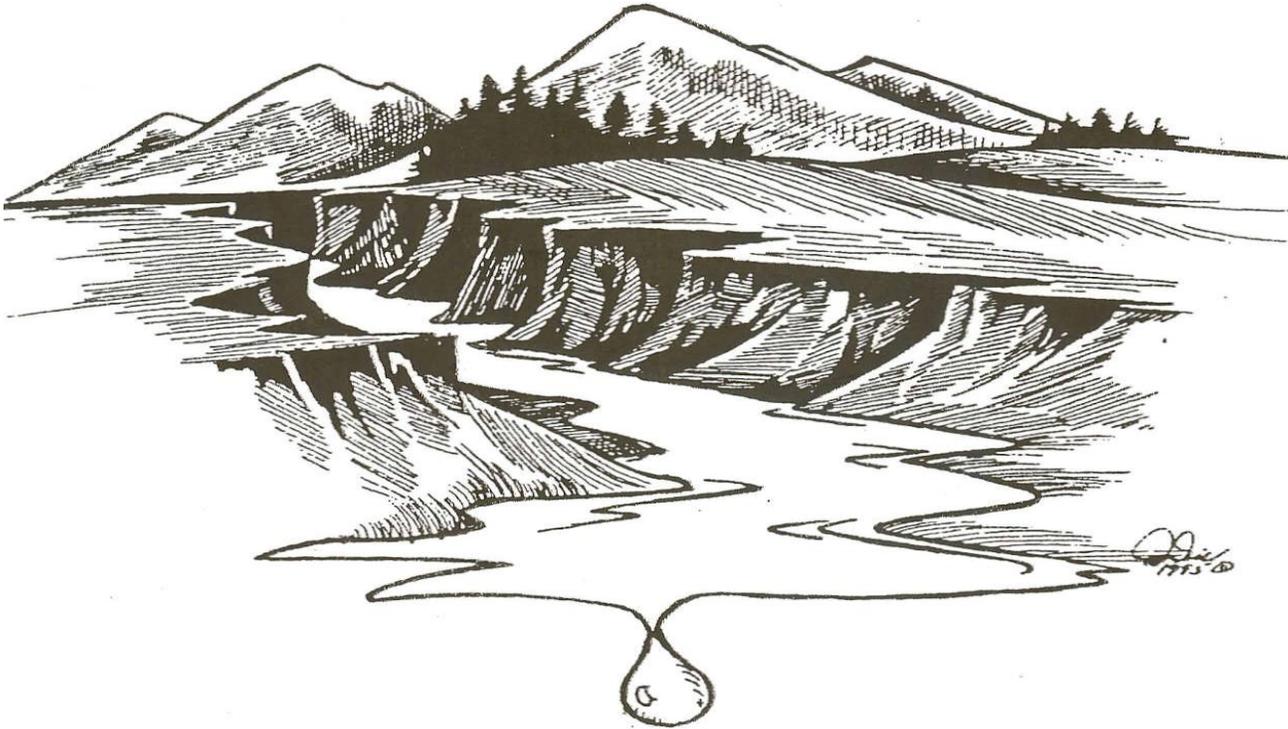


Coordinated *Water Resource* **Management Plan**



**Counties of Cassia, Gooding, Jerome, Lincoln
And Twin Falls**

**MIDDLE SNAKE COORDINATED WATER RESOURCE
MANAGEMENT PLAN**

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ACRONYMS

AFO – Animal Feeding Operation

AIS – Aquatic Invasive Species

BMP - Best Management Practices

CAFO – Concentrated Animal Feeding Operations

CAMP – Comprehensive Aquifer Management Plan

EPA – U.S. Environmental Protection Agency

ESPA – Eastern Snake Plain Aquifer

IDEQ – Idaho Department of Environmental Quality

IDWR – Idaho Department of Water Resources

NASS – National Agricultural Statistic Service

NRCS – Natural Resource Conservation Service

NPDES – National Pollutant Discharge Elimination System

TMDL – Total Maximum Daily Load

USDA – U.S. Department of Agriculture

USGS – U.S. Geological Survey

SUMMARY OF COORDINATED WATER RESOURCE MANAGEMENT PLAN

Following is a summary of the Coordinated Water Resource Management Plan which was adopted by Cassia, Gooding, Jerome, Lincoln, ~~Minidoka~~ and Twin Falls Counties.

PLAN SUMMARY:

Section one is a history of the Middle Snake region. The history also described the geology and archeology of the area starting with the Bonneville flood. **It** also describes the history of the development of the region as well as the customs and culture of the people who settle here.

Section two (revised 2018) is the water quality portion of the plan. This portion of the plan describes water quality problems with the region and then sets forth possible solutions. The water quality section is divided into seven subsections.

Subsection 1:

Lists 15 policy statements. These statements establish policy for the member counties with regard to public water quality concerns. The policies also guide the Middle Snake Regional Water Resource Commission in the performance of its duties as described on pages 67 - 71 in the authorization portion of the planning document.

Subsection 2:

Recognizes that recreation, tourism and fish and wildlife can have a negative impact on the quality of the region's water. The subsection spells out goals, objective and strategies that minimize that impact.

Subsection 3:

Recognizes the potential for the introduction of aquatic invasive species into the waters of the region and steps to be taken to minimize the danger.

Subsection 4:

Recognizes that hydro power impacts water quality by providing still water that traps nutrients and sediments in the region's rivers and streams. Goals, objectives and strategies are listed in this subsection that will minimize the impact of existing hydro power facilities and seeks to prevent the development of new facilities on the Middle Snake.

Subsection 5:

Subsection four recognizes the impact on water quality from private, municipalities and industrial waste treatment systems in the region. Goals, objective and strategies are listed that encourages industries, municipalities and individuals to maximize multiple use of water, implement conservation technologies and the treatment of runoff water.

Subsection 6:

Recognizes the impact of field agriculture, on our region's water resources. Goals, objectives and strategies describe how field agricultural water users can reduce the amount of biological, chemical and physical contaminants entering the waters of the Middle Snake Region through the use of various best management practices (BMP's). This portion of the plan also calls for increased monitoring and better enforcement of existing laws and regulations.

Subsection 7:

Recognizes the impact of animal agriculture on the Regions water resources. Goals, objectives and strategies describe how animal agriculture water users can reduce the amount of biological, chemical and physical contaminants entering the waters of the Middle Snake Region through the use of various best management practices (BMP's) and nutrient management planning. This portion of the plan also calls for increased monitoring and better enforcement of existing laws and regulations.

Subsection 8:

Recognizes the importance of source water protection for cities and other public water systems and offers a way to establish protection through county zoning.

Subsection 9:

Glossary of terms found throughout the water quality portion of the plan.

Section three (revised 20013) is the water quantity portion of the plan. This section describes water quantity concerns within the region for both our above ground and underground water resources and sets forth possible remedies for these public concerns. The water quantity portion of the plan has four subsections.

Subsection 1:

Describes the development of our region's water resources and defines our region's customs and culture with regard to water. The subsection further recognizes that an adequate supply of water is the basis for all customs that have evolved with the region.

Subsection 2:

Lists 15 policy statements. These statements establish policy for the counties within the region allowing them to speak with one voice. The policies also direct the actions of the Middle Snake Regional Water Resource Commission.

Subsection 3:

Recognizes the importance of an adequate supply of water and establishes certain goals, objectives and strategies that promote and protect our region's water resources. The section calls

for the conjunctive management of above ground and underground water sources and promotes increased efficiencies in the use of water. This section also promotes the equitable management of the region's water by recognizing that with water, first in time is first in right. Finally, this section promotes economically neutral solutions for the protection of endangered species.

Subsection 4:

Definition of terms used throughout this portion of the plan.

Section four of the plan (revised 2018) is the economic portion. This section describes the importance, economically, of the region's water resources and establishes an average value for an acre foot of water.

Section five is the implementation portion of the plan. The plan is to be continually reviewed to respond to emerging technologies, changes in water supply and quality, changes in use, and growth trends. The plan is to give direction, with regard to water, to county planning and zoning commissions within the region.

Section six of the plan is the authorization section which established, by agreement of the member counties, a regional commission and an executive committee made up of county commissioners to oversee the work of the commission. The agreement spells out the make-up of the commission and executive committee and outlines the power and duties of each. The agreement also established a budget procedure for the commission and procedures for a county to withdraw from the region or be added to it.

HISTORY SECTION

A HISTORY OF THE MIDDLE SNAKE RIVER by Virginia Ricketts

The Middle Snake River in south-central Idaho is the southernmost part of the great arc that is the route of the Snake River across Idaho. The territory extends from east of Raft River to west of the town of Bliss. The area is part of the Great Snake River Plain and contains six counties that are part of an eight county area called the Magic Valley. The major tributaries of the Snake River in the area are Raft River, Rock Creek, Salmon Falls Creek, Malad River, and Clover Creek. Goose Creek no longer exists but at one time it was also a tributary. Like the Snake River each of these tributaries has its own unusual canyon.

The Snake River and its deep canyon has always divided south-central Idaho into a south side and north side. The two sides of the river are quite different from each other. Providing transportation routes has always been and is still limited because of the Snake River, its canyon, and the adjoining terrain. The uniqueness of the area has resulted in several sites being designated for national recognition and preservation. Its geology, archaeology, and history are unusual. No other area of Idaho shows the dramatic effects of fire and water as does the land bordering the Middle Snake River. The landscape, especially on the north side of the river, is dominated by large buttes and cinder cones that are visual reminders of a time when the area was a fiery furnace. Lava from the many volcanoes and cinder cones created a new terrain on the north side as it slowly crept westward. Lava also pushed the ancient Snake River south to its present course. The earlier locations of the river are marked by springs in the north canyon wall in Hagerman Valley. After the time of the volcanoes wind eroded the lava rock surface and deposited rich soils and sediments. The terrain on the south side is dominated by several mountain ranges although some evidence of volcanoes can also be seen. The south side has deep soils along the Snake River that are in contrast to the shallow soils on the north side.

As a rule geology is a slow subtle process but sometimes it is very visible. Wind and rain usually take centuries to carve a canyon or a rock like the Balanced Rock located on Salmon Falls Creek west of Castleford, the unique rock formations in the city of Rocks in southern Cassia County, and the Little City of Rocks north of Gooding. Then again, geologic changes are sometimes quick and dramatic. The Bonneville flood, for example, is estimated to have occurred about 15,000 years ago when ancient Lake Bonneville broke its boundary at Red Rock Pass south of Preston. An immense volume of water, estimated by geologists to have been many times the average discharge of the Amazon River poured along the Snake River. The gigantic flood surged for weeks scouring all moveable material from its path. The flood poured back into the Snake River canyon along its north wall between Milner and Blue Lakes. It filled the canyon and deepened the many falls. The overflow of water in the canyon carved alcoves along the canyon wall including Devil's Corral, the Shoshone Falls-Deirke's lake Alcove, and the Blue Lakes Alcove. Huge boulders were picked up by the torrent and worn smooth as they were tumbled along. This big stones were deposited along the route of the flood as far away as Hells

Canyon. When the water stopped flowing extensive areas of land on the north side were left without soil and in some places large fields of stones called melon gravel remained to mark the flood's passing. The best known field of melon gravel is probably the one between Bliss and King Hill where a Stinker station has sign once stood that read "Take home a petrified watermelon to your mother-in-law."

The 1993 landslide on Bliss hill is one of the latest examples of geology in action. When the slide first occurred the earth visibly moved downhill carrying everything in its path toward the Snake River. The landslide forever changed the course of the Snake River at that place. Even today the slide continues to move materials downhill.

Several archaeological sites throughout south-central Idaho have made major contributions to the understanding of ancient man. The most significant of several archaeological excavations was at Wilson Butte Cave. The first of two excavations at Wilson Butte Cave was conducted in 1958-59 under the direction of Ruth Gruhn for the Peabody Museum of Harvard University and Idaho State University. The materials and information gleaned from its interior dated man back to about 14,500 b.p. (Years before the present). The cave also revealed the prehistoric camel, bison antiquus, foot high eohippus horse, saber toothed tiger, and the ancient mammoth or elephant that had roamed among trees on a lush grassland. About 7,000 b.p. a change occurred and the desert began to emerge with different animals, cultures, and artifacts. Significant materials have also been obtained from other caves in the area.

In addition to the fossilized Hagerman horse-one has been in the Smithsonian Museum for several decades-the Hagerman Fossil Beds National Monument is a rich repository of many kinds of Pliocene era fossils. Many construction projects, large and small, have revealed other evidence of the archaeological history of south-central Idaho when bones of prehistoric animals and other artifacts have been uncovered.

Recorded history began when the Astorians, an expedition of American and French Canadian fur trappers, ventured into the area in October 1811. John Jacob Astor of New York, a rich fur merchant, sent the party to find a route from the Missouri River to the Pacific Ocean. The exploration led by Wilson Price Hunt lost a boatman and several boats in the rapids of the Snake River downstream from Milner. They were forced to abandon their boats and walk to Fort Astoria at the mouth of the Columbia River. The journey during a hard winter took them four months to complete. To stay alive during the trek they were forced to eat horses, rodents, dogs and what plants they could dig from under the deep snow. Men became ill but surprisingly most of the group completed the trip.

The Astorians were followed by both American and British fur trappers. Alexander Ross brought a large party of trappers over the Sawtooth Mountains and across the Camas Prairie to the Snake River in 1824. Some of his men became ill while camped on a stream near the Snake

River. They named the stream the Riviere Aux Malade or “sickly river” and the name has endured as Malad River.

The Americans and the British Hudson’s Bay Company were competitors for the fur pelts along the streams of the Snake River country. Both the United States and Great Britain wanted to own the area and there was a lot of competition between the fur trappers of each nation. The Hudson’s Bay Company tried to make the Snake River plain a “fur desert” by eliminating all fur bearing animals. They thought the Americans would not want the territory if there were no fur bearing animals. Peter Skene Ogden, mastermind of the fur desert plan, led three expeditions through the region in his attempt to strip it of all pelts. During Ogden’s 1826 expedition his men harvested over 1,000 pelts from the Raft River drainage alone. To help accomplish their goal the Hudson’s Bay Company purchased Fort Hall from Nathaniel Wyeth in 1834 and built the Snake Fort or Fort Boise at the mouth of the Boise River. This gave them virtual control of the Snake River plains for a few years until the huge migration of Americans to the Oregon Country forced the company to retreat northward. The issue was settle in 1846 when the 49” parallel was established by treaty as the boundary between Canada and the United States.

Transportation through the area has always been a challenge especially across the Snake River and its canyon. The first road was opened by the Hudson’s Bay Company on the north side of the Snake River because it was the shortest route to link Fort Hall and Fort Boise. The company had exclusive use of the road until Oregon immigrants began seeking alternate routes from the Main Oregon Trail on the south side of the river. The great migration to the Oregon Country used three routes through the Snake River desert area. The main route of the Oregon Trail on the south side of the Snake River went from The Cedars at Milner to Rock Creek/Stricker, crossed Rock Creek near the Independent Meat Company plant and then followed Rock Creek to the Snake River. There was also a very early trail that closely followed the Snake River and the canyon on the south side. The third route is the Hudson’s Bay Company Road that today is called the North Side Alternate Oregon Trail.

A fourth important emigrant road was the main California Trail which separated from the Oregon Trail at Parting of the Ways at Raft River. It followed Raft River southwest through the unique geological rock formations of City of Rocks. Two sub-routes or cutoffs, the Sublette Cutoff and the Salt Lake Trail, merged with the main California Trail in southern Cassia County to become one road over Granite Pass into the great Nevada desert of the Great Basin. Most of the goldrushers in 1849 and the early California pioneers traveled this route to reach their destination.

The Hagerman Valley was a major camping site on the Oregon Trail. There the travelers decided whether to cross the Snake River to travel the North Side Alternate Road or continue westward across the arid desert to the crossing at Three Island. Ex-fur trappers began operating a ferry at Thousand Springs in the early 1850’s. The ferry made it easier for wagon trains to

cross the Snake River and travel the North Side Alternate Route where grass and water were more plentiful. Thousands traveled through the Snake River country each year during the hottest part of summer turning the trails into rough and dusty thoroughfares.

Some of the most impressive and pristine Oregon Trail remnants in Idaho can be seen in south-central Idaho. Between Devil's Corral and Clover Creek thousands of iron-wheeled vehicles left deep grooves in the rock outcroppings on the North Side Alternate Route. Equally spectacular is the steep Oregon Trail grade beside the Bess Rapids highway which is now a featured interpretive site in the Hagerman Fossil Beds National Monument. The Cedars was a major campsite during the emigrant era and today the Bureau of Land Management endeavors to preserve its historic significance as the Milner Interpretive Site. The Rock Creek-Stricker site south of Hansen is another notable landmark on the Main Oregon Trail. The compaction caused by Thousands of wagons on the deep soil on the Main Oregon Trail across the South Side can also be seen by the observant eye when crops planted on top of the trail wilt on a hot summer afternoon or rain water left after a hard storm stands long after the water off the trail has been absorbed into the ground.

