPLY IN KANSAS
Before the Blue Ribbon Task Force for Water Resource Management
April 19, 2016

Good morning, my name is Cleve Reasoner, site vice president of Wolf Creek Nuclear Operating Corporation. Thank you for the opportunity to testify before you today.

Wolf Creek Generating Station is a nuclear power plant located near Burlington, Kan. In 2015, the plant produced 8.6 million megawatt hours of electricity, which is enough to power approximately 800,000 homes.

In addition to being an important source of clean energy in Kansas, the plant also provides substantial economic benefits. Wolf Creek has more than 1,000 full-time employees in a variety of professional and technical positions. The company pays \$30 million of annual property taxes, and the local and state economies benefit greatly from the plant's payroll and purchase of materials and supplies.

Wolf Creek is one of the largest customers of the Kansas Water Office. The nuclear power generation process relies on a consistent, clean source of cooling water. Wolf Creek's primary cooling water source is Coffey County Lake, with makeup water supplied through contract by John Redmond Reservoir.

Wolf Creek's 30-year water contract is up for renewal in 2017, and the impending rate increase will have a significant financial impact to Wolf Creek and its customers. Therefore, we want to ensure the money is well spent to support our long-term needs.

We are interested in promoting conservation efforts and believe the increase in water marketing revenue from Wolf Creek could be leveraged with conservation partners to ensure there is adequate water available from John Redmond Reservoir to meet Wolf Creek's needs, as well as the downstream ecology of the Neosho River.

Wolf Creek is currently doing its part to positively influence natural resources. To reduce dependence on water stored in John Redmond Reservoir, we are using strategies consistent with those outlined in the *Vision Document*. In addition, we are investigating water conservation and improved sources of supply. Our conservation efforts have been successful. The sedimentation rate of Coffey County Lake is only 28 acre feet per year, which is a fraction of the rate at John Redmond.

We support funding dedicated to the adoption of watershed practices that reduce future water supply loss in the John Redmond Reservoir watershed and believe local, state and federal conservation program infrastructure in the John Redmond Reservoir watershed should be prioritized. Additionally, we support financially efficient John Redmond Reservoir water supply restoration through dredging and other sediment management techniques.



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Given the extent of John Redmond Reservoir's sedimentation problem, and the necessity for a partnership approach to address the challenge, we are prepared to support financially and ecologically strategic investments in conservation. Specifically, we have facilitated two Conservation Innovation Grants on Wolf Creek property through the Natural Resources Conservation Service, converted all company cropland to no-till with cover crops and support local Watershed Restoration and Protection Strategy groups.

In conclusion, Wolf Creek is an important asset in our state, and John Redmond plays an important role in our operation. Therefore, we believe restoring John Redmond Reservoir capacity and preventing sediment deposits from the Neosho River basin are vital to both the long-term success of the plant and the region.

Testimony before the Blue Ribbon Funding Task Force for Water Resources Management, April 19, 2016

Funding a Strategy for Managing Corps Land to Protect Clinton Reservoir as a Public Water Supply and Contact Recreation Resource

Prepared by Tom Huntzinger, Kansas Alliance for Wetlands and Streams

Description of Need

Runoff from the Upper Wakarusa watershed replenishes Clinton Lake following the hydrologic cycle of precipitation. Clinton Lake water provides a public water supply for about 100,000 people and the most visited recreational destination in the state. Water quality monitoring and analysis has shown that nutrients and sediment washed off cropland and stream banks has resulted in concentrations in the lower reaches of the Wakarusa River and Clinton Lake that have exceeded water quality standards during storm events. Excess nutrient loads in the Lake have resulted in taste and odor problems and hypoxic ecological conditions hazardous to aquatic life and contact recreation. Sediment transport into the Lake has exceeded the projected rates decreasing its expected capacity. Pesticide transport from croplands during spring runoff events is also of concern but has not exceeded standards in recent years.

Cropland and grassland that is in close proximity to Clinton Lake provide the best opportunity to improve water quality by controlling transport of nutrients and sediment in storm water runoff directly into the Lake or lower reaches of the Wakarusa River. Excess runoff that occurs more frequently than would occur from native prairie has destabilized stream banks which also contributes sediment to Clinton Lake. Cropland and grassland on Corps property and managed by Kansas Department of Wildlife, Parks and Tourism (KDWP&T) are located in close proximity to the Lake.

