



GENERAL PLAN

FOR
RIVER HEIGHTS CITY, UTAH
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Prepared by:
River Heights City
Planning Commission

Adopted by:
River Heights City
City Council
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RIVER HEIGHTS CITY GENERAL PLAN

1 INTRODUCTION

Utah State law requires that cities prepare a general plan for the "present and future needs of the municipality." This plan is the official statement that describes overall goals and strategies for the future development of the City. This plan functions within a community to:

- Improve the physical environment of the community as a setting for human activity. This purpose is in accord with the broad objective of local government to promote the health, safety, order, convenience, prosperity, and general welfare of the citizens.
- Promote the public interest of the community at large, rather than the interest of individuals or special interest groups within the community. By adopting and following a general guideline it will help prevent arbitrary, capricious, biased actions. The contributions of the plan to a democratically responsible government help safeguard the public interest.
- Facilitate the democratic determination and implementation of community policies on physical development. A general plan is a policy instrument. It is a declaration of long range goals. It places the responsibility for determining policies on the elected officials and provides an opportunity for citizen participation under the democratic process.
- Inject long range consideration into short range actions. It provides for coordination through time, to attempt to make sure that today's decisions lead to tomorrow's goals. The use of forecasts and the establishment of long range goals are significant features of the general plan.
- Bring professional and technical knowledge to bear on the making of political decisions concerning the physical development of the city. This is intended to promote wiser decision making, to achieve informed, constructive government. The importance of a general plan as a policy document and a general guide to the future of River Heights should be emphasized. It should be considered as a compass. It sets the direction which the City should take but it is not static. Future events may necessitate a change in course. It should be reevaluated on a regular basis and updated as it becomes necessary to do so to guarantee its relevancy.

This document has five sections:

1. Introduction
2. Land Use
3. Transportation
4. Infrastructure/City Utilities
5. Affordable Housing

Each section contains a description of the current situation and conditions, applicable background information, and recommendations for adoption by the Planning Commission and the City Council.

Once adopted this becomes the plan for the future development of River Heights. The Zoning and other ordinances are then changed, as needed, to comply with and implement the provisions of this adopted plan. The ordinances then become the instrument by which these policies are put into effect. These two planning documents are interwoven.

Planning is more than the production of a general plan and regulatory ordinances. It is an ongoing process. Therefore, after this plan is adopted it will be reassessed on a regular basis. This document can change over time.

Planning is dynamic. The initial adoption of the General Plan and its elements is the beginning of the planning process. A periodic reevaluation process will be used to maintain the validity of the goals and policies of the plan.

Amending the plan can take two forms. Most amendments will come through the Planning Commission. At periodic intervals they should review the plan and determine if it still coincides with existing conditions and attitudes. If it is determined that it does not meet the needs of the city at some future time, after appropriate public input, it should be changed.

A second method of amending the general plan is by written application submitted by an individual requesting a consideration for a change.

In both of the above referenced methods for changing the general plan, the Planning Commission should hold a public hearing, consider the data, and make a recommendation to the City Council. The Council conducts a final review and enacts needed changes and takes final action.

1.1 BACKGROUND

Incorporated as a Town in 1934 and becoming a City in 1968, River Heights is one of the youngest communities in Cache County. Originally pasture land, it started slowly and evolved into a community of well kept homes. It is on the east bench lands of Cache Valley, a remnant of ancient Lake Bonneville. The Bear River range of the Wasatch Mountains is the east backdrop of the city. Providence City is to the south and Logan City is to the north, east and west.

The first settlers of the area came in the 1880s and built homes in the area between Providence and Logan where land was inexpensive. Named "Dry Town" for obvious reasons, new inhabitants arrived slowly and it was incorporated into a Town only when it became necessary to receive a grant from the federal government to drill an irrigation well to augment scarce water supplies during the drought of the 1930s.

River Heights is unique among most other Cache communities. It is completely surrounded by either other cities or physical barriers that will limit its long term growth. While there still remains land that can be developed, it is limited. The community is primarily residential with some agricultural areas with only limited possibilities of future commercial development.

1.2 DEMOGRAPHICS

1.2.1 Population

Table 1 shows the historical population of River Heights:

Year	1950	1960	1970	1980	1990	1995	2000	2005
Population	468	880	1088	1211	1274	1320	1495	1565

Table 1
Historical Population

1.2.2 Projected Population

While Cache County has experienced about 2.0% annual growth rate since 1950, River Heights has shown a rate of less than 1.5%. Growth for the ten year period 1980 to 1990 was approximately 0.5% per year and for the period 1990 to 2000 it was 1.6%. Growth for the five year period 2000 to 2005 was less than 1.0%. That rate of growth could change dramatically. As the southeast bench area of Logan continues to fill up, pressure will build for new subdivisions and homes in River Heights. The following table shows growth projections through 2020 as interpolated from information provided by the Cache County Planning Office.

Year	2010	2020
Population	1660	1850

Table 2
Population Projections

There are approximately 200 acres of land currently undeveloped that are either inside the current city boundaries or inside the annexation declaration policy area. This land represents the growth limits of the City. Assuming three lots per acre, there could be approximately 600 additional homes in River Heights compared to the current number of 550. This population projection would add approximately 2,000 more residents for a total of 3,850. These numbers are estimates based on available land and current zoning and building trends.

The above estimate is especially useful in planning for infrastructure needs.

2 LAND USE

Current land use is almost exclusively single family residential. There are a few apartments in the City, however, no apartment complexes are allowed under current zoning. The city is divided into three residential density zones allowing for 8,000 square foot lots, 10,000 square foot lots, and 12,000 square foot lots. There are also Planned Unit Development, Commercial and Mixed-use zones available but they have been used on a very limited basis to date.