The locations of several emigrant graves are known along the route of the North Side Alternate of the Oregon Trail. Some pioneer North Side farmers found emigrant graves when they first plowed their fields. One farmer left the graves on his land untouched during the decades he owned his farm. The only known graves along the Main Oregon Trail are in the pioneer cemetery at Stricker and at the Rock Creek Canyon crossing near the Independent Meat Company Plant.

When Idaho Territory was established in 1863 the Middle Snake River area was part of three counties. The north side portion became the southernmost part of huge Alturas County while the south side territory was part of Owyhee County. In 1864 Ben Holladay obtained the contract to carry the mail from the railroad in Utah to Walla Walla via the new village of Boise City. Holladay established stage stations along the road he built. His road connected with the North Side Alternate Oregon Trail near Clark's Ferry. The first permanent residents of the area were ferry operators in the Hagerman valley and the people who operated the stage stations Holladay built.

In 1865, a store was built beside the Rock Creek stage station. Large freight wagon trains hauling supplies on the Kelton Road from the railroad at Kelton, Utah to Boise City merged with the stagecoaches traveling the Holladay stage road and the immigrant wagons on the Oregon Trail at Rock Creek where the three trails became the Overland Road. Herman Stricker purchased the Rock Creek store and adjoining property in 1876. For many years the store was the only commercial enterprise between Fort Hall and Boise where travelers could obtain supplies. It also served the local ranchers and miners who bought their supplies, got their mail, and voted there in early elections. Today, the 1865 store and the 1901 Stricker home are owned by the Idaho State Historical Society and co-managed with the Friends of Stricker as one

of the outstanding historic landmarks in south-central Idaho.

In 1866, the Territorial Legislature authorized Thos. Oakley to build a bridge across the Malad Gorge, the first bridge to be built in south-central Idaho. It did not have side-rails and was just wide enough for a wagon or stagecoach to cross. The freight wagons and stagecoaches, and many emigrant wagons, paid the toll to use the bridge because it eliminated the need to ford the Malad River above the head of the gorge.

Miners rushed to the Snake River Canyon in 1870 after fine flour gold was discovered on the gravel bars at Shoshone Falls. The entire stretch of river through south-central Idaho became a hive of hundreds of placer miners. The miners received premium prices for the gold they recovered in the Snake River mines because of the purity of the gold. Best known of the many mining camps that sprang up along the river was Springtown, upstream from the Twin Falls. Soon after the rush began the first post office in the area was established in a town named Shoshone, located on the north canyon wall near the Twin Falls. The Rock Creek (at Stricker) post office began operating in January 1871 after the Shoshone office closed. Chinese miners reworked the mines later. Mining continued on a smaller scale along the river for several decades. Recently, outstanding artifacts have been retrieved from some of the Chinese sites. Some of the earliest water rights in this area date back to those mining claims.

Following the mining rush, people began settling permanently along the Snake River and its tributaries. The first Mormon settlers entered the southern part of Cassia County about the same time. Large cattle ranches were also developed along Raft River and Goose Creek. A.J. Harrell owned several ranches including the Shoe Sole and Point Ranches and his cattle roamed the Great Basin desert from central Nevada to the Snake River. His holdings were purchased by Sparks and Tinnan in 1882. A few years later he repurchased the Shoe Sole and other ranches. One of the round-up sites was in the vicinity of the present-day city of Twin Falls. Henry Schodde was the best known of the North Side cattlemen. Finding markets for the livestock grown in Oregon, Washington and Idaho was a major problem. Throughout the 1870's enormous herds of cattle, sheep, and horses were driven through southern Idaho from Oregon and Washington to stock Wyoming and Montana ranches or to markets in Colorado or the one in Omaha, Nebraska.

Cassia County was formed in 1879 as a result of the increasing population in the eastern part of Owyhee County. Albion, originally named Marsh Basin, was designated the county seat. Four other communities grew large enough to acquire post offices during the 1870's. Oakley's office opened in 1877 followed by Bridge and Cassier, or Raft River Bridge. In the northwest corner of Cassia County the Salmon Falls post office also opened in 1879. The 1870's was the decade of early development but significant growth started in the 1880's.

Construction of the Oregon Short Line Railroad's line created many changes in transportation in southern Idaho. The need for cattle drives from Washington and Oregon and long-haul freighting from the Utah depots was eliminated. Completion of the railroad also forced the stage lines to retreat to shorter local routes. And new communities developed when some of the construction camps became the first towns north of the Snake River. Minidoka was the first railroad town, its post office was established January 7, 1883. It became the railroad terminal that served the eastern part of the area, especially the Cassia County seat at Albion where the Idaho State Normal School was located.

When the railroad construction crews reached the camp of Naples located on the Wood River in February 1883 they stopped their work toward Oregon long enough to build the Wood River Branch Line to Hailey so the ore from the rich mines in the Wood River Valley could be taken to eastern markets. After the branch line was completed the push to Oregon was resumed by the construction crews. Naples officially became Shoshone in March 1883. The railroad company built its shops in Shoshone and for a time the town was larger than Pocatello. Shoshone experienced its first economic reversal in 1887 when the shops and the railroad crews were moved to Glens Ferry. The first newspaper in south-central Idaho, *The Rustler*, began publication in Shoshone in 1883. The following year the *Shoshone Journal* was started and is still in publication.

Toponis and Bliss were the other two railroad camps that became towns during the railroad construction era. N.R. Woodworth was farming at Toponis before the railroad arrived. When the railroad reached the site in 1883 the Toponis post office was opened. That same year Frank R. Gooding moved to Toponis from the Wood River Valley. He began raising bum lambs and in the years that followed expanded his flocks to over 100,000 sheep. He eventually acquired seven ranches and the Toponis townsite. Mr. Gooding also served as governor of Idaho and as a United States Senator. He had a lot of influence during the development of the irrigation projects on the north side. Toponis was renamed Gooding in 1900.

Bliss Hill was already a rendezvous site for miners and cowboys and a small store and saloon were located there before the railroad arrived. It became the railroad shipping point for the Hagerman and Clover Creek areas. Both the Bliss and Toponis post offices opened October 18, 1883.

While some of the railroad camps were becoming towns the tourist industry also began in 1883 when a tent hotel with a post office was set up on the north bank of the Snake River at Shoshone Falls. A rough road connected it with the railroad at Shoshone. It operated for three years before a new frame hotel was built across the Snake River. The new hotel provided accommodations for tourists and vacationers for three decades before it was destroyed by fire.

A notorious gang of horse thieves made Devil's Corral their headquarters while the

railroad was being built. The gang allowed no strangers to come near the Corral. At least one murder was blamed on the outlaws in 1883 when a body was found on a nearby butte giving that landmark the name of Skeleton Butte. In 1908 Devil's Con.al became a wild animal park featuring bears, deer, and other animals for a few years.

Ira Burton Perrine relocated from the Wood River Valley to the Blue Lakes in 1884. He planted thousands of trees on his Blue Lakes Farm. The quality of the fruit from his orchards won gold medals at several world expositions. He carved roads by hand down the canyon wall to provide access to his farm. One of the steep grades he built is still used. Perrine envisioned using water from the Snake River to irrigate the rich desert land around his farm. He worked tirelessly, sometimes against great odds, to see his dream become reality.

The last decade of the nineteenth century was a time of growth and transition for the area. Albion became the education center of south-central Idaho when the Second Idaho State Legislature authorized the town to build a building and start classes for the Albion State Normal School. The college trained teachers for Idaho and surrounding states for six decades before it was closed in 1951.

Alturas County had a lot of power in Idaho Territory. Other areas of the state, especially in the Mountain Home and Ada County areas were jealous of its influence. The jealousy resulted in the division of Alturas County into three smaller counties in 1890. Political and legal battles during the next five years changed the county name of the North Side area for times. First it became part of Logan County. The next legislature abolished Logan County and established a new county named Lincoln County. The Supreme Court found that action unconstitutional and it reverted to Logan County. In 1895 the legislature successfully recreated Lincoln County from the southern part of old Alturas County.

While the political battles were waged, Shoshone became the population and transportation center of south-central Idaho. The sheep and cattle industry developed into the backbone of the area economy after mining collapsed in the Wood River Valley. When the Carey Act was passed by Congress in 1894 the Shoshone Journal editorialized about the effect the legislation could have on Lincoln County.

In 1896 all eyes turned to Albion when several confrontations between cattlemen and sheep-men resulted in the arrest of Diamondfield Jack Davis for killing two sheep-herders. The trial that followed involved the future Governors of two states and a future United States Senator.

Davis spent several years in jail at Albion and twice was spared on the day scheduled for his hanging when riders brought the Governor's Stays of Execution from the railroad at Minidoka. He received eight stays of execution and his case appeared before five parole boards before his sentence was commuted to Life Imprisonment in 1901. He finally was pardoned.

In 1898, as the century drew to a close, United States Senator George Shoup proposed Shoshone Falls and the surrounding area be made into a national park reserve. The following year E. H. Harriman, president of the Union Pacific Railroad Company, brought a large group of scientist to study the Shoshone Falls and canyon area. Every horse-drawn vehicle in the area had to be commandeered to transport the visiting dignitaries.

A few small orchards and fields were being irrigated at the close of the nineteenth century. When the door opened on the new century it brought with it the irrigation era. The swift treacherous Snake River had always been an ominous adversary and barrier to travelers. During the first decade of the twentieth century, the role of the Snake River in south-central Idaho was permanently changed. It remained an obstacle to be overcome but its water became the basic resource to develop and sustain south-central Idaho during the Twentieth century. The orientation of development in south-central Idaho was permanently changed with the advent of irrigation.

Many proposals to build irrigation projects under the provisions of the 1894 Carey Act were made and millions of dollars in private capital were spent to irrigate and transform the great desert plain of the Snake River. Only a few of the irrigation projects were completed. No irrigation project, Carey Act or federal reclamation, was exempt from multiple difficulties. Unforeseen construction complications and legal and financial problems plagued every project.

In July 1900 a Claim of Water Right to 3,000 c.f.s. (cubic feet per second) of the water on each side of the Snake River at the Cedars was filed in the recorders' offices in Lincoln and Cassia counties. In August the water claim was filed with the State, the land was segregated on the south side of the Snake River, and a survey started. The following month the Twin Falls Land & Water Company was formed in Salt Lake City to build the project.

Two obstacles to the project were removed when the Shoshone Falls Park Reserve proposal was canceled in 1901 and a lawsuit over a proposed power plant at Shoshone Falls was settled. Finally, in 1902 Perrine was authorized to establish a permanent camp at the Cedars. Rough desert roads were built on the north side to connect Milner with the railroad. Shoshone and Kimama became the supply depots for the construction materials needed for the new project. The first bridge across the Snake River, a modest suspension structure that spanned the river from bank-to-bank, was built at Milner.

The Twin Falls Land & Water Company was reorganized in January, 1903 with Frank H. Buhl of Sharon, Pennsylvania as the major stockholder. Three months later Buhl and Peter Kimberly formed the Buhl-Kimberly Corporation to finance the development of the Twin Falls project. At the same time actual construction of Milner Dam and the Twin Falls canal was started. The first telephone line connecting Shoshone with Milner, Shoshone Falls, and Blue Lakes was completed and Perrine installed a ferry on the Snake River at Blue Lakes.

When the first Carey Act land drawing for the Twin Falls project was held for 60,000 acres in July 1903 in Shoshone only 57 applicants attended. Another drawing held in October 1904 was better advertised and more successful.

In 1904 the Twin Falls town site was selected and the Twin Falls Townsite Company organized to oversee its development. The plan for Twin Falls became a blueprint for other irrigation company towns in the area. A professional planner was hired to design Twin Falls and Buhl. A water system was installed using water lifted to a storage tank from Rock Creek. Parks, the civic center, and a company hotel were included in the plans. The Blue Lakes and Shoshone

falls ferries were kept busy transporting across the Snake River all the materials that were freighted from the railroad at Shoshone to build Twin Falls and the nearby towns. Newspaper accounts relate that on some days as many as fifty wagon freight trains traveled the Shoshone Falls Road to cross the river at Shoshone Falls. Bids were opened to build a large company hotel in the center of town. The post office was opened, and the Twin Falls News began publication. Cassia County commissioners also formed the Twin Falls election precinct and road district.

A lot was accomplished on the Twin Falls project in 1905. A brick kiln near the center of Twin Falls provided building material for many of the first business blocks and some homes. When the gates were closed at Milner Dam in March, people went to Shoshone Falls in hopes of scooping up gold in the dry bed of the Snake River. The Minidoka and Southwestern Railroad reached Twin Falls and in December people gathered around the Perrine Hotel to admire the big modern luxury hotel standing in the middle of the desert with electric lights ablaze.

Other south side towns started soon after Twin Falls. Kimberly started in 1904 and Filer in 1905. The Twin Falls Townsite Company laid out the town site of Buhl in 1905. A water system was installed and construction of the Buhl Hotel started. The Buhl town opening was in April 1906. The railroad reached Buhl in 1907. Frank H. Buhl donated a city block and \$25,000, half the cost, for the large brick F. H. Buhl school that was built in 1908. Castleford had its start when another Carey Act project, the Ferguson Fruit and Land Co. was organized to develop and sell five acre tracts of land that had been planted to apple trees.

The Bureau of Reclamation was established by Congress in 1902. While the fledgling Twin Falls project was being started under the provisions of the Carey Act, funding for the Minidoka Project, the second reclamation project in the nation was authorized by Congress. \$2,600,000 was allocated in 1904 for construction of the Minidoka Dam, and work started on the Minidoka Dam in September of that year. Settlers began arriving on the project that same year to find sagebrush desert with the dam and canal system years from completion. Most of the men worked on construction while the women cared for the family and livestock. The first water was turned into the Minidoka North Side canal in 1907 and the Minidoka Dam was completed in 1909.

By 1909 some of the money authorized to build the Minidoka South Side division had been reallocated to other reclamation projects leaving only enough for completion of the pumps and lift stations. The Bureau contemplated dropping the Minidoka South Side unit even though many settlers were already on the land. To complicate matters the time was approaching when the Bureau's filing for the South Side water would lapse. The South Side Minidoka Water Users Association was formed by the Settler and in an agreement with the government was authorized to build the South Side canals. The Association discovered there were only about ninety days to build the canals and make beneficial proof. About ninety miles of canal were completed in the ninety days so enough water could be turned into the system and proof made. The entire project was paid for with certificates of credit which became the medium of exchange for a while. Later the government redeemed the certificates at par.

Two Secretaries of the Interior and an ex-president visited the Minidoka Project: Secretary James R. Garfield, son of President James a. Garfield, inspected the project in July 1908 and in September 19]] Secretary Walter L. Fisher came to personally see the progress of the project. Ex-President Taft visited the project build during his administration.

The Bureau planned three government towns for the Minidoka project: Rupert, Riverton (renamed Heyburn), and Acequia. By the time Bureau engineers platted the Rupert town site several business buildings had already been constructed around the town square. Considered squatters by the government and facing possible sale of the property where their buildings stood the businessmen petitioned Congress in 1906 to be allowed to purchase the lots. Congress responded by passing a special act granting their petition. Rupert was incorporated in April 1906.

Across the river on the Minidoka South Side, L. B. Perrine and associates held a town drawing for their new town of Burley on May 1, 1905. The Burley drawing was a festive event with special excursion trains bringing people from Utah and across south Idaho.

The Idaho Irrigation Company began construction of the canals on its Carey Act project north and east of Shoshone in June 1906. The project was designed to irrigate 200,000 acres of land with water from the Big Wood River, Little Wood River, and Fish Creek. The company's first land drawing and town opening was held at Alberta in June 1907. Alberta became Richfield after new owners acquired the company in 1908. The construction of Magic Dam was completed in 1910. In a court case heard by United States Judge Frank S. Dietrich, the Idaho Irrigation Company project was limited to 65,000 acres until enough water could be found for more land. Judge Dietrich's decision was upheld by the United States Supreme Court in 1922. The project was enlarged when the United States Bureau of Reclamation built the Milner-Gooding Canal in 1927 to carry water to the Dietrich, North Shoshone, and Gooding areas.

