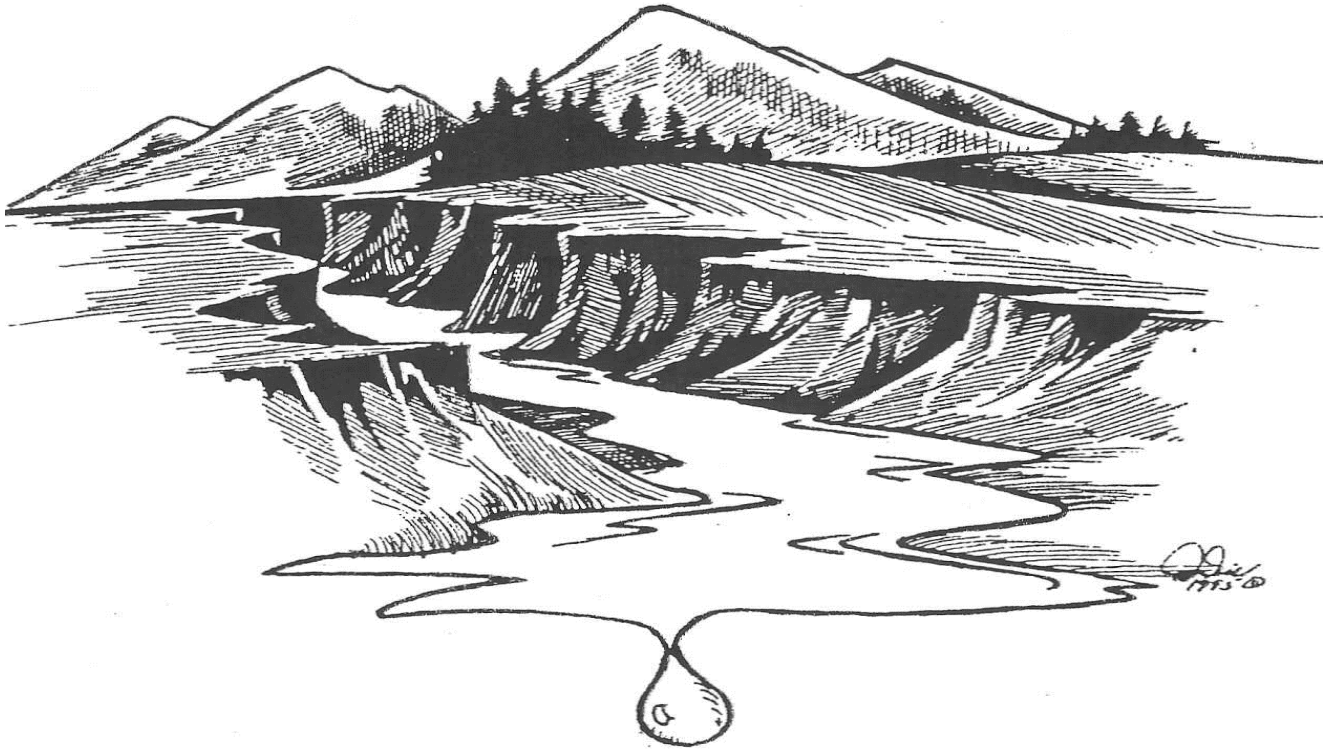
MIDDLE SNAKE REGIONAL
WATER RESOURCE COMMISSION

COORDINATED WATER RESOURCE MANAGEMENT PLAN



COUNTIES OF CASSIA, GOODING, JEROME, LINCOLN AND TWIN FALLS

MIDDLE SNAKE COORDIANTED WATER RESOUCE 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

IPDES - Idaho Pollutant Discharge Elimination System

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, and Twin Falls Counties.

PLAN SUMMARY:

SECTION 1 is a **HISTORY OF THE MIDDLE SNAKE REGION** which includes information relating to 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 settled here.

SECTION 2 (revised 2022) is the **WATER QUALITY** portion of the plan. This section addresses a variety of water quality issues within the region, then sets forth possible solutions. The water quality section is divided into ten subsections:

1. POLICY STATEMENT includes 15 statements which establish policy for member counties with regard to public water quality concerns. The policies also guide the Middle Snake Regional Water Resource Commission in the performance of duties as described on pages 75-79 in the Authorization portion of this plan.

2. FIELD AGRICULTURAL 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 best management practices (BMP's). This subsection also calls for increased monitoring and better enforcement of existing laws and regulations.

3. ANIMAL AGRICULTURE recognizes the impact of livestock on the region's 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 using best management practices (BMP's) and nutrient management planning. This subsection also calls for increased monitoring and better enforcement of existing laws and regulations.

4. PRIVATE, MUNICIPAL, COMMERCIAL, AND INDUSTRIAL WASTE TREATMENT: subsection recognizes the impact on water quality from private, municipal, and industrial waste treatment systems in the region. Goals, objectives, and strategies are listed to encourage industries, municipalities, and individuals to make assurances on the quality of water being discharged by implementing conservation technologies and the treating runoff water.

5. SOURCE WATER PROTECTION recognizes the importance of source water protection for cities and other public water systems and offers a way to establish protection through county zoning.

6. GROUNDWATER RECHARGE recognizes efforts by The Idaho Department of Water Resources (IDWR) in utilizing excess surface water to assist in the replenishment of the

Snake River Plain Aquifer. This subsection recognizes that water used for recharge efforts must be closely monitored before entering the aquifer.

7. HYDROPOWER recognizes that hydropower generation does impacts water quality due to the creation of still water areas which facilitate the building of sediments and trapping of nutrients in regional rivers and streams. Goals, objectives, and strategies listed in this subsection focus on minimizing the negative impacts of existing hydro power facilities, as well as outlining the importance of preventing the development of new facilities on the Middle Snake.

8. RECREATION, TOURISM, FISH AND WILDLIFE recognizes that recreation, tourism, and fish & wildlife can have a negative impact on the quality of the region's water. The subsection spells out goals, objectives and strategies which minimize that impact.

9. AQUATIC INVASIVE SPECIES (AIS) recognizes potential for the introduction of aquatic invasive species into waters of the region and also includes actions which can be taken to minimize those threats.

10. DEFINITIONS contains a list of terms found throughout the water quality portion of the plan.

SECTION 3 (revised 2022) is the **WATER QUANTITY** portion of the plan. This section describes water quantity concerns within the region relating to both surface and ground water resources, and also sets forth possible remedies to address public concerns. The Water Quantity portion of the plan has four subsections:

1. WATER QUANTITY AND CUSTOMS & CULTURE 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.

2. POLICY STATEMENTS include 14 statements establishing policy for member counties to allow them to speak with one voice. The policies also guide the Middle Snake Regional Water Resource Commission in the performance of duties as described on pages 75-79 in the Authorization section of this plan.

3. ADAQUATE WATER SUPPLY 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 and below ground water sources and promotes increased efficiency 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.