Intense development of commercial use is occurring on land adjacent to River Heights to the west and southwest in the cities of Logan and Providence. Community leaders of the City recognize the need for commercial zoning within River Heights for a number of reasons:

1. Landowners of properties adjacent to current commercial use will likely want the option to zone commercially;
2. In some cases it may be the best "use" fit for the area;
3. There is an increased revenue need to support city infrastructure; and
4. It is important to design commercial and mixed-use zones that will best serve the City.

An ordinance establishing an Agricultural Zone was passed by the City Council in 1998. All land annexed in the City is placed under this zone. The agricultural zone allows the integration of residential areas with open space.

2.1 PARKS AND OPEN SPACE

Few things define the ambiance and general attractiveness of a city more than its parks and open spaces.

At present, there are four developed parks in the City: Heber Olsen Park, the playing fields behind the new elementary school, the DUP Park, and the Hillside Park.

Heber Olsen Park is six acres in size and is next to the former elementary school and city office building. Within this park is Ryan's Place Park (playground), built in the spring of 2007. Adjacent to Ryan's Place Park are tennis courts, playing fields and a pavilion area for public use.

In 1997, the City transferred approximated 8.4 acres, near 600 South and 800 East, to the Cache County School District. That land had been set aside by the City for a park. The Cache County School District uses that land for outside recreation grounds and playing fields (softball, soccer, etc). Under an agreement made with the School District in 1997, the School District allows these recreational grounds and playing fields to be used by residents of the City and the general public. The public can use the fields at any time except during school hours. This land is, therefore, part of the River Heights City park system. The total area of these recreation grounds and playing fields is 5.6 acres.

The DUP Park, located at 400 East and 450 South, is 0.13 acres. Hillside Park, north of River Heights Boulevard and east of 600 East, is 0.27 acres.

The National Recreation and Park Association recommend as a guideline 6.25 to 10.5 acres of

park land per 1,000 residents. Counting the recreation grounds near the elementary school, River Heights is within the recommendation at nine acres per 1,000 residents. If River Heights reaches its potential population of 3,850 it will be at 3.84 acres per thousand people.

In the future there is the possibility of two additional park areas: one in the Riverdale area and the second on Stewart Hill Drive where the City presently owns 3.58 acres.

2.2 GEOLOGY

River Heights is located on firm ground. None of the existing neighborhoods in River Heights are built on land said to be unstable for development. A study by Evans, McCalpin, and Holmes, Department of Geology, Utah State University, published in 1996 indicates this. Appendix A contains details about the geology of River Heights.

2.3 SENSITIVE LANDS

Sensitive areas in and near River Heights include the Logan River corridor, the Spring Creek drainage, and steep slopes. There may also be wetlands in some of the undeveloped fields in River Heights. Spring Creek is located between River Heights and Providence City. Steep slopes separate the upper terrace of River Heights from the Riverdale neighborhood, the Logan River, and the area in Logan known as the Island.

2.3.1 Logan River Corridor

The Logan River provides about 3,000 feet of the border between Logan City and River Heights, in the Riverdale neighborhood. This area has the potential for flooding, but the River Heights side of the river is higher than the Logan side and thus less susceptible to flooding. Landowners in Riverdale report that the Logan River did not overflow its banks during the 1983 flood. Flood plain maps provided by the Cache County recorder indicate that the Logan River corridor, in River Heights, would not be inundated by a 100-year flood.

The Logan River corridor provides valuable wildlife habitat. The river and its associated riparian vegetation provide habitat for a variety of bird species. These species are listed in appendix B of this document. Appendix C lists the native plant species in the riparian zone along the Logan River.

2.3.2 Spring Creek and Wetlands

Spring Creek is the natural drainage for most of River Heights and Providence. It currently serves as a boundary between the two cities from approximately 800 East to 400 East. From approximately 700 East heading west, Spring Creek is bordered by residential neighborhoods. Developers have left buffers between homes and the waterway; in some areas park like features have been developed near and around the waterway. Stone Creek Subdivision has built a retention pond for storm water runoff and irrigation purposes.

In this region wetlands include marshes, bogs, wet meadows, shrub wetlands, forested wetlands, and similar areas. Wetlands are protected under section 404 of the Clean Water Act and a permit is required to fill or destroy wetlands. Permits are issued by the United States Army Corps of Engineers (COE). Pursuant to section 404(c) of the Clean Water Act, the

Environmental Protection Agency has veto power over the issuance of section 404 permits for certain reasons.

Wetland delineation, performed by the COE or a wetland ecologist as certified by the COE, must be conducted to determine the boundaries of any wetlands that may exist near Spring Creek or in any other part of River Heights, prior to implementation of any development activities that may affect those wetlands. It is the responsibility of land developers to determine if wetlands exist on any sites that are to be developed. If wetlands are found, it is their responsibility to obtain the required permits from the COE before wetlands can be filled. In most cases, mitigation will be required to compensate for the filling of a wetland. Wetland mitigation usually includes the creation, restoration, or enhancement of an acreage of wetlands comparable to or greater than the wetland acreage impacted. In some cases, wetland preservation may be acceptable as mitigation.

2.3.3 Steep Slopes

The slopes that separate the upper terrace of River Heights from the Logan River and the Riverdale area are too steep to build on. At present, there are no structures on the slopes. Due to the obvious problems associated with building on these slopes it is doubtful that anyone will propose building on them. These slopes are covered with trees and vegetation. At present there is a zoning ordinance that requires buildings near and on slopes greater than twenty-five degrees to have adequate provision by siting, retaining walls, landscaping, terracing, etc. to maintain site stability and to prevent erosion.