The North Side project started in 1907 when W.S. Kuhn, and his brother J. S. Kuhn

of Pittsburgh, Pennsylvania acquired the Milner town site and all the rights to develop an irrigation projects in the southern part of Lincoln County from the Buhl interests. An agreement was also made at that time designating the proportional ownership and maintenance responsibility of Milner Dam by the North Side and South Side companies. The Twin Falls North Side Land and Water Company was organized to build the new project. Other companies were formed by the Kuhn's to set up towns, build a railroad, distribute electricity from the Shoshone Falls power plant, start banks and operate a telephone company.

Expositions showcasing products from the Twin Falls Tract were held in Chicago to promote the new development on the North Side. Developing markets for the crops grown in south-central Idaho was a major problem. Construction of the Kuhn projects provided the twin Falls Tract farmers the markets for their hay and grain, a necessity for the success of the Twin Falls effort. The hundreds of men and horses needed for the construction crews also provided a source of supplemental income for the new settlers.

The first land drawing and Milner town site sale was held on April 22, 1907. **In** June 1907 the town sites of Jerome, Wendel and Hillsdale were selected. Both Jerome and Wendel were named for sons of Kuhn. A second "L" was added to Wendell after it was founded. The Kuhn's developed Jerome as a model irrigation company town with electricity, a water system and a modern hotel. Its opening was held on September 30, 1907. The second land drawing for the North Side project was held the following day. Thousands attended and it was the largest of all the drawings held. The Jerome State Bank received about \$2,000,000 for 60,000 acres sold during the first week after the drawing. The Kuhn's Idaho Southern Railroad reached Jerome on January 1, 1909 connecting the town with the Union Pacific Railroad at Gooding. **In** 1911 the Oregon Short Line Railroad Company completed construction of its Rupert-Bliss Cutoff.

Both the Twin Falls project and the North Side system had water seepage problems. The soil was so fine and deep on the Twin Falls project it held the irrigation water resulting in large bogs. To solve the problem the Twin Falls Canal Company constructed an underground tile drainage system. The problem for the North Side canal was just the opposite. When the first water entered the canal at Milner in 1908 it disappeared into the underground aquifer. The North Side canal could not hold water. The seepage created a new lake at Devil's Corral. The flow of Alpheus Creek increased so much that several buildings along its banks at the Blue Lakes Farm were undermined and sank. New springs were created along the canyon and the flow of others was increased. To control the seepage concrete liners were placed in the canal. The North Side Canal Company continues to cope with the porous rock that underlies its canal system.

The success of the North Side project depended on reliable storage. The seepage problem caused the company to abandon the three storage reservoirs included in the original project plans. Later the developers were forced by the state to construct the Jerome Reservoir to store water

for the Second and Third Segregation. Like the canal the reservoir could not hold water and it had to be abandoned. An agreement was then made with the federal government for storage at Jackson, Wyoming. In 1910 the temporary dam at Jackson sprang a leak and work stopped on the enlarged replacement dam when the Twin Falls North side Land and Water Company could not make its preconstruction payments to the Bureau of Reclamation. The Kuhn's were forced into receivership in 1913. Their failure affected several irrigation projects, railroads, most of the power plants on the Snake River, towns, large modern hotels, and a telephone company. The failure imperiled the status of the entire area.

In Minneapolis a Bondholders Protective Committee was formed. The committee provided additional financing and sent Russell E. Shepherd to supervise the continuation of the North Side project. Contract adjustments were made for the settlers so they could complete their water contracts. The Bondholders also prepaid the cost of rebuilding the dam at Jackson so construction could begin on that important part of the project. The irrigation water supply began to stabilize in 1927 after the formation of the American Falls Reservoir District and the construction of the American Falls Dam.

Two other Carey Act projects were initiated by the Kuhn's: the Twin Falls Salmon River project and the Twin Falls Oakley Project. The Salmon River project was originally planned to place nearly 128,000 acres of land under irrigation at a construction cost of \$3,000,000. A large concrete dam was built in the canyon west of Rogerson and the towns of Hollister, Rogerson Amsterdam, and Berger started. From the beginning the project was embroiled in legal action because of the lack of water and the financial failure of the eastern capitalists. The settlers company, the Salmon River Canal Company, took over management of the project in 1924 and today about 35,000 acres are irrigated by the canal system. Three grain elevators still stand on the Salmon Tract as a testimonial to the hopes of the pioneers on this project.

Small dams and irrigation diversions had been placed in Goose Creek by the first settlers. The Kuhn's formed the Twin Falls Oakley Land and Water Company in 1909 and built the Oakley project to reclaim 43,893 acres. The Oakley Dam was the largest earth dam in the world at the time of completion. After the Kuhn failure a committee of bondholders took over the project. The lack of sufficient water cased the project acreage to be reduced to about 21,000 acres managed by the Oakley Canal Company.

Several other Carey Act projects for south-central Idaho were initiated with the State Land Board but either failed or were never started. Most notable of the projects was the Bruneau project which was proposed three times, first in 1908 and the last time in 1932 as the last Carey Act project proposal in the state.

One Desert Land Act project was started by the Deep Creek Irrigation Company. The company built two dams and a canal system between Amsterdam and Hollister in 1906 after

filing for 5,000 acres under the Desert Land Act. The project was surrounded by the Salmon River Canal system. Several thousand fruit trees were planted but lack of water caused the project to fail.

In spite of the many problems and short water supplies the farmers were able to successfully add new crops to the alfalfa hay and grain they had planted first. Sugar beets were introduced and the construction of the Burley sugar factory in 1912 made it possible to use the beets for sugar instead of livestock feed. The factories at Paul and Twin Falls followed the Burley plant. The D. N. Ferry Company contracted 150 acres of dry beans in 1913. The Bean Growers Association was formed in 1921 to market Idaho beans, especially the Idaho Great Northern Bean. To supplement their incomes most farm families depended on selling or trading milk and eggs in town for their groceries and other needs.

From the beginning, schools had high priority with all the pioneers. There was a school at Albion in 1875. The school at Bliss was started in a huge tent used by railroad construction crews. Some classes were first started in homes or empty business blocks but the goal was to provide a substantial and imposing structure as a fitting educational facility and a symbol of permanency for the community. Buildings were built by community subscription or with money donated by developers. The school buildings also served as community centers. The Idaho State School for the Deaf and Blind began operating in 1910 on land furnished by Governor Frank R. Gooding. Not content with elementary and secondary education the people of south-central Idaho have supported higher education since the start of the Idaho State Normal School at Albion. The Methodists opened Gooding College in 1916 on land donated by Governor Gooding on the south edge of Gooding. After Gooding College closed in 1938 the State of Idaho acquired the property and used it for the Idaho State tuberculosis Hospital. The College of Southern Idaho opened in Twin Falls, in 1964.

World War I was a time of shortages and hardships. Concern for the soldiers was on everyone's mind as the area worked to fulfill quotas of sewing and Liberty bonds. The women gathered in Red Cross sewing groups where they knitted stockings, mufflers, and sweaters, and rolled bandages to fill their quotas for the war effort. There were shortages of all kinds, especially coal. Christmas in 1917 was especially bleak: eighty-seven men had left in one group for military duty and their leaving overshadowed and subdued the traditional decorations and celebration. Sorrow was a constant companion as each issue of the newspapers related the toll from casualties and the dreaded influenza epidemic. Some towns had privately operated hospitals but most towns turned vacant rooms or lodge halls into make-shift hospitals during the epidemic. The Twin Falls county Hospital opened in June 1918. The Gooding Hospital started operating on November 16, 1918. Efforts by Jerome and Wendell after World War I resulted in the Sisters of St. Benedict acquiring the Wendell Inn in 1922 and operating it as St. Valentine's Hospital until St. Benedict's Hospital opened in Jerome in 1952.

After World War I many of the women's Red Cross sewing groups organized as community clubs. They devoted their energies to projects to benefit their local communities and schools. Many also became members of the Idaho Federation of Women's Clubs, a strong political force that worked on many statewide issues including welfare, health care, good roads, and especially supporting Idaho products and businesses.

An extended drought began during World War 1 and a financial panic also started during the war that became a recurring cycle of economic depressions. More banks failed in south-central Idaho during the early 1920's than during the Great Depression.

Rapid growth on the Twin Falls tract resulted in the division of Cassia County and creation of Twin Falls County in 1907. When Gooding and Minidoka counties were formed from Lincoln County in 1913 Wendell made an unsuccessful attempt to have the unfinished Wendell Inn used for the Gooding County courthouse but Governor Gooding prevailed and Gooding became the county seat. Rupert was named the Minidoka County seat. Lincoln County was divided for the last time in 1919 when Jerome County was formed. Also, Burley became the Cassia County seat in 1919.

The rough dusty historic trails were used to meet the region's transportation needs until better roads were needed for automobiles. After World War I the old trails began to give way to better roads and the ferries were replaced by bridges. Construction began in 1922 on the Gooding-Rupert segment of the North Side State Highway which is also known as the Boise-Yellowstone Route. License plates from across the nation appeared on the streets of the towns and in the new auto camps. Construction of U.S. Highway 30, known as the Oregon Trail Highway, followed. As local highways joined each other the north-south highway connecting Canada with Mexico slowly evolved into U.S. 93. It was completed on the north side in the mid 1950's. Construction began in the 1960's on Interstate 80/84, the last major highway to be constructed in the area.

For many decades south-central Idaho had to depend on ferries for passage across the Snake River until bridges could be built. At least twenty ferries operated on the Middle Snake River at one time or another as cross-river link for the roads and trails. The Blue Lakes Bridge was opened by Perrine in 1911 and one at Clear Lakes opened in 1912. The Murtaugh Bridge, and first toll-free bridge, was completed in 1917. The Hansen Bridge, completed in 1919, was the first structure to span the canyon rims. Owsleys Bridge was opened in 1921 and in 1926 work started on the Twin Falls-Jerome Inter-county Bridge. Nine months later it opened as a toll bridge. It was the highest cantilever bridge for its length in the world. Renamed the Perrine Memorial Bridge it was later purchased by the state and the toll removed.

Fish farming was pioneered by Alpha Kinsey in 1909 when he started a small operation

at Devil' s Corral. Later he started another one at Shoshone Falls. Other small fish farms followed along the Snake River during the next two decades. The modern commercial aquaculture industry had its start in 1928 when the Snake River Trout Company began operating at Clear Lakes. The constant water temperature from the springs fed by the North Side aquifer made it possible for the early fish farms to evolve into an important aqua-culture industry. About ninety percent of the trout sold commercially in the world came from the local area in the 1960's. A National Fish Hatchery was build south of Hagerman in 1933 and an Idaho State Fish Hatchery opened near the federal operation in 1947.

There was some growth in the 1930's in spite of the drought and depression. Civilian Conservation Corps camps were opened in several places. Among the Public Works Administration projects completed were schoolhouses, courthouses, and the Idaho State Bird Farm.

Sun Valley was opened by the Union Pacific Railroad in 1936. Special ski train carrying movie stars and other notables went through Shoshone on the way to the new ski resort.

When Sun Valley was used as a naval hospital during World War II the trains carried wounded sailors to the resort.

A wholesale exodus of men and women to the armed services or war plants occurred during World War II. The area coped with labor shortages, rationing, and blackouts. In 1942 the Minidoka War Relocation Center was built in the desert north of Eden at Hunt to hold ten thousand Japanese detainees. The Japanese from Hunt and the German prisoners of war from the military camp near Paul are credited with providing the manpower that saved the local crops from 1942-1945. In 1946, after the Hunt Relocation Center closed, the relocation land was transferred to the Bureau of Reclamation and opened to farming.

Farm technology began a process of continuing evolution after World War II. More and more sophisticated machinery replaced the horse and first tractors. The hand work required to raise hay, beets, and potatoes gave way to mechanized equipment. Large irrigation wells began tapping the aquifer. Gated pipe, siphon tubes, hand-set sprinkler lines, and high-tech circular sprinklers have nearly made the irrigation shovel obsolete. The combination of controlled sprinkler irrigation and sophisticated machinery has made potatoes one of the important crops for

the area. Technology has also caused the humble potato cellar to be replaced by controlled temperature storage units. Hay, grain, beets and beans continue to be significant crops.

Since the beginning of the irrigation projects dairying has been an important part of the economy. There was a time when milk cans lined country roads waiting to be transported to the creamery by milk truck. That scene vanished with the arrival of Grade A dairy regulations. Today, the family herd of cows has been replaced by high-tech dairies that milk thousands of

cows daily. The dairies and cattle feeding operations provide a ready market for the high quality alfalfa hay grown in the valley. Beans, beets, and grain are still important basic crops in the farming rotation cycle. The final land drawings were held in 1956 and 1957 for the A & B Irrigation District, a deep well irrigation project on the Jerome-Minidoka county line. Hundreds of thousands of acres of land in south-central Idaho are irrigated with water from the Snake River and its tributaries. The Twin Falls and North Side systems each deliver water to 150,000 acres.

Manufacturing in the area was pioneered by the flour mills, milk processing plants, and beet factories. The modern potato processing industry started when a potato dehydration plant began operating in 1946. Other manufactured products have included hosiery, windows, boxes, and plastic products.

Tourism and recreation have developed as the newest industry. Hundreds of people enjoy the area's many golf courses. People from around the world visit the myriad scenic and historic sites.

History in south-central Idaho, both prehistoric and modern, centers around the Snake River and its tributaries. The economy, the towns and communities, electricity, manufacturing and industry, and agriculture are dependent on the Snake River for continued existence. The collapse of any portion of the foundation of the structure that has been built would be disastrous. The periodic drought cycles serve as reminders that without water the entire region could, probably would, quickly revert to the original great sagebrush covered desert of the Snake River Plains.

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WATER QUALITY SECTION
(Revised 2018)

PREFACE

The Middle Snake River Study Group (1989-1991) was a joint effort among the counties of Gooding, Jerome, Lincoln and Twin Falls to address water quality problems with all surface water in the Middle Snake River Region. The planning document now known as the Coordinated Water Resource Management Plan has been adopted by Gooding, Jerome, Lincoln, Twin Falls and Cassia counties. The plan also authorized the establishment of the Middle Snake Regional Water Resource Commission. The Commission's duties and responsibilities are set forth in the authorization section of this document. The plan was expanded to include a section on the history of the region and a section on water quantity in 1995. The economic portion of the plan was added in 1996. Ground water quality was incorporated into the plan in 2002. All sections of the plan are reviewed and updated on a regular basis.

Ground water issues were addressed by the Middle Snake Regional Water Resource Commission in 1995 when groundwater problems first became apparent in Gooding and Lincoln counties and continue throughout the region to this day. Between 1995 and 2001 additional ground water quality data was collected by the USGS to facilitate the incorporation of ground water quality into the Coordinated Water Resource Management Plan.

The Idaho Department of Environmental Quality (IDEQ) currently recognizes three areas in our 5 county region as Nitrate priority areas within the state. Ranking of priority areas are updated every five years by IDEQ and were last updated in 2014. A map of each priority area can be found under the IDEQ web site by searching on nitrate priority area delineations. The Marsh Creek area in Cassia County is currently ranked as the highest priority in the state. Others are a large area in Twin Falls County (ranked 21) and near Bliss in Gooding County (ranked 32). Ground water in these areas typically are slow moving, have high water tables and/or are located under fractured basalt. This makes them highly susceptible to contamination through leaching of nitrates as well as other biological, chemical and physical contaminants. Extreme caution must be taken when considering new or expanding land uses within these areas of concern.

Planning Area:

The plan encompasses all surface and ground water resources in and running through the counties of Cassia, Gooding, Jerome, Lincoln, and Twin Falls. All five counties are located in South Central Idaho and four of the five counties border the Middle Snake River. Lincoln County, while not bordering the river, is an integral participant because of agricultural return flows, the interaction of the aquifer and the Little and Big Wood Rivers which are major tributaries to the Middle Snake. The five county region contains about 5,100 square miles and has a population of nearly 146,200.

Situation:

The planning area is part of the Snake River Basin located in south central Idaho. The Middle Snake River region, in our definition, includes all surface water and the underlying aquifers. The region's water is impacted by:

- Recreation, tourism, fish and wildlife
- Aquatic invasive species
- Private, municipal, industrial uses

- Hydroelectric development
- Agricultural uses
- Recharge
- Cloud seeding
- Climate change
- Federal mandates and court decisions
- The Idaho Nuclear Laboratory (INL)

Recreation and tourism:

Recreation and Tourism is increasing along the Middle Snake River corridor. More people are moving to the area because of job opportunities and retirement. Local communities along with regional and state agencies are also doing a better job of promoting the areas many tourist and recreational opportunities. As more people move into or visit the region, there will be increased pressure on existing accesses to the region's water ways.