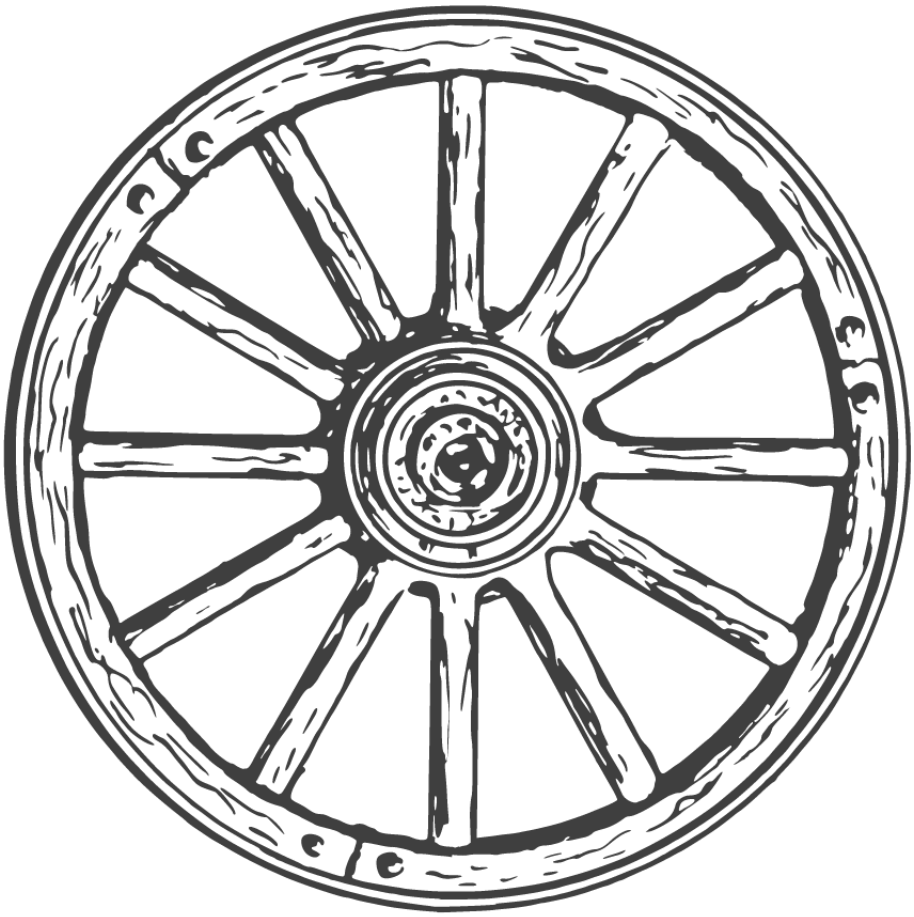
4. DEFINITIONS contains a list of terms found throughout the water quantity portion of the plan.

SECTION 4 (revised 2022) contains the **ECONOMIC** portion of the plan. This section describes the economic importance of the region's water resources and establishes an average value per acre foot of water.

SECTION 5 contains our **IMPLEMENTATION AND AUTHORIZATION** portion of the plan. By implementation, the plan will be continually reviewed and updated to respond to emerging technologies, changes in water supply and quality, changes in use, and growth trends. The plan gives direction, with regard to water, to county planning and zoning commissions within the region. The authorization portion details the establishment of a regional commission (by agreement) whose work would be overseen by an executive committee comprised of commissioners from member counties. The agreement spells out the make-up of the commission and executive committee and outlines the power and duties of each. The agreement also establishes budget procedures for the commission as well as procedures for member counties to withdraw from or be added to.

MIDDLE SNAKE REGIONAL
WATER RESOURCE COMMISSION

HISTORY OF THE MIDDLE SNAKE REGION



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 marks the route of the Snake River across Idaho. The territory extends from east of Raft River to west of the town of Bliss. The Middle Snake River 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. The providing of transportation routes has always been, and still is 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, and its geology, archaeology, and history classify it as unusual. No other area in 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 in contrast to shallow soils found on the north side.

As a rule, geology is a slow and subtle process. Wind and rain usually take centuries to carve a canyon, as well as rock formations like 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 tumbled along. These 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 as evidence of the flood's passing. The best-known field of melon gravel is probably the one between Bliss and King Hill where a Stinker station had a sign that once 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. This landslide forever changed the course of the Snake River in that location, and 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 archaeological excavation was at Wilson Butte Cave. The first of two excavations at Wilson Butte Cave were 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 evidence of species of ancient North American camels, ancient bison, the foot-tall *Eohippus* horse, saber toothed cats, and the ancient mammoth or elephant that had roamed amongst 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 of which has been displayed 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 additional evidence of the archaeological history of south-central Idaho as bones of prehistoric animals and other artifacts are 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 up 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 “the Sickly River” and the name has endured as the 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 the area 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 settled in 1846 when the 49th 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 emigrants traveling to Oregon began seeking alternate routes from the Main Oregon Trail on the south side of the river. The great migration to the Oregon Country utilized three routes through the Snake River desert area. The main route of the Oregon Trail on the south side of the Snake River ran from The Cedars at Milner to Rock Creek/Stricker, traveled across Rock Creek near the Independent Meat Company plant, then followed Rock Creek to the Snake River. There was also an earlier trail that closely followed the Snake River and canyon on the south side. The third route was the Hudson's Bay Company Road that today is known as the North Side Alternate Oregon Trail.

A fourth important immigration road was the main California Trail which separated from the Oregon Trail at Parting of the Ways in Raft River. It followed Raft River southwest through the unique geological rock formations of the 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 and became one road traveling over Granite Pass into the great Nevada desert of the Great Basin. Most of the 1984 goldrushers and early California pioneers traveled this route to reach their destination.

The Hagerman Valley became major camping site on the Oregon Trail. There, travelers decided whether to cross the Snake River to journey along 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 undisturbed Oregon Trail remnants in Idaho can be seen in south-central Idaho. Thousands of iron-wheeled vehicles left deep grooves between Devil's Corral and Clover Creek in the rock outcroppings on the North Side Alternate Route. Equally spectacular is the steep Oregon Trail grade alongside the Bell Rapids highway which is now a featured interpretive site within the Hagerman Fossil Beds National Monument. The Cedars was a major campsite during the migrant 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 rolling over the deep soils of the Main Oregon Trail across the South Side can also be seen by the observant eye. Evidence is seen when crops planted on top of the trail wilt during a hot summer afternoon, or when rainwater from hard

storms leaves standing water, long after the precipitation deposited in off trail areas has absorbed into the ground.

The locations of several emigrant graves have been identified along the route of the North Side Alternate Oregon Trail. Some north side pioneer farmers reported that they found emigrant graves when fields were first plowed. One farmer left the graves found on his land untouched during the decades he owned his farm. Currently, the only known graves along the Main Oregon Trial are in the Pioneer Cemetery at Stricker and at the Rock Creek Canyon crossing near the Independent Meat Company Plant.

When the Idaho Territory was established in 1863, the Middle Snake River was part of a three-county area. The north side portion became the southernmost part of Alturas County, while the south side portion was part of Owyhee and Cassia Counties. In 1864, Ben Holladay obtained the contract to carry mail from the railroad in Utah to Walla Walla via the new settlement 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 individuals who operated Halladay's stage stations.

In 1865, a store was built beside the Rock Creek Stage Station. Large freight carrying wagon trains hauled supplies along the Kelton Road which extended from the railroad at Kelton, Utah to Boise City. This road merged with the Holladay Stage Road and the Oregon Trail at Rock Creek, known for hosting stagecoaches and emigrant wagons, and later became 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, picked up their mail, and cast votes in early elections. Today, the 1865 store and the 1901 Stricker home are owned by the Idaho State Historical Society and co-managed by 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 and was the first bridge built in south-central Idaho. It did not have side-rails and was just wide enough for one wagon or stagecoach to cross at a time. Freight wagons, 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 in 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 Snake River mines because of the purity content. Springtown, located upstream of the Twin Falls, was the best known of the many mining camps that sprang up along the river. Soon after the rush began, the first area post office 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 Post Office closed. Chinese miners reworked the mines after the initial rush diminished, and operations continued at a smaller scale along the river for several decades. Recently, outstanding artifacts have been retrieved from some of the

Chinese mining sites. Of interesting note, 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. Harrell's 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 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 and Omaha, Nebraska.