2.4 LAND USE GOALS AND RECOMMENDATIONS

2.4.1 Goal: River Heights should be primarily a residential community of single family homes. It should continue to have an atmosphere of pleasant and quiet residential living.

Policies:

1. Growth in the City should be paced by the City's ability to provide services.
2. Retain a lighting ordinance which preserves a dark sky.
3. Retain a City policy for moderate income housing as required by state law.
4. Retain zones allowing homes on 8,000, 10,000 and 12,000 square foot lots.
5. Retain a Planned Unit Development (PUD) ordinance in the City Code. Encourage, owner occupied, single family units in a PUD. Require open space in PUDs.
6. Retain a conditional use permit for a kennel license (the keeping of three or more dogs). Include sitting review and guidelines for dog enclosures.

2.4.2 Goal: Newly annexed areas of the City should maintain an agricultural atmosphere until the owners request further development.

Policies:

1. All newly annexed areas shall come into the City zoned for agriculture use or greenbelt/open space.
2. Allow parcels smaller than five acres in size to be annexed into River Heights under the agricultural zone.

2.4.3 Goal: Maintain an attractive, aesthetically pleasing community with open spaces available for public use.

Policies:

1. Encourage private landowners to preserve open space.
2. Require new subdivisions to set aside land for city parks either by paying an impact fee for parks or by requiring that land be dedicated to the City for parkland.
3. Encourage citizens to reduce air pollution through decreased driving and increased bicycle and pedestrian travel.
4. Encourage citizens to adhere to air quality conditions and heed recommendations to not burning on “yellow” and “red” pollution days.
5. Encourage citizens to be mindful of limited landfill and energy resources and therefore, recycle as much as possible.
6. Preserve City owned Stewart Hill land for future park/open space.

2.4.4 Goal: The City boundary should ultimately go east to the U.S. Forest Service land boundary and should go south to Spring Creek, continue west along Spring Creek to Providence and Logan on the west. River Heights needs to consider adjacent land for potential annexation. These considerations may include best use and fit for the environment of the community.

2.4.5 Goal: Maintain a plan for excessive storm water runoff.

Policy: Maintain and update, as needed, the storm water runoff plan for River Heights, coordinated with Logan and Providence.

2.4.6 Goal: Preserve and protect sensitive areas.

Policies:

1. Prohibit building on steep slopes.
2. Encourage land owners along the Logan River to preserve the riparian vegetation along the river, including the over story (trees) and the under story (shrubs, etc.)
3. Encourage land owners along the Logan River to remove concrete and asphalt riprap from the riverbank and replace it with native trees and shrubs.
4. Require structures to be set back at least 30 feet from the Logan River.
5. View jurisdictional wetlands as an opportunity for wetland preservation. Educate developers of the need to comply with the Clean Water Act when planning developments in wetlands.

2.4.7 Goal: Establish an urban forestry program.

Policies:

1. Retain the street tree ordinance. This is a work and action plan that provides clear guidance for planting, maintaining and removing of trees from streets, parks and other public places.
2. Apply for Tree City USA, proclaim Arbor Day in River Heights, (National Arbor Day is the last Friday in April) and plant some new trees.
3. The city budget should allow, through assessment or donation, \$2.00 per capita for urban forestry.

4. The City should encourage residents to replace trash trees with better quality trees.
5. Developers of new areas need to adhere to the green space guidelines for new developments.

2.4.8 Goal: Plan pedestrian and bicycle paths.

Policies:

1. Ensure safe pedestrian traffic to and from River Heights Elementary School and other traffic crossing zones.
2. Plan for a pedestrian/bicycle path where possible.
3. Require that pedestrian and bicycle movement across any new roads be central to the design of any new road projects.

2.4.9 Goal: Plan for a small commercial zone.

Policies:

1. The commercial zone shall be adequately buffered from all residential zones so that noise, lighting, and traffic that may be generated by a commercial zone does not significantly impact residential zones.
2. The commercial zone must not cause a significant burden on City services.
3. The general purpose of commercial zoning is to promote the general welfare and sound economic development of River Heights City and to encourage the best use of land in areas most appropriate for the location of commercial establishments. Toward that end, separate zoning areas are established in which specified land uses may be permitted. Two different commercial areas in the community: Commercial and Mixed-use, will best serve to define commercial enterprises which will conform to the unique physical and geographic settings of two different locals within the City. The Commercial zone will comprise the southwest area of River Heights that abuts a Providence City boundary line. The Mixed-use zone has a separate set of bylaws unique to its neighborhood and its location in the Riverdale area of River Heights. Both the Commercial and Mixed-use areas were created to help better achieve planning goals expressed by the community; the bylaws for each responding to and addressing the unique conditions and circumstances of each area.

A. Commercial Zone:

The main purpose of the Commercial zone is to make best use of land situated near main collector streets and highways. Allowed in the Commercial zone are some commercial uses that offer services and products typically found along roads with a high amount of traffic.

B. Mixed-use Zone:

The purpose of the Mixed-use zone is to shape a village environment with economic vitality, community orientation and mixed-use environment in the 100 East Area. A village environment is characterized by pleasant architectural styles, attractive streetscapes, intimate pedestrian atmosphere, and a true mixed-use environment. This area can be a place where people may comfortably grab a bite to eat, make a variety of stops for business and pleasure, and converse with friends and acquaintances. It is desirable that the area's streetscape reflect a pedestrian orientation rather than one that serves the automobile.

3 TRANSPORTATION

The transportation portion of the River Heights General Plan is challenging in that the city is a destination only for those who live here. Many more must travel the streets to arrive at their respective destinations. As Providence and Millville continue to grow and, especially after 100 East is completed, more traffic will pass through and affect River Heights, thus requiring planning for this impact.