Aquatic invasive species:

Aquatic invasive species (AIS) are plants and animals that are dependent on aquatic and riparian ecosystems. Introduction and uncontrolled spread of AIS play havoc with native fish and ecological communities as well as recreation, irrigation and power generation. With more water users come more opportunities for the introduction and spread of AIS in our region's waterways.

Hydro power:

Relatively inexpensive hydro power has been a major player in building the regional economy. It has helped to make the desert bloom and bring manufacturing and other jobs to the area. With only five remaining rapids in the Middle Snake River, hydro power on this section of the river is considered to be fully developed under current technology. Opportunities do exist, however, for off- site systems using tributary streams, springs and canals.

Irrigated agriculture:

As with the rest of the nation, there has been a slow, but steady decline of irrigated agriculture land caused by urbanization. Approximately 857,000 acres are irrigated with water from the Snake River, its tributaries, and deep wells in the planning area. Improper farming practices can impact both our underground and above ground water resources through leaching and runoff of nitrogen and phosphorus, however, agricultural land owners including those who utilize manure received from CAFO operators are not required to have nutrient management plans in Idaho.

Concentrated animal feeding operation (CAFO):

Many large dairies, feedlots and aquaculture facilities are located in the five-county area. These operations typically include feed yards and waste water lagoons which, if constructed or maintained improperly, can increase nutrient loads to both surface and ground water resources within the region. A second and possibly more important risk for increased nutrient loading is the improper application of manure to agricultural land. All CAFO operations are required to have nutrient management plans for the application of livestock waste.

Non-irrigated agriculture:

Non-irrigated agriculture land includes livestock grazing and dry land farming. These uses may also contribute to the degradation of the regions above ground and underground water resources. Poor dry land farming practices can increase the risk of erosion causing nutrient and chemical bearing sediment to enter rivers and streams while livestock can damage stream banks causing erosion and runoff problems.

Private, industrial and municipal waste treatment:

Point source dischargers requiring NPDES permits include cities such as Jerome, Buhl, Filer, Twin Falls, Hagerman, Hansen, Gooding, Burley, Richfield and Shoshone. In addition to the above cities who have NPDES permits the following cities have either lagoons with land application or total containment: Albion, Hazelton, Eden, Castleford, Wendell, Declo, Murtaugh and Dietrich. In addition to the municipalities there are several private and industrial waste water treatment facilities within the region.

The Problem:

The Middle Snake River was considered by many as a working river since development began to occur in the early 1900's. Residents and public officials discovered, however, in the late 1980's and early 90's that we were overworking the river. Studies, at the time, indicated the river no longer had the ability to clean itself through flushing flows (can only occur during high water years) unless accompanied by large reductions in nutrient, chemical and sediment loading. For this reason Total Maximum Daily Loads (TMDL's) were established on this portion of the river by the watershed advisory groups and the Idaho Department of Environmental Quality as directed by the Clean Water Act.

Monitoring continues to show increasing nutrient loads in some parts of the region's ground and surface water supply. Nitrates, phosphorus, pharmaceuticals, feed additives and pesticides are potential problems which can affect both ground and surface water in the region.

The problems with the water quality of the Middle Snake area extend beyond the individual county borders, a multi-county approach. By combining their efforts, counties can ensure that the needs of each county can be met without creating unequal hardships. A locally developed plan has the advantage of local input and control of solutions, which recognize the economic, social and environmental needs of the local community. If a community understands the need to protect the resource they are more willing to cooperate and even compete to be part of the solution.

One Answer to pollution is dilution and three events since 2010 may, with proper safeguards, increase the water supply to the Eastern Snake Plain Aquifer (ESPA). In 2010 the Comprehensive Aquifer Management Plan for the ESPA was adopted by the state legislature. The plan calls for aquifer recharge, ground and surface water conversions and other demand reduction strategies. In 2015 a landmark settlement agreement between irrigation pumpers on the ESPA and canal companies called for reduction of pumping with the intent of restoring the ESPA ground water levels to the 1991-2001 average by 2025. The latest event in 2016 was the Director of the Idaho Department of Water Resources designating the ESPA and its tributary basins as a "ground water management area" broadening the power of the Director to more effectively address the declines in the ESPA.

POLICY STATEMENTS

The following policies are intended to clarify the intent of Cassia, Gooding, Jerome, Lincoln and Twin Falls counties as the means of dealing with current and future events influencing water quality in the Middle Snake region.

IT SHALL BE THE POLICY OF CASSIA, GOODING, JEROME, LINCOLN AND TWIN FALLS COUNTIES TO:

1. Recognize that safe drinking water is essential to economic growth and the wellbeing of each citizen in the region. Each county will take all steps necessary to protect its drinking water supply from threats within or outside its borders and the borders of this region.
2. When necessary, adopt ordinances and encourage regulation to implement technologies which will preserve or improve water quality.
3. Work actively to ensure a coordinated effort among federal, state and local government agencies in the implementation and evaluation of the Coordinated Water Resource Management Plan for the Middle Snake Region.
4. Nuclear fuels and radioactive waste shall not be utilized or stored within the counties of the Middle Snake Regional Water Resource Commission
5. Oppose shipments of radioactive waste to the Idaho Nuclear laboratory (INL) for study or and long term storage until the requirements outlined in the 1995 settlement agreement between the state of Idaho and the U.S. Department of Energy have been satisfied.
6. Promote sharing the burden of preserving and improving water quality and provide education on the importance of water quality as well as direction for community efforts to improve the general condition of the waters in the region. Clubs, schools, civic organizations, industries, elected officials and individual citizens can play an important role in improving the region's water resources for all to use and enjoy.
7. Encourage the preservation of existing filtration ponds and develop additional filtration ponds in the Middle Snake Region. filtration_ponds_are effective in removing chemical, physical and biological contaminants from return flows and provide valuable wildlife habitat.
8. Discourage development in the region which will negatively impact the quality or quantity of the region's water resources.
9. Support research and development of possible economic uses for contaminants or potential contaminants.

10. Initiate efforts on a state and local level which will create financial and other incentives for water users to both conserve and improve the quality of the region's water resources.
11. Maintain existing free-flowing stretches of the Middle Snake River to enhance water quality and support recreation and fish and wildlife values.
12. Discontinue use of unlicensed injection wells.
13. Encourage and support the development of new technology including Best Management Practices (BMPs) which will reduce contamination of the waters in the region.
14. Facilitate planning efforts with agencies and upstream and downstream water users with regard to water quality and quantity issues.
15. Encourage federal, state and local agencies to insure the accuracy and uniformity of compliance data and, after analyzing all available water quality data, to issue written summary reports to the public.

RECREATION, TOURISM, FISH AND WILDLIFE SITUATION STATEMENT

The Middle Snake River and its tributary streams and springs are important to the public as a recreational and aesthetic resource. Currently, the condition of the river, because of maximum daily load limits for various contaminants, has improved, but there is still much to be done to maximize its recreational potential. Tourism can be an important source of income to the region and the number of visitors spending time in the region can be somewhat dependent on water quality.

Use of the region's water resources for recreation and tourism may also contribute to water quality degradation if the area is not developed utilizing a plan which addresses this concern. Sediment levels in the tributaries and direct runoff into rivers and streams can increase due to increased use of unimproved river accesses. Water quality enhancement improvements to existing recreational facilities and the development of water quality neutral new and expanded facilities are encouraged.

GOAL A: Improve the water quality of the region's water resources to enhance fish and wildlife habitat, increase recreation opportunities and increase the potential for tourism.

OBJECTIVE A01: Create additional recreational access to spread the use. Maintain current and future accesses to reduce the potential for erosion.

STRATEGIES:

- A01.a Seek both public and private means of developing new multiple use accesses to the region's water resources which minimize the potential for erosion and contaminants from entering water ways.
- A01.b Ensure proper maintenance of accesses to prevent erosion.
- A01.c If a current river access is deemed to be undesirable, the access should be closed or restrictions imposed on its use. Corrective action should be taken to improve recreational opportunities.
- A01.d Discourage the development of recreation and tourism opportunities along the waters of the region which increase the potential for water quality degradation.

OBJECTIVE A02: Increase public awareness of the water quality situation in the region.

STRATEGIES:

- A02.a Utilize current information centers to focus public attention on all aspects of water usage and water quality in the region.
- A02.b Continue to develop educational materials which will emphasize all aspects of water uses in the region as related to water quality. Videos, newsletters, and pamphlets could be used to disseminate the

information. Dissemination of the information will become a responsibility of local, state, and federal agencies and organizations.

AQUATIC INVASIVE SPECIES (AIS)

Overall values associated with aquatic resources demand actions to protect this resource for the public good. The region must be particularly vigilant concerning the introduction of aquatic invasive species (AIS) because of the costly impact to our agriculture and aquaculture industries as both are dependent on a quality supply of water. Boating and fishing opportunities within the region attract enthusiasts from all parts of the nation and coupled with our growing population, who are also mobile in their aquatic recreational pursuits, pose a real threat of introducing AIS to the region. Home and business owners with aquariums and fish ponds, most times unknowingly, may also be responsible for the introduction of AIS.

GOAL A: Member counties to work with each other, the Idaho Department of Agriculture and others to prevent the introduction and spread of (AIS) into the waters of the region.

OBJECTIVE A01: Educate the public, local governments and other elected officials on the threat posed by AIS and measures to prevent the introduction and spread of AIS throughout the region.

STRATEGIES:

- A01.a Aid in the development of a comprehensive education program to raise awareness of AIS introduction and spread for counties and law enforcement.
- A01.b Help provide information on AIS to managers of fishing tournaments and various sportsmen and recreational groups.
- A01.c Work with other agencies to develop and maintain advertisements, public service announcements, designing programs and other methods of communication with the public to raise awareness of AIS threats and the need for personal actions such as cleaning fishing and boating equipment
- A01.d Promote the development of boat cleaning stations at the regions recreation areas.

HYDRO POWER SITUATION STATEMENT

The Middle Snake River has been highly developed as a source of hydro power. This resource has been instrumental in the development of this region. In addition to clean, economical power, hydro power has increased recreation opportunities including boating, fishing, and camping.

While hydro power development has been highly beneficial to the region, it has also reduced the amount of wetlands; adversely altered fish and wildlife habitat; lowered oxygen levels in the water; reduced the natural cleansing ability of the river; and raised the temperature of water in many portions of the river. Recent technology in hydro power, such as low head systems and co-generation plants, has compounded water quality problems associated with hydro power production. Dams and diversions have eliminated long, free-flowing stretches of the river, affecting fish migration patterns which are essential for the reproduction of several species.

GOAL A: Limit the development of hydro power facilities on the Middle Snake River.

OBJECTIVE A01: Allow no development of hydro power facilities on the Middle Snake River which will eliminate the remaining free-flowing reaches of the river or which will contribute to water quality degradation.

STRATEGIES:

A01.a Ensure that modifications to existing hydro power facilities have no negative impact to water quality.

A01.b Maintain current wetland habitat or mitigate to compensate for loss of habitat.

GOAL B: Encourage the development and implementation of new technology which will reduce or eliminate the negative impacts of current facilities on the Middle Snake and its tributaries.

OBJECTIVE B01: Encourage adoption of new technologies (related to water quality) to be incorporated into existing facilities at the time of re-licensing.

STRATEGIES:

B01.a Maintain current storage capabilities by reducing sediment loading in impounds. Reduce erosion and solids entering the river which are responsible for reducing the capacity of impounds.

B01.b Investigate the feasibility of dredging sediment from impounds to increase storage capacity in the existing system.

PRIVATE, MUNICIPAL, COMMERCIAL AND INDUSTRIAL WASTE TREATMENT SITUATION STATEMENT

Many municipalities within the region discharge from their waste treatment plants into the Snake River or one of its tributaries, while other cities use land application methods of handling waste. There is an increasing number of septic systems being used and some older systems may still discharge into injection wells or open ditches. Storm water runoff and seepage from public, private, commercial and industrial properties can also result in harmful discharges to the waters of the region. When proper procedures for handling waste material is not followed there is a potential for contamination of water from organic toxins, bacteria, nutrients, suspended solids, pharmaceuticals, chemicals, petroleum and heavy metal. Municipal, commercial and industrial waste treatment requires an NPDES permit.

GOAL A: Improve the water quality of the region as related to private, municipal, commercial and industrial uses.

OBJECTIVE A01: Assure the quality of the water being discharged into the waters of the region from municipal, commercial and industrial sources.

STRATEGIES:

- A01.a Monitor current and future discharges into surface water by municipalities, commercial and industrial uses.

- A01.b Local government to coordinate efforts to inventory current data on water condition within the region to identify current water quality problems and take steps to correct those problems until sustainable standards are met for the designated use.

- A01.c Local government to pass and enforce land use planning ordinances regarding public, private, commercial and industrial waste treatment systems that will provide protection for the waters of the region. This includes the requirement for an NPDES permit. Such regulation to include surface water runoff.

- A01.d Municipalities, private entities, commercial and industry uses are encouraged to update equipment and implement new technology to reduce biological, chemical and physical contaminants from being discharged into the waters of the region.

- A01.e Require residential subdivisions to use municipal waste treatment systems unless it has insufficient capacity and the municipality is

unable to expand the system within a reasonable period of time. If a municipal system is not available, the developer must ensure the use of septic systems which incorporate engineering based on soil type, geology, depth to ground water, and nutrient and biological information. The resulting system should be based on the best available science to minimize any negative impact to the aquifer. Residential wells in the development are to be tested, as deemed necessary by the South Central Public Health District, with the results being reported to that agency.

- A01.f Require commercial and light industrial land uses to use municipal waste treatment systems unless it has insufficient capacity and the municipality is unable to expand the system within a reasonable period of time. If a municipal system is not available, the developer must develop a waste treatment system which incorporates engineering required by the NPDES permit.
- A01.g Increase monitoring and enforcement of regulations for commercial and small industry uses for chemical storage and handling, chemical mixing and loading, chemical waste disposal and chemical spills, fuel storage, solid waste disposal and well construction and abandonment.
- A01.h Recommend that all rural residents in the region test their well and septic systems at regular intervals and as deemed necessary.
- A01.i French drains, shallow injection wells and filtration ponds are to be constructed to a standard to remove contaminants from the water being discharged to the aquifers of the region. Municipalities, industry and private entities, however, are discouraged from using french drains, injection wells and filtration ponds as an alternative to treatment of runoff by waste treatment systems.
- A01.j Request continued monitoring for pharmaceuticals in ground water and develop educational and regulatory methods to deal with areas of concern within the region.
- A01.k Ensure the enforcement of current regulations.
- A01.l Ensure the use of the best information available when developing or changing land use plans including hydrology, geology, soil types, and nutrient and biological information.

GOAL B: Protect surface and ground water quality within the region as related to heavy industry.

OBJECTIVE B01: Assure that pollutants from heavy industry do not degrade the surface and ground water within the region.

STRATEGIES:

- B1.a The developer shall have engineered a private waste treatment system with contingency plan reflecting no negative impact from escape or discharge of pollutants to surface and ground water resources. The developer must develop a waste treatment system which incorporates engineering required by an NPDES permit.
- B01.b The developer shall provide for the construction and use of adequate monitoring wells with samples analyzed at regular intervals and test results being forwarded to the appropriate local, state and federal agencies.
- B01.c The developer shall have engineered structures for fuel and commodity storage reflecting no negative impact from the escape of pollutants to the surface and ground water resources of the region.
- B01.d When applicable, the developer shall have engineered a solid waste landfill that shall reflect no negative impact to surface and ground water resources.
- B01.e When applicable, the developer will submit a dust remediation plan during construction and after construction if utilizing solid fuels, reflecting no negative impact from these operations to surface and ground water resources.
- B01.f When applicable, the developer will submit a smoke stack remediation plan indicating that heavy metals, chemicals, or biological contaminants being released from the stack have no negative impact to surface water and settling particulate matter will not leach into ground water.

* Measurement procedures: Methods and procedures for the determination of the existence of any dangerous and objectionable elements shall conform to applicable standard measurement procedures by the American Society of Testing Materials (ASTM) or other appropriate authority

FIELD AGRICULTURAL SITUATION STATEMENT

Agriculture is the primary user of water in the region and is also the mainstay of the economy in South Central Idaho. The region has over 3,400 farms encompassing over 857,000 acres which accounts for about 45% of Idaho's total agricultural product. Most of the irrigated lands receive 8 to 11 inches of precipitation annually so crop production in most of the region is impossible without irrigation from surface and ground water sources. Much of the irrigated land has been converted over the years to sprinkler irrigation. This conversion along with improved management practices by canal companies, has led to a reduction of return flows to rivers and incidental recharge to ground water within the region.

