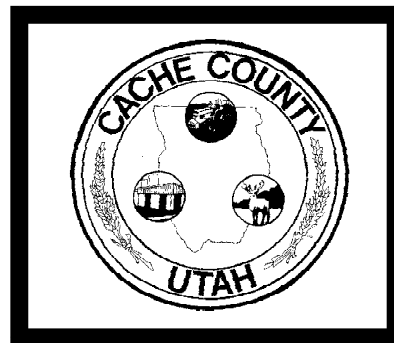
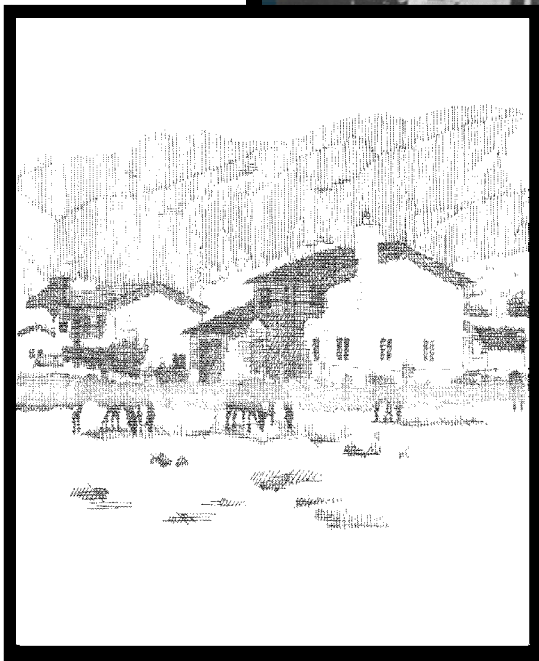
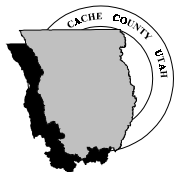


Cache County Countywide Comprehensive Plan



Adopted January 27, 1998



Prepared by:
Countywide Planning &
Development Office

CACHE COUNTY
CORPORATION

M. LYNN LEMON
COUNTY EXECUTIVE/SURVEYOR

120 NORTH 100 WEST
LOGAN, UTAH 84321
Tel 435-752-5935
Fax 752-9169

COUNTY COUNCIL

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RESOLUTION NO. 98-05

A RESOLUTION ADOPTING A CACHE COUNTY-WIDE
COMPREHENSIVE PLAN AND LAND USE ELEMENT.

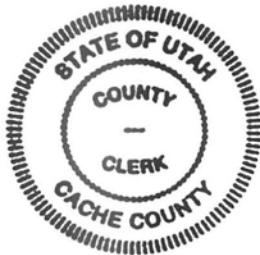
The County Council of Cache County, Utah, in a regular meeting, lawful notice of which has been given, pursuant to Utah Code Ann. §17-27-303, finds that a public hearing has been held on a proposed Cache County-Wide Comprehensive Plan and Land Use Element, and that the same should be adopted.

THEREFORE, the Cache County Council hereby adopts the following Resolution:

1. The proposed Cache County-Wide Comprehensive Plan and Land Use Element, as recommended by the Cache County Planning Commission, is hereby adopted, without amendment.
2. The Cache County-Wide Comprehensive Plan and Land Use Element shall be an advisory guide for land use decisions made under the existing Cache County Land Use Ordinance.
3. This Resolution shall become effective immediately upon adoption.

This resolution was adopted by the Cache County Council on the 27th day of January, 1998.

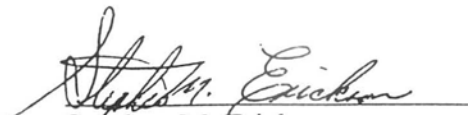
CACHE COUNTY COUNCIL



By:


Darrel L. Gibbons
Chairman

ATTEST:


Stephen M. Erickson
Cache County Clerk

COMPREHENSIVE PLAN

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-INTRODUCTION

We perform planning activities on a daily basis. We plan our day at work, at home, or our leisure time. We plan for our future by setting personal or family goals. These goals may be as simple as the purchase of a new car; however, the process and events to attain the goal may be complex and difficult.

Citizens of Cache County have expressed a need for a countywide plan of land use, transportation, and services to meet the growing needs of the County. The planning process for Cache County is not so different from our individual planning process. However, instead of planning for a few we must plan for current and future citizens. This planning process can achieve order and balance within the County as the citizen's work together to define goals in the Comprehensive Plan.

To insure proper planning for Cache County, the County Council and Planning Commissions have begun a long-range planning process to guide the future development of the community. The primary purpose of the plan is to recommend orderly future patterns of land use and transportation as well as determine the need for public facilities and services to meet the anticipated growth of the area. Cache County's growth must be viewed in the light of the capacity of the county and communities to provide services.

The planning process should result in a plan that represents the best expression of the community's public interest and at the same time provide protection of the private interest. This plan is intended to be a guide to which public officials will refer when important decisions must be made that will affect the quality of life and environment of Cache County. To accomplish this, the plan and planning process must be comprehensive and continuous so that all aspects of development are covered and becomes an integral part of the decision making process.

CACHE COUNTY HISTORY

Cache County is one of three northern counties of Utah along the southern border of Idaho; Box Elder and Rich are the other two. The County covers approximately 1,174 square miles within its jurisdictional boundary. Cache County is divided into two distinct and different areas, the valley and mountainous areas.

Cache Valley sits at an elevation of approximately 4,600 feet above sea level and is surrounded on three sides by the Bear River Range. The valley is about 60 miles long and 15 miles wide. Its land is fertile, producing various farm crops. Cache Valley has always been known for its fine dairy herds. The agriculture industry has played an important part in the history of the Valley and County. There are 19 incorporated communities with Logan City being the largest.

The Wellsville Mountain Range is one of the narrowest and steepest in North America. This range averages about five miles wide at its base and ranges from 4,300 to 9,372 feet in elevation and forms the western boundary of Cache Valley. The eastern boundary of Cache Valley is part of the Bear River Mountain Range, part of the most valuable watershed lands found east of Utah's most populous valleys between Logan and Salt Lake City.

Early inhabitants of the Cache Valley were the nomadic Shoshoni Indians who hunted and fished in “Willow Valley” named for the great willow trees that lined the streams and river banks. The valley was a good hunting area for the Indians providing buffalo, elk, deer, and antelope for food and clothing.

Mountain men, found the streams and rivers ideal for trapping beaver. Such famous trappers include John Weber, Jim Bridger, Peter Skene Ogden, Warren Angus Ferris, and Major “Black” Harris. In 1824, John Weber and young Jim Bridger with the Rocky Mountain Company entered Cache Valley and made their winter quarters along the Cub River. They were followed by Peter Skene Ogden of the Hudson Bay Company in 1825. There probably was not a year between 1824 and 1885 when trappers or explorers did not visit Cache Valley.

The name Cache Valley comes from the large number of “caches” for furs and stores. “Cache” is a French word that means ‘to hide.’ The mountain men would dig a hole or pit six feet deep with a smaller opening to store their furs acquired from trapping. A story has it that a fur trapper was buried alive when his just-completed “cache” collapsed. The man’s body was never recovered and the trappers called it Cache Valley in his honor.

In addition to the trappers and mountain men that explored and visited Cache Valley, there were a number of famous explorers that visited and surveyed the area. In 1843, John C. Fremont visited the Valley of the Bear River and followed its course to the northern part of the Cache Valley. Howard Stansbury, of the Corps of the Topographical Engineers of the U.S. Army, made one of the earliest surveys of Cache Valley in August 1847.

In 1853, the first settlers came to Cache Valley. It seems that all the settlements were chosen and located where water was available. In 1855, Brigham Young sent 2,000 church-owned cattle, 1,000 privately-owned animals, and a group of men north to Cache Valley. The group decided to settle on the Blacksmith Fork River, one mile northeast of Nibley. They built the first log cabin on this site and called the area Elkhorn Ranch because of the large elk heads and antlers hanging over the main gate to the ranch. That winter the livestock suffered because of lack of feed. An attempt was made to drive the animals into the Salt Lake Valley by way of Beaver Dam, in modern day Box Elder County; however, only 420 cattle survived.

After this first failure, Mormon leaders sent another group led by Peter Maughan. Their settlement was located at the present site of Wellsville and was called Maughan’s Fort. Many different groups followed and settled on sites where many communities are located today.

The influx of white men caused conflict with the Indians. They harassed the settlers with petty thievery and occasional attacks on isolated farms. Peter Maughan advised the pioneers to locate in the Southern end of Cache Valley for protection. Even after these settlements were founded, the settlers would retreat to Maughan’s Fort when the Indians threatened. The Battle of Bear River, the largest Indian battle this side of the Mississippi, was fought in January 1863 north of present-day Preston, Idaho. A treaty was signed in Brigham City which ended most problems with the Indians.

The Organic Act, passed by the U.S. Congress and signed by President Millard Fillmore September 9, 1850, conferred upon the governor and legislative body of the new territory, Utah, the power to appoint or provide for elections for “all townships, districts, and county officers.” In 1851, the first territorial legislature passed legislation creating counties and providing the necessary officials. This form of

county government existed until 1896 when Utah became a state. The original Cache County took in a much larger area than today's County. The north portion of the Cache County was lost when Idaho became a State in 1890.

1860 was "boom" time for the Cache Valley. A large number of new people came into the Valley because of the agricultural and water potential. In 1859, Peter Maughan wrote to the Desert Newspaper describing the Valley. Brigham Young added to it, "No other valley in the territory is equal to this. This has been my opinion ever since I first saw this valley." Much of this growth spurred development of many of the communities of today. The Territorial Surveyor, Jesse Fox, surveyed the town sites and fields for most of the Cache County communities. As the population in Cache County continued to grow, additional surveying was done by Jared Martineau. Much of this survey work transformed the forts of 1860 into the cities of 1865. These new communities, including Logan, Providence, Mendon, Hyrum, Smithfield, Richmond, Millville, Franklin, Clarkston, Weston and Paradise, were surveyed like Salt Lake City with 10-acre blocks subdivided into 10 one-acre parcels.

From 1880 to 1910 has been called Cache Valley's "Golden Age." Much of the development today can be traced back to this period of change in Cache Valley. The communities of Cache Valley played a very important role in the life of the residents of Cache Valley. "The principal institution of the period from 1880-1910 was the local town, community, or village." Cache Valley was made up of village units and life centered in the villages. People took pride in their village, its peculiarities, its heros, and its accomplishments. "Each community had its general store, its bank, its creamery, and its sugar factory-- or, at least almost every community . . . Civic pride was an important motivating force in economic activity and development." (The History of the Valley)

In 1896, Phil Robinson, a British writer, described Cache Valley as "Filled from mountain to mountain with delightful farmsteads." Robinson was right about Cache County being full of farms; according to a "Report of the Governor of Utah, 1895": Cache County's 3,842 farms were the most of any county in the state. A headline in the 1892 Logan Journal called Cache County, "The Granary of Utah--the Loveliest and Grandest Valley in the West." A variety of crops were grown here including wheat, corn, rye, barley, oats, potatoes, beets, hay, and lucern. Fruit was also abundant with apples, peaches, apricots, plums, pears, and grapes being grown. Other farm products included cider, vinegar, sorghum, butter, cheese, and honey.

Over the years, Cache County has maintained a rural, agricultural-based economy; however, the twentieth century has brought increasing urbanization of the County. Today there is a strong, mixed economic base of agricultural and non-agricultural industries. The Logan Urbanized Area was created based on population growth of the 1990 United States Census. Cache County will continue to grow and change as it has throughout the history of this area.

THE COMPREHENSIVE PLAN

This Comprehensive Plan is a written official statement that describes overall goals and strategies for the desirable future development of the County. The Plan contains a detailed list of goals and strategies. T.J. Kent, one of the fathers of city planning theory, describes a comprehensive plan's functions within

the community administrative framework as follows:

- **To improve the physical environment of the community as a setting for human activities.** To make it more functional, beautiful, decent, healthful, interesting, and efficient. 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 community. The intent is to enhance what already exists in the community.
- **To promote the public interest, the interest of the community at large, rather than the interest of individuals or special interest groups within the community.** The comprehensive nature of the plan contributes to this purpose because it facilitates the consideration of relationships between any question pertaining to the overall physical development of the entire community. The plan is based on facts and on studies that attempt to be thorough and impartial. It helps to prevent arbitrary, capricious, and biased actions. The contributions of the Plan to democratic responsible government help to safeguard the public interest.
- **To facilitate the democratic determination and implementation of community policies on physical development.** The Plan is primarily a policy instrument. The Plan constitutes a declaration of long range goals and provides the basis of a program to accomplish the goals. By placing the responsibility for determining policies on the elected officials and providing an opportunity for citizen participation, the Plan facilitates the democratic process.
- **To affect political and technical coordination in community development.** Political coordination signifies that a majority with the community is working toward the same end. Technical coordination means a logical relationship among the physical elements dealt within the Plan and the efficient planning and scheduling of actual improvements so as to avoid conflict, duplication and waste.
- **To inject long range considerations into the determination of short range actions.** In effect, this purpose is intended to achieve coordination through time, to attempt to make sure that today's decisions will lead toward tomorrow's goals. The use of forecasts and the establishment of long range goals are significant features of the general plan. The Plan represents an effort to add the important time dimension to the decision making process.
- **To bring professional and technical knowledge to bear on the making of political decisions concerning the physical development of the community.** The purpose is intended to promote wiser decision making, to achieve informed, constructive government. Through the general Plan, the special knowledge of the professional planner is brought into play in the democratic political process.

The importance of the Comprehensive Plan as a policy document and a general guide to the future development in Cache County should be emphasized. The Plan is often considered to be like a compass. It sets the direction which the County and municipalities should take, but like the hiker in the woods, an obstacle may necessitate a change in direction. The obstacle may even alter the final destination. One should remember, that once the Plan is adopted, it does not become static but is subject to change. The economy, new administrations, and unforeseen events may have an impact on the Plan. Thus, it should be reevaluated from time to time to assure its relevancy.

In Cache County, this process of developing will take multiple years to complete. Much effort was placed on citizen participation during the early stages of the Plan's development. The information collected from citizen involvement has been coupled with the Planning Commission and County Council input as well as staff expertise to develop this final Plan.

ORGANIZATION OF THE PLAN

The Countywide Comprehensive Plan's format is organized into three separate sections. These sections include: (1) Introduction; (2) Implementation Policies; (3) Elements.

Introduction - defines the purpose and mission of the Comprehensive Plan and how it should be used as a planning and decision-making tool for Cache Council and Planning Commission and communities of Cache County. It also discusses the process of reviewing, maintaining, and updating this Plan.

Implementation policies - The Countywide Comprehensive Plan emphasis is on implementation and interconnection of each element. Much of what is discussed in the individual elements should result in encouraging a particular action. As different elements are developed and adopted, this section will be the focal point coordinating the implementation of the goals and strategies from the different elements.

The Implementation Policies section will be developed as a matrix that will identify the different elements. As each element is adopted, their goals and strategies will be added to the matrix and the best implementation strategy will be developed. Generally, the recommendations for implementing these goals and strategies shall be done through special programs, the subdivision and land use ordinance, and capital improvement programs.

Elements - are individual specialized plans within the overall Countywide Comprehensive Plan. The following are the currently proposed individual elements for the Plan: Land Use, Transportation, and Water Management. Additional elements should and will be developed as needed. The elements are broken down into the following five chapters:

- **Introduction** - a brief description of the mission and purpose to the element.
- **Community Profile** - individual technical reports prepared for each element which contain data and information that pertain to a particular subject.
- **Goals and Strategies** - presented at the ending of the document and are supported by the "community profiles."
- **Appendix** - includes the additional information that needs to be included with each element. This section also includes the public input to the plan.
- **Bibliography** - includes a listing of all reference documents and information used in the document.

Because each element will focus on a specialized area, this basic outline may vary slightly. This will be determined by the needs of each element. There will be socioeconomic and demographic data that will develop for one element and be used in another. To reduce redundancy in the Plan, different elements may refer to others for information.

USING THE PLAN

The Utah State Land Use Development and Management Act (*Utah State Code*, Title 17 Counties) provides a basic framework for local planning. The provisions of this law and several court cases indicate that a county should prepare a comprehensive plan to guide its land use decisions and provide for: (1) The present and future needs of the residents, and; (2) The growth and development of the land within the county or any part of the county. The Countywide Comprehensive Plan should represent a road map by which appointed and elected officials manage the future growth and development of Cache County.

The Comprehensive Plan as a Decision-making Tool

As stated above, the Comprehensive Plan is a statement of policy of the local legislative body regarding the desired direction for growth and development in a county. This Plan then becomes a decision-making tool by which all requests and proposals before the Planning Commission and County Council are measured. The planning process, by which the Plan was developed, used an open and participatory process of gathering public input to reflect the public interest.

The Comprehensive Plan and the Land Use Ordinance

The Comprehensive Plan is a planning tool for making policy decisions. The Land Use Ordinance is the instrument by which these policies are implemented. These two planning documents are interwoven. In 1991, the State enabling laws mandated there be consistency between the Comprehensive Plan and the Land Use Ordinance of the County.

MAINTAINING THE COMPREHENSIVE PLAN

Planning is more than the production of a comprehensive plan and regulatory ordinances. It is an ongoing process. For this reason, the planning program adopted needs to be reassessed on a continuing basis. This is to take into account changing conditions in the County as well as new planning concepts as they are developed. It is important to understand that the Countywide Comprehensive Plan is a “Living Document” which grows and changes over time.

Review and Updating Process

The comprehensive planning process is a dynamic one. The initial development and adoption of the Comprehensive Plan and its elements are only the beginning of the total planning process. No sooner has the Plan been completed than the cycle of researching new data, evaluation and analysis of that data, plan formulation and implementation begins anew. A periodic reevaluation process helps to maintain the validity of the goals and policies of the Comprehensive Plan.

The review and updating of the Comprehensive Plan should be an ongoing process. Any minor revisions adopted by the Cache County Planning Commission are recommended to the Cache County Council.

- An annual review of the Comprehensive Plan will be submitted to the Planning Commission for their review in November of each year. As part of this process, a public hearing should be held to receive citizen input.
- On a five-year period, the plan will have an update of all socioeconomic and demographic data to ensure the Plan is current.
- The elements and the Plan will have a total review and rewrite of the document every ten years to extend the term of the Plan.
- All recommended changes to the Comprehensive Plan will be submitted to the Cache County Council for an evaluation, adoption or denial.

Amending the Comprehensive Plan

The amending of the Plan can take two different forms. These are: First, the Cache County Planning Commission/Council can make amendments through an annual review process; and, Second, by a formal request from the public. It is important that these processes exist since this document should deal with changing conditions and shall be used as a decision-making tool for the public policy makers.

The County's annual review process was discussed in detail in the previous section. This section will focus on the public request to change the Plan. From time to time, there will be requests to change the Comprehensive Plan by individuals. The Plan needs to remain flexible enough to change if circumstances warrant. Careful evaluation is necessary to accurately weigh the petitioner's interest and the interest of the community as a whole.

With a written application, accompanying documentation and supporting information, any individual may request that the Comprehensive Plan be changed. Planning Commission members should judge each application on its own merits, without concern of setting a precedent. The following procedure shall be followed:

- The Planning Commission will review each request and base a decision on the evidence provided by the applicant. A recommendation should only be made after a public hearing has been held and overwhelming data is presented to support the belief that the Comprehensive Plan should be modified.
- The Planning Commission will forward a recommendation to the County Council with Findings of Fact for their review of the proposal. Another public hearing should be held to receive public input.
- To limit repetitive requests for changing the Comprehensive Plan, an individual may make the same request no more than once in a twelve-month period.

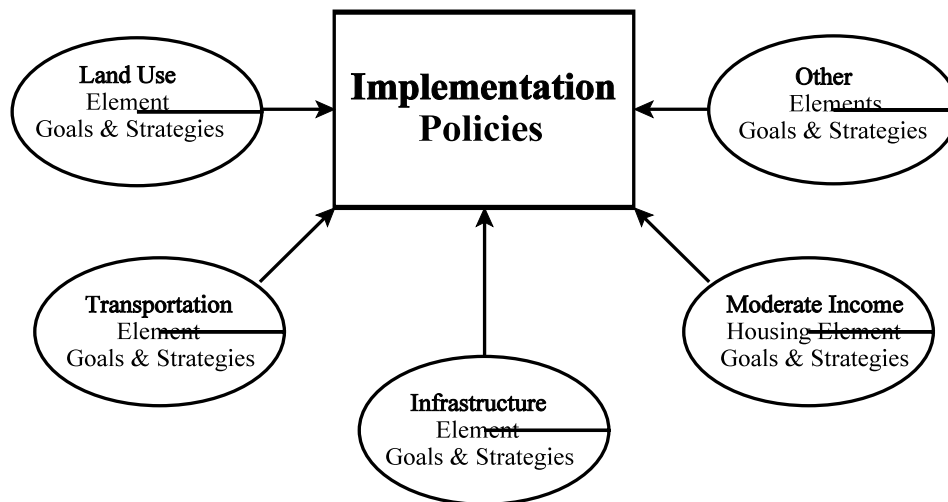
The above process will help insure that the Countywide Comprehensive Plan will maintain pace with the physical, social, technical and economic growth over the next twenty years. This updating process plays an important part in keeping the goals, policies, and implementation of the Plan both timely and relevant.

IMPLEMENTATION POLICIES

The *Cache County-wide Comprehensive Plan* is a concerted attempt by County and City officials, citizens, and professional planners to combine the following data information, goals and strategies, into a set of comprehensive policy statements which will be used to guide future development. The *Cache County-wide Comprehensive Plan's* primary intent is to directly influence the pattern, design and quality of projected development and growth that will take place between 1996 and the year 2020. It is a guide for the Cache County Planning Commissions and Communities in matters relating to land development. In addition to addressing future social, economic and physical growth, the Plan's intent is to protect the County and community's health, safety and general welfare.

The *Cache County-wide Comprehensive Plan* summarizes all future land use and related development within the County's unincorporated areas while recognizing and coordinating with each community's master plan. The plan recommends the desired pattern or appropriate location of specified land use activities. The overall intent of the plan is to promote compatible land uses while maintaining the integrity of the community. The Implementation Policies are divided into the different Elements (Land Use, Transportation, and Infrastructure) of the Countywide Comprehensive Plan, and becomes the focal point of the Plan. The structure of the Plan is designed to provide a method to deal with a number of different elements. Each of these Elements will have a different set of goals and strategies. The graphic below depicts the overall structure of the Countywide Comprehensive Plan.

Cache Countywide Comprehensive Plan



The Implementation Policies are an expression of the Goals and Strategies developed as part of the different Elements of the Countywide Comprehensive Plan. Each of the Implementation Policies are designed to achieve the primary purpose of each Goal and Strategy. No one recommended strategy is preferred to another. These are only possible recommendations for carrying out the overall goal.

LAND USE ELEMENT

The implementation policies for the Land Use Element are divided into two categories. The first category is the General Implementation Policies that are general in nature and affect the County as a whole. These policies will require action on the part of the County, Cities, and private groups. The second category is the County Land Use Ordinance Implementation Policies. These policies are specific to Cache County as to the actions and items the County must take to implement the policy.

GENERAL IMPLEMENTATION POLICIES

The general implementation policies, of the Land Use Element, represent a broad set of action oriented policies. These policies encourage different entities or groups to work together and coordinate in the development of different land use plans and policies. These policies may or may not reflect direct changes to the land use ordinances. The overall intent is to identify all groups and give these groups focused direction in developing coordinated land use development efforts.

DEVELOPMENT OF A TIERED URBAN GROWTH AND SERVICE BOUNDARY AROUND LOGAN URBANIZED AREA

(Land Use Goals & Strategies: A1, R1, R2, CII, QL1 & T2)

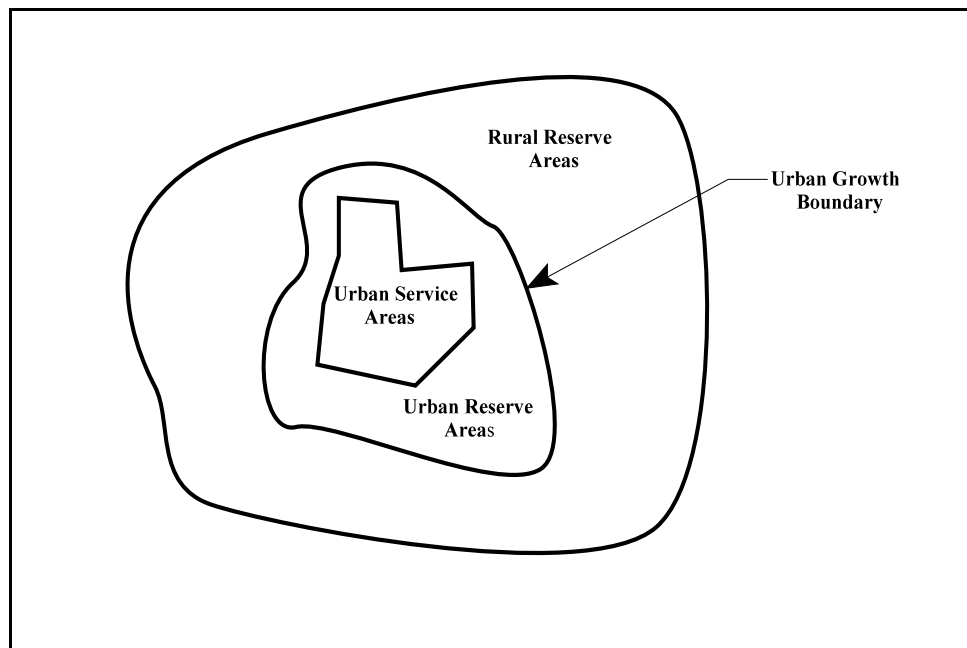
The uncontrolled urban growth within Cache County has led to a land use pattern of uneven and disjointed urban development. This land use pattern plus the loss of prime agricultural land due to increasing leapfrog development adds to the growing problem of an uncontrolled urban sprawl within the County. Continuance of this urban-sprawl growth pattern will begin to strain the budgets of communities trying to deliver the necessary services to this inefficient pattern of development. The ultimate outcomes are usually increased taxes, user fees, and impact fees to make up for the budget shortfalls.

To effectively manage uncontrolled urban sprawl and growth patterns requires the development and implementation of an effective growth management policy. It is important to understand that growth management tools require regional cooperation of all affected jurisdictions. The most effective tool for limiting an urban sprawl is to define the areas where urban development should and may take place. This is done with a growth management tool called an Urban Growth Boundary.

An Urban Growth Boundary is a line on a map used to mark the separation of urbanizable land from rural land. Urban development is limited and contained within the boundary for a specified period of time. The proposed Urban Growth Boundary will have two tiers: the urban service areas; and the urban reserve areas.

- **Urban Service Areas** - are those areas in which urban services are available now or will be provided in the immediate future (existing municipalities). Urban services include such things as water, sewer, roads, transit, police, and other types of services.
- **Urban Reserve Areas** - are those areas outside an urban service boundary, however, included within the urban growth boundary in which future development and extension of services are planned.

The following graphic depicts an Urban Growth Boundary which encompasses the urban service areas and urban reserve areas.



Defining the limits of the Urban Growth Boundary and individual tiers require a detailed analysis of data about the region. The drawing of the boundary lines on a map requires more than an arbitrary decision. A cooperative effort is needed to collect the necessary data to properly define the boundary. To some extent the reason behind the need for managing growth will determine the kind of data to be collected.

Implementation Recommendations:

- Form a working committee with representation from each municipality and Cache County to develop and define the different boundary lines
- Perform a detailed land use analysis of the Logan Urbanized Area (OPB Grant)
- Limit urban development to remain within the urban growth and service boundary's tiers
- Supply water and sewer service by public systems where possible in the urban service areas (Existing Municipalities)
- Limit any municipal annexations within the urban reserve boundary
- Evaluate and adjust the urban growth and service boundary every five years as part of the County-wide Comprehensive Plan update and review process

DEVELOPMENT OF A PROCESS AND GUIDELINES TO ALLOW UNINCORPORATED EAS TO CREATE LOCAL COMMUNITY COUNCILS

(Land Use Goals & Strategies: A3, R1, R4 & QL4)

A major concern expressed by individuals at the public open houses was that local areas had little or no input in the decision-making process of the Cache County Planning Commission when reviewing an application for their area. The most effective way is to develop a mechanism by which local areas have

the ability to review and make recommendation to the County Planning Commission. There are a number of methods by which this can be used to improve the public input process. The different methods for local input available to the County can be divided in two different groups of formal and informal structures.

The informal organization has no state statutory responsibility, but is created based on the local needs. These organizations are created by local regulations and the functions can be designed to meet the needs of the local county. They have different names: neighborhood districts, planning districts, community councils, and others. Typically, these organizations are created at the request by citizens of a local area. Their primary responsibility is to act as a recommending body to the local elected and appointed bodies of government. For example, as part of the application process to the planning commission, a developer would coordinate with the local community council board for a neighborhood meeting to allow for review before the County Planning Commission meeting. The recommendations from community council meetings with the developer would be forwarded to the planning commission for consideration. This allows local areas to have more formal input in the planning process.

Implementation Recommendations:

- Develop a simple process to allow local areas to form community councils by petitioning the County Council
- Community Council Boards to be locally appointed residents from the unincorporated area
- Develop an application review process for recommendation of local planning issues to the County Planning Commission by the Community Council.

DEVELOP A LONG-RANGE TRANSPORTATION PLAN FOR CACHE COUNTY CONSISTENT WITH THE CACHE MPO'S MAJOR THOROUGHFARE PLAN FOR THE LOGAN URBANIZED AREA

(Land Use Goals & Strategies: A1, R3, CI1, QL1, QL3, T1, T2, T3 & T4)

A unified and coordinated transportation system within the region provides people the ability to travel from where they live to where they work, purchase goods and services, and recreate. A region's transportation system does not just happen, and many factors play into the overall development of a system. If left alone and developed based on the dictates of land-use development, the transportation system would be woefully lacking. The planning of a system needs to be farsighted and coordinated to deal with today and future needs.

The development of a county-wide transportation plan for Cache County should be consistent with existing plans and those that are being developed. There are many different players, such as federal, state, and local government dealing with transportation; it is important that their interests and needs are met. The Cache Metropolitan Planning Organization (CMPO) has federal responsibility to develop a Long-range Transportation Plan for the Logan Urbanized Area. This Plan is currently under development and was adopted in 1997. The Logan Urbanized Area is the most populated area in Cache County and encompasses the cities of Smithfield, Hyde Park, North Logan, Logan, River Heights, Providence, Millville, and Nibley. The development of a Countywide Transportation Plan should use the CMPO's Plan as the basis for the rest of the region.

Implementation Recommendations:

- Identify all existing transportation plans and those under development

- Prioritize the transportation needs and wants for the entire County
- Coordinate Countywide Transportation Elements with CMPO Plan for Logan Urbanized Area

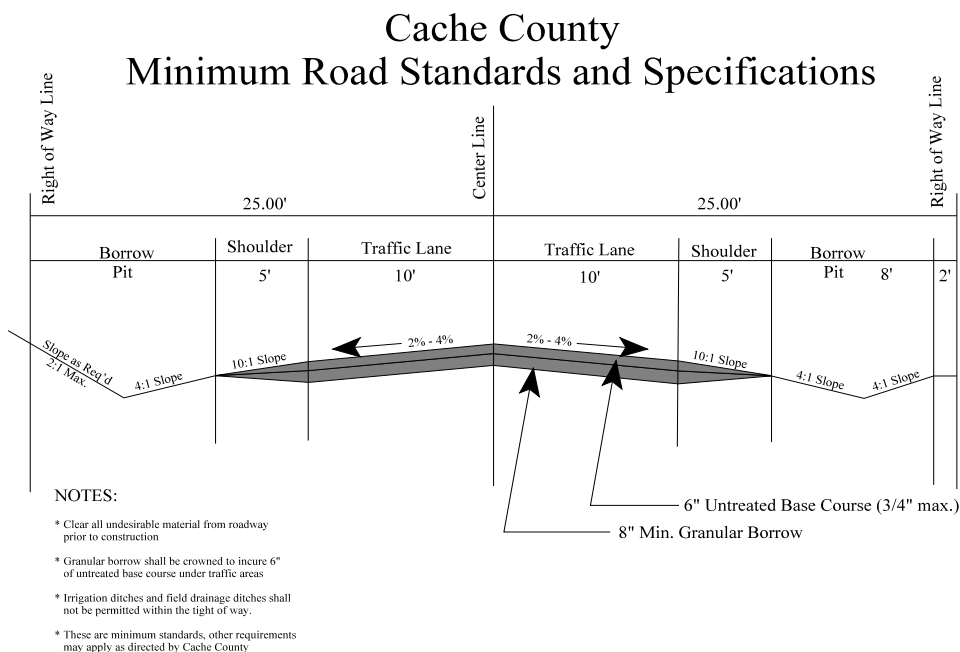
RESIDENTIAL DEVELOPMENT IN UNINCORPORATED AREAS OF CACHE COUNTY SHALL BE LIMITED TO IMPROVED ROADWAYS

(Land Use Goals & Strategies: A1, R1 & T2)

The relationship of roads and other land use types is a reciprocal one. Land-use development patterns can and will affect transportation networks and travel demand. Development of roads will also affect the locations of different land-use types. It is necessary for the road system to be adequate enough to provide for both mobility of the populace and accessibility to land. The County and cities must be able to provide a minimum level of services (police, fire protection, garbage collection, school buses, and mail delivery) to all properties. To be able to provide and maintain this level of service, road networks providing access to land should have a minimum standard.

As urban development continues to expand into the unincorporated areas of Cache County, the more important the road network becomes. To ensure the County, cities, school districts, and other public agencies are able to provide a minimum level of service to all property owners who live within the County, a road network should be developed at the same standard as property is developed.

Cache County's current road standard assumes that all roads should be developed at one standard. The graphic on the next page defines the current road standards (Resolution No. 96-43) for Cache County. Because the importance of coordinating between jurisdictions and the different functionality of individual roads, the County should develop a set of multiple road standards, depending upon the function of road and location of the development.



Implementation Recommendations:

- Modify and expand current right-of-way standard for Cache County (Resolution No. 96-43)
- Coordinate development within close proximity to existing municipalities so that placement of uses and right-of-way widths are compatible with the municipality
- As part of the Transportation Element, identify the functional classification of the County road network
- Develop a set minimum standard to match the functional classification of the County roads

DEVELOP A WATER MANAGEMENT PLAN FOR CACHE COUNTY

(Land Uses Goals & Strategies: R3 & ES8)

There are 19 municipalities in Cache County providing culinary water to their residents in addition to one special improvement district (Benson) and four (4) private water companies providing culinary water to some of the unincorporated area. There are also more than 2500 individual wells and springs being used for culinary water sources. In order to coordinate these different water systems and protect existing water rights, it is necessary to develop a Water Management Plan as part of the Infrastructure Element of the Comprehensive Plan.

Implementation Recommendations:

- Coordinate with appropriate State agencies and offices in the development of the Water Management Plan
- Coordinate with local public water systems, special improvement districts and water companies in developing the Plan
- Utilize State grant monies for studies in surface water and underground water availability in Cache County
- Utilize results from studies using data relevant to Cache County's water sources and ways to better utilize the available water to minimize waste
- Develop an inventory of available water in Cache County (municipalities and unincorporated areas)
- Project the water needs in Cache County in 10 years and 25 years
- Identify potential sources of water to satisfy future needs for water in Cache County (municipal, industrial, agricultural, and recreational)
- Develop a plan to provide water for future needs

DEVELOP SOURCE DELINEATION AND PROTECTION PLANS FOR CULINARY WELLS AND SPRINGS

(Land Uses Goals & Strategies: R3, ES2, ES8, & ES10)

There are more than 14000 water rights registered with the State Engineer's Office in Cache County. Approximately 2500 of those are for wells and springs designated as culinary sources. Protection of culinary wells and springs is critical because they are vulnerable to contamination. The best way to protect your drinking water source is to develop and enforce a Source Protection Plan. Sources of drinking water are valuable individual and community assets and protecting them protects the capital invested in them. Protection programs must anticipate potential problems and should be established in advance or they will be ineffective.

Water that does not need treatment for culinary use is worth substantially more than water that does

need treatment. Cache County has ample groundwater, but the high quality groundwater is much more limited. Leakage from sewage systems, seasonal failures of septic tank systems, and other threats to groundwater contamination are important, but poorly understood factors.

Implementation Recommendations:

- Support water sampling and recharge area delineation studies to support enforceable quality protection ordinances
- Support aquifer classification studies and defensible ordinance formulation to protect potential and existing water sources
- Identify potential contamination sources
- Work with the State to develop programs to control potential contamination sources

DEVELOP A STORM WATER MANAGEMENT PLAN FOR CACHE COUNTY

(Land Use Goals & Strategies: ES9)

The potential for flooding in Cache County is very high. However, in the past, the flood plains and natural wetland areas have been able to handle flooding that has occurred. The large irrigation canals and systems have been able to allow large runoffs to be taken into the Bear River and on into the Great Salt Lake.

The increased population growth and urban development have begun to encroach into areas that handle these historical floods. Development decreases the ability of the soil to naturally absorb water. This adds to the potential flooding problems.

Each municipality must begin the development of a Flood Control Plan for their community. The County will have an important role in the development of these plans. Flood control is a multi jurisdictional problem which crosses municipal boundaries. Successful flood control requires the coordination of all jurisdictions in developing a system that works.

Implementation Recommendations:

- Coordinate with the communities in development of their storm-water management plan
- Work with federal, state, and local entities to identify problem areas and solutions
- Work with local irrigation companies to protect their rights and systems

FOLLOW LOGAN-CACHE AIRPORT MASTER PLAN

(Land Use Goals & Strategies: R3 & ES1)

The Logan-Cache Airport serves as a general aviation airport and is classified as a General Utility airport by the FAA. The Logan-Cache Airport is jointly owned and operated by Cache County and Logan City. The Logan-Cache Airport Authority supervises the operations of the airport. Members of the Logan-Cache Airport Authority are appointed by both Logan City and Cache County. The service area for the Logan-Cache airport consists of Utah's Cache and Rich Counties and portions of Utah's Box Elder County and Idaho's Franklin and Bear Lake Counties.

Implementation Recommendations:

- Keep the Logan-Cache Airport Master Plan updated
- Implement the recommendations of the Airport Layout Plan

- Encourage compatible land use within close proximity to the airport.
- Maintain and enlarge the Airport Hazard Zones and Runway Protection Zones as the Logan-Cache Airport expands for safety and protection reasons.

FOLLOW COUNTY-WIDE SOLID WASTE MANAGEMENT PLAN

(Land Use Goals & Strategies: R3 & ES1)

Current solid waste management is provided through a Service Area. Service Area #1 is supervised by a Board of Trustees made up of the members of the Cache County Council. The Board of Trustees appoints members to the Solid Waste Advisory Board who make recommendations to the Board of Trustees. They currently contract the day-to-day operation of the service area through Logan City to provide collection and disposal of solid waste.

There is an adopted Solid Waste Management Plan for the continuous operation of the Service Area. It is important that this plan is implemented and the recommendations followed. The development of good land-use plans adds support to existing plans and helps to support the overall intent of providing service to the citizens of Cache County.

Implementation Recommendations:

- Keep the County-wide Solid Waste Management Plan updated
- Encourage a centralized transfer/disposal location
- Encourage residential development in locations where services can be economically provided

THE CACHE COUNTYWIDE COMPREHENSIVE PLAN SHOULD PROVIDE DIRECTION TO THE FOREST SERVICE MANAGEMENT PLAN TO BETTER MANAGE DEVELOPMENT WITHIN THE NATIONAL FOREST AREAS OF CACHE COUNTY

(Land Use Goals & Strategies: R7, CI2, CI4, QL1 & QL2)

The Forest Service manages 336,347 acres or approximately 45 percent of Cache County's land area. The Cache National Forest also includes two wilderness areas. Much of this area is some of the most scenic and beautiful in Utah; there are large tracts of privately owned land interspersed. The management of these areas should be done to protect the property owner's rights, but at the same time coordinating with the Forest Service Management Plan for these areas.

Implementation Recommendations:

- Coordinate with the Forest Service in updating the Management Plan for the National Forest lands in Cache County
- Modify and update the Countywide Comprehensive Plan, where necessary, to coordinate with the Forest Service Management Plan
- Coordinate with the National Forest Service in developing new Land Use Ordinance standards

DEVELOP STANDARDS FOR URBAN DEVELOPMENT ON UPPER BENCH AREA TO LIMIT THE POTENTIAL HAZARDS FROM WILDFIRES AND ALLOW FOR SAFE URBAN DEVELOPMENT.

(Land Use Goals & Strategies: R1, R7, CI1, CI2, QL4 & T1)

As urban development takes place on the upper bench areas of Cache County, there are increasing problems with wildfire. The primary concern is that wildfires on public lands spread to increasing urban development on these upper bench areas. The ability to prevent fire and damage to urban development and non-urban public land increasingly becomes more difficult.

Implementation Recommendations:

- Work with Federal and State agencies in the identification of potential areas with high fire danger.
- Develop a set of standards for “defensible spaces” for urban development in these areas of high fire danger.

ACKNOWLEDGE PRIME AND STATEWIDE SIGNIFICANT FARMLANDS FOR PROTECTION AND LIMIT DEVELOPMENT ON THESE LANDS

(Land Use Goals & Strategies: A1, A2 & CI1)

Farmland is one of the most important assets of Cache County; agriculture adds to the quality of life. The economic impact of agriculture can be identified by the number of jobs created and the sales of agricultural products. The need to protect these lands is one of the most important efforts of the County-wide Comprehensive Plan.

Implementation Recommendations:

- Coordinate with State agencies, USU Extension Service, USU Experiment Station, and Soil Conservation Districts (North Cache & Blacksmith Fork) to identify the important farmlands
- Work with local efforts in the creation of a Land Trust to provide farmers with options to preserve farms
- Work with the State to upgrade and use Agriculture Protection Areas (USC17-41-101)

INCLUDE AND PROMOTE AGRICULTURE AND AGRICULTURAL INDUSTRIES TO THE ECONOMIC DEVELOPMENT AGENDA THE SAME AS OTHER COMMERCIAL AND INDUSTRIAL BUSINESSES

(Land Use Goals & Strategies: A2 & CI6)

Typically, agriculture has been viewed for its value as open space and quality of life. Municipalities tend to view agricultural lands as areas for future urban development. In many cases these Agricultural Zoned areas are considered no more than a holding zone for more urban-type zoning in the future. The economic importance of agriculture and agricultural industries has been treated as a secondary issue.

Agriculture and agricultural industries provide a valuable and important portion of the local economy by its direct sale of agriculture products. Agriculture and agricultural industries are an important part of the economy of Cache County. The loss of this industry with related jobs would have a dramatic effect on the local economy. As the area is promoted for economic development, it is important that agriculture and agricultural industries are part of those promotional efforts.

Implementation Recommendations:

- Work with Cache Economic Development to include agriculture and agricultural industries as part of the economic development agenda
- Work with local agricultural groups to increase the understanding of the value of agriculture
- Coordinate with the USU Extension Office, and Experiment Station to promote agriculture

DEVELOPMENT OF IMPACT FEES, IF NEEDED, SHOULD BE DONE ON A REGIONAL BASIS TO LIMIT URBAN SPRAWL AND PREVENT DEVELOPMENT SHOPPING

(Land Use Goals & Strategies: R1 & R2)

Many local governments have suffered from the fiscal impact of developments which places stress upon public facilities until tax revenues can be generated. In many cases, when the tax revenues finally flowed, they were found to be inadequate. A remedy for this shortfall used by many local communities has been the imposition of a fee based upon anticipated dwelling units or population to assure that parks, streets, storm sewers, etc., would be in place to satisfy demand.

As the use of these fees increases, it is important that they should not create unnecessary competition for development among communities. Many of these fees can be developed, used, and distributed on a regional basis. These impact fees can provide the needed revenue to improve the necessary infrastructure at the time of development without pitting one community against the other.

Implementation Recommendations:

- Work with communities to identify potential impact fees that could be done on a regional basis
- Encourage communities to work together when considering potential impact fees that could be implemented regionally
- Work with different groups that may use impact fees

ACKNOWLEDGE THE LIMITATIONS OF THE USE OF SEPTIC TANK SYSTEMS IN PRIMARY AND SECONDARY RECHARGE AREAS AND GROUND-WATER SENSITIVE AREAS OF THE COUNTY

(Land Use Goals & Strategies: R3, CL2 & ES8)

One of the most important environmental issues is the protection of the ground water. There are more than 2000 wells and springs that are used as culinary water sources for homes and businesses. As the number of wells increase, the potential for groundwater contamination will also increase. The number of septic systems is not the primary issue, but where these septic systems are being located.

Currently much of the residential development is being located on the upper bench areas of Cache Valley for their views. These upper bench areas are the primary or secondary recharge areas for Cache County ground water that is recharged every year by melting snow. Increasing residential development in these areas is a major concern because of increased concentration of septic systems in these recharge areas. As concentrations increase, the potential of groundwater contamination increases.

Implementation Recommendations:

- Support delineation studies of recharge areas to support enforceable, quality protection ordinances
- Support aquifer classification studies and defensible ordinance formulation to protect groundwater

- Identify potential contamination sources
- Coordinate with the State to develop programs to control potential contamination sources

DEVELOPMENT OF CONSISTENT LAND USE POLICIES AND ENFORCEMENT OF ALL COUNTY ORDINANCES

(Land Use Goals & Strategies: R2, R3, R4, QL3, QL4, QL5 & ES1)

The regulatory functions of the County to develop land use policies and enforcement of codes can be an uncomfortable exercise at best. However, it is important for the public to have consistent land use policies. Citizens expect the ordinance and policies will be fairly enforced. As the County population increases, the need for better enforcement increases. This will require well defined and consistent land use policies.

Implementation Recommendations:

- Develop clear standards for dumping, junky yards, noise, air, animals, and zoning
- Develop clear and defined enforcement procedures that are consistent and fair
- Consider development and implementation of a fix-it ticket program for enforcement
- Develop a clear policy for protection of agriculture

DEVELOP AND IMPLEMENT A COUNTY-WIDE POLICY FOR MODERATE-INCOME HOUSING (UCS 10-9-307 & 17-27-307)

(Land Use Goals & Strategies: R2 & R5)

The Utah Legislature has determined that municipalities and counties should afford a reasonable opportunity for a variety of housing. This should include moderate-income housing to meet the needs of people desiring to live in a community. Moderate-income housing should be encouraged to allow persons with moderate incomes to benefit from, and to fully participate in, all aspects of neighborhood and community life. Moderate-income housing is defined as housing occupied or reserved for occupancy by households with a gross household income equal to or less than 80 percent of the median gross income of the metropolitan-statistical area for households of the same size.