Cassia County was formed in 1879 due to an increasing population in the eastern part of Owyhee County. Albion, originally named Marsh Basin, was designated as the county seat. Four additional communities grew large enough to acquire post offices of their own during the 1870's. Oakley's post 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 did not start until the 1880's.

Construction of the Oregon Short Line Railroad, and the line of travel it opened, changed the face of transportation in southern Idaho. The need to drive cattle from Washington and Oregon, as well as long-haul freighting from Utah depots was eliminated. Completion of the railroad also forced the stage lines to retreat into making shorter local routes. New communities developed as railroad construction camps developed into the first towns north of the Snake River. Minidoka was the first railroad town and 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 of Albion where the Idaho State Normal School was located.

When 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, allowing ore from the rich mines in the Wood River Valley to be carried to eastern markets. After the branch line was completed, the push to Oregon was resumed. The camp of Naples officially became Shoshone in March 1883. The railroad company built its shops there, and for a time, Shoshone was larger than Pocatello. Shoshone experienced its first economic reversal in 1887 when it's shops and railroad crews were repositioned to Glenns Ferry. The first newspaper in south-central Idaho, The Rustler, began publication in Shoshone in 1883. The following year, the Shoshone Journal was also published and ran until 1931. It later became the Lincoln County Journal which is still in publication today.

Toponis and Bliss were two additional railroad camps that later 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 as well as the Toponis townsite. Mr. Gooding later served as governor of Idaho and as a United States Senator. His position and holdings allowed him great influence during the development of the irrigation projects on the north side. The town of Toponis was renamed to Gooding in 1900.

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

While railroad camps were becoming towns, the tourist industry also saw its first spark. In 1883, a tent hotel with a post office was set up on the north bank of the Snake River at Shoshone Falls which had a rough road connecting it to the railroad at Shoshone. The tent hotel operated for three years before a new framed hotel was built across the Snake River. The new hotel provided accommodation 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 did not allow 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 Corral 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 and one of the steep grades he built is still in use. 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 educational center of south-central Idaho when the Second Idaho State Legislature authorized the building of the Albion State Normal School. This college trained teachers for Idaho as well as surrounding states for six decades before it was closed in 1951.

Alturas County had a lot of power in the 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 county names in the North Side area four times. First, Alturas County became part of Logan County. The next legislature then abolished Logan County and established a new county named Lincoln County. The Supreme Court found that action unconstitutional, so it again reverted to Logan County. In 1895, the legislature successfully recreated Lincoln County from the southern part of the 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's economy after mining had collapsed in the Wood River Valley. When the Carey Act was passed by Congress in 1894, the Shoshone Journal made an editorial about the effect that 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 was twice spared on the scheduled day for his hanging when riders delivered a stay of execution from the Governor via 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 was eventually pardoned.

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

Only a few small orchards and fields were using irrigation at the close of the nineteenth century. When the door opened to a new century, it brought about 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 overcome, however, its water became the base resource to development and sustainability in south-central Idaho, and the orientation of that development was in direct correlation to 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 transform the great desert plain of the Snake River through irrigation. Only a few of the irrigation projects were completed as no irrigation project, Carey Act, or federal reclamation was exempt from a variety of difficulties. Unforeseen construction complications as well as 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 water on each side of the Snake River was filed at the recorders' offices in Lincoln and Cassia counties for The Cedars. In August, the water claim was filed with the State, initiating a survey of the land to segregate it on the south side of the Snake River. The following month, the Twin Falls Land & Water Company was formed in Salt Lake City with the purpose of building this 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 supply depots for 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 of 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 initiated. 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 in Shoshone in July 1904 for 60,000 acres, only 57 applicants attended. Another drawing held in October 1904 was better advertised and more successful.

Also 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 that was lifted to a storage tank from Rock Creek. Parks, a civic center, and a company hotel were included in the plans. The Blue Lakes and Shoshone Falls ferries were kept busy transporting materials across the Snake River that were freighted from the railroad at Shoshone to build Twin Falls and the nearby towns. Newspaper accounts reported 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. A post office was opened, and the Twin Falls News began publication. Cassia County commissioners also formed the Twin Falls election precinct and road district.

Much 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 several 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 large modern luxury hotel standing in the middle of the desert with electric lights ablaze.

Additional south side towns were constructed soon after Twin Falls. Kimberly established in 1904 and Filer in 1905. The Twin Falls Townsite Company laid out plans for Buhl in 1905. A water system was installed, and construction of the Buhl Hotel began. The Buhl town opening occurred in April of 1906 and the railroad reached Buhl in 1907. Frank H. Buhl donated a city block and $25,000, which was half the cost of the large brick F. H. Buhl School that was built in 1908. Castleford established when another Carey Act project, the Ferguson Fruit and Land Co., was organized which developed and sold five-acre tracts of land that had been planted with apple trees.

The Bureau of Reclamation was established by Congress in 1902. While the fledgling Twin Falls project was in construction 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 began on the dam in September of that year. Settlers began arriving to the project site that same year only to find a sagebrush desert, with a dam and canal system that was 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 redistributed to other reclamation projects, leaving only enough for the 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 settlers, and in an agreement with the government, was authorized to build the South Side canals. By this time, the Association discovered there were only about ninety days left to build the canals and make proof of beneficial use. Nearly ninety miles of canal were completed in the ninety days, so enough water could be turned into the system to show that proof. The entire project was funded with certificates of credit, which became the medium of exchange for a time. Later, the government redeemed the certificates at face value.

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 1911, Secretary Walter L. Fisher came to personally see the progress of the project. Ex-President Taft also 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 as squatters by the government and facing possible sale of the property where their buildings stood, the businessmen petitioned Congress in 1906 for the right 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 transporting people from Southern Idaho and Utah.

The Idaho Irrigation Company began construction of the canals north and east of Shoshone with its Carey Act project 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 in Alberta in June 1907. Alberta was later named 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 before adding additional 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 project in

the southern part of Lincoln County. 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 establish towns, build a railroad, distribute electricity from the Shoshone Falls power plant, set up banks, and operate a telephone company.

Developing markets for the crops grown in south-central Idaho was a major problem so products from the Twin Falls Tract were showcased at expositions held in Chicago to promote the new development on the North Side. Construction of the Kuhn projects provided the Twin Falls Tract farmers with markets for their hay and grain, a necessity for the success of the Twin Falls effort. The hundreds of men and horses needed for 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 and 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 in the Twin Falls project area that it created large bogs as the soil held onto the irrigation water. 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 water first entered the canal at Milner in 1908, it disappeared into the underground aquifer. The North Side canal could not hold water, and the seepage that occurred 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 other springs 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 identified seepage problem caused the company to abandon three storage reservoirs included in the original project plans. Later, the State forced developers to construct the Jerome Reservoir to store water for the Second and Third Segregation. Like the canal, the reservoir could not hold water, so 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. Work also 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. 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 additional 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, facilitating the development of the towns of Hollister, Rogerson, Amsterdam, and Berger. From the beginning, the project was embroiled in legal action because of the lack of water as well as the financial failure of the eastern capitalists. The settler's 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 caused the project acreage to be reduced to about 21,000 acres managed by the Oakley Canal Company.