The Cache Metropolitan Planning Organization (CMPO) is a consortium of city and county governments in the Logan Urbanized Area that conducts transportation planning to provide a comprehensive, coordinated and continuing approach. The CMPO (www.cachempo.org) was formed in 1992 to carry out the federally mandated metropolitan planning process so the Logan Urbanized Area can receive federal funds for improving transportation facilities and services. River Heights is part of the CMPO. The Mayor of River Heights sits on the executive committee of the CMPO, as do all of the mayors in the Logan urbanized area.

The CMPO has developed the five-year Transportation Improvement Program (TIP). It is a six-year program which plans for the development of collector type roads of regional importance, highway, transit, pedestrian, and bicycle projects for urbanized areas. The construction of 100 East going south from 300 South to Providence is imminent and will have a significant and evolving impact on River Heights over the next five to 10 years. At the writing of this document River Height's officials are studying the project, working with Logan City officials and designing new zoning ordinances for that area.

There is an improvement plan in place for 200 East in Logan City from 300 South to 1400 North. Improvements to 200 East from 300 South in Logan extending to 100 North in Providence will involve River Heights; therefore the City will need to plan accordingly.

3.1 TRANSPORTATION GOALS AND RECOMMENDATIONS

3.1.1 Goal: River Heights should be a community with adequate streets to effectively move traffic through residential neighborhoods and through the city. The City should plan, design, and enhance pedestrian walkways and bicycle paths.

Policies:

1. Local neighborhood streets should have at least a 50 foot right-of-way.
2. All identified collector streets should have at least a 60 foot right of way. Existing collector streets that are less than 60 feet wide should be upgraded whenever possible.
3. All collector streets should have sidewalks on both sides of the street, curb and gutter, and a five to eight foot planting strip.
4. The widening of roads and rights-of-way should be accomplished sensitively within residential areas. Mitigating measures should be taken to reduce the impact of enlarged roadways.
5. On-street parking will be regulated by ordinance.

3.1.2 Goal: Build sidewalks in the existing developed areas of the city.

Policy: Develop a systematic plan to install sidewalks and curbs and gutters (where appropriate). This should be on a cost sharing basis with adjacent property owners. In new subdivisions or developments, however, the cost of sidewalks and curb and gutter will be the sole responsibility of developers and subdividers.

3.1.3 Goal: Local and trans-city traffic should be able to move throughout the city safely and effectively. As much as possible, collector streets should be adequate so as not to concentrate traffic on only a few streets.

Policies:

1. The following streets, either existing or as they are developed in the future, are to be collector streets:
 - A. 400 East from 600 South to 300 South
 - B. 600 East
 - C. 1000 East
 - D. 600 South between 400 East and 1000 East
 - E. 700 South from Highway 89 to 600 East
 - F. River Heights Blvd. from 400 East to 1000 East
2. A right-of-way should be preserved for the following new collector and/or neighborhood streets:
 - A. 200 East from 300 South extending south arcing toward and intersecting 100 East at approximately 650 South
 - B. 500 South from approximately 100 to 300 East
3. A right-of-way should be preserved for the following new neighborhood streets:
 - A. 700 East between 400 South and 600 South
 - B. 400 South from 750 East to 1000 East (this right-of-way is also required to protect access to a 10 inch water line)
4. Provide access from Summerwild to Riverdale Area
5. Collector roads should have controlled access, meaning no houses fronting the street in all new subdivisions.
6. Participate in regional transportation planning by working with the Cache Metropolitan Planning Organization (CMPO).

3.1.4 Goal: River Heights should improve and investigate additional routes and stops providing access to mass transit.

Policy: Maintain communication and contact with the Transit District, via a liaison, regarding the needs of River Heights City's riders.

4 INFRASTRUCTURE AND CITY UTILITIES

This section describes historical infrastructure information, current infrastructure and utility conditions, and recommendations to guide infrastructure and utility planning, capital improvements budgeting, and infrastructure maintenance.

4.1 WATER

4.1.1 Historical Information

The drought in 1934 resulted in the Utah Drought Agency drilling two wells in the River Heights area to be used for late-season agricultural irrigation. Each was located adjacent to one of the two canals now traversing the City. A year later the state assigned the upper well to the City at no cost. Years later the City purchased the lower well from the Providence-Pioneer Irrigation Company. A third well was drilled in 1980 by the City.

4.1.2 Present Condition

Information about the River Heights water system is provided. It is intended as a brief outline of the current water system that can be used to make some general assumptions and make general projections. Table 3 details the City's water system.

Currently River Heights City acquires water from three different wells which charge two reservoir tanks. By today's pumping capacity and availability of groundwater to pump and use, it appears River Heights has the capacity to deliver adequate water to the current residents and should be able to provide enough for anticipated growth. Please refer to the following table.

Source of water supply	3 wells
Number of connections	539
Reservoir capacity	1,500,000 gallons
Average daily use	591,000 gallons
Peak daily use (summer)	1,420,000 gallons per day
Peak operating capacity	3,456,000 gallons per day
Estimated number of connections that can be served with water supply	2,000 (exclusive of water rights pumping capabilities, only water available in the wells)
Total number of projected connections as per land use recommendation	1150
Present water rights	Approx. 8.5 cubic feet per second
Projected summer peak use requirements:	
at 600 connections	1,582,200 gallons per day
at 800 connections	2,109,600 gallons per day
at 1,000 connections	2,637,000 gallons per day

Table 3

It would be prudent for River Heights City officials to be mindful of the possible effects of prolonged drought and unanticipated growth via high density-housing (PUD, condominiums, apartments), either or both of which could introduce the need for more water in the future.