Implementation Recommendations:

- Estimate the existing supply of moderate-income housing located within the municipalities and county
- Estimate and revise annually the need for moderate-income housing in the municipalities and county for the next five years
- Survey total residential zoning
- Show an evaluation of how existing zoning density's affect opportunities for moderate-income housing
- Development of a program by municipalities and the County to encourage an adequate supply of moderate-income housing

IMPLEMENT A SIMPLE DEVELOPMENT REVIEW AND APPROVAL PROCESS (ONE-STOP SHOPPING).

(Land Use Goals & Strategies: A3, R4, CL5 & QL4)

The primary function of government is to provide services to the citizens of a community. The average citizen spends very little time involved with government; at times, people become involved with government in uncomfortable and unfriendly situations. These circumstances usually deal with taxes, licensing of motor vehicles, and violations. Government should provide more of a service-orientation training for County employees to better deal with these situations in serving the public.

Most public offices have an approval process that is complex and confusing to most residents. Many times the individual is passed from one office to another based on the requirements of the different offices. The current structure of the government creates this separateness between public offices. To develop a simple review and approval process requires the cooperation and coordination of the different departments and entities of the government.

Implementation Recommendations:

- Coordinate the different needs of local government offices (Zoning, Building, Clerks, Health, and Fire Departments).
- Identify the steps of the review and approval process and modify them to make the process more customer friendly.
- Modify ordinances and code requirements to make the review and approval process simpler.

COUNTY LAND USE ORDINANCE IMPLEMENTATION POLICIES

Zoning and land use ordinances are the most commonly used tools for the implementation of a comprehensive or general plan. They are designed to implement the plan's goals and public policies, to assure a compatible interrelationship of land uses in such a way that the health, safety, and general welfare of the county are promoted and protected.

The objective of a land use ordinance is to establish regulations that provide locations for all essential uses of land and buildings and to ensure that each is located appropriately. The ordinance should discourage nuisances that tend to create blight or other problems. The land use ordinance can, and should, be used creatively. Uses that may be incompatible in one location may be welcome in another. The designation of an appropriate location for all legitimate uses, not just the segregation of uses, is the challenge and responsibility of creative land use ordinances.

The following implementation policies are recommendations concerning the Cache County Land Use Ordinances. Because implementation policies are recommendations and general in nature, they do not reflect the final wording of the land use ordinance. These policies are intended to act as a guideline and a reference in the development process of Cache County's land use ordinances. The legal limitation of state and federal statutes and court cases will determine the final product.

DEVELOP STANDARDS FOR RESIDENTIAL DEVELOPMENT BASED ON DENSITY

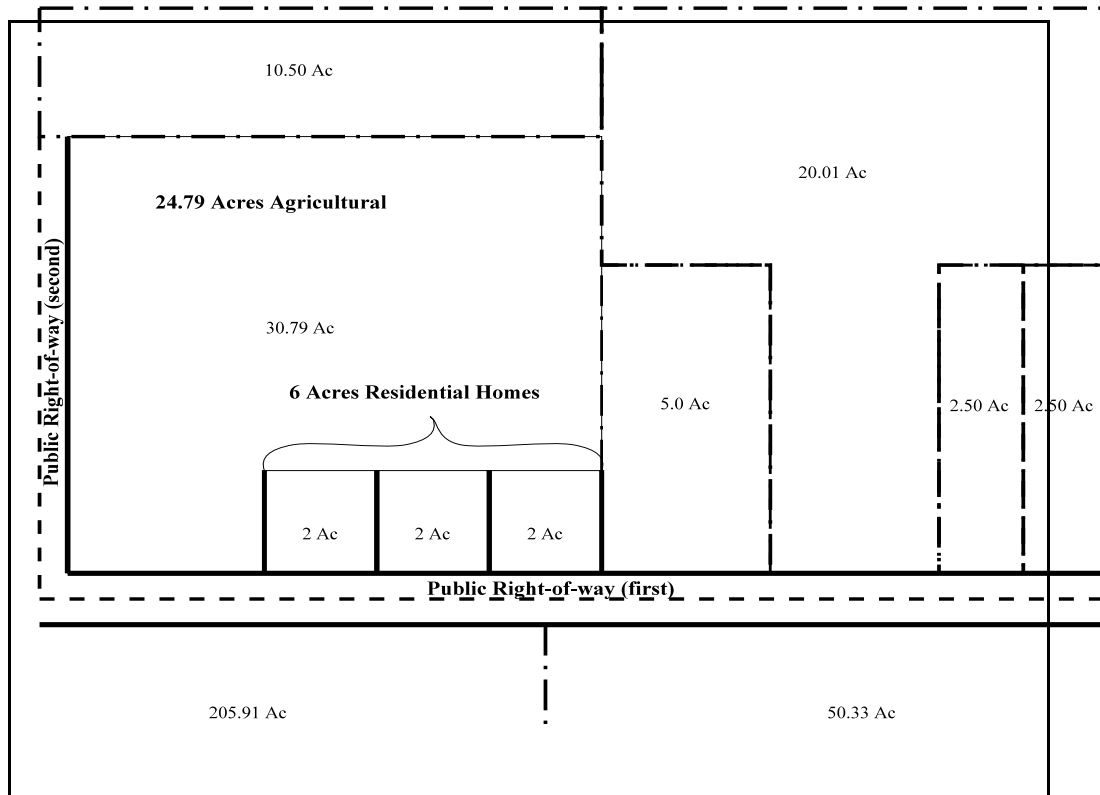
(Land Use Goals & Strategies: A1, R1, R4, R7, & T2)

Block-style zoning was originally developed and designed by communities to segregate incompatible uses (dry cleaners from residential units - San Francisco) and has been used for years throughout this country. This style of zoning lays out precise requirements for uses and quality of development. However, when this type of zoning is applied to a regional system like Cache County with its unique and different environs, it fails to meet the needs of the County. A more flexible system is needed to deal with the complex and unique issues of this region.

A primary concern expressed by Farmers and other individual property owners during the public open houses, was the increased development of residential homes and subdivisions within the unincorporated areas of Cache County. The municipalities also expressed helplessness and concern for what they perceive as uncontrolled development just outside their jurisdictional borders with little or no concern for their future development plans. With urbanization comes loss of valuable farmland and the potential loss of their right to continue to farm. Many individual property owners were concerned with the protection of their property rights to develop their land for homes for themselves and their posterity. To meet these needs and still limit urban development to those existing urban areas, a residential density-base zoning is recommended.

How does residential density-based zoning work and how will it be used to protect agricultural lands? Under the current zoning system, there is direct competition between agriculture and residential development for the same land. Residential density-based zoning recognizes the need for both uses and

develops compatibility between residential development and agricultural land. The graphic below depicts a plat of land within the county and how residential density would be applied. For this example, it is assumed that these parcels are located within an area which is defined as a moderate density area (1 unit per 10 acres).



The owner of the 30.79 acre parcel would like to subdivide lots for his family and sale to a friend. This parcel is located in a moderate density range which allows one residential unit per 10 acres. The property owner would be allowed to subdivide three lots from the 30.79-acre parcel. Parcels for residential homes would be 1.5 to 2 acres per parcel. Lots of this size are based on bank financing, culinary well, and septic tank limitations. For this example, the owner created three two-acre parcels or six acres for residential lots. The remaining 24.79 acres is left in agricultural use. The residential development right has been transferred to the three residential lots. This transfer of the residential development right would be recorded with the deed of the property so that future purchasers would be informed of the limitations to the property.

The plat also shows some parcels that are smaller than the ten-acre density requirement. These lots would be considered legal lots, but would be allowed one single family dwelling developed on them. This would, however, depend upon whether the lot was legally subdivided and approved by the County.

Implementation Recommendations:

- Develop a set of standards for residential density-based zoning
- Develop a system to transfer and record the residential development rights on deeds

- Adopt the following residential-based density ranges based on the public input from the second round of Public Open Houses

RESIDENTIAL DENSITY RANGES

Density	Units per Acre
Very High	Existing Municipalities
High	1/5
Medium	1/10
Low	1/20
Very Low	1/40

- Use the developed map on the following page as the basis of density ranges for Cache County

DEVELOP STANDARDS FOR CLUSTERING RESIDENTIAL DEVELOPMENT TO LIMIT URBAN SPRAWL AND CENTRALIZE SERVICES (GARBAGE, MAIL, UTILITIES, ETC.)

(Land Use Goals & Strategies: A1, R1, R3, & R4)

As urban development continues to spread into the rural areas of Cache County using farm land, forests, and wildlife habitat, the use of clustered development has high potential to preserve the rural character. Cluster development can preserve a percentage of a parcel as open space allowing preservation of the uses that people associate with rural countryside.

To effectively develop a clustering system as a tool to preserve the rural character of the County, one must define and characterize the difference between the urban and rural areas. The rural areas of Cache County are outside the existing municipalities and are characterized as a mixture of farms, forests, undeveloped open spaces, waterways, wildlife habitat, and absence of urban amenities, such as street lights and sidewalks.

A major advantage of cluster development is that it allows for limited housing development while preserving activities characteristic of the rural landscape. Clustering can contribute to the preservation of resources such as water quality, stream flow, floodplain, steep slopes, geologic hazards, wetlands, wildlife habitat, aquifer recharge areas, and soils unsuitable for septic systems. Clustering can benefit landowners and developers by reducing costs over conventional development. If the standards are flexible, it also allows for lot siting to take advantage of views and other site features.

Implementation Recommendations:

- Set minimum and maximum lot sizes based on Health Department standards for well and septic tank needs
- Make approval process simple and streamline to minimize regulations
- Develop incentives and lot bonuses to encourage clustering of residential homes
- Lots should be located with respect to topography and other site features
- Lots should not be located on prime or statewide important farmlands where possible

MAP CP-1
Cache County Residential
Density Ranges

MAP CP-1
Back page of Density Map

DEVELOP SUBDIVISION STANDARDS TO STREAMLINE AND SIMPLIFY THE REVIEW AND APPROVAL PROCESS

(Land Use Goals & Strategies: A1, R1, R2, R3 & T2)

Subdivision regulations are one of the important tools that counties and municipalities have to regulate the orderly development of their community. Subdivision regulations are used to protect both prospective home buyers and local government units from the practices of some developers. Subdivision regulations are recognized as an important influence on development, whether it is in the unincorporated county or in a municipality. Once large tracts of land have been carved up into streets, blocks, and lots, and have been publicly recorded, the pattern is difficult, if not impossible to change, except with costly redevelopment programs.

Subdivision standards are regulations that govern how land is divided. Many consider only the large urban residential development as a subdivision; this is not the case. Utah State Code clearly defines what constitutes a subdivision of Land (USC 10-9-103(r)(i) & 17-27-103(r)(i)). Below is the definition for a subdivision for State Code.

“Subdivision” means any land that is divided, resubdivided or proposed to be divided into two or more lots, parcels, sites, units, plots, or other division of land for the purpose, whether immediate or future, for offer, sale, lease, or development either on the installment plan or upon any and all other plans, terms, and conditions.

“Subdivision” includes the division or development of land whether by deed, metes and bounds description, devise and testacy, lease, map, plat, or other recorded instrument.

“Subdivision” does not include a bona fide division or partition of agricultural land for agricultural purposes.

Based on this definition, the simple dividing of one parcel into two or more lots is considered a subdivision. State Code for Counties, however, exempts divisions of agricultural land for agricultural purposes.

Implementation Recommendations:

- Limit subdivisions to no more than five (5) lots in the Agriculture Zone of Cache County on prime or statewide significant soils
- Major subdivision of more than five (5) lots may be considered only on soils which are not Prime or Statewide Significant as determined by the USDA Soil Survey and after a concept review by the Planning Commission
- Subdivisions in the Agricultural Zone may have three lots by right and an additional two lots with performance standards (clustering, combining of large agricultural parcels, etc.)
- To limit the processing and approval time and effort of the property owner, the Land Use Ordinance should provide for a simple metes and bounds or lot-split subdivision (maximum two lots) with standards
- Metes and bounds or lot-split subdivisions shall include the following standards:
 - Maximum size limited to two legal lots
 - Lots may not be resubdivided
 - Lots shall have direct access to a public right-of-way (private lanes and dedication of new roads by Planning Commission approval)

- All other divisions of land, which do not meet the above standards, will be required to go through the regular subdivision process

DEVELOP A SET OF STANDARDS THAT ARE CONSISTENT WITH THE CLOSEST MUNICIPALITY

(Land Use Goals & Strategies: R8, T2, T3 & T4)

There are 19 separate municipalities in Cache County. Each of these municipalities have different general plans, zoning, and/or land use ordinances. The County is constantly faced with the problem of development within close proximity to the jurisdictional boundary of these individual municipalities. Many times the development standards have been less than the municipality or there was little consideration given to the general plan of the community. These problems necessitate that Cache County and municipalities develop a better working relationship.

There are a number of ways to improve the coordination between jurisdictions. The primary method is to begin to develop a set of consistent development standards. This does not mean that each jurisdiction should adopt the same land use ordinances and standards. Development standards should be based on each jurisdiction's general plan and the needs of the community. However, there should be some standards that are consistent between jurisdictions and these could be identified and developed to limit the conflicts between them. Also, there should be a better reviewing process between Cache County and the different municipalities. This would help improve the communication between the County and the cities.

Implementation Recommendations:

- Develop standards to include the following:
 - Lot size (based on existing plans)
 - Right-of-way standards and dedication
 - Access
 - Signage
- Develop a formal application reviewing process between the County and the municipalities

MAKE ZONES WITH LISTS OF USES TO BE CONSISTENT WITH THE PURPOSE OF THE ZONE

(Land Use Goals & Strategies: A1 & C2)

A zoning ordinance should have a consistent structure that would provide for an easily read and understood ordinance. Each zone of the Land Use Ordinance is divided into three sections. These sections are: the purpose, a list of allowed uses (permitted and conditional), and a set standard or regulations for the zone. These sections help to maintain the integrity of the zone.

Implementation Recommendations:

- Develop a clear and concise purpose for each zone
- Review and revise the list of allowed and conditional uses
- Develop a central section of clearly understood definitions

DEVELOP A STATEMENT TO INTERFACE RESIDENTIAL DEVELOPMENT WITH WILDLIFE AREAS TO LIMIT THE IMPACT

(Land Use Goals & Strategies: R1, R7, CI1, CI2, QL4 & T1)

As development takes place on the upper bench areas of Cache County, there is increasing concern with the residential/wildlife interface. The residential/wildlife interface areas are those where residential development is located that may have the most potential conflicts with wildlife areas.

REVISE AND DEVELOP SPECIFIC STANDARDS FOR LOGGING AND MINING OPERATIONS

(Land Use Goals & Strategies: C2, C3, & C4)

Commercial logging and natural-resource extraction operations can have major impacts on land. These types of operations and businesses are necessary and lawful. The development of regulations for commercial logging and natural-resource extraction operations should not focus on limiting the business, but with helping the owners to manage the impacts on the land.

These projects may be long-term operations and have lasting impacts on the environment; therefore, it is important that a master plan for the life of the operation be developed and approved by the County Planning Commission. This allows the business and County to save time, not only in the approval process, but in the long-term operation of the business. A master plan of the project helps define the operation, impacts and mitigation efforts of the impacts.

Implementation Recommendations:

- Develop standards for operation of commercial logging and natural-resource extraction operations
- Businesses shall develop a Master plan for the operation which shall include the following
 - Operations Plan
 - Transportation Plan
 - Reclamation Plan

DEVELOP A NEW POINT SYSTEM TO REVIEW DEVELOPMENT PROJECTS FOR THE COUNTY

(Land Use Goals & Strategies: R1)

A point system is a method by which new development is reviewed. Usually, the points or credits are awarded on a basis of distance of the proposed development site from existing facilities such as water lines, sewer lines, major streets, schools, and other facilities.

Cache County's point system is used as a guide in the approval process for new single family dwellings on agricultural lands. The numerical point system evaluates a project based on the seven areas listed below:

- Culinary Water
- Septic Tank Systems

- Farmland Evaluation
- Land Use Compatibility
- Road Conditions-
 - garbage collection
 - ambulance service
- Sensitive or Hazardous Site Conditions
- Mitigation of Sprawl-
 - school bus stops
 - fire stations

A point or permit system can provide an effective method of reviewing and approving projects. This type of system allows a developer or property owner to work much closer with the staff and Planning Commission approval process.

Implementation Recommendations:

- Revise and update the Land Use Ordinance point system as circumstance's warrant

UPDATE THE DEVELOPMENT STANDARDS FOR THE FOREST - RECREATION ZONE (FR-40) TO DEAL WITH CURRENT NEEDS AND CONDITIONS OF THE AREAS
(Land Use Goals & Strategies: R6, R7, CI1, CI2, QL1, QL2, ES2 & ES8)

The Forest Recreation Zone is the largest zone of land area in Cache County and covers approximately 498,000 acres or 66 percent of the land area of the County. Most of this area, about 70 percent or 350,000 acres, is under public ownership; the remaining 30 percent or about 145,000 acres is under private ownership. This area of the County is fairly undeveloped and has little or no services available.

The Forest Recreation Zone was originally developed as part of the 1970 Cache County Ordinance. The current ordinance and standards have changed very little from the original ordinance. The purpose of the zone remains the same.

6-1 Purpose

To permit the proper use of the forest areas of Cache County for grazing, forestry, mining, recreation, and other activities to the extent compatible with the protection of the natural and scenic resources of the forest for the benefit of present and future generations.

Development in these areas has primarily been limited to recreational development. This development has been consistent with the intent and purpose of the zone. As people move into Utah, there will be increasing demands for more property to be used for recreation. With this increasing demand for recreational development, it will be important for the Forest Recreation Zone to continue to maintain its primary purpose and integrity.

Implementation Recommendations:

- Develop standards so that uses are consistent with the purpose of the zone
- Coordinate the Forest Recreation Zone with new overlay zones for canyons

DEVELOP OVERLAY ZONES WITH STANDARDS THAT ARE UNIQUE FOR EACH OF THE MAJOR CANYONS (LOGAN, BLACKSMITH FORK, WELLSVILLE, AND SOUTH CANYON)

(Land Use Goals & Strategies: R6, R7, CL1, CL2, QL1, & QL2)

An overlay zone is a mapped zone that imposes a set of requirements in addition to those of the underlying zoning district. In an area where an overlay zone is established, property is placed simultaneously in the two zones and may be developed only under the conditions and requirements of both zones.

Typically, overlay zones are applied when there is a special public interest in a geographic area that does not coincide with the underlying zone. Some of the more common uses for such zones relate to special environmental features that restrain development. Floodplain zones and wet soils overlay zones are good examples. Other uses are to maintain the integrity of historic areas, to preserve views, to restrict areas to public uses, and to limit building height in certain areas.

Overlay zones are described in the zoning text which has been mapped and adopted by the governing body in a manner similar to conventional zoning. Provisions are administered through usual zoning processes. Since overlay zones are tied to the zoning map the courts are not likely to overturn their provisions in initial determinations if allowable uses are reasonable.

Overlay zones are site specific and retain most of the elements of the familiar zoning process. But through their limited flexibility, they are an opportunity to implement site-specific public policies, especially with regard to environmental protection.

Implementation Recommendations:

- Develop design and performance standards for development in each overlay zone
- The design and performance standards should include the following:
 - Design consistency with surrounding environment
 - The setting and development of a parcel should be based on natural limitations
 - Use of natural materials
 - Set height limitation

LIMIT COMMERCIAL AND INDUSTRIAL DEVELOPMENT TO EXISTING ZONES WHERE POSSIBLE

(Land Use Goals & Strategies: A1, CI1, T2)

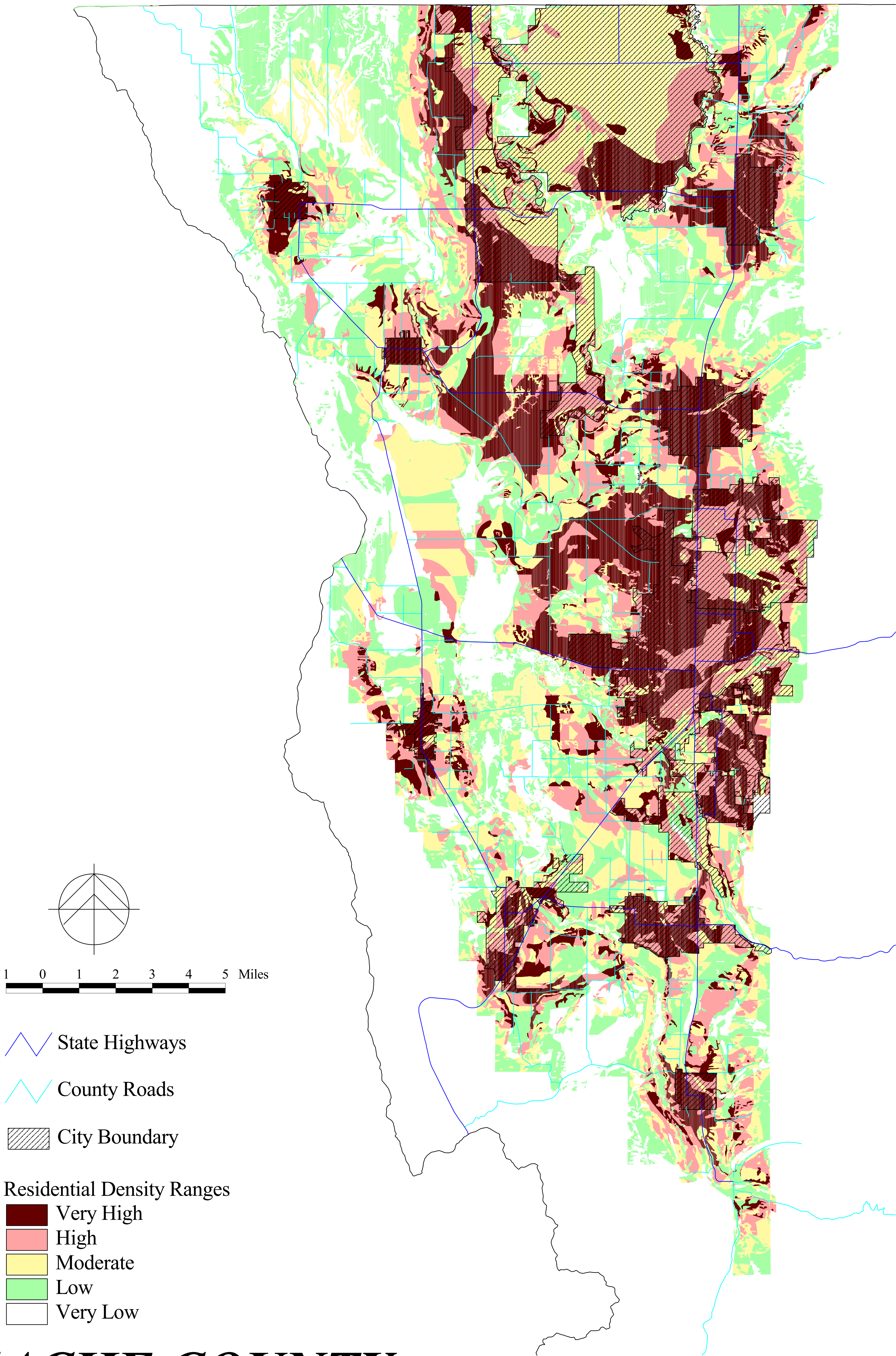
Commercial and industrial development is a major portion of the economy of Cache County. There is a need for some commercial and industrial zoning to be located within the unincorporated County to provide areas for citizens to shop for goods and services as well as to provide places of employment. These zones should not be located where they would create land use conflicts, but it is important that these areas be convenient and accessible to the public.

Implementation Recommendations:

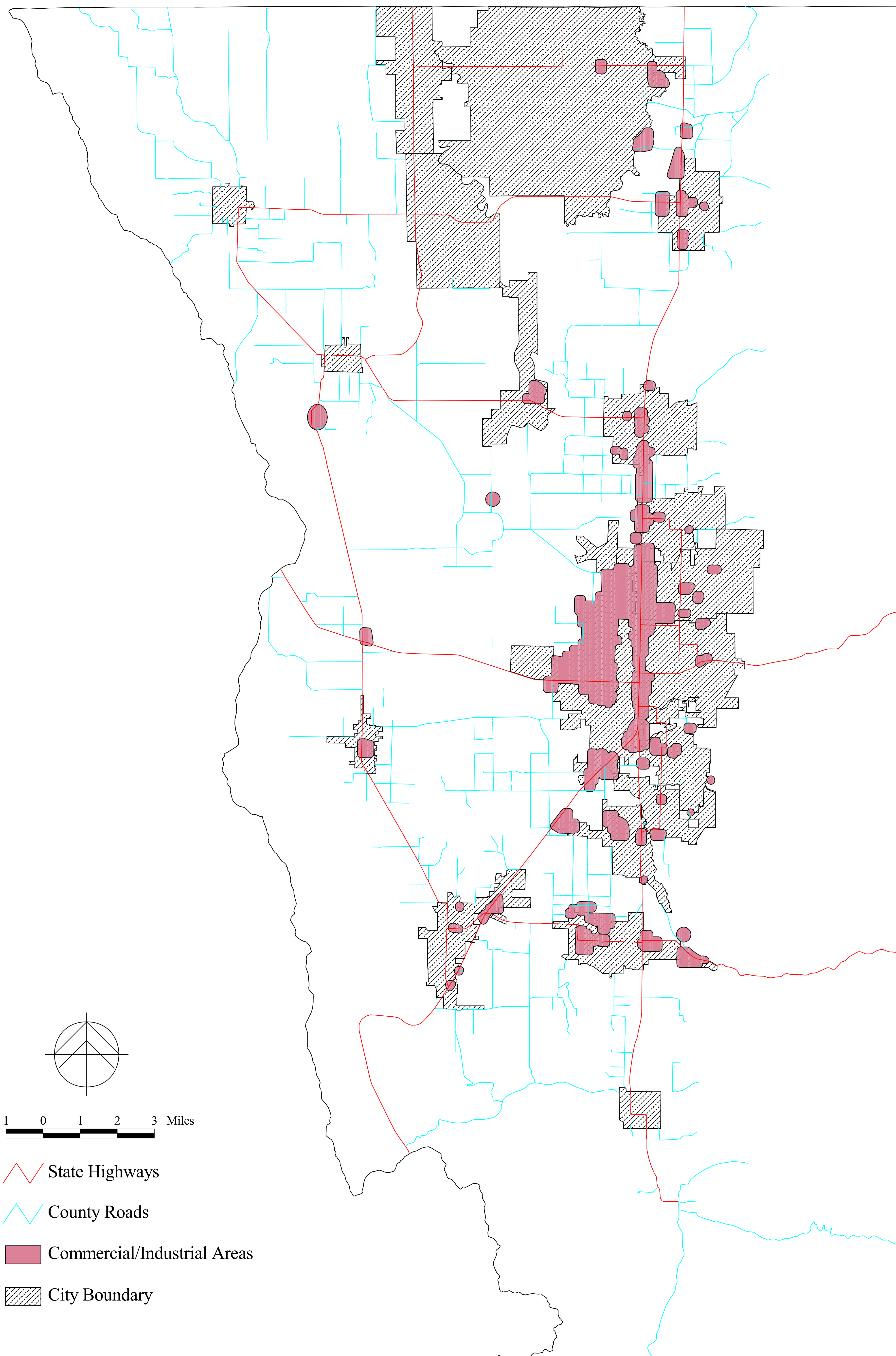
- Identify existing commercial and industrial zoned areas
- Evaluate existing businesses to determine if there should be new zones identified
- Encourage commercial and industrial development in municipalities where possible

MAP CP-2
Cache County Commercial and
Industrial Areas

MAP CP-2
Back page of Commercial Zone Map



CACHE COUNTY RESIDENTIAL DENSITY RANGES



CACHE COUNTY

COMMERCIAL & INDUSTRIAL AREAS

MAP CP-2

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INTRODUCTION

The Land Use Element focuses on the interrelationship of different land use types and their effect on urban development patterns within Cache County. The Land Use Element attempts to identify the problems and develop solutions. The planning process and effort for developing the Countywide Comprehensive Plan and Land Use Element were designed to solicit as much public input as possible. The heavy emphasis on citizen participation ensures that the goals and policies developed for the Land Use element truly express the will and desires of the public as a whole.

The Land Use Element was designed with its socioeconomic information, maps and goals and strategies to be a working and decision-making document for elected and appointed officials. The information included in the Land Use Element was collected and presented in a format to help understand the existing conditions within the County. The Land Use Element is also a valuable resource to individual citizens, developers, and anyone concerned about land use development within Cache County.

The overall purpose of this Element is to be used as a guideline and basis for all land use decisions made in Cache County. The Land Use Element should not be used to make land use decision. This Element and other elements (transportation, and infrastructure), to be developed, should be used as companion documents to the Cache County Land Use Ordinance. The information and recommendations should be used as the basis for decision concerning requests before the Cache County Planning Commission and County Council.

The Land Use Element is not developed only for the unincorporated areas of Cache County but for all the communities within the County. Each community should use the information and recommendations as a building block in making their own land use decisions and development of their general plans.

Another important part of the Land Use Element is the aspect of private property rights and their protection. With any change to a comprehensive plan or ordinance there will be some effect on the property rights of a parcel of land. The property rights of a given parcel are defined by the local zoning or land use ordinance. The United States Supreme Court has expressly prohibited that total taking of any viable use of an individual's land. This does not mean, that one has the right to do whatever he or she chooses with his property.

PLANNING DISTRICT

Cache County has many singular and diverse environs. Each of these areas presents unique and different planning issues. Planning for these areas need to treat them as unique and separate areas. Dividing the County into planning districts helps facilitate a stronger Countywide planning process while allowing it to deal with the individual issues within each district.

The Planning Districts were used for a series of open houses to solicit public input from the citizens, and local officials for the development of the Countywide Comprehensive Plan. The open houses were held in schools, churches, and public facilities in each district to provide easy access of the public to these meetings. The first round of open houses provided an opportunity for the general public to express their concerns as to what the issues were for their district and the County as a whole. The second round of open houses focused on evaluating the possible planning techniques which could be used to deal with the issues expressed from the first series of open houses. The final open house allowed for a review by the public of the preliminary plan that would be presented to the County Planning Commission and Council. Planning by district provides the flexibility to do planning on a smaller scale while, at the same time, creating a county-wide comprehensive plan.

On the following pages is a brief description of each of the eight different planning districts. A table for each district shows the incorporated communities and unincorporated areas and also shows the past, present, and projected population for each district. Map LU-1 on the following page shows Cache County and the eight Planning Districts.

PLANNING DISTRICT 1 - NORTH EAST CACHE VALLEY

Planning District 1 encompasses the northeastern part of Cache Valley. This area consists of the Communities of Lewiston, Richmond and the unincorporated county area of Cove. Currently this district area is sparsely populated. The table below shows the past, present and projected population for this planning district.

Jurisdiction	1950	1960	1970	1980	1990	2000	2010	2020
Lewiston	1,533	1,336	1,244	1,438	1,532	1,620	1,800	2,029
Richmond	1,091	977	1,000	1,705	1,955	2,343	2,919	3,552
Unincorporated	264	265	252	335	470	745	920	1,000
Total	2,888	2,578	2,496	3,478	3,957	4,708	5,681	6,581

Source: Utah Economic & Demographic Projection, 1997, State of Utah Office of Planning and Budget

PLANNING DISTRICT 2 - NORTH WEST CACHE VALLEY

Planning District 2 encompasses the northwestern part of Cache Valley. This area includes the communities of Amalga, Clarkston, Cornish, Newton, Trenton, the unincorporated county areas of Cache Junction, and the northern part of Petersboro. Like Planning District 1 this area is relatively sparsely populated.

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MAP LU-1
PLANNING DISTRICT MAP

MAP LU-1
BACK PAGE OF PLANNING DISTRICT MAP

Jurisdiction	1950	1960	1970	1980	1990	2000	2010	2020
Amalga	225	198	207	323	366	443	517	611
Clarkston	526	490	420	562	645	728	845	955
Cornish	181	157	173	181	205	230	255	276
Newton	497	480	444	623	659	707	850	960
Trenton	451	448	390	447	464	557	564	612
Unincorporated	142	143	136	181	254	405	500	544
Total	1,880	1,773	1,634	2,136	2,339	2,665	3,031	3,414

Source: Utah Economic & Demographic Projection, 1997, State of Utah Office of Planning and Budget

PLANNING DISTRICT 3 - NORTH CENTRAL CACHE VALLEY

Planning District 3 encompasses the north central part of Cache Valley. This area consists of the unincorporated county area of Benson. The Cache County Council created a separate planning commission for the unincorporated Benson area in September 1979. Currently this district area is relatively sparsely populated.

Jurisdiction	1950	1960	1970	1980	1990	2000	2010	2020
Unincorporated	264	265	252	335	470	459	567	616
Total	264	265	252	335	470	459	567	616

Source: Utah Economic & Demographic Projection, 1997, State of Utah Office of Planning and Budget

PLANNING DISTRICT 4 - URBANIZED AREA

Planning District 4 encompasses the urbanized area of Cache Valley. This area consists of the Communities of Hyde Park, Logan, Millville, Nibley, North Logan, Providence, River Heights, Smithfield, and the southern part of unincorporated county area of College Ward. The 1990 Census designated the Logan Urbanized Area based on the population for the area.

Jurisdiction	1950	1960	1970	1980	1990	2000	2010	2020
Hyde Park	644	696	1,025	1,495	2,190	3,092	4,009	5,000
Logan	16,832	18,731	22,333	26,844	32,762	41,906	49,269	55,286
Millville	401	364	441	848	1,202	1,725	2,397	3,326
Nibley	304	333	367	1,036	1,167	2,012	2,769	4,528
North Logan	535	741	1,405	2,258	3,768	5,786	8,842	12,066
Providence	1,055	1,189	1,608	2,675	3,344	4,292	5,725	7,117
River Heights	468	880	1,008	1,211	1,274	1,386	1,644	1,791
Smithfield	2,398	2,512	3,342	4,993	5,566	7,079	8,733	10,154
Unincorporated	902	907	861	1,147	1,608	1,745	2,155	2,343
Total	23,524	26,353	32,390	42,507	52,881	68,622	85,235	101,611

Source: Utah Economic & Demographic Projection, 1997, State of Utah Office of Planning and Budget

PLANNING DISTRICT 5 - SOUTH CENTRAL CACHE VALLEY

Planning District 5 encompasses the south central part of the Cache Valley. This area consists of the unincorporated county area of Young Ward and the northern part of College Ward. The College and Young Ward area is directly adjacent to the Urbanized Area and is projected as one of the high growth areas of the County.

Jurisdiction	1950	1960	1970	1980	1990	2000	2010	2020
Unincorporated	451	453	430	574	804	1,352	1,669	1,815
Total	451	453	430	574	804	1,352	1,669	1,815

Source: *Utah Economic & Demographic Projection, 1997, State of Utah Office of Planning and Budget*

PLANNING DISTRICT 6 - SOUTH WEST CACHE VALLEY

Planning District 6 encompasses the southwestern part of Cache Valley. This area consists of the communities of Mendon, Wellsville, and the unincorporated county areas of Mount Sterling, and southern part of Petersboro. This district also takes in an area of Cache National Forest land and does have some of the same issues as District 8.

Jurisdiction	1950	1960	1970	1980	1990	2000	2010	2020
Mendon	369	345	345	663	684	823	1,039	1,309
Wellsville	1,421	1,106	1,267	1,952	2,206	2,852	3,075	3,360
Unincorporated	345	347	330	439	616	878	1,085	1,179
Total	1,955	1,798	1,942	3,054	3,506	4,553	5,199	6,118

Source: *Utah Economic & Demographic Projection, 1997, State of Utah Office of Planning and Budget*

PLANNING DISTRICT 7 - SOUTH EAST CACHE VALLEY

Planning District 7 encompasses the south central part of Cache Valley. This area consists of the communities of Hyrum, Paradise, and the unincorporated county area of Avon. This area along with District 4 is an area currently experiencing heavy growth.

Jurisdiction	1950	1960	1970	1980	1990	2000	2010	2020
Hyrum	1,704	1,728	2,340	3,952	4,829	5,818	7,453	9,303
Paradise	401	368	399	542	561	714	731	818
Unincorporated	437	440	418	556	780	1,249	1,543	1,677
Total	2,542	2,536	3,157	5,050	6,170	7,781	9,727	11,798

Source: *Utah Economic & Demographic Projection, 1997, State of Utah Office of Planning and Budget*

PLANNING DISTRICT 8 - EAST CACHE COUNTY

Planning District 8 encompasses the eastern part of Cache County. This area consists mostly of the Cache National Forest Land of the unincorporated county. Much of the environmentally sensitive land in Cache County is found in this District. Most of this area is public owned, however, there is some privately owned land in this district.

Jurisdiction	1950	1960	1970	1980	1990	2000	2010	2020
Unincorporated	7	7	6	9	12	17	21	23
Total	7	7	6	9	12	17	21	23

Source: Utah Economic & Demographic Projection, 1997, State of Utah Office of Planning and Budget

POPULATION

The importance of accurate population projections in planning a county's future should not be underestimated. Virtually every important element of the county will be directly affected by the increase or decrease of its most important resource, people. A precise population forecast can aid planners, engineers and administrators in determining land required for future housing, the increased demand for parks and recreational amenities, the location of new public facilities such as schools and libraries, increased public services such as police and fire protection, demand for commercial development and the likelihood of new employment.

POPULATION GROWTH

Cache County has for the last 45 years, from 1950 to 1995, maintained a steady growth rate. The annualized rate is about 2 to 2.5 percent a year. Most of Cache County's increase in population has been natural due to births. The County, at times, has experienced surges of out and in-migration but has maintained a fairly constant growth rate. Table LU-1 shows Cache County population.

TABLE LU-1 CACHE COUNTY POPULATION

	1950	1960	1970	1980	1990	1995
Cache County	33,536	35,788	42,331	57,176	70,183	82,451

Source: U.S. Census, State of Utah Office of Planning and Budget

Community Profile

In 1990, there were 35,208 male and 34,975 female residents of Cache County. For this same period there were 70,183 persons living in 21,055 households, making an average household size of 3.33 persons. The household size for the State of Utah averages 3.27 persons. Approximately 95.0 percent of Cache County residents are white, with 97.6 percent of non-Hispanic origin. Roughly 3,500 persons of minority races, Black, American Indian, Asian or Pacific Islander, or other, live within the County. Approximately 41.2 percent of Cache County's population is between 1 and 19 years old, with another 43.0 percent between ages of 20 and 49, and only 15.8 percent at age 50 or older. Table LU-2 represents a simple demographic comparison of Cache County with the five neighboring counties.

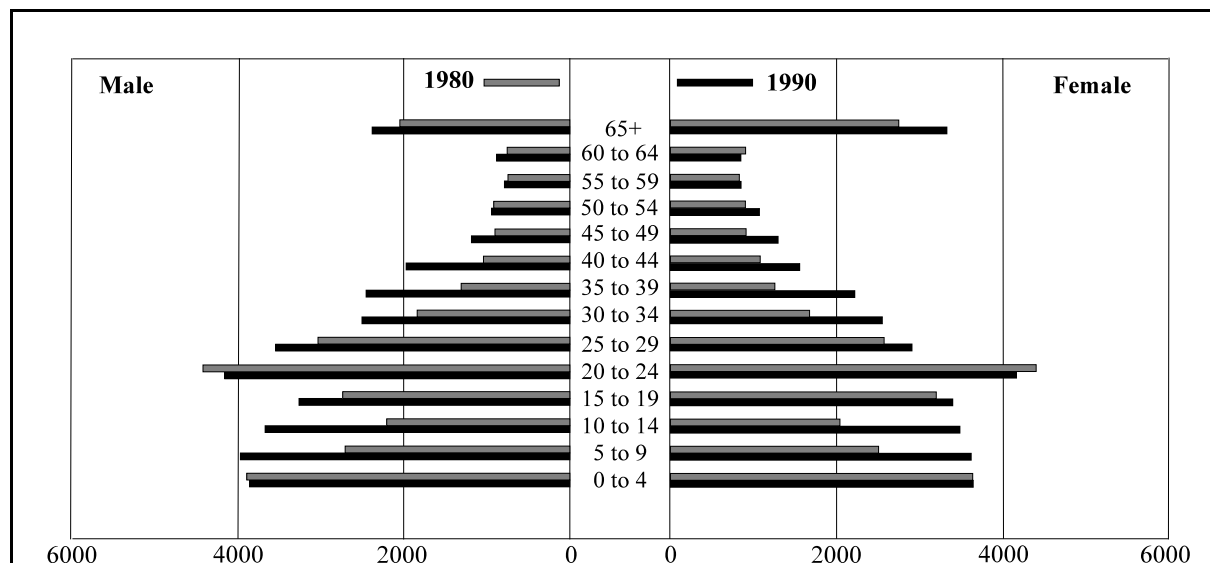
TABLE LU-2 COUNTIES PROFILE COMPARISON - 1990

County	Median Age	Household Size	Percent Minority
Cache	23.6	3.33	5.2
Box Elder	26.9	3.31	4.8
Rich	27.2	3.26	1.3
Weber	28.9	2.93	7.4
Franklin, Idaho	31.1	2.85	2.0

Source: United States Census, Bureau of Census, Department of Commerce, 1990

A standard method of population comparison is the use of an age cohort pyramid. When the age cohorts for 1980 and 1990 are combined in one composition, it is easy to recognize which age groups represent the largest proportion of the total population and which age groups have increased or decreased over the last ten years. Figure LU-1 below shows both the 1980 and 1990 population pyramids for Cache

FIGURE LU-1 CACHE COUNTY POPULATION PYRAMID



County.

Source: United State Census, Bureau of Census, Department of Commerce, 1990

PLANNING PROJECTION

The State of Utah Governor's Office of Planning and Budget uses a model to develop projections for the State of Utah. This model is called the Utah Process Economic and Demographic model or UPED. This model has been used for many years to generate population and employment baseline impact projections.

UPED Model

UPED model combines three components (birth, death, and migration) cohort survival projection technique with an economic base model to project population and employment given various assumptions about the future. The cohort survival portion of the process involves a relatively simple technique based on the fact that the next period's population equals the present period's population, plus births, minus deaths, and plus net migration. To project population, then, cohort survival techniques merely project these three components of population change. The link between the cohort survival technique and the economics base model comprising UPED is the relationship between the portion of population migration which depends on employment.

The economic base model divides the area's economic structure between basic and non-basic components of employment, and assumes the basic component, known as the "economic base," is the driving force for economic activity. Basic economic activity is defined as export oriented, and thereby independent of population size, so the economic base comprises industries and firms which produce goods and services which are sent for use and consumption in other states or counties. Non-basic production, also known as residentiary or population dependent, occurs for use and consumption by local residents. Thus, residentiary employment includes those jobs, such as restaurant workers, teachers, and sales clerks which specifically attend the local population. It should be realized that many export oriented industries will include some production component necessary for local consumption, and every industry may have some component of population related to both basic and residentiary demands.

Figure LU-2, on the following page, depicts the UPED Model flow chart. To generate a projection, UPED divides the present population, sometimes referred to as the "baseline population," in cohorts, typically constructed by sex and year of age. As box 2 indicates, using cohort-specific fertility rates, two new cohorts are created from baby girls and boys born during the baseline. Then, using cohort specific mortality rates, all cohorts are aged and survived one year, non-employment relates migration, which typically results from LDS missions, armed service assignments, college enrollment, or retirement, is accounted for, and, as box 3 indicates, and "adjusted natural increase population" for the next year is derived.

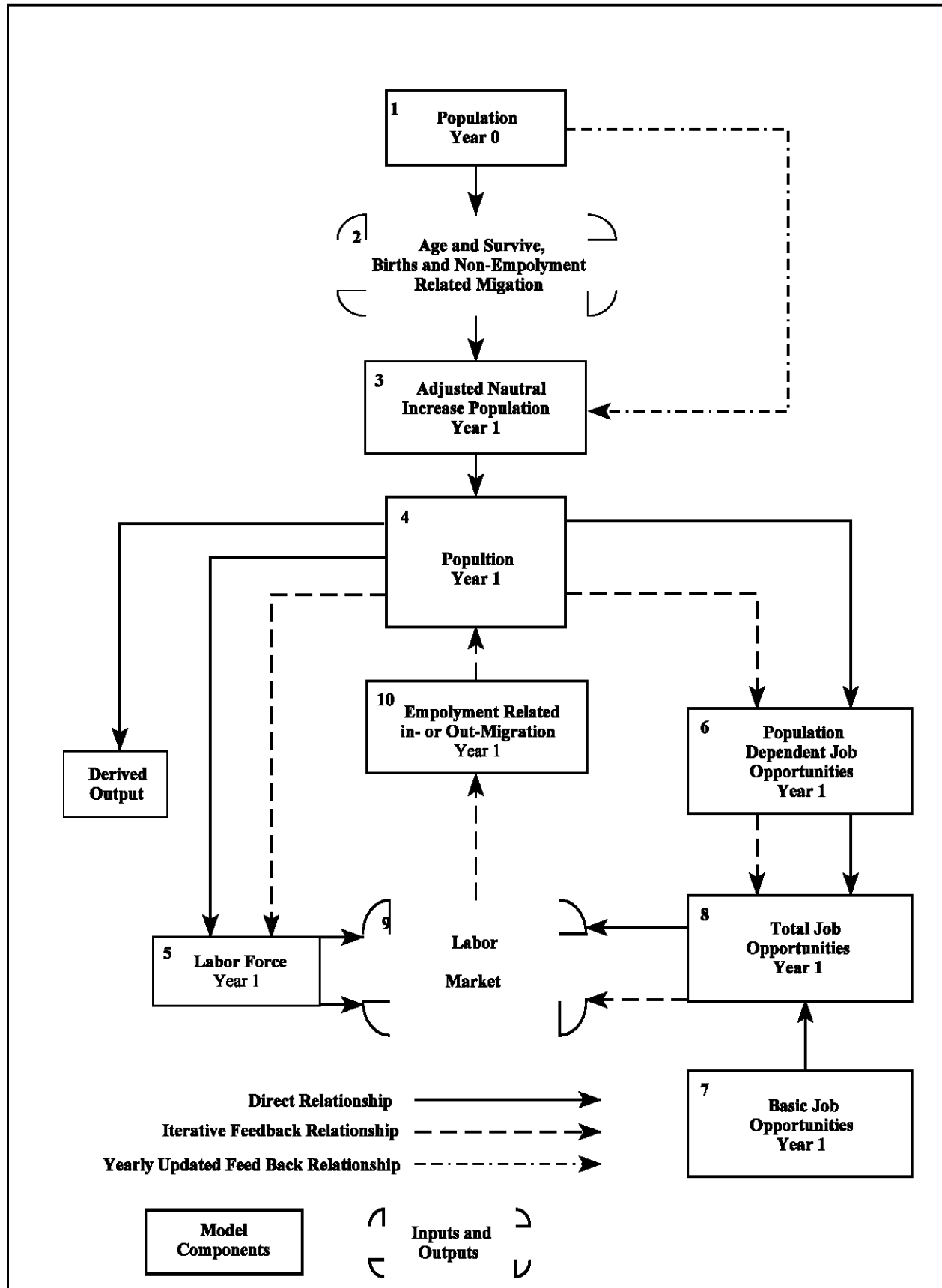
Given this adjusted natural increase in population, as box 6 indicates, residentiary employment is computed. In making this computation, UPED uses 65 detailed industries and calculates the basic and residentiary component of each industry as well as industry specific (residentiary) employment multipliers and (basic) industry growth estimates. These 65 industries generally correspond to the U.S. Office of Management and Budget's two digit level, Standard Industrial Classification (SIC) industries. As box 8 indicates, adding residentiary and basic job opportunities gives total job opportunities, which are often referred to as labor demand. Box 5 indicates the labor force, also known as labor supply, depends on the adjusted natural increase population through cohort-specific labor force participation rates. The interaction of labor supply and demand in the labor market, indicated in box 9, determines employment, which in turn, as box 10 indicates, determines employment related net migration.