The State Land Board initiated additional Carey Act projects for south-central Idaho, but they either failed or were never started. Most notable was the Bruneau project which had been proposed three times. First in 1908 and last in 1932 and was the last Carey Act project proposal in the state.

The Deep Creek Irrigation Company initiated a Desert Land Act project. The company built two dams and a canal system between Amsterdam and Hollister in 1906 after filing under the Act for 5,000 acres. 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.

Despite the multitude of problems and short water supplies, farmers were able to successfully add new crops to the alfalfa hay and grain they had first cultivated. Sugar beets were introduced which led to the construction of the Burley Sugar Factory in 1912 which made it possible to use their beets for sugar, instead of only as livestock feed. The generation of factories in Paul and Twin Falls soon followed. 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 incomes, most farm families depended on selling or trading milk and eggs in town for groceries and other needs.

From the beginning, schools were seen as a high priority amongst pioneers. Albion had a school in 1875. The school at Bliss was started in a huge tent used by railroad construction crews. In some areas, classes were first started in homes or empty business blocks, but the overall goal was to provide a substantial and imposing structure that could be used as a fitting educational facility, as well as provide 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 only providing 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 and located 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 1 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 reported on the toll of 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. The Sisters of St. Benedict acquired the Wendell Inn in 1922 and operated as St. Valentine's Hospital until St. Benedict's Hospital opened in Jerome in 1952.

After World War 1, many of the Red Cross women's sewing groups organized as community clubs. They devoted their energies to projects that would 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, roads, and especially supporting Idaho products and businesses.

An extended drought began during World War 1 as well as a financial panic 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 designate the unfinished Wendell Inn as the courthouse for Gooding County. Governor Gooding prevailed, and Gooding became the county seat. Rupert was named the county seat for Minidoka County. Lincoln County was divided for the last time in 1919 when Jerome County was formed. Also, Burley emerged as county seat for Cassia County in 1919.

Rough and dusty historic trails were used to meet the region's transportation needs until the need for better roads emerged with the growing use of automobiles. After World War 1, old trails gave way to better roads, and 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 town streets and in 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. Highway 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 a cross-river link for established roads and trails. The Blue Lakes Bridge was opened by Perrine in 1911, and one at Clear Lakes opened in 1912. The Murtaugh Bridge was the first toll-free bridge and was completed in 1917. The Hansen Bridge, completed in 1919, was the first structure to span both canyon rims. Owsley's Bridge was opened in 1921, and work was started in 1926 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. The Twin Falls-Jerome Inter-County Bridge was 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 a second operation at Shoshone Falls. Over the next two decades, additional small-scale fish farms were established and followed along the Snake River. The constant water temperature found in springs fed by the North Side aquifer made it possible for early fish farms to evolve into an important aqua-culture industry. South-central Idaho's modern commercial aqua-culture industry had its start in 1928 when the Snake River Trout Company began operating at Clear Lakes. About ninety percent of trout sold commercially throughout the world came from the local area in the 1960's. A National Fish Hatchery was established south of Hagerman in 1933 and an Idaho State Fish Hatchery opened near the federal operation in 1947.

Growth in south-central Idaho continued in the 1930's despite drought and the 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. A special ski train carrying movie stars and other notables went through Shoshone on the way to the new ski resort. Sun Valley was also used as a naval hospital during World War II and trains would carry wounded sailors to the resort.

During World War II, a wholesale exodus of men and women to the armed services or war plants occurred. The area coped with labor shortages, rationing, and blackouts. In 1942, the Minidoka War Relocation Center was built in Hunt (located in the desert north of Eden) and held 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 local crops from 1942-1945. After the Hunt Relocation Center closed in 1946, the land was transferred to the Bureau of Reclamation and opened to farming.

After World War II, farm technology experienced momentous advancements as more and more sophisticated machinery replaced the horse and early tractors. The manual labor required to raise hay, beets, and potatoes gave way to mechanized equipment. This is also the time when 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 along with updates in farming 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 as significant crops for the area.

For as long as irrigation projects have facilitated the delivery of water to south-central Idaho, dairies have been an important contributor to 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. Family-sized dairies of the past have been replaced by high-tech operations with the ability to milk thousands of cows daily. Dairy and cattle feeding operations provide a ready market for the high-quality alfalfa hay grown in the valley.

Manufacturing in the area was pioneered by the flour mills, milk processing plants, and beet factories. The modem 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.

The final land drawings in south-central Idaho were held in 1956 and 1957 for the A & B Irrigation District in relation to a deep well irrigation project on the Jerome-Minidoka County line.

History in south-central Idaho, both prehistoric and modern, centers around the Snake River and its tributaries and hundreds of thousands of acres of land in south-central Idaho are irrigated with water from them. The Twin Falls and North Side systems each deliver water to 150,000 acres. 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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MIDDLE SNAKE REGIONAL
WATER RESOURCE COMMISSION

SECTION 2 - QUALITY

WATER QUALITY IN THE MIDDLE SNAKE

(Revised 2022)

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 in relation to 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 authorized the establishment of the Middle Snake Regional Water Resource Commission, the first such commission in Idaho. Commission duties and responsibilities are also set forth in the authorization section of this document. The plan has been expanded to include a section on the history of the region, water quantity (1995), economics (1996), and groundwater quality (2002). All sections of the plan are reviewed and updated on a regular basis.

Groundwater issues were addressed by the Middle Snake Regional Water Resource Commission in 1995 when problems first became apparent in Gooding and Lincoln counties. To this day, groundwater issues continue as a problem throughout the region. Between 1995 and 2001, additional groundwater quality data was collected by the USGS, and that data was used to facilitate the incorporation of groundwater quality information into the Coordinated Water Resource Management Plan.

The Idaho Department of Environmental Quality (IDEQ) currently recognizes four areas in our 5-county region as Nitrate Priority areas within the state. The ranking of priority areas is updated every five years by IDEQ, and the last update occurred in 2020. A map of each priority area can be found on the IDEQ website (www.deq.idaho.gov) and searching for *Nitrate Priority Area Delineations*. The Marsh Creek area in Cassia County is currently ranked as the 5th highest priority in the state. Additional areas include a large area in Twin Falls County (ranked 9th), a small area southwest of Jerome (ranked 10th) and another in Gooding County near Bliss (ranked 32). Groundwater in these areas typically move slow, 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 and physical contaminates. 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. These five counties are located in South Central Idaho, and four of the five counties border the Middle Snake River. Even though Lincoln County does not border the river, it is an integral participant because of agricultural return flows that interact with the aquifer, as well as the Little and Big Wood Rivers which are major tributaries to the Middle Snake. The five-county region contains approximately 5,100 square miles and has a population of just over 144,000. The increasing population of the region brings its own challenges in maintaining and improving water quality.

SITUATION STATEMENT:

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 underlying aquifers. The region's water is impacted by:

- Agricultural uses (irrigated, non-irrigated and concentrated animal feeding operations)
- Private, municipal, industrial uses
- Recharge
- Hydropower
- Aquatic invasive species
- Recreation, tourism, fish & wildlife
- The Idaho Nuclear Laboratory (INL)
- Federal mandates and court decisions
- Cloud seeding
- Climate change

Irrigated Agriculture:

As observed throughout the nation, a slow yet steady decline of irrigated agricultural land is being experienced due to increased urbanization. Within the planning area, approximately 857,000 acres are irrigated with water accessed from the Snake River, its tributaries, and deep wells. Improper farming practices can impact both our above and below ground water resources through runoff and leaching of nitrogen and phosphorus, however, agricultural land practices, including those which utilize manure received from Concentrated Animal Feeding Operations (CAFO) operators, are not required to introduce nutrient management plans in Idaho.