Irrigation water management practices can still result in returns which are typically higher in biological, chemical and physical contaminants than when it was taken from the rivers and aquifers of the region. Some injection wells are still being used to provide drainage for tail water, which may also contribute contaminants to the aquifer. Surface irrigation plays an important role in recharging the aquifers, but care must be taken to limit pollutants from this source. The following goals, objective and strategies have been developed to meet the overall objective of this plan.

GOAL A: Encourage conservation of water to allow for future uses within the region.

OBJECTIVE A01: Use only the amount of water necessary on crop lands to meet the needs of the specific crop being produced.

STRATEGIES:

A01.a Promote educational programs on proper water management in regard to crop requirement, irrigation scheduling, soil water holding capacity and consumptive use.

GOAL B: Improve the quality of return flows.

OBJECTIVE B01: Reduce the amount of biological, chemical and physical contaminants discharged in return flows.

STRATEGIES:

B01.a Encourage continued research and adoption of new BMP's to reduce sedimentation, loss of nutrients and leaching of nutrients.

B01.b Support educational programs of Soil Conservation Districts, the University of Idaho Cooperative Extension Service and agri-business to demonstrate and improve BMP's.

B01.c Encourage canal companies and farmers to develop filtration systems and settling ponds to remove sediment, nutrients and chemicals from

irrigation return flows. Also, encourage the continued improvement of existing filtration systems and settling ponds as needed.

- B01.d Encourage increases in local, state and federal funding for agricultural water quality projects in the region.
- B01.e Encourage education and enforcement of the Idaho Stream Channel Protection Act which pertains to stream alteration projects.
- B01.f Encourage Soil Conservation Districts in the region to coordinate planning, implementation and funding for water shed treatment using BMP's.

OBJECTIVE B02: Implement improved irrigation and soil fertility management to reduce movement of biological, chemical and physical contaminants through the soil profile to surface and subsurface water.

STRATEGIES:

- B02.a Match animal waste, agricultural solid waste and chemical fertilizer application with crop usage.
- B02.b Match irrigation applications more closely to evapotranspiration (ET) based on specific crops and soil types.
- B02.c Encourage additional research by the University of Idaho and the United States Department of Agriculture on nutrient movement in soils and on crop nutrient requirements.
- B02.d Encourage additional private, state and federal funding for research into nutrient movement in soils and crop use to supply additional data to update the University of Idaho's fertilizer guides.
- B02.e Encourage educational programs through partnerships among soil conservation districts, canal companies, school systems and others, concerning proper usage of nutrients in the region.
- B02.f Encourage continued research for new voluntary and mandatory BMP's by the Idaho Department of Agriculture and others to reduce nutrient loads in the areas of the region where nitrogen inputs exceed plant uptake.
- B02.g Support research and use of USDA approved genetically engineered crops to reduce the use of pesticides.

GOAL C: Encourage monitoring of discharge by non-point source dischargers to the waterways and aquifers of the region.

OBJECTIVE C01: Increase monitoring of discharge associated with crop production and storm runoff.

STRATEGIES:

- C01.a Systematically monitor return flows of concern as identified by the Department of Environmental Quality.
- C01.b Encourage the assessment of problem areas for water quality including point of use and points of contamination.
- C01.c Encourage the identification of site variability so that ground water quality data is updated and interpreted accurately.
- C01.d Encourage the evaluation and dissemination of ground water quality data including trend information and site variability.
- C02.e Identify any areas where current and future use of ground water for drinking water supplies may pose a public health threat.

GOAL D: Protect ground and surface water from potential site specific contamination from field agriculture and agricultural related industries.

OBJECTIVE D01: Encourage increased monitoring of potential site specific water quality programs and standards for rivers and aquifers of the region.

STRATEGIES:

- D01.a Encourage increased monitoring and enforcement of regulations for agricultural chemical storage and handling, chemical mixing and loading, chemical application practices, chemical waste disposal and chemical spills, solid waste disposal, deep and shallow injection wells and other underground disposal methods and well construction, abandonment, and underground fuel storage tanks.

OBJECTIVE D02: Work with federal, state and local agencies to increase the effectiveness of water quality programs dealing with field agriculture.

STRATEGIES:

- D02.a Work with and encourage legislators and agencies to fund water quality programs for field agriculture.
- D02.b Encourage all agencies who participate in water quality monitoring and adopting or enhancing BMP's to do an annual report to the public covering their accomplishments dealing with water quality concerns in the region.

- D02.c Utilize education as the first step to any regulatory process.
- DO2.d Encourage the development of products such as geographic information systems and probability mapping which will facilitate management decisions regarding the resource.

ANIMAL AGRICULTURE SITUATION STATEMENT

Animal Feeding Operations (AFO's) and particularly the dairy industry has a major impact on the regional economy and many businesses throughout the region are supported in whole or in part by the industry. Currently the dairy industry in Idaho ranks 4th in the nation for dairy cows and 3rd in milk production. Our region accounts for about 75% of the states total milk production. Livestock, raised for beef, other than dairy livestock sold for beef, also has an impact on the region's economy. Idaho is ranked 13th in the nation for beef cattle, but when dairy is removed this region only has a small percentage of the state's total.

AFO's have grown in numbers and size. An increasing number of livestock create an increased potential for contamination in surface and ground water through runoff and leaching. In some cases producers are improperly applying both solid and liquid livestock waste to farm land increasing the risk of contamination to surface water and, over time, ground water. Areas of the region that feature high water tables, fractured basalt or coarse underlying material are of particular concern for ground water. Research into new technologies is ongoing for waste handling and feed requirements. Current research suggests that reduced nitrogen and phosphorus in feed rations will reduce these elements from animal excretion without affecting productivity.

Aquaculture is an important industry within the Magic Valley. The industry is responsible for about 40 million pounds of trout annually which is about 70% of the total trout sold in the United States. The majority of the water used in fish production comes from underground springs along the walls of the Snake River Canyon, but a few fish facilities are located on tributary streams. Fish propagation facilities are non-consumptive water users, and waste management is an integral part of facility design and operation. Facilities currently operate under NPDES permits and a TMDL with strict limits on the amount of nutrients and suspended solids allowed in the water leaving a facility. Regular monitoring of facility discharge for total phosphorus has provided much needed data on the actual impact of aquaculture on the Middle Snake River. Future reductions in the discharge of phosphorus will largely depend upon the results of research to continually improve fish feeds. Current limits are enforced and future limits on solids and total phosphorus must be based on sound scientific evaluation of good data.

I. Animal Feeding Operation (AFO):

Animal Feeding Operation are agricultural operations where animals are kept and raised in confined situations. AFO's generally congregate animals, feed, manure, dead animals and production operations on a small land area. Feed is brought to the animals rather than the animals grazing or otherwise seeking feed in pastures. Animal waste and wastewater can enter water bodies from runoff, spills or breaks of waste storage structures (due to accidents or excessive rain), and agricultural application of manure to crop land.

2. Concentrated animal feeding operations (CAFO):

A CAFO is an animal feeding operation that is considered a point source discharger of waste through man-made conveyance or directly into the waters of the United States or is designated a CAFO by a permitting authority on a case-by-case basis. To be a CAFO, a facility must first be defined as an animal feeding operation (AFO). CAFO discharges are regulated through the NPDES program of the United States Environmental Protection Agency.

3. Enforcement of AFO regulations have been improving, but agencies still lack adequate resources to meet the demands of increasing regulations and animal numbers. Current regulations require monitoring of containment facilities and the management of nutrients applied to crop land.

GOAL A: Improve management of the water resources to improve water quality in the region.

OBJECTIVE AOI: Better manage water used in animal feeding operations (AFO's).

STRATEGIES:

A01.a Encourage producers to reduce the amount of water used to manage manure and the facility.

A01.b Where applicable, encourage the recycling of water used, for facility operations.

A01.c Recommend replacing liquid flushing systems with dry systems such as scrapping, vacuuming, composting, etc.

OBJECTIVE A02: Use manure management systems that will allow the producers to transport nutrients to other areas which will provide for greater dispersion.

STRATEGIES:

A02.a Encourage the use of proper livestock manure composting technologies using NRCS guidelines.

A02.b Encourage the use of anaerobic digesters to stabilize the nutrients and for energy conversion, waste management and other uses, particularly in areas of the region found to be susceptible to ground water contamination.

A02.c Encourage the use of field injection systems for liquid manure application at agronomic rates.

A02.d Encourage the use of precision agricultural tools and update BMPs for the application of solid, slurry and liquid manure and waste.

GOAL B: Protect ground and surface water from potential site specific contamination from animal agriculture and other related industries.

OBJECTIVE B01: Reduce nutrients in runoff and leaching on crop land where livestock waste has been applied.

STRATEGIES:

- B01.a Seek compliance with all federal, state and local regulations for livestock operations. All livestock waste applied to crop land to match the nutrient needs of the crop and proper irrigation practices followed to reduce the possibility of leaching contaminants to the aquifer. Continuing education for livestock owners and managers through the University of Idaho and the NRCS is highly recommended for proper implementation, application, evaluation and modification of the required nutrient management plan.
- B01.b Encourage the timely incorporation of livestock waste to reduce the potential of contaminated runoff.
- B01.c Facility design and other management requirements of a proposed or modified AFO site to be based on soil type, geology, depth to ground water and flow, distance from rivers, springs or any water conveyances, and nutrient and biological information.
- B01.d Encourage more research and development to improve water and waste management systems and to reduce nitrogen and phosphorus in feeds.
- B01.e Encourage continued monitoring for pharmaceuticals in ground and surface water and develop educational and regulatory methods to address areas of concern within the region.
- B01.f Encourage increased monitoring and enforcement of regulations of animal agriculture for chemical storage and handling, chemical mixing and loading, chemical application practices, chemical waste disposal and chemical spills, solid waste disposal, deep and shallow injection wells and other underground disposal methods, well construction and abandonment, and above ground and underground fuel storage.

OBJECTIVE B02: Encourage regulatory compliance for discharges associated with aquaculture production.

STRATEGIES:

- B02.a Encourage the use of best waste handling technology at all fish propagation facilities.
- B02.b Seek accurate reporting and encourage a comprehensive evaluation by the Idaho Department of Water Resources, Department of Environmental Quality and the Environmental Protection Agency on flow, solids and nutrients.
- B02.c Encourage research into fish feeds and waste management techniques that will reduce nutrients and solids from leaving a facility.

OBJECTIVE B03: Encourage public and private entities to better coordinate the monitoring for discharge associated with animal agricultural production.

STRATEGIES:

- B03.a Encourage state, federal and private entities, which are responsible for monitoring in the region, to develop and implement a regional coordinated monitoring plan.
- B03.b Encourage all public and private entities involved in monitoring programs to allocate adequate resources to create a coordinated evaluation and reporting system.
- B03.c Continue to evaluate standards and parameters that are currently being used to determine acceptability of return flows to the waters of the region.

GROUND WATER RECHARGE SITUATION STATEMENT

Ground water levels have been dropping for many years. There are several reasons including the increase in ground water pumping since 1950, conversion to sprinkler irrigation systems and periods of intermittent drought. A significant amount of natural recharge occurs in the region from losses in the various canal systems. This, however, is no longer adequate to maintain ground water levels. It is for this reason that the Idaho Department of Water Resources is conjunctively managing the surface and ground water resources in the Snake River basin. The Idaho Water Resource Board approved a Comprehensive Aquifer Management Plan (CAMP) which was developed by water users and others residing on the Eastern Snake Plain Aquifer. The CAMP plan outlines several ways to replenish the aquifer, but a significant element will be recharge. The legislature has authorized some funding for recharge efforts in this region, but long term funding sources have not been identified. Until long term funding is secured, recharge in the region will be at the pleasure of the legislature. After the CAMP plan was approved, ground and surface water users signed an agreement seeking to increase the level of the Eastern Snake Plain Aquifer to its 1991-2001 average level by 2025. There are still some hurdles to overcome, however, such as the availability of recharge water, availability of canal systems to wheel the recharge water, identifying land to use as recharge sites and addressing public concerns for water quality.

GOAL A: Ensure that ground water quality is maintained when managed artificial recharge occurs.

OBJECTIVE A01: Water used specifically for recharge not to exceed acceptable concentrations of biological, chemical and physical contaminants as established by the Department of Water Resources using guidelines developed by the Idaho Department of Environmental Quality.

STRATEGIES:

- A01.a Monitor concentrations of biological, chemical and physical contaminants of water being used for recharge prior to, during and down gradient of recharge site.
- A01.b Use recharge basins that ensure proper filtration prior to reaching ground water.
- A01.c In areas where direct recharge occurs, ensure that water quality is tested and analyzed prior to injection.

Source Water Protection

The safety of all drinking water in this region is critical to the health and welfare of its residence. The Idaho Department of Environmental Quality (IDEQ) has developed a program that protects community water sources through the development of a source water protection plan. The plan is a cooperative effort between counties, cities, drinking water associations and the IDEQ to identify vulnerability of public water systems and assess all possible sources of contamination. Certain land use restrictions and prohibitions may be necessary to provide adequate protection for these valuable drinking water sources.

GOAL A: Source Water Protection

OBJECTIVE A01: Assure safe drinking water to public water systems which are defined by the IDEQ as a system for the provision of water to the public for the consumption through pipes or other constructed conveyances, if such system has at least 15 service connections or regularly serves an average of at least 25 individuals at least 60 days out of the year.

STRATEGIES:

- D01:** While it is the duty of the Board of Commissioners to protect the drinking water supply to each resident of the county, source water protection planning by public water systems described under Objective D01 above is encouraged.
- D02:** All source water protection plans duly adopted by the public water system outlined in objective D01 above should be presented to the Board of County Commissioners in each county if a county ordinance is proposed. Submissions must include the following:
1. Location of wellheads protected by the plan.
 2. Legal description of proposed vulnerability tiers based on time of travel within the county.
 3. Water quality trend within proposed protected area.
 4. Identification of prohibited uses within each vulnerability tier and evidence to support prohibition.
- D03:** After review of the source water protection plan and the water quality portion of this plan, the county commissioners may accept the premise of the source water protection plan. If accepted the commissioners may adopt an ordinance establishing wellhead vulnerability tiers and prohibitions within the county. An ordinance can be based on a template developed by the Idaho Association of Counties.
- D04:** if a source water ordinance is created prohibiting certain land uses within protection tiers, each prohibited use may include this or similar language: prohibited unless a licensed engineer develops a site utilization plan and/or waste disposal plan with contingency plan showing acceptable levels of protection to ground or surface water.

Design shall consider soil type, geology, depth to ground water, water flow and soil tests indicating current nutrient, biological and chemical load information for the proposed site.

- D05: Developer may be required to establish an ongoing water quality monitoring program and report the results to the appropriate state agency and county planning and zoning commission. If monitoring indicates a negative trend, show steps to be taken to correct degradation unless it's shown to come from a source upstream or up-gradient from the subject site.

DEFINITIONS

1. **Aesthetics:** Doctrine that the principles of beauty are basic to other moral principles. A devotion to emphasis of beauty, a branch of philosophy of the beautiful and judgments concerning beauty.
2. **Best Management Practices (BMP):** A measure determined to be the most effective, practical means of preventing or reducing pollution inputs from non-point sources in order to achieve water quality goals. A variety of definitions exist for best management practices. The definition used in the Idaho Department of Health and Welfare (1985) water quality standards is as follows: Best Management Practice is a practice or combination of practices determined by the department to be the most effective and practicable means of preventing or reducing the amount of pollution generated by non-point sources.”
3. **Contaminants:** Any chemical, ion, radio nuclides, synthetic organic compound, microorganism waste or other substance which does not occur naturally or which naturally occurs at a lower concentration.
4. **Co-generation:** The practice of using water to generate electricity which is sold to a primary utility. In this case, a secondary use of the water which results in the generation of electricity.
5. **Commercial:** As defined by the member counties.
6. **Development:** Residential, industrial, commercial use which could include, but are not limited to hydro facilities, dairies, crop-land, subdivisions, fish hatcheries, road construction, industrial and commercial land uses, parks and recreational areas.
7. **Evapotranspiration (ET):** Water that is transpired from the leaves of plants and evaporated from the soil. ET data is used in water management decisions because it represents the amount of water consumed by irrigated agriculture and other land uses.
8. **Filtration ponds:** Also referred to as farm ponds. These are manmade structures capturing tail water and allowing sediment and contaminants to settle out. The pond can serve a dual benefit of recycling irrigation water while also recharging ground water.
9. **Industry:** As defined by the member counties.
10. **Municipalities:** A city, town or other district having local, self-government or residential subdivisions and Planned Unit Development (PUD).
11. **NPDES:** The National Pollutant Discharge Elimination System (NPDES) permit program under the EPA and administered by the Idaho Department of Environmental Quality that controls water pollution by regulating point sources that discharge pollutants into waters of the United States.
12. **NRCS:** Natural Resources Conservation Service is under the U.S. Department of Agriculture and works with landowners through conservation planning and assistance

designed to benefit the soil, water, air, plants and animals that result in productive and healthy ecosystems.