In-migration occurs when the initial demand for labor exceeds the supply for labor. In-migration creates additional population related jobs (residentiary employment) so the process is repeated until an equilibrium point is reached. The equilibrium point is based on a predetermined unemployment rate. Out-migration occurs when the equilibrium unemployment rate is somewhat below the input unemployment rate. Again, such employment related migration initiates an iterative process in which changes in residentiary job opportunities and population occur until a non-migration unemployment rate characterizes labor market equilibrium. Given no additional migration, a first year population is projected, which is then used as input to the second period projection, with the process continuing to the end of the projection horizon.

Population projections translate to household projections through the application of cohort-specific head of household rates to the projected population. The number of households so determined indicates the number of dwelling units needed to house the projected population. Dividing projected population by projected households gives average people per household, or average family size. Related forecasts of demographic statistics can derive the age and sex structure of the population with family size and other variables.

FIGURE LU-2

GENERAL FLOW CHART UPED MODEL



Perhaps the most important feature of UPED to understand is that projected population ultimately depends on projected basic employment. While there are a host of important assumptions concerning existing and future demographic characteristics, such as fertility and mortality, UPED was originally designed as a means to formalize the impacts on Utah's economy and population of different scenarios for the economic base. As box 7 infers projections of basic employment are largely independent from UPED's determination of total population and employment.

Projections are often most relevant and useful when viewed within the context of historical trends. As a point of reference, Tables and Figures LU3 and LU4 show a comparison of Cache County and Utah's population growth curves for the period 1950 to 2020. The County and State's U.S. Census counts for 1950 to 1990 were used. The Utah Office of Planning and Budget's UPED Population Projection was used to determine Cache County and Utah's population totals for 2000, 2010 and 2020. Because of the wide numerical difference between Cache County and the State of Utah, it was impractical to superimpose the respective curves on a single graph. However, the slope of the two different curves is what really matters and it is easy to determine that Cache County is growing at about 2.5 percent which is slightly slower than the State of Utah's growth rate of 3.4 percent.

TABLE LU-3 CACHE COUNTY POPULATION (UPED) PROJECTION (1950-2020)

	1950	1960	1970	1980	1990	2000	2010	2020
Planning District 1	2,888	2,578	2,496	3,478	3,957	4,708	5,681	6,581
Planning District 2	1,880	1,773	1,634	2,136	2,339	2,665	3,031	3,414
Planning District 3	264	265	252	335	470	459	567	616
Planning District 4	23,524	26,353	32,390	42,507	52,881	68,622	85,235	101,611
Planning District 5	451	453	430	574	804	1,352	1,669	1,815
Planning District 6	1,955	1,798	1,942	3,054	3,506	4,553	5,199	6,118
Planning District 7	2,542	2,536	3,157	5,050	6,170	7,781	9,727	11,798
Planning District 8	7	7	6	9	12	17	21	23
Cache County	33,536	35,788	42,331	57,176	70,183	90,157	111,130	131,976

Source: Utah Economic & Demographic Projection, 1997, State of Utah Office of Planning and Budget

FIGURE LU-3 CACHE COUNTY POPULATION (UPED) PROJECTION (1950-2020)

G R O
W T H
C U R
V E

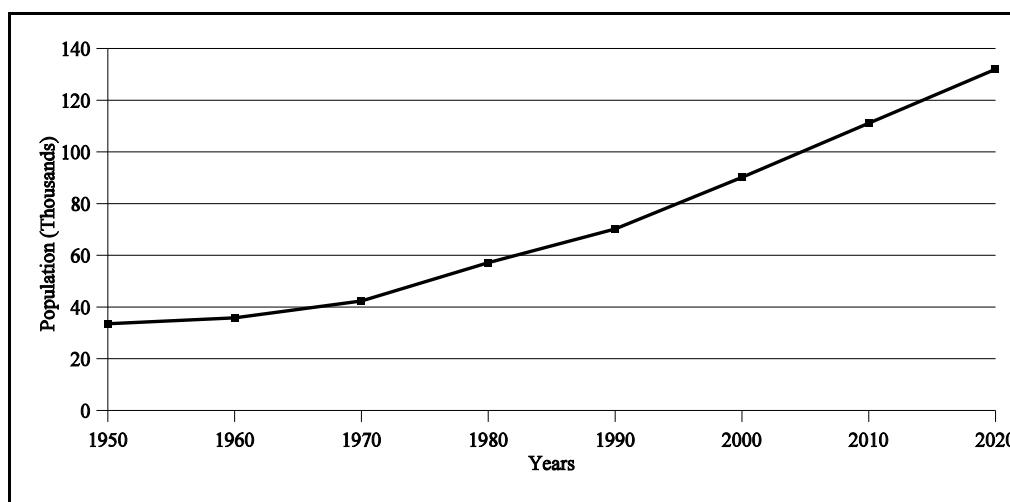
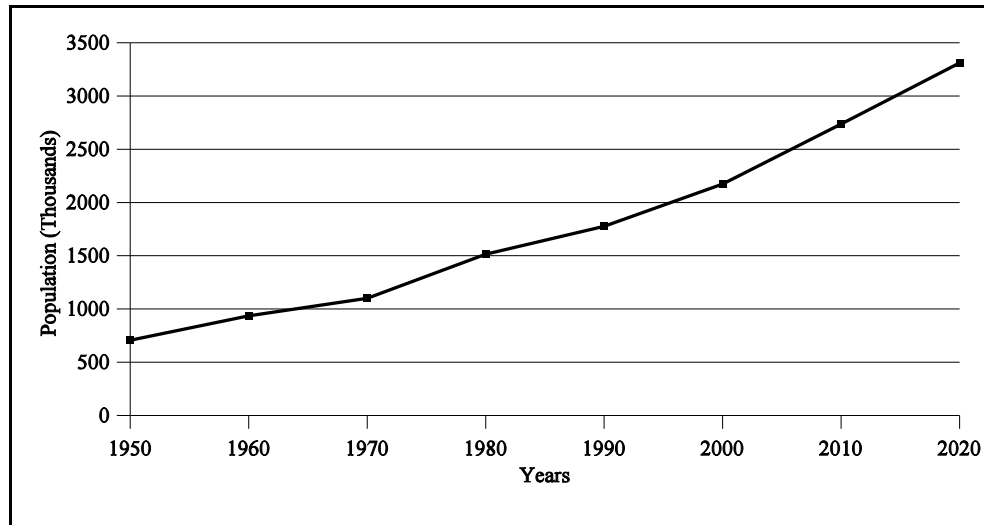


TABLE LU-4 UTAH STATE POPULATION (UPED) PROJECTION (1950-2020)

1950	1960	1970	1980	1990	2000	2010	2020
706,100	936,000	1,101,000	1,515,000	1,775,450	2,172,513	2,737,189	3,311,302

Source: *Utah Economic & Demographic Projection, 1997, State of Utah Office of Planning and Budget*

FIGURE LU-4 UTAH STATE POPULATION (UPED) PROJECTION (1950-2020) GROWTH CURVE

UTAH STATE UNIVERSITY

Utah State University currently is the second largest state run university in the State of Utah. The student population is not included as part of the population projections. Utah State University's current enrollment is approximately 20,000 students within its system with about 13,000 of those considered full-time students on the Logan campus. The University estimates that the student enrollment will continue to grow. Table LU-5 shows the projected full-time student projected enrollment.

TABLE LU-5 UTAH STATE UNIVERSITY FULL-TIME ENROLLMENT (1970-2020)

1970	1980	1990	2000	2010	2020
8,532	10,580	13,319	20,565	23,000	27,000

Source: *Utah State University*

The student population is not always included within the current projection and should have some consideration given to their impact on the region and its resources.

POPULATION ISSUE STATEMENT

Population growth trends provide insight and understanding of the future of a region. It also, provides the county and municipalities the ability to plan for the social and physical needs of this future population. The problems that most developing communities do not understand or take into account is the consequence of growth and the future needs of the residents of their communities.

Cache County historically has maintained an annualized growth rate of approximately 2 percent since the 1950s. The population projections, for the County, show this trend is expected to continue for the next 20 plus years. Overall, this is not a dangerous growth rate and the county and the municipalities have the ability to meet the needs of this increasing population growth. The problem is that most communities do not recognize that they are facing growth and are not planning for its impacts in the future.

It is important to understand that this type of annualized growth rate has a compounding and doubling effect. If this rate growth continues, the population in Cache County will double in the next 25 to 30 years. With this increasing population will come increased demands for affordable housing and employment. The pressure will be on the existing communities to meet and provide for the needs of these and future residents.

LAND USE

Cache County has a variety of land uses. The County continues to evolve from an area that was once composed essentially of agricultural uses to a county with diverse urban and agricultural communities. At one time there were extensive tracts of natural wetlands, farmlands, woodlands and grasslands, and small compact urban communities. Over the years as population increased there has been an expansion of the urban uses such as subdivisions, commercial, and industrial uses outside the cities. Cache County has successfully merged the best elements of both urban and rural uses into well-balanced communities. However, the continuing of urban sprawl and development in the non-urban areas has created a number of problems and conflicts within the County.

Cache County can be divided into three distinct and separate areas. Each of these have unique issues and they should be treated differently. These areas can be defined as the Urban, Non-Urban, and Canyons/National Forest Areas. The following are a set of descriptions for the different areas of Cache County.

Urban - areas of the County which are currently or will be experiencing increased urbanization pressure from the expansion of existing communities. The land use types in the urban areas include activities such as residential housing, commercial business, industrial manufacturing, public works and recreation. The urban area of the county should be receiving most of the population and employment growth in the future.

Non-Urban - areas of the County which are not yet ready for urbanization and have significant agriculture value. The land use types in non-urban areas include land devoted to primary agricultural production, farming, grazing, and wetlands. These unincorporated non-urban areas should be reserved primarily for rural uses, such as agriculture and associated residential uses. There are also incorporated communities in this non-urban area. Most of the current urban developments have been located in these communities or within close proximity of them.

Canyons/National Forest - These areas are for the proper use of the National Forest/Canyon areas of Cache County for grazing, forestry, recreation and other activities to an extent compatible with the protection of the natural and scenic resources of the forests and canyons for the benefit of present and future generations. The land use types in the Canyons/National Forest areas include activities such as seasonal residential housing, resort and recreation business, range & forested woodland, grazing, wildlife, watershed, and wilderness areas.

These different areas provide a method of understanding and considering future development patterns within the County. As part of the development of the Land Use Element of the Countywide Comprehensive Plan, these areas of Cache County should play a role when considering the placement of future land use types.

Map LU-2 on the following page graphically depicts these three different areas of Cache County.

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MAP LU-2
CACHE COUNTY AREAS MAP

MAP LU-2
BACK PAGE OF CACHE COUNTY AREAS MAP

URBAN, URBAN DEVELOPMENT, URBAN SPRAWL AND RURAL LAND USE

The terms urban, urban development, urban sprawl, and rural are used many times throughout the Land Use Element. It is important that these terms are clearly defined. Definitions for these terms are not easy black and white ones. In most cases these terms are referring to a process or a stage in the development process of land.

The United States Census Bureau provides a most simple analytical definition for urban and rural. The following are the definitions for urban, and rural.

Urban - the population and territory within the boundaries of an Urbanized Area (UA) and the urban portion of places (cities) outside of UA's that have decennial census population of 2,500 or more.

Urbanized Area (UA) - an area consisting of a central place(s) and adjacent urban fringes that together have a minimum residential population of at least 50,000 people and generally an overall population density of at least 1,000 people per square mile of land area.

Rural - the population and territory outside any Urbanized area and the urban part of any place (city) with a decennial census population of 2,500 or more.

These definitions are very simple and in some respect are easy to rely upon. Based on these definitions only the communities within the Logan Urbanized Area and the municipalities of Wellsville and Hyrum would be defined as urban. The remaining communities of Newton, Clarkston, Cornish, Trenton, Lewiston, Richmond, Amalga, and Mendon would be defined as rural. The Census Bureau definitions are useful in defining and separating rural areas from urban areas. However, these definitions may not do a good job of describing the land use problems of urban development and sprawl.

Urban development within the unincorporated County is divided between two land use classifications of residential housing and commercial/industrial development. Currently, most urban development has been limited to existing municipalities. This is primarily due to the fact that much of the development requires urban type services (sewer and water) which are not generally available in the non-urban areas. However, there is an increasing amount of residential development taking place in the unincorporated areas of the County. If this trend continues, there will be demands for urban services to be developed in the unincorporated county areas.

Urban sprawl is a result of different planning decisions and actions taking place over time. Many times urban sprawl is often referred to as leapfrog development. Urban sprawl is when development is allowed on cheaper agricultural land that is annexed and rezoned. Even though vacant land is available within municipal boundaries for this type of development. This practice usually will require the expansion of municipal utility services to meet the demands of the new development. The increased problems of urban sprawl and leapfrog development taking place throughout the unincorporated areas of the County is eating away at the agricultural uses within the County. The primary cause of these problems is Cache County's less restrictive land use ordinances and processes. Also, the overall cost of land tends to help contribute this growing problem.

COUNTYWIDE LAND USE PATTERNS

A number of separate, land use surveys have been conducted in Cache County. The first survey was completed in 1960. The second study was part of a 1979 transportation plan. The most recent land use survey was carried out in 1990 as part of a study done for Utah Department of Natural Resources. Table LU-6 on the following page summarizes all three survey studies on land use in Cache County.

TABLE LU-6 CACHE COUNTY GENERALIZED LAND USE (acres)

Land Use Categories	1960	%	1980	%	1990	%
Urban	13,387	1.8	19,174	2.6	17,286	2.4
Irrigated Pasture & Cropland	167,954	22.4	119,974	15.9	110,821	14.8
Non-irrigated Pasture & Cropland			60,365	8.1	60,407	8.0
Range & Forested Woodland	544,670	72.5	543,693	72.4	540,600	71.9
Wetlands/Marsh Land Areas	22,757	3.0	5,562	0.7	19,654	2.6
Water	2,592	0.3	2,592	0.3	2,592	0.3
Total	751,360	100.0	751,360	100.0	751,360	100.0

Source: Cache County 1970 Master Plan, Soil Conservation District's Zone 1-RMS

The existing land uses of Cache County have been classified under the following general categories

Urban - These are lands used for community growth and development within incorporated areas of the County.

Irrigated Pasture and Cropland - These are irrigated lands primarily used for production of alfalfa, grain or grasses more than 50% of the time.

Non-irrigated Pasture and Cropland - These are lands used to produce crops for domestic livestock from natural precipitation.

Range and Forested Woodland - These are lands used for several purposes including grazing, forestry, recreation, and seasonal dwellings. These lands are comprised primarily of state and federally managed areas, however, there are also areas of privately owned land.

Wetland and Marsh Areas - These are lands and areas critical to hydrology of Cache County. They are lands defined as wetlands and subject to flooding. These areas are also critical to waterfowl population and habitat.

Water - These areas include reservoirs, natural lakes, and other extended areas of surface water.

Cache County has 751,360 total acres or 1,174 square miles within its jurisdictional boundary. The above table of the generalized land use gives a fair estimate of the different land use types and their distribution throughout Cache County.

A more significant review of the land use is to consider the different types of land ownership within Cache County. Table LU-7 on the following page breaks down the different types of ownership into

private, public, and other.

TABLE LU-7 CACHE COUNTY 1995 LAND OWNERSHIP

Land Use Categories	Acres	%	Acres	%
Private	389,246	51.8%		
Agriculture/Green belt			355,408	47.3%
Commercial/Industrial			1,557	0.2%
Residential			8,979	1.2%
Vacant			23,302	3.1%
Public	353,037	47.0%		
National Forest			267,827	36.0%
Wilderness Areas			68,520	9.0%
State			16,690	2.0%
Other	9,077	1.2%		
Water			2,592	0.3%
Other			6,485	0.9%
Total	751,360	100.0%	751,360	100.0%

Source: Cache County Auditor, 1995 Property Summary Report

The groupings, private, public, and other, are further refined into different subgroups which provide a more detailed understanding of the existing land uses within Cache County. These groupings were based on the Property Summary Report from the Cache County Auditor's office. The information is from the current taxing code based on the use of the property. The following are detailed descriptions of the private subgroups:

Agriculture/Greenbelt - These are the lands devoted to the raising of useful plants and animals with a reasonable expectation of profit.

Commercial/Industrial - These are lands used for commercial or industrial purposes.

Residential - These are lands used for residential purposes.

Vacant - These are lands not included in any of the categories. This group is primarily land found within communities that have not yet been developed (vacant residential lots).

The public category only includes those public lands owned by the Federal (National Forest, Bureau of Land Management, and Bureau of Reclamation) and State (Natural Resources, and School Trust Lands) Government. The Other category includes all other lands which include lands used for schools, Utah State University, local public buildings, hospitals, and other nontaxed properties. Map LU-3 on the following page provides a graphical distribution of the different land ownership within Cache County.

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MAP LU-3
CACHE COUNTY OWNERSHIP MAP

MAP LU-3
BACK PAGE OF LAND USE OWNERSHIP MAP

LAND USE ISSUE STATEMENT

There are many factors that can affect land uses and where they are located. Primarily, future trends for land use development are dependent on the land use planning policies which are developed and adopted by individual jurisdictions. Other factors which affect land use trends include such things as the transportation systems, economics, and demographics.

Traditionally the urban development in Cache County has been located within or in close proximity to the existing municipalities. This is due primarily to the fact that the municipalities provide most of the urban services (culinary water and sewer systems) within the County. Cache County does not provide these type of municipal services. However, over the last few years there has been an increasing trend of locating urban uses outside of existing communities. This change is primarily based on economic decisions and concerns of cost of land and development. These developments usually do not meet the official definitions of urban development but their total cumulative effect is the same.

This increasing trend of locating small urban developments outside existing municipalities has begun to generate increasing problems of urban sprawl and leapfrog development into the cheaper agricultural farmlands. Urban sprawl development will create an increasing monetary cost to Cache County and its municipalities. This increase cost will be found in higher taxes paid to meet the increasing demand for urban services. If this trend continues, it will eventually inhibit economic growth and degrade the overall quality of life within Cache County.

PHYSICAL ENVIRONMENT

The physical environment of Cache County affects every aspect of planned urban growth and development. It affects how, when and where development takes place, along with limiting the type, intensity and manner of building construction. The physical environment has a profound influence on the quality of life. Factors, such as location, weather, topography, geology, air, soil and water characteristics either enhance or detract from the full benefit of an urban settlement. The physical conditions of a particular location directly influence the physical layout of the community, its style of architecture and, to no small degree, the cultural aspects of the inhabitants.

The following section of the Land Use Element's community profile attempts to describe the physical characteristics of the County along with the natural constraints to development. A complete understanding of the physical environment will promote responsible development decisions, insure the community's health and safety and protect those areas that are uniquely susceptible to harm by man.

Cache County is made of two very different regions. These two regions are the mountainous region of eastern Cache County and valley region of western Cache County. The mountainous region of Cache County is a very important geological area. There is, however, limited urban development in this region. Most of this section will place emphasis on the valley region of Cache County where most of the urban development in the County is taking place.

The valley region of Cache County is bounded on the west by the Bannock Range, the southern extension of the Malad Range, and the Wellsville Mountains. The altitude of the Wellsville Mountains rises abruptly to more than 9,000 feet. The Bannock Range also reaches altitudes above 9,000 feet. The Malad Range reaches altitudes of 6,000 to 7,000 feet where it bounds Cache Valley. The mountainous region of Cache County bounds the valley region on the east by the Bear River Range, which rises in altitude from 8,000 to near 10,000 feet.

CLIMATE

The variation in elevation affects the climate in Cache County. The amount of precipitation increases with elevation. Elevation, latitude and continental location combine to create a climate characterized by four well-defined seasons, hot, dry summers and cold, wet winters and a wide range of temperatures, precipitation and relative humidity.

Annual rainfall for Cache County averages 17.4 inches. The wettest months for rainfall are during the spring months and driest months are during the summer. The rainfall in Cache Valley is not usually adequate to produce maximum crop production without some type of supplemental water. A considerable amount of the annual moisture is snow, most of which falls during the months of December through March. The average annual snowfall is between 60 and 80 inches. There can be as much as several hundred inches in the higher elevation. The growing season for most of the farming areas in Cache Valley ranges from 114 to 150 days with a slightly longer season along the higher lake terraces and mountain foot slopes. Some valley floor locations have closer to a 90 day growing season.

The County's average temperature during the summer months ranges from 50 to 80 degrees Fahrenheit.

A maximum temperature of 90 degrees or higher may occur an average of less than 25 days a year. The average temperature during July is 73 degrees Fahrenheit. Winter months are cold and can be severe at times. In an average year there are only 6 to 12 days which have a minimum temperature that is below zero, and 35 to 40 days having a maximum that is 32 degrees Fahrenheit or below. The average temperature during January is 25 degrees Fahrenheit.

The winds generally are light, however, the winds from Logan and Blacksmith Fork Canyons may sometimes reach a velocity of more than 80 miles per hour. This can be a problem for development in the mouth of these canyons.

TOPOGRAPHY

Cache County lies in the transition zone between two physiographic provinces, the Basin and Range to the west and Middle Rocky Mountains to the east. Cache Valley is that area of the county below the highest level of ancient Lake Bonneville (about 5230 ft.) between the Wellsville Mountains-Clarkston Mountain line and the Bear River Range or plateau on the east. The lowest area of the valley floor is about 4400 feet where the Bear River exits the valley after collecting about half its flow from Cache watersheds. A veneer of Lake Bonneville deposits in the valley area combined with the excellent watershed of the Bear River Plateau, with elevations nearing 10,000 feet, combine in a soil and water resource to make Cache Valley the leading agricultural producing area of Utah.

The Pleistocene or Ice Age period has profoundly affected today's topography. Evidence of glacial processes is found in the higher elevations. Lake Bonneville overflowed in a catastrophic flood through Red Rock Pass at the north end of Cache Valley about 14,500 years ago. Many thousands of years before that the Bear River was blocked by a lava flow at Soda Point and diverted from Pacific drainage to Great Basin drainage. This had a profound effect on the floor of Cache Valley and resulted in the deposition of the sand and silt parent material for the fine agricultural soils along the margins of the Bear River. Shore features left by the lake are much in evidence in the form of deltas, wave cut terraces, bars, and spits. These have provided some of the most attractive building sites in the valley.

GEOLOGY

Precambrian, Paleozoic, and Cenozoic rocks are exposed in the county. No Mesozoic rocks are mapped, but they are well represented a few miles to the east in the Bear Lake Plateau. Wellsville Mountain and the Bear River Range reveal a section of Paleozoic rock's tens of thousands of feet thick. These have been folded by compressional forces and over thrust in mountain sized blocks for distances on the order of tens of miles. Thick sequences of Tertiary rocks have accumulated in down faulted depressions resulting from extensional faulting with maximum displacements that probably exceed 10,000 vertical feet and miles of horizontal extension.

Since the theory of plate tectonics or continental drift came into greater popularity with earth scientists starting in the 1960's, many new interpretations have been advanced to explain the rock record. The application of this theory seems to explain at least partially the patterns of seismic activity observed by seismologists today as well as evidence of ancient earthquakes. The ponderous lateral movement of the continents and oceanic plates through geologic time have had and is yet having an influence on Cache

County. At the present time we are in a crustal extension mode. This extension of the Earth's crust along a generally east-west line across the great basin is progressing at the rate of one's fingernail growth. Moderate earthquakes capable of producing surface rupture can be expected. One of the enigmatic problems of current research is the lack of correlation of seismic activity with mapped surface traces of faults. Present seismic activity appears to be related to internal adjustments on faults within blocks bounded by major basin-range faults rather than on the major faults themselves. Fault geometry seems to be quite different from that traditional thought. Seismic profiles developed during oil exploration show a listric pattern where near vertical fault planes at the Earth's surface become more level with depth and eventually approach the horizontal and merge with more ancient thrust fault surfaces.

SEISMIC HAZARDS

There are several major mapped fault zones within Cache County, most prominent among them are: 1) West Cache, 2) Dayton, 3) East Cache, and 3) The Temple Ridge. The faults in each of these zones and unmapped faults could produce a number of different seismic hazards that should be taken into consideration as part of the planning process for land use. These hazards include; ground shaking, liquefaction, and ground failure.

Ground shaking, or the motion of the earth caused by the release of kinetic energy when over strained rocks suddenly rebound, is a major risk to the built environment. Local geologic conditions can change the characteristics and intensity of an earthquake induced ground shaking. Thick deposits of unconsolidated soil materials can amplify the intensity of shaking. Ground shaking is more pronounced in loosely packed, fine-grained silt, sand and clay deposits because they amplify ground motion, sometimes by a factor of ten. The geologic composition of Cache County makes it particularly susceptible to this type of seismic hazard. However, other factors also play an important part. These factors include seismic source zones, frequency of earthquake events, mechanics of individual fault segments, local filtering characteristics of the earth's crust and mantle constituting the regional paths along which seismic waves travel and the filtering characteristics of the column of soil and rock underlying the area of interest.

Ground failure, as a result of seismic activity, includes surface ruptures, landslides, slope failure, debris flows, tectonic subsidence, and soils liquefaction. Under the proper soil and ground water conditions, seismic induced liquefaction, an event where sediments and soils collapse from a sudden loss of cohesion and shear resistance, can occur. Liquefaction results in a temporary transformation of soil into a fluid mass which may fail to support overlying buildings and structures. These structures may actually sink into the ground as a consequence of seismic liquefaction. Liquefaction problems are generally confined to areas having water-saturated soils and unconsolidated sediments of uniform grain size sand and clay. Map LU-4 on the following page identifies these areas of potential liquefaction and fault within Cache Valley.

Seismic Class III design restraints are required to be installed in all structures throughout the State of Utah. This design class provides excellent protection and reinforcement against seismic shock. Public buildings and critical facilities, such as hospitals, fire and police stations, have additional seismic design requirements. Seismic design codes were approved by Cache County and the existing communities when public officials adopted Utah State's Uniform Building Code.

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MAP LU-4
CACHE COUNTY LIQUEFACTION POTENTIAL MAP

LU-4
BACK PAGE OF CACHE COUNTY FAULTS AND
LIQUEFACATION POTENTIAL MAP

SOILS

The soils of Cache County, formed from the area's surfacial geology, are generally lake bottom sedimentary types which remained behind the receding waters of ancient Lake Bonneville. The Lake breached to the Snake River Valley about 15,000 years ago. Between 14,000 and 12,000 years ago, Lake Bonneville evaporated to its present size leaving additional deposits of salt, mud, sand, silt and gravel exposed. The intervening years have seen a wide variety of soil types evolve from these residual lake sediments. A detailed discussion of agricultural soils is included as part of the agriculture section of the Land Use Element.

Construction Limitations

The different soil classes found in Cache County have innate characteristics that are compatible with the demands of building construction. They are easily compacted for building footings and foundations and can be used as road base, since they exhibit strong shear-strength and load-bearing capacity. Some local soils are only moderately to poorly drained, depending on depth to ground water. In these locations there is a tendency toward active shrink-swell cycles because of the high clay and silt composition of these soils. The engineering design of footing for heavy structures in these areas depends greatly on the moisture content of the ground and the permeability of the soil. Table LU-8 summarize the construction limitations of Cache County soils.

TABLE LU-8 CONSTRUCTION LIMITATIONS BASED ON SOIL TYPE

Soil Type	Low Buildings	Septic Tanks	Road Fill Suitability
Agassiz	moderate	severe	slight
Airport	severe	severe	moderate
Ant Flat	severe	severe	severe
Avon	severe	severe	moderate
Barfuss	moderate	severe	moderate
Battle Creek	severe	severe	severe
Bickmore	severe	severe	slight
Blackrock	moderate	moderate	moderate
Bradshaw	severe	severe	slight
Cache	severe	severe	severe
Cardon	severe	severe	severe
Center Creek	severe	severe	severe
Clegg	severe	severe	slight
Cluff	moderate	moderate	slight
Collett	severe	severe	severe
Collinston	moderate	moderate	moderate
Crookston	slight	moderate	moderate
Crowshaw	moderate	moderate	moderate
Curtis Creek	severe	severe	moderate
Dagor	moderate	moderate	moderate
Dateman	severe	severe	slight
Datwyler	severe	severe	moderate
Despain	severe	severe	moderate
Elwood	severe	severe	slight
Elzinga	moderate	severe	slight

TABLE LU-8 CONTINUED

Soil Type	Low Building	Septic Tank	Road Fill Suitability
Fitzgerald	mode rate	severe	slight
Flygare	mode rate	mode rate	slight
Foxol	severe	severe	mode rate
Goring	severe	severe	severe
Green Canyon	slight	slight	mode rate
Greenson	mode rate	severe	mode rate
Hendricks	mode rate	mode rate	mode rate
Hiibner	mode rate	severe	severe
Hillfield	mode rate	severe	mode rate
Hoskin	severe	severe	slight
Hyrum	mode rate	mode rate	mode rate
Jordan	severe	severe	severe
Kidman	slight	mode rate	mode rate
Kirkham	severe	severe	mode rate
Lakewin	slight	slight	slight
LaPlatta	severe	severe	severe
Lasil	severe	severe	severe
Layton	mode rate	mode rate	slight
Leatham	severe	severe	mode rate
Lewiston	mode rate	mode rate	mode rate
Logan	severe	severe	severe
Lucky Star	mode rate	mode rate	mode rate
Maughan	severe	severe	mode rate
McMurdie	severe	severe	severe
Mendon	mode rate	severe	severe
Middle	severe	severe	slight
Millville	mode rate	mode rate	mode rate
Mult	mode rate	mode rate	mode rate
Munk	severe	severe	mode rate
Nebeker	severe	severe	mode rate
Nibley	severe	severe	severe
Obray	severe	severe	severe
Parleys	mode rate	severe	mode rate
Parlo	mode rate	slight	mode rate
Payson	severe	severe	severe
Picayune	severe	severe	mode rate
Poleline	severe	severe	mode rate
Preston	slight	slight	slight
Provo	severe	severe	slight
Quinney	mode rate	severe	severe
Red Spur	mode rate	severe	mode rate
Richmond	severe	severe	slight
Ricks	slight	slight	slight
Roshe Springs	severe	severe	mode rate
St. Mary	severe	severe	slight
Salt Lake	severe	severe	severe
Scave	mode rate	severe	mode rate
Scout	mode rate	severe	mode rate

TABLE LU-8 **CONTINUED**

Soil Type	Low Buildings	Septic Tanks	Road Fill Suitability
Shay	severe	severe	severe
Sheep Creek	severe	severe	mode rate
Smarts	mode rate	severe	mode rate
Steed	slight	slight	mode rate
Sterling	mode rate	mode rate	slight
Timpanogos	mode rate	mode rate	mode rate
Trenton	severe	severe	severe
Wheelon	mode rate	severe	mode rate
Winn	mode rate	mode rate	mode rate
Woods Cross	severe	severe	severe
Yeats Hollow	mode rate	severe	mode rate
slight	- few existing limitations can be easily overcome		
moderate	- limitations can be overcome by careful planning and sound management		
severe	- limitations are serious enough to make use questionable and above average planning and management are required		

Source: USDA Soil Survey, Cache Valley Area, Utah, 1974.

HYDROLOGY

Most surface water in Cache Valley originates outside the valley and flows into the Valley in major streams. A significant amount of surface water also comes from springs on the valley floor. Ground water in Cache Valley occurs principally in consolidated and poorly consolidated rocks and unconsolidated basin-fill deposits.

Surface Water

Surface water mainly originates from either flow into the valley in the Bear River, the surrounding mountains, or flow from springs and seeps inside the valley itself. Except the Bear River, the perennial streams that enter Cache Valley originate in the Bear River Range. Surface water is the primary source of irrigation water in Cache Valley and is also used for recreation, agriculture, and public supply. The surface water leaves Cache Valley through the Bear River, West Side Canal, and Hammond Main Canal, all of which flow from Cutler Reservoir. Table LU-9 shows the major rivers and creeks of Cache Valley and their average annual flow rates. Map LU-5 shows the water bodies of Cache County.

TABLE LU-9 **RIVERS, STREAMS AND CREEKS OF CACHE VALLEY**

River/Creek	Average Annual Flow	Drainage Area
Bear River	1,023 cubic feet/sec or (741,100 acre feet/year)	NA
Logan River	257 cubic feet/sec or (186,200 acre feet/year)	214 sq. miles
Blacksmith Fork River	140 cubic feet/sec or (101,400 acre feet/year)	268 sq. miles
Little Bear River	59 cubic feet/sec or (42,700 acre feet/year)	62 sq. miles
East Fork Little Bear River	33 cubic feet/sec or (23,900 acre feet/year)	57 sq. miles
Cub River	88 cubic feet/sec or (63,800 acre feet/year)	32 sq. miles
High Creek	30 cubic feet/sec or (21,700 acre feet/year)	16 sq. miles
Summit Creek	20 cubic feet/sec or (14,500 acre feet/year)	15 sq. miles
Total	1,650 cubic feet/sec or (1,195,300 acre feet/year)	664 sq. miles

Source: Utah Department Natural Resources, 1994

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MAP LU-5
CACHE COUNTY WATER BODIES MAP

MAP LU-5
BACK PAGE OF CACHE COUNTY WATER BODIES MAP

Reservoirs

There are four large and several small reservoirs in Cache Valley that store water for irrigation and divert water for power generation. Most water in the larger reservoirs is diverted from streams that originate outside the valley. Table LU-10 below shows the different reservoir's, their purpose, depth, surface area and capacity.

TABLE LU-10 RESERVOIRS OF CACHE VALLEY

Reservoirs	Purpose	Average Depth	Surface Area	Capacity
Cutler	Power	3 feet	7,183 acres	15,386 acre feet
Hyrum	Irrigation	39 feet	438 acres	18,700 acre feet
Porcupine	Irrigation	feet	173 acres	12,800 acre feet
Newton	Irrigation	23 feet	134 acres	5,600 acre feet
Total			7,928 acres	52,486 acre feet

Source: Utah Department Natural Resources, 1994

Ground Water

The basin-fill aquifers in Cache Valley are shallow unconfined and perched aquifers (confined). The thickness of the shallow unconfined aquifer is 10 to 20 feet. Along the benches and near the mountains, layers of clay or silt commonly impede the downward flow of ground water, forming isolated discontinuously perched aquifers. These aquifers are small and commonly discharge as seeps and springs at the break in slopes on the basin side of the benches. The principal aquifer is confined, except for a narrow band adjacent to the mountain ranges, where the aquifer is unconfined and water levels in wells are relatively deep.

The confining layers in Cache Valley are generally rich in clay and increase in thickness and frequency basinward. These clay layers exist throughout the vertical section and are all across the valley. Deep wells in the center of the valley encountered semi-consolidated to consolidated sediments that form confining layers that probably are part of the Salt Lake Formation. The Salt Lake formation also crops out around the margins of the valley. It is generally considered a poor aquifer but many domestic wells are completed in this formation.

The Cache County aquifer system is recharged by the annual snow and rainwater. The recharge areas in Cache Valley are adjacent to and generally coincide with the topographic break in slope between mountains and valley. The primary recharge area includes areas of consolidated rock outcrop bordering the valley and a narrow band of basin fill along the mountain fronts. Secondary recharge areas are present on the east and west sides of the valley, with the exception of the southeastern and northeastern part of the County. In the Avon and Paradise area (southern Cache Valley), secondary recharge areas are more extensive and surround discharge areas. In the Northeast part of the valley, the secondary recharge area is absent near areas of consolidated rock extending in the valley.

Ground water levels fluctuate in response to changes in the seasons, seepage from local streams and discharge by withdrawal of water from wells, primarily for municipal or irrigational use. Other factors causing ground water levels to fluctuate include recharges by infiltration of precipitation and irrigation

water and discharge by evapotranspiration. The magnitude of seasonal fluctuations vary from year to year with the greatest recorded differences near regions of recharge or discharge. Long-term fluctuations of ground water levels generally reflect either long-term trends in precipitation or changes in withdrawals from active wells, or both.

WETLANDS

Wetlands are lands transitional between terrestrial and aquatic systems where the water table is usually at or near the surface or the land is covered by shallow water. Water is the dominant factor determining the nature of soil development and the types of plants and animal community living in the soil and on its surface. The single feature that most wetlands share is soil and substrate that are at least periodically saturated with or covered by water. Map LU-6 on the following page shows the wetland areas of Cache County. There is a more detailed description and definitions of the wetland systems included in the appendix

There are four federal agencies involved with wetland identification and delineation: Army Corps of Engineers (CE), Environmental Protection Agency (EPA), Fish and Wildlife Service (FWS), and Natural Resources Conservation Service (NRCS). The Army Corps of Engineers is responsible for administering and enforcing the wetlands regulated under Section 404 of the Clean Water Act.

Wetlands serve an important water quality control function. They are mother nature's natural filtration system. Wetlands provide an efficient method of improving water quality. Wetlands trap nutrients, such as nitrogen and phosphorus, and other pollutants that might enter waterways from point and nonpoint sources located on adjacent lands. Studies have shown that polluted water is significantly cleaner after passing through a wetland area.

Wetlands are also one of the single most effective flood prevention techniques available. Natural wetland areas allow flood waters to spread out over a large surface area, thereby reducing flow and the flood peak. This storing of floodwater over time allows water to percolate into aquifers, thereby recharging groundwater supplies. Filling and developing in wetland areas can increase the flooding problems within an area. The recent flooding along the Mississippi River is a good example why urban development in wetland areas should not be encouraged.

FLOODING

Flooding has been a common occurrence in Cache Valley for many years. Because the resulting damages have been moderate, flooding has not been a major problem. Most of the damage from floods has been to agricultural land and property. Damages from thunderstorms are usually in the form of erosion and sediment deposition. Dry crop land areas in the Cache Valley are most susceptible to this type of damage. Flooding along the river plains inundates crop land and pasture, damages irrigation systems, and disrupts rural road systems.

Spring snow melt flooding in the Bear River Basin periodically exceeds stream channel capacity and

overflows onto adjacent low lands. More serious damage occurs when heavy rains fall on frozen

**MAP LU-6
CACHE COUNTY WETLAND MAP**

MAP-LU-6
BACK PAGE OF CACHE COUNTY WETLANDS MAP

ground and /or a heavy snow pack. Severe flooding of this type has been experienced several times in Cache Valley.

Most of the Bear River flood plain has a high water table; thus, construction of homes and other building within these zones should be discouraged. The flood plains that are subject to infrequent flooding have minor development presently, and are most likely to have increasing development pressure. All urban development in flood plain areas should be discouraged.

The Cache County Zoning Administrator functions as the designated Flood Plain Administrator for Cache County and coordinates with the State and Federal Flood Plain Administrators. All development projects within flood plain areas should be reviewed and commented on by the Flood Plain Administrator whether it is within a City or unincorporated County. Map LU-7 on the following page shows the 100 year flood plains for Cache Valley.

No single entity has sole authority for flood control management activities. Cache County and the cities have the necessary statutory authority to act, but at least six other organizations or officials also have some degree of authority and responsibility. Emergency response and hazard mitigation coordination authority rests with Utah Comprehensive Emergency Management Office (CEM). Hazards mitigation planning is usually provided by the state hazard mitigation team following flood emergencies. Pre-emergency planning is also often conducted.

WATER QUALITY

An intense water quality monitoring program was conducted from October 1992 through 1993 to determine the current water quality status in the lower Bear River basin. Water quality studies on the Bear River date back to the 1940s. Most of the early work focused on salinity and sediments. Within the past 20 years, concerns over nutrient and bacterial problems have dominated most of the water quality investigations. The Utah Division of Water Quality (UDWQ) has been monitoring the Bear River Basin since 1976. There has been a series of studies evaluating water quality in the Bear River below the Oneida Reservoir with the intent of developing a management plan for the lower basin. Cache Valley is part of this lower basin. A Bear River Water Quality Management Plan is being developed by Bear River RC&D and Ecosystems Research Institute for Utah Division of Water Quality and Division of Water Resources

The Final Draft of the Plan shows the water quality problems in the lower Bear River basin arise primarily from high phosphorus and total suspended sediment concentrations. Other impacts arise from violations of state criteria for dissolved oxygen and ammonia, especially in the Spring Creek portion of the Little Bear drainage. High sediment loads in the Cub River and the mainstream Bear River are also a problem. There were violations of coliform criteria occurring throughout the basin, but were most severe in the Spring Creek subdrainage and indicate potential public health concerns.

The study and plan identified the Spring Creek Drainage, entering the Bear River at the south end of Cutler Reservoir, the Cub River within Utah, and the mainstream of the Bear River from the Utah-Idaho State line to below Cutler Reservoir has significant problem areas for water quality. Cutler Reservoir itself was a major contributor of sediments and phosphorus. The Little Bear River did not

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MAP LU-7
CACHE COUNTY FLOOD PLAINS MAP

MAP LU-7
BACK PAGE OF FLOOD PLAINS MAP

appear to be among the most serious contributors to the Bear River problems, however, problems within its own drainage compromise the water quality in Hyrum Reservoir.

The Draft Water Quality Management Plan recommends improving riparian areas, removing feedlots and other intensive grazing activities from the river corridors, implementing nontill agriculture to reduce sediment inputs from crop land, and improving manure management throughout the watershed. Currently much of the drainage is agricultural. Many of the nonpoint pollution problems are attributed to these activities. An additional important observation made by the Draft Water Quality Management Plan was “As Cache Valley becomes more urbanized, however, nonpoint pollution inputs from lawns, parking lots and other urban sources will be an increasing problem. It is important that all citizens in the lower Bear River basin understand their individual roles in reducing water pollution. Fertilizer use on lawns, inappropriate dumping and washing household chemicals down drains all contribute to water quality problems...”.

WILDLIFE HABITAT

Cache County with its mountains, valley and abundance of water exhibits wonderful areas of prime wildlife habitats for numerous species including mule deer, elk, four species of grouse, etc. Urban growth and development in the County has resulted in the fragmentation and loss of many of these natural wildlife habitats. The process of urbanization will continue to alter the biological and physical components of existing County’s ecosystems as development reaches into more of these natural habitats.

The cumulative effects of land development have a devastating impact on natural ecosystems, and that impact extends far beyond the boundaries of developed areas. Although ecosystems adapt to naturally occurring changes, new conditions caused by residential and commercial construction produce artificial plant and animal communities that have little relationship with native habitats. In addition to destroying wildlife habitat, buildings, roads, fences, and other obstructions restrict natural wildlife migrations. Some species are particularly vulnerable to such obstructions. The following recommendations for protecting wildlife habitat should be taken into consideration while planning for new development:

- Maintain buffers between areas dominated by human activities and core areas of wildlife habitat.
- Maintain large, intact patches of native vegetation by preventing fragmentation of those patches by development.
- Facilitate wildlife movement between areas of native habitat by identifying and protecting corridors for movements
- Balance the opportunities for public recreation with the habitat needs of wildlife.

Most people realize that the presence and protection of wildlife improve the quality of their lives. There is an obvious value to wildlife habitat and open space in areas where people live, even though it is difficult to assign actual values to that habitat. Unfortunately, for many Americans, the concept of wildlife habitat is defined by an urban perspective. Even though our land-use patterns tend to diminish wildlife habitat, paying attention to both man and nature should be mutually beneficial, not

mutually exclusive. Development and environmental protection can be compatible if planning is applied in harmony with the environment rather than dominating it.

AIR QUALITY

The Clean Air Act Amendments (CAAA) of 1990 over earlier Clean Air Acts were prompted in part by the fact that increasing numbers of people in the United States were living in areas designated as non-attainment for one or more pollutants for which National Ambient Air Quality Standards (NAAQS) have been previously set (criteria pollutants) and the continuing concern about the health effects of air pollutant on people. The EPA estimates that 86.4 million Americans reside in non-attainment areas for any NAAQS.

There are six criteria pollutants addressed in the CAAA of 1990. A list of the health effects of these criteria pollutants are included in the Appendix. Table LU-11 below list the six criteria pollutants of the Clean Air Acts Amendments of 1990 and the national ambient air quality standards. The health effects of the different air pollutants are included in the appendix.

TABLE LU-11 NATIONAL AMBIENT AIR QUALITY STANDARDS

Criteria Pollutants	Federal Standards			Allowed Exceedences	Problem Times
	ppm	ug/m ³	Period		
Ozone	0.12	235	1-hour	3 times in 3 years	Summer
Carbon Monoxide	9	10,000	8-hour	1 time in 1 year	Winter
	35	40,000	1-hour	1 time in 1 year	
Particulants (PM10)	--	60	Ann. Avg.	Mean	Winter
	--	150	24-hour	1 time in 1 year	
Oxide of Nitrogen	0.05	100	Ann. Avg.	Mean	Winter
Sulfur Dioxide	.03	80	Ann. Avg.	Mean	Winter
	0.14	365	24-hour	1 time in 1 year	
	--	(1300)	3-hour	1 time in 1 year	
Lead	--	1.5	3-month	Mean	Winter

Source: Bear River Health Department

Cache County currently has not violated any of the national ambient air quality standards for any of the criteria pollutants and is defined as an attainment area. This is not to say, however, that there are not air quality issues for Cache County. Air pollutants can come from a number of different sources. These sources include vehicles, industry, wood burning stoves, lawn mowers, and the backyard barbeque. Cache Valley is particularly vulnerable to air quality problems due to frequent temperature inversions during fair weather high pressure periods in the winter months which trap's pollutants near the valley floor.

Over half the pollutants in the air presently come primarily from vehicles. The growth number of vehicles nationally has remained fairly constant but vehicle miles traveled has increased at a much faster rate. This trend is the same for Cache County. Table LU-12 below shows the growth trend of the number of vehicles and vehicle miles traveled (VMT) for Cache County from 1990 to 1994.