Non-Irrigated Agriculture:

Non-irrigated agricultural land includes livestock grazing and dry land farming. These operations may also contribute to the degradation of the regions above and below ground water resources. Poor management practices within dry land farming operations can increase the risk of erosion causing nutrient and chemical bearing sediment to enter rivers and streams. Poorly managed livestock operations can also damage stream banks, leading to excess erosion and runoff issues.

Confined Animal Feeding Operation (CAFO):

Many large dairies, feedlots, and aquaculture facilities are located within the five-county area and these operations typically include feedlots and wastewater lagoons. If feedlots and

wastewater lagoons are constructed or maintained improperly, they can increase nutrient and phosphorus loading in both surface and ground water resources within the region. A second, and possibly more important risk for increased nutrient and phosphorus loading, is the improper application of manure on agricultural land. All CAFO operations are required to have nutrient management plans for the application of livestock waste.

Private, Industrial, and Municipal Waste Treatment:

Point source dischargers required to have National Pollutant Discharge Elimination System (NPDES) permit include cities such as Jerome, Buhl, Filer, Twin Falls, Hagerman, Hansen, Gooding, Burley, Richfield and Shoshone. In addition, the following cities have either lagoons with land application or total containment: Albion, Hazelton, Eden, Castleford, Wendell, Declo, Murtaugh and Dietrich. NPDES permits are also required for several private and industrial wastewater treatment facilities within the region.

Groundwater Recharge:

The Idaho Department of Water Resources (IDWR) has been utilizing excess surface water, when available, to help replenish the Snake River Plain Aquifer. Water used for recharge efforts must be closely monitored before entering the aquifer.

Hydropower:

Relatively inexpensive, hydropower has been a major player in building the region's economy. It has assisted in making the desert bloom as well as bringing manufacturing and other jobs to the area. With only five remaining rapids in the Middle Snake River, hydropower operations within this section of the river are considered as fully developed under current technology. Opportunities for expansion may exist, however, they would only be available for off-site systems using tributary streams, spring, and canals.

Aquatic Invasive Species (AIS):

Aquatic invasive species (AIS) are plants and animals that are dependent on aquatic and riparian ecosystems. The introduction and uncontrolled spread of AIS play havoc with native fish and ecological communities, as well as recreation, irrigation, and power generation. With an increase in water-related users and activities, we also see an increase in opportunity for the introduction and spread of AIS within our region's waterways.

Recreation, Tourism, Fish & Wildlife:

The Middle Snake River and its tributary streams and springs are important to the public as a recreational and aesthetic resource, however, 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 best management practices (BMP's). Tourism can be an important source of income for

the region, and the quality of water available for activities could play a large role in the amount of time recreationalist would choose to spend within the region.

Idaho Nuclear Laboratory (INL)

The Idaho Nuclear Laboratory (INL) sits above the Snake River Plain Aquifer which is a primary source of water within our region. The aquifer also feeds the Snake River through springs and seeps and is one of the largest and most productive aquifers in the nation. The Middle Snake Region is located down gradient from the INL which is a particular concern. Due to this, it is important to closely monitor all actions taken at the INL by the Department of Energy.

Cloud Seeding:

Cloud Seeding is the use of common chemicals such as silver oxide, potassium iodide, dry Ice, liquid propane, and even table salt, to form cloud condensation. Idaho Power has been performing cloud seeding operations for several years in various parts of central and eastern Idaho.

Climate change:

Global climate change will undoubtedly impact our region. What that impact will be, however, is still debatable since sufficient impact data has not been generated.

THE PROBLEM:

The Middle Snake River was considered by many as a working river since development began in the early 1900's. However, in the late 1980's and early 90's, residents and public officials discovered that the river was being overworked. Studies at the time indicated that the river no longer possessed the ability to clean itself due to the absence of "flushing" flows that are now only observed during high water years. Unless management actions sought to make large reductions in the amount of nutrients, chemicals and sediment entering the river, water quality would continue to deteriorate. For this reason, Total Maximum Daily Loads (TMDL's) were established on Middle Snake River. Watershed advisory groups and the Idaho Department of Environmental Quality worked together to set TMDL's as directed by the Clean Water Act. Continued monitoring shows increasing nutrient loads in some parts of the region. Nitrates, phosphorus, pharmaceuticals, feed additives, and pesticides are potential problems which can affect both our surface and ground water.

The problems with the quality of water in the Middle Snake area extend beyond the individual county borders, requiring a multi-county approach. By combining 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 receiving local input, as well as a level of local control in terms of solutions that will 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 may 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 supply of water 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 a reduction of pumping with the intent of restoring the ESPA groundwater levels to the 1991-2001 average by 2025. The latest event occurred in 2016 when the Director of the Idaho Department of Water Resources designated the ESPA and its tributary basins as a "groundwater 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 River 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, encourage the implementation of 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.
4. Nuclear fuels and radioactive wastes 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 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 settling ponds and develop additional settling ponds in the Middle Snake River Region. Settling 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, as well as 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 as well as upstream and downstream water users regarding water quality and quantity issues.
15. Encourage federal, state, and local agencies to ensure the accuracy and uniformity of compliance data. After analyzing all available water quality data, issue written summary reports to the public.

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 it had been when 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, objectives 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 BMPs to reduce sedimentation, loss of nutrients, and leaching of nutrients.

B01.b Support educational programs of Soil Conservation Districts, the University of Idaho Extension Service and agribusiness 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 BMPs by the Idaho Department of Agriculture and others to reduce nutrient loads in the areas of the region where 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 groundwater quality data is updated and interpreted accurately.

C01.d Encourage the evaluation and dissemination of groundwater quality data including trend information and site variability.

C02.e Identify any areas where current and future use of groundwater 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 BMPs 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 (AFOS) 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 state's 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.

AFOs have grown in numbers and size. An increasing density of livestock creates 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 onto farmland, increasing the risk of contamination to surface water, and over time, groundwater. Areas of the region that feature high water tables, fractured basalt, or coarse underlying material are of particular concern for groundwater. 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 35 million pounds of trout annually which is about 70% of the total trout sold in the United States. The majority of 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 the sound scientific evaluation of "good" data.

Animal Feeding Operations (AFO):

- Animal Feeding Operations are agricultural operations where animals are kept and raised in confined situations. AFOs generally congregate animals, feed, manure, carcasses, 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 from agricultural application of manure on croplands.

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.

Enforcement of AFO regulations have been improving, but agencies still lack adequate resources to meet the demands of increasing regulation 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 A01: Better manage water used in animal feeding operations (AFOs).

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 groundwater 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 cropland 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, NRCS and the Idaho State Department of Ag 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 groundwater 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, as well as 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, other underground disposal methods, well construction and abandonment, and above and below ground 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 flows, solids, nutrients, phosphorus, and plant growth in the Snake River.

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.

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, and heavy metals. 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 IPDES permit for the regulation of surface water runoff.

A01.d Municipalities, private entities, commercial and industry users 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 groundwater, 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 IPDES 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 settling ponds as an alternative to treatment of runoff by waste treatment systems.

A01.j Request continued monitoring for pharmaceuticals in groundwater 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 groundwater 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:

B01.a The developer shall engineer 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 IPDES 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 smokestack 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.*

Source Water Protection - SITUATION STATEMENT

The safety of all drinking water in this region is critical to the health and welfare of its residents. 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. IDEQ defines public water systems as constructed conveyances that provide water for human consumption through pipes or other conveyances to at least 15 service connections, or regularly serves an average of at least 25 individuals for at least 60 days out of the year.