The land management strategy involves five elements. Construct wetland forebays to trap and filter sediment and nutrient before they reach the main reservoir. A comprehensive implementation of conservation practices that reduce sediment loads from croplands. Provide a transition of current cropland to native landscape that results in a sustainable and productive habitat. Develop a rigorous and timely channel maintenance program to address the accumulation of debris. And finally a dedicated revenue source to cover costs of managing and maintaining a sustainable and healthy native habitat that promotes wildlife, protects Clinton Reservoir for public water supply and contact recreation.

Wetland Forebays

Construct a wetland forebay near the mouth of each tributary and main river channel coming into the Reservoir that would settle out suspended material before it reaches the main lake. Kansas Department of Health and Environment preliminary projections indicate the structures could meet the sediment reduction requirements for Clinton Lake and about 45% of the reduction in phosphorous needed to meet the water quality standard in the Lake. Wetland structures would be built so water from the River can also be gravity diverted into the tributary wetlands during high flow periods but probably not the massive infrequent flood events. The intent of the diversion

system would be to sustain the wetland environment when tributary inflows are not sufficient to maintain an optimum habitat for filtering and degradation of contaminants in the storm water. Current efforts to enhance wetland habitat for wildlife has been a focus and this concept is consistent with that effort. KDWP&T would provide guidance in the design of the forebays to address the need to sustain current fisheries and other aquatic life that will not substantially disrupt migration, spawning, nesting and other biological functions. Adequate water control structures would be part of the forebay structure to optimally manage aquatic habitat and trap sediment and nutrients. It must be expected that these forebays would be cleaned out every 15 or 20 years with a plan for the destination of the dredge materials at the outset. Forebays in addition to the main river channel would be on tributaries that drain directly into Clinton Lake or into the Wakarusa River within the flood pool and would include Coon Creek, Deer Creek, Rock Creek, Elk Creek, Camp Creek and Lynn Creek.

Funding requirements

The primary funding source would be the Corps of Engineers Continuing Authorities Program (CAP) under Section 1135 Ecosystem Restoration. The program is initiated with a request for a feasibility study. The planning effort in the feasibility study involves planning, design and construction oversight and requires a 50% local match for costs over \$100,000. Construction and implementation costs require a 25% local match. There is a precedent in Kansas for CAP funding as similar work was done at Milford Reservoir sometime ago under Section 1135. The program at Milford cost about \$5.3 M for 12 forebays installed in the mid 1990's. The proposed program for Clinton Reservoir will include 6 forebays; the main channel and five tributaries. The local commitment for this program at Clinton Reservoir is considered to be similar Milford but a few less structures and an increased cost over 20 years. The local match would be in the \$1.0M range. Operation and maintenance of these structures as effective stormwater retention and wildlife habitat once in place would require about \$50,000/ year.

Conservation Master Plan

The Upper Wakarusa Watershed Restoration and Protection Strategy (WRAPS) is working with the KDWP&T and contract farm operators to develop and implement a conservation master plan for Corps land. The plan proposes to implement specific best management practices on croplands and stream reaches that field surveys have identified as significant sources of nutrient and sediment. Current cropland farming agreements allow farm operators flexibility to produce crops with some constraints for wildlife habitat management. In recent years some effort has been directed toward water quality concerns in response to the need to protect Clinton Lake from contaminants particularly during storm events. Contractual agreements on the cropland currently do not require no till practices. No till methods have been encouraged with moderate success. No till methods are being considered as a requirement for this cropland when new agreements are written. Cover crops and nutrient management methods should also be a part of the land management approach. A conservation practice list for structural improvements has been developed that shows specific needs for each individual field. Implementation of these practices is necessary to reduce sediment and nutrients transport directly into the Reservoir or the lower reaches of the Wakarusa River. A request for assistance will be made in the coming month or so to the NRCS to prepare final conservation plans and final construction cost estimates for each field that requires them.

Funding requirements

Preliminary site plans and most probable cost estimates indicate a cost of about \$150,000 to implement needed conservation plans on 42 fields.

Transition Cropland to Native Habitat

It is commonly understood that the ultimate land management solution to reduce contaminant transport from the cropland would be to plant it to permanent native vegetation. There is significant merit to considering this option overall. However it is acknowledged that some common feed grain species provide effective food plots for wildlife. KDWP&T would retain this management option when it enhances wildlife and maintains protection from sediment transport to the Reservoir. This protection would include seasonal cover crops, strip plots, rotations etc. The current agricultural use of these fields is to lease the land for crops and use the revenue to manage the remainder of the land for wildlife habitat. A reasonable transition from this tradition may take 5-15 years to allow leases to expire and to retain some crop acres for a longer period of time to reasonably accommodate farm operators that need more time to adjust their farm operations. KDWP&T wildlife and land managers would be expected to work with farm operators to achieve this transition. There is currently about 1000 acres of cropland. A sequence of field activities will guide the transition to eventually establish perennial vegetation for optimum wildlife habitat.