TABLE LU-12 CACHE COUNTY VEHICLES AND VMT TRENDS 1990 TO 1994

Jurisdiction	1990 Vehicle's	1994 Vehicles	Percentage Change	1990 VMT	1994 VMT	Percentage Change
Amalga	127	407	220.47%	2,315	4,046	74.77%
Clarkston	467	511	9.42%	1,290	1,449	13.33%
Cornish	144	175	21.53%	4,154	5,195	25.06%
Hyde Park	1,466	1,777	21.21%	40,798	51,598	26.47%
Hyrum	3,757	4,453	18.53%	25,951	30,814	18.74%
Lewiston	1,111	1,256	13.05%	24,349	34,066	39.91%
Logan	20,210	24,059	19.05%	396,683	508,616	28.22%
Mendon	653	820	25.57%	4,568	5,936	29.95%
Millville	834	1,051	26.02%	5,184	6,250	20.56%
Newton	563	630	11.90%	1,925	2,374	23.32%
Nibley	912	1,155	26.64%	15,923	25,975	63.13%
North Logan	2,369	2,296	-3.08%	88,053	108,654	23.40%
Paradise	664	863	29.97%	5,296	5,798	9.48%
Providence	2,710	2,836	4.65%	16,666	21,724	30.35%
Richmond	1,422	1,655	16.39%	28,847	35,492	23.04%
River Heights	680	632	-7.06%	7,043	8,699	23.51%
Smithfield	4,052	4,901	20.95%	72,239	88,847	22.99%
Trenton	369	417	13.01%	5,099	7,828	53.52%
Wellsville	1,725	2,292	32.87%	33,883	42,686	25.98%
Unincorporated	2,870	2,061	-29.23%	503,607	682,401	35.50%
Cache County	47,787	54,502	14.05%	1,283,873	1,678,448	30.73%

Source: Utah Department of Transportation

As the above table shows the percentage change for the number of vehicles registered in 1990 to 1994 is 14.05 percent while the percentage change for the vehicle miles travels is 30.73 percent. This trend is consistent with national trends of VMT over the number of vehicles. Urban sprawl is one of the leading factors causing this problem. If this trend continues in Cache County, the overall air quality will suffer. The ultimate conclusion is for Cache County to become designated as a non-attainment area if there are no efforts to curb the growing air quality problems.

PHYSICAL ENVIRONMENT ISSUE STATEMENT

The physical environment of Cache County provides valuable information and insight that were used for the development of the *Land Use Element of the Cache Countywide Comprehensive Plan*. Understanding the impact of the physical environment helps to identify either limitations or potential for urban development. The physical environment is made up of many different domains. These domains include such things as the soil, geology, hydrology, topography, and others. Because of Cache County's different environs the physical environment presents some of the most interesting and challenging conditions. Cache County's diverse environment can make planning for the future of County very difficult.

The physical environment of the County can be used to create development factors in determining the potential of different areas of the County for urban development. Physical conditions of a parcel of land can determine either the constraints or potential for development of the land. Typically during the evaluation of projects for development the characteristic of the physical environment of the project has only slightly been considered. This primarily due to the fact that the physical environment is a very

complex and difficult issue to totally review as part of the project. The reviewing boards are made up of individual lay people and they are not experts in all things. These boards depend heavily on their staff and the developer to provide them all the facts and information about a project. In most circumstances all the issues are not taken into consideration simply because they are not known.

A detailed study of the physical environment of Cache County is important to provide the needed information to the different reviewing projects. The data about the physical environment can be used to help develop a set of criteria for reviewing projects. This information can be used to improve the numerical point system use in the County Land Use Ordinance.

AGRICULTURE

Prime agricultural lands are one of the earth's rapidly diminishing, irreplaceable resources. Virtually every community in Utah and Cache County is facing the same problem of vanishing agricultural lands. As these lands disappear under asphalt and concrete, they must be replaced with less suitable, less productive and more remote farmlands elsewhere. In recent times, a growing concern for the preservation of prime cropland has surfaced. Given impetus by the signing of the Farmland Preservation Act of 1981, the United States Department of Agriculture and the Environmental Protection Agency have developed coordinating plans to save "environmentally significant" agricultural lands. Unfortunately, to date, their success in the face of economic pressure has been minimal. The once predominately agrarian-based economy of Cache County has dramatically changed. A steady increase in county-wide population has resulted in the steady pressure of urban sprawl. Today, an increasing patchwork of single family residential development is interspersed among farm land and pastures.

SOIL

The designation of prime agricultural land is based on soil properties, slope of the land, growing season, moisture supply and the kind of agricultural uses and crops which can be produced on that land. The soils are classified by the United States Department of Agriculture's Natural Resource Conservation Service into eight general soil classifications. Table LU-13 specifies these soil classification and their limitations as use by the United States Department of Agriculture.

TABLE LU-13 SOIL CLASSIFICATION AND LIMITATIONS

CLASS	LIMITATIONS
I	- Soils have few limitations that restrict their farming potential (None in Cache County).
II	- Soils have limitations that require a reduced choice of crops or that requires moderate conservation practices.
III	- Soils have severe limitations that reduce the choice of plants, require special moderate conservation practices, or both.
IV	- Soils have severe limitations that reduce the choice of plants, require very careful management, or both.
V	- Soils are subject to little or no erosion but have other limitations, impractical to remove, that limit their use largely to pasture, range, woodland, or wildlife habitat.
VI	- Soils have severe limitations that make them generally unsuited to cultivation and limit their use to pasture, range, woodland, or wildlife habitat.
VII	- Soils have severe limitations that make them unsuited to cultivation and restrict their use to pasture, range, woodland, or wildlife habitat.
VIII	- Soils and land forms have limitations that preclude their use for commercial plants and restrict their use to recreation, wildlife habitat, or water supply, or to esthetic purposes.

Source: U.S. Department of Agriculture, Natural Resources Conservation Service, Soil Survey of Cache Valley Area, Utah.

The soils can be further classified into three major groups depending on the importance of the farmland. These classifications identify the most important farmland within Cache County. These different groups are: (1) Prime Farmlands; (2) Farmlands of Statewide Importance (irrigated), and; (3) Important Farmland (non-irrigated). Table LU-14 on the following page summarizes Cache County's soil types by their sub-series, class and whether the soils were considered to be prime agricultural farmlands.

TABLE LU-14 PRIME AND STATEWIDE IMPORTANT FARMLAND SOILS

SOIL TYPE	SUB-SERIES	CLASS	PRIME
Avon silty clay loam	ArA,ArB,ArC	IIC, IIE, IIIE	X
Avon-Collinston complex	AsC	IIIE	
Battle Creek silty clay loam	BcA	IIIS	X
Blackrock gravelly loam	BmB, BmC	IIE, IIIE	X
Cardon silty clay	Cd	IIIW	
Collett silty clay loam	Ck	IIIW	
Collinston loamy fine sand	C1A	IIIS	
Collinston loam	CmC	IIIE	
Crookston loam	CoA, CoB, CoC	IIIE	X
Crowshaw gravelly loam	CrB, CrC	IIC, IIE, IIIE	X
Dagor silt loam	DaC	IIIE	
Green Canyon gravelly loam	GrA, GrB	IVS	X
Greenston loam	GsA, GsB, GsC	IIW, IIIE	X
Greenston loam, deep over clay	GuA	IIIW	
Greenston loam, deep over gravel	GvA	IIW	X
Hendricks silt loam	HdA, HdB, HdC	IIC, IIE, IIIE	X
Hiibner gravelly clay loam	HeC	IIIE	
Hyrum gravelly loam	HuC	IIIE	
Kidman fine sandy loam	KdA	IIC	X
Kidman fine sandy loam, deep water table	KfA, KfB, KfC	IIC, IIE, IIIE	X
Kirkham-Shay complex	Ks	IIW	X
Layton loamy fine sand	Lh	IIIS	X
Lewiston fine sandy loam	Ln	IIW	X
Logan silty clay loam	Lr	IIIW	
McMurdie silt loam	McA, McB, McC	IIC, IIE, IIIE	X
Mendon silt loam	MeA, MeB, MeC	IIC, IIE, IIIE	X
Mendon-Collinston Complex	MfB	IIIE	
Millville silt loam	MIa, MIB	IIE, IIW	X
Nebeker silt loam	NbB, NbC	IIE, IIIE	X
Nibley silty clay loam	NcA, NcB	IIIW	
Parleys silt loam	PaA, PaB, PaC	IIC, IIE, IIIE	X
Parlo silt loam	PIA, PIB, PIC	IIC, IIE, IIIE, IIIS	X
Preston fine sand	PtC	IVS	
Quinney silt loam	Qu	IIIW	
Ricks gravelly loam	RhA, RhB, RhC	IVS	
Roshe Springs silt loam	Rs	IIIW	
Shay silty clay loam	Sm	IIIW	
Steed gravelly loam	SvA, AvB, SvC	IVS	
Sterling gravelly loam	SwC	IVS	
Timpanogos silt loam	TmA, TmB, TmC	IIC, IIE, IIIE	X
Timpanogos silt loam, deep water table	TnA	IIC	
Winn silt loam	Wn	IIIW	
Winn-Provo complex	Wp	IIIW	
Woods Cross silty clay loam	Wr	IIIW	

Subscripts e, s, c, and w show main limitations

c -- wet soil e -- erosion s -- climate either too cold, too dry, or both w -- soil factor, shallow, stony, or drought

Source: *Important Farmlands of Cache County, Research Report 41, Utah Agricultural Experiment Station, 1979.*

Prime Farmlands - These are lands that may not be the most productive in Cache County. They will, however, produce more per input without sustaining loss of productive potential. To insure long-term agricultural production, these land must be managed according to their inherent capabilities.

- A water supply adequate to meet irrigation requirement in seven of ten years;
- Summer temperature of the soils warmer than 59°C (15°C) at a depth of 20 inches (50cm);
- A pH value between 5.5 and 8.6 above a depth of 20 inches (50 cm), and an alkali (sodic) content (ESP) less than 15 percent;
- A water table that does not restrict the production of food, feed, and forage crops;
- No significant salt content (less than 4 mmhos) in the upper 20 inches of soil;
- No flood hazard nor flooding more than once in two years; and
- Minimal erosion danger (K factor times percent slope is 5 or less).

Farmlands of Statewide Importance (irrigated) - These lands are not as good as the prime lands, but are important in the agricultural base of Cache County. These lands may not qualify as prime when they are on relatively steep slopes with erosion hazards, have a high water table, have more salt or alkali problems, and the water supply meets production needs five years out of ten, or some other limitations.

In general, these lands require more management than do prime lands if they are to achieve satisfactorily and sustain economic production. With inputs such as drainage and erosion controls, however, these lands may produce as much per acre as those called prime. At the same time, their quality can be maintained, and in some cases even improved by careful management.

Important Farmlands (non-irrigated) - These lands are agriculturally significant contribute to small grain and alfalfa production. They also represent a potential productivity reserve if additional irrigation water supplies are developed, or if presently allocated water becomes available due to land-use decisions. For example, if future land-use patterns push farming off the prime lands, these are the land resources that would most likely be called upon for crop production. Their usefulness will depend on the economic conditions, available water, and farm prices.

These lands are now used for dryland wheat and alfalfa but could become prime farmland with irrigation. The prevalent soil texture, slope, and salinity levels indicate excellent agricultural potential. From a long-range planning perspective the neglect of such potentials could be costly.

Table LU-15 below breaks down the farmlands by type and acreage within Cache County. Map LU-8 on the following page shows the different type of farmland.

TABLE LU-15 FARMLAND BY TYPE AND ACREAGE

FARMLAND	ACRES
Prime	51,890
Statewide Importance (irrigated)	30,240
Important (non-irrigated)	29,510
Total	111,640

Source: Important Farmlands of Cache County, Research Report 41, Utah Agricultural Experiment Station, 1979.

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MAP LU-8
CACHE COUNTY IMPORTANT FARMLANDS

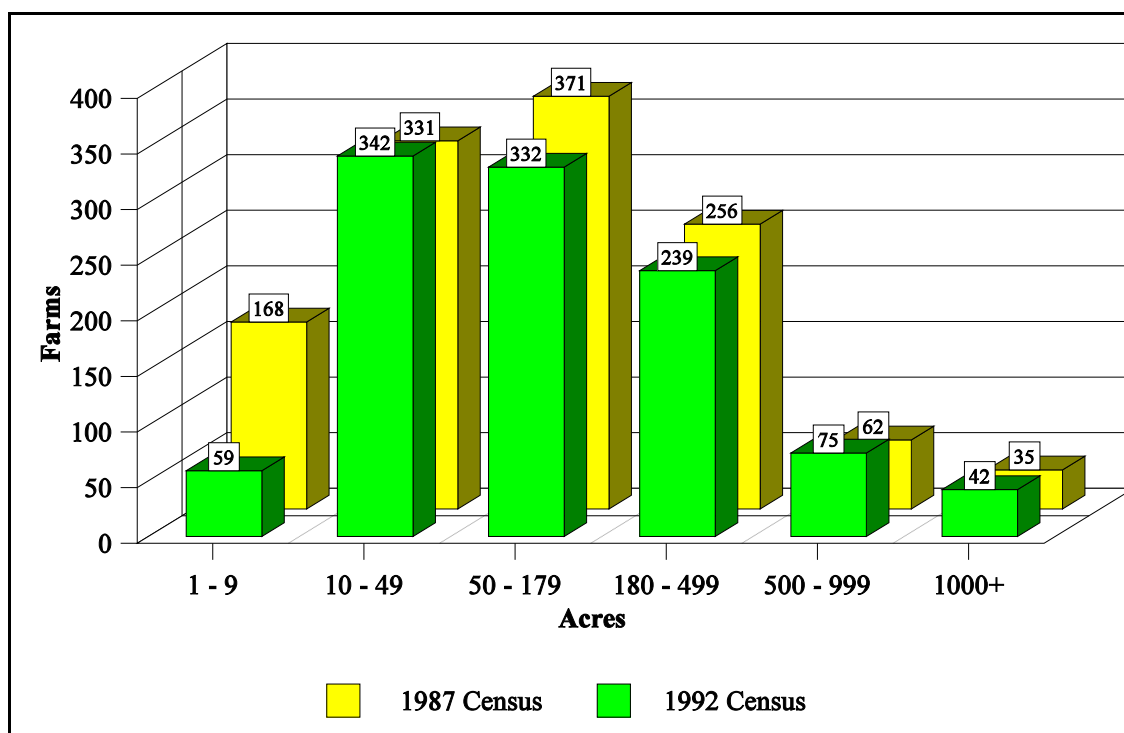
MAP LU-8
BACK PAGE OF IMPORTANT FARMLANDS MAP

AGRICULTURAL PRODUCTION

Cache County is one of the most productive agricultural counties in the State of Utah. There are approximately 1,189 active farms in Cache Valley based on the 1992 U.S. Census of Agriculture. The number of farms in Cache County is down from 1,223 in the 1987 U.S. Census of Agriculture. This trend of declining number of farms is consistent with national trends across the United States. Cache County still ranks 2nd in the number of farms, just behind Utah County with 1,696 farms, for the State of Utah.

The 1995 Property Summary Report from the Cache County Auditor's office shows 355,408 acres or 47.3 percent of the land in Cache County is in some type of agricultural use. The Utah Department of Agriculture in its 1995 Annual Report indicated that there are 267,924 acres in farms. The average size of farms in Cache County has declined over the years. The 1987 Census of Agriculture showed the average size of a farm in the County was 265 acres. The average size of a farm in the 1992 Census of Agriculture dropped to 225 acres. Figure LU-5 below shows a comparison of the number of farms in Cache County by acres for the 1987 and 1992 Census of Agriculture.

FIGURE LU-5 **CACHE COUNTY FARMS BY ACRES**



Source: Utah Department of Agriculture Annual Report, 1995

Most farming in the Cache Valley is feed production for dairying and the raising of livestock. There are approximately 175,063 acres devoted to cropland production in the County and 120,044 acres of which is harvested cropland.

Cache County ranks first in the State of Utah in livestock and livestock production. Table LU-16 below shows a comparison of livestock for the County.

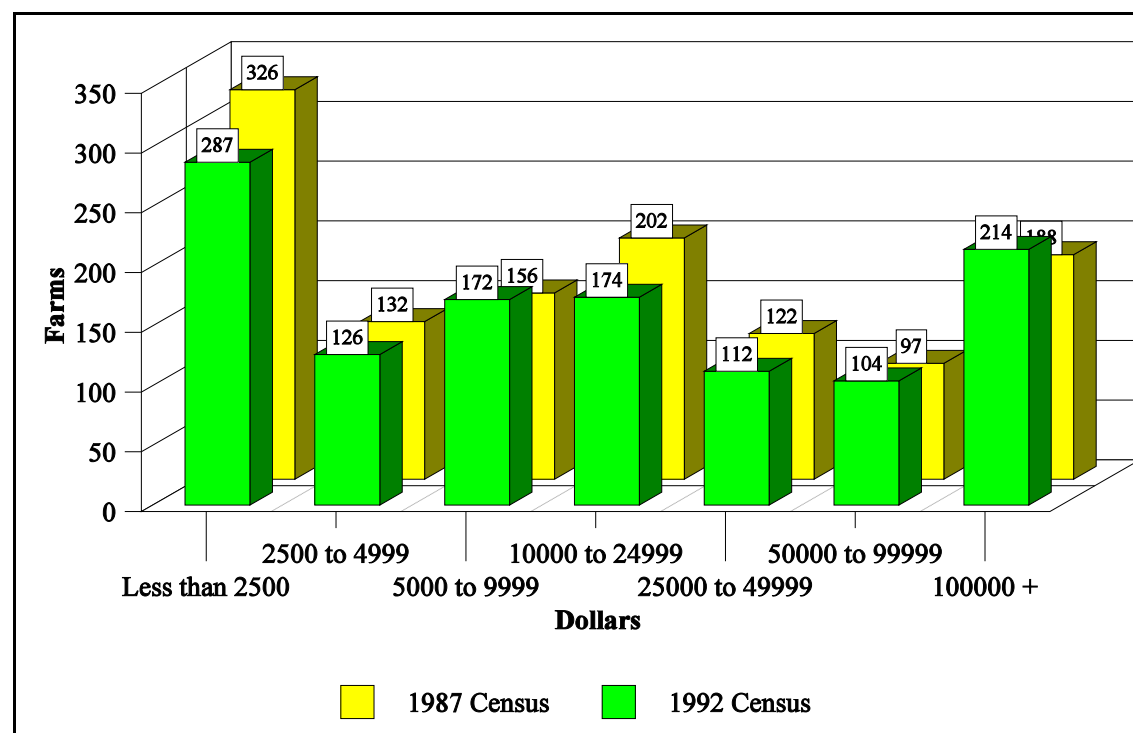
TABLE LU-16 CACHE COUNTY LIVESTOCK

	1987	1992	1995
Cattle	66,629	74,100	75,000
All Cows	27,035	31,164	31,000
Beef Cows	6,888	8,844	9,000
Milk Cows	20,147	22,320	22,000

Source: U.S. Census of Agriculture, 1987 and 1992, Utah Department of Agriculture Annual Report, 1995

Agriculture is a valuable part of the market and economy of Cache Valley. In 1987, agriculture products sales amounted to about \$66,629,000. In 1992, that number increased to \$87,898,000 and for 1993, that number was approximately \$94,200,000. Figure LU-6 below shows a comparison of the number of farms in Cache County by values of sales for the 1987 and 1992 Census of Agriculture.

FIGURE LU-6 CACHE COUNTY FARMS BY VALUE OF SALES



Source: Utah Department of Agriculture Annual Report, 1995

AGRICULTURE ISSUE STATEMENT

Agriculture and agricultural industries are an important part of the economy of Cache County.

Historically farming has played an important role in the economic and cultural lifestyle of the County. However, in the last few decades two uncomfortable trends have been affecting the agriculture of Cache County. These trends are the declining markets for agricultural products and the increasing loss and fragmentation of prime and statewide important farmlands to urbanization. The protection and preservation of these farmlands and industries should be a major priority for the municipalities and Cache County

The continued loss of important farmlands to urbanization and urban sprawl is a dangerous trend. Traditionally communities have look upon agricultural lands as holding areas for future urban development. This trend of treating agricultural areas as future areas of urbanization has lead to the increasing loss of prime and statewide important farmlands from agricultural production and viability. This should be discouraged not only from the standpoint of protecting this valuable physical and economic resource but also for the economic health of the existing municipalities.

Agriculture and agricultural industries are a very important segment to the local and state economies. Continued urban sprawl and leapfrog development into the agricultural farmlands will translate into a significant loss to farmers and many others who earn a living from agriculture. Agriculture and farming are important and viable economic concerns. Farms add to the local economy by providing jobs and income.

RESIDENTIAL DEVELOPMENT

Housing and its condition is of paramount importance to a community's well being and sense of identity. The prevalent housing type gives a community its sense of residential character. Cache County enjoys a distinctly rural setting, with homes located on relatively large lots. Much of the housing stock is new and in good condition. Housing affordability for Cache County remains competitive with surrounding regions. A wide range of housing styles and prices are available. Cache County also enjoys several unique districts where historic pioneer homes have been beautifully preserved, restored or readapted. Future housing trends will witness an increase in demand along with an associated decrease in affordability. Land prices, building costs and planning policies will play a major role in determining the amount, style, and quality of future Cache County housing.

HOUSING INVENTORY

In 1995, as part of the research for the Countywide Comprehensive Plan, a housing survey was conducted by Planning District. A total of 25,194 units were counted which compares favorably with the U.S. Census total of 22,053 units. Single family dwelling comprises 66.5 percent of the housing stock, duplex units total 3.4 percent, multi-family units 24.7% and mobile homes account for 4.7 percent. Table LU-17 shows the breakdown of the number of dwelling units by type by Planning District.

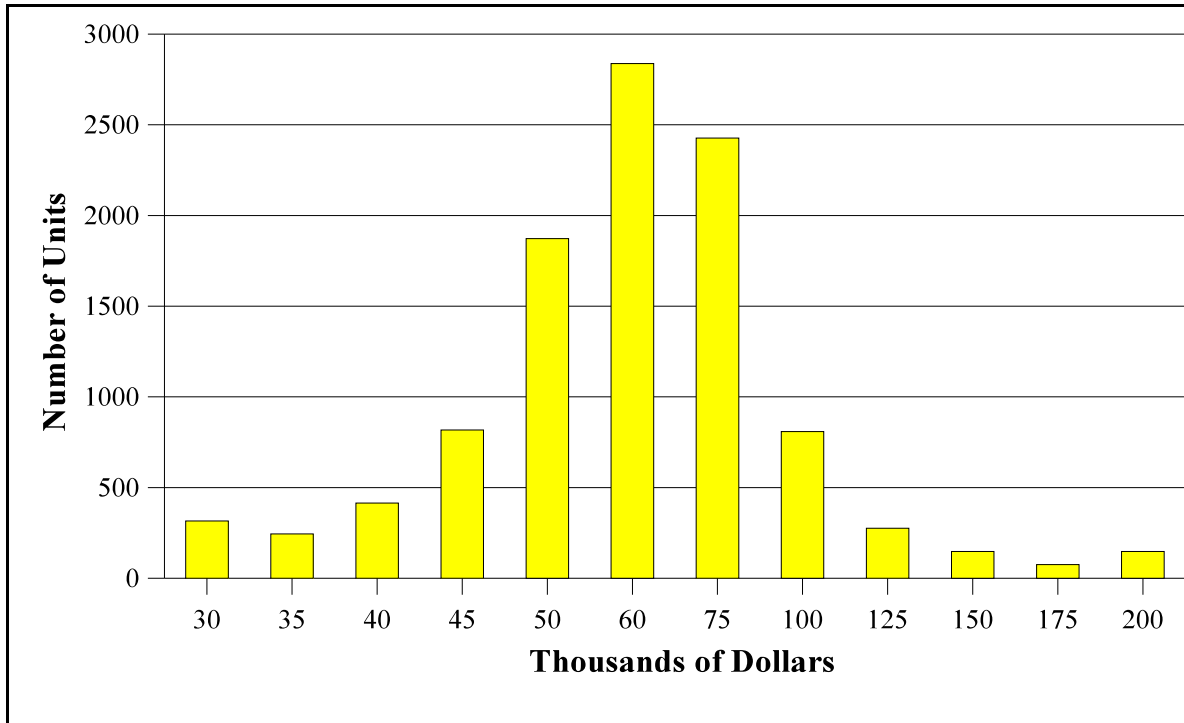
TABLE LU-17 DWELLING UNIT BY TYPE AND PLANNING DISTRICT

Planning District	Single Family	Duplex	Multi Family	Mobile Home	Other
District 1	1,047	17	42	57	4
District 2	739	3	0	55	0
District 3	148	0	0	19	0
District 4	12,036	824	6,034	842	140
District 5	194	0	0	34	0
District 6	995	2	38	22	0
District 7	1,466	21	114	130	14
District 8	126	0	0	31	0
Total	16,751	867	6,228	1,190	158

Source: 1990 US Census

The Utah State Tax Commission completed a 1995 Year End Profile of Cache County showing the average cost of new housing to be between \$70,000 - \$140,000. Older existing homes have an average value between \$60,000 - \$100,000. Figure LU-7 on the following page shows a breakdown of value of housing units based on information from the 1990 Census. The 1990 Census showed the median value of housing units for all owner-occupied housing to be \$66,800. However, in the five years since the census the average selling price for owner-occupied housing has increased to \$116,000. Based on the information in Figure LU-7, you would expect the value to be shifting to more expensive housing.

FIGURE LU-7 CACHE COUNTY HOUSING VALUE - 1990



Source: 1990 US Census

The age of housing in Cache County has a broad spectrum. Table LU-18 shows age of housing by Planning District. Approximately, 53.6 percent of the housing stock is less than 20 years old and 28.9 percent is less than 10 years. One major concern is the number of older housing units. These units present unique problems for the property owner. Approximately, 46.4 percent of housing units are older than 20 years, with about 26.7 percent of these more than 40 years old.

TABLE LU-18 AGE OF HOUSING BY PLANNING DISTRICT

Planning District	0 to 5	6 to 10	11 to 20	21 to 30	31 to 40	40+
District 1	69	122	292	82	32	531
District 2	27	65	183	49	54	382
District 3	0	0	0	0	0	0
District 4	2,608	3,319	4,327	2,307	1,822	4,682
District 5	0	0	0	0	0	0
District 6	99	123	239	103	57	232
District 7	234	234	529	189	77	316
District 8	0	0	0	0	0	449
Total	3,141	4,141	6,062	2,808	2,156	6,734

Source: 1990 US Census

From the perspective of the building code there is a potential of a number of problems that may need to be addressed with this older housing stock. The primary issue will be with the electric wiring within the homes. Many older homes were wired at a time when electrical appliances did not require a heavy electric usage. However, modern appliances such as microwaves, electric dryers, computers, stereos, and other type items are more common and place increasing demands on the electrical systems. The demands by these modern appliances are forcing minor electrical upgrades to homes' electrical systems so that the property owner may use them. Most of the minor electrical upgrades are the conversion from a fuse system to a circuit breaker system which is much safer. A more detailed review of housing conditions will be discussed in another place in this section.

RENTAL HOUSING

The U.S. Census for 1990 reports that 7860 Cache County dwelling units are being rented by 22,232 persons. Approximately 29 percent of all rental units are single family. The median age of a renter in Cache County is between 25 - 34 years old and median contract rent equals \$335 per month. Table LU-19 below shows a breakdown of the average rental cost by the number of bedrooms in a rental unit from a Fair Market Rent Survey. The Bear River Association of Governments did this survey in 1995.

TABLE LU-19 AVERAGE RENTAL COST BY THE NUMBER OF BEDROOM

	Average Rent	Average Utility Cost	Total Rent Cost
Studio	\$261.25	\$15.50	\$276.75
1 Bedroom	\$346.00	\$54.42	\$401.06
2 Bedroom	\$424.72	\$89.35	\$523.93
3 Bedroom	\$631.45	\$106.82	\$682.63
4 Bedroom	\$806.15	\$105.97	\$902.63

Source: BRAG, Fair Market Rent Survey, 1995

HOUSING CONDITION

In the summer of 1993, as part of the research for the Bear River Association of Governments' **Comprehensive Housing Affordability Strategy (CHAS)** a comprehensive housing survey was conducted. This survey involved a drive-by windshield analysis of four major structural components of all housing units in Cache County.

The criteria used for rating dwelling unit conditions was broken down into components, and each component surveyed. These structural components included the following items; roof, walls and foundations, windows and doors, and porches and stairs. The condition of the dwelling units is depicted in Table LU-20 on the following page. Each unit is rated from best to worst possible condition and given a rating corresponding with the repairs needed.

Of the total 20,953 units, 21 percent were found to be in satisfactory condition, 60 percent were found to need minor repair, and 18 percent are in need of moderate repair. Only 1 percent of the units need major repair. Adding these figures reveals a total of 79 percent of dwelling units which are suitable for rehabilitation. Table LU-20 on the following page breaks down the conditions of dwelling units by

jurisdiction within Cache County.

TABLE LU-20 CONDITION OF DWELLING UNITS IN CACHE COUNTY

Jurisdiction	Total Units	Satis. Units	Needs Minor Repair	Needs Moderate Repair	Needs Major Repair	Beyond Repair
Amagla	-	-	-	-	-	-
Clarkston	212	21	126	59	4	2
Cornish	74	5	48	19	1	1
Hyde Park	653	196	387	68	2	0
Hyrum	1,338	181	936	215	4	222
Lewiston	482	50	287	134	9	2
Logan	9,518	1,310	6,135	2,033	36	4
Mendon	229	63	77	65	23	1
Millville	316	110	172	32	2	0
Newton	194	31	119	38	1	5
Nibley	391	173	188	28	1	1
North Logan	1,243	470	702	66	4	1
Paradise	182	28	112	40	1	1
Providence	956	376	196	80	4	0
Richmond	586	60	408	108	7	3
River Heights	927	471	423	33	0	0
Smithfield	1,559	259	1,034	260	6	0
Trenton	148	16	87	41	2	2
Wellsville	670	87	292	234	47	10
Unincorporated	1,275	440	629	185	9	12
Cache County	20,953	4,347	12,658	3,738	163	47

Source: BRAC, Comprehensive Housing Affordability Strategy, 1993

HOUSING TRENDS

A number of economic, social, and demographic factors play varying degrees of importance in determining future housing style, cost, availability. Many of these factors are the result of national policies, which are beyond the control of local government. National housing specialists have noted specific trends that are currently taking place which has direct consequences for local housing markets. Some of these trends will undoubtedly affect Cache County over the next twenty years.

Demographic

Both national and local population projections indicate a continued decrease in average family size. At the same time, the number of households has increased substantially. Many households now consist of single parent families. An increase in elderly households will continue as the 'baby boomer' cohort bulge works higher up the population pyramid. The demographic trends translated into many of the smaller families competing for available housing. Housing demand is projected to increase substantially and by the end of the 1990's the need for more housing could be even more acute.

Affordability

For the majority of persons, the cost of housing continues to increase at a faster rate than real personal income. A number of factors have contributed to the swift rise in housing cost. The rapid population growth of Cache County has created an increased demand for additional housing. The accelerated rate of household formation, comprising smaller families and more single parent households, is evident. At the same time, there is a decrease in the supply of readily available land for residential construction. Land prices are driven up as more and more desirable housing units are developed. Housing affordability is also affected by government regulations which require street improvements, curb, gutter, and sidewalk, storm water control, utility connections and street lighting. The periodic fluctuations in inflation rates and financing costs also directly determine housing affordability for many families looking to purchase their first home.

Housing Style and Size

To help offset the increased cost of housing, compromise strategies directed toward housing style and size have been considered in other parts of the nation. The trend is to reduce housing cost by allowing single family homes to be built without carports or garages. Smaller lots and reduced minimum floor area requirements also help trim the price tag of a new home. In an effort to save money, some areas of the country allow wood foundations, ½ inch dry walls, thinner basement floors, plastic plumbing and framing studs to be placed 24 inches on center rather than 16 inches. Conventional brick and wood construction is being replaced by press board and aluminum siding. Smaller homes on smaller lots also help reduce cost. Manufactured housing, planned unit developments and condominiums are being offered as affordable alternatives to the traditional single family lifestyle. Housing style and size will continue to evolve as demand increases and affordability decreases.

Energy Issues

The demand for housing which is more energy efficient will increase as a result of rising electricity and natural gas costs. Both passive and active solar housing styles will become common before the turn of the century. There is also a need for greater sensitivity and flexibility in the placement of homes on lots, to take advantage of solar radiation. Existing dwelling units will find means of incorporating energy efficient technologies as utility costs make such retrofitting profitable.

RESIDENTIAL DEVELOPMENT ISSUE STATEMENT

Residential development is an important and necessary part of a community's land use planning. Much has been made over the quality and the cost of residential development within community. Residential development does place a financial burden on a community. However, communities are made up of people and these people need places to live. The three primary issues facing most communities dealing with residential development are the location of residential development, the type housing (single-family, multi-family and etc.), and finally the affordability of housing.

The lack of planning for appropriate locations for residential development can have a dramatic and long term effect on the future of a community. As plans for residential housing developments are approved,

there needs some type of recognition that the community as a whole takes on a financial burden to provide needed services (i.e., police, fire, water, sewer, transportation, utilities, and others). The total cost of providing those services cannot and should not be totally placed upon the new development. The courts have found that new residential developments are only responsible for their fair share and rest of the community must bear the remainder.

The unincorporated areas of Cache County have remained primarily rural and the County provides only minimal level of services (i.e., police, fire, and snow removal). Culinary water and sewer services are provided by individual wells and septic systems. Growth projections for the County show that the population of the unincorporated County will continue to increase. By the year 2010 the population of the unincorporated of Cache County will have the second largest population in the County behind Logan City. As the number of residential homes increases in the unincorporated County, the demand and public pressure for urban type services will increase. It will be become more and more difficult to continue to limit the level of services to these residents. Only by developing and implementing well thought out land use policies for limiting urban development in the unincorporated areas to levels that will not place increasing burden and demand on this and future County Councils.

Municipalities are the primary providers of urban type services and need to be preparing to meet this future demand for residential housing for the County. This is not to say that all residential development should be limited just to the municipalities and residential homes in the unincorporated areas be prevented. There will always be a need for residential housing development in the unincorporated areas. The need for homes to be developed in the unincorporated areas will continue but the size of the development will be limited based on the ability of the County to provide services and the physical constants of the land.

The types and the affordability of residential development are two closely connected issues. The United State Supreme court has made a number of different court rulings (Mount Laurel I & II) that clearly declared that communities may not use exclusionary zoning and land use policies concerning housing. The Utah Legislature, in 1996, with the HB 295 begun to require all municipalities and counties in the State of Utah develop as part of their general plan, a moderate income housing plan. These housing plans are to help act as a guide for communities residential development decisions.

The cost of housing in Cache County has steadily increased to a point, where the cost of living index for the Logan Urbanized Area shows that housing costs are one of the highest in the State of Utah. The increasing trend of rising housing cost is not a health for the local economy and housing needs of the County. Some of the factors that contribute to this trend are the increasing cost of land, construction cost (labor and material), and government regulations and policies (lot sizes, process, and density).

Land use policies for residential housing development in Cache County need to be based on meeting the needs of current and future residents of the County. These housing policies should be developed to balance and protect individuals property owners rights, while at the same time meeting the housing needs of all income levels.

COMMERCIAL AND INDUSTRIAL

The purpose of the commercial and industrial section is to evaluate current and future economic potential of the business community of Cache County. This section will help identify countywide needs, goals, objectives, and develop an understanding of the commercial and industrial land uses within the County. The commercial and industrial section deals with the entire commercial/industrial environment of the County. Commercial and industrial business trade areas seldom adhere to jurisdictional boundaries. Businesses display spatial patterns that conform to the geographic distribution of consumers and transportation, not the conceptual boundaries of city limits.

ZONING

Cache County Land Use Ordinance provides for zones where commercial and industrial businesses may be located. Each of these zones has a purpose which defines the intent and function of the zone. The Cache County Planning Commission should always review proposals based on the purpose of the zone. Below are listed the individual purpose sections for the commercial and industrial zone from the Cache County Land Use Ordinance.

Commercial Zone - C

7-1 Purpose- To allow areas where industries necessary and beneficial to the local economy may locate and operate. The regulations of the zone are designed to protect and preserve the environment of the zone, adjacent areas and the entire County.

Manufacturing Zone - M

7-1 Purpose- To allow areas where industries necessary and beneficial to the local economy may locate and operate. The regulations of the zone are designed to protect and preserve the environment of the zone, adjacent areas and the entire County.

These descriptions combined with the list of legal uses should determine the type and quality of development intended by the appropriate zone. The idea of a controlled and planned commercial and industrial environment is a much more recent idea than the idea of planned and protected residential setting. Many of the physical planning ideas now being applied to the commercial and industrial environment are adaptations of concepts first tried and refined in residential. If development is not consistent with these above purposes and the legal uses within the individual zone, then the zones have problems and review of each zone should be made to correct them.

The County's Land Use Ordinance has defined commercial and industrial zones, but they are very sparingly used. The Map LU-9 on the following page shows the current existing commercial and industrial zones in unincorporated areas of Cache County. The County Land Use Ordinance over time has listed a number of commercial and industrial uses within the non-commercial/industrial zones. This practice has become problematic in that it has broadened the purpose and intent of the non-commercial/industrial zones. For example, the list of allowed uses in the Agriculture (A) zone now

includes so many commercial and industrial uses within the zone that the intent and purpose of the zone

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**MAP LU-9
CACHE COUNTY COMMERCIAL AND
INDUSTRIAL ZONES MAP**

**MAP LU-9
BACK PAGE OF COMMERCIAL AND
INDUSTRIAL ZONES MAP**

have become unclear. To maintain the integrity of any zone it is important that the purposes and list of uses remain consistent. This consistency of purpose and uses provides the Planning Commission with the tools and policies to make better decisions and have control over development within the zones.

LAND USE

Most of the commercial and industrial land uses within Cache County are found within the existing incorporated communities. There is approximately 1,557 acres within Cache County committed to commercial or industrial land uses. Commercial and industrial land uses makeup about 0.2 percent of the privately owned land within the County. These number are based on Cache County Auditor's **1995 Property Summary Report**. The Utah Department of Employment Security reports there are 1,819 non-agricultural commercial and industrial firms which employ approximately 36,546 people

The overall impacts of commercial and industrial development are very similar from a land use perspective. The effects and impacts of commercial and industrial development include the transportation systems, the location and density of residential, and urban design of the community. The intensity of these land uses may have adverse effect on the urban fabric of a community. Uncontrolled commercial and industrial development can do more damage to a communities urban design. However, commercial and industrial uses are necessary for a healthy tax and employment base of a community. To better understand the impacts it is important to review each of these land uses separately.

Commercial

Residents of Cache County make daily use of the goods and services offered by commercial business establishments. Commercial businesses provide convenient and economically competitive places where people can purchase food and clothing, have their automobiles repaired, be entertained, and acquire other durable or nondurable goods and services. In addition, the variety of commercial uses enhances the desirability of living within a community, creates employment opportunities, and generates sales tax revenue to be used for public services. Commercial development is essential to the community's economic viability.

The location of commercial land uses tends to congregate around large arterial streets. This trend has taken place for many years and will continue for many more. Commercial buildings are developed and are occupied by businesses for years. However, as more traffic is generated on these high visibility streets there will be more pressure to move from these older buildings to newer and larger commercial developments. As new commercial development takes place there is increasing pressure for leap frog development in areas of less expensive agricultural land.

Visually, commercial corridors often lack a sense of organizational structure, and this "confusion" reflects poorly on overall community design. Commercial strips tend to display the following characteristics:

- Numerous large freestanding and portable signs;
- Large expanses of unscreened surface parking;

- Little or no landscaping of public or private property;
- Few or no pedestrian improvements;
- Above ground utilities and overhead lights;
- Numerous poorly delineated, closely spaced driveway access points, and;
- Uncoordinated approach to design, location, and planning of public and private improvements.

The visual effect of the commercial corridors bears little or no relationship to the community's natural setting or the architectural styles present in the rest of the community. These streets bisect the communities, leaving visitors with a less than favorable impression. The image created by the commercial strip will affect the community as a whole. To change an image based on the appearance will require a combination of many different planning strategies.

Curbing the ills of the commercial corridor takes a combination of entryway, sign controls, landscaping standards, pedestrian amenities, and architectural standards. Regulatory standards addressing these aspects of urban design are proven methods of upgrading strip commercial development. A commitment to setting up changes is necessary before any real improvements will take place. A consistent plan with goals and methods will help attain the desired outcome.

Industrial

Industrial uses convert raw materials into useful products or supply support type businesses. Industrial business provides a significant contribution to employment growth, tax revenue, and an export economy. At the same time, industrial businesses can have severe social and environmental impacts upon a community's neighborhoods, transportation network, and air and water ecosystems. Local land use controls of industrial uses fall into two categories: immediate code standards as exemplified by zoning ordinances and subdivision regulations; and, long-range philosophical judgements of the comprehensive plan which show where the communities will permit future industry to go, approximately how much land will be set aside for future industry, and which type of industry will be accepted.

Industrial uses can be divided into two separate categories. These two categories are light and heavy industrial uses. Individual industries are classified heavy or light depending on their environmental impacts, externalities, amount of outside storage and degree of operation intensity. The following definition defines these two categories of industrial uses:

Light Industry - Light industry includes businesses primarily engaged in warehousing or the manufacturing and wholesale distribution of finished goods. All manufacturing occurs inside a building, such as a machine or cabinet shop, with little or no outside storage of materials.

Heavy Industry - Heavy industry includes manufacturing businesses with extensive (defined as 30% or more of any parcel's total land area), outside storage of equipment, such as petroleum works, truck lines, construction firms, cement plants, and mining. This land use category also includes any business that produce a high level of noise, visual impact or environmental pollution.

PROJECTED LAND USE

In projecting the future location of commercial and industrial land uses first focuses on the future intent and needs of the existing communities. More and more commercial and industrial development is necessary for creating a strong tax base within the County. Because of the lack of municipal type services (water and sewer) within the unincorporated area most of the commercial and industrial development will be located in the existing communities. This is based on the communities ability to provide services, and concentration of the population.

Each community provides for commercial and industrial zoning and master plans for future development. Map LU-10 on the following page shows the generalized municipal zoning map for the communities. To better understand the future land uses of the region it is helpful to see how communities are currently zoning land. National averages show that communities should maintain approximately 15 percent of communities land use in a mix of commercial and industrial.

In addition to zoning it becomes important to review the employment projection for the region. Table LU-21 below shows the existing and projected employment by industrial classification based on the major groups as defined by the **Standard Industrial Classification Manual**. The SIC codes separate businesses into 10 industrial classifications. The Agriculture group is typically excluded from the definition of total employment because its growth dynamics is somewhat unique, particularly in an urban setting. The manual also breaks down the Trade group into Whole and Retail Trade, however, the available information in these groups is combined into one group.

TABLE LU-21 Cache County: Existing and Projected Employment by Industry, 1990 - 2020

Industry	1990	1995	2000	2010	2020
Mining	0	4	5	6	7
Construction	961	1,814	2,249	2,759	3,216
Manufacturing	8,452	10,094	12,514	15,351	17,893
Trans., Comm. & PU*	616	1,048	1,299	1,594	1,858
Wholesale & Retail Trade	5,017	7,180	8,901	10,920	12,727
FIRE**	588	801	993	1,218	1,420
Service	4,388	5,690	7,054	8,654	10,086
Government	8,172	9,742	12,078	14,816	17,269
Total	30,216	36,373	45,093	55,317	64,476

*Transportation, Communication and Public Utilities

**Finance, Insurance, and Real Estate

Source: *Utah Economic & Demographic Projection, 1997, State of Utah Office of Planning and Budget*

Of these ten SIC categories or major groups, three are commercial and five are industrial in nature. The three commercial groups are Retail Trade, Finance/Insurance/Real Estate, and Service. The five industrial groups are Mining, Construction, Manufacturing, Transportation/Communication, and Wholesale Trade. The Government group shows those individuals that work in the public sector. A more detailed description of the different Standard Industrial Classification codes are listed in the Appendix.

Commercial and industrial development is an integral part of the makeup and economy of a community. It is important to locate commercial and industrial zones in appropriate locations to enhance the community's urban design and to maintain the economic stability of the community now and into the future.

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**MAP LU-10
CACHE COUNTY GENERALIZED
MUNICIPAL ZONING MAP**

MAP LU-10
BACK PAGE OF CACHE COUNTY GENERALIZED
MUNICIPAL ZONING MAP

COMMERCIAL AND INDUSTRIAL ISSUE STATEMENT

Commercial and industrial development is the economic lifeblood of communities. These land uses are the primary revenue source for the County and municipalities either through property or sales tax. Commercial and industrial development can and does have a tremendous effect on the growth and economic potential of a region. Because these land uses are so important to communities sometimes there are overly aggressive in their efforts to attract them.

Commercial and industrial development, like residential development, is necessary for a healthy community. There should be however, a health mixture of the different land uses within a community. Studies show that communities should have approximately 15 to 20 percent commercial or industrial developments of their total land use. This percent provides a balance between other uses (residential, public, and transportation). When communities have much commercial and industrial development, the other land uses such as residential, tend to begin to deteriorate and devalue over time.

The locating of commercial and industrial land uses within a community can have either a beneficial or detrimental effect. Proper planning for locating these types development should be done so that the overall impact is to the foremost benefit of the community and the development. The impacts of commercial and industrial development can be divided into two different areas. These two areas are the effect of commercial and industrial development on adjacent property and on a transportation system. It is important to understand how these impacts affect a community and what can be done to mitigate them.

The first type of impact is the effect of commercial and industrial development on adjacent land uses. These impacts include such things as noise, smell, light and other. Most general plans and land use ordinances try to resolve these impacts by segregation of non-compatible land uses. There will always be circumstances where non-commercial/industrial land use abutting or are adjacent to a commercial and industrial development. Standards can and should be developed to offset or minimize the impacts. These standards can include such things as sound walls, height restrictions, limits on hours of operation, and landscaping buffers.

The second type of impact of commercial and industrial land uses is on a regions transportation system. Not considering impacts of commercial and industrial development on transportation will lead to problems of traffic flow and gridlock during peak hours (going to and from work). Allowing strip commercial development along principal highways can create additional problems of urban sprawl, deterioration of older downtown commercial areas and loss of economic value of land. Methods of dealing with the effects of commercial and industrial development on a transportation system includes such things as access management techniques, limiting urban sprawl, redevelopment, and traffic calming.