STRATEGIES:

A01.a 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 A01 above is encouraged.

A01.b All source water protection plans duly adopted by the public water system outlined in objective A01 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.

A01.c 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.

A01.d 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 groundwater, water flow and soil tests indicating current nutrient, biological and chemical load information for the proposed site.

A01.e 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.

GROUNDWATER RECHARGE - SITUATION STATEMENT

Groundwater levels have been dropping for many years. There are several reasons including the increase in groundwater 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 groundwater 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 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. For more information on CAMP, see page 52 of the water quantity portion of this plan. There are still some hurdles to overcome 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 groundwater 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 groundwater.

A01.c In areas where direct recharge occurs, ensure that water quality is tested and analyzed prior to injection.

HYDROPOWER - SITUATION STATEMENT

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

While hydropower 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 hydropower, such as low head systems and co-generation plants, has compounded water quality problems associated with hydropower 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 hydropower facilities on the Middle Snake River.

OBJECTIVE A01: Allow no development of hydropower 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 hydropower facilities have no negative impact on 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.

AQUATIC INVASIVE SPECIES (AIS) – Situation Statement

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 fishponds, 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 applicable 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 region's recreation areas.

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 tributaries and direct runoff into rivers and streams can increase due to increased use in unimproved river access areas. Water quality enhancement improvements to existing recreational facilities, and the development of new or expanded facilities using BMPs is necessary.

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 areas to spread use. Maintain current and future access areas to reduce the potential for erosion.

STRATEGIES:

A01.a Seek both public and private means of developing new multiple use access areas to the region's water resources which minimize the potential for erosion and contaminants from entering waterways.

A01.b Ensure proper maintenance of access areas 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 including parks and recreational areas 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 various aspects of water use 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 utilizing such things as local organizations and social media.

DEFINITIONS

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.

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."

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.

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 resulting in the generation of electricity.

Commercial: As defined by the member counties.

Development: Residential, industrial, commercial use which could include, but are not limited to hydro facilities, dairies, cropland, subdivisions, fish hatcheries, road construction, industrial and commercial land uses, parks, and recreational areas.

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.

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 groundwater.

Industry: As defined by the member counties.

IPDES: Idaho Pollutant Discharge Elimination System permit issued by the Idaho Department of Environmental Quality by an agreement with the EPA that controls water pollution by regulating point sources that discharge pollutants into the water of the United States

Municipalities: A city, town or other district having local, self-government or residential subdivisions and Planned Unit Development (PUD).

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.

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.

Nuclear Fuel: a fissionable substance which will sustain a chain reaction.

Prohibited Uses: Those land uses which are not allowed in specific zones under a county zoning ordinance.

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.

Radioactive Waste: Substances which, according to the EPA standards, emit harmful amounts of radioactivity.

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.

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.

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.

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.

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.

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.

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.

Wellhead: The upper terminus of a well, including adapters, ports, seals, valves and other attachments.

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

MIDDLE SNAKE REGIONAL
WATER RESOURCE COMMISSION

SECTION 3 - QUANITIY

WATER QUANTITY IN THE MIDDLE SNAKE

(Revised 2022)

WATER QUANTITY AND CUSTOMS & CULTURE WITH REGARD TO WATER - SITUATION STATEMENT

During the late 1800's and early 1900's, settlers began to develop relatively small parcels of farmland 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 into the area for domestic and livestock purposes. The early settlers most likely understood that the region's rivers and streams were dependent on the snowpack in the far away mountain ranges, but probably had no understanding of 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 completed 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 systems they developed now irrigate several hundred thousand acres of highly productive agricultural land.

When canal systems first began delivering water to croplands, an exciting phenomenon occurred. Springs flowing from the Snake River Canyon walls began to increase in volume. The more water diverted for agriculture; the more water flowed from the springs. Landowners along the river made claim to spring flows, and as spring flows increased more claims were made. Springs were captured for use in power generating facilities and two additional hydropower plants were placed on the river, partially due to the volume of water exiting the many springs. In 1950, our above and below groundwater resources appeared in balance, except during periods of drought.

The construction of Milner and Magic Dams, while necessary for water delivery and storage, was not a hedge against drought. Dams were developed upstream from Milner for additional water storage to supplement agricultural demands during low water periods. The Middle Snake River area is by no means drought proof; however, 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, the pumping of groundwater for agricultural use began in earnest in both southeast and south-central Idaho. Today, there are roughly 458,000 acres of farmland in the Middle Snake River area that is irrigated with water pumped from the aquifer. At that time, pumping districts were not organized to monitor and regulate the amount of water being pumped, so no one knew how much water was being withdrawn from the aquifer. The majority of pumpers use various types of sprinkler irrigation systems. The most popular being the center pivot, or circle system. Above groundwater users also saw the benefit of the sprinkler system and soil conservation districts promoted the practice 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 wastewater runoff.

The advent of groundwater pumping, as well as improved irrigation water application such as sprinkler systems, pipelines, concrete ditches, and gated pipe, have significantly reduced groundwater resources in our region. Studies by the University of Idaho and USGS indicate

clearly that aquifer levels have been dropping concurrently 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 didn't add as much water to the aquifer as was being withdrawn. Additional water supply demands are being made by other users both upstream and downstream from the region. The Comprehensive Aquifer Management Plan (CAMP) for the Eastern Snake Plan Aquifer (ESPA) was approved by the state legislature in 2010. The plan called for the development of groundwater recharge sites in eastern and south-central Idaho, allowing for up to, at least, 250,000-acre feet of recharge per year. Many recharge sites have and are still being developed since 2010. Their use over the past few high-water years has had a positive influence on the resource. A historic agreement had also been reached between groundwater pumpers and surface water users in 2016, and groundwater districts were established by the Idaho Department of Water Resources in the same year. The 2016 agreement calls for the level of the aquifer to be equal to, or exceed, the average groundwater levels experienced between 1991 and 2001. The agreement also calls for a reduction of groundwater pumping by 240,000-acre feet per year as well as a shortening of pumpers irrigation season.

The people of the Middle Snake River area 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 tributary streams and springs flowing through or from the counties of Cassia, Gooding, Jerome, Lincoln, and Twin Falls Counties, support a myriad of fish and 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. 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 also be found in the region. The continued success of these wildlife populations is dependent on year-round flows from all water sources throughout the region.

Regarding water, the county commissioners of the Middle Snake River 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 is necessary for beneficial uses within the region. 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 quality water is the basis for all other customs that have evolved within the region (refer to the 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 the Coordinated Regional Water Resources Management Plan.

POLICY STATEMENTS

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

IT SHALL BE THE POLICY OF THE COUNTIES TO:

1. 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. Counties shall 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 seek to incorporate 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. Continue to encourage the Idaho Department of Water Resources to remain pro-active regarding the conjunctive management of our above and below ground 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 continue their support of aquifer recharge 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. Demand local representation on all state and federal planning groups dealing with matters that impact the region's water resources.
13. Encourage future development which will not exceed hydrologic capabilities of the Snake River Plain, or the physical carrying capacity of the regional ecosystem.
14. Recognize that leakage from canal systems within the region is beneficial as it contributes to aquifer recharge.

ADEQUATE WATER SUPPLY - GOALS, OBJECTIVES & STRATEGIES:

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 region's surface and ground water supplies in order to protect and enhance our economic and social viability.