Transition to alternative land uses must identify alternative revenue sources concurrently with any transition away from cropland. One viable opportunity would be to develop a source for native plants that reflects the local wild species ecotypes that have been planted in various habitats in the area that can be nurtured for harvest and sold on the market as seeds, plants, and fruit. This function could be contracted to a private firm that has the capability to sustain this as a business enterprise similar to the current feed grain cropland. Another example would be harvesting native hay crops as is currently done in several locations but not at a substantial scale. Some vendors have expressed interest in these concepts. In these examples some startup funding is expected to cover some of the risks associated with the startup enterprise.

Funding requirements

Revenue currently generated from the land as cropland is currently about \$80,000/year. Alternative funding sources must be found to replace cropland leases that provide the fundamental foundation for most of the resources for current maintenance of Corps land that would transition to native habitat. To fully implement this option would require planting permanent vegetation on about 1000 acres currently in forage crops. The transition would take place over a 10-year period. It would require about \$15,000/year over the ten years to plant it to permanent native cover. Maintenance of the native habitat would require \$50,000/year. Opportunity for revenue from the native vegetation seed or plants is possible after the cover is established. Some native plants have market value as alternative crops that may equal or exceed current row crops. If there is a loss in revenue with permanent cover this amount would need to be funded. Startup funds for a native plant alternative crop enterprise is expected to be \$15,000/year for three years.

Channel Stability and Management of Debris Flows

Establish a regular channel maintenance program to manage debris flows after floods that enhances channel stability. Large quantities of woody vegetation and trees are transported downstream during flood events. It is deposited where channel geometry slows down the velocity or snags on the bank that prevent debris from moving on downstream. The stationary debris accumulates more debris resulting in large piles in the channel. Flow currents cut around the piles taking out part of the bank leaving the piles mid channel to erode the banks each time runoff occurs. A maintenance effort should be sustained that moves these mid channel piles to the bank preferably to the bank that is eroding. The debris can be anchored to the bank to trap sediment from future storm runoff that eventually forms a flood plain bench and stabilizes the bank but still sustains meanders that control streambed gradients. The cleared channel is then capable of conveying the full storm discharge without undermining the banks. Larger machine methods such as track hoes or drag lines may be required to move large logs and debris piles.

Several reaches of the lower Wakarusa River and tributaries have been identified as unstable and sources of sediment to the Reservoir. Unstable bed and banks in these reaches should be stabilized to prevent further bank erosion and destruction of flood plain benches and riparian zones. Streambank stabilization projects on larger streams are typically done in a coherent series along a defined reach of channel. They are expensive and technically challenging. The need for channel stabilization is acknowledged here but is considered beyond the scope of this presentation.

Funding requirements

The need for this effort is flood dependent so would be an intermittent task vigorous at times and modest at others. It is expected that \$20,000/year would insure that resources and machines were available when needed. If this maintenance were to be neglected the channel may not be capable of conveying floods and would fill the channel with sediment and added debris over time and cleanup may not be achievable or affordable.

Maintenance and Enhancement Resources

Cropland leases provide the fundamental foundation for most of the resources for current maintenance of Corps land. For example, current funding from cropland leases is about \$80,000 per annum at Clinton Reservoir. The funds are also used to leverage grant opportunities for additional resources. Alternative funding sources must be found to replace the cropland leases as native vegetation and forebays are completed. Additional funding is required to manage wetlands, implement needed conservation practices and maintain channel conveyance free of debris.

Summary of Funding Requirements

Wetland Forebays	\$1.0M installation	\$50,000 annual maintenance
Conservation Masterplan	\$150,000 implementation	
Transition cropland to native veg		
Native habitat maintenance		\$50,000 annual maintenance
Native plant seeding		\$15,000/year for 10 years
Alternative native crop startup	\$ 15,000/yr for 3 yrs	
Management of channel debris		\$20,000 annual maintenance



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Rob Manes, Director

Mr. Tracy Streeter, Director
Kansas Water Office
900 SW Jackson, Suite 404
Topeka, KS 66612

April 12, 2016

Dear Mr. Streeter:

The Nature Conservancy commends the Kansas Water Office staff and leadership for the development of, and efforts to implement, the *Long-Term Vision for the Future of Water Supply* in Kansas (the Vision). Thank you for your continued dedication to Kansas' water resources and the people who rely on them. I appreciate also the opportunity to provide the following comments, on behalf of The Nature Conservancy of Kansas, addressing some of the most critical and challenging issues that face the people and wild resources of our state.