4.1.3 Secondary Water System

For over 100 years, Providence-Logan Irrigation company water has sub-irrigated the city, watered and grown its many trees and provided relief to culinary supplies by its secondary use of irrigating fields, gardens and lawns. River Heights City owns and uses a number of shares in the company to water the Heber Olson Park. It also relies on the canals to carry storm water runoff. However, currently the irrigation company has infrastructure problems. The old flume needs to be replaced with a new delivery structure. Should this source of water cease it will put a greater demand on the City's culinary system.

From a planning perspective, City officials understand the value of retaining, supporting, and or maintaining interest in the irrigation company as a resource which could provide a direct benefit to the City through reduced culinary demand, shade trees watering, etc. and also provide the City bargaining power if they were to be involved in water negotiations with other entities as growth further increases the rising demand for water throughout Northern Utah.

4.1.4 Water Supply and Use

The City has applied for the rights to an additional three cubic feet per second from its current wells. The application has not been approved yet. This would allow for 565 more connections for a total of 1,655 connections.

The State of Utah Division of Drinking Water establishes standards for storage capacity for public water systems. They recommend storage capacity of about 800 gallons per residential connection. At that rate the River Heights reservoirs will accommodate approximately 1,875 connections.

4.1.5 Proposals to Enhance Water Sources

In recent years considerable attention has been focused on the relationship of ground water to surface water in the Bear River drainage. There is considerable debate going on at this time concerning how much the drawing or pumping of sub-surface water ultimately affects the flow of springs and other sources that feed the Bear River system. Water rights in Utah are determined by a priority system, basically first come, first served. River Heights' wells have priority rights of 1934, 1964, and 1980. This compares with three large water users in Box Elder County with rights dating from 1889 to 1923. At times during the late part of the summer and on low water years these entities have a hard time filling their rights on the river. Because of this shortfall, River Heights could face the possibility of having to turn its pumps off in a drought situation because of a call for water by senior rights holders. This has never happened to date but neither has it been discussed and debated like it is now.

The State Engineer for the State of Utah is the official charged with overseeing and regulating water appropriations. The State Engineer's Office has not approved any new applications for Cache County for at least four years because of the on going debate about how much the ground water and surface water in the area are related. The City has an application pending for

an additional three CFS but it is being held by the State Engineer without approval at this date (along with applications for about 400 CFS from other cities in the valley).

If it is decided by the State Engineer that the wells do indeed affect surface water flows, then in order to get any new appropriation from the state a city would have to replace the water (or some portion of it) it is expected to draw. The consequences of this policy are: that in order to grow more than its current water rights can provide, the City of River Heights will be obligated to find other sources of water or water rights. Also, holders of more senior rights could force the City and others to provide some replacement water to cover the rights it is already using. Part of the reason the State is considering a dam on the Bear River is to provide other water for replacement purposes for cities and other water users that may need to replace water in the future or to cover currently used rights that are junior to more senior rights holders on the Bear River System.

Another way to protect rights is to acquire other, more senior rights, and transfer them to the City's wells. This is an acceptable and often times more economical way to protect and enhance current water rights. One way to accomplish this would be by acquiring all or part of the rights from the Providence-Logan Irrigation Company or other canal company and transferring them to the City's well.

The State of Utah has recently required all public water systems to complete a drinking water source protection study and create a plan of action to protect drinking water from contamination at its source. LarWest International Engineering has completed the study and has submitted it to the City along with a plan entitled: *Potential Contamination Source Inventory and Management program for River Heights City*. There are preventative steps to be taken now regularly in the future to warn citizens of potential source contamination. It should be a community effort.

4.1.6 Summary

The City has the water "in the ground" and water rights to serve about 1,100 residential connections. By adding additional pumps and receiving approval on the rights that are applied for, the City could serve about 1,700 residential connections. This is more than needed for the projected growth for the City. The addition of large irrigation users, or use of the city system to irrigate areas now served by the Providence-Logan Irrigation Company system, should it cease to provide water to its users, could certainly alter this figure.

Capacity of the reservoirs presently will accommodate about 1,875 residential connections. The City owns a new reservoir site on a bluff just south of the Dry Canyon entrance east of Logan.

4.2 SEWER

River Heights contracted with Logan City for sewage treatment in the mid 1970s. The collection system was installed and is now maintained by River Heights City. A February 1994 study conducted by Wallace Jibson, P.E. concludes that the River Heights system is adequate for the area that it presently serves and for any new development of areas east of 600 East and north of about 700 South that are anticipated by the proposed general plan. A sewer line was installed along 800 South in 2004 to serve the needs of development in that area. This line will also service the needs of future development east of 600 East.

4.2.1 Water and Sewer Recommendations

1. The City should develop a policy whereby developers are required to transfer their water stock to the City as development is approved.
2. The City should develop a five – eight year capital projects improvement and development plan for the water and sewer utilities. The plan should prioritize projects and identify methods of paying for them. It should be approved by the city council and updated annually.
3. If it becomes necessary, the City should establish a limit for building permits well in advance of the time of reaching the limit that can be serviced by the present water storage capacity. This will allow all prospective developers and home buyers ample notice of the intent of the City to control development.
4. The City should determine and implement the method of financing additions to the water and sewer systems. Relying on impact fees, water sales revenues or a combination of the two philosophies should be considered.
5. The City should develop a policy on water and sewer main line extensions – whether they shall be the exclusive responsibility of the City or the developer, or both, and under which circumstances the City will participate.
6. Implement management programs to control potential water sources contamination as indicated in the *Potential Contamination Source Inventory and Management Program for River Heights City*.
7. The City must not allow the ten inch water line from the City's reservoir, between 1000 East and 600 East, to be covered by any development. Much of this water line is buried in an undeveloped part of River Heights. Any development in that area must leave an unobstructed right-of-way to maintain that water line.