OBJECTIVE A01: Protect the customs and culture of the region with regard to the continued viability of our water resources.

STRATEGIES:

A01.a Oppose any effort which allows the region's water to leave the area without first being put to its traditional beneficial uses.

A01.b Recognize and continue to protect the Idaho Constitution which states the premise that, with water, **first in time is first in right**.

A01.c Educate the public concerning the importance of our water resources in forming the customs and culture of our region.

A01.d Support state and local efforts to control and eradicate aquatic invasive species to ensure the uninterrupted delivery of our surface water resources.

A01.e Oppose any effort by the Department of Energy or other entity seeking a water right, or a change of use to any existing right, for any purpose that carries undue potential for contamination of the Snake Plain Aquifer.

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 stream flows to maintain wildlife and support water recreation as well as water quality standards in the region.
2. Enhancement of the aquifer.

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

STRATEGIES:

A03.a Promote the curtailment of junior right holders who are found to create a measurable impact to senior holders.

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.

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

STRATEGIES:

A04.a Support and work with the Department of Water Resources in their recharge efforts when and where feasible.

A04.b Encourage and promote water conservation techniques by all water users.

OBJECTIVE A05: Protect the region's social, psychological, and economic well-being, 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.

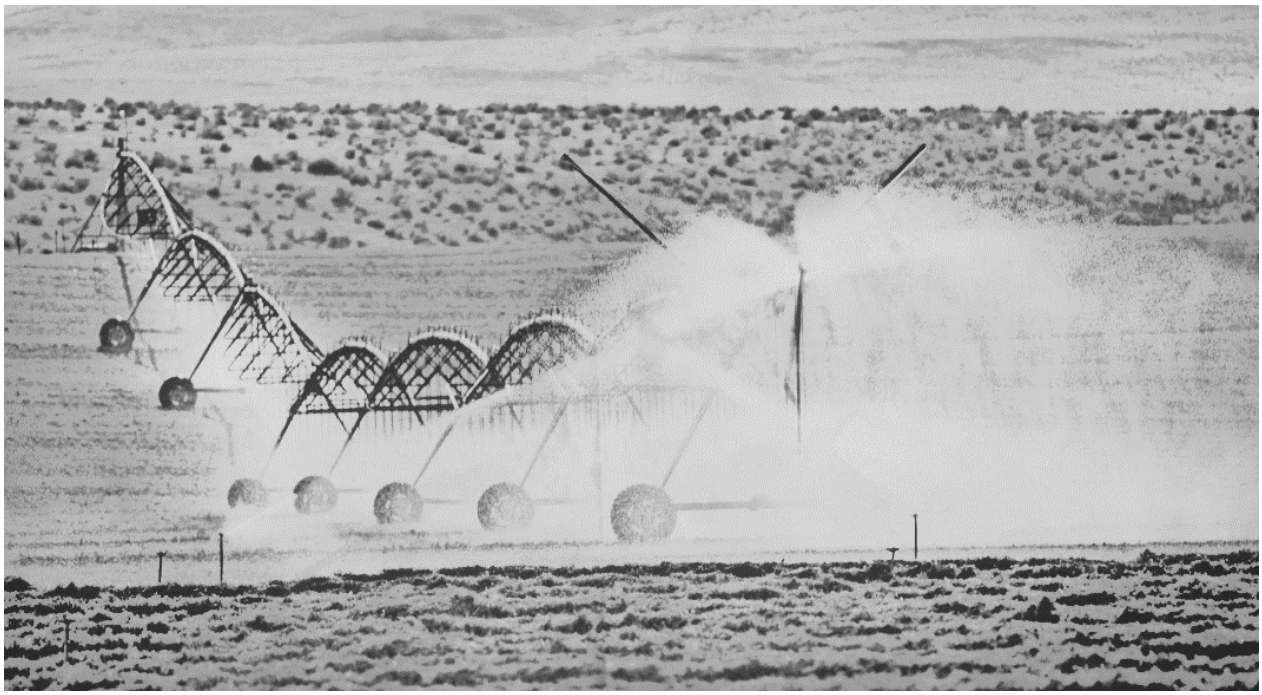
WATER RIGHT: The legal right to divert and use or to protect in place the public waters of the State of Idaho where such a right is evidenced by a decree, a permit or license issued by the Idaho Department of Water Resources, a beneficial or constitutional use right or a right based on federal law.

MIDDLE SNAKE REGIONAL
WATER RESOURCE COMMISSION

SECTION 4 - ECONOMICS

ECONOMICS IN THE MIDDLE SNAKE

(Revised 2021)



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Steve Hines, University of Idaho Extension Educator, Jerome office

Joel Packham, University of Idaho Extension Educator, Cassia County

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

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, which is an 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 used to meet the demand for Swan Falls comes from spring flows, with lessor amounts provided 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 quantity of water outlined in the Swan Falls Agreement.

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 at up to 427,000-acre feet of water from the upper Snake River Basin. The water is earmarked for in-stream flow augmentation for the salmon recovery effort. There are also consequences under this agreement if the water volume delivered to Swan Falls is less than the agreement dictates.

An additional limiting factor may include 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 unknown impact at the present time. County leaders should consider that over time, the results of climate change could lead to less moisture availability in 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, then, the migrants whose destination had originally been the Oregon Territory. Miners also 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 is what 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 are also developing. It is difficult, however, to place a dollar value on water-related recreation and tourism as the associated activities within the region are many and varied. They include sightseeing at Shoshone Falls and observing the grandeur of the Snake River Canyon, along with lessor canyons. Viewing spring water that is cascading from canyon walls and visiting fish production facilities to learn how operations are utilizing spring fed

resources. Spectating or participating in speed boat racing at the annual Burley Regatta or B.A.S.E jumping into the Snake River Canyon. Boating, fishing, and hunting on the Snake River and area reservoirs. Recently, kayaking and paddle-boarding have also become major recreational activities. The region's water resources have created many recreational and touristic opportunities over the years. The Idaho Department of Labor, Research, and Analysis estimates that tourism creates about 3,317 jobs within Region IV, representing 3.9% of the total workforce in 2018. The number of workers directly tied to this region's water resources is impossible to gauge. 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 to the importance of water in the region. Many have forgotten how much our 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 agriculture is the major base industry in the region. 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 economy of the member 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 a 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 (data includes Minidoka County). Economic data for the model was updated in 2020 using 2017 and 2018 data.

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 2017, the lower six counties of the Magic Valley produced $3.6 billion dollars of agricultural products sold and $632 million dollars of net income. In this same time period, the State of Idaho produced $7.6 billion dollars (2017 USDA Census of Agriculture) of agricultural products. Forty-seven percent of agricultural products sold in Idaho in 2017 were generated by these counties (Table 1). Ninety-two percent of the agricultural land in this 6-county region is irrigated, a little over one million acres. One-third of Idaho's irrigated acres are located in this

region. Water is a major factor in the agricultural economy of the Magic Valley, and Magic Valley agriculture is a major player in the agricultural 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	$255,319,000	$671,401,000	$926,720,000
Gooding	$72,000,000	$710,528,000	$783,388,000
Jerome	$121,144,000	$518,439,000	$639,583,000
Lincoln	$42,662,000	$160,426,000	$203,088,000
Minidoka	$260,145,000	94,304,000	$354,449,000
Twin Falls	$168,671,000	$511,567,000	$680,238,000
Magic Valley Total	**$920,801,000**	**$2,666,665,000**	**$3,587,466,000**
State of Idaho Total	**$3,210,834,000**	**$4,356,606,000**	**$7,567,440,000**

2017 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 results 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 25 acres irrigated, there is one job created in the region, and for every 127 acres irrigated, there is one direct production job created. To put it another way, 3.2 direct and indirect jobs are created for every 127 acres of irrigated farm ground. The number of jobs attributed to agriculture has decreased from previous analysis, however, this is a positive change as it indicates other economic sectors in the region are growing as a result from growth and increased exports of the agricultural sectors.