Most of the commercial and industrial development within Cache County has been limited primarily to the existing municipalities. Much of the development has been located along the principal highway system US Highways 89/91. As population increases along these highways, the pressure for more commercial and industrial development will increase. The primary issue facing commercial and industrial development in Cache County is the strip development taking place along US Highway 89/91

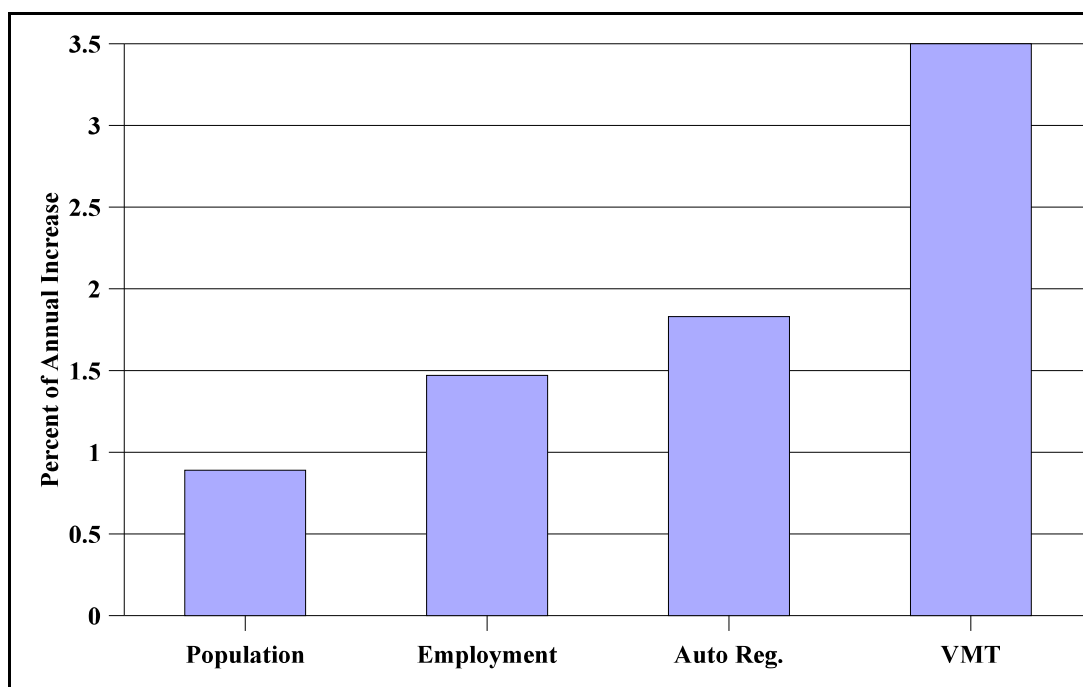
and future development along State Route 165. A consistent set of development standards for commercial and industrial land uses should be created to limit their overall impact on the transportation system.

TRANSPORTATION

One of the most vital elements of any community is the transportation system. Streets, highways, public transit, and railroads are essential to the orderly functioning of the urban area by providing mobility for people and goods as well as access to land. Planning for these facilities involve a comprehensive analysis of the ability of the transportation systems to accommodate future changes in demand with minimal cost and negative impacts for the community.

The automobile has played a very important part of the development of today's American community. Since the development of the automobile at the turn of the century no other modern convenience has had a greater impact on the makeup of the modern community. We as a society have become dependent on the automobile. The relationship of transportation and land use development is very complex and reciprocal. Land use patterns affect travel decisions and travel decisions affect land use patterns. As vehicular miles traveled by individuals continue to increase as shown in Figure LU-8 below, the need for sound planning of the existing and future transportation needs will be necessary.

FIGURE LU-8 VEHICULAR MILES TRAVELED COMPARISON 1980-1989



Transportation systems are regional by nature and provide access to and from the surrounding areas of the region. Cache County's transportation system is a part of a much larger and regional system with the Wasatch Front and the Intermountain Region. Many of the highways within Cache County provide pass through travel routes to other destinations in the Intermountain Region, as well as access to major employment centers within and outside of Cache County. The transportation system of Cache County and the planning of it can be divided in two areas, the urbanized area and the non-urbanized area. The urbanized area transportation system is planned by the Cache Metropolitan Planning Organization (CMPO) and the non-urban area is planned by Cache County.

CACHE METROPOLITAN PLANNING ORGANIZATION (CMPO)

With the 1990 Census the Logan area population surpassed the population plateau of 50,000 people. This caused the creation of an Urbanized Area for the Logan region. Map LU-11 on the following page shows the Logan Urbanized Area. With the creation of an Urbanized Area comes the added responsibility of doing planning for transportation within the area by local communities. This is to be done through a group called the Metropolitan Planning Organization. In an agreement executed on October 15, 1992 the Governor designated the Cache Metropolitan Planning Organization (CMPO) as the metropolitan planning organization for the Logan Urbanized Area.

The CMPO comprises two bodies, a legislative body and an advisory committee. The legislative body, or the Executive Council, comprises representatives from Cache County, Utah Department of Transportation (DOT), Logan Transit District (LTD), as well as elected officials appointed by the mayors representing the communities of Nibley, Millville, Providence, River Heights, Logan, North Logan, Hyde Park, and Smithfield.

The Cache Technical Advisory Committee (CTAC) advises the Executive Council on technical and other matters as assigned. Members of CTAC are engineers, planners, and public works officials from the same jurisdictions and agencies as the Executive Council.

Since the CMPO was created in 1992, the Executive Council and Technical Committee have been working to develop and complete a Long Range Transportation Plan for the Logan Urbanized Area.

PUBLIC RIGHTS-OF-WAYS

Public rights-of-ways or roads make up the transportation system within Cache County. Roads and public rights-of-ways may be regional in nature but the responsibility and jurisdiction varies. This complicates the planning process for managing the entire system. Table LU-22 below provides a description of each class of road with responsibility and funding sources.

TABLE LU-22 ROAD CLASS AND OWNERSHIP

TYPE	OWNERSHIP
Class A	These are roads under the jurisdiction and control of the Utah Department of Transportation. These roads are constructed and maintained by DOT from funds made available for that purpose.
Class B	These are roads located in the unincorporated areas under the jurisdiction and control of Cache County. These roads are constructed and maintained by the County Road Department.
Class C	These are roads located in the incorporated municipalities of Cache County. They are under the jurisdiction and control of each community. These roads are constructed and maintained by each of the different communities.

Source: Utah Department of Transportation

The funding source for these road classes primarily comes from the gasoline tax.

MAP LU-11
LOGAN URBANIZED AREA MAP

MAP LU-11
BACK PAGE OF LOGAN URBANIZED AREA MAP

The roads can be further defined based on the overall function of each road type. These functional classifications define the road network within the County. This road network is composed of four classifications of different road types. Table LU-23 defines the different functional classifications of the road network

TABLE LU-23 RIGHT-OF-WAY FUNCTIONAL CLASSIFICATION

Classification	Definition
Major Arterial	The primary function of these roads is to move traffic to destinations within Cache County and to provide access in and out of the County. During the peak hours, these roads handle most of the traffic demand within the County. These roads should have limited access to adjacent land use.
Minor Arterial	Although the function of these streets is very similar to a major arterial, there are more compromises that allow for access to adjacent lands. Generally, these streets are located on an 80' right-of-way and may connect to major arterial through intersections or directly through gradual transitions in major arterial.
Major Collector	These roads serve mainly internal neighborhood traffic movements or connect an area with the arterial street system. The intent is to handle through traffic for short distances. Collector streets provide the link to minor streets and are generally characterized by two lanes of traffic with an ample median/turning lane or by four lanes with no parking allowed on streets during peak hours. Right-of-way needs can be satisfied by 66 feet.
Local	The primary purpose of these streets is to provide good accessibility to land. Traffic volumes should be very low and traffic movement is slow. On-street parking combined with short lengths and reduced pavement width yields essentially a one lane street within less than a 60' right-of-way.

Each of the different classifications is able to handle different amounts of traffic capacity within a safe speed. Table LU-24 below is a breakdown of the general characteristics of the streets.

TABLE LU-24 GENERAL CHARACTERISTICS OF STREETS

Classifications	Traffic Capacity	Speed	Right-of-Way
Freeway	2000 vphpl*	55 mph	> 150 feet
Major Arterial	650 - 1200 vphpl	> 45 mph	> 100 feet
Minor Arterial	550 - 700 vphpl	35 - 45 mph	80 - 110 feet
Collector	400 - 650 vphpl	30 - 40 mph	66 - 84 feet
Local	< 400 vphpl	< 30 mph	< 66 feet

*vehicles per hour per travel lane

SOURCE: Wasatch Front Regional Council

Table LU-25 and Map LU-12 indicate Federal and State designated highways within Cache County and a description and functional classification for each.

TABLE LU-25 FEDERAL AND STATE HIGHWAYS AND CLASSIFICATION

Highway	Description	Classification
US Highway 89/91	From Box Elder County line through Wellsville Canyon northerly to 400 North in Logan.	Principal Arterial
US Highway 91	From 400 North in Logan northerly via North Logan, Hyde Park, and Smithfield to Utah-Idaho state line near Franklin, Idaho.	Principal Arterial
US Highway 89	From Main Street at 400 North in Logan, via Logan Canyon to the Rich County line.	Principal Arterial
State Highway 23	From US Highway 89/91 south of Wellsville northerly via Wellsville, Mendon, Petersboro, Newton, and Cornish to the Utah-Idaho state line near Weston, Idaho	Major Collector
State Highway 30	From the Box Elder County Line to US Highway 89/91 at Main Street at 200 North in Logan.	Minor Arterial
State Highway 61	From Route 23 at Cornish easterly through Lewiston to Route 91 at Webster Junction.	Major Collector
State Highway 101	From Wellsville on Route 23 easterly via Hyrum to the Hardware Ranch with a stub connection to the Visitor's Center and parking area.	Major Collector
State Highway 142	From Route 23 near Newton to Clarkston; thence easterly via Trenton to US Highway 91.	Major Collector
State Highway 165	From Paradise northerly via Hyrum and Nibley to US Highway 89/91 in Logan.	Minor Arterial
State Highway 200	From Route 61 northerly to the Utah-Idaho State Line near Preston, Idaho	Major Collector
State Highway 218	State Highway 23 East of Newton easterly to US Highway 91 in Smithfield	Major Collector
State Highway 237	From 700 North and 800 East in Logan northerly to Hyde Park; thence west to US Highway 91 west of Hyde Park.	Minor Arterial
State Highway 238	From Route 165 East to Millville; thence northerly via Providence and River Heights to US Highway 89/91 in Logan	Minor Arterial
State Highway 239	From US Highway 91 East coincident with 1400 North to State Highway 237	Minor Arterial
State Highway 243	From US Highway 89 in Logan Canyon to Beaver Mountain Ski Resort.	Major Collector
State Highway 288	From US Highway 89 at 1200 East in Logan, Utah State University, via 1200 East and 1000 North to State Highway 237.	Urban Collector

Source: Utah Department of Transportation

MAP LU-12
CACHE COUNTY FUNCTIONAL CLASS SYSTEM MAP

MAP-12
BACK PAGE OF CACHE COUNTY FUNCTIONAL
CLASS SYSTEM MAP

MASS TRANSIT

The transit department of the City of Logan, known as the “Logan Transit District” (LTD), was instituted under Utah State Code 10-8-86 following a public referendum in November 1990. The referendum established a one-quarter percent sales tax within Logan City, and these revenues are dedicated to public transportation. A six-bus fixed-route and one-bus ADA paratransit service began on April 27, 1992. Minor service adjustments have resulted in a current peak-level of seven fixed-route buses, and an annual service level surpassing 26,000 hours.

The system remains fare-free to all residents of and visitors to Logan, and provides more than 850,000 trips per year. Operating expenses and capital matching funds are provided by the sales tax revenues; Federal Transit Administration (FTA) funds are used to replace capital items on a programmed basis. The LTD is a participating member of the Cache Metropolitan Planning Organization, the body charged with regional transportation planning for the Logan Urbanized Area.

The LTD has been recognized by the FTA as the sole recipient of Federal transit funds in the Logan Urbanized Area. The current organizational structure of the LTD consists of the Transit Manager (a department head position with the City of Logan) and a Transit Assistant. The operations facility, operations and maintenance staff, and vehicle maintenance is provided by a private management firm (currently contracted to DAVE Transportation Services, Inc.). Vehicles and fuel are provided by the City of Logan. A seven-member Citizen Advisory Board assists the City of Logan administration with policy-making.

The mission of the Logan Transit District is to provide public transportation that enhances the quality of life in our community. The LTD will: provide safe, reliable, and effective service; provide accessible, efficient, and convenient transportation; enhance the community aesthetically, economically and environmentally; seek public participation through the public hearing process; and reasonably accommodate the needs of a diverse population.

RAILROADS

Approximately 43 miles of Union Pacific Railroad branch line extends from Cache Junction to the Idaho State line where it continues to Preston. Two local trains run daily on this line distributing or redistributing raw materials and finished products to various commercial industries throughout Cache Valley.

Forty to sixty cars carrying a monthly average of 55 tons per car terminate in Cache County. At Cache Junction, the 120 to 140 cars that originate in Cache County hook up to Union Pacific trains that head southward through Ogden or northward through Pocatello on the main line. Approximately 16 trains a day travel the 17.4 miles of main line that extends through Cache County. The above figures indicate that approximately 33 percent more materials are exported by rail from Cache County than are imported.

The safety between rail and motor vehicle traffic is a major issue that should be taken into consideration. Whenever these two forms of transportation come in contact, the potential for dangerous accidents may occur. Table LU-26 on the following page shows the different railroad-street crossing types with the relative hazard associated with each type.

TABLE LU-26 RAILROAD CROSSING AND RELATIVE HAZARD

TYPE OF CROSSING	RELATIVE HAZARD
Crossbucks	1.00
Stop Signs	0.58
Wigwags	0.34
Flashing Lights	0.20
Gated	0.11

SOURCE: Wasatch Front Regional Council

Based on the above table, the gated crossing is 10 times safer than the crossbuck crossing. However, a gated crossing will at times restrict the flow of traffic.

AIRPORTS

There are two airports of importance to Cache County, Logan-Cache and Salt Lake International. These two airports provide the aviation needs of the region. Below is a brief description of these airports and the services they provide.

Logan-Cache Airport - The Logan-Cache Airport serves as a General Aviation airport in the FAA's National Plan of Integrated Airport Systems (NPIAS). It is further classified as a General Utility airport. The Logan-Cache Airport is a publicly-owned airport located in central Cache County. The service area for the Logan-Cache Airport consists of Utah's Cache and Rich Counties and portions of Utah's Box Elder County and Idaho's Franklin and Bear Lake Counties.

Salt Lake International Airport - Salt Lake International Airport, owned by the Salt Lake City Corporation and operated by the Salt Lake City Airport Authority. Salt Lake City International Airport is presently one of the fastest growing large hub airports in the country. The airport is the only major air carrier airport in the State of Utah and serves Utah, southern Idaho and western Wyoming. Salt Lake International Airport is the major regional airport for air carriers and business activities. Its main function is to serve the commercial side of aviation. The Salt Lake City International Airport will continue to accommodate the activities of the Utah Air National Guard, the Army Reserve, and general aviation aircraft.

Almost every complaint imposed against an airport and based on either safety concerns or airport noise can be attributed to poor, inadequate, or nonexistent land use planning and zoning of property in close proximity to the airport. Residential encroachment on the airport places the most stress on an airport. Good land use and development plans, based on an in-depth compatibility study, are among the most potent and affordable ways to protect an airport while still allowing development near an airport. This process could save the local taxpayers many dollars by avoiding the purchase of additional land to protect the airport. Currently, the Logan-Cache Airport has plans to update the master plan to deal with the new growth at the airport. The hope is to increase funding to deal with the increase usage and demands on the airport.

TRANSPORTATION ISSUE STATEMENT

The transportation system of Cache County plays a very important part in the development of different land uses within the County. As discussed earlier, transportation has a reciprocal relationship with other land uses. We are such a mobile society and very dependent on our automobiles, a well designed and managed transportation system is critical. A good transportation system provides for the economic health, convenience and safety of the residents of Cache County.

The transportation system within Cache County is made up of three different transportation networks. They include the State's functional classification system, Cache County priority road system, and local municipal streets network. These different transportation networks are owned and managed by separate public jurisdictions and when combined, form the overall transportation system for Cache County. Because a transportation system is managed by different groups with separate interests, the role and responsibility each jurisdiction plays in the overall transportation system are unclear.

These unclear roles and responsibility within the total transportation system sometimes create coordination problems of the system. As each jurisdiction considers their own network's needs, there is little consideration of other jurisdiction's needs. Finger-pointing and blaming another party for failures within the transportation system is a common problem. Many times there are unreal expectations concerning the role of the larger entities and their assumed responsible for solving the problems with the entire transportation system. This cycle of blaming each other and creating unreal expectation will eventually lead to mistrust and finally a poorly coordinated transportation system.

It is important to understand that a transportation system is regional by nature. Roads do not just begin or end at a jurisdictional boundary. For a transportation system to function properly each individual jurisdiction must understand their role in the development and maintenance of the total system. Failure or lack of support on their part to maintain or develop their portion of the system will eventual lead to increased traffic problems and place the financial burdens on the more responsible jurisdiction to find alternative solutions.

ESSENTIAL FACILITIES AND SERVICES

Within Cache County there are a number of different essential facilities and services that are provided to the citizens. These services come from different sources like the public, service districts, and private utility companies. For an area to develop it is necessary to provide sufficient facilities and services to the public. Supplying these facilities and services is a primary function of every level of government. Many of them are directly funded and operated through tax monies such as government, police, fire, and schools. Others are funded through direct payment for services and generated by private or quasi-public entities, such as water/sewer services and utilities. Some services are required by law and others are provided in response to a public referendum or to a perceived need in a particular area. Police and fire departments represent the former, libraries, parks and hospitals represent the latter. The operation of these facilities and services have a direct and sometimes great impact on the lives and the quality of life of the citizens.

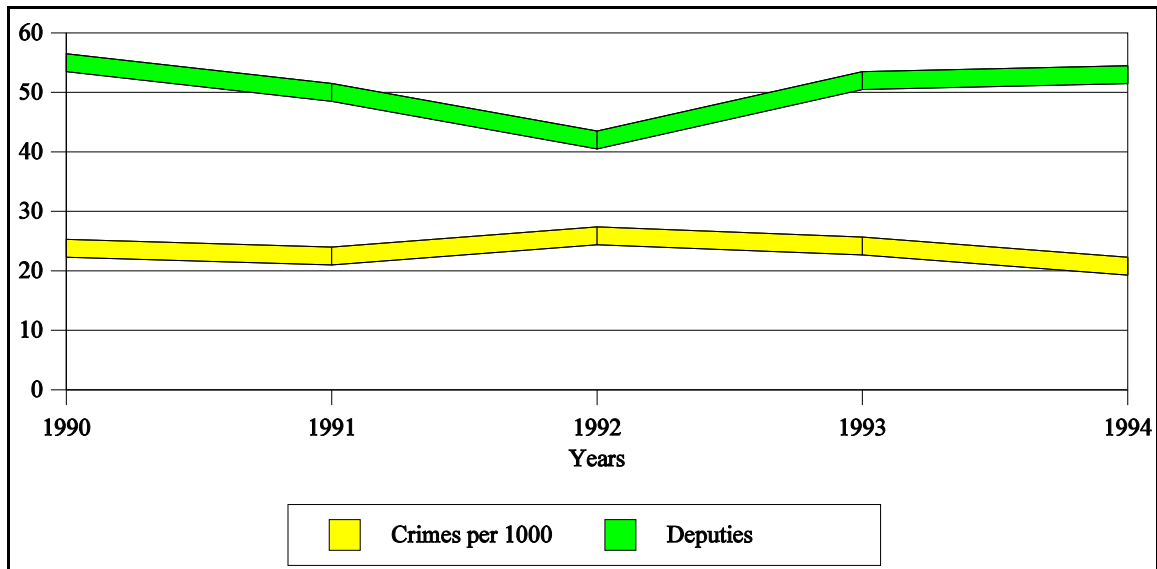
The capacity of the County to accommodate expected growth, is best assessed by consideration of the facilities and services that are essential for the population and their limitations. Over the last few years our use of these services has increased and the available capacity in each area is diminishing. As these trends continue, as capacities are reached, additional service capability will be required. How the capability is best developed and provided are just a few of the critical questions that must be addressed in the areas of delivery of essential facilities and services.

The primary issues surrounding essential facilities and service are costs and levels of performance. Costs and levels of performance are related through an equation to determine the efficiency of the service. Efficiency of any given facility or service is a key issue considered when any type of comparison is made to like services in the region. If these facilities or services can be provided more efficiently and cost effectively, the County should try to pursue that course. Sometimes sharing of service through quasi-public entities might more efficiently handle essential facilities and services or the County might even consider privatization of services.

POLICE

The Cache County Sheriff's Office provides law enforcement services to the unincorporated county areas as well as most of the communities in the county under a contractual agreement. The only communities in the county that have their own police departments are Logan with 51 officers, North Park (North Logan and Hyde Park) with 6 and Utah State University with 12 officers. The Sheriff's Office employs 55 full time deputies, 21 of which are assigned to the county jail and do not provide patrol services on the street level. Two deputies are assigned to Smithfield permanently, two to Hyrum permanently and one to Wellsville permanently through the Federal **Cops Fast Grant** program.

The average number of officers per 1000 population in Cache County is 2.6. The national average is 2.1 per 1000. The State of Utah average is 1.7 per 1000. These figures do not include the deputies assigned to the County Jail and thus not available to provide street law enforcement services. The Sheriff's Office ratio is 1.1 per 1000 which is significantly below both the state average of 1.7 per 1000 and the national average of 2.1 per 1000. Figure LU-9 on the following page shows a comparison of the number of deputies in the County Sheriff's Office versus the number of crimes per 1000. From the figure we can see there may be a correlation between the number of deputies and the number of crimes.

FIGURE LU-9 CACHE CO SHERIFF'S DEPUTIES & CRIMES/1000 PEOPLE

Source: Cache County Sheriff's Department

Table LU-27 provides a detailed breakdown of the police service needs based on the population projections of Cache County. The table includes the County Sheriff, patrol officers, investigators, and jail personnel. The Sheriff's Office administrative personnel are not included as part of this table.

TABLE LU-27 POLICE SERVICE NEEDS IN CACHE COUNTY

Community	Current # of Officers	# Needed 2000	# Needed 2010	# Needed 2020
Amalga	County Svc.	.66	.80	.92
Clarkston	County Svc.	1.11	1.30	1.44
Cornish	County Svc.	.33	.37	.39
Hyde Park	2.5	3.02	3.82	4.61
Hyrum	2 County Officers	9.06	11.42	13.76
Lewiston	County Svc.	2.5	2.8	3.0
Logan	County Svc.	56.06	64.49	71.09
Mendon	County Svc.	.93	1.64	1.99
Millville	County Svc.	2.43	3.33	4.41
Newton	County Svc.	1.14	1.32	1.46
Nibley	County Svc.	2.60	4.03	6.13
North Logan	2.5	5.53	7.48	9.75
Paradise	County Svc.	.95	1.09	1.20
Providence	County Svc.	6.28	7.92	9.36
Richmond	County Svc.	3.6	4.5	5.4
River Heights	County Svc.	2.11	2.35	2.53
Smithfield	2 County Officers	9.87	11.75	13.36
Trenton	County Svc.	.46	.56	.65
Wellsville	1 County Officer	3.96	4.77	5.48
County Total	114	122.05	146.67	170.81

Source: Bear River Association of Governments

The number of officers for Logan City and Cache County were based on population projection and the number of officers per 1000 citizens and were calculated to be 1.5 officers. The number of officers for North Logan and Hyde Park were based on the population projections for the combined communities and the number of officers per 1000 citizens was calculated to be 1.1 officers.

FIRE

Fire protection with Cache County is provided through the Cache County Fire District. The Fire District is broken into 12 fire zones. Map LU-13 on the following page shows the fire zones for Cache County. The different fire zones are made up of a number of full time or volunteer Fire Departments depending on the Fire Zone. Table LU-28 shows the different fire zones, equipment, and manpower.

TABLE LU-28 FIRE DISTRICT ZONES, EQUIPMENT AND MANPOWER

Zone	Fire Engines	Tender Truck	Brush Engines	Aux. Unit	Squad Unit	Ladder Truck	Fresh Air Truck	Fire Fighters
1-Clarkston	2	1	1		1			15
2-Lewiston	2	1	2	1				20
3-Richmond	1	3	1		1			18
4-Smithfield	2	1	2	1	1			25
5-Newton	1	5	1		1			18
6-Wellsville	2	2	2	1		1		20
7-Logan	3	1	1	1				30
8-Hyrum	3	2	2	1				20
9-Paradise	2	2	2					18
10-Trenton	1	1	2					15
11-Mendon	1	1	3		1			15
12-No. Logan	3	1	2	1	1		1	25
Total	23	21	21	6	6	1	1	239

Source: Cache County Fire District

The following list is a description of the different fire fighting equipment and the function of each:

Fire Engine - Primary vehicle used to fight fires by pump water. The capacity of the engines in the County range from 500 gallons per minute to 1500 gallons per minute.

Tender Truck - Vehicles used mainly as a water shuttle for fire engines. These trucks have a capacity of 1000 gallons or greater. The size of the trucks in the County range from 1200 gallons to 5000 gallons.

Brush Engine - Vehicles mainly used to fight wild land fires. These vehicles carry 300 gallons of water or less.

Auxiliary Unit - Vehicles used to carry miscellaneous equipment, supplies and for transportation of personnel.

Squad Unit - Vehicles that carry medical and/or rescue equipment.

Ladder Truck - Vehicles mounted with a ladder.

Fresh Air Truck - Vehicles whose main purpose is to provide fresh air to fill air bottles for fire fighters in the field.

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MAP LU-13
CACHE COUNTY FIRE ZONE MAP

**MAP LU-13
BACK PAGE OF CACHE COUNTY
FIRE ZONE MAP**

The Forest Service also has some equipment and manpower that are available to fight fires in the National Forest Areas when necessary. The Forest Service has approximately 43 fire fighters and 2 brush engines.

CULINARY WATER

Culinary water in Cache County is being provided by one of three different methods. These three methods are: (1) Municipal Water Systems; (2) Service District or Water Companies, and; (3) Individual wells and springs.

Municipal Water Systems

Generally municipal water systems include four elements: supply, treatment, storage, and a distribution system. One of these factors usually limits the ability of the system to provide adequate service or accommodate system expansion. Each of the existing communities provides a municipal water system. Table LU-29 shows the municipal water systems within Cache County.

TABLE LU-29 MUNICIPAL WATER SYSTEMS

Community	System Capacity (mgd)	System Age (years)	Linear Size (miles)	Service Area (sq. Miles)	Users/User Capacity
Amalga	-NA-	56	11	3.5	109/109
Clarkston	1.5	100	24	5	220/150
Cornish	.7	60	18	6	80/125
Hyde Park	.9	5	15.7	8	660/700
Hyrum	11.8	8	30	2	1250/1500
Lewiston	2.5	74	159	47	494/665
Logan	30	130	146	12	10,894/20,000
Mendon	1.1	17	10.3	2	82/82
Millville	1.5	58	19	1.5	345/400
Newton	.46	80	12.5	4.5	200/200
Nibley	.8	64	10	3.1	1350/2000
North Logan	4.1	60	50	6	1168/3343
Paradise	.25	60	-NA-	.8	185/250
Providence	3.5	64	33	2.7	1015/1100
Richmond	3.5	1	1.6	2	545/856
River Heights	1.2	59	5.7	.5	412/600
Smithfield	5.7	88	32	2.5	1600/2500
Trenton	.2	50	-NA-	20	151/175
Wellsville	4.5	100	30	3.5	700/-NA-

Source: Bear River District Infrastructure Inventory and Analysis, BRAG, September 1994

Service District and Water Companies

There are one service district and four water companies providing water to unincorporated areas of Cache County. Table LU-30 shows the service district and water companies water systems within Cache County.

TABLE LU-30 SERVICE DISTRICT AND WATER COMPANIES

System	System Capacity (mgd)	System Age (years)	Linear Size (miles)	Service Area (sq. Miles)	Users/User Capacity
Benson SID	.084	3	24	--	142/300
Gilbert Springs	--	--	--	--	18/
Highcreek	--	--	--	--	17/50
Riverside	--	--	--	--	--
South Cove	--	--	--	--	24/

Source: Individual District

Individual Wells

There are approximately 2400 domestic wells providing culinary water to residential homes in Cache County. Most of these wells are located within the unincorporated areas of the County.

WASTEWATER

Communities have the responsibility of assuring that wastewater does not adversely affect the health, the environment, or private property. Depending on the communities' needs, this could involve monitoring on-site septic systems or operating a sewer system. The primary elements of a sewer system are the collection system and the treatment facility. Communities within the County utilize a range of sewage treatment methods such as on-site septic systems, sewage lagoons, and treatment plants. Wastewater or sewage is currently handled either by municipal systems or by individual on-site septic tanks. Table LU-31 shows the existing municipal sewer systems in Cache County.

TABLE LU-31 MUNICIPAL SEWER SYSTEMS IN CACHE COUNTY

System	System Capacity (mgd)	System Age (years)	Linear Size (miles)	Service Area (sq. Miles)	Users/User Capacity
Hyde Park	1.71	1	18	1.8	492/1,650
Hyrum	1.18	16	-NA-	1.7	1,150/1,750
Lewiston	1.23	20	8.2	5	187/1,320
Logan	21.84	30	120	12	12,000/19,000
North Logan	.951	11	50	6	1,165/3,600
Providence	.39	3	26	1.4	890/1,100
Richmond	4.68	22	13.2	2	580/-NA-
River Heights	.18	12	5.7	.4	410/700
Smithfield	.93	4	30	2.5	1,590/-NA-
Wellsville	.78	24	17	1.8	600/-NA-

Source: Bear River District Infrastructure Inventory and Analysis, BRAG, September 1994

Smithfield, Hyde Park, North Logan, River Heights, and Providence all have a sewer collection infrastructure but a contract with Logan for the use of the sewage treatment facility. The remaining communities Amalga, Clarkston, Cornish, Mendon, Millville, Newton, Nibley, Paradise, Trenton and the unincorporated areas of the County use individual on-site septic systems. As discussed in the Physical Environment Section of the Land Use Element some of these on-site septic systems are located and concentrated in aquifer recharge areas and may become a problem in the future for ground water.

SOLID WASTE

The collection and disposal of solid waste stems from the concern that improperly stored or treated waste can feed and harbor disease-bearing pests and endanger public health. Local government also has an interest in assuring that streets are clean and waste is treated as resource (recycling and composting) as much as possible, that all operations are free of public nuisances, and that they are not a public hazard.

All solid waste in Cache County is currently being collected in the Logan landfill, located just west of Logan. The Logan landfill is the only open and approved solid waste facility in Cache County. The Logan landfill has served Logan City since 1960 and all of Cache County since 1974. The current landfill occupies approximately 85 acres. The landfill uses an area fill method. The original 85 acres has been excavated approximately 6 to 8 feet below the original ground elevation. The excavated area has been filled to an elevation generally 10 feet above the original ground elevation.

Solid waste collection and disposal in Cache County are administered by the Cache County Service Area No. 1. The Service Area contracts with Logan City to provide collection and disposal service for solid waste generated in the County.

The Logan landfill has an estimated 20 year life span. With the increasing population growth pressure in the County there will be increased demands on the existing solid waste facilities. Currently the County and Logan City are performing studies to determine potential sites for a new landfill to handle the disposal needs for the County in the future. Other alternatives should be considered such as recycling, burn facilities, shipping out of county, and privatization of the system.

STORM DRAINAGE

Currently, in Cache County the issue of storm drainage has not been well addressed. Much of the storm drainage historically has been handled by the natural river and stream and the existing irrigation canal systems. However, the problem of handling storm drainage within Cache County will continue to grow as the population base grows. The State of Utah have begun to require communities to develop plans for dealing with storm drainage within their communities

The storm drainage issue will need to be addressed and long term solutions determined. A regional storm water management plan will be necessary and important to handle this issue. Storm drainage is a regional issue which cannot and should not be handled on a local level. The issue needs to have a regional perspective and any plans and solutions should be countywide.

SCHOOLS

There are a number of educational opportunities within the County which provide for the needs of the citizens of Cache County. These opportunities range from public and technical schools to institutions of higher learning.

Public Schools

There are two public school districts within Cache County. The Logan City School District which covers school aged children within Logan City boundaries and the Cache County School District that serves school aged children within the remainder of the County. Table LU-32 below shows the different facilities offered by each school district

TABLE LU-32 SCHOOL DISTRICTS BY TYPE AND ENROLLMENT

School District	High School	Student	9th Grade Centers	Student	Middle School	Student	Elementary School	Student
Cache Co.	3	3,004	2	1,095	4	3,121	11	5,082
Logan City	1	2,686	0	0	1	1,404	6	2,686
Total	4	5,690	2	1,095	5	4,525	17	7,768

Source: Cache and Logan City School Districts

There are approximately 19,078 children attending public schools in the Logan and Cache School districts.

Bridgerland Applied Technology Center

In addition to the local school district the Bridgerland Applied Technology Center (BATC) provides a technical training facility. This center provides technical training to high school and adult students of Cache, Box Elder, and Rich Counties. Currently, the BATC has an annual enrollment for 6,500 students who are enrolled in 35 occupational courses in such diverse fields as automotive service, dairy herd management, welding, electronics, diesel mechanics, office occupations, and building construction. The Bridgerland Applied Technology Center is fully accredited by the Utah State Board of Education and offers competency and completion certificates for students successfully completing course requirements.

Utah State University

Utah State University is one of four accredited universities and the second largest in the State of Utah. Utah State University was founded in 1888 as Utah's Land-grant College. The university has an international reputation for research and teaching. Utah State's current enrollment exceeds 20,000 students at its main campus and educational centers in Southeastern and Uintah Basin of Utah. Utah State University also provides Cooperative Extension Service. Cooperative Extension has 30 offices located throughout the state and specialists in 20 departments on Campus.

UTILITIES

Both private and public entities provide utilities such as electricity, natural gas, and telephone services. Most private and public entities anticipate that they can handle any growth within their current systems. As the County and communities develop consideration for the placement of these improvements should be incorporated into the development process.

Electricity - is available throughout the county. Utah Power provides it to most of the communities and unincorporated areas of Cache County. Logan and Hyrum City own and operate electrical utility systems within their communities.

Natural Gas - is provided and available within most populated areas of the County by Mountain Fuel Supply Co. There are some areas of the County that do not receive natural gas service due to the cost of running the infrastructure. It is not economically feasible yet due the small population bases.

Telephone - Local service is provided through US West Communication. US West provides digital switching and T1 service to the area. Long distance service is available by a number of long distance providers.

Most communities expect the subdivider to arrange for gas, electrical, and telephone service. It is now common to require the under grounding of local gas, electricity, and telephone cables, at least where soil, water tables and terrain permits, and where lots are less than one acre in size.

The accepted practice for locating underground lines varies. Developers can save money by locating telephone, electricity, and cable lines under the pavement in common trenches with sewer, water, and gas lines, if the utilities are willing to cooperate. Efforts on the part of communities should continue to work closely with the utility companies when and where new development takes place.

CAPITAL IMPROVEMENT PROGRAM

The development of essential services and facilities come from either the public or private sector. The development of theses services and facilities from the private sector should be coordinated through the development process. However, public services and facilities provided by the County or communities should be coordinated and planned for by a Capital Improvements Program. A Capital Improvements Program is a process of budgeting for large-scale public facilities which are expected to have a relatively long life, usually ten years or more, and usually exceed \$2,000.00 in value.

ESSENTIAL FACILITIES AND SERVICES ISSUE STATEMENT

The primary role of county and municipal government is to provide needed public facilities and services citizens for their communities. This facilities and services include such things as public safety (police and fire), public utilities, water and sewer services, solid waste collection and disposal, storm water management, and public education. The level of services provided varies depending on the size of the community.

Cache County provides very few municipal type services, while the cities of Cache County provide most of the different municipal type services. Cache County has maintained a policy that urban services should be provided by the existing municipalities and not the County. The primary reason is most of the existing municipal type facilities and services are now located within the existing communities. There has been limited urban development within the unincorporated areas so there has been no need to provide the services. However, as increasing urban development continues to locate in the unincorporated areas the demand on the County to start providing more services. Development of a land use ordinance and standards that limit the type and size of development in the unincorporated areas will go a long way to maintain limited urbanization of the unincorporated areas of Cache County.

There are number municipalities within Cache County that are fairly small and provide only limited public facilities and services to their citizens. In many cases these municipalities have share services with the County or other municipalities to make available more services. Some of the services communities combine together to share include, solid waste collection, fire and police protection, sewer systems, and others. The sharing of services is one the most cost effective methods by which small communities can provide increased level services to their residents.

A number of national studies have shown in larger urban areas the sharing of facilities and services can be the most cost effect method to increase the level of services to the public. The primary concerns most municipalities have with the sharing of services are in two areas. These areas are the perception of a loss of control and the cost of providing services and are the hardest of overcome. Most municipalities are very reluctant to give up total control of the services within their community. Many municipalities are overly concerned about the maintaining the costs will continue to pay more for providing the service.

In this time of increasing demand and cost of services the County and municipalities should work closer to identify potential services that could be developed based on shared services. As the population in Cache County continues to grow, this demand will increase. Working together, the County and municipalities can develop more areas of shared services. The primary areas of concerns are control and cost of services. These concerns should be set aside in favor of increasing the level of services to citizens of Cache County.

GOALS AND STRATEGIES

Citizen involvement in planning is an opportunity, a right, and an obligation. It is the aspect of the planning process which reflects the consensus of citizens' feelings and attitudes about the future growth of the community. The citizens' participation in this phase of the planning process serves as a means to gain insight from the residents of any existing problems and to maximize the opportunity for them to make recommendations on the potential development of the community. This effort was designed to increase awareness, simulate discussion and develop a consensus by individuals living in the County from which public policy recommendations can be derived.

COMMITTEES

Citizen Committees were formed to develop goals and strategies for the Land Use Element of the Cache Countywide Comprehensive Plan, based on the public input from the different open houses held in the County. In order to aid in their deliberations of the total County needs, the participants were divided in the following committees at the public meeting:

- Agricultural
- Quality of Life
- Residential Housing Development
- Commercial/Industrial Development
- Transportation
- Essential Facilities and Services

Each committee developed a set of goals and strategies based on the committee's area of emphasis. The development of these goals and strategies is the best method of achieving full expression from like interest groups and is a means of arriving at a final plan by way of comparing and combining different goals and strategies. These goals and strategies will be combined in preparation and will form the basis of the final plan. This process allows for the different perspectives to be expressed and understood. This process will also be an educational process for the entire County.

Over a period of four months committee members would meet, usually during the evening or early morning, and discuss both problems and possible solutions to their assigned area of emphasis. These dedicated individuals spent many hours identifying, studying, deliberating and preparing goals and strategies to reflect the unique needs and desires of the County. The final result of each committee's efforts was a comprehensive list of goals and strategies to address specific problems in the County. The goals for the Comprehensive Plan are general statements that express very broad ideals for the future direction of the County. These statements are followed by strategies suggesting how the goals might be achieved.

The difficulty of arriving at a consensus for community development through a series of formalized goals and strategies is often evidenced by the submission of conflicting goals by the various interest groups. Nevertheless, the process described above worked very well and the results were very satisfying. The following section outlines the various goals and strategies for the Land Use Element of the Cache Countywide Comprehensive Plan for the next 20 years.

The citizens of Cache County contributed their time, talents and effort in developing this important document. They represent individuals who share a sense of civic duty, volunteerism, and willingness to make a difference. Cache County owes each a vote of gratitude for their dedicated work in helping to improve their County and its quality of life.

AGRICULTURE COMMITTEE

Grant L. Nelson	Gordon Younker	Guy Ray Pulsipher
Clark Israelsen	Noble Erickson	Allen Gardner
Ross A. Jacobson	Don A. Huber	Jon C. Meikle
Weldon S. Sleight	Darrell L. Gibbons	Ed Nelson

COMMERCIAL/INDUSTRIAL COMMITTEE

Verne E. Bray	Kathleen Capels	Darla Clark
Terence Yorks	Doug Thompson	LaMar Clements
Eric Toll	Lauren Keller	Larry Anhder

ESSENTIAL SERVICES

Lynn Davis	Rick Lungman	Thad Erickson
Glen Stringham	Gary Olson	Wm. A. McCreary
Sarah Ann Skanchy	Rod Blossom	

QUALITY OF LIFE COMMITTEE

Don Taylor	Jane Carlson	Craig Petersen
Chris Coray	Georgette McCreary	Kim Meyer
Wm. A. McCreary Jr.	Carolyn Lavae	

RESIDENTIAL HOUSING DEVELOPMENT

Bruce Godderidge	Beth Gill	Georgette McCreary
J.R. Allred	Jack Nixon	Mark Larson
Noel Gill	Wm. A. McCreary	Jerry Allen
Craig Nelson	Michael Timmons	

TRANSPORTATION COMMITTEE

Lee Nelson	Geoff Straw	Larry Olsen
Gordon Miller	Joe Kirby	Ross Wilson
Layne Beck	John Nicholson	Andy Huneck
Bruce Bishop	Michael Nilson	

AGRICULTURE

The Agriculture Committee identified the importance and value of agricultural uses to Cache County. The continued pressure on these areas to become urbanized and sudden loss of open space and viable agricultural land was a major concern.

GOAL 1: Maintain agricultural and open space within Cache County, which provide food, security, watersheds, clean air and adds to the quality of life for people and nature of the region

Objectives:

- Encourage urban development within current and existing urban areas
- Encourage the protection of agricultural and open space within the unincorporated areas of Cache County
- Encourage cities to maintain agricultural and open space within and between existing communities where possible
- Encourage the retention and continued use of farm land for present and future generations as a valuable natural resource

Strategies:

- 1.1 Create local land trusts to encourage and acquire open space
 - Work to upgrade Agriculture Protection Area to provide enhancements and incentives
 - Educate public of important advantages and means of protecting agricultural land
- 1.2 Make changes in the Cache County Land Use Ordinance to encourage protection of agricultural land
 - Eliminate major subdivisions (6 lots and more) within unincorporated areas of Cache County
 - Limit sizes of subdivisions to 3 lots with an increase to 5 lots with incentives
 - Create zoning standards to encourage cluster development vs. urban sprawl
 - Limit uses in the agricultural zones to agriculture
- 1.3 Develop an urban growth boundary which defines growth potential for the existing communities of Cache County
 - Discourage leap frog development
 - Encourage urban open space within existing communities
 - Limit expansion of Urban Growth Boundary into areas of prime agricultural land
 - Provide a regular review period for Urban Growth Boundary
- 1.4 Develop a Countywide Transportation Plan
 - Limit the impact of transportation on agricultural areas of County
 - Discourage urban sprawl in agricultural area of County

GOAL 2: Preserve agriculture and agricultural industry within Cache County to allow farm operators the opportunity to use their farm land in appropriate farming operations which will be in harmony with the agricultural use of the land

Objectives:

- Maintain agriculture production
- Encourage the economic value of farming as an industry
- Provide for agricultural supportive industries

Strategies

- 2.1 Encourage studies of the economic value of agriculture and agricultural industries to Cache County and review periodically
- 2.2 Work closer with Utah State University to create new industries and markets for the farming and agricultural industries in Cache County
- 2.3 Assist and enhance existing agricultural industries
- 2.4 Cache County should support and protect agricultural uses and industry within Cache County with legal limits of the law

GOAL 3: To improve the planning process within Cache County by providing a means by which individuals, property owners and affected public jurisdictions may become more involved in the process on a local level**Objectives:**

- Provide increased public voice into the planning process in Cache County
- Increase the public participation and knowledge of proposals
- Provide local areas with opportunities to have input into planning decisions affecting their respective areas

Strategies:

- 3.1 Develop a process and structure that allow for the increase of public input from local areas of Cache County
 - Create planning districts or community councils
 - Provide for a comment period for local communities when development is within a ½ mile of jurisdictional boundaries
- 3.2 Increase input of public entities that can act as a resource to the Cache County Planning Commission
 - Identify and coordinate with agencies of the Federal, State and Local government which may have jurisdiction or interest in local land use decisions
- 3.3 Use local Soil Conservation Districts as a planning resource
 - Consider the Soil Conservation Districts as an affected entity in planning process
 - Provide for review by Soil Conservation Districts in all planning decisions dealing with agricultural areas

RESIDENTIAL HOUSING DEVELOPMENT

A principal concern of the Residential Housing Committee was to set standards for the location of residential housing development and the providing of adequate services. The committee focused on the need to protect the open spaces and prevent urban sprawl within the County.

GOAL 1: To limit urban sprawl and growth in non-urban areas of Cache County and protect the agriculture and open space

Objectives:

- Discourage the urban sprawl outside the existing communities
- Maintain agricultural and open space areas of the County
- Define appropriate areas for residential housing development

Strategies:

- 1.1 Develop Urban Growth and Service Area Boundary guidelines
 - Separate urban from rural areas
 - Define areas for urban services
 - Protect open spaces
 - Prevent urban sprawl
- 1.2 Subdividing of properties shall be limited to encouraging growth within incorporated areas where proper services can be provided
- 1.3 Any subdividing of large parcels of land shall be subject to the following requirements.
 - Any homes built shall be placed in a clustered area in order to make use of open spaces and to minimize emergency and County road vehicle access
 - Develop impact fees to help provide essential services
 - Revise Point System to help determine if subdividing should be allowed (flood plain/slope/soil/roads/etc.)
 - Public input shall be heard, weighed and investigated as to pertinent substance and impact

GOAL 2: Preserve and protect the rural atmosphere of non-urban areas of Cache County

Objectives:

- Develop and enforce a clear, concise Land Use Ordinance
- Designate urban growth and service area boundaries
- Encourage the planning and maintaining of open space
- Encourage urban growth within existing incorporated communities where the proper level of services can be provided

Strategies:

- 2.1 Limit size of subdivisions to 4 houses in unincorporated areas
- 2.2 Limit large residential subdivisions to incorporated areas
- 2.3 Investigate incentive programs to encourage preservation and maintenance in existing communities to increase property value, community pride, development potential and to also prevent urban decay and “move-out” mentality
- 2.4 Impose impact fees to help provide essential services

GOAL 3: Define and provide adequate level of services

Objectives:

- Provide law enforcement, fire, ambulance, and animal control coverage equally throughout the County
- Control pollution of all types: air, noise, visual, smell, taste
- Balance provision of essential services to rate of growth

Strategies:

3.1 Public Safety

- Identify personnel and funding requirements for 24 hour public safety coverage
- Determine if there is conflict of coverage for unincorporated areas
- Institute more neighborhood watch programs and clinics
- Establish Public Safety base at each end of the valley
- Train more EMT personnel
- Advertise for contracted commission salaried animal control officer
- Write stricter enforcement codes including increased fees and penalties for stray animals
- Review quantity of animals per lot size ordinances
- Consistent enforcement on complaint

3.2 Control and limit increased pollution of all types: air, water (both surface and ground), noise, visual, smell, and taste

- Establish permanent air quality monitoring stations in various County locations
- Implement and enforce air/odor pollution guidelines to exceed Federal standards
- Consistently enforce air quality guidelines
- Consider voluntary vehicle emission program for Cache County
- Initiate/employ incentive programs for voluntary emission testing
- Write, implement and consistently enforce a Cache County Noise Ordinance
- Write, implement and consistently enforce a policy plan for dumping, junk yards, weed control etc.
- Establish and encourage, through education, recycling programs
- Vigilant monitoring of pollution to recharge areas
- Tighten septic tank standards.