13. **Nuclear fuel:** a fissionable substance which will sustain a chain reaction.
14. **Prohibited Uses:** Those land uses which are not allowed in specific zones under a county zoning ordinance.
15. **Point Source Discharger:** Industrial, municipal or other facilities that discharge pollutants directly into the waters of the United States or are defined as such. NPDES permits are required.
16. **Radioactive waste:** Substances which, according to the EPA standards, emit harmful amounts of radioactivity.
17. **Recreation Use:** Use of the waters of the region for those activities which are usually considered to have recreational value such as boating, hiking, picnicking, hunting and fishing.
18. **Settleable Solids:** Those solids which would settle out of solution based on criteria used by the Idaho Department of Environmental Quality as related to settling time and conditions which would not ordinarily be found if returns were from naturally occurring sources.
19. **Source Water:** Any aquifer, surface water body or water course from which water is taken either periodically or continuously by a public water system for drinking or food processing purposes.
20. **Suspended Solids:** Are those solids which remain suspended in water being discharged in returns to the waters of the region. These solids are those found in addition to those which would not ordinarily be found if the returns were from naturally occurring sources.
21. **Time of Travel Areas:** The land area plotted based upon the time for a particle of water to move from a specific point in the aquifer to a well or spring that serves as a drinking source. Time of Travel Areas are those calculated or approved by the Idaho Department of Environmental Quality (IDEQ) and maintained in the public record of IDEQ.
22. **TMDL:** (total maximum daily loading) A calculation of the total maximum amount of a pollutant that a body of water can receive each day and still meet water quality standards.
23. **Vulnerability Tiers:** An area of four (4) functional tiers that correlate with the vulnerability surrounding each public water system well or spring. Each tier is based on the time of travel for possible contaminants to the public water system.
25. **Wellhead:** The upper terminus of a well, including adapters, ports, seals, valves and other attachments.
26. **Wetlands:** A collective term for marshes, swamps, bogs and similar areas found in generally flat vegetated areas, in depressions in the landscape and between dry land and water along the edges of streams, rivers, lakes and coastlines.

**WATER QUANTITY
SECTION**

(Revised 2013)

WATER QUANTITY PLAN SITUATION AND STATEMENT OF CUSTOMS AND CULTURE WITH REGARD TO WATER

During the late 1800's and early 1900's settlers began to develop relatively small parcels of farm land in the Middle Snake region. Farms were located near sources of water such as springs, streams or rivers where water could be easily diverted to irrigate the land. Wells were also dug in the area for domestic and livestock purposes. The early settlers most likely understood that the region's rivers and streams were dependent on the snow pack in the far away mountain ranges, but probably had no understanding as to the tremendous pools of water that lay just beneath their feet.

During the early 1900's a few people had a dream of capturing the flows in the Snake River and using that water to make the desert bloom. Their efforts resulted in the construction of the Milner Dam which was completed in 1907 and the Magic Dam in 1910. The dam and canal systems for both the north side and south side tracts took many years to develop and were an amazing undertaking for their time. Today, the system they developed irrigates several hundred thousand acres of highly productive agricultural land.

When canal systems were charged and crop lands began to receive water, an exciting phenomenon occurred. The springs flowing from the Snake River Canyon walls began to increase in volume. The more waters diverted for agriculture, the more water flowed from the springs. Land owners along the river made claim to spring flows and as spring flows increased more claims were made. Springs were captured for a power generating facility and two other hydro power plants were placed on the river partially due to the amount of water flowing to the river from the many springs. In 1950, our above ground and underground water resources appeared to be pretty much in balance, except during periods of drought.

The construction of Milner and Magic Dams, while necessary for water delivery and some storage, was not a hedge against drought. Other dams were developed upstream from Milner to hold vast amount of water in storage to supplement agricultural demands during periods of low water. The Middle Snake area is by no means drought proof, but the effects of catastrophic drought have been greatly reduced. Efficient and relatively inexpensive deep well irrigation pumps were developed in the 1940's, and by 1950 pumping for agricultural use began in earnest in both South East and South Central Idaho. Today, there are roughly 458,000 acres of farm land in the Middle Snake area alone that is irrigated by pumping from the aquifer. Since pumping districts were not organized at that time to monitor and regulate the amount of water being pumped, no one actually knew how much water was being withdrawn from the aquifer. Most pumpers use various types of sprinkler irrigation systems. The most popular being the center pivot or circle system. Above ground water users also saw the benefit of the sprinkler system. Soil conservation districts promoted them as the best method to minimize soil erosion and improve water quality. It also enables the irrigator to become more efficient by reducing labor costs and eliminating waste water runoff.

The advent of ground water pumping and improved irrigation water application such as sprinkler systems, pipelines, concrete ditches and gated pipe have significantly reduce the ground water resources of our region. Studies by the University of Idaho and the USGS indicate clearly that aquifer levels have dropped concurrent with the advent of irrigation pumping and improved methods of water application by surface water users. Periodic droughts compound the problem and

while wet years with heavy runoff slows reduction, they still don't add as much water to the aquifer as is being withdrawn. Additional demands are being made on the short supply by other users both up and downstream from the region. The Comprehensive Aquifer Management Plan (CAMP) for the Eastern Snake Plan Aquifer (ESPA) approved by the state legislature in 2010 calls for the development of ground water recharge sites in eastern and south central Idaho. If sites can be developed, water, during years with high runoff, could be captured instead of running to the ocean.

The people of the Middle Snake continue to recognize the importance of wildlife and wildlife habitat within the region, and recognize the recreational opportunities derived from the valuable water resource as part of what makes South Central Idaho such a unique and special place to live. The Middle Snake River and the tributary streams and springs flowing through or from the counties of Cassia, Gooding, Jerome, Lincoln, Minidoka and Twin Falls, support a myriad of fish and other wildlife. As many as nine species of game fish, including the large white sturgeon, are found within the region. There is also a large non-game fish population. Many varieties of game and non-game birds are also found within the region. Many species of water fowl can be found in or near waterways, both natural and manmade. Depending on available habitat, other birds such as pheasant, chucker, Hungarian partridge and sage grouse can be found in relative abundance. Birds of prey such as falcons, hawks, golden and bald eagles and a few species of owls also make their homes here. Other wildlife such as deer, elk, antelope, coyotes, bobcats, mink, weasel, badgers, skunks and various species of rabbit and small rodents can be found in the region. The continued viability of these wildlife populations is totally dependent on year round water flows from all sources throughout the region.

Regarding water, the county commissioners of the region (hereafter referred to as the counties) recognize the following as the custom and culture of the counties:

With the exception of drought, the uninterrupted use of state water by local water right holders for beneficial uses within the region. The beneficial uses include agriculture and livestock production, domestic, commercial, municipal, industrial, and the support of fish and wildlife.

The counties further recognize the availability of an adequate supply of water is the basis for all other customs that have evolved within the region. Refer to History Section.

The county commissioners fully understand the economic value of water and the dependency of the citizens and the local tax base on that resource. The counties contracted with the University of Idaho, Idaho's land grant college, to complete an economic analysis of the region for the purpose of defining community stability and is included in the economic portion of this plan.

Continued reduction to our surface and subsurface water resources will have an impact on the region's economy. The counties have long recognized their economic dependence on water and will continue to protect the resource and promote its highest and best use through local land use planning and zoning ordinances. County commissioners recognize that land use planning is only one ingredient to a strong and healthy economy. The other and probably most important ingredient is the long term adequate supply and allocation of water. To this end the counties have adopted this regional water resources management plan.

The following policies are intended to clarify the intent of the counties when dealing with current and future events influencing the quantity of water available for use in this region.

IT SHALL BE THE POLICY OF THE COUNTIES TO:

- I. Recognize that the people's quality of life, economic stability and environmental health are interdependent.
2. Recognize the supremacy of Idaho state law regarding the controlled distribution, appropriation and beneficial use of water, from federal reservoirs and all other sources in Idaho, and oppose any effort which allows Idaho water to leave the state prior to being put to its traditional beneficial use.
3. Oppose any plan involving the waters of Idaho and this region, by state and federal agencies That incorporates regions of the state or nation, but fails to consider the following for individual counties within this planning region:
 - a. The customs and culture of residents in each county.
 - b. The social and psychological impact of the plan on the residents of each county.
 - c. The economic impact of the plan on the residents of each county.
 - d. Mitigation of any negative impact on the residents of each county.
4. Encourage the Idaho Department of Water Resources to become pro-active regarding conjunctive management of our above ground and underground water resources.
5. Support the refinement of rules for conjunctive management and recognize the constitutional provision of **first in time is first in right** unless, in the short term, strong scientific evidence and or local economic data suggest that a call for water by a senior right is futile.
6. Encourage and promote the development of long range water conservation plans and the use of water conservation techniques in cities and with private water users.
7. Encourage the Idaho Department of Water Resources, when issuing or transferring permits for agriculture, commercial or industrial wells, to require the applicant to show substantial evidence that there will be no negative impact on existing wells or springs in the region.
8. Work with the Idaho Department of Water Resources and the State Legislature to form aquifer recharge districts where feasible.
9. Recognize as beneficial to the region's customs and culture, the use of surface water for the irrigation of residential lawns, gardens, trees and shrubs assuming a conservative use of the resource.
10. Recognize and agree with the premise that water conserved will remain in federal reservoirs to be carried over to the next irrigation season.
11. Oppose any plan or strategy by state or federal agencies that fails to recognize, or in any way infringes on, private property rights, both real and personal, tangible and intangible,

as well as investment backed expectations, within the region. Such rights include the right to use them, not use them, sell them, lease them, give them away, encumber them and in all ways quietly enjoy them. The counties recognize that these rights are subject to certain taxes that may, from time to time, be levied upon them, and certain police powers, for the purpose of protecting the health and safety and/or to promote the general welfare of the public.

12. Oppose plans to protect endangered species that will negatively impact the existing plant, fish and wildlife in the region.
13. Demand local representation on all state and federal planning groups dealing with matters that impact the region's water resources.
14. Encourage future development which will not exceed the hydro-logic capabilities of the Snake River Plain or the physical carrying capacity of the regional ecosystem.
15. Recognize the leakage from canal systems within the region is beneficial as it contributes to aquifer recharge.

The counties are aware that the economic well-being of our region is directly tied to the adequate supply of water. They are also aware that water in our region is finite and must be used wisely if the region's economy is to remain strong and expand. The people of the Middle Snake must learn to use the water in a way that both maximizes the benefits and conserves the resource.

GOAL A: Conjunctively manage our regions above ground and underground water supply in order to protect and enhance our economic and social viability.

OBJECTIVE AOI: Protect the customs and culture of the region with regard to the continued viability of our water resources.

STRATEGIES:

- AOI.a Oppose any effort which allows the region's water to leave the area without first being put to its traditional beneficial uses.
- AOI.b Recognize and continue to protect the Idaho Constitution which states the premise that, with water, **first in time is first in right.**
- AOI.c Educate the public concerning the importance of our water resources in forming the customs and culture of our region.

OBJECTIVE A02: Protect reasonable and viable uses of the region's water resources.

STRATEGIES:

- A02.a Promote increased efficiency in the application of water to the land for the purpose of:

1. Increasing acres farmed by spreading the water.
2. Increasing stream flows to maintain wildlife and support water recreation as well as water quality standards in the region.
3. Preservation of the aquifer.

OBJECTIVE A03: Promote the equitable management of the region's water resources.

STRATEGIES:

- A03.a Promote the curtailment of a junior right holder that is found to measurable impact a senior holder.
- A03.b Support harsher penalties for those who draw more water than allowed by permit.
- A03.c Support harsher penalties for out of season withdrawal by agricultural wells.
- A03.d Support conjunctive management rules that apply to conflicts between senior and junior ground water users, as between senior and junior surface water right holders.

OBJECTIVE A04: Maintain and enhance flows in the regions streams, springs and underground water supply.

STRATEGIES:

- A04.a Work with the Department of Water Resources and the state legislature to form recharge districts where feasible.
- A04.b Encourage and promote water conservation techniques by all water users.

OBJECTIVE A05: Protect the region's social, psychological and economic wellbeing, by promoting economically neutral solutions for the protection of endangered species.

STRATEGIES:

- A05.a Explore alternate and economically neutral means of protection for endangered species.
- A05.b Recognize that species, other than unique adaptations of a species, while endangered in the Snake River Basin, may be plentiful in other parts of the nation or world and should not be considered endangered.

A05.c Take legal action, if necessary, to oppose any plan to restore an endangered species, that does not consider the region's customs and culture as well as the social, psychological and economic impact on the people of the Middle Snake.

DEFINITIONS

CONJUNCTIVE MANAGEMENT: Legal and hydro-logic integration of administration of the diversion and use of water under water rights from surface and ground water sources.

ECOSYSTEM: All the interacting parts of the physical and biological world.

ENCUMBER: An interest or right in real property which diminished the value of the fee, but does not prevent conveyance of the fee by the owner thereof such as mortgages, taxes easements and reservations.

FUTILE CALL: A delivery call made by the holder of a senior-priority surface or ground water right that, for physical and hydro-logic reasons, cannot be satisfied within a reasonable time of the call by immediately curtailing diversions under junior-priority water rights or that would result in waste of the water resource.

JUNIOR RIGHT HOLDER: Determined by the priority date of the appropriation. Later right holders shall have water delivered after those right holders that are earlier have been satisfied during times of shortage.

MITIGATION: Actions and measures to prevent, or compensate for material injury caused by the diversion and use of water.

PERSONAL PROPERTY: Movable property which is not real property.

QUIET ENJOYMENT: The right of an owner to use the property without interference of possession.

REAL PROPERTY: Also real estate, land and hereditaments or right therein and whatever is made part of or is attached to it by nature or man.

SENIOR RIGHT HOLDER: Determined by the priority date of the appropriation. Early right holders shall have water delivered first from a source during times of shortage.

TRADITIONAL BENEFICIAL USE: Those uses of water which have been authorized and permits issued pursuant to Idaho law.

WATER RIGHT: The legal right to divert and use or to protect in place the public waters of the State of Idaho where such a right is evidenced by a decree, a permit or license issued by the Idaho Department of Water Resources, a beneficial or constitutional use right or a right based on federal law.

WATER SPREADING: Water made available through the use of conservation techniques that is applied on land located within an established district that was otherwise considered non irrigable.

ECONOMIC SECTION
(Revised 2018)

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Garth Taylor, PhD., University of Idaho, Agricultural Economist

MIDDLE SNAKE REGIONAL WATER RESOURCE COMMISSION ECONOMIC IMPACT OF WATER

LIMITING FACTORS

Before there can be any discussion of the economics of water within the region several important limiting factors must be considered. The first of these is the Swan Falls Agreement of 1984. This agreement is between Idaho Power Company and the State of Idaho. The agreement states that between April 1 and October 31 of each year 3,900 cubic feet per second (cfs) of water must be available at Murphy's gage below the Swan Falls Dam. If there is insufficient water to meet this demand, the Idaho Department of Water Resources will curtail upstream water users. Most of the water to meet the demand for Swan Falls comes from spring flows with lesser amounts coming from feeder streams and canal return flows below Milner Dam. Groundwater pumping has reduced spring flows and better management by canal companies has reduced canal return flows. If spring flows continue to decline, it will become more and more difficult to sustain the flows to Swan Falls.

Another factor is the Nez Perce Agreement of 2004. This agreement calls for the rental, by the Bureau of Reclamation, from the state's rental pool up to 427,000 acre feet of water from the upper Snake River Basin. The water is to be used for in-stream flow augmentation for the salmon recovery effort. There are also consequences under this agreement if water to Swan Falls is less than allowed by the Swan Falls agreement.

A limiting factor may be global climate change. This is truly an X factor for the future of the region's water supply. Some scientists believe the earth is warming and there is still disagreement as to the cause. The cause of climate change for the region is perhaps less important than the impact which is unknown at the present time. County leaders should consider that the result may be, over time, less moisture to regional water sheds. Water is, and will remain, a limiting factor to the region's primarily agricultural economy.

SITUATION STATEMENT - THE VALUE OF WATER

The economy of the counties making up this region evolved in much the same way as other regions of the state and similar to many other western states. First the fur trappers arrived and then the immigrants whose destination was the Oregon Territory. Then the miners came following the discovery of gold along the Middle Snake. Camps and settlements began to appear and permanent settlers began cultivating the land and raising livestock. A fledgling tourist industry also made its appearance in 1883.