PRODUCTION AND EXPORTATION

Table 2 provides a view of Magic Valley crop and livestock production industries for 2018. It provides a picture of the value of the production as well as 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.

Commodity	Value of Production	% of Livestock Production	% of Crop Production	% of Food Processing	Services	% of Total
Dairy Production	$1,729,264,000	64%				20%
Beef	$840,949,000	31%				10%
Miscellaneous Animal	$72,151,000	3%				1%
Fish	$61,818,000	2%				1%
Hay and Silage	$346,520,000		31%			4%
Vegetables*	$253,367,000		30%			4%
Grains	$303,000,000		23%			3%
Sugar Beets	$175,119,000		16%			2%
Miscellaneous Crops	$10,142,000		1%			0%
Dairy Manufacturing	$2,035,381,000			44%		23%
Potato Manufacturing	$718,015,000			15%		9%
Beet Manufacturing	$627,822,000			13%		8%
Livestock feed Manufacturing	$574,783,000			12%		7%
Beef Processing	$326,378,000			7%		4%
Fish Processing	$125,099,000			3%		1%
Other Food Processing	$119,134,000			3%		1%
Grains Manufacturing	$114,000,000			3%		1%
Ethanol	$12,000,000			0%		0%
Ag Services	$193,576,000				100%	2%
Total	**$8,668,475,000**					**100%**

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

One major reason agriculture production has remained an important part of the region's economy is the physical location of raw input 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 value increases the export potential of the raw products. Milk, sugar beets, potatoes, and feed are at the top of the list in relation to 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 most of the processed products are exported, the money they bring into the region helps to fuel the local economy, which in turn, benefits the entire region. Since agricultural products are sold to local processing facilities, the relationship between the two indicate that agricultural production is fully integrated into the regional economy.

Economic success can be measured by the ability to capture and hold outside resources. Exports from a region increase that ability by bringing new money into the region. Table 3 shows the percentage of exports contributed by raw agriculture products, processed ag products, ag services, and all non-ag industry sectors. Since the last update, the percentage of non-ag contribution has increased, and the percentage of processed ag products contribution has decreased. This indicates that the region is growing and adding a diversity of other industries. Diversity of industry strengthens the regional economy, much like a diversified portfolio that spreads an individual's investment risk.

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

Products	Percent of Total Exports
Raw Ag. Products (wheat)	13%
Processed Food Products	43%
Manufacturing. & Services	44%

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 (2018) 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 job, 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	8,400	34,200
Remaining. Segments of the Economy	29,500	29,700
Total Jobs (Direct + Indirect): 101,800		

Agriculture production and processing employees represent about 8,400 people who are directly employed in those sectors. The result of all the economic activity associated with the agricultural production and processing creates another 34,200 jobs. The end result captures that 42,600 of 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 101,800 jobs in the region, 42,600 or 42% are a result of agriculture. The total percentage of ag sector jobs contribution declined by 6% from the previous regional update, again indicating an increase in non-ag sector jobs.

REGION'S RELIANCE ON WATER

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 it. In the Magic Valley, the reliability of the irrigation water supply is the largest single factor affecting farmland value. An example of this would be look at a parcel of land served by the Gooding-Milner Canal which provides water from the Snake River. Then compare it to 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 agricultural production to the economy of the Magic Valley has been documented and 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 value 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 $800.00 per acre, and another buyer will pay $7,000.00 for an irrigated acre, the cost of water is $$6,200.00 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 $151.00 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 $377.50. The value of an acre foot of water dropped from the previous update, reflecting the lower prices received for farm products during the review period (2013 to 2017). 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. Groundwater 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, 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. Potatoes and sugar beets are not grown on the Salmon tract. The crop value for Lincoln County was used to better represent the cop mix on the Salmon Tract. *Average of Jerome and Gooding County, ** Average of Lincoln and Gooding County*

Normal diversions (Table 5) in acre feet are based from conversations with canal company managers on what they have typically 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 as well as 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 recent 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 $151.00 in production sales value is lost. That number doesn't really tell the story though, as it is an average of all crops in counties. It is likely that, if curtailed, producers would cut less valuable crop acres to protect the higher value crops, especially those that require heavy investment in equipment such as potatoes and sugar beets. Similarly, the forage acres of alfalfa and corn would be protected as much as possible to supply feed to the regions massive livestock industry. 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 groundwater 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, although a curtailment would have less direct consequences. The aquaculture industry is a bit of an anomaly in that it is a non-consumptive use of the water diverted. As the water is returned 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	Total Acres	Average Marketing Year Yield (2017)	Average Marketing Year Price (2017)	Total Value of Regional Production (2017)	Value of Production/Acre	Acres Required to Generate $1 Million in Production
Wheat-all (bu)	116,000	108.5	$4.65	$58,524,900	$505.00	1,982
Barley-all (bu)	116,500	120	$4.75	$66,405,000	$570.00	1,754
Alfalfa (tons)	238,600	5.75	$138.00	$36,897,750	$794.00	1,260
Corn-Grain (bu)	44,000	202	$4.25	$37,774,000	$859.00	1,165
Corn Silage (ton)	163,000	30	$32.00	$156,480,000	$960.00	1,042
Dry Beans (cwt)	46,500	24.9	$28.90	$33,461,865	$720.00	1,390
Potatoes (cwt)	75,000	472	$7.23	$255,942,000	$3,413.00	293
Sugarbeet (tons)	102,500	39	$40.20	$160,699,500	$1,568.00	638
Livestock				**Value of Production Per Head (2017)**		**Head Required to Generate $1 Million in Sales**
Beef steer				$760.00		1,316
Feed lot				$1,512.00		661
Dairy (annual milk production /cow)				$4.193.00		238
Fish (food size-1lb				$1.80		555,536

Even though the Surface Water Coalition-Idaho Ground Water Appropriators, Inc settlement agreement has been reached, 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 groundwater management program. In 2016, IDWR adopted the Eastern Snake Plain Aquifer Groundwater 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 – The collection of water 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 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 the 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.

MIDDLE SNAKE REGIONAL
WATER RESOURCE COMMISSION

SECTION 5 - AUTHORIZATION

IMPLIMENTATION, ADPTION, AND AGREEMENT FOR ESTABLISHMENT OF THE MIDDLE SNAKE REGIONAL WATER RESOURCE COMMISSION

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 in both 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 not be interpreted as unalterable commitments, but rather as a reflection of the best foreseeable direction at a given time.

The policies of member county Comprehensive Plans and the Coordination Water Resource Management Plan establish the underlying direction for future amendments to member county 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.

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 a 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 Commissioners, 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 20, 2022)

AGREEMENT made this 12th day of April 1993, among the counties of Gooding, Jerome, and Lincoln, and now also including Twin Falls and Cassia, 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 agree 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 organizations 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 enhancement 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.

    j. The Commission shall not become members of or associated with any group or organization with specific interest in the water resources of this region without written authorization of the executive committee.

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 commissioner 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 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, carryon 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 with the constrains 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 ensuring 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.