4.3 STORM WATER

Pursuant to existing subdivision regulations, developers are required to provide uniform and adequate facilities and improvements within developing subdivisions for storm water drainage. While this subdivision requirement provides for the collection of storm water within the subdivision, the uniform disposal of storm water is an issue that requires a city wide plan.

Currently, subdividers and developers are required to receive approval from the appropriate ditch or canal company before any storm water is channeled through a ditch, canal or waterway under the jurisdiction of the company. While the current storm water disposal method works under the existing network of ditches and waterways, in-fill residential development may eliminate agricultural areas and the need for ditches, etc. The city's liability exposure will require the closing or covering of those canals and waterways thus restricting the capacity of a storm drain system based only upon irrigation ditches and canals.

Future development should minimize the dependency of storm water systems on canal company ditches and waterways. Use of such systems should be limited, where possible, to piped systems with controlled inflow to the system.

Additionally, with potential residential development of the area south of 700 South from 100 East to 1000 East, a city wide or regional storm drain collection and disposal system could be incrementally installed to minimize costs and use the gradient of the Spring Creek drainage. The City should pursue a citywide or regional storm water plan which could provide direction

regarding the scope, the advisability and general design parameters of a proposed storm water handling facility and the area which said facility would serve.

4.3.1 Storm Water Recommendations

A city wide or specific area storm water plan should be maintained and provide the following:

1. Master Storm Water Management Plan;
2. Review standards and specifications for drainage facilities and improvements, etc. to verify conformance with National Pollutant Discharge Elimination System (NPDES) requirements for the Cache County urbanized area;
3. Provisions outlining the distinctions between collection and disposal systems and policies outlining the funding requirements for the developer and the City;
4. Review and implement appropriate recommendations from the Cache County Urbanized Area Storm Water Analysis completed in 2003 including maintenance, notification, and best management practice (BMP) procedures; and
5. Formulation of funding alternatives and determination of when and how said funding alternative should be adopted and implemented. A considerable number of funding alternatives exist and should be considered as to which can accommodate the varied interests of the existing or developed areas as well as developing areas, including but not limited to, impact fees, special improvement district assessments, temporary sewer surcharge, general budget appropriations, Community Development Block Grant Funds, etc.

4.4 ELECTRIC UTILITIES

Rocky Mountain Power (RMP) provides electric utility service to River Heights under a franchise agreement. The City and Rocky Mountain Power have had, and continue to have, a good working relationship. In the future, deregulation of electric utilities should pose few, if any, serious problems or issues for River Heights. Other future issues on the horizon might include direct-line reading of electrical meters and the possibility of the city's direct line reading of electronic water meters. The benefit cost analysis of such a system requiring a new or retrofitted electronic water meter will obviously have to be carefully evaluated.

Opposition to unsightly overhead electrical wires has become a political issue in most Utah communities. State statutes allow electric utilities to install overhead wires as the standard and if the community prefers buried lines then the community must bear the cost difference. Some designated locations within River Heights may warrant underground lines. City officials should visually survey the community and determine if such public policy and accompanying expense is appropriate for any specific location.

The franchise agreement additionally provides for underground services in developing subdivisions and overhead service in existing neighborhoods. Developers and city officials are encouraged to designate streetlight locations early in the subdivision review process so costs of streetlight installation by RMP can be economically included when underground residential services are installed. The City and RMP should agree to a consistent lighting fixture and pole type based on street, intersection standards, and conforming to the River Heights City Lighting Ordinance. Street lighting in developing subdivisions will be served by underground wiring.

4.5 EASEMENTS

Utility easements are and should consistently be required on all subdivision plats and made part of the official record. During the construction process and thereafter, the easements should be consistently protected by the city's best enforcement method. Whenever possible, city representatives should inform property owners regarding the existence of easements, and protect said easements from encroachments. Officials considering building permits, fence permits and requests for variances, etc., should consider utility easements on every application.

4.5.1 Location of Service Lines

Cable and telephone service lines in developing subdivisions should be installed underground to enhance the value, appreciation, opportunities of land and buildings, reduce visual proliferation of poles, wires and equipment, and reduce maintenance costs. Respective city officials should make valiant attempts to reduce the visual proliferation of overhead lines, poles and equipment in existing neighborhoods, especially along major transportation corridors and within prime and identified vistas/view sheds.

4.5.2 Electric, Cable, and Telephone Utility Recommendations

1. The City should continue to require underground services in developing subdivisions.
2. The City should review locations for street lights in developing subdivisions early in the process so RMP can economically install street lights while residential underground work is commencing.
3. The City should determine if certain designated areas warrant the expense of burying overhead lines. Special attention should be given to major transportation corridors and areas with significant vistas. The goal is to reduce the proliferation of overhead lines, poles, and equipment.
4. The City should continue to require utility easements and protect them from encroachment.
5. As new water meters are purchased, the City should determine the feasibility of electronic meter reading.

5 AFFORDABLE HOUSING

5.1 MODERATE INCOME HOUSING PLAN

The availability of moderate income housing is an issue of City-wide concern. To this end River Heights City should strive toward a reasonable opportunity for a variety of housing, including moderate income housing, to meet the needs of people desiring to live in River Heights.

The plan must address the following five issues:

1. An estimate of the existing supply of moderate income housing located within the municipality;
2. An estimate of the need for moderate income housing in the municipality for the next five years as revised annually;
3. A survey of total residential zoning;
4. An evaluation of how existing zoning densities affect opportunities for moderate income housing; and
5. A description of the municipality's program to encourage an adequate supply of moderate income housing.