The Nature Conservancy is a 64-year-old, private, non-profit conservation organization that works in all 50 states and more than 35 countries worldwide. The Conservancy is founded on sound science, collaboration, and integrity. The Conservancy's work in Kansas focuses on initiatives and strategies that benefit both ecosystem health and the lives and well-being of people, including the economies and communities that sustain them.

As noted in our October 31, 2014 correspondence on this matter, The Nature Conservancy continues to assert that, in addition to actions being taken to improve water supply, the State of Kansas and its partners must concurrently commit to essential funding to implement conservation measures that also protect water *quality and the integrity of natural water systems*. These include such basic strategies as streambank stabilization, riparian buffers, and more holistic and broad watershed protection strategies. More aggressive and innovative strategies, essential to the future of water in Kansas, will demand greater funding than has been contemplated in a previous discussion of water policy and practice in our state.

While new funding sources can be discussed and considered, we recommend the first priority of the Task Force be to ensure the State Water Plan Funds are restored and included in the State budget. In addition, we believe there are opportunities to develop projects and funding mechanisms that can address water quantity and quality challenges, as well as other human and fish and wildlife habitat needs. Wildlife and habitat needs are well aligned with water quality and quantity goals for human use, and should be included in funding for the Vision. Strategic and funding concepts that should be considered are outlined in the following paragraphs.

Removing invasive eastern red cedars from grasslands in places like the Red Hills of southcentral Kansas can improve forage for livestock, as well as habitat for aquatic and terrestrial wildlife. Importantly, these same cedar trees are robbing the regional economy of enormous revenues. Cutting and burning these invasive trees or using them as revetments on eroding banks can restore surface water supplies for fish, wildlife, recreation, livestock use, and public water supplies. As an early strategy, State funding should be appropriated to match USDA program funds that are currently available for the removal of cedars in key areas where water conservation could be a significant beneficial outcome.

As an overall strategy to increase in-stream flow across the state, we urge support for expansion of land management practices that will increase infiltration of overland runoff to increase stream base flows and groundwater recharge. Many of these practices are already being promoted to improve water quality and soil and watershed health, including riparian forest buffers, native prairie grass restoration, cover crops,

terraces, and grassed waterways. Supporting implementation of similar stormwater retention and infiltration practices in urban areas, such as infiltration trenches and vegetated swales, porous pavement, and rain gardens, will help reduce urban flooding. Widely applied, these practices will improve watershed runoff regimes, ultimately increasing stream base flows, decreasing flood peaks, mitigating downcutting and in-channel bank erosion, and benefitting our water supply, as well as aquatic life and recreational resources.

In the recent past, the State of Kansas has invested in Conservation Reserve Enhancement Program initiatives to address quantity and quality needs in ground and surface waters in certain parts of the state. While these efforts have yielded successes, they have not been sustained at sufficiently large scales or over sufficient timelines to produce the type of results needed. We recommend that a robust and reliable source of funds be developed for such projects and leveraging opportunities.

The Nature Conservancy has worked with private and government partners in other states and around the world to develop and deploy "water funds", which are mechanisms to protect both water resources (quality and quantity) and associated important ecological communities. Under such initiatives, public and private investments in upstream conservation measures and best management practices deliver multiple benefits to downstream users, typically municipal, industrial and residential patrons. Funding for such aggressive strategies is sometimes derived from real estate transfer taxes, water users, specified sales taxes, and other sources. We support measures to develop increased funding for the State Water Plan Fund.

I would also emphasize the importance of establishing programs and funding that reward agricultural producers and other landowners who implement practices that improve water quality and quantity. We would like to encourage the KWO to consider bonus incentives for protection and expansion of the stream corridor, especially ecoregion-appropriate riparian buffers (native prairie grasses or forests). Restoring and protecting riparian areas provides myriad benefits including water quality improvements, reduced streambank erosion, and improved fish and wildlife habitat. Kansans will benefit from increased recreational opportunities along with improved water quality and the reduced costs passed on to tax payers to address issues like reservoir sedimentation and lost storage capacity.