Shortly after the beginning of the 20th Century it became evident that agriculture would become the backbone of the regional economy and it remains so to this day. Harnessing the waters in the region made it so. Some small non-agricultural related industries have developed and are developing in the region, but their economic impact remains small. Recreation and tourism is also developing.

It is difficult, however, to place a dollar value on water related recreation and tourism within the region, but is believed to be significant. Water related activities within the region are many and varied. They include viewing of Shoshone Falls and the grandeur of the Snake River Canyon along with lesser canyons, watching or participating in speed boat racing at the annual Burley Regatta, viewing spring water cascading from the canyon walls, viewing and learning about fish production facilities, B.A.S.E jumping into the Snake River Canyon and boating, fishing and hunting on the Snake River and area reservoirs. The region's water resources have created many recreational and tourism opportunities over the years. The Idaho Department of Labor, Research and Analysis estimates tourism creates about 3,220 jobs within region IV representing 3.9% of the total workforce in 2013. Many workers, however, are employed outside our member counties in the Sun Valley area of Blaine County. How many workers are directly tied to this region's water resources is impossible to gauge. The Idaho Department of Fish and Game estimates anglers alone brought in about \$12,451,000 to the regional economy. If the value of recreation and tourism could be accurately estimated, the amount could be added over and above the value created by agriculture since most would be directly related to water resources.

The counties desire that the public and all levels of government understand the region's economy and the impact of water on the continued health of that economy. There is a fear the expanding economy coupled with increasing job opportunities in the retail and service sectors have made people complacent. Many have forgotten how much this region's economy relies on an adequate supply of good quality water for agricultural production and processing. Every populated center is dependent upon one or more base industries and it is readily apparent that ours has only one at this time-agriculture. For this reason the County Commissioners asked the University of Idaho Extension, the College of Agricultural and Life Science and rural economists to prepare a model which examines the regional agricultural economy. This model is now used to produce a water resource impact statement based on the model for the economy of the counties covered in the Coordinated Water Resource Management Plan.

ECONOMIC IMPACT OF AGRICULTURE IN THE MAGIC VALLEY

The Magic Valley economy has evolved from a substantially rural community to one that has experienced consistent growth in the goods and services sectors. The economy has enjoyed a constant and steady growth over the past decade. There have been some changes in the sectors which provide the major impact within the economy. As strong and varied as the economy is, the major strength is the direct result of the jobs and new money generated by agricultural production and processing. A regionalized economic input/output model was developed to look more closely at the relationship of individual agricultural commodities and the overall economy of the six lower counties in the Magic Valley. Economic data for the model was updated in 2016 using 2012 and 2013 data.

In order to give a clear picture of the value of water to the agriculture economy, it is important to compare the value of agriculture to the economy of the Magic Valley, and the State of Idaho. In 2012 the lower six counties of the Magic Valley produced \$3.5 billion dollars of agricultural products sold and \$682 million dollars of net income. In this same time period, the State of Idaho produced \$7.8 billion dollars (2012 USDA Census of Agriculture) of agricultural products. Forty-four percent of agricultural products sold in Idaho in 2012 were generated by these counties (Table 1). Ninety-two percent of the agricultural land in this 6 county region is irrigated. Water is a major

factor in the farm economy of the Magic Valley and Magic Valley agriculture is a major player in the farm economy of the State of Idaho.

TABLE 1. Per County Farm Product Value

Geographic Area	Value of Crops Sold	Value of Livestock and Livestock Products	Total Value of Ag products sold
Cassia	\$257,600,000	\$696,100,000	\$953,700,000
Gooding	\$101,000,000	\$842,000,000	\$943,000,000
Jerome	\$145,200,000	\$472,000,000	\$617,200,000
Lincoln	\$ 38,300,000	\$137,300,000	\$175,600,000
Minidoka	\$268,000,000	\$101,000,000	\$369,000,000
Twin Falls	\$216,000,000	\$384,000,000	\$600,000,000
Magic Valley Total	\$880,900,000	\$2,632,400,000	\$3,513,300,000
State of Idaho Total	\$3,443,000,000	\$4,358,400,000	\$7,801,400,000

2007 USDA-NASS Census of Agriculture

One concern frequently raised in the region is the impact of the potential loss of irrigation water. Before examining the result of a loss of water, it is beneficial to look at the industry as it currently exists. The agricultural industry in the Magic Valley is highly integrated throughout the entire economy. Along with farms, dairies, ranches and aquaculture, there are important support businesses. Feed, seed, irrigation equipment, fertilizer and chemical suppliers, farm equipment and management services are the most obvious. Many jobs found in the public and private sectors of the economy are the direct result of the total agricultural economy. Producers of raw agricultural products, along with food processors, provide a large portion of the region's direct jobs and contribute to the region's property tax base. Agriculture utilizes natural resources. The Magic Valley has used the production from, and exportation of, natural resource based products to generate wealth for the community. The productive value of water is used to look at job creation. For every 28 acres irrigated there is one job created in the region, and for every 80 acres irrigated there is one direct production job created. To put it another way, 3.6 direct and indirect jobs are created for every 80 acres of irrigated farm ground.

Production and Exportation

Table 2 provides a view of the Magic Valley crop and livestock production industries for 2013. It provides a picture of the value of the production and the relative size of each of the commodities within the agricultural economy.

Table 2. Value of Crop and Livestock Production and the Relative Importance of Each to Magic Valley

	Value of Production	% of Livestock Production	% of Crop Production	% of Food Processing	% of Total**
Dairy Production	\$ 1,883,000,000	71%			21%
Cattle Including Dairy	\$ 685,000,000	26%			8%
Fish Farming	\$ 38,000,000	1%			0%
Miscellaneous Livestock	\$ 57,000,000	2%			1%
Hay and Silage	\$ 402,000,000		34%		5%
Vegetables*	\$ 300,000,000		25%		3%
Grain (all wheat and barley)	\$ 303,000,000		26%		3%
Sugar Beet Production	\$ 160,000,000		14%		2%
Miscellaneous Crops	\$ 13,000,000		1%		0%
Dairy Processing	\$ 2,079,000,000			42%	24%
Livestock Feed	\$ 741,000,000			15%	8%
Potato Processing	\$ 791,000,000			16%	9%
Sugar Processing	\$ 938,000,000			19%	11%
Ethanol Production	\$ 66,000,000			1%	1%
Livestock Processing	\$ 217,000,000			4%	2%
Miscellaneous Food Processing	\$ 63,000,000			1%	1%
Fish Processing	\$ 100,000,000			2%	1%

*Potato, bean and sweet corn production, ** Zeros indicate less than 1% of the total, not an actual zero value

One major reason agricultural production has remained an important part of the region’s economy is the physical location of commodity production relative to agricultural processing facilities. The ability to “add value” to raw agricultural products, through processing is of primary importance to the region’s economy, and adding value³ increases the export potential of the raw products. Milk sugar beets, potatoes and feed lead the list of ag processing in the Magic Valley. Adding value to raw products boosts the local economy through increased exports, job creation and the profitability of investments. Since the majority of the processed products are exported, the money they bring into the region helps to fuel the local economy which then benefits the entire region. Farm and ranch inputs are purchased locally and the products produced are sold to local processing facilities. The result; agricultural production is fully integrated into the regional economy.

Economic success can be measured by the ability to capture and hold outside resources. The export of processed agriculture products enhances that ability. Table 3 shows the percent of export contributed by raw agriculture products, ag processing, manufacturing and service sector of the economy.

Table 3. - The Percent of Exported Products for Sector Sources

Products	Percent of Total Exports
Raw Ag. Products (wheat)	13%
Processed Food Products	49%
Manufacturing. & Services	38%

Using the Magic Valley Economic Model, the impact of changes in agriculture can be evaluated. Table 4 shows the amount of employment directly and indirectly (2013) contributed by agricultural production and food processing in the sub-regional economy. Direct employment jobs are those that are directly related to a specific segment of the economy. These are the workers on the farm or in the factory. The indirect jobs are those necessary to support the workers directly employed. For example the individual who works on a farm in the production of an agricultural commodity is a direct employee while the grocery clerk and waitress at the restaurant who serve the needs of the direct employee are considered indirect jobs. Each sector of the economy has direct and indirect jobs associated with it.

Table 4. Number of Jobs in the Magic Valley Economy

Segments of the Economy	Direct Jobs	Indirect Jobs Created
Agriculture Production and Processing	8,600	36,800
Remaining Segments of the Economy	23,600	26,100
Total Jobs (Direct + Indirect)	95,000	

Agriculture production and processing employees represent about 8,600 people who are directly employed in those sectors. The result of all the economic activity associated with the agricultural production and processing creates another 36,800 jobs. The end result is that 45,400 of the jobs in the Magic Valley are directly or indirectly related to agriculture. Identifying which sector is responsible for specific jobs in the region is a bit confusing, but of the total of 95,000 jobs in the region, 45,400 or 48% are a result of agriculture. The sustainability of a strong agricultural economy in the Magic Valley depends on a reliable supply of water. Unlike what cities experience when a business closes, when an agricultural production unit is vacated by one producer it is operated by a new producer, usually in the next production cycle, rather than remaining idle. Regardless of the water source - surface or ground - the key is reliability of the source. Drought and water calls decrease reliability. Agricultural processors have been willing to invest in our area due to the reliability of water. The location of agricultural processing in the Magic Valley is directly dependent upon our ability to provide a dependable supply of agricultural commodities. The sustainability of the relationship between processors, producers and the entire agricultural economy is dependent on the reliability and availability of quality water.

Farmers and ranchers, as well as investors, view land in two ways: 1) for the productive value of the land, and, 2) for the investment potential of the land. The land value is based on both its ability to produce and its value as an investment. The value of the land is greatly dependent on the reliability of the water resources that accompany the land. In the Magic Valley, the reliability of the irrigation water supply is the largest single factor affecting land value.

An example is the land served by the Gooding Milner Canal, which provides water from the Snake River and is bordered by land that is served solely by the Big Wood Canal, which provides water out of Magic Reservoir on the Big Wood River. These neighboring sites have the same production potential, yet the difference in land value is substantial. The difference in land value is reliability of the water source.

The importance of the agricultural production to the economy of the Magic Valley has been documented. The sustainability of that production is key to the continued viability of the entire

economy. A change in agricultural production and processing would be expected to have an effect on every sector of the economy. Using the regional economic model to evaluate the effect of a lowered quantity of available water would suggest that economically it would be beneficial to increase application efficiency. The technology to increase application efficiency does exist, but at a cost. The cost to increase efficiency must be purchased with profits and government incentive programs. Thus, producers will have to redirect profits from traditional uses to investment in more efficient irrigation. The other option is to not increase efficiency but to reduce production. The exact effect of reducing production would depend on which crops were no longer produced. Those with ties to local processors in the Magic Valley would have greater local impact. When water is in short supply, farmers have made huge investments in more efficient sprinklers and many change crop rotations to those requiring less water. Farmers have also improved efficiency by changing application rates, pressure adjustments, scheduling and idling marginal ground. Evaluating production during the last drought, it is hard to find that the value of farm production has suffered, but it came at a huge expense. Farmers and canal companies have done much to insulate the community from the economics of drought by investing in technology. Only history will tell whether it is sustainable ecologically and economically.

The cost of water in the Magic Valley is usually determined by what a typical buyer would pay for an irrigated acre of land compared to what a buyer would pay for a dry acre. The cost of irrigated land is dependent on location, soil and dependability of the water supply. As an example, if a typical buyer of dry land is willing to pay \$500.00 per acre and another buyer will pay \$4,000.00 for an irrigated acre the cost of water is \$3,500.00 per acre. Another way to find the value of water is based on the value of production and finding what an individual will pay for a certain annual stream of production. The production value of water is, therefore, the annual crop production from a flow of water. The annual productive value is determined by the amount of water it takes to produce a certain crop with a known value. Productive value of water shown in table 5 is estimated based on known water diversions and the approximate value of all crops grown. The productive value of water averages \$170.00 per acre foot. On average it takes the application of about 2 ½ acre feet of water to properly irrigate one acre, so the value of 2 ½ acre feet of water based on the value of one acre foot averages \$425.00. This value, however, does not consider diverted water lost by the canal system to the aquifer or evaporation which together can be 30% or more. Arguably this loss, if known, would inflate the productive value of water actually received at the farm. Ground water pumpers have an advantage in this regard since little is lost. It is important to note that groundwater pumping accounts for roughly one half of the irrigation water used in the magic Valley and the data in Table 5 shown on the next page, only represents the surface diversions.

Table 5. Typical Productive Value of Surface-diverted Water

County	Water District	Acres Served	Normal Diversions Acre Feet (see side bar)	Average Crop Value -\$ Per/Acre	Total Value of Crops for Served Acres	Productive Value per Acre Foot of Water ⁽¹⁾
Gooding-Jerome	North Side	160,000	1,000,000	\$843*	\$134,880,000	\$135
Lincoln	Gooding-Milner	62,420	454,000	\$626**	\$39,074,920	\$86
	Big Wood	36,542	250,000	\$540	\$19,732,680	\$79
Twin Falls	Twin Falls	202,690	1,060,000	\$844	\$171,070,000	\$161
	Salmon Falls	20,500	65,500	\$626	\$12,833,000	\$196 (B)
Cassia	BID	47,812	240,600	\$1,082	\$51,732,584	\$215
Minidoka	MID	77,254	315,000	\$1,307	\$100,970,000	\$320

(a) It takes an average of 2.5 acre feet to properly irrigate one acre. Productive value per acre = Value per acre foot X 2.5

(B) Salmon Tract is irrigated with some supplemental groundwater thus this value possibly over represents the value of surface diversions

*Average of Jerome and Gooding County

** Average of Lincoln and Gooding County

Normal diversions in acre feet is based from conversations with canal company managers on what they typically have diverted in previous years. Historically some canals have diverted more than this amount when they were running water in the winter for stock water. Because of improvements in canal delivery efficiency and user efficiency most canal companies are diverting less per acre than they did when the systems were first fully operational. Some of the improvements in efficiency are due to canal management and sealing of major leaks. In the past 10 years, advancements in flow monitoring have allowed managers to improve efficiency in all parts of the delivery system. Individual year diversion is as much a function of weather, which affects the length of growing season, as is water availability and diversion rights. Water diverted for irrigation is determined by more than what is simply in storage or in natural flow. In addition to total amount available, managers have to determine dates to start and stop irrigation along with average flow per day during differing parts of the irrigation season. Even if supplies were adequate, diversion could be below average during a wet spring or fall.

For every acre foot of water not available, it is estimated that an average of \$170.00 in production sales value is lost. It is interesting to note however, the last period of drought and restricted diversions did not result in a corresponding loss of production. This occurred because of investments in irrigation efficiency, changes to crop rotations and the continued stability of ground water pumping and high crop and livestock prices. It is critical to understand that without groundwater the valley's economy would be affected more significantly during drought.

One of the strengths of Idaho's Water Management System has been the availability of water bank resources. The water bank is a storage reserve of committed, but generally not completely used,

water that has been available to agricultural production in short water years. In previous low water years this reserve was completely allocated. The water demand for salmon recovery and periods of drought has made the water bank very important and caused the value of the leased water to increase.

The average value of crops produced per acre and the number of acres it would take to raise \$ 1 million dollars of that crop is shown in Table 6. The number of head of various livestock enterprises that would produce \$1 million of product is also included. The aquaculture industry is a bit of an anomaly in that it is a non-consumptive use of the water diverted. An acre foot of water generates \$26.00 worth of value in aquaculture. As the water is returned back to the river, it can be used again for recreation, hydropower, and crop and livestock production further downstream. The non-consumptive nature of the industry makes developing a per-acre-foot value difficult because the water has value not only for aquaculture, but all other downstream uses.

Table 6. Production Units Required to Generate \$1,000,000

Crop	Value of Production/Acre	Acres required to generate \$1 million in production
Small Grains	\$775	1,290
Potato	\$3627	276
Sugar Beets	\$1,400	714
Comm. Beans	\$465	2,150
Alfalfa	\$1,020	980
Corn Silage	\$1,064	940
Livestock	Value per Production/Head	Head required to generate \$1 million in sales
Beef (Cow-calf)	\$1,400	714
Feedlot (1250lb)	\$1,812	552
Dairy (milk only)	\$1,350	740
Fish (food size/l lb.) *	\$1.24	806,450

*Fish category added 2006 based on 2005 Idaho Agriculture Statistics

Historically, water calls have caused a flurry of activity in eastern and south-central Idaho. A report to the Middle Snake Regional Water Resource Commission by University of Idaho Extension Educators showed the huge loss to the region’s economy should a cutoff to groundwater pumping occur. The impact of water curtailment in east and south central Idaho to junior pumpers and others led to the creation of the Comprehensive Aquifer Management Planning Group (CAMP). This group worked for several years to create an aquifer management plan for the entire Eastern Snake Plain Aquifer (ESPA) that was adopted by the legislature in 2008. A permanent funding source, however, has not been identified so funding to carry out the plan is currently at the annual discretion of the legislature.

