



A LONG-TERM VISION FOR THE FUTURE OF WATER SUPPLY IN KANSAS

Developed based upon input from the citizens of Kansas

JANUARY 2015

TABLE OF CONTENTS

CALL TO ACTION: PURPOSE AND NEED FOR A LONG-TERM VISION FOR THE FUTURE OF WATER SUPPLY IN KANSAS	6
SUMMARY OF VISION DEVELOPMENT PROCESS	7
STATE OF THE RESOURCE	8
HIGH PLAINS AQUIFER	9
RIVER-RESERVOIR SYSTEMS	9
VISION STATEMENT	10
MISSION STATEMENT	11
GUIDING PRINCIPLES	11
IMMEDIATE PRIORITY ACTION ITEMS	12
NEED FOR LEADERSHIP	12
KEYS TO SUCCESS	12
THEMES AND STRATEGIES TO ACHIEVE THE VISION	13
EXPLANATION OF SECTION	13
THEME AND STRATEGY OVERVIEW	14
WATER CONSERVATION	15
<i>Strategically emphasize information and education regarding the importance of water and water conservation practices</i> ...	15
<i>Implement additional or enhanced water conservation policies and practices</i>	16
<i>Reduce barriers and increase development of locally driven conservation and management plans</i>	18
<i>Encourage conservation planning in economic development and business recruitment</i>	19
<i>Increase adoption of watershed practices that reduce future water supply loss</i>	19
WATER MANAGEMENT	22
<i>Modify reservoir operations and downstream targets to most efficiently operate reservoirs for water supply</i>	22
<i>Improve interstate cooperation so that Kansans' water needs are met and protected</i>	23
<i>Increase the regionalization of water supply to improve the long-term water supply reliability</i>	25
<i>Evaluate changes to the Kansas Water Appropriation Act and Rules and Regulations to promote better balance between efficient water use and economic benefit</i>	25
<i>Evaluate and improve state agency coordination and collaboration</i>	27
TECHNOLOGY AND CROP VARIETIES	28
<i>Promote irrigation efficiency technologies</i>	28
<i>Increase adoption of less water intensive crop varieties</i>	29
<i>Implement research-based technology aimed at better understanding our state's water supply</i>	31
<i>Develop career and technical education programming related to water resource management and technology to build the needed workforce</i>	33
ADDITIONAL SOURCES OF SUPPLY	35
<i>Restore water supply lost to sedimentation through dredging and other in-lake sediment management techniques</i>	35
<i>Allow for the transfer of water supplies between basins where feasible and cost effective</i>	35
<i>Evaluate the sources and potential uses of lower quality water</i>	36
<i>Secure all available storage at federal reservoirs including reallocating storage where such actions are possible</i>	38
<i>Increase other sources of available storage for water supply</i>	38

ECONOMIC ANALYSIS 41

 WATER CONSERVATION 41

Impact analysis 41

Decision making tools 41

Value of water 41

Water conservation outreach 42

 WATER MANAGEMENT 42

 TECHNOLOGY AND CROP VARIETIES 42

 ADDITIONAL SOURCES OF SUPPLY 42

 ECONOMIC ANALYSIS TIMELINE 42

Current studies 42

Future studies - Phase I 42

Future studies - Phase II 42

MEASURING SUCCESS WITH A REGIONAL APPROACH 43

 DEFINING REGIONAL PLANNING AREAS (NOVEMBER - DECEMBER 2014) 43

 IDENTIFYING REGIONAL GOAL LEADERSHIP TEAMS (JANUARY 2015) 43

 PUBLIC OUTREACH (FEBRUARY – MARCH 2015) 44

 DEFINE REGIONAL GOALS AND PRESENT TO KWA (APRIL – MAY 2015) 44

 PUBLIC COMMENT (JUNE – JULY 2015) 44

 INCORPORATE REGIONAL GOALS INTO VISION (AUGUST 2015) 44

 PRESENT REGIONAL GOALS TO GOVERNOR AND LEGISLATURE (NOVEMBER 2015 - JANUARY 2016) 44

 ANNUAL REVIEW (BEGINNING IN JANUARY 2017) 44

BE THE VISION 46

 OWENS CORNING 46

 FORT RILEY 47

 CITY OF HAYS 47

 MCCARTY FAMILY FARMS, LLC 48

 NATIONAL COOPERATIVE REFINERY ASSOCIATION (NCRA) AND CITY OF MCPHERSON 49

 SHERIDAN-6 LOCAL ENHANCED MANAGEMENT AREA (LEMA) 51

 SUPREME FEEDERS 52

 FIRSTWATER AG, INC 53

 WENSTROM FARMS 54

CONDITION ATLAS 55

VISION TEAM AND RESOURCES 68

 VISION TEAM MEMBERS 68

 RESOURCES 68

EDUCATION AND PUBLIC OUTREACH SUPPLEMENT 69

VISION EDUCATION-RELATED ITEMS 70

GUILDING PRINCIPLES 71

BUILDING ON SUCCESS 71

THEMES AND STRATEGIES 72

STRATEGY OVERVIEW 72

COORDINATING TEAM SUBGROUP CHAIRS 72

REGIONAL GOAL ACTION PLANS	78
CIMARRON REGIONAL GOAL ACTION PLANS	78
<i>Priority Goal 1 – Reduce the rate of decline of the Ogallala Aquifer through voluntary, incentive-based conservation ...</i>	78
<i>Priority Goal 2 – Extend the usable lifetime of the Ogallala Aquifer through technology adoption, new crop varieties and conservation</i>	78
<i>Priority Goal 3 – If individual elects to conserve then they would be afforded flexibility</i>	79
<i>Priority Goal 4 – As measured through increase in adoption by 50% as assessed each five years, promote the adoption of irrigation efficient technology and invest in university research to evaluate the effectiveness of such technology and crop varieties to develop voluntary incentives and tools</i>	80
EQUUS-WALNUT REGIONAL GOAL ACTION PLANS	80
<i>Priority Goal 1 – Achieve and maintain sustainable balance of groundwater withdrawals with annual recharge in the Equus Beds Aquifer</i>	80
<i>Priority Goal 2 – Each public water supplier in the region will develop a long term water supply plan to meet their individual forecasted needs</i>	81
<i>Priority Goal 3 – Implement and maintain watershed protection activities to maintain regional reservoir storage capacity</i>	82
<i>Priority Goal 4 – Maintain or reduce the rate of sedimentation and nutrient loading through the encouragement of Best Management Practices</i>	82
<i>Priority Goal 5 – Allocate necessary resources within five years to identify and prioritize current contamination issues impacting the Equus Beds Aquifer and develop a plan to manage and mitigate the contamination.....</i>	82
<i>Priority Goal 6 – Coordinate with public/private research and development programs to develop and promote less water and nutrient intensive crops</i>	86
<i>Priority Goal 7 – Encourage municipal, commercial and industrial users of water to increase the efficiency of net water use by reducing the volume of water use per unit of measure by 5% per decade.....</i>	87
GREAT BEND PRAIRIE REGIONAL GOAL ACTION PLANS	88
<i>Priority Goal 1 – Achieve water use sustainability within the Great Bend Prairie regional planning area by 2025 with a starting point being no new net depletions that includes a reasonable raising or lowering of the water table based on average weather conditions</i>	88
<i>Priority Goal 2 – Maintain annual training funds of 15% from Clean Water Drinking Fee and increase technical training support to PWS systems.....</i>	91
<i>Priority Goal 3 – Enhance the monitoring of poor quality water in areas which have salt water disposal lines, disposal wells and areas with high salt sources to ensure that contamination of fresh water sources does not occur</i>	93
<i>Priority Goal 4 – Initiate research and development of feed wheat as an alternative feed source.....</i>	94
<i>Priority Goal 5 – Work towards sustainability of watersheds so that flood control capacity is maintained while maintaining streamflow to meet downstream water needs</i>	95
KANSAS REGIONAL GOAL ACTION PLANS	96
<i>Priority Goal 1 – Increase water storage capacity and availability in federal reservoirs.....</i>	96
<i>Priority Goal 2 – Explore additional storage possibilities such as construction of multipurpose lakes so that new water sources can be brought online</i>	98
<i>Priority Goal 3 – Reduce the cumulative sediment rate of federal reservoirs and other water supply lakes by 10% through BMPs</i>	98
<i>Priority Goal 4 – Reduce per capita water consumption by 10% by 2035 through conservation, education and pricing mechanisms</i>	100
<i>Priority Goal 5 – After 2020, reduce duration and frequency of harmful algal blooms disrupting recreation in lakes</i>	103
<i>Basin Wide Watershed Management System</i>	104

MARAIS DES CYGNES REGIONAL GOAL ACTION PLANS	107
<i>Priority Goal 1 – Reduce cumulative sediment loads entering PWS impoundments by 10% to extend the life of existing infrastructure.....</i>	<i>107</i>
<i>Priority Goal 2 – Increase sources of supply, at a minimum of one multipurpose structure, to meet increased demand in specific growth areas</i>	<i>107</i>
MISSOURI REGIONAL GOAL ACTION PLANS.....	108
<i>Priority Goal 1 – Since groundwater quality is not well known, compile existing and collect additional data to establish a baseline.....</i>	<i>108</i>
<i>Priority Goal 2 – To ensure a reliable surface water supply in the future, BMPs will be implemented so surface water quality in identified drainages is maintained or improved using goals and milestones</i>	<i>110</i>
<i>Priority Goal 3 – Collect additional information to improve safe yield estimate of groundwater and tributary streams within 3 years.....</i>	<i>108</i>
NEOSHO REGIONAL GOAL ACTION PLANS	112
<i>Priority Goal 1 – Prolong the water supply storage in John Redmond Reservoir to the year 2065 by reducing the sedimentation rate by an average of 300 acre-feet per year through watershed practices</i>	<i>112</i>
<i>Priority Goal 2 – Reduce vulnerability to drought by increasing reservoir storage at Marion and Council Grove reservoirs through a permanent raise in conservation pool elevation</i>	<i>113</i>
<i>Priority Goal 3 – Reduce frequency of algal blooms in Marion Reservoir to no more than every 3 years</i>	<i>113</i>
<i>Priority Goal 4 – Increase storage in basin below John Redmond through development of additional storage sites.....</i>	<i>114</i>
<i>Priority Goal 5 – Every 5 years assess the effectiveness of BMPS for effects on hydrology, reduction of sediment and nutrients, and provide that information and education to those implementing practices.....</i>	<i>114</i>
RED HILL REGIONAL GOAL ACTION PLANS	114
<i>Priority Goal 1 – Reduce the rate of water use by 10% throughout the region collectively by 2025.....</i>	<i>114</i>
<i>Priority Goal 2 – Increase sources of supply through the use of a multipurpose small lake to meet increased demand in specific group or need areas</i>	<i>116</i>
<i>Priority Goal 3 – Reduce the amount of freshwater used in oil and gas completion operations by 4% annually.....</i>	<i>117</i>
<i>Priority Goal 4 – Work with oil and gas industry, beginning in 2040, to have 10,000 barrels a day of fresh water recycled from oil production</i>	<i>117</i>
SOLOMON-REPUBLICAN REGIONAL GOAL ACTION PLANS.....	118
<i>Priority Goal 1 – Within the next two years, develop a clearinghouse of technical tools, agreements and agency personnel for use alternatives for Solomon-Republication region waters.....</i>	<i>118</i>
<i>Priority Goal 2 – Reduce inbound sediment loads, through conservation measures, with a focus on White Rock Creek to Lovewell Reservoir</i>	<i>119</i>
<i>Priority Goal 3 - Complete a bathymetric assessment every 10 years on all reservoirs in the region</i>	<i>119</i>
<i>Priority Goal 4 – Continue initiative that will maintain, and annually fund a KS Admin. Team to facilitate Republican River Compact Compliance</i>	<i>119</i>
SMOKY HILL-SALINE REGIONAL GOAL ACTION PLANS.....	120
<i>Priority Goal 1 – Increase available water supply, water supply storage, and interconnectivity among public water supplies within the region.....</i>	<i>120</i>
<i>Priority Goal 2 – Develop a statewide conservation education program/model which is applicable to all public water supplies which quantifies water conservation efforts on customer usage</i>	<i>121</i>
<i>Priority Goal 3 – Reduce sediment and total suspended solids concentrations with in the lakes and streams within the region.....</i>	<i>122</i>
<i>Priority Goal 4 – Increase public water supply water use efficiency for suppliers within the region.....</i>	<i>124</i>

UPPER ARKANSAS REGIONAL GOAL ACTION PLANS	125
<i>Priority Goal 1 – Extend the usable lifetime of the Ogallala Aquifer for at least 25 years in the region through promotion of multiple Local Enhanced Management Areas, Water Conservation Areas and other incentive-based programs</i>	125
<i>Priority Goal 2 – By 2020, continue to re-establish and maintain flows along the Upper Arkansas River in the amount of one cubic feet per second at the USGS gage located at Dodge City for 100% of Kansas’ share of compact water ...</i>	127
<i>Priority Goal 3 – Maximize available water and promote conservation of municipal use through incentives, education and outreach, reduced water loss and increased data availability to reduce gallons per capita per day usage.....</i>	127
<i>Priority Goal 4 – Maximize available water and promote conservation of industrial use through incentives, education and outreach, benchmarking efforts and increased data availability to reduce gallons per production unit usage.....</i>	128
UPPER REPUBLICAN REGIONAL GOAL ACTION PLANS	128
<i>Priority Goal 1 – Develop and adopt a water conservation plan that provides maximum flexibility while reducing overall actual use, in concert with GMD 4, to extend the aquifer life and economic well-being.....</i>	128
<i>Priority Goal 2 – Enhance current efforts on education of all water users for all age groups on sources of supply, quantity of supply , BMPs, to help stakeholders conserve and extend</i>	129
<i>Priority Goal 3 – Republican River Compact Administration should be encouraged to maintain compliance in the South Fork Republican River</i>	129
<i>Priority Goal 4 – Increase utilization and adoption of water conservation technology and practices by 10%.....</i>	129
<i>Priority Goal 5 – Encourage the state to coordinate with the USDA Risk management agency as well as our congressional delegation and neighboring states, to develop common sense tools for crop insurance that encourage water conservation</i>	129
UPPER SMOKY HILL REGIONAL GOAL ACTION PLANS	130
<i>Priority Goal 1 – By 2025, reduce irrigation use by 25% based on recent average pumping history per water right. Allow water right transfers and other flexibilities as long as a net reduction is achieved.....</i>	130
<i>Priority Goal 2 – Develop a water reduction plan and begin implementation by January 2017</i>	130
<i>Priority Goal 3 – All municipal users within the planning region will be at or below the regional 2015 average gpcd within the next 5 years.....</i>	130
<i>Priority Goal 4 – Maximum water use per head will be maintained as defined by the Kansas Water Appropriation Act. Stockwater allocations as defined by Act will implement BMPs and be as efficient as possible</i>	131
<i>Priority Goal 5 – Industrial users and all other beneficial uses of water will develop Best Management Practice plans to be as efficient as possible</i>	131
VERDIGRIS REGIONAL GOAL ACTION PLANS	131
<i>Priority Goal 1 – In order to manage the water storage capacity in our region, evaluate different processes of managing our reservoirs by 2020</i>	131
<i>Priority Goal 3 – By 2020 evaluate potential sites and the costs and benefits of building new reservoirs within the region to meet future demands.....</i>	132
APPENDIX – BLUE RIBBON FUNDING TASK FORCE FINAL REPORT	133

Looking back through history, specific generations have become known for key achievements, traits and ideals. Stereotypes are broadly applied across the United States but what about us? What will this generation of Kansans be remembered for? It could be for putting personal politics and differences aside, rolling up our sleeves and working together to ensure future generations of Kansans have a reliable source of water to fuel our state's economy.

In October 2013, Governor Brownback issued a call to action to his Administration to develop a 50-Year Vision for the Future of Water in Kansas stating, "Water and the Kansas economy are directly linked. Water is a finite resource and without further planning and action we will no longer be able to meet our state's current needs, let alone growth."

"Water and the Kansas economy are directly linked. Water is a finite resource and without further planning and action we will no longer be able to meet our state's current needs, let along growth." – Governor Sam Brownback

The writing is on the wall and if we don't act today, our future is bleak. The Ogallala Aquifer is declining faster than it is recharging. Reservoirs, which are critical water storage structures for much of our state, are filling with sediment. At this rate, with no changes in the next 50 years, the Ogallala will be 70 percent depleted and our reservoirs will be 40 percent filled with sediment.

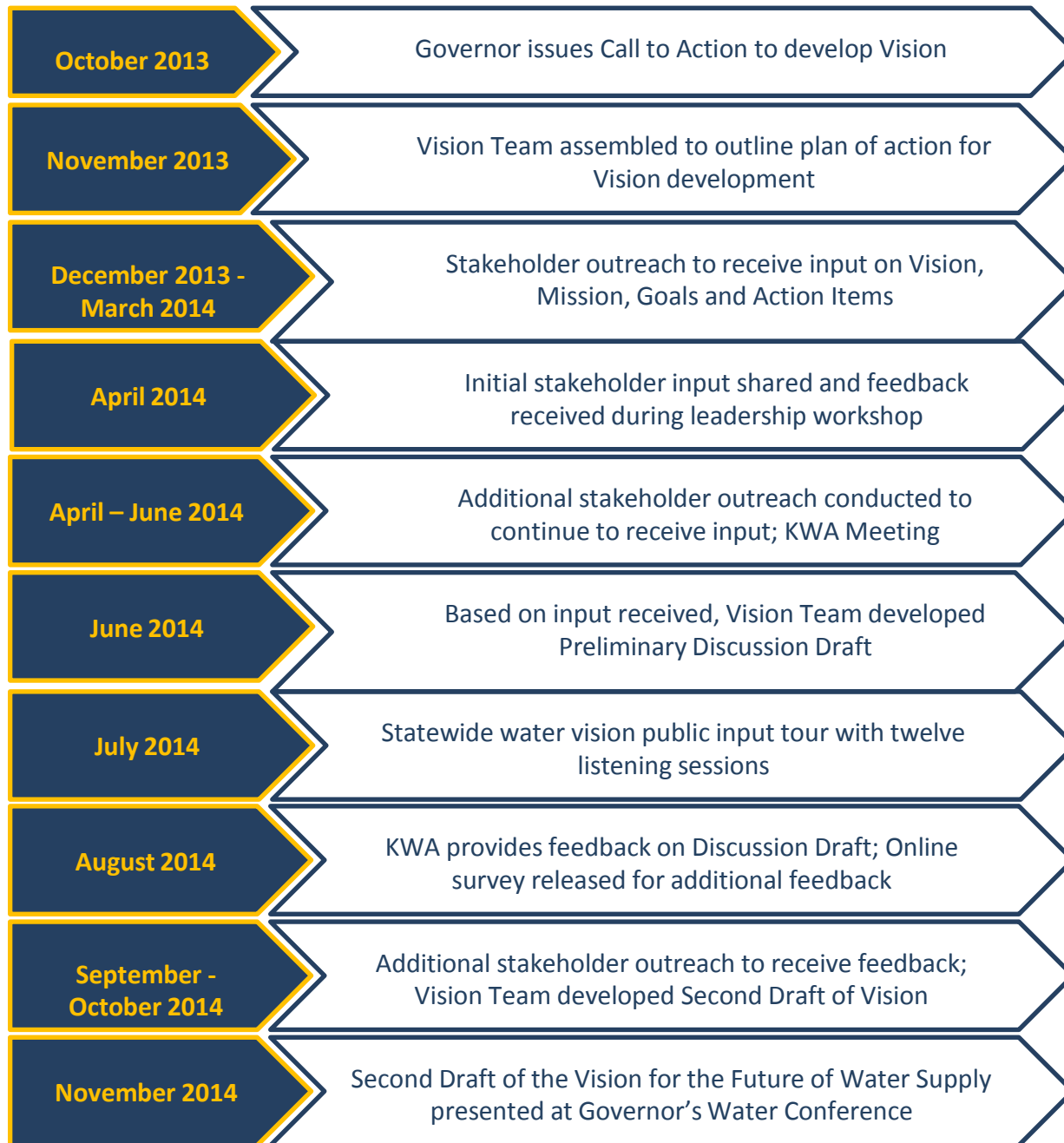
The multi-year drought has brought water issues to the forefront; we must plan for the future now.

Since issuing the call to action in October, a Vision Team comprised of the Kansas Water Office, Kansas Department of Agriculture and Kansas Water Authority, embarked on a one-year mission to seek input from water users, compile data, conduct research and chart a path forward.

Governor Brownback's Administration, and most importantly the citizens of Kansas, have responded to his call to action and have developed a Vision to ensure a reliable future water supply. If we remain united and committed to implementing the strategies defined in this Vision, future generations will look back on the work we do and say that's the generation of Kansans who worked together to protect and conserve the state's water resources today and for the future.

SUMMARY OF VISION DEVELOPMENT PROCESS

Following is a summary of the year-long process employed to develop the Vision.



Measuring progress towards meeting the Vision requires a firm understanding of the current conditions of the state's water resources. A brief overview of the current conditions of our state's water resources and a description of how water is used and managed in the state is included below. Supporting graphics and maps are provided in the Condition Atlas at the end of this document.

Kansans use approximately four million acre-feet of water annually. Statewide, irrigation is the largest water user, accounting for 80-85 percent of all water diverted in most years. Municipal use is the second largest water use category. Approximately 90 percent of all water used in Kansas is pumped from ground water sources.

Kansas water resources are ground water dominated in the western half of the state and surface water dominated in the eastern half. Climate is a significant factor in this variability, with semi-arid conditions, low precipitation and limited surface water in western Kansas. There are aquifers in eastern Kansas; however, they are generally more limited in extent and yield than the aquifers in western Kansas.

Both weather and climate exhibit a great deal of variability in Kansas. This may be the case over several days, from year-to-year and over a multi-year period. Perhaps the most striking example of this variability is the periodic recurrence of drought conditions in Kansas. Due diligence in protecting water resources and adapting to future climate variability will be important to maintaining and improving quality of life and the state's economy.

State policy regarding water management is guided by the Water Appropriation Act which asserts that water in Kansas is dedicated to the use of the people of the state, with the state charged to manage the system of water rights. As such, surface and ground water can be appropriated for beneficial use, without waste, if that does not cause impairment of an existing, more senior water right and does not unreasonably affect the public interest. A water right does not constitute ownership of such water, only the right to use it for beneficial purposes. The date of a water right, and not the type of use, determines the priority to divert and use water at any time when supply is not sufficient to satisfy all water rights. In addition, Kansas has four Native American Tribes. Each is afforded a Tribal Reserve Water Right by the federal government, which is linked to the creation of each tribal reservation. Although none of these rights have currently been quantified, the future management and use of our water resources must take into account these rights, which are likely to have the most seniority in the state.

The *Kansas Water Plan* is one of the primary tools used by the State of Kansas to address current water resource issues for future needs. The Kansas Water Office, in coordination with local, state, federal and interstate partners updates the Kansas Water Plan every 5-years. Water resource issues addressed in the Kansas Water Plan extend beyond water supply and include goals and priorities such as improving our state's water quality and improving recreational opportunities available to our citizens. The Kansas Water Plan will serve as the implementation plan for the Vision, providing 5-year milestone events to measure success towards achieving the Vision.

HIGH PLAINS AQUIFER

The High Plains aquifer underlies the western and south central portions of Kansas. It is one of the world's largest aquifers and underlies portions of eight states from South Dakota to Texas and New Mexico. About 27 percent of the irrigated cropland in the United States overlies the High Plains aquifer. In Kansas, the aquifer consists of the hydraulically interconnected Ogallala aquifer in the west, the shallower and geologically younger Great Bend Prairie and the Equus Beds aquifers in south central Kansas and the associated alluvial aquifers.

The Ogallala portion of the High Plains aquifer is the primary source of water in western Kansas for all uses and is heavily developed, primarily for irrigation. Most of the Ogallala-High Plains aquifer is closed to or restricted from additional development. The aquifer has been over-appropriated in many regions and, in localized areas, water quality is deteriorating. Projections of how many more years the aquifer will support a particular level of withdrawal indicates many large areas that have 50 years or less at current usage rates.

Recognizing that the High Plains aquifer is the largest, most economically important ground water source in Kansas, many programs, policies and individual management decisions have been directed towards conserving and extending the useable life of this resource. Examples of such activities include the development of Local Enhanced Management Areas (LEMAs), establishment of water banks, increased compliance and enforcement and implementation of various water conservation programs such as the Water Transition Assistance Program (WTAP) and Conservation Reserve Enhancement Program (CREP).

The Groundwater Management Act (GMD) Act, enacted in 1972, provided five locally developed GMDs the flexibility to adopt management practices based on local hydrologic conditions. The purpose of the Act was to preserve basic water law doctrine as established by the Water Appropriation Act while establishing the right and responsibility of local water users to determine their future with respect to ground water use.

RIVER-RESERVOIR SYSTEMS

Kansas has several major rivers, but few natural lakes. Many reservoirs, large and small, have been constructed to control flooding and store water for beneficial use. Major rivers in Kansas include the Arkansas, Kansas and Neosho. The state's largest river, the Missouri River, forms the northeast border and provides significant potential for addressing Kansas' future water demands. Twenty-four large reservoirs were constructed by the federal government in Kansas, the oldest being Kanopolis (1948) and the youngest three being El Dorado, Big Hill and Hillsdale (1981). The primary authorized purpose for reservoirs built by the U.S. Army Corps of Engineers (Corps) at the time of their construction was flood control. Irrigation water supply along with flood control was a primary use for those reservoirs constructed by the U.S. Bureau of Reclamation. Other authorized uses, which vary by reservoir, include municipal and industrial water supply, water quality, recreation and navigation support.

Kansas has purchased water supply storage in 14 federal reservoirs. Water from this storage is accessible via contract for municipal, industrial and irrigation use. These reservoirs are an important source of water supply in Kansas, providing water in some manner to approximately two-thirds of the citizens of the state. Nearly 60 percent of the energy produced in Kansas relies on storage in our reservoirs. The state's population growth projections indicate Kansans will be increasingly reliant on the reservoirs.

There are many challenges to managing reservoir supplies, such as: protecting the reservoirs from losing storage from sedimentation, identifying a method to pay for additional storage as well as operation and maintenance costs, increasing storage at key reservoirs to regain storage already lost to sedimentation and reducing or eliminating the Corps releases of water from Kansas River reservoirs to support navigation on the Missouri River. This is a practice of marginal benefit to the nation and detrimental to Kansas interests. Actions currently underway to secure, protect and restore reservoir water supply include watershed restoration and protection activities such as streambank stabilization, reallocation of storage and removal of sediment through dredging.

VISION STATEMENT

Vision:

Kansans act on a shared commitment to have the water resources necessary to support the state's social, economic and natural resource needs for current and future generations.

- At every point in the Vision development process, the Water Vision Team has been reminded the key to a reliable, long-term water supply is rooted in every Kansan understanding the importance of the state's water resources.
- The Vision statement calls on every Kansan, as stakeholders, to not only commit to ensuring a reliable water supply but also to act on that commitment.
- The Vision attempts to make clear water is necessary for human health and welfare as well as environmental stewardship and our economic well-being.
- The Vision is also based on the concept that water is not only important for today but also for our future as a state.

Mission:

Provide Kansans with the framework, policy and tools, developed in concert with stakeholders, to manage, secure and protect a reliable, long term statewide water supply while balancing conservation with economic growth.

Since the Vision calls on all Kansans to be committed to their water resources, the state of Kansas is called on in the mission to provide Kansans everything they need to act on that commitment.

GUIDING PRINCIPLES

Following are four guiding principles that directed the development of the Vision document. These guiding principles will continue to serve as precepts for the implementation of the action items.

1. Locally driven solutions have the highest opportunity for long term success. Therefore, the intentional focus of the action items presented in the Vision are to provide the necessary tools and support to allow for greater flexibility and management of water resources at the local level.
2. Policies and programs should not unintentionally penalize those who have already demonstrated good stewardship with the state's water resources.
3. Voluntary, incentive and market-based water conservation and land management activities are the preferred tools for ensuring a reliable statewide water supply.
4. Action is necessary now to ensure a reliable supply into the future.

IMMEDIATE PRIORITY ACTION ITEMS

During the development of the Vision, two action items rose to the top as critical activities necessary to ensure the successful implementation of all other actions in all theme areas. The following action items will be initiated immediately:

1. Improve coordination on water related issues with the state's primary water related agencies through the **creation of the Governor's Water Resources Subcabinet** at the Executive level with additional regular agency collaboration to implement joint activities.
2. Establish a Blue Ribbon Funding Task Force to develop a balanced, affordable and sustainable method to provide financing for water resource management and protection, including alternatives that utilize public and private partnerships.

NEED FOR LEADERSHIP

In order to accomplish the Vision, Mission, Goals and Strategies, leadership is necessary at every step in the process.

The best strategic plans are not likely to be successful if they are not carefully developed and effectively communicated to those with the power to implement them. Implementing the Vision will require leadership and cooperation with stakeholders across the state and the diligence to make the correct choices and wise investments in our state's water resources. Providing a reliable water supply for Kansas will be a big challenge in the years ahead, but if stakeholders work together to implement the strategies and recommendations described in the Vision, future generations of Kansans will have water for tomorrow.

KEYS TO SUCCESS

Keys to successful implementation of the Vision include:

1. Clear definition of the resource conditions and issues.
2. Agreement among the majority of stakeholders on the goals Kansas and its citizens are trying to achieve. The goal setting process in this document calls upon Kansans to meet, discuss and determine the goals for their region. The leadership of the Kansas Water Authority is critical to the development of these goals and must hold stakeholders accountable in meeting them.
3. While goals are important and the appropriate tools need to be readily available, stakeholders need to have the flexibility and freedom to meet the goals and use the tools.
4. Review and evaluate progress toward achieving the Vision in a timely manner to determine if further action is needed.
5. Leadership at the local level is the most critical. Local decision makers must listen to their constituents while at the same time balancing the future needs of their communities.

THEMES AND STRATEGIES TO ACHIEVE THE VISION

This section includes the themes, strategies and action items identified during the vision development process.

EXPLANATION OF SECTION

Following are a series of actions and strategies designed to achieve the vision, mission and regional goals.

The strategies are arranged in four themes:

- Water conservation
- Water management
- Technology and crop varieties and
- Additional sources of supply

Within each theme, three to five specific strategies are identified.

While many strategies are applicable to the whole state, some are specific to one or more distinct regions. Each action item is categorized into one of four applicable regions:

- Statewide
- Ogallala-High Plains Aquifer
- Reservoirs or
- Other Regions

For example, an action item in the Water Management theme recommending assessment of the Kansas River alluvial aquifer is unique to northeast Kansas and is therefore characterized as an “Other Regions Action Item.”

Within each strategy, action items are identified and categorized in Phases according to the priority for implementation.

- Phase I action items are the highest priority and will be initiated, but not necessarily completed, during the first year of this draft of the Vision
- Phase II action items will be initiated within five years
- Phase III action items are longer-term and may require additional research, development and stakeholder coordination before the action item can be initiated

WATER CONSERVATION

- Strategically emphasize information and education regarding the importance of water and water conservation practices
- Implement additional or enhanced water conservation policies and practices
- Reduce barriers and increase development of locally driven conservation and management plans
- Encourage conservation planning in economic development and business recruitment
- Increase adoption of watershed practices that reduce future water supply loss

WATER MANAGEMENT

- Modify reservoir operations and downstream targets to most efficiently operate reservoirs for water supply
- Improve interstate cooperation so that Kansans' water needs are met and protected
- Increase the regionalization of water supply to improve long-term water supply reliability
- Evaluate changes to the Kansas Water Appropriation Act and Rules and Regulations to promote better balance between efficient water use and economic benefit
- Evaluate and improve state agency coordination and collaboration

TECHNOLOGIES AND CROP VARIETIES

- Promote irrigation efficiency technologies
- Increase utilization of less water intensive crop varieties
- Implement research-based technology aimed at better understanding our state's water supply
- Develop career and technical education programming related to water resource management and technology to build the needed workforce

ADDITIONAL SOURCES OF SUPPLY

- Restore water supply lost to sedimentation through dredging and other in-lake sediment management techniques
- Allow for the transfer of water supplies between basins where feasible and cost effective
- Evaluate the sources and potential uses of lower quality water
- Secure all available storage at federal reservoirs including reallocating storage where such actions are possible
- Increase other sources of available storage for water supply