3.3 Coordination between County Zoning Office and State Engineer for water permits (minimum water flow to be in place before building permit application accepted)

3.4 Coordination between County Zoning Office and Bear River Health Department for septic tank permits (limit the number of septic tanks in primary and secondary recharge areas and spring source areas)

GOAL 4: To protect private property rights and discourage unnecessary land speculation in the unincorporated areas of the county

Objectives:

- Plan and control growth without limiting income potential of property owners
- Plan and control growth without decreasing values and right of adjacent property owners

- Land use ordinances need to be: what the majority of the land owners want, well-defined, understood, easy to interrupt, no loop holes or conditional uses, and enforced by an educated staff

Strategies:

- 4.1 Consider a design committee to help evaluate land use and the plot plans of property owner's
Make suggestions, if needed, to help improve benefits to property owners and Cache County
- 4.2 Develop incentives for clustering and open space considerations (density, and tax)
- 4.3 Allow and take into consideration adjacent property owner rights and opinions
- 4.4 Provide educational information about land use options available to property owners to maximize their profits and to preserve this beautiful valley
- 4.5 Develop enforceable land use ordinances
 - Zoning office should be able to say yes or no
 - No favors or prejudices

GOAL 5: Promote and encourage the development of affordable housing by the private sector

Objectives:

- Encourage the use of accessory dwelling units and downtown “loft” dwelling units (mixed use zoning)
- Create opportunities to form public/private partnerships in an effort to create affordable housing
- Create opportunities for special needs housing countywide
- Support programs which rehabilitate existing housing stock
- Promote centralized infrastructures through zoning and incentives to eliminate costly extension of services to outlying areas

Strategies:

- 5.1 Affordable housing quotas will be established for new subdivisions which require developers to design and build a certain percentage of their units to be marketable to lower-income buyers (regulation driven)
- 5.2 Density bonuses will be created which would allow developers to increase the density of a proposed development providing the “quota” of affordable units are also developed (incentive driven)
- 5.3 Designate, through zoning, portions of the incorporated Cities in the County which would allow higher densities than the standard “large lot zoning”
- 5.4 Promote economic and cultural diversity through zoning and design
- 5.5 Accessory dwelling units shall be allowed in single family zones provided they are approved by special use permit
- 5.6 Apartment or condo housing shall be allowed in downtown zones in existing buildings provided they are approved by special use permit
- 5.7 Cooperate with existing housing service providers from the public and private sectors to create affordable housing opportunities
- 5.8 Establish an affordable housing trust fund which will act as a revolving loan account to create affordable housing opportunities
- 5.9 Create mechanisms for municipalities to donate surplus land for affordable housing projects.
Liens can be placed to recapture land value once units are sold

- 5.10 Support existing affordable housing programs and increase awareness of needs by facilitating affordable housing seminars and guest lectures from housing service providers
- 5.11 Support research, funding applications, and property acquisition for a regional transitional housing facility which would serve the “homeless” population in Cache County
- 5.12 Provide incentives to create affordable housing for persons with disabilities and the elderly
- 5.13 Create incentives or support existing programs which allow lower income home owners to repair their homes
- 5.14 Develop programs which encourage neighborhood reinvestment such as beautification, code enforcement and other proactive measures
- 5.15 Zone core areas of communities higher density, with decreasing densities approaching urban boundaries
- 5.16 Facilitate neighborhood commercial zoning in more urban communities
- 5.17 Encourage land use patterns which minimize trip generation to and from employment centers’ thereby reducing congestion
- 5.18 Encourage alternate forms of transportation and pedestrian oriented design

GOAL 6: Provide protection of the sensitive areas and sites, taking into account the public good and property owner rights

Objectives:

- Encourage the protection of sensitive areas of Cache County
- Promote environmentally sound residential development
- Discourage residential development in sensitive areas

Strategies:

- 6.1 Protect productive agricultural lands and irrigation systems and potential that serve them
- 6.2 Consider the following issues with residential development:
 - slopes
 - vegetation
 - habitat
 - including preventing and/or mitigating down slope pollution
 - waste management
- 6.3 Plan against hazards of flooding or seismic activity
- 6.4 Consideration of historic or scenic sites, so that their cultural and educational value may be preserved and made available for the edification and enjoyment of all

GOAL 7: Maintain and protect the pristine and sensitive canyons and national forest areas of Cache County

Objectives:

- Encourage environmentally sensitive residential development
- Limit uncontrolled urbanization of areas
- Maintain the quality of the canyons and national forest areas

Strategies:

- 7.1 All current FR-40 should remain FR-40
- 7.2 Only seasonal secondary housing should be allowed in order to minimize impacts on County services, utilities and the environment
- 7.3 Clustering of residential type development should be allowed with incentives
 - Unlotted areas must be dedicated as permanent, public or semipublic open space preserve. For example, allowable units would be increased based upon proposed net densities as indicated below:
 - 5 acre lots - 10% increase in total units
 - 1 acre lots - 20% increase in total units
 - ½ acre lots - 30% increase in total units
 - 1/4 acre lots - 40% increase in total units
 - Less than 1/4 acre lots up to 8 units per acre - 50% increase in total units
 - Lodging (rooms and/or suites for rent) - 200% increase in total units
- 7.4 Guidelines prepared for all canyon development which should include at least the following:
 - Site planning: in relation to slope, soils, vegetation, habitats, hazards, grading (limits of disturbance), visibility
 - Architecture: in relation to materials, colors, forms
- 7.5 Densities should decrease as development gets closer to the FR-40 line and as slopes increase
 - 1 acre lot size minimum within 500 feet of FR-40 line
 - No development on slopes greater than 30%
- 7.6 Limit development in canyon mouths along the Cache Valley
 - Within 1/4 mile of major canyon mouths the minimum lot size should be 5 acres
 - Minor canyon mouths should be left in open space with pedestrian access corridors that link to other trail systems and adjacent communities
- 7.7 Development in the Powder Mountain Area
 - Allow similar land use as Weber County via the cluster provision. Weber County will provide all services
 - Development must follow all guidelines provided for the rest of the FR-40 Zone

GOAL 8: Develop a set of consistent development ordinances within the County**Objectives:**

- To encourage organized and planned future development of land in the County
- The objective is to develop criteria for specific ordinances
- To provide for consistent development and prevent development shopping

Strategies:

- 8.1 Develop a formal land use ordinance that will be a part of a Countywide Comprehensive Plan
- 8.2 The ordinance document will include both broad general guidelines and direction for future growth and development
- 8.3 The ordinance will be clearly and concisely worded with carefully defined terms to avoid subjective interpretation
- 8.4 It will provide objective determination for permitted and conditional uses
- 8.5 It will serve as the basis for responding to all requests to bodies governing zoning and land utilization

COMMERCIAL/INDUSTRIAL DEVELOPMENT

The potential of future commercial and industrial development is primary to the financial health of any community. The Commercial and Industrial Development Committee examined the problems associated with present and future commercial and industrial development needs, along with strategies to help maintain a viable tax base while protecting the quality of life for the County.

GOAL 1: Commercial and industrial development within Cache County should strive to bring in industries that are revenue neutral in their effect on local government

Objectives:

- Encourage commercial/industrial close to areas where people work, shop, and live
- Encourage infill commercial/industrial development instead of leap frog development
- Encourage development within existing city boundaries before annexing new areas
- Encourage better development standards to protect major transportation routes

Strategies:

- 1.1 Encourage integration of work, shopping, and residential development more closely together, which can minimize unnecessary travel
 - Theme: the farther out you go, the more it should cost
 - Establish criteria for choice of nucleus sites
- 1.2 Commercial/industrial zone areas should be better defined, so that existing zones are filled before new ones are allowed
 - Maps of existing areas that are commercial/industrial, and that are not agricultural
- 1.3 Create uniform and consistent planning standards across all communities in the County, based on standards and ordinances that have been proven to give desired results
- 1.4 Create threshold standards for home-based businesses, beyond which they must move to established commercial/industrial zones
- 1.5 Develop a set of consistent development standards between the County and communities to prevent development shopping:
 - Shared access to major transportation routes
 - “Commercial” and “industrial” needs to be explicitly defined, with subclasses among them

GOAL 2: Maintain the economic value of Cache County’s resource base: the canyons and forested areas of the County are a non-renewable (irreplaceable) resource, so further urban commercial/industrial development within them should be limited

Objectives:

- Limit commercial/industrial urban development within canyon and forest areas of Cache County
- Encourage development with self-sufficiency of services (this should include municipal-standard water systems and secondary sewage treatment)

Strategies:

- 2.1 A set of overlay zones and standards should be developed for each of the canyon areas before any further development should occur to protect their uniqueness

- 2.2 Performance development standards should be developed requiring the blending of commercial/industrial development with surroundings
 - Develop a design review process for commercial/industrial development
 - Visibility of development should be limited from existing roads
 - There should be limited development within biologically-sensitive areas
 - Any disruption of natural cover should be replaced (trees and shrubs)
- 2.3 Any commercial/industrial development in the forest and canyons areas shall not be located within municipal watershed areas
- 2.4 Any development should have shared access to minimize the main road intersections and visibility of development

GOAL 3: Control commercial/industrial mining (including gravel extraction)

Objectives:

- Protect the quality of life of neighboring land use
- Minimize the overall impacts of such operation on the County

Strategies:

- 3.1 All commercial/industrial mining operations should develop master plans and submit them for approval by the County Planning Commission
- 3.2 The master plans of the operation should include the following for review:
 - Operations Plan
 - Transportation Plan
 - Reclamation Plan
- 3.3 The commercial/industrial mining operation should have reclamation plans which are concurrent and continuous with the operation
- 3.4 All commercial/industrial mining operations should provide berming of existing topsoil for screening and stockpiling for reclamation
- 3.5 All federal and state permits should be consistent with local ordinances
- 3.6 Clear enforcement policy with penalties for violation of permits

GOAL 4: Control commercial/industrial logging

Objectives:

- Encourage protection of a limited natural resource
- Limit the impact on the environment
- Protect environmentally sensitive areas of the County

Strategies:

- 4.1 Logging and cutting master plans should be developed and be submitted for approval by County Planning Commission
- 4.2 The master plans of the logging operation should include the following information for review:
 - Operations Plan
 - Transportation Plan
 - Reclamation Plan
- 4.3 All federal and state permits should be consistent with local ordinances

- 4.4 Clear enforcement policy with penalties for violation of permits
- 4.5 Clear-cutting logging operations should be generally prohibited
- 4.6 Logging is a commercial/industrial operation and should not be considered as an agricultural use

GOAL 5: Administrative procedures for review of commercial/industrial projects

Objectives:

- Improve and simplify the process for review and approval of a project
- Provide a fair process to the public
- Encourage a customer service oriented environment to the public

Strategies:

- 5.1 A guiding ordinance needs to specify what documentation requirements (e.g., site plans) must be submitted as part of applications for development. These may be tiered in detail according to size of prospective impact, but nonetheless need specific guidelines. The county decision-makers need a full set of information, while applicants need to know what that entails
- 5.2 There must be a specific time period established in which the administrators must respond to applications, either to accept or to reject
- 5.3 The administrative process needs to be streamlined, understandable, and coordinated. To accomplish this, procedures must be clearly defined: to whom applications are to be sent, how and by whom they are processed, how difficulties are to be resolved, and who has final responsibility for each step
- 5.4 Policy objectives need to be clearly stated: what is the application process trying to accomplish?
- 5.5 There should be clear definition of where “no” will be an answer to a development request, of what will surely not be approved
- 5.6 The responsible administrator should have training and experience in the planning field, and there should be a review mechanism to evaluate administrative performance at regular intervals

Goal 6: Consider agriculture and agricultural industries on the same level as other commercial and industrial uses

Objectives:

- Treat the farmer like any other business
- Bring more diversity back into local agriculture
- Enhance the profitability, thereby maintaining this land block in that highly desirable use pattern

Strategies:

- 6.1 Add agricultural and agricultural industries to the economic development agenda
- 6.2 Bringing Ag. Extension and USU more into focus on this issue could be an important aid
- 6.3 Development of value-added agriculturally-related industry
- 6.4 Work to develop new markets and opportunities for agriculture to maintain and enhance that land use

QUALITY OF LIFE

Each community has its own identity and they protect this through urban design that has developed over time. The types of development allowed by the community adds to this overall image. The urban design and image are the outward appearance of what defines Cache County. The Quality of Life committee looked at the issues that affect development of the County and its quality of life.

GOAL 1: Maintain and protect open spaces and environmentally sensitive areas of Cache County

Objectives:

- Limit urbanization in canyons and agricultural areas
- Encourage environmentally sound infrastructure development

Strategies:

- 1.1 Design ordinances to emphasize open space and aesthetic designs and densities which do not conflict with surrounding environment, to include impact fees, zoning, subdivision and overlay ordinances
- 1.2 Identify environmentally sensitive areas of the county

GOAL 2: Develop recreational areas in harmony with open space and canyon environments

Objectives:

- Maintain public access and acquire right of way to such places with minimum harm to the environment
- Encouragement of activities which emphasize a safe, quiet and peaceful community appreciation of such areas

Strategies:

- 2.1 Acquire right of way and develop trails for non-motorized uses throughout the county
- 2.2 Use restaurant tax to expand regional recreation facilities outside incorporated areas
- 2.3 Work with state to develop access and use lands for public access and recreation

GOAL 3: Improvement of current air quality levels

Objectives:

- Exceed Wasatch Front standards for air quality attainment levels
- Air environment in Cache County is more fragile than Wasatch Front's
- According to the Utah Air Quality Board Hearing Officer, Lynn Menlove, with whom Jane spoke on 2/8/96, the air quality standard for all Utah areas outside the Wasatch Front can be designated to not exceed 25% of non-attainment levels for the Front. At this time Logan is at 52% according to monitor

Strategies:

- 3.1 Include odor problems as part of air quality standards
- 3.2 Encourage non-polluting businesses to locate in Cache Valley

- 3.3 Develop no-burn day standards, including use of exclusionary rule
- 3.4 Develop vehicle emission standards and testing - use voluntary incentive programs
- 3.5 Ask for state air-monitoring equipment
- 3.6 Develop property tax incentives to encourage non-polluting improvements
- 3.7 Get USU to clean up its smokestack
- 3.8 Encourage scrub standards in all commercial smokestacks

GOAL 4: Enforcement of State and County Codes

Objectives:

- Provide a clear, concise Land Use Ordinance
- Enforce consistently the Land Use Ordinance
- Create an environment to encourage public input
- Train/certify staff, Planning Commission and Board of Adjustments
- Balance public/private rights
- Protect sensitive areas: historical canyons, flood plains
- Create feeling of community

Strategies:

- 4.1 Write a brief, clear, concise Land Use Ordinance
- 4.2 Review staff resources available to implement/enforce Land Use Ordinance
- 4.3 Educate the public to their responsibility and importance of their input
- 4.4 Zoning staff, Planning Commissioners, Board of Adjustments needs to be educated in importance of public input
- 4.5 Hold Planning and Zoning meetings at night to allow more public input
- 4.6 Establish training/education requirements for Zoning Administrator, Planning Commission and Board of Adjustments to be completed prior to appointment or hiring
- 4.7 Create Community Councils
- 4.8 Identify importance of land use issues to judicial system
- 4.9 Put the following statement directly in the Land Use Ordinance: “This historical de-facto policy of ‘ask for forgiveness instead of permission’ is officially noted in this ordinance and one of the clear purposes of this ordinance to affirmatively state that it is not acceptable”
- 4.10 Require incorporated areas to respond to mandatory forms of inquiry for development within ½ mile of border
- 4.11 Require notification of land owners within 600 feet of request of development or conditional use
- 4.12 Enforcement of codes upon complaint

GOAL 5: Public safety should provide for the preservation of peace and the protection of life and property for all citizens

Objectives:

- Provide law enforcement, fire ambulance, and animal control coverage equally throughout the county

Strategies:

- 5.1 Identify personnel and funding requirements for 24 hour coverage
- 5.2 Review existing contracts with the incorporated areas for conflict of coverage for unincorporated area
- 5.3 Institute more neighborhood watch programs and clinics
- 5.4 Establish Public Safety base at each end of the valley
- 5.5 Train more EMT personnel
- 5.6 Advertise for contracted commission salaried animal control officers
- 5.7 Write stricter enforcement codes including increased fees and penalties for stray animals
- 5.8 Review quantity of animals per lot size ordinances
- 5.9 Enforce on complaint

TRANSPORTATION

Future development will require the necessary transportation infrastructure. Cache County's transportation network includes state highways, railroad and a variety of arterial and collector roads. The Transportation Committee discussed the present condition and future need for within the County. The need for a detailed Long Range Transportation Plan for the entire County was discussed.

GOAL 1: Develop convenient alternative modes of transportation

Objectives:

- Enhance mobility of citizens
- Provide alternatives in bad weather
- Encourage pedestrian friendly land use development
- Encourage economic development by getting people to their jobs
- Reduce stress

Strategies:

- 1.1 Develop inter-county bus system
- 1.2 Provide financial incentives to maximize mass transit
- 1.3 Develop parkways for pedestrians and other modes of transportation
- 1.4 Urban development is reviewed by transit developers
- 1.5 Look at expanding alternative modes throughout the County
- 1.6 Encourage small business development
- 1.7 Expand countywide transit system through a countywide referendum
- 1.8 Involve school districts in alternative modes of transportation

GOAL 2: Control urban sprawl through prudent countywide land use planning

Objectives:

- Develop travel demand management specifications
- Encourage higher density development in residential, commercial, and industrial areas while providing for safety and essential services

- Reduce/prevent congestion on main roads
- Protect agricultural areas, open spaces, stream corridors and wildlife
- Seek alternative funding sources to maintain the transportation system (i.e., impact fees)

Strategies:

- 2.1 Establish urban growth boundaries limiting services outside the boundaries (i.e., roads)
- 2.2 Develop an Access Management Plan limiting access on major roads
- 2.3 Develop a Development Plan for major roads (i.e. US89-91, 165, 30 etc.)
- 2.4 Encourage standards along major roads
- 2.5 Encourage neighborhood commercial development
- 2.6 Develop mass transit plans, pedestrian rights of ways, etc.
- 2.7 Develop standard cross-section for all functional classifications of roads
- 2.8 Develop interblock development policies and standards encouraging responsible development
- 2.9 Encourage development on major roads
- 2.10 Limit development on private roads

GOAL 3: Safety

Objectives:

- Provide alternative modes of transportation (bike paths, mass transit, express buses, walking paths, train-light rail, etc.)
- Reduce single occupancy vehicles (SOV)
- Reduce existing and future accesses to main corridors
- Do better access management on main roads
- Develop countywide development standard
- Develop better traffic light management
- Educate county residents

Strategies:

- 3.1 Never become a non-attainment area
- 3.2 Develop standard ordinances for access management
- 3.3 Reduce the number of stops/stop lights and synchronize lights
- 3.4 Reduce the number of curb cuts
- 3.5 Create acceleration and deceleration lanes
- 3.6 Encourage park and ride
- 3.7 Encourage the development of a rural transit system
- 3.8 Develop a marketing plan for a countywide transportation plan
- 3.9 Encourage express buses

GOAL 4: Develop a countywide transportation plan/system

Objectives:

- Integrate the countywide transportation plan with the CMPO plan
- Develop a marketing, education, and cooperative strategy to implement the plan
- Develop a realistic priority process to match current revenues
- Develop alternative funding mechanisms to build and maintain the system

- Develop a transportation system that functions to move people easily, quickly, safely and economically to their destinations
- Consider multiple forms of transportation (cars, buses, light rail, bicycles, pedestrian, etc.)
- Develop an implementation strategy
- Recognize the plan as a regional system that is bigger than the cities and needs to be coordinated with the cities, county, state, surrounding states and the national system

Strategies:

- 4.1 Require countywide consistency and build on the CMPO plan
- 4.2 Involve all communities in the development and implementation through public input and cooperation
- 4.3 Develop measures to evaluate projects for prioritization
- 4.4 Identify and encourage all levels of government to provide funding and funding mechanisms
- 4.5 Transportation is a reciprocal land use and should not drive other land uses, it should be subservient
- 4.6 Base local ordinances on the plan

ESSENTIAL SERVICES AND FACILITIES

Essential services and facilities directly benefit each individual citizen. The provision of police and fire protection, water, and sewer, solid waste management, and flood control contribution to the overall quality of community life. This committee addressed the problems and possible solutions to the growing need for quality essential services and facilities and government services.

GOAL 1: SOLID WASTE MANAGEMENT - Ensure environmentally safe, politically acceptable, economical and reliable methods of solid waste collection and disposal for Cache County

Objectives:

- Provide for all collection and disposal needs in Cache County
- Develop attainable waste disposal reduction goals
- Develop countywide Hazardous Waste Program to identify, control disposal of and affect reduction in hazardous waste

Strategies:

- 1.1 Update and keep current Countywide Solid Waste Management Plan through the Cache County Solid Waste Advisory Board. Twenty to thirty year long term plan needs to be reviewed/updated every five years
- 1.2 Enlarge recycling, composting, conservation programs to affect overall waste disposal reduction
 - Establish recycling alternatives (private or public)
 - Establish rates encouraging conservation and recycling
 - Establish educational programs to affect disposal reduction
- 1.3 Coordinate hazardous waste programs. Develop a management plan/strategies for compliance reduction. Enforcement programs for illegal dumping

Land Use:

- Encourage centralized transfer/disposal location
- Encourage urban development in locations where essential services are available

GOAL 2: SEWER & WASTEWATER MANAGEMENT - Ensure environmentally safe, adequate, reliable and economical method(s) of wastewater collection and treatment for Cache County**Objectives:**

- Provide for collection and treatment needs in Cache County
- Meet all Federal and State wastewater standards and regulations

Strategies:

- 2.1 Update and keep current a Countywide Wastewater Management Plan, including a twenty to thirty year long term plan to be reviewed and updated every five years
- 2.2 Establish a Countywide Development Plan that will protect environment and water quality through approved collection/treatment systems
- 2.3 Establish pretreatment programs to protect capacity/viability of collection/treatment systems

Land Use:

- Encourage centralization/regional wastewater treatment systems
- Require residential/industrial growth to be on adequate wastewater collection and treatment system(s)

GOAL 3: ELECTRIC UTILITIES - Ensure a reliable, safe, adequate and economical supply and use of electric power to meet the current and future needs of all users in Cache County**Objectives:**

- Provide for 100% of the current needs and 100% of the projected needs of the County
- Ensure compliance with adopted safety standards for all new construction
- Achieve a public that is wise in the safe use of electricity
- Reduce electrical safety risks within the County
- Identify and preserve existing critical power line easements and right-of-ways
- Provide necessary easements and right-of-ways for future electrical distribution and transmission lines to meet growing needs of the County
- Ensure electrical line locations and service are addressed when planning for any new road, (commercial, industrial, residential) development or public improvement

Strategies:

- 3.1 Educate the public in safe and efficient use of electricity through a County planning function and utility companies
- 3.2 Encourage, through a County planning function, the cooperation of cities and industries in planning with representative utilities for future growth and development. County Land Use Master Plan to include utility master plan overlay

- 3.3 Encourage, through a County planning function and utility companies, public input on reliability needs and current conditions
- 3.4 Require all construction to meet applicable electrical codes

Land Use:

- Require all new developments to address and plan for electric utility easements and right of ways through building permit process
- Require all road maintenance and new road construction to address and provide for electric distribution and transmission facility location
- Require adequate clearances and distance from existing electrical distribution and transmission facilities to preserve utility easements and corridors

GOAL 4: NATURAL GAS UTILITIES - Maintain a reliable, safe and economically viable supply of natural gas to Cache County

Objectives:

- Provide as much quality service to the outlying residents of the County as is economically feasible
- Continue to provide quality service to the existing customers of the County
- Continue an active role in the development of the County's Master Plan
- Operate a safe and reliable distribution system
- Educate the contractors and home owners in utilizing the Blue Stake program
- Preserve existing right of ways
- Maintain a proactive approach with all entities as it relates to new subdivisions or expansion of the existing distribution system
- Coordinate with other utilities the installation of facilities

Strategies:

- 4.1 Educate the public in safe and efficient use of natural gas
- 4.2 Encourage the cooperation between the developers of residential and commercial properties, homeowners and the utility as to the development of the lands within the County
- 4.3 Encourage, through a County planning function, the public input to respective utilities on reliability needs and current conditions
- 4.4 Ensure that all new and existing construction projects meet applicable building codes
- 4.5 Hold annual meetings to educate local contractors about locating lines prior to excavating
- 4.6 Continue to inform businesses and homeowners about locating lines prior to excavating through mail inserts and advertising
- 4.7 Comply with pipeline safety guidelines when installing, inspecting, and maintaining distribution lines

Land Use:

- Conform to local ordinances in restoration of public/private right-of-ways
- Insure that public safety is adhered to by properly installing distribution lines

GOAL 5: TELECOMMUNICATIONS - Ensure modern, reliable and economical telecommunication services that will meet the needs of Cache County users

Objectives:

- Develop and maintain a telecommunication system that is adequate to meet the needs of Cache County

Strategies:

- 5.1 Encourage, through a County planning function, the cooperation of cities and industries in planning with representative utilities for future growth and development. County Land Use Master Plan to include Utility Master Plan overlay
- 5.2 Encourage, through a County planning function and telecommunication companies, public input on future needs and current conditions

Land Use:

- Require all new developments to address and plan for telecommunication easements and right-of-ways through building permit process
- Require all road maintenance and new road construction to address and provide for telecommunication facility location

GOAL 6: EMERGENCIES/PREPAREDNESS - Ensure that Cache County has a current emergency operation plan for disaster preparedness for all essential services and ensure adequate and safe response to all disaster emergencies**Objectives:**

- Prepare the public to meet major disasters
- Maintain a trained organization that can coordinate a multi-agency emergency response to major disasters

Strategies:

- 6.1 Support the Cache Emergency Operation Center and encourage regular mock disaster drills for countywide operations and readiness
- 6.2 Ensure that emergency preparedness plans are updated and current
- 6.3 Educate public on proper responses to emergencies
- 6.4 Train and equip personnel for adequate response to an emergency situation
- 6.5 Ensure cooperative agreements between city, county and state government agencies for overlapping jurisdictional situations
- 6.6 Ensure cooperative agreements between the County and private businesses engaged in providing essential services

Land Use:

- Urban development needs to address the ability for adequate emergency provider response

GOAL 7: PUBLIC SAFETY - Public safety should provide for the preservation of peace and the protection of life and property for all citizens

Objectives:

- Provide better, more visible and faster responding Sheriff protection
- Provide more traffic control coverage throughout the County
- Decrease response times to accidents to less than the state/national average
- Decrease response times to routine calls to less than the state/national average
- Provide faster fire protection response times and better fire fighting capability
- Provide faster ambulance response times
- Provide better and faster response to animal control in the unincorporated areas

Strategies:

- 7.1 Increase deputy-to-population ratio to exceed the state/national average with Level 1 certified officers
- 7.2 Provide on-duty patrol coverage twenty-four hours a day
- 7.3 Build satellite facilities in the north and south ends of the Valley for public safety
- 7.4 Increase the contract price to incorporated areas for police services
- 7.5 Write a comprehensive animal control code (large and small animals)
- 7.6 Hire trained/qualified Animal Control Officer (equal to Logan City) on commission basis
- 7.7 Enforce violations of codes/law on complaint
- 7.8 Encourage Neighborhood Watch Programs

Land Use:

- Urban development needs to address the ability for adequate public safety response

GOAL 8: WATER SUPPLY - Ensure a continued safe, high quality, least cost, water supply for municipal/residential, industrial and agricultural uses**Objectives:**

- Provide planning for the long term municipal and industrial (M&I) water needs for Cache County
- Protect agricultural and other water rights for Cache County
- Develop a Water Management Plan

Strategies:

- 8.1 Support Cache County Water Policy Advisory Board objectives in developing planning data for water demands and supply, current and future
 - Define the County interest and role in water management matters
 - Identify and weigh major water issues and problems have countywide importance
 - Maintain liaison with complex of institutions having water management responsibilities in Cache County and assess their effectiveness in meeting issues identified in the above
 - Develop municipal demand/supply computer modeling which will extend existing model from four Wasatch Front counties to Cache County by January 1997
- 8.2 Support objective studies with possible impacts on decision making that can allow protection of water quality, optimal development of ground water and protection of local water rights
- 8.3 Educate water managers and users (including the public) in safe and efficient use and conservation of supplies
- 8.4 Facilitate water marketing and transfer of water rights on a willing seller/willing buyer basis

Land Use:

- Encourage residential development to hook up to municipal water systems when physically and economically feasible

GOAL 9: STORM DRAINAGE - Minimize the threat from flooding to life and property**Objectives:**

- Protect public and private property by encouraging the development of a storm water management plan

Strategies:

- 9.1 Review the adequacy of Cache County Ordinance 89-06, an ordinance relating to Flood Plain Management and Amending Ordinance 85-02, and superseding the Sensitive Area Ordinance in part
- 9.2 Examine Title 17 of the Utah Code as pertains to the County role in dealing with flooding problems in light of the rapid development on flood plains in Cache County
- 9.3 Gather input from irrigation canal companies on impact and legal ramifications of using canals to dispose of flood waters
- 9.4 Encourage the application of science and technology as it applies to awareness of and mitigation of natural geologic hazard and threat

Land Use:

- Identify areas of water related geologic hazards including but not limited to mud flows, debris flows, areas susceptible to liquefaction and the consequences of earthquake caused failures of irrigation canals, water mains, sewage systems, etc.

GOAL 10: WATER QUALITY - Ensure a reliable, adequate, affordable and safe water supply of sufficient quality to meet human, animal and agricultural standards and needs**Objectives:**

- Support Bear River Quality Management Plan objectives
- Monitor status of EPA funded and DEQ monitored shallow ground water study ongoing in Cache County
- Provide a safe and adequate supply of municipal water for the increasing human population of the County
- Maintain and improve the agricultural base of the County by judicious application of realistic water quality standards for agricultural use and disposal of water resources
- Maintain the water related recreational qualities of the County by setting water quality standards suited to recreational uses

Strategies:

- 10.1 Develop suitable watershed management practices to ensure high quality water at its source
- 10.2 Identify groundwater recharge areas and management programs for those areas to maintain high quality groundwater supplies

- 10.3 Identify and categorize the various water uses in the County
- 10.4 Develop water quality standards suitable for each category of water use
- 10.5 Adopt water quality testing and monitoring programs adapted to local conditions and local uses
- 10.6 Limit regulations' mandating testing and monitoring programs to the minimum required for particular water uses
- 10.7 Work with communities to develop source protection plans for springs and other culinary water sources

LAND USE ELEMENT - APPENDIX

PHYSICAL ENVIRONMENT

WETLAND SYSTEMS

Riverine System: contains all wetlands and deep water habitats contained within a channel. A channel is “an open conduit either naturally or artificially created which periodically or continuously contains moving water or which form as a connecting link between two bodies of standing water” (Langbein and Iseri 1960:5). As Riverine systems are bounded on the landward side by upland, by channel banks (including natural and man-made levees) or by wetland dominated by trees, shrubs, persistent emergents, emergent mosses, or lichens.

Lacustrine System: includes wetlands and deep water habitats with all of the following characteristics: (1) situated in a topographic depression or a dammed river channel; (2) lacking trees, shrubs, persistent emergents, emergent mosses or lichens with greater than 30 % areal coverage; and (3) total area exceeds 20 acres. A Lacustrine system includes permanently flooded lakes and reservoirs, and intermittent playa lakes.

Palustrine System: includes all nontidal wetlands dominated by trees, shrubs, persistent emergents, emergent mosses or lichens. It also includes wetlands lacking such vegetation, but with all of the following three characteristics: (1) area less than 20 acres; (2) active wave forming or bedrock shoreline features lacking; (3) water depth in the deepest part of basin less than 2 meters at low water. Palustrine systems include all vegetated swamp, bog, fen, and prairie, which are found throughout the United States. It also includes the small shallow, permanent or intermittent water bodies often called ponds

Upland: are any area that does not qualify as a wetland because associated hydrologic regime is not sufficiently wet to elicit development of vegetation, soils, and/or hydrologic characteristics associated with wetlands.

HEALTH EFFECTS OF AIR POLLUTANTS

Carbon Monoxide: Impairs the ability of blood to carry oxygen in the body. The cardiovascular system is primarily affected, causing angina pain in persons suffering from cardiac disease and leg pain in individuals with occlusive arterial disease. It affects other mammals in a similar manner.

Lead: Damages the cardiovascular, renal and nervous system, resulting in anemia, brain damage, and kidney disease. Preschool age children are particularly susceptible to brain damage effects. Similar effects are observed in other mammals. There are additional adverse effects on animals, microorganisms and plants.

Ozone: Damages the respiratory system, reducing breathing capacity and causing pain, headaches, nasal congestion and sore throat. Individuals with chronic respiratory diseases are especially susceptible to ozone. Injures some plants, trees and materials.

Particulates: Causes irritation and damage to the respiratory system, resulting in difficult breathing, inducement of bronchitis and aggravation of existing respiratory disease. Also, certain polycyclic aromatic hydrocarbons in particulate matter are carcinogenic. Individuals with respiratory and cardiovascular diseases, children and elderly persons are at the greatest risk. Also soils and damages materials and impairs visibility.

Sulfur Dioxide: Aggravates asthma, resulting in sneezing, shortness of breath and coughing. Healthy persons exhibit the same response at higher concentrations. Asthmatic and atopic individuals are the most sensitive groups, followed by those suffering from bronchitis, emphysema, bronchiectasis, cardiovascular disease, the elderly and children. Damages some plants and materials. Impairs visibility and contributes to acid deposition due to its conversion to sulfate particles.

RESIDENTIAL

CACHE COUNTY LOW AND MODERATE INCOME LEVELS BY FAMILY SIZE(\$)

Persons	1	2	3	4	5	6	7	8	9	10
Income										
Very Low	14,000	16,000	18,000	20,000	21,600	23,200	24,800	26,400	28,000	29,600
Low	22,400	25,600	28,800	32,000	34,550	37,100	39,700	42,250	44,800	47,700

Source: Department of Community & Economic Development, State of Utah

RESIDENTIAL DENSITY-BASED ZONING

The current Cache County Land Use Ordinance employs a traditional block style zoning. This type of zoning was developed and designed by communities to segregate incompatible uses (dry cleaners from residential units - San Francisco) and has been used for years throughout this country. Block style zoning lays out painfully precise requirements for uses and quality of development. However, when this style of zoning is applied to a regional system like Cache County, with its unique and different environs, it fails to meet the needs of the County. A more flexible style of zoning is needed to deal with the complex and unique issues of this region.

Due to the uniqueness of the different areas within the County and the importance of agriculture, the standards should be based on their importance and the physical effect they have on the development potential of the property.

These development factors were derived from the current Numerical Evaluation Point System used by the Cache County Planning Commission for evaluating single family dwellings and minor subdivisions. The development factors were digitized into a Geographic Information System (ArcInfo) so that data could be combined and a suitability analysis performed. The use of a Geographic Information System allowed this analysis process of the data to be quickly developed. Utah State Automated Geographic Reference Center and the Cache Countywide Planning & Development office worked together to develop this analysis. The table of development factors on the following pages details the urban and physical factors and suitability values used in defining residential density.

The data sets were assigned a point value based upon the suitability for residential development. The higher the point value the less desirable or suitable for residential development. For example, if an area is in a 100 year flood plain from FEMA maps, it would be assigned a very high point value. The suitability values are shown to the right of the development factors in the previous tables. Once the data was assigned point values it was combined into a set of five density ranges. The following table shows the Proposed Residential Density ranges developed based on the public input from the second round of Public Open Houses.

RESIDENTIAL DENSITY RANGES	
Density	Units per Acre
Very High	1/1
High	1/5
Medium	1/10
Low	1/20
Very Low	1/40

DEVELOPMENT FACTORS

URBAN FACTORS	SUITABILITY	PHYSICAL FACTORS	SUITABILITY
Water Systems		100 Year Flood Plain	
- Public Water System	1	- Non-Flood Plain	1
- No Public Water System	5	- Flood Plain	5
Sewer Systems		Liquefaction Zones	
- Discharge Area	1	Low to Moderate	1
- Secondary Recharge Area	3	Moderate	3
- Primary Recharge Area	5	Moderate to High	5
Distance From Existing Municipality		Slope	
- Within ¼ mile	1	- Less than 10%	1
- Within ¼ to ½ mile	2	- 10 to 20%	2
- Within ½ to 1 mile	3	- 20 to 30%	3
- Beyond 1 mile	5	- More than 30%	5
Distance to Fire Station		Wetlands	
- Less than 2 miles	1	- Non- Wetlands	1
- 2 to 4 miles	2	- Wetlands	5
- 4 to 6 miles	3		
- More than 6 miles	5	Water	
		- Non-Water	1
Proximity to Nearest 1st Priority Road		- Water	5
- Les than ¼ mile	1	Critical Wildlife Habitats	
- ¼ to ½ mile	2	- Non-Wildlife Habitat	0
- ½ to 1 mile	3	- Wildlife Habitat	1
- More than 1 mile	5		
Distance to School Bus Route		Farmland	
- Les than ½ mile	1	- Non Prime or Statewide Significant	1
- ½ to 1 mile	3	- Statewide Significant (irigated)	6
- More than 1 mile	5	- Statewide Significant (nonirigated)	6
		- Prime	10

COMMERCIAL/INDUSTRIAL

SIC CODES

Standard Industrial Classification [SIC] is the statistical classification standard underlying all establishment-based Federal economic statistics classified by industry. The SIC is used to promote the comparability of establishment data describing various facets of the U.S. economy. The classification covers the entire field of economic activities and defines industries according to the composition and structure of the economy. It is revised periodically to reflect the economy's changing industrial organization.

The Standard Industrial Classification Codes are broken down into different categories. Below is a list of each division and corresponding codes.

Division A. AGRICULTURE, FORESTRY, AND FISHING

01 - 06 This division includes establishments primarily engaged in agricultural production, forestry, commercial fishing, hunting and trapping, and related services.

Division B. MINING

10 - 14 This division includes all establishments primarily engaged in mining. The term mining is used in the broad sense to include the extraction of minerals occurring naturally; solids, such as coal and ores; liquids, such as crude petroleum; and gases such as natural gas. The term mining is also used in the broad sense to include quarrying, well operations, milling (e.g., crushing, screening, washing, flotation), and other preparation customarily done at the mine site, or as a part of mining activity.

Division C. CONSTRUCTION

15 - 17 This division includes businesses primarily engaged in construction. Three broad types of construction activity are covered: (1) building construction by general contractors or by operative builders; (2) heavy construction other than building by general contractors and special trade contractors, and (3) construction activity by other special trade contractors.

Division D. MANUFACTURING

20 - 39 The manufacturing division includes establishments engaged in the mechanical or chemical transformation of materials or substances into new products. These businesses are usually described as plants, factories, or mills and characteristically use power driven machines and materials handling equipment. Establishments engaged in assembling component parts of manufactured products are also considered manufacturing if the new product is neither a structure nor other fixed improvement. Also included is the blending of materials, such as lubricating oils, plastic's resins, or liquids.

Division E. TRANSPORTATION, COMMUNICATIONS, ELECTRIC, GAS, 40 - 49 AND SANITARY SERVICES

This division includes establishments providing, to the public or to other business enterprises, passenger and freight transportation, communications services, or electricity, gas, steam, water or sanitary services, and all establishments of the United States Postal Service.

Division F. WHOLESALE TRADE

50 - 51 The chief function of establishments primarily engaged in selling merchandise to retailers to industrial, commercial, institutional, farm, construction contractors, or professional business users, other wholesalers, or acting as agents or brokers in buying merchandise for or selling merchandise to such persons or companies.

Division G. RETAIL TRADE

52 - 59 This division includes establishments engaged in selling merchandise for personal or household consumption and rendering services incidental to the sale of the goods. In general, they classify retail establishments by kind of business according to the principal lines of commodities sold (groceries, hardware, etc.), or the usual trade designation (drug store, cigar store, etc.).

Division H. FINANCE, INSURANCE, AND REAL ESTATE

60 - 67 This division includes establishments operating primarily in the fields of finance, insurance, and real estate. Finance includes depository institutions, nondepository credit institutions, holding (but not predominantly operating) companies, other investment companies, brokers and dealers in securities and commodity contracts, and security and commodity exchanges. Insurance covers all types of insurance, and insurance agents and brokers. Real estate includes owners, lessors, lessees, buyers, sellers, agents, and developers of real estate.

Division I. SERVICES

70 - 89 This division includes establishments primarily engaged in providing services to a wide variety of individuals, business and government establishments, and other organizations. Hotels and lodging places: establishments providing personnel, business, repair, and amusement services; health, legal, engineering, and other professional services; educational institutions; membership organizations, and other miscellaneous services, are included.

Division J. PUBLIC ADMINISTRATION

91 - 97 This division includes the executive, legislative, judicial, administrative and regulatory activities of Federal, State, local and international governments.

Division K. NONCLASSIFIABLE ESTABLISHMENTS

99 This division includes establishments which cannot be classified in any other industry.

GOALS AND POLICIES

The following information is the public comments from the first series of open house that were held to introduce the plan.

RESIDENTIAL HOUSING DEVELOPMENT

DISTRICT 1

- Understand the fiscal cost of residential development on the services to the community
- Development in the area directly adjacent to communities should be of equal standards as the communities
- There needs to be unified development standards between County and communities
- There should be standards for differing size subdivisions
- There is a need to provide for affordable housing

DISTRICT 2

- Water will continue to be a limiting factor for residential development in this district
- There needs to be better control of the subdivision of land
- How do small communities deal with multifamily homes in their community

DISTRICT 3

- Residential development should not be on prime agricultural land
- As density of the area increases the issue of waste water needs to be addressed
- The minimum lot should not be less than one acre in area.
- There should be stricter control on residential development than there is now
- There should be no subdivision of more than two lots in area
- They should maintain the existing status quo for the district

DISTRICT 4

- Residential development should be on land that is not agriculturally productive
- Residential development should provide open space
- Sensitive area should be protected (open space, land trusts)
- There should be some consistency between City and County development standards
- The communities should provide for affordable housing
- New residential developments should pay their fair share of the cost of services
- Residential development should be done in a way as to not create urban sprawl
- Residential development on the bench should provide access to the mountains
- Urban residential development should remain within the communities
- There is a need to protect the historical residential homes within the district
- They should develop standards for all types of residential development
- The residential development should try to maintain a rural atmosphere
- There should be a balance of public and private property rights
- Residential development should provide all the services and amenities
- Residential development should provide variation in lot size
- All major subdivision development should remain within the cities who provide urban services
- There should be limited development on private roads
- There should be consistency with siting of residential, school, open space, and commercial
- Better public input into the approval process for project, ordinances, and procedures

DISTRICT 5

- Any building should be on existing small parcels and limited
- Application for development should require notification of adjacent property owners
- There should be no major subdivision within the district

DISTRICT 6

- Give controlled planned development open space
- Lot sizes in the area should be larger (5 to 10 acres)
- The smaller lot development should be in the existing communities
- Major subdivisions should be located in the existing communities
- Developers need to address the storm drainage with development
- Developers should consider cluster development

DISTRICT 7

- There should be tighter control of residential development
- Lot size should be at least 5 to 10 acres
- Residential development should not be on prime agricultural land
- No major subdivisions in the unincorporated County
- They should better review the issues of services for residential areas
- Urban development should remain within the existing communities
- Development should be done on existing public roads

DISTRICT 8

- Residential development in the Stump Hallow area should be limited due to waste disposal problems
- There is currently too much development in the canyons and should be limited
- Future development will create pollution problems downstream
- Any future development should be based on performance standards
- There should be better enforcement of current development codes
- There needs to be development rights provided to private landowners
- The FR40 zone needs to be evaluated to see if it is meeting the needs of the area

COMMERCIAL AND INDUSTRIAL DEVELOPMENT

DISTRICT 1

- Commercial/industrial development should be in proper location in the existing communities
- They should allow some small service type businesses in the unincorporated County to provide for the needs of residents

DISTRICT 2

- Commercial/industrial development should be in proper approved location in the existing communities
- There is a need for service/commercial type businesses in existing communities for the residents of the area and district
- Communities should provide for home based businesses with restrictions so as not to impact neighbors

DISTRICT 3

- Commercial/industrial development should be in proper location in the existing communities
- There should better enforcement laws with businesses that operate in the County
- They should cite and make junky yards be cleaned up

DISTRICT 4

- Large commercial development should be in appropriate location so as not to create strip development
- Better sign control needs to be developed to prevent visual clutter
- There should be better access management along Hgwy.. 89/91 for commercial development
- Prevent leap frog development by limiting development to existing urban areas that are zoned for commercial
- There needs to be better separation between residential and commercial/industrial uses to prevent land use conflicts
- Economic Development should:
 - Protect and enhance existing businesses;
 - Increase the job opportunities and wages
- There should be fewer regional shopping centers and more neighborhood oriented commercial businesses.