Moderate income housing is defined by the Utah State Code as: "...housing occupied or reserved for occupancy by households with a gross household income equal to or less than 80% of the median gross income..." of River Heights residents.

5.1.1 Existing Supply of Moderate Income Housing

The median income for a household in River Heights is \$53,750. The average household in River Heights has 3.3 people. These figures are from the 2000 census report, the latest year for which this data is available.

As reported in the 2000 census, River Heights has 493 total housing units in the City. These accommodations were divided as follows: 479 occupied; 380 owner-occupied houses; 74 rental units.

The 2000 census estimated River Heights has 463 single-family homes. If more than 30% of a household's income is spent on housing, funds for other necessities such as food, transportation, and health care may be insufficient. Therefore, the maximum amount that should be spent for housing (maximum monthly rent or mortgage plus utilities) for the households with less than 80% of the median income would be \$1,075. As of the 2000 census report approximately 25% of the housing in River Heights cost less than \$1,075 per month.

5.1.2 Estimated Need of Moderate Income Housing over the Next Five Years

River Heights' population in 2000 was 1,495. Based on the recent growth rate of 1.0% per year, River Heights will add 165 citizens by 2010 increasing the population to approximately 1,660 persons. This equates to 50 new households since 2000 based on an average household size of 3.3 individuals (as per current population estimates).

The Utah Department of Community and Economic Development developed a mathematical computer model to estimate the existing and projected affordable housing needs for a municipality. The computer model uses a spreadsheet program to make descriptive statistics, as provided by the State, to estimate the affordable housing needs. Inputs to the model included the number of houses in River Heights, the number of rental units, the monthly housing costs as a percentage of income, the number of new houses built, income distribution, population projections, housing stock assumptions, and mortgage assumptions.

The findings of that model indicated there was a sufficient supply of affordable housing for households earning 80% of the median income at the time.

5.1.3 Survey of Total Residential Zoning

River Heights is a community of mostly single family homes, with a few twin homes and apartment units. The zones in which residential living is most likely are R-1-8, R-1-10, R-1-12 and Mixed Use. Within residential zones there is an allowance for Planned Unit Developments which would effectively increase residential housing density. River Heights also has a small Agricultural zone.

5.1.4 Affect of Existing Zoning on Opportunities for Moderate Income Housing

It appears from the data received from the model that River Heights zoning densities has allowed for sufficient housing for moderate income families. River Heights is unique due to its small size (approximately ½ square mile area). And although there is a Mixed Use allowance on the west side of town, there are currently no commercial businesses operating which would provide jobs.

Additionally, River Heights is surrounded by the communities of Logan and Providence which currently have excessive low to moderate income apartments available for rent within 80% of the median income. Families making 50% of the median income, who will typically be renters, may be affected by zoning, but may also be impacted by market conditions beyond the control of the City. Families making 30% of the median income will need federal or state government housing assistance and are beyond the scope of zoning influence.

5.1.5 Program to Encourage an Adequate Supply of Moderate Income Housing (See Affordable Housing Goals and Policies below)

5.2 AFFORDABLE HOUSING GOALS AND RECOMMENDATIONS

5.2.1 Goal: Provide moderate and low income home ownership opportunities.

Policy: Support the Bear River Association of Governments' existing low income home buyer programs.

5.2.2 Goal: Assist low income homeowners in financing home repairs.

Policy: Help low income homeowners secure minor and major home repair loans from the Bear River Association of Governments (BRAG). BRAG can make minor repair loans; they also have a program for making loans for major home repairs.

5.2.3 Goal: Maintain the supply of affordable housing units

Policies:

1. Retain the R-1-8 zone which allows single family homes on lots of 8,000 square feet.
2. Continue to allow manufactured homes in the City.
3. Allow owners who occupy their home to rent their basement or similar apartments in the same home.

5.3 REFERENCES

1. General Plan for River Heights City, August 1999
2. 2000 Census Report
3. CMPO Transportation Improvement Program (TIP) 2007-2012
4. "Geologic Map of the Logan 7.5' Quadrangle, Cache County, Utah", by James P. Evans, James P. McCalpin, and David C. Holmes. Miscellaneous Publication 96-1, 196, Utah Geological Survey, a division of Utah Department of Natural Resources.
5. "North Ogden City General Plan", prepared by Bio/West, Inc., Logan, Utah. November 1997.

6 APPENDICES

6.1 APPENDIX A GEOLOGY OF RIVER HEIGHTS

River Heights lies on Quaternary units that were deposited in the deltas, shorelines, and the lake bottom of Lake Bonneville (16,000 to 15,000 years ago). The River Heights City center lies on deltaic deposits from the younger, Provo shoreline of Lake Bonneville (14,500 to 13,500) years ago. Quaternary deposits east of River Heights include alluvial stream and fan deposits near the mountain front.

The mountain front of the Bear River Range east of River Heights formed by the East Cache Fault, is an active normal fault which is approximately 48 miles long. This fault forms the boundary between Cache Valley and the Bear River Range. Although this fault runs through parts of Logan City, and is visible on the fairways of the Logan Golf and Country Club, it is east of River Heights near the base of the mountains.

A study by Evans, McCalpin, and Holmes, Department of Geology, Utah State University, published in 1996 states that geologic hazards in this area include flooding, mass wasting, and earthquakes. That same study, however, indicates that River Heights is on ground with few geological hazards, with the exception of earthquakes.

River Heights is on four Quaternary units:

Qal – Clast-supported pebble and cobble gravel in a matrix of sand, silt, and minor clay, with thin sand lenses; located on modern floodplains and low terraces. This area covers the Riverdale section of the City.