This year, The Nature Conservancy is launching the David T. Beals Healthy Streams for Kansas Initiative. We intend to partner and build on the ongoing efforts of agencies and other non-profit and private organizations currently working in the area of water resources management. Our focus will primarily be on developing and implementing sustained programs to improve water resource management on the creeks and rivers of the state. We look forward to cooperating with public, non-profit and other private partners to improve and protect water quality and quantity for Kansas and its citizens.

Finally, I would assert that funding for water conservation in Kansas has long been grossly inadequate; unfortunately, this situation cannot be addressed without new revenue sources (including those mentioned above). I urge the Water Office and other Kansas government and industry leaders to be both aggressive and progressive in developing budgets and pursuing revenue generation for improving water quality and quantity in the state.

The Nature Conservancy and other private and non-profit organizations stand ready to partner in these critical endeavors.

Thank you for considering these comments.

Sincerely,

A handwritten signature in black ink, appearing to read "Rob Manes", with a horizontal line extending to the right.

Rob Manes, Director

WRITTEN TESTIMONY FOR BLUE RIBBON TASK FORCE

PREPARED BY

JARED "PETE" GILE

KBID SUPERINTENDENT

Kansas Bostwick Irrigation District (KBID) is a Pick-Sloan Project of the Bureau of Reclamation formed under the Flood Control Act of 1944. The original repayment and water service contract was signed with the Bureau of Reclamation in 1951. The district became operational in 1957 and the final block was constructed and put into operation in 1968.

The District was incorporated as a nonprofit political subdivision of the State of Kansas and holds Appropriated Water Right #385 with a priority date of July 16th, 1948 for Republican River flows and #4673 with a priority date of October 7th, 1955 for White Rock Creek flows.

Headquartered in Courtland, KS and located in both Jewell and Republic Counties, KBID contains 42,500 classified irrigation acres and provides irrigation service to approximately 350 irrigators. There are 100 miles of main canals and 150 miles of lateral canal and pipelines for irrigation water delivery. The District also contains 200 miles of open and buried tile drains within the system.

KBID is served by Harlan County Reservoir in Nebraska managed by the United States Army Corps of Engineers and Lovewell Reservoir in Kansas managed by the Bureau of Reclamation. Releases made from Harlan County Reservoir travel 60 miles downstream in the Republican River to the Guide Rock Diversion Dam where they are then diverted into the Courtland Canal where they can subsequently be delivered to Bostwick Irrigation District of Nebraska in the first 15 miles of the canal or KBID irrigators located in the following 19.7 miles of the canal, or they can be delivered into Lovewell Reservoir 34.8 miles downstream from the Guide Rock Diversion Dam. Releases made from Lovewell Reservoir at mile point 38.0 are delivered to the portion of the District located below the Reservoir. Of the 42,500 classified irrigation acres in the District approximately 13,000 are situated above Lovewell Reservoir and 29,500 situated below Lovewell Reservoir.

To improve efficiency and being conservation minded, the District has been actively converting the open lateral canals to buried pipe systems for many years and continues this activity currently. Of the 150 mile of those constructed originally for the District, over 100 miles have been eliminated and converted to buried pipe systems. This beneficial activity has been completed under several funding concepts and programs. Some of these conversions have been completed with dollars from the Districts annual operation and maintenance budgets; others have been completed under policies where the irrigators contribute a portion of the cost of materials and the District provides the equipment and labor for the projects. In addition to those methods

of funding the conversion projects, KBID has been successful over the years in receiving Field Service and WaterSMART grants through the Bureau of Reclamation which also pair up with irrigator contributions to complete these projects.

Most recently and as a result of the 2015 ruling in case of Kansas v. Nebraska No. 126 Original pertaining to disputes over flows of the Republican River, the Supreme Court of the United States awarded Kansas \$5.5 million. Through the action of state legislators, including District 106 State Representative Sharon Schwartz (R-Washington, KS), \$3.5 million of the award was credited to the Republican River Water Conservation Projects-Nebraska Moneys Fund for water improvement projects in the Republican River Basin. By consensus, the Lower Republican River Stakeholder Advisory Committee, Rep. Schwartz along with officials from the Kansas Department of Agriculture and the Kansas Water office awarded KBID \$2.5 million to be used for the further conversion of open lateral canals to buried pipe systems. These funds should allow for an additional 15 to 20 miles of open laterals to be converted to buried pipe systems.

KBID continues explore ways to become more efficient over time based on the historically diminishing flows of the Republican River of which the District is reliant on.