DISTRICT 5

- Commercial/industrial development should be limited to urban areas
- Restrict the amount of commercial/industrial development along Hgwy. 89/91
- Provide for home based businesses with restrictions

DISTRICT 6

- Restrict commercial/industrial development to urban areas
- Do not allow for infringement of commercial/industrial development on agricultural and residential areas

DISTRICT 7

- Major commercial/industrial development should be located in the existing urban areas
- There is a need for small service type commercial businesses in some areas of the County
- Allow for some home based businesses but with restrictions to protect surrounding uses
- Stop leap frog and strip development along the highways
- Limit the regulation of business and simplify process for business licenses

DISTRICT 8

- Limit and restrict the types of commercial/industrial businesses within the canyons
- Develop performance standards for development in canyons
- Treat each canyon as unique and different by developing overlay zones

ESSENTIAL FACILITIES AND SERVICES

DISTRICT 1

Public Safety

- Development should be done to provide for good access by police and fire

Water

- Cove should consider a water improvement district

Sewer/Septic

- Any development in water recharge areas should be limited to non-septic systems

DISTRICT 2

Public Safety

- There are limited services currently do not meet the needs of the communities
- The travel distance for law enforcement to the communities is a problem

Water

- Water is a real limiting factor for this area
- The quality and quantity are real issues
- There is a need to improve the water delivery systems

Sewer/Septic

- There will be a need to develop sewer systems in the communities in the district in the future

Other

- There are air quality problems during the winter months
- There is a lack of education facilities in this district, they must bus students long distances

DISTRICT 3

Public Safety

- Better traffic control and speeding are problems in the district
- Need for local access to fire station/truck (comes from Smithfield)

Water

- The water improvement district currently provides water
- There is 20 year planning in system which limits the number of hookups to five a year
- A balance needs to be found with the conflict between irrigation and domestic uses of water

Sewer/Septic

- There are limits on septic systems depending on the ground water conditions

Other

- The need for access to a library (bookmobile is used but not adequate for need)
- There is a lack of storm drainage system (irrigation canals are carrying away storm drainage)
- There is a need to balance the local and recreationalist use of the area

DISTRICT 4

Public Safety

- There needs to be better late night protection for south end of district
- Hazard issues need to be addressed
 - Location of fire hydrants
 - Road width for fire trucks
- There is double taxation for contract police services

Water

- There is a need for a water management plan for the County and should address the following issues
 - Protection for the water recharge areas
 - Water availability (carrying capacity developed)
 - Secondary water system development
 - Impact fees for services

Sewer/Septic

- They should develop sewer system in the southern part of the district
- What is the current capacity of the existing sewer system and will it meet the needs of the

communities

Other

- What is the future of the landfill and where will a new one be located in the County
- There is a need for more parks and recreational opportunities
- The level of services available should control growth
- How are we handling the flood control problem with this growth
- There needs to be coordination of land use planning and utility planning

DISTRICT 5

Public Safety

- There is no police coverage late at night or early in the morning
- Closest fire service comes from Logan City
- Homes are located too far from hydrants

Water

- There is a need to protect the ground water from contamination and interference
- The need for water conservancy and central water system

Sewer/Septic

- There should be limitation on lot size using septic tank systems
- High water tables in the district causes problems for septic tanks
- There will be a need for a sewer system in the future

Other

- Development should be sited so not to cause critical problem for storm drainage
- There should be access to a library system
- Citizens are paying taxes but not receiving the same level of service as other areas
- Problems with the Post Office delivery and Zip codes for the area
- There should be more emphasis on recycling to increase lifespan of landfill

DISTRICT 6

Public Safety

- There needs to be better enforcement of traffic codes on local roads

Water

- They should study the effect of development on the availability of water
- They should protect sensitive water recharge areas from development
- A water management plan for the area should be developed to balance the water needs of the communities

Sewer/Septic

- The size of lots will restrict the use of septic tanks
- There needs to be controls on sewer management so not to pollute the Little Bear River and wells in area

DISTRICT 7

Public Safety

- There is no police coverage from the Sheriff after 2 am
- There are problems of response times for traffic accidents

- Fire protection in area comes from Paradise or Hyrum City
- Ambulance/first responders take too long time to respond to area
- There is a real need for better animal control in the area

Water

- There are problems with the number of individuals wells
- Growth should be limited to the urban areas that provide water
- There should be no subdivision on central wells

Other

- There is a need for access to some type of library system
- There is a need for natural gas service to the Avon area
- The growth potential for the district should make providing services feasible

DISTRICT 8

Public Safety

- Building codes should restrict any commercial development for fire protection
- Private development should carry sufficient liability insurance
- There is a need for better police protection in the area

Water/Sewer/Septic

- Water and sewer should be provided by property owners through creation of SID
- Health standards should restrict the amount of development
- Any septic tank should have protection so as not to create pollution downstream (Franklin Basin)

Other

- Private landowners should provide solid waste collection
- All utility lines should be underground
- As Logan Canyon road is improved they should make improved provision to plan for future utilities in area

AGRICULTURAL

DISTRICT 1

- They should protect the agricultural uses within the County
- The loss of agricultural land should be limited by preventing urban sprawl
- There should be an effort to develop new markets for agriculture (economic development)

DISTRICT 2

- The prime agricultural land needs to be protected from urban development
- Any urban development should be encouraged within existing communities or areas directly adjacent to them
- Work to limit restriction on farmers by Federal standards and regulations

DISTRICT 3

- The agricultural uses need to be protected and maintained within the County
- Limit amounts of urbanization within the agricultural areas

- Provide flexible zoning standards that adjust over time within agricultural areas
- Limit the restriction on farmers by Federal standards and regulations

DISTRICT 4

- Agricultural uses in the Smithfield and Hyde Park areas need to be preserved
- There is a need to protect and maintain the agricultural uses within the County as open space
- The conflicts between agricultural uses and urban development (noise, smell, hazards) need to be dealt with
- There needs to be a buffer zone between communities
- The communities need to deal with the urban sprawl issues by developing ordinances
- Inner lot development needs to be encouraged instead of urban sprawl
- There needs to be incentives to protect open space and agricultural uses in the district
- They should identify and protect prime farm land
- Consider creating agricultural land trusts to preserve farmland
- Divert development from primary agricultural land to marginal or non-agricultural land
- Encourage urban development in the existing incorporated areas
- There is a need to provide incentives for farmers to keep their land in agricultural uses

DISTRICT 5

- Protect and maintain the agricultural uses within the County
- Provide in the County Land Use Ordinance to protect remaining agricultural areas
- Limit development in agricultural areas to only health and safety issues
- Provide tax to develop funds to pay for farmers' development rights

DISTRICT 6

- Prevent the continued loss of agricultural land uses
- There needs to be better enforcement of the County codes to prevent junk storage areas
- There should be better enforcement of the County and City Codes
- Limit development to the communities and do not allow a leap frog into agricultural areas
- There should be initiatives to provide for protection of agricultural land uses

DISTRICT 7

- There is a need to preserve the agricultural land in the County
- Land not suited for agricultural uses should be developed for residential and other uses
- Current interpretation of agricultural land is too vague and loose and needs to be clarified

DISTRICT 8

- No Issues

QUALITY OF LIFE

DISTRICT 1

- The air and water quality needs to be protected before there are problems
- County needs to do a better job of planning throughout the unincorporated areas
- Development should be encouraged within or areas directly adjacent to existing communities

DISTRICT 2

- The large areas of agriculture and open space in this district needs to be protected
- The lack of a good water source limits the communities within this district
- The current feeling of community needs to be protected
- Any urbanization needs to be located within the existing communities

DISTRICT 3

- The openness and lifestyle of the district needs to be maintained and protected
- The area should not become the recreational area for people from other areas of the county
- The district should not be a dumping area (pets, litter, and garbage)
- The residents should have better access to services (recreational, library)

DISTRICT 4

- There needs to be a balance between public and private property rights
- Historical sites should be protected and preserved
- Urban sprawl should be prevented
- There should be broader opportunities for public (cultural, recreational)
- There should be coordination of public services between jurisdictions
- There should be better public input to the approval process
- The rural atmosphere of the County needs to be protected
- Recreational opportunities needs to be encouraged
 - Recreational corridors
 - Parks
 - Trails
 - Access to mountains protected
 - Access to the waterways needs to be protected
- Better enforcement of the existing codes
- Provide more opportunities for all sectors of our society (youth, sr. citizens)
- The air and water quality needs to be protected

DISTRICT 5

- Maintain and protect the existing quality of life within district
- There is a need to prevent the encroachment of cities into the area
- Provide for the safety of the residents of the district
- There should be better public input to the approval process

DISTRICT 6

- Maintain and protect the quiet rural atmosphere and lifestyle of the district
- Limit development to the existing communities
- Provide buffers and access to the mountains
- Control pollution (air, noise, and site) before it becomes a problem
- There should be better public input to the approval process

DISTRICT 7

- Prevent all types of pollution (air, water, and noise) before they become problems
- Protect and maintain the rural atmosphere and lifestyle of the area

- Better enforcement of the current County codes
- Balance the conflicts between residential, agricultural, and recreational uses
- Provide better zoning standards within the County
- Provide for more and better input from the local area into the approval process
- Restrict the overall size of development within the County
- All urban development should be local in existing urban communities

DISTRICT 8

- The district should remain a multi-use recreational area
- Urbanization should be limited within canyons
- There should be opportunities for many diverse interests in using the canyons
- All plans for canyons should be consistent (County, Forest Service, and State)
- They should identify and protect all sensitive areas
- Each canyon is unique and should be treated individually

TRANSPORTATION

DISTRICT 1

- There is a need for a County-wide transportation plan
- Current Highway 91 has too much traffic
- The land use conflicts along Highway 91 should be limited
- There should be better access management along Highway 91 to improve safety
- There needs to be an alternative north south highway with limited access
- The east west roads have fewer problems
- Planning for future transportation problems (air quality) needs to be done
- There is a need to provide alternative transportation modes (mass transit, bicycles)

DISTRICT 2

- There is a need for a County-wide transportation plan
- There is a need to provide alternative modes of transportation
- Future impacts of transportation should be considered for each area

DISTRICT 3

- There is a need for a County-wide transportation plan
- There need to develop a County-wide transit system
- Problems of traffic using area as a bypass needs to be considered
- Airport road and 2400 West is becoming a bypass road
- The current roads are too narrow and have no shoulders
- There needs to be better maintenance of road system
- There needs to be limited access on the through roads

DISTRICT 4

- There is a need for a County-wide transportation plan
- There is a need for alternative north south routes, there is too much traffic congestion in the Logan area

- There should be limited destruction of neighborhoods with development of road systems
- There should be better access management along existing roads
- There needs to be a regional transit system that works for the area
- Alternative modes of transportation need to be considered
- There needs to be better maintenance of existing roads
- The issue of air quality needs to be dealt with before it becomes a problem

DISTRICT 5

- There is a need for a County-wide transportation plan
- There is a need for a bypass road around Logan (10th West)
- Any future bypass road should have limited access with frontage roads
- There needs to be limited development along Highway 89/91
- There needs to be a plan to develop a County-wide mass transit system
- Local roads are too narrow with no shoulders
- Better traffic control on local roads (speeders) is needed

DISTRICT 6

- There is a need for a County-wide transportation plan
- There is a need to provide a safer crossing of Highway 89/91 (Wellsville)
- There are problems of turning at the intersection of Highways 30 and 23
- A park and ride lot should be developed at intersection of Highways 30 and 23
- The Valley View Highway (30) needs to be improved
- There are safety problems along Highway 23 and development should be limited
- The road between Mendon and College and Young Wards needs to be improved

DISTRICT 7

- There is a need for a County-wide transportation plan
- There should be consideration for a County-wide transit system
- The current state road should end in Paradise and not continue into Huntsville
- There are a number of safety problems that they should address such as maintenance, snow removal, unmarked curves, and bridges
- They should pave the road to Porcupine Reservoir due to the increased recreational use
- There needs to be better signage control to prevent semi-trucks driving into Avon area
- There needs to be better traffic control in the Avon and Paradise area
- The road along Mountain Crest High School needs to be widened
- The local county roads are too narrow and have shoulder problems
- There is a problem of hazardous logging trucks in the Avon area

DISTRICT 8

- There is a need for a County-wide transportation plan
- Limit the number of access points to private roads (access management)
- There should be better development standards along public roads
- There is a need to protect the 2477 roads in the County

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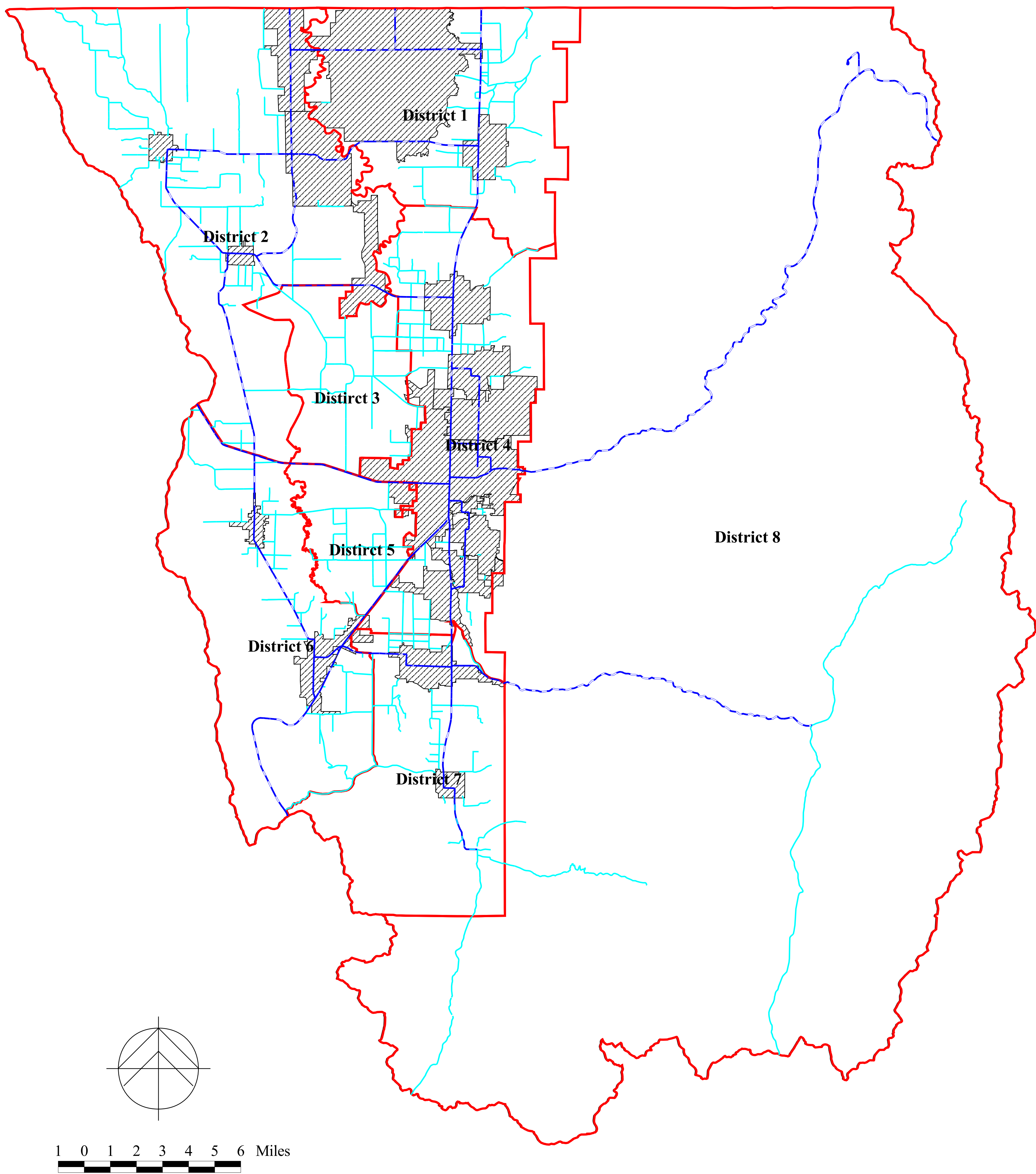
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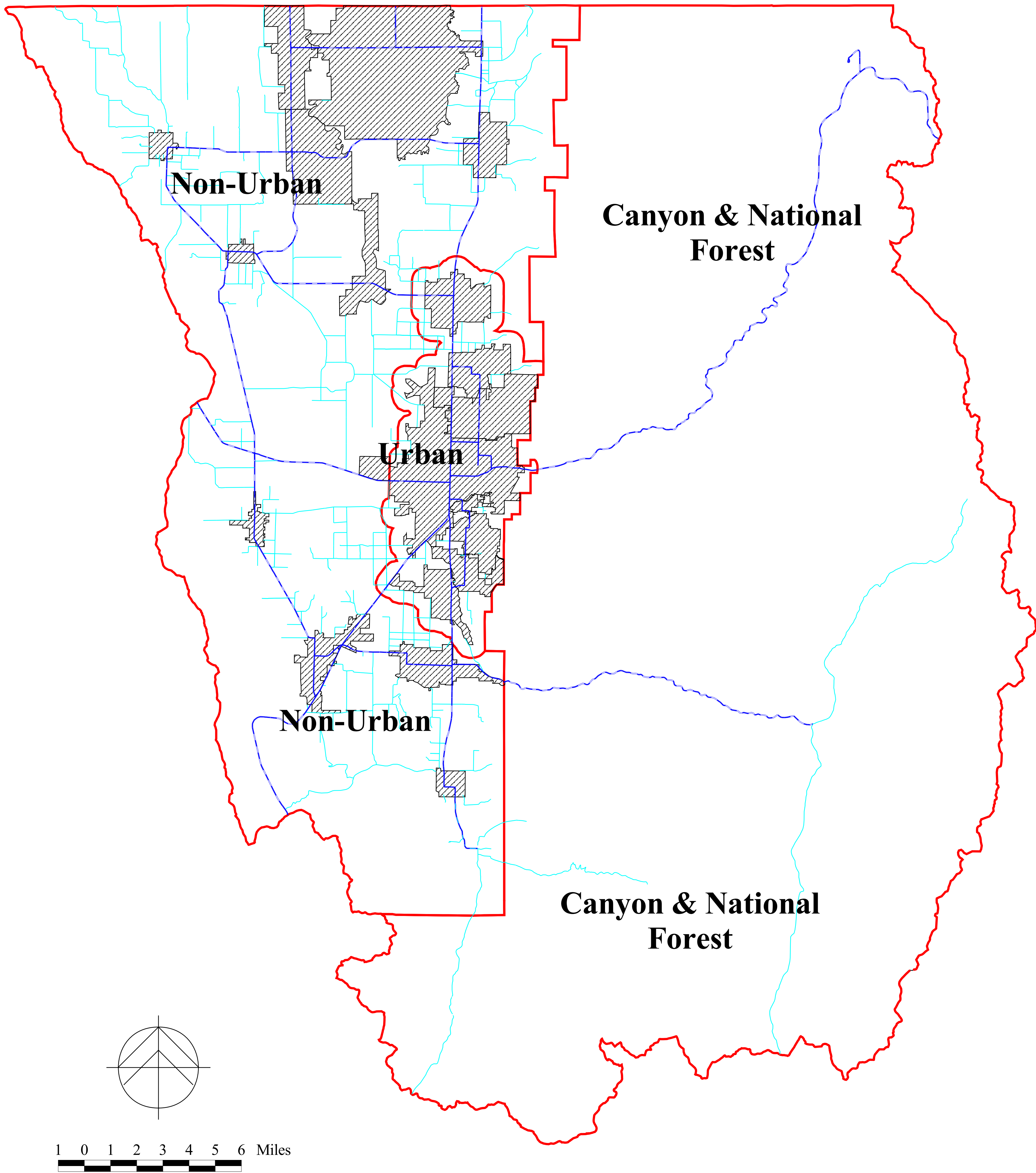
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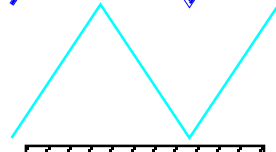

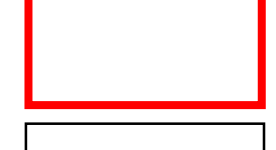



-  State Highways
-  County Roads
-  Planning Districts
-  City Boundary
-  County Boundary

CACHE COUNTY PLANNING DISTRICTS

MAP LU-1

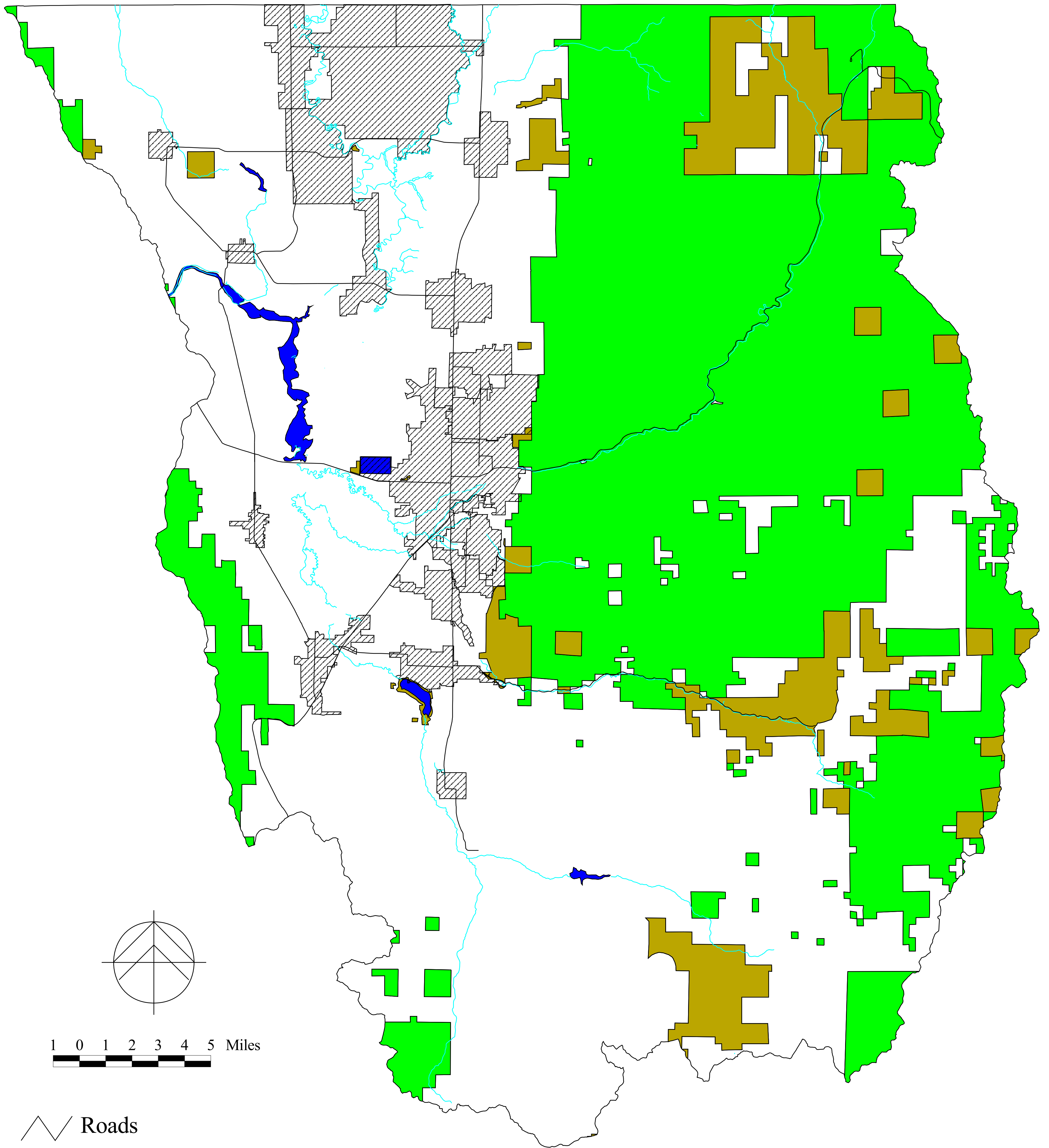


-  State Highways
-  County Roads
-  City Boundary
-  Urbnarea.shp
-  County Boundary

CACHE COUNTY

AREAS

MAP LU-2



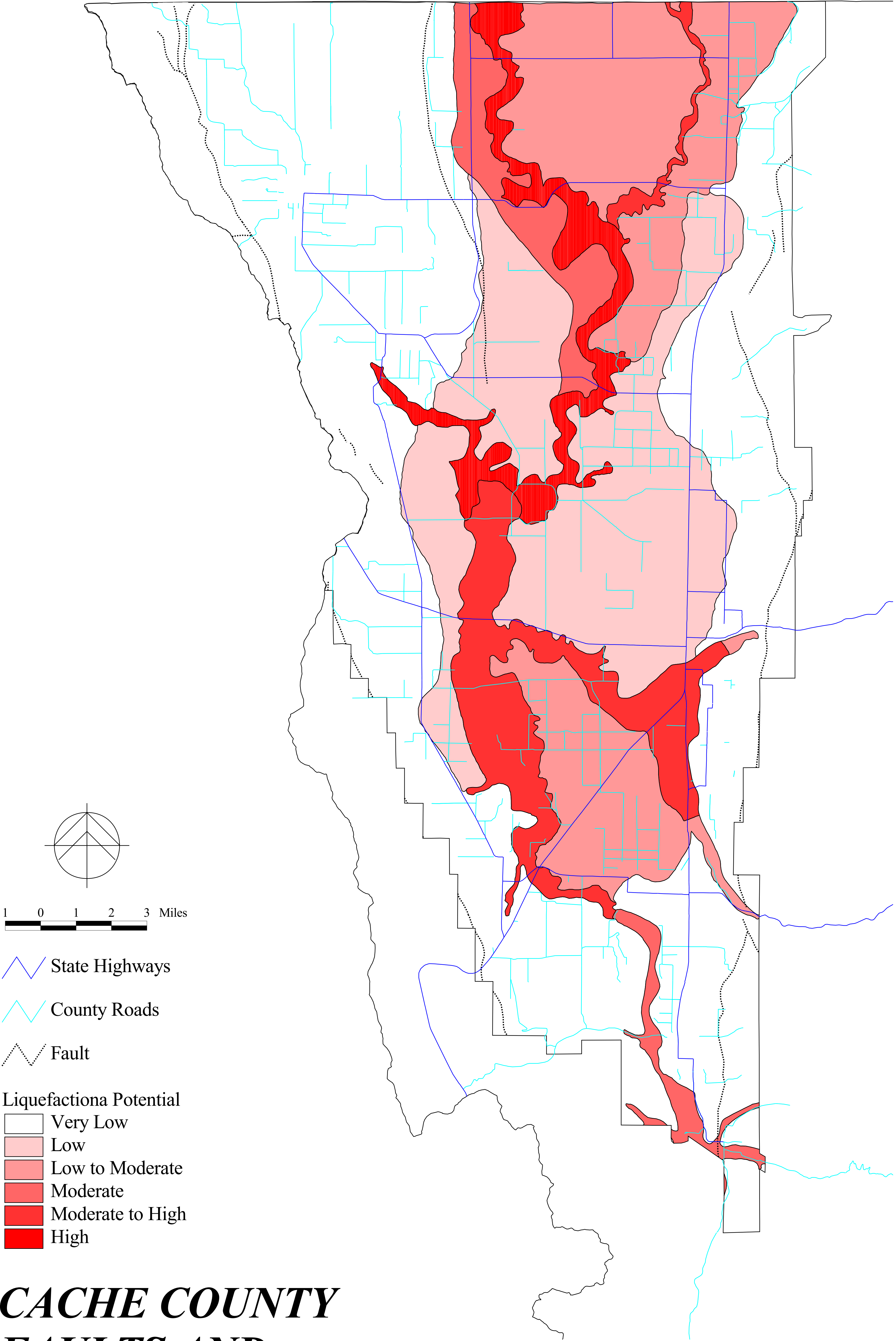
- ⚡ Roads
- ⚡ Rivers and Streams
- ▨ City Boundary

- Land Ownership
- Federal
 - Private
 - State
 - Water

CACHE COUNTY

LAND OWNERSHIP

MAP LU-3



1 0 1 2 3 Miles

State Highways

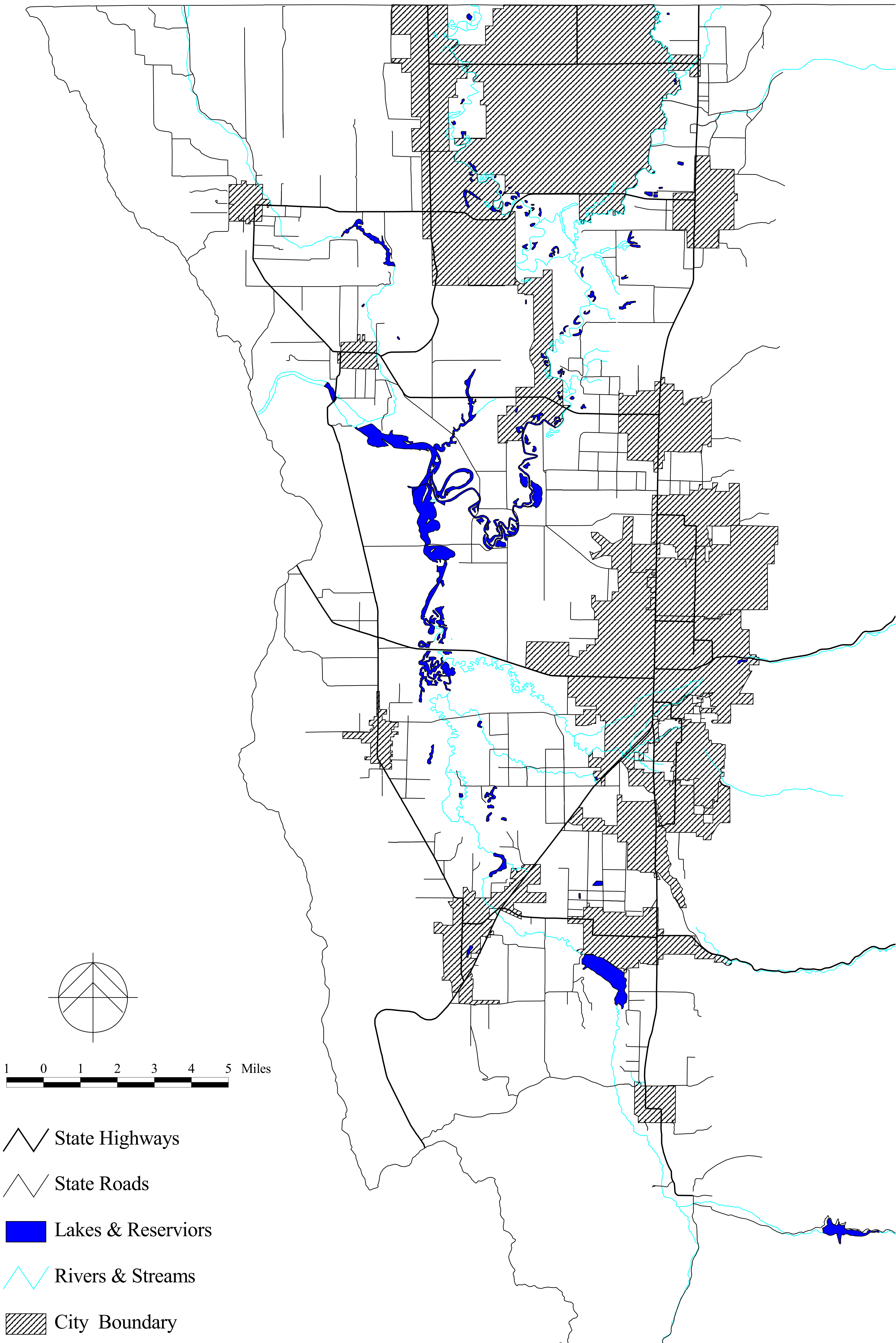
County Roads

Fault

Liquefaction Potential

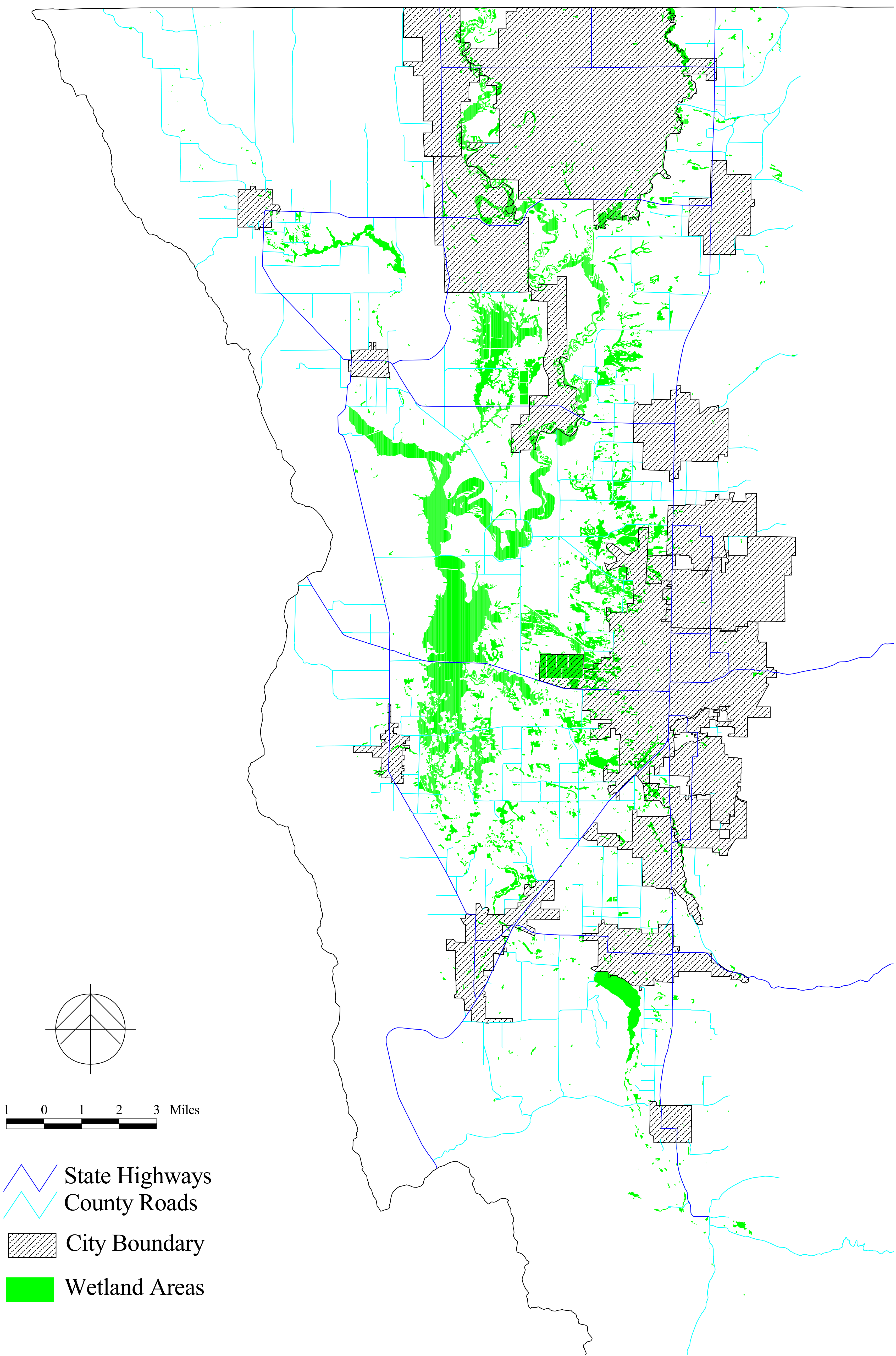
Very Low
Low
Low to Moderate
Moderate
Moderate to High
High

CACHE COUNTY FAULTS AND LIQUEFACTION POTENTIAL



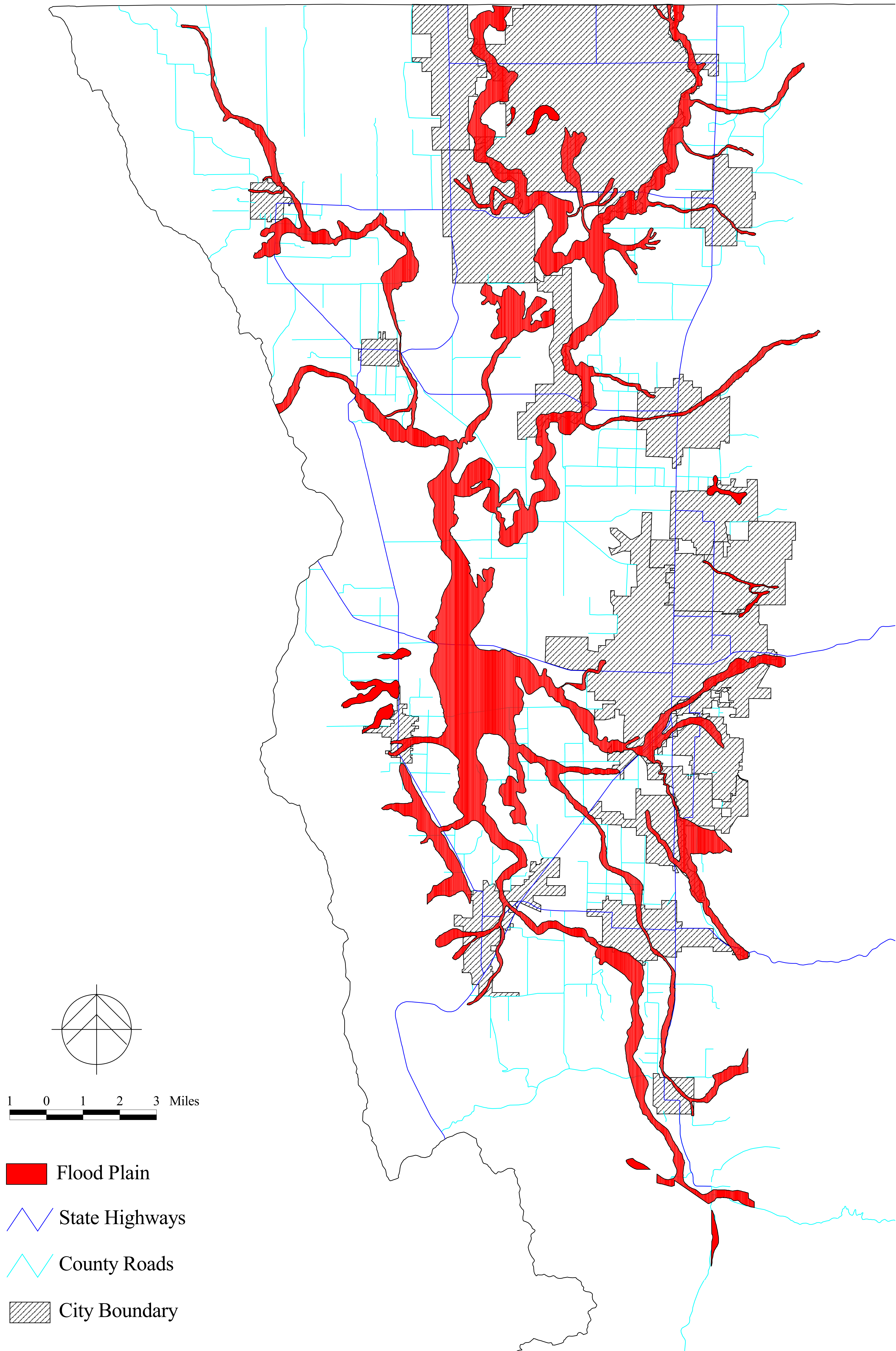
CACHE COUNTY WATER BODIES

MAP LU-5



CACHE COUNTY WETLANDS

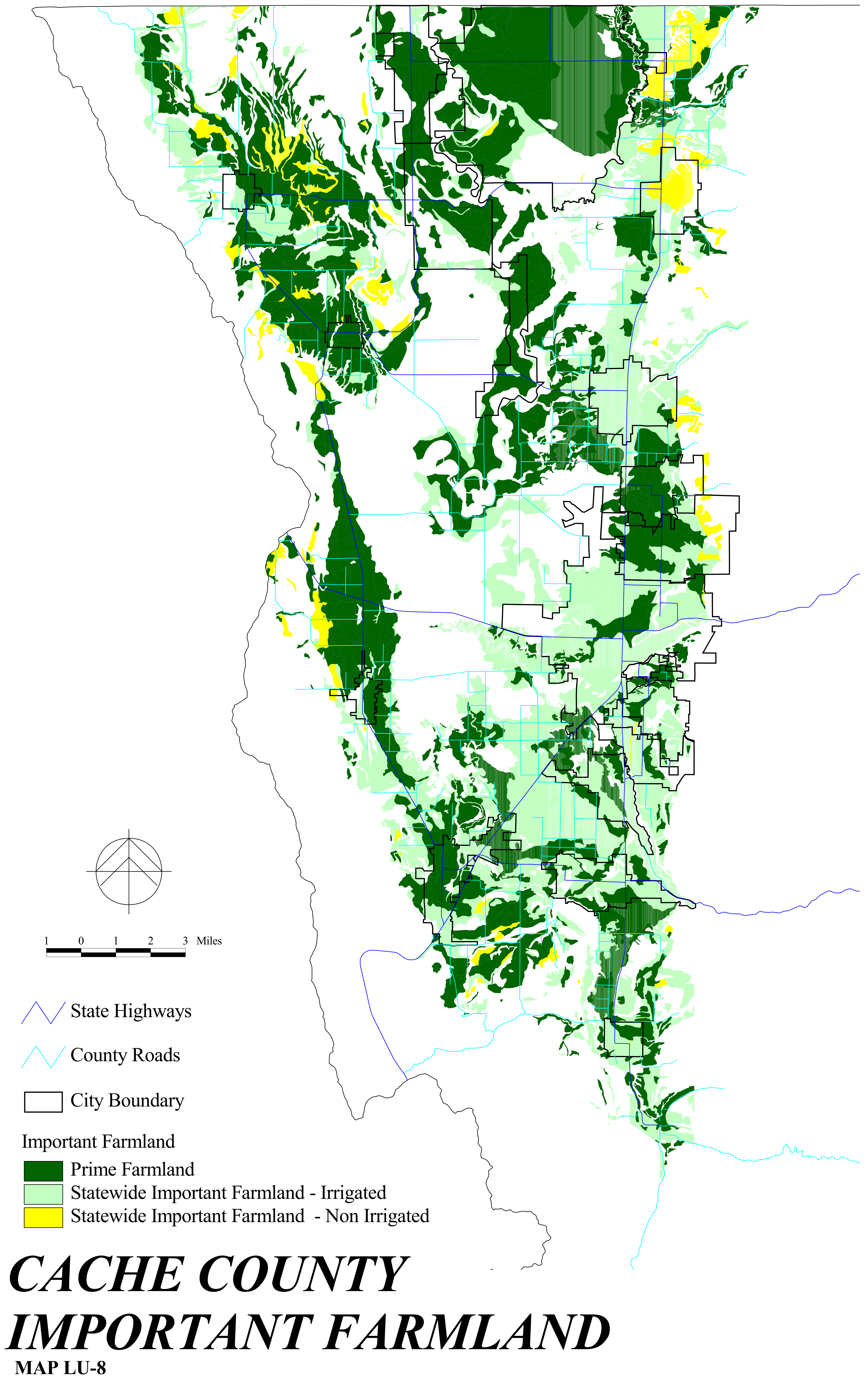
MAP LU-6

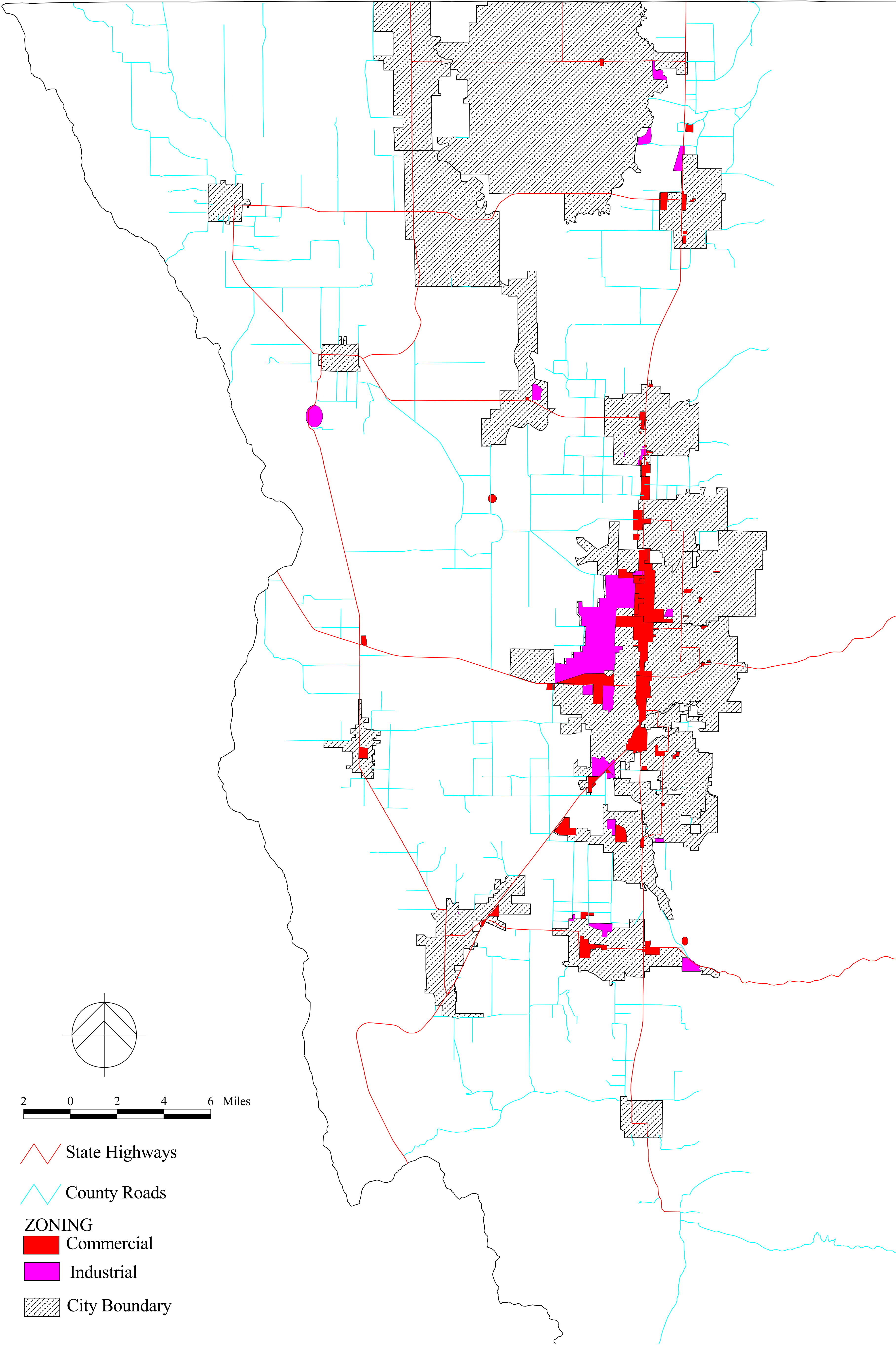


CACHE COUNTY

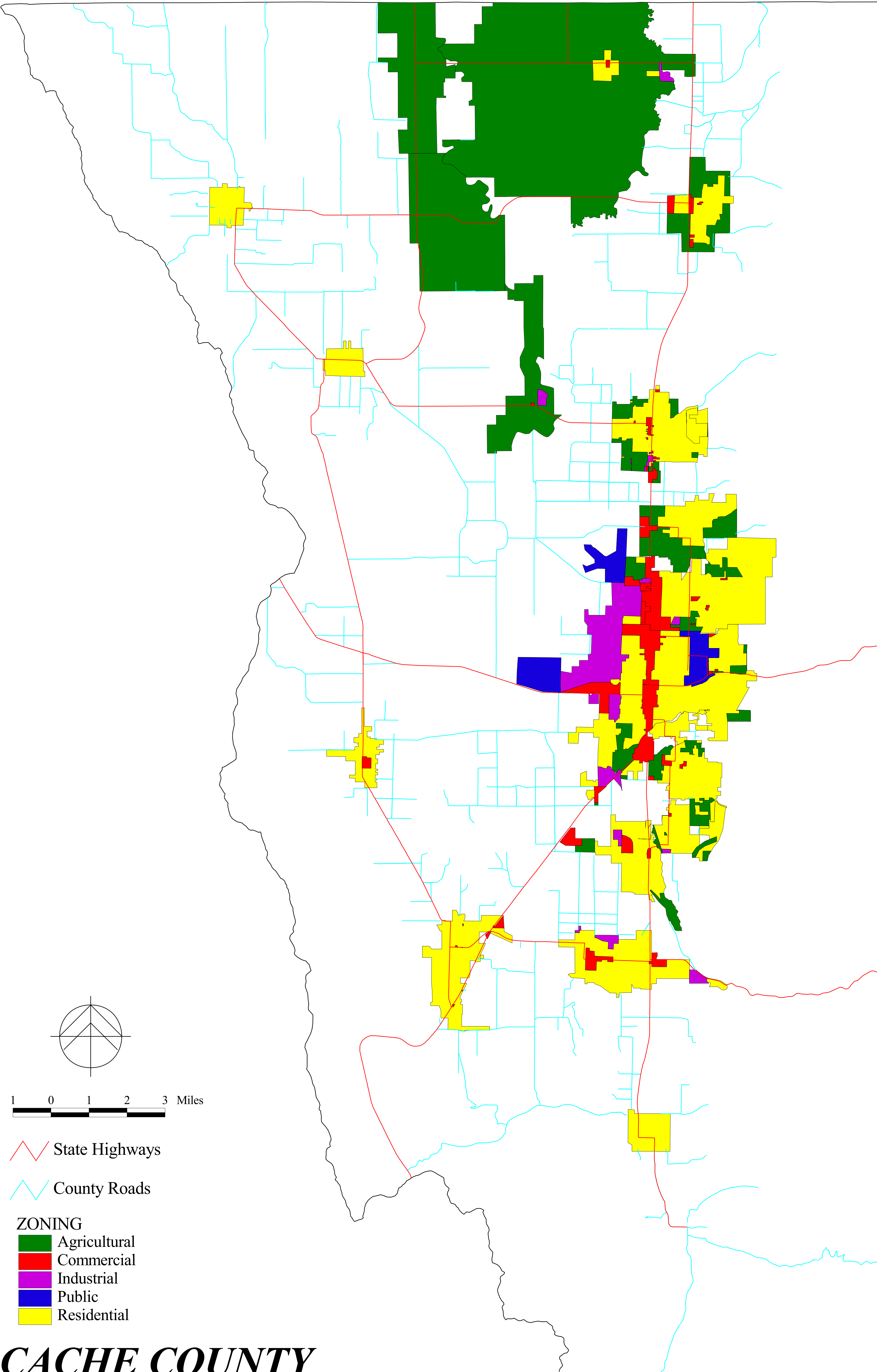
100 YEAR FLOOD PLAINS

MAP LU-7

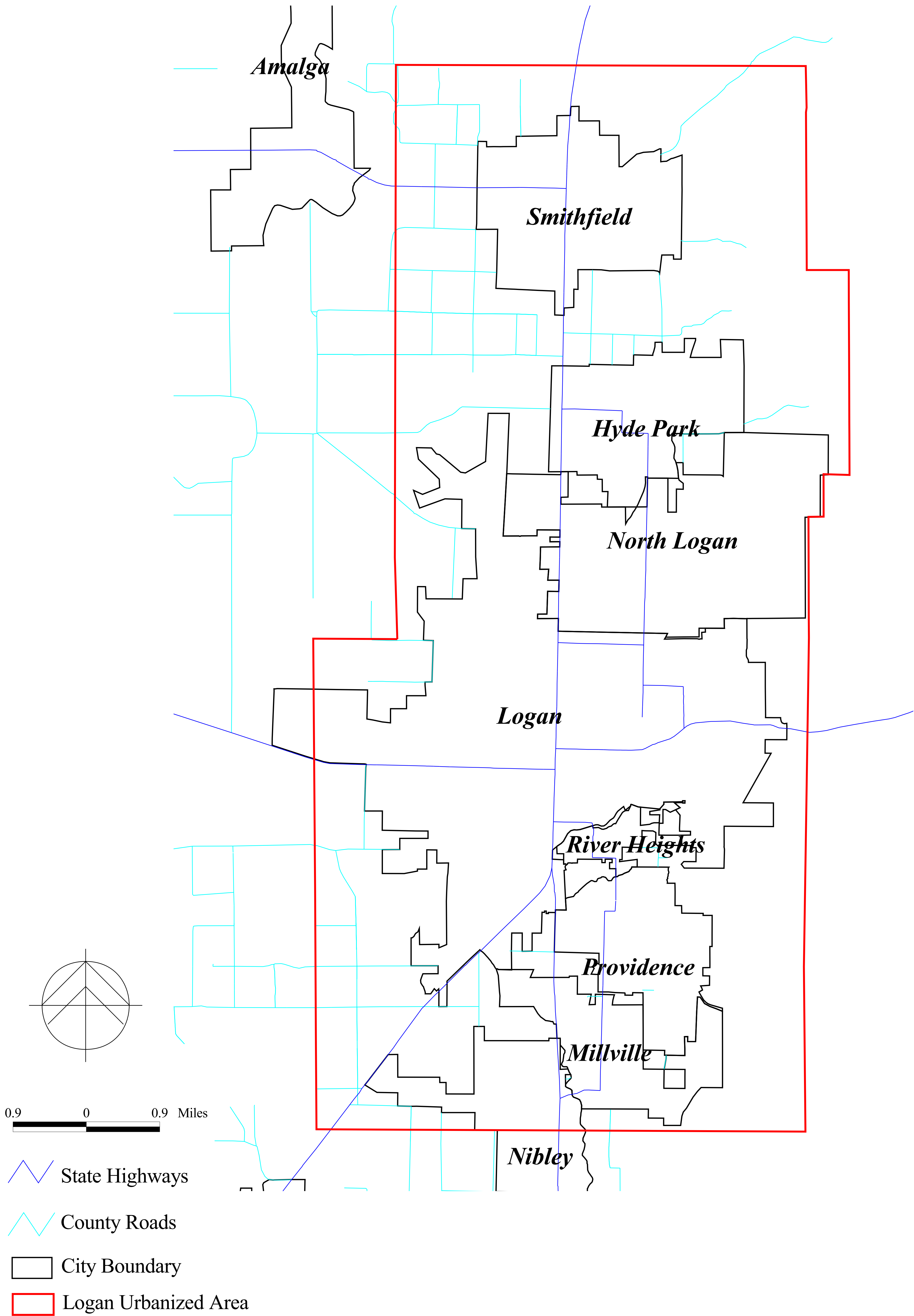




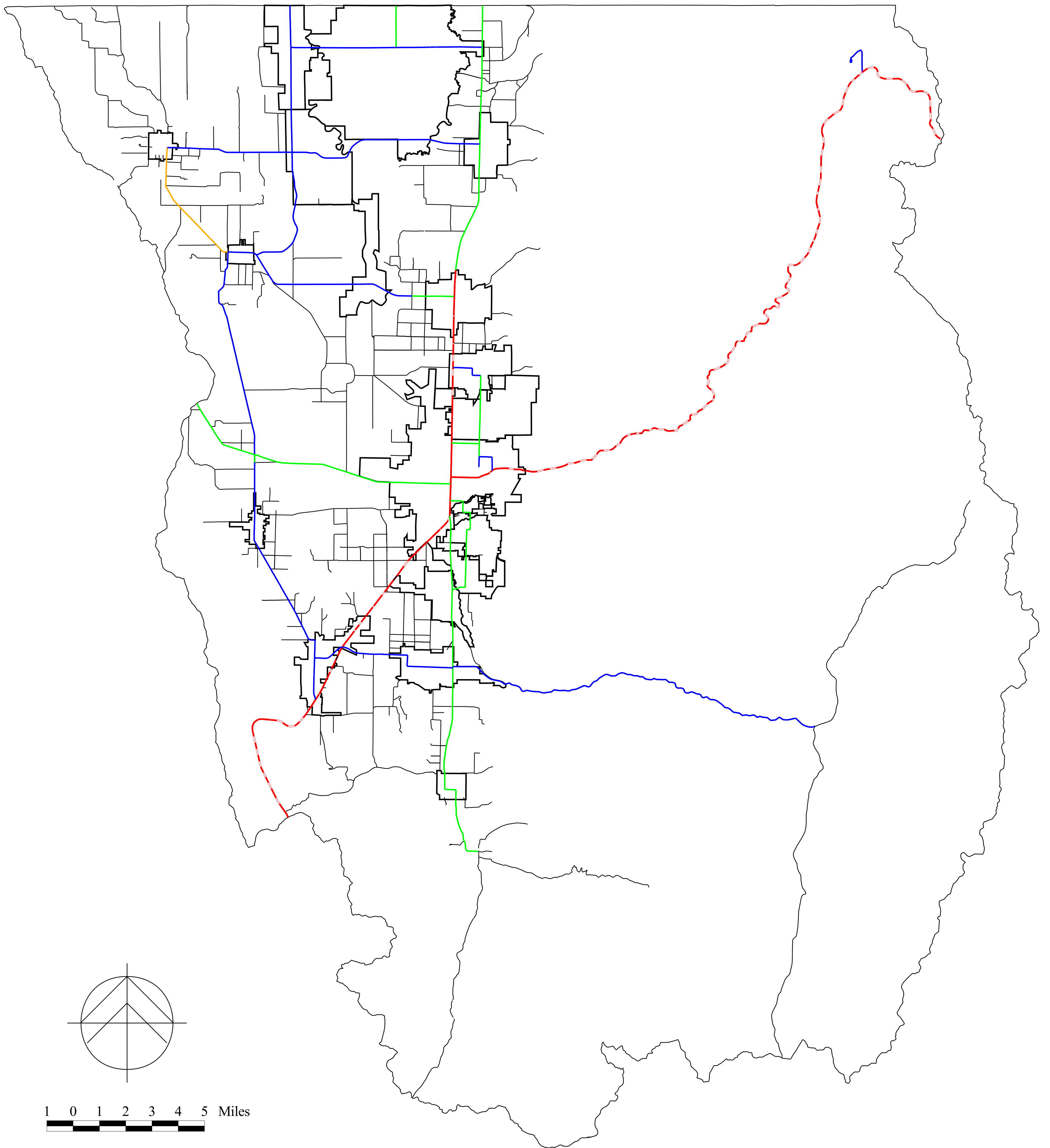
CACHE COUNTY
COMMERCIAL & INDUSTRIAL ZONING
MAP LU-9




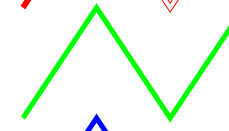



CACHE COUNTY
GENERALIZED MUNICIPAL ZONING
MAP LU-10



CACHE COUNTY
LOGAN URBANIZED AREA
MAP LU-11



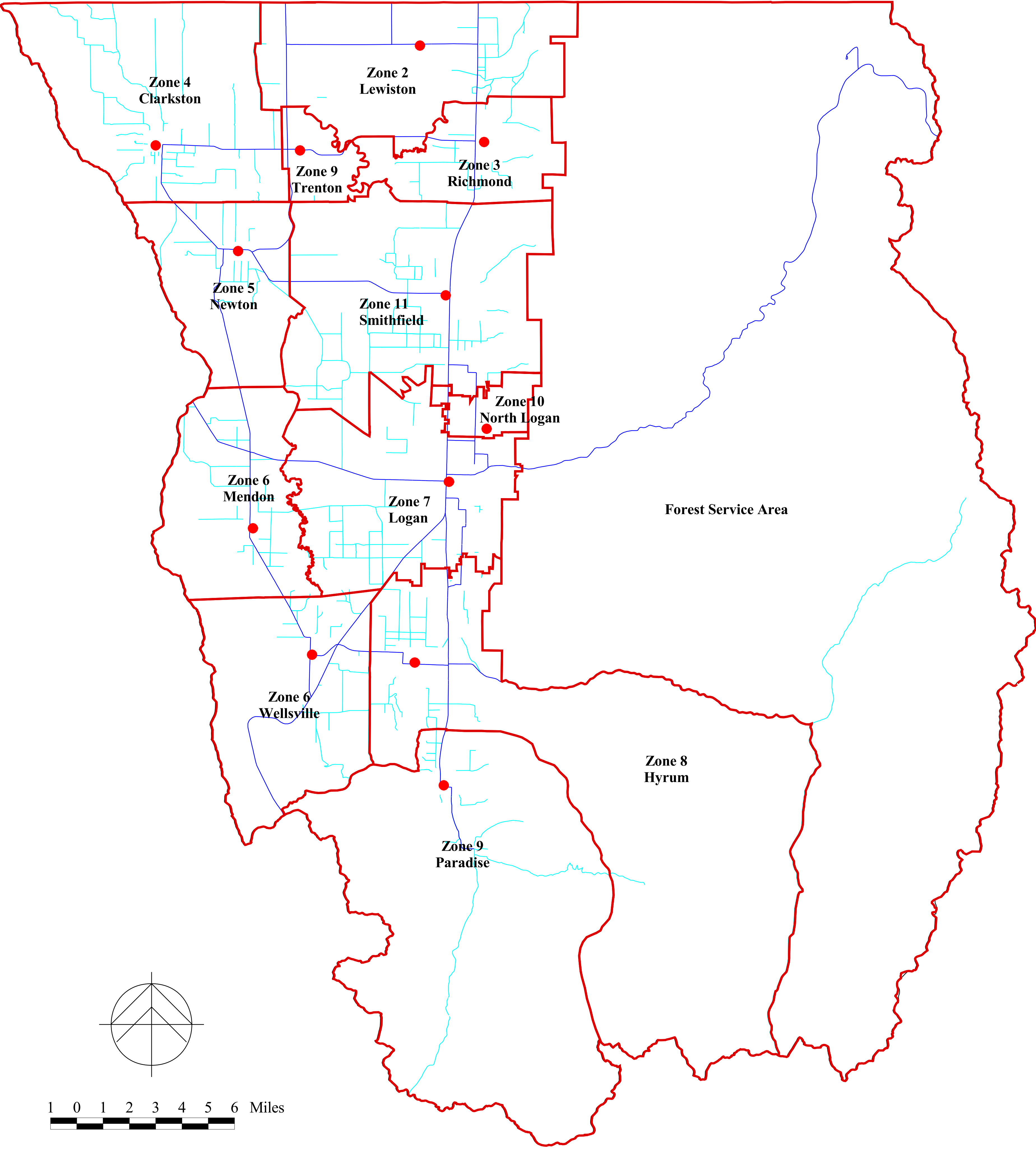
FUNCTIONAL CLASSIFICATION





-  Principal Arterial
-  Minor Arterial
-  Major Collector
-  Minor Collector
-  County Roads

 County Boundary

CACHE COUNTY FUNCTIONAL CLASSIFICATION SYSTEM

MAP LU-12



-  State Highways
-  County Roads
-  Fire Stations
-  Fire Zones

CACHE COUNTY

FIRE STATION BUFFERS

MAP LU-13

TRANSPORTATION ELEMENT

The Transportation Element of the Cache Countywide Comprehensive Plan is currently in **Draft Form** and has not been adopted as of yet. (5/24/01)

TRANSPORTATION ELEMENT

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INTRODUCTION

A transportation system is one of the most vital elements of any region. The highways, local roads, public transit, railroads, and other modes of transportation are essential to the orderly functioning of the urban and nonurban areas. These transportation systems provide the mobility for people and goods as well as access to land. The planning for transportation facilities involves a comprehensive analysis of the transportation systems to accommodate future changes in demand with minimal cost and negative impacts for the county and communities.

Transportation systems are regional by nature and provide access to and from the surrounding areas of the region. Cache County transportation system is a part of a much larger and regional system with the Wasatch Front and the Intermountain region. Many of the highways within Cache County provide pass through travel routes to other destinations in the Intermountain Region, as well as access to major employment centers within and outside of Cache County. The transportation system of Cache County and the planning of it can be divided in two areas, the urbanized area and the non-urbanized area. The urbanized area transportation system is planned by the Cache Metropolitan Planning Organization (CMPO) and the non-urban area is planned by Cache County and individual cities.

Mission and Purpose

The mission and purpose of the Transportation Element of the Cache County-wide Comprehensive Plan is to provide for the planning and programming of an effective transportation system for today and the future needs of Cache County. The County's transportation system is the life blood for the entire County. The development of a transportation system does and will have a tremendous effect on the future of the County.

Highways and roads systems normally do not begin and end at jurisdictional boundaries. The planning for such systems should be planned based on their affect on the region. A well planned transportation network provides for a continuous flow of traffic and vehicles from one location to another. To fully understand the mission and purpose of a transportation system you must look at the overall functionality of a system on a local, regional, and state levels. **MAP T-1 & MAP T-2** shows the regional transportation system for Northern Utah and Southeast Idaho, and the Western United States.

Planning Process

The planning process for the Transportation Element is somewhat similar to the Land Use Element. However, the time period for developing the Transportation Element will be somewhat shorter. This is due to much of the input gathered during the public open houses' for the Land Use Element will be used as the bases of the Transportation Element. Because the transportation system of Cache County is a regional and multi-jurisdiction system the planning process for the development of the Transportation Element of the Countywide Comprehensive Plan is based on a "3-C" planning process. This process is based on use of *continuing* and *comprehensive* transportation planning process done *cooperatively* by the State, County, and local communities of Cache County.

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MAP T-1
STATE REGIONAL TRANSPORTATION SYSTEM

BACK STATE REGIONAL MAP

MAP T-2
WESTERN UNITED STATES REGION TRANSPORTATION SYSTEM

BACK WESTERN UNITED STATES REGION TRANSPORTATION MAP

SOCIO-ECONOMIC CHARACTERISTICS

The socio-economic characteristics of the County plays an important role in the discussion and understanding of the County's transportation system. **Table T-1** shows the population and employment growth trends for Cache County from 1990 to 1996. This data is broken down by County total, Logan Urbanized Area, and the Non-Urbanized Area of Cache County.

TABLE T-1 POPULATION AND EMPLOYMENT FOR CACHE COUNTY 1990 - 1999

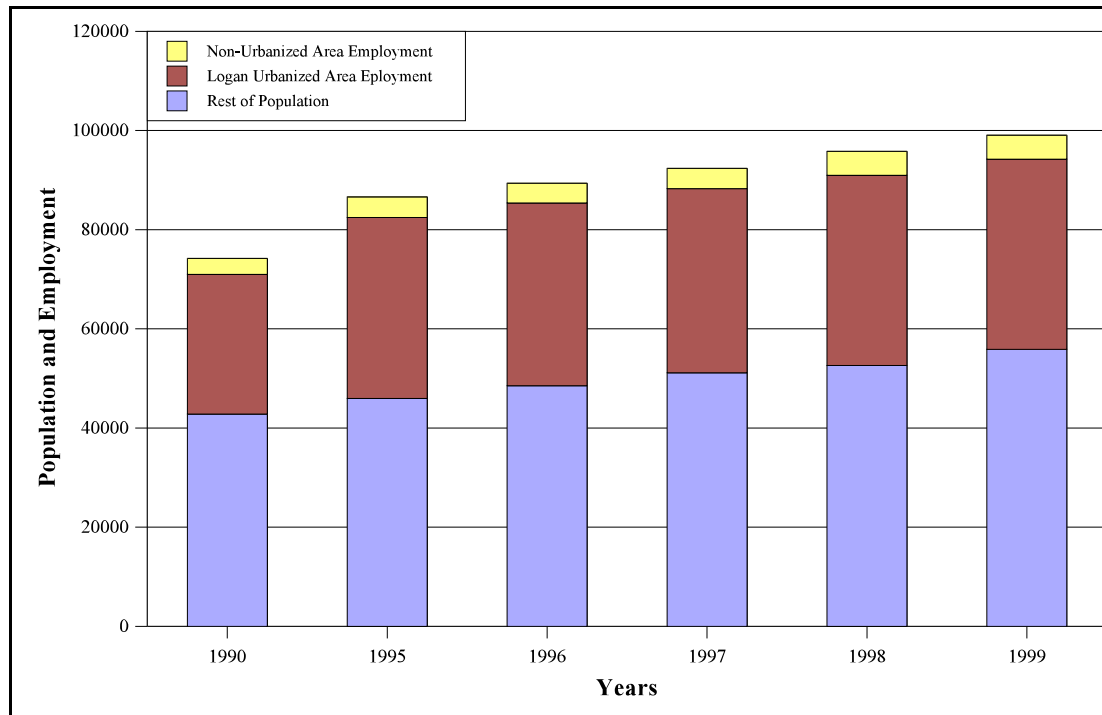
	1990	1995	1996	1997	1998	1999	AARC*
Population							
Cache County Total	71,008	82,451	85,408	88,292	90,980	94,215	2.9 %
Logan Urbanized Area	53,607	63,573	65,991	68,211	70,100	72,416	3.1 %
Non-Urbanized Area	17,401	18,878	19,417	20,082	20,880	21,799	2.3 %
Employment							
Cache County Total	28,179	36,472	36,879	37,128	38,351	38,351	3.1 %
Logan Urbanized Area	24,974	32,324	32,917	33,058	33,523	33,523	3.3 %
Non-Urbanized Area	3,205	4,148	3,962	4,070	4,828	4,828	4.2 %

* AARC - Average Annual Rate of Change

Source: CPDO; Annual Report of Socio-Economic Characteristic, 1997

Much of the County's population and employment growth has been located primarily within the Logan Urbanized Area. **FIGURE T-1** shows the breakdown of the total employment by Urbanized and Non-Urbanized Areas and the rest of the population from 1990 to 1999.

FIGURE T-1 TOTAL POPULATION AND EMPLOYMENT 1990 - 1999



As the table and graph show, most of the current employment is concentrated within the Logan Urbanized Area. This concentration of employment is why most of the transportation needs and improvements should be focused on the Logan Urbanized Area and the access to and from the area to other areas within and outside Cache County.

POPULATION TRENDS

Cache County has maintained a fairly consistent growth rate since the 1950s. Data collected shows that most of the growth has primarily been located within the Logan Urbanized Area. During the 1960s and 70s the population of the non urbanized area declined slightly, but since the 1980s has continued to grow. The population data are shown below in **TABLE T-2**.

TABLE T-2 POPULATION TRENDS IN THE CACHE COUNTY AREA

Year	Logan Urbanized Area	Non Urbanized Area	Cache County Total
1950	23,524	10,012	33,536
1960	26,353	9,435	35,788
1970	32,390	9,941	42,331
1980	42,507	14,669	57,176
1990	52,929	17,254	70,183
1995	63,573	18,878	82,451
1996	65,592	19,402	85,728

Source: U.S. Bureau of Census, CPDO; Annual Report of Socio-Economic Characteristic, 1997

The growth patterns established in the 1950s, 60s, and 70s are expected to continue with the bulk of the population and dwelling units primarily being developed in the Logan Urbanized Area. This growth will especially be focused on the northern end of the Logan Urbanized Area in Smithfield, Hyde Park, and North Logan area. There will also be some development in the southern end the Logan Urbanized Area in the cities of Providence, Millville, and Nibley. The lack of a municipal sewer system will limit development in this area. Population of Logan City is anticipated to have small limited growth potential.

The growth and distribution of population will have a great impact on the transportation needs for the year 2020. While almost all the population growth will occur in the Logan Urbanized Area and on the south end of Cache Valley, Logan City will still be the major employment center in Cache County. This growth will increase the need for better north-south travel in and out of the area.

EMPLOYMENT TRENDS

The factors most lending to the continued growth include a highly educated work force, a low cost of living, and abundant recreational opportunities. Employment in Cache County has grown at a rate faster than the growth in population and dwelling units. **TABLE T-3** shows the employment growth trends for Cache County since 1950. The Logan Urbanized Area has always maintained most of the employment within Cache County.

TABLE T-3 EMPLOYMENT TRENDS IN CACHE COUNTY

Year	Logan Urbanized Area	Non Urbanized Area	Cache County Total
1970			11,784
1980			19,892
1990	24,974	3,305	28,179
1995	32,324	4,148	36,472
1996	32,917	3,962	36,879

Source: U.S. Bureau of Census, CPDO; Annual Report of Socio-Economic Characteristic, 1997

The employment data for the Urbanized and Non-Urbanized Areas is not available since these areas were not created till the 1990 Census. Basic employment is expected to continue to expand in the western parts of Logan, and North Logan. Residentiary employment (employment providing services and sales to home and people) will expand in the areas within the population growth ring of the Logan Urbanized Area.

FUTURE CONDITIONS

TABLE T-4 shows 1995 and projected 2020 socio-economic data for Cache County, including population, dwelling units, and employment. Population is expected to grow by more than 56 percent during the next 25-year period from 1995 to 2020. The growth in dwelling units will parallel the growth in population, although the number of dwelling units is expected to grow at a slightly faster rate than population. Employment is projected to grow at a rate significantly higher than the growth in population and dwelling units. Employment is projected to increase more than 76 percent in the Logan Urbanized Areas.

TABLE T-4 SOCIO-ECONOMIC DATA FOR CACHE COUNTY, 1995 AND 2020

	Logan Urbanized Area	Non Urbanized Area	Cache County Total
Population			
1995	63,574	18,877	82,451
2020	99,061	29,581	128,642
% Growth	55.8%	56.7%	56.0%
Dwelling Units			
1995	20,132	5,632	25,764
2020	31,649	8,830	40,479
% Growth	57.2%	56.8%	57.1%
Employment			
1995	32,324	4,148	36,472
2020	57,080	7,291	64,371
% Growth	76.6%	75.8%	76.5%

Source: U.S. Bureau of Census, CPDO; Annual Report of Socio-Economic Characteristic, 1997

LAND USE CHARACTERISTICS

The automobile has played a very important part in the development of today's American city. Since the development of the automobile at the turn of the century, no modern convenience has had a greater impact on the makeup of the modern community. More and more, we as a society are dependent on the automobile. The relationship of transportation and land development is very complex and reciprocal. Land Use patterns affect travel decisions and travel decisions affect development of land use patterns.

Regional Land Use

The Countywide Planning & Development Office prepares and maintains an *Annual Report of Socio-Economic Characteristics*. This annual report include such things as population, dwelling units, employment, and income. The data is collected annually from the local municipal and county building permit data, Governor's Office of Planning and Budget, Utah State Tax Commission, and Department of Workforce Services. The census year acts as a base year count for the population and dwelling units information.

Data from this socio-economic report can provide an understanding of land use for the region. A statistical method was developed to determine land use patterns based on population and employment growth rate data derived from the above mentioned socio-economic characteristics.

Generalized land use maps can be developed based on population or employment density rates. These population and employment densities can be determined from the 150 traffic zones making up Cache County. Where population densities exceeded employment, these were divided into four land use categories. Where employment was greater than population, these were divided into three land use categories. The land use maps use a generalized definition for land use. **TABLE T-5** shows the land use categories and the density formula used for each category.

TABLE T-5 LAND USE CATEGORIES

Category	Density
Residential, High Density	Population > Employment; 15+ Persons/acre
Residential, Medium Density	Population > Employment; 6 - 15 Persons/acre
Residential, Low Density	Population > Employment; 0.5 - 6 Persons/acre
Vacant, or Open	0 - 0.5 Person/acre or 0 - 1 job/acre
Commercial/Industrial, Low Density	Employment > Population; 1- 7 jobs/acre
Commercial/Industrial, High Density	Employment > Population; 7+ jobs/acre

Source: CPDO; Regional Planning Projects, 1997

These categories are based on population and employment densities. It would be impossible to identify detailed land use types, however, these provide a fair understanding as to the location and type of development in terms of residential or commercial/industrial. **TABLE T-6** shows the percentage of density type within Cache County.

TABLE T-6 PERCENTAGE OF DENSITY TYPE

Category	Logan Urbanized Area	Non Urbanized Area	Cache County Total
Residential, High Density			
1995	64	0	64
2020	1,644	0	1,644
Residential, Medium Density			
1995	2,141	0	2,141
2020	2,095	0	2,095
Residential, Low Density			
1995	14,013	4,869	18,882
2020	19,122	4,869	23,991
Vacant, or Open Space			
1995	34,969	693,201	728,170
2020	27,352	693,201	720,553
Com/Industrial, Low Density			
1995	818	0	818
2020	1,375	0	1,375
Com/Industrial, High Density			
1995	1,286	0	1,286
2020	1,702	0	1,702

Source: CPDO; Regional Planning Projection, 1997

Based on the above information, the Logan Urbanized Area will experience most of the growth for Cache County over the next twenty five years. Much of the non urbanized areas of Cache County will remain undeveloped by 2020. This is primarily due to the lack of urban services within these areas except within individual municipalities or some type of development constraint caused by the geomorphology of Cache Valley. **MAPS T-3 and T-4** show the 1995 and projected 2020 population and employment densities for the Log an Urbanized Area.

SOCIO-ECONOMIC ISSUE STATEMENT

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MAP T-3
1995 POPULATION/EMPLOYMENT DENSITIES FOR CACHE COUNTY

BACK 1995 POPULATION/EMPLOYMENT DENSITIES FOR CACHE COUNTY

MAP T-4
2020 POPULATION/EMPLOYMENT DENSITIES FOR CACHE COUNTY

BACK 2020 POPULATION/EMPLOYMENT DENSITIES

ENVIRONMENTAL ISSUES

The development of a transportation system that provides for the needs of the citizens are affected by many factors. Paramount are the existing physical or the environmental issues of a region. These issues include air quality, noise, hydrology, soils, and other.

AIR QUALITY

The Clean Air Act Amendments (CAA) of 1990, over earlier Clean Air Acts, were prompted in part by the fact that increasing numbers of people in the United States were living in areas designated as non-attainment for one or more pollutants for which National Ambient Air Quality Standards (NAAQS) have been previously set (criteria pollutants) and the continuing concern about the health effects of air pollutant on people. The EPA estimates that 86.4 million Americans reside in non-attainment areas for any NAAQS.

There are six criteria pollutants addressed in the CAA of 1990. A list of the health effects of these criteria pollutants are included in the Appendix. **Table T-7** below list the six criteria pollutants of the Clean Air Acts Amendments of 1990 and the National Ambient Air Quality Standards (NAAQS). These national ambient air quality standards have been established to protect public health and welfare. The health effects of the different air pollutants are included the appendix.

TABLE T-7 NATIONAL AMBIENT AIR QUALITY STANDARDS (NAAQS)

Criteria Pollutants	Federal Standards			Allowed Excedences	Problem Times
	ppm	ug/m ³	Period		
Ozone	0.12	235	1-hour	3 times in 3 years	Summer
Carbon Monoxide	9	10,000	8-hour	1 time in 1 year	Winter
	35	40,000	1-hour	1 time in 1 year	
Particulates (PM10)	--	60	Ann. Avg.	Mean	Winter
	--	150	24-hour	1 time in 1 year	
Oxide of Nitrogen	0.05	100	Ann. Avg.	Mean	Winter
Sulfur Dioxide	.03	80	Ann. Avg.	Mean	Winter
	0.14	365	24-hour	1 time in 1 year	
	--	(1300)	3-hour	1 time in 1 year	
Lead	--	1.5	3-month	Mean	Winter

Source: Bear River Health Department

The Bear River Health Department is currently working with the Utah State Department of Environmental Quality to maintain an air quality monitoring station within Cache County. This monitoring station has been in operation since June of 1995. The data monitored includes Particulate Matter (PM10), Carbon Monoxide (CO), and Ozone (O3). The air quality monitoring station is located in Logan City at approximately 50 West 200 North. The following three figures show the historical data collected for each of the three of the criteria pollutants. These three pollutants are more identified as transportation related pollutants. The other three criteria pollutants are associated more with industry and heavy manufacturing uses. The figures show the monthly monitored levels versus the Federal Ambient Air Quality Standards for Ozone(O3), Carbon Monoxide(CO), and Particulate Matter(PM10)

FIGURE T-2 CACHE COUNTY - OZONE (O₃) LEVELS 1995 - 2000

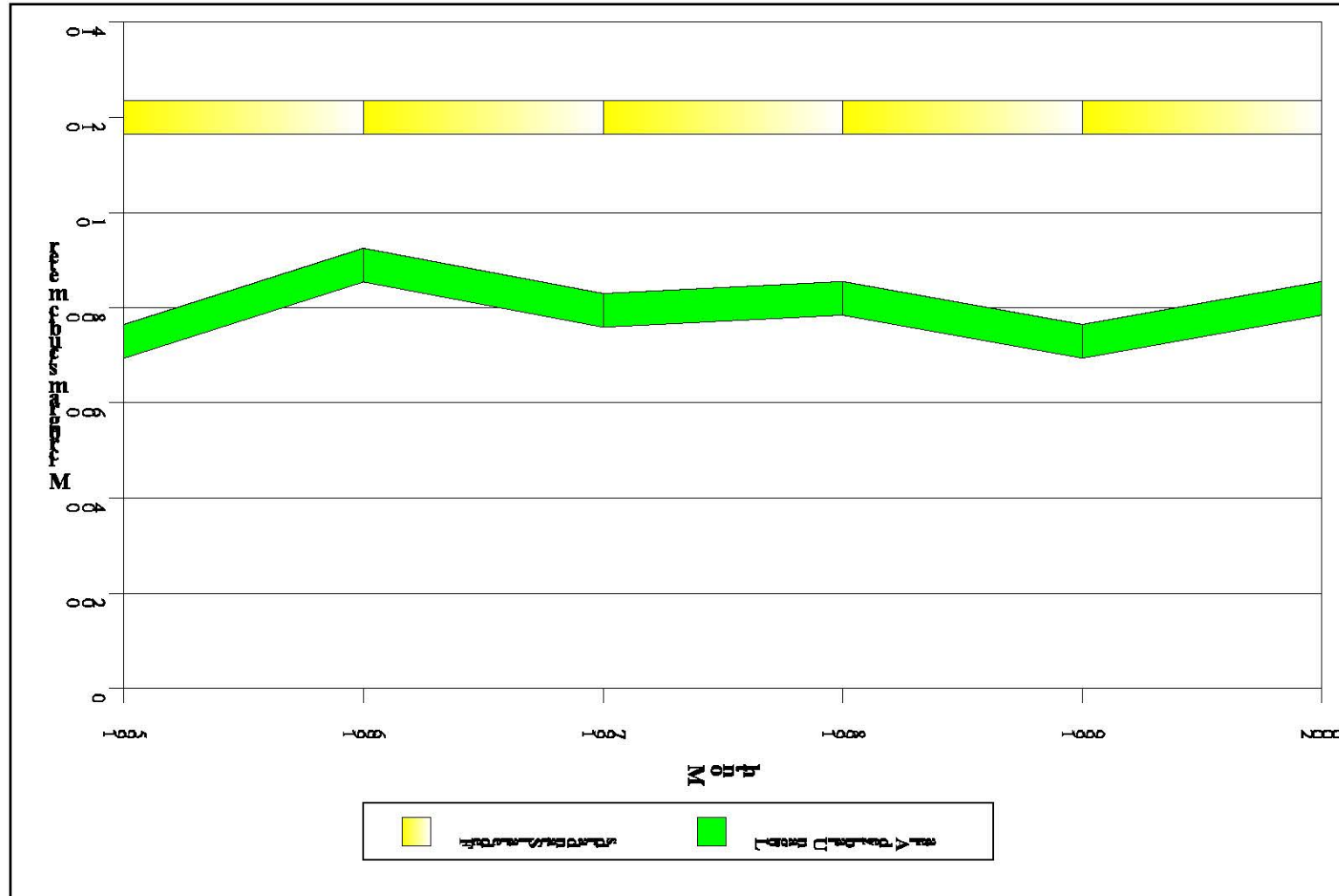


FIGURE T-3 CACHE COUNTY - CARBON MONOXIDE (CO) LEVELS 1995 - 2000

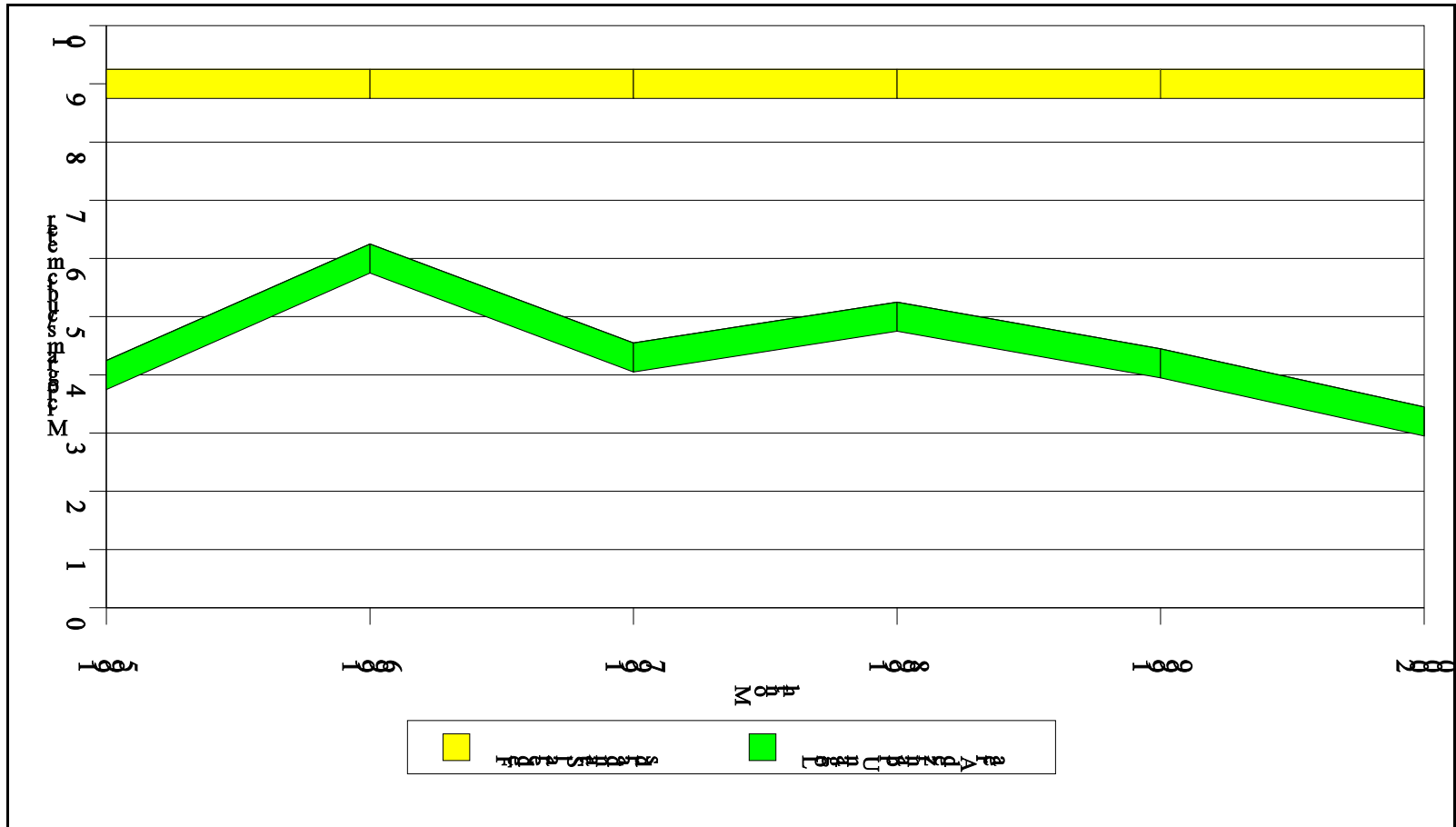


FIGURE T-4 CACHE COUNTY - PARTICULATE MATTER (PM-10) LEVELS 1995 - 2000



These figures show that Cache County currently has not violated a national ambient air quality standards for any of the criteria pollutants. This means that Cache County still remains defined as an attainment area for air quality. This is not to say, however, that there are not air quality issues for the County. Air pollutants can come from a number of different sources. These sources include vehicles, industry, wood burning stoves, lawn mowers, and the backyard barbeque. Cache Valley is particularly vulnerable to air quality problems due to frequent temperature inversions during fair weather high pressure periods in the winter months which trap pollutants near the valley floor.

Over half of the pollutants in the air today come primarily from vehicles. The number of vehicles nationally have remained fairly constant, but the amount of vehicle miles traveled has been increasing at a much faster rate. This trend is the same for Cache County. As **Table T-8** shows the percentage change for the number of vehicles registered in 1990 to 1994 is 14.05 percent while the percentage change for the vehicle miles travels is 30.73 percent. This trend is consistent with national trends of VMT over the number of vehicles. Urban sprawl is one of the leading factors causing this problem. If this trend continues in Cache County, the overall air quality will suffer, and the ultimate conclusion is for Cache County will become a designated non-attainment area unless there are efforts to curb the growing air quality problems.

TABLE T-8 CACHE COUNTY VEHICLES AND VMT TRENDS 1990 TO 1994

Jurisdiction	1990 Vehicles	1994 Vehicles	Percentage Change	1990 VMT	1994 VMT	Percentage Change
Amalga	127	407	220.47%	2,315	4,046	74.77%
Clarkston	467	511	9.42%	1,290	1,449	13.33%
Cornish	144	175	21.53%	4,154	5,195	25.06%
Hyde Park	1,466	1,777	21.21%	40,798	51,598	26.47%
Hyrum	3,757	4,453	18.53%	25,951	30,814	18.74%
Lewiston	1,111	1,256	13.05%	24,349	34,066	39.91%
Logan	20,210	24,059	19.05%	396,683	508,616	28.22%
Mendon	653	820	25.57%	4,568	5,936	29.95%
Millville	834	1,051	26.02%	5,184	6,250	20.56%
Newton	563	630	11.90%	1,925	2,374	23.32%
Nibley	912	1,155	26.64%	15,923	25,975	63.13%
North Logan	2,369	2,296	-3.08%	88,053	108,654	23.40%
Paradise	664	863	29.97%	5,296	5,798	9.48%
Providence	2,710	2,836	4.65%	16,666	21,724	30.35%
Richmond	1,422	1,655	16.39%	28,847	35,492	23.04%
River Heights	680	632	-7.06%	7,043	8,699	23.51%
Smithfield	4,052	4,901	20.95%	72,239	88,847	22.99%
Trenton	369	417	13.01%	5,099	7,828	53.52%
Wellsville	1,725	2,292	32.87%	33,883	42,686	25.98%
Unincorporated	2,870	2,061	-29.23%	503,607	682,401	35.50%
Cache County	47,787	54,502	14.05%	1,283,873	1,678,448	30.73%

Source: Utah Department of Transportation

The Clean Air Act of 1990 requires that all areas in violation for the National Ambient Air Quality Standards implement reasonably available transportation-related control measures in order to meet the standards. These control measures cover a broad range of strategies, including the Federal Motor Vehicle Control Program (FMVCP), Inspection and Maintenance (I/M) programs, and Traffic Control

Measures (TCM).

NOISE

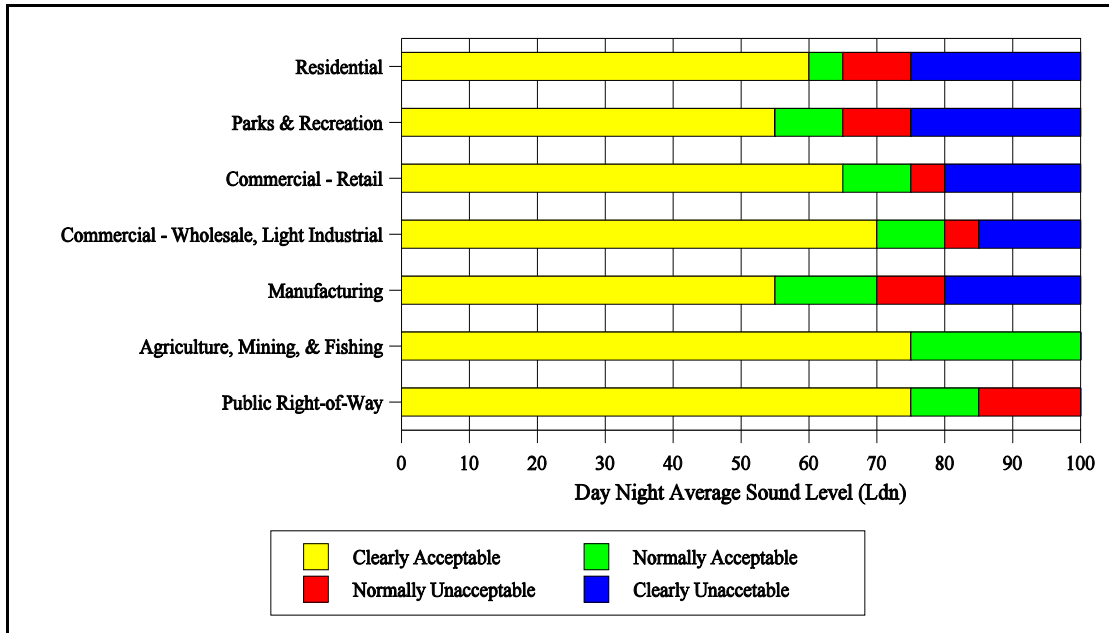
The air around us is constantly filled with sounds, yet most of us would probably not say we are surrounded by noise. What then is the difference between ordinary sound and what we call noise? The traditional definition of noise is “unwanted sound”. Sound becomes unwanted when it either interferes with our normal activities such as sleeping, conversation or recreation, when it causes actual physical harm such as hearing loss or has adverse effects on mental health. As we have become a more urbanized country and as technology has advanced, the level of sound in our environment has reached the point when it sometimes does cause interference and does cause physical and psychological harm.

The main contributors to a community’s noise problems are transportation sources such as highways, railroads and airports. These sources are the most pervasive and continuing of the noise sources within the community. Of course, at any given site, there may be other noise sources which add to the problems, such as jack-hammers at a construction site. But in general, and for the purposes of the Transportation Element, the main concern is with the transportation sources.

The dynamics of a noise problem are based on the relationship between the noise source, the person or place exposed to the noise (receiver) and the path the noise will travel from source to receiver. The source generates a given amount of noise which travel along the path and arrives at the receiver. The amount of noise will be reduced to some extent as a result of how long that path is or whether there are any barriers along the path. The severity of the impact on the receiver is a function of what type of activity is taking place, whether it is indoors or outdoors, and what type of building it is in if the activity is indoors. Figure T-?? shows some basic land use compatibility guidelines. The figure below shows different land use types and sound level guideline recommendations for each land use type. The noise levels are shown in the Day Night Average Sound Level System, abbreviated as DNL and symbolized mathematically as L_