Qlf – Undivided fine-grained Lake Bonneville deposits. This is a small section in River Heights east of 700 South, below Summerwild Avenue.

Qlpd – Deltaic deposits related to the Provo and younger shorelines - Clast supported pebble and cobble gravel in a matrix of sand and minor silt, with thins, sand beds; mostly deposited at the time of the Bonneville flood. This area covers most of the City's center, surrounding the City office building and the area surrounding the Providence cemetery.

Qlps – Lacustrine sand and silt related to Provo and younger shorelines - Nearshore deposits of coarse to fine sand, silt, and minor clay. This area covers the area surrounding the new elementary school.

6.1.1 Geologic Hazards

None of these Quaternary units, as discussed by Evans, McCalpin, and Holmes, are said to be unsuitable to build on. Further, no problem soils (soils with large amounts of clays that have a high shrinking-swelling potential due to hydration and drying) were found during their investigation (Evans, McCalpin, & Holmes, 1996).

6.1.1.1 Mass Wasting

It is important to note, however, that other Quaternary units near River Heights are unsuitable for building due to a potential for mass wasting. This is a process in which rock, soil, and debris move down slope under the influence of gravity. Mapped complex slope failures are located on both sides of the Logan River where steep slopes of fine-grained Lake Bonneville deposits have failed. This zone exists along the north and south sides of the Logan River for about two miles downstream from the mouth of Logan Canyon. The northern boundary of River Heights is close to this zone.

The Evans and McCaplin study also says that alluvial fans are potential hazard sites. Several alluvial fans are east of River Heights, closer to the mountains.

6.1.1.2 Earthquakes

Because River Heights (and all of Cache Valley) is close to the East Cache Fault, which is an active fault, all of Cache Valley is at risk for an earthquake. Ground shaking due to earthquakes may pose a significant risk to River Heights.

6.1.1.2 Flood Hazards

Flood hazards in River Heights could occur along the Logan River in the Riverdale area or along Spring Creek. Determination of future flood risk is "notoriously poor" for canyon mouths in Utah. Melt-induced floods and peak discharges for the Logan River occurred May 24, 1907 (2,480 cfs) and May 31, 1984 (1,980 cfs). (Evans, McCaplin, & Holmes, 1996).

6.2 APPENDIX B BIRD SPECIES FOUND ALONG THE LOGAN RIVER CORRIDOR IN RIVER HEIGHTS

Species	Residency
American Kestrel (<i>Falco sparverius</i>)	year round
American Dipper (<i>Cinclus mexicanus</i>)	year round
Bald Eagle (<i>Haliaeetus leucocephalus</i>)*	winter
Belted Kingfisher (<i>Ceryle alcyon</i>)	year round
Black-headed Grosbeak (<i>Pheucticus melanocephalus</i>)	migrating
Cooper's Hawk (<i>Accipiter cooperii</i>)	migrating
Fox Sparrow (<i>Passerella illaca</i>)	migrating
Great Horned Owl (<i>Bubo virginianus</i>)	year round
Hermit Thrush (<i>Catharus guttatus</i>)	year round
House Wren (<i>Troglodytes aedon</i>)	migrating
MacGillivray's Warbler (<i>Oporornis tolmie/</i>)	migrating
Northern Goshawk (<i>Accipiter gentilis</i>)	winter
Red-tailed Hawk (<i>Buteo jamaicensis</i>)	year round
Rough-legged Hawk (<i>Buteo lagopus</i>)	winter
Rufous-sided Towhee (<i>Pipilo erythrophthalmus</i>)	year round
Sharp-shinned Hawk (<i>Accipiter striatus</i>)	migrating
Swallow species	migrating and year round
Townsend's Solitaire (<i>Myadestes townsendi</i>)	winter
Western Screech-Owl (<i>Otus kennicotti</i> J)	year round
Western Tanager (<i>Piranga ludoviciana</i>)	migrating
White-breasted Nuthatch (<i>Sitta carolinensis</i>)	winter
White-crowned Sparrow (<i>Zonotrichia leucophrys</i>)	migrating
Wilson's Warbler (<i>Wilsonia pusilla</i>)	migrating
Yellow Warbler (<i>Dendroica petechia</i>)	migrating
Yellow-breasted Chat (<i>Icteria virens</i>)	migrating
Yellow-rumped Warbler (<i>Dendroia coronata</i>)	migrating

*Two bald eagles have had a winter roost along the Logan River, in River Heights, since 1989. Bald eagles are listed as a threatened species, in Utah, on U.S. Fish and Wildlife Service's endangered species list. The eagles arrive in November and leave in March.

6.3 APPENDIX C PLANT SPECIES FOUND ALONG THE LOGAN RIVER

Common Name	Botanical Name
Fremont Cottonwood Trees	<i>Populus fremontii</i>
Narrow-leaf Cottonwood Trees	<i>Populus angustifolia</i>
Water Birch Trees	<i>Betula occidentalis</i>
Dogwoods	<i>Comus sericea</i>
Sandbar Willows	<i>Salix exigua</i>
Willow species	<i>Salix spp.</i>
Wild Rose	<i>Rosa woodsii</i>
Choke Cherry	<i>Prunus virginiana var. melanocarpa</i>

6.4 APPENDIX D MAPS

- 6.4.1 City Boundary Map
- 6.4.2 General Plan Land Use Map
- 6.4.3 General Plan Land Use and Sensitive Area Map
- 6.4.4 Transportation Master Plan Map
- 6.4.5 Trail and Park Master Plan Map
- 6.4.6 Annexation Declaration Map (for reference only)