Water calls continued for several years after the ESPA Management Plan was approved until an agreement was reached between ground water pumpers and a surface water coalition in 2015. The agreement includes language to meet the requirements of the Swan Falls Agreement and over the long term, calls for a reduction in pumping on the ESPA by 240,000 acre feet, delivery by pumpers of 50,000 acre-feet of storage water and the installation of measuring devices at well heads. The agreement also seeks state sponsored recharge efforts of 250,000 acre-feet annually.

Pumpers could be further curtailed by the Director of the Idaho Department of Water Resources (IDWR) if the terms of the Surface Water Coalition Agreement are not met or if it is not sufficient under its new ground water management program. In 2016 IDWR adopted an Eastern Snake Plain Aquifer Ground Water Management Area which gives the Director the ability to do what is necessary to stabilize the aquifer. If the management area survives challenges, it would also include the aquifer's tributary basins. IDWR will also monitor the impact of these events and their impact on stabilizing the ESPA.

DEFINITIONS

Cost of Water – The price paid to acquire the right to use and the delivery of water

Diverted Water – Water received through a diversion structure from its natural source. Typical Water structures include pumps, head gates, ditches, pipeline and dams or any combinations.

Groundwater – Groundwater is water that is located beneath the ground surface in soil pore spaces and the fractures of lithological formations.

Surface Water – Water collecting on the ground or in a stream, river, lake, wetland, or ocean. Surface water is naturally replenished by precipitation and naturally lost through discharge to evaporation and subsurface seepage into groundwater.

Water Bank – The water bank, also known as the Idaho Water Supply Bank, is essentially a water exchange market operated by the Idaho Water Resource Board to assist in marketing the water right of natural flow and water stored in Idaho reservoirs. It is a mechanism by which water rights that are not being used can be made available for use by others through the lease and rental process.

Input/output model – An economic model that studies the interdependency of various sectors of the national or regional economy.

Direct Employment Job – When studying a regional economy based on exports or sales outside of the region, these jobs that are directly attributed to a specific exporting sector in the economy. For example, the employees in a potato processing facility would represent the direct employment of processing sector.

Indirect Employment Job – When studying a regional economy based on exports or sales outside the region, these are the jobs that are not directly attributable to a specific exporting sector in the economy. For example, when the employees of the potato processing facility spend their money in a restaurant in the region the restaurant jobs are indirectly linked to the potato processing facility.

Value Added - The sum of (1) wages and salaries, (2) proprietor's income, (3) indirect business taxes, and (4) dividends, interest, and rents. Value added is more than simply buying raw commodity, making some product, and selling it for more money.

Value of Water – Equivalent worth or return from the initial cost of water.

Water Call – A water delivery call made by the holder of a senior right to the use of water. A water call is made by a senior right holder when the holder is not receiving its total allocation.

Region – Defined by the economic portion of the Coordinated Water Resource Management Plan to include the counties of Cassia, Gooding, Jerome, Lincoln, Minidoka and Twin Falls.

IMPLEMENTATION

The regional Coordinated Water Resource Management Plan update reflects a 5-10 year time horizon, although the plan should be reviewed continually to respond to emerging technologies, changes in water supply and quality, changes in use, and growth trends. This planning period allows adequate time to implement new development ordinances, water use patterns and public development plans. Implementation of the Coordinated Water Resource Management Plan will be accomplished through the following measures:

- Application of policies in this plan, and such other policies, resolutions, or ordinances as may be adopted by the county commissions of the member counties.
- Continued coordination with the Planning and Zoning Commissions of the member counties, state and federal government agencies, community groups and citizens.
- Education, adoption and practice of water quality protection and conservation measures both in county facilities and new development.

Implementation is the most important phase of the planning process. It is the process that is intended to transform the goals and policies of the Coordinated Water Resource Management Plan into actions.

If this plan is to be useful and effective, it should be continually reviewed and updated, as needed. The recommendations within the plan should be interpreted as unalterable commitments, but rather as a reflection of the best foreseeable direction at a given time.

The policies of the member counties Comprehensive Plans and the Coordinated Water Resource Management Plan establish the underlying direction for future amendments to the member counties zoning ordinances and zoning maps. The text of the zoning ordinance identifies permissible land uses and establishes the conditions under which land may be used. The zoning map identifies the location of specific districts where various types of land uses may be located to form a compatible development pattern. Idaho State law requires that all zoning districts be consistent with the policies of a county's adopted Comprehensive Plan.

AUTHORIZATION SECTION

ADOPTION AND AMENDMENT OF PLAN

The Middle Snake Regional Water Resource Commission prior to recommending the plan, amendment or repeal of the plan to the Executive Committee, shall conduct at least one (1) public hearing in which interested persons shall have an opportunity to express their views. At least fifteen (15) days prior to the hearing, notice of time and place shall be published in the newspaper of general circulation within the region. The Commission shall also make available a notice to other newspapers, radio and television stations serving the region for use as a public service announcement. Following the Commission hearing, if the Commission makes material change in the plan, further notice and public hearings shall be held. Upon completion of hearing process, the commission then recommends adoption of the plan to the Executive Committee for distribution to the Commissioners of the counties making up the region as defined in this plan. A record of the hearings, findings made, and actions taken shall be maintained indefinitely.

The individual Boards of County Commissioners making up the region, prior to adoption, amendment or repeal of the plan shall conduct at least one (1) public hearing using the same notice and hearing procedures as the Commission. The Boards of County Commissioners shall not hold a public hearing, give notice of a proposed hearing, not take actions upon the plan, amendments or repeal until recommendations have been received from the Commission. Following the hearings of the Boards of County Commission, if the Boards make a material change in the plan, further notice and hearing shall be provided before the Boards of County Commissioners adopts the plan. A record of the hearings, findings made, and actions taken shall be maintained indefinitely.

This ordinance or resolution enacting the Regional Coordinated Water Resource Management Plan or part thereof may be adopted, amended, or repealed by reference as provided for in sections 31-715 and 50-901 IDAHO CODE.

This Coordinated Water Resource Management Plan cannot be amended more frequently than every six (6) months.

Be it further ordained that the terms and provisions herein enacted shall be deemed separable, and the invalidity of any sections of this ordinance or resolution shall have no effect on the validity of any other section.

AGREEMENT FOR ESTABLISHMENT OF THE MIDDLE SNAKE

REGIONAL WATER RESOURCE COMMISSION

(As revised on April 10, 2006)

AGREEMENT made this 12th day of April, 1993, among the counties of Gooding, Jerome, and Lincoln and now also including Twin Falls, Cassia and Minidoka, now referred to as “Member Counties”, acting by and through their duly elected and acting Boards of County Commissioners, for the joint establishment and operation of a regional commission to study, protect and enhance water resources within the boundaries of the Member Counties. This agreement is executed pursuant to the powers granted under the provisions of the statutes pertaining hereto, the provisions of Idaho Code 67-2328, and the powers granted to counties under the laws of the State of Idaho.

NOW, THEREFORE, in consideration of the mutual promises and consideration expressed herein, the Member Counties hereby agrees as follows:

1. **Commission-Creation-Membership.** There is hereby created a regional commission to be known as the Middle Snake Regional Water Resource Commission “Commission”, to be comprised of twelve members consisting of two members from each of the Member Counties. Said commission shall act in an advisory capacity to the Boards of County Commissioners of the Member Counties. The Boards of County Commissioners of each Member County shall submit the names of no less than two nominees to represent the county with at least one nominee associated with the Member County’s planning and zoning commission and appointment shall be subject to majority vote of the Boards of each Member County. To be eligible for appointment to a Member County’s seat on the Commission, a person must be a current resident of said county and may hold office only so long as such county residence is maintained. No person deemed by the Commissioners to lack the ability of making an unbiased decision with regard to water quality and quantity issues shall be eligible for membership. Input from representatives of specific industry or environment groups and organization is best obtained through advisory committees and through the hearing process. Appointees must have a basic knowledge of water quality and quantity issues within the region, as well as an interest in serving the public.

2. **Terms of Members-Compensation.** The terms of office of each Commission member shall be four (4) years; provided, however, that one of each Member County’s initial appointments to the Commission shall serve a term of two (2) years and the other initial appointment from each Member County shall serve

a term of four (4) years. All vacancies shall be filled for the balance of the unexpired term in the same manner as original appointments. The Commission may establish subcommittees and advisory committees to advise and assist in carrying out its responsibilities within the constraints of the approved annual budget. Commission members shall serve without compensation, but may be reimbursed for their actual expenses incurred in attending Commission meetings or conducting Commission business under such rules as may be adopted by the Executive Committee and within the constraints of the approved annual budget.

3. **Executive Committee-Creation-Membership.** There is hereby established an

Executive Committee, consisting of one (1) County Commissioner from each of the Member Counties, to be appointed by the Board of each participation county, which committee shall be responsible for any legislative and regulator, or financial functions of or for the Commission. The Executive Committee shall elect a chairman four (4) members shall constitute a quorum for the conduct of business but all votes shall require a three (3) member majority. The Executive Committee shall meet on an “as needed” basis.

4. **Water Resource Plan-adoption.** The Member Counties hereby ratify, affirm and adopt the Coordinated Water Resource Management Plan “Plan” in the form attached hereto as exhibit “A”, which exhibit is fully incorporated herein by this reference.

5. **Purpose of Commission.** It shall be the purpose of the Commission to:

a. Take actions as authorized and necessary to implement the goals and objectives of The Plan, as the same are set forth therein.

b. Gather information on an on-going basis regarding the quality of water resources in the Member Counties and establish baseline data for monitoring water quality.

c. Act as a focal point for issues, concerns, uses and education regarding all water resources, surface and underground, in the Member Counties and, in connection therewith, provide a forum for the public to have input on such issues and to obtain information and educational services with regard to the same.

d. Work with governmental entities at all levels, water user groups, private parties, and the general public to coordinate and facilitate the development of water study, management, protection or enhancement plans in and for the region.

- e. Provide a forum for local, state and federal agencies to coordinate activities related to the study, management, protections and enhancements of water resources.
- f. Provide information and recommendations to local Planning and Zoning Commissions and other local governmental entities with respect to ordinances that may be necessary and proper to facilitate the study, management, protection and enhancement of water resources within the Member Counties.
- g. Gather, coordinate and disseminate information regarding water resource issues in the Member Counties to and for the benefit of governmental, business and private parties.
- h. Take additional actions, as necessary, to facilitate the Plan and the accomplishment of its objectives.
- i. The Commission is to act within the constraint of the annual budget as approved by the County Commissioners of the Member Counties.

6. **Powers of Commission,** The Commission shall have and may exercise the following powers and duties within the constraints of the annual budget approved by the commission of member counties:

a. To hold hearings on issues pertaining to the study, management, protection and enhancement of water resources in the region, particularly as the same may impact the Member Counties.

b. To make and submit testimony and comments, both oral and written, to public and private entities and agencies, regarding the study, management, protection and enhancement of water resources located in the Member Counties and surrounding area.

c. To complete and disseminate information regarding the Plan and any and all issues pertaining to the water resources located within the Member Counties.

d. To take any actions necessary to coordinate the Plan with the plan, rules or regulations of other governmental agencies, local, state and federal, which shall specifically include the state's Rules and Regulations for Nutrient Management (IDAPA 16.0\16000, and as the same may be amended, with the primary purpose of bringing such other plans, rules or

Regulations in line with the Plan and secondary purpose of fostering coordination and cooperation with respect to the same.

- e. To invoke the provisions and/or protections set out in Executive Order 12630 as the same may impact or affect in any way the property and resources located in the Member Counties.
- f. To provide assistance to local governmental entities in the enforcement of laws pertaining to the study, management, protection and enhancement of water resources located in the Member Counties.
- g. To review the Plan on an on-going basis and, when necessary, to recommend revisions of the same to the Executive Committee and boards of the County Commissioners of Member Counties.
- h. To study and report with respect to the economic impacts of actions taken by local, state and federal agencies which may in any way impact, restrict or impair water uses in the Member Counties.
- i. To develop data on the customs and culture of the region for the purpose of determining the impact of various actions taken by local, state and federal governmental agencies with respect to water resources located therein.
- j. To do all things necessary or incidental to the proper operation of the Commission and furtherance of the objectives of this Agreement, subject only to authority properly delegated to the Commission.

7. **Duties of Executive Committee.** The Executive Committee shall have and may exercise the following powers and duties:

- a. Recommend budgets to the commissioners of the Member Counties and provide all necessary budgetary functions for the Commission.
- b. To review the work of the Commission and to provide policy direction.
- c. To hold hearings in each county and make recommendations to the commissioners of the Member Counties with regard to amendments to the plan.
- d. To provide liaison services between the Commission and the Boards of County Commissioners of the Member Counties.

e. To hire an executive director for the Commission, who shall serve at the pleasure of the Committee. Such executive director shall serve as a

non-voting member of the Executive Committee, carry on its business as directed on an on-going basis, and act as its secretary-treasurer. The executive director may, subject to the approval of the Executive Committee, employ and remove any consultants, experts or other employees as may be needed within the constraints of the budget approved by the Member Counties.

- f. To receive monies and property from Member Counties and to receive gifts, grants and donations from any person or entity, and to expend the same for the purpose of this Agreement.
 - g. To retain or employ regular legal counsel, and to retain such special counsel as may be deemed necessary, all within the constraints of the annual budget.
 - h. With the recommendations of the Commission, to adopt rules and regulations for the conduct of all business done and to be done pursuant to this Agreement.
 - i. To do all things necessary or incidental to carry out the purposes of this Agreement within the constraints of the budget as approved by the Member Counties.
 - j. Provide information and recommendations to state and federal agencies, including the state legislature and U.S. Congress, regarding actions or programs necessary for study, management, protection and enhancement of water resources in the region as defined in the Plan but including additional counties which may become party to this Agreement.
 - k. Authority to subpoena witnesses and documents for Commission hearings.
8. Annual Budget. The fiscal year of the Commission shall commence on October 1st of each year and shall end on September 30th of the following year. The Commission shall prepare, by the first Monday in June of each year, a preliminary budget for the Executive Committee including the activities of the Executive Committee, and an estimate of costs to be apportioned to each Member County for the ensuing year. The Executive Committee shall approve and certify the budget to each Member County on or before July 15th of each year. Such determination shall be binding upon all Member Counties.

9. Duration and Dissolution. It is intended that this Agreement and the Commission established hereby shall have permanent status. However, member Counties shall have the ability to withdraw from this Agreement, beginning one (1) year from the date hereof. Any Member County wishing to withdraw after completion of the first year, must give one (1) year's written notice to the Executive Committee of such intention to withdraw. A Member County withdrawing from the Agreement shall not be entitled to reimbursement of any funds or to any proportionate share of any property accumulated by the Commission or Executive Committee and shall be responsible for payment of its share of the budget for said fiscal year. This Agreement may be terminated by majority vote of the Member Counties after completion of its fifth year, in which event all assets remaining after payment of all costs and expenses shall be distributed to the Member Counties in proportion to their share of the last annual budget of the Commission.

10. Amendment of Agreement. This Agreement may be amended by an executed Addendum, approved by resolution duly adopted by the Board of commissioners of each Member County.
11. Addition of Counties. Any county which is not a party to this Agreement may, with the consent of a majority of the Board of Commissioners of each Member County, become a Member County to this Agreement by executing an Addendum to that effect to this Agreement and by the adoption of an ordinance approving this Agreement.
12. Effective Date. This Agreement shall be effective from and after execution by the Chairmen of the Boards of Commissioners of the three (3) Member Counties. Each county shall forthwith adopt an ordinance approving the Agreement, which ordinance shall be in the form attached hereto as Exhibit "B" which exhibit is incorporated herein by this reference. The number of each such ordinance and the date of adoption shall be noted in the place indicated below.

IN WITNESS WHEREOF, the Member Counties, acting through their respective Board Chairman, have executed this Agreement.

AMENDMENT #1:

This Agreement is amended to include Twin Falls County as a Member County. The Twin Falls County Commissioners adopted an ordinance approving the Agreement and adopting the Coordinated Water Resource Management Plan on January 29, 1996.

AMENDMENT #2:

This Agreement is amended to include Cassia County as a Member County. The Cassia County Commissioners by resolution approved the Agreement and adopting the Coordinated Water Resource Management Plan on June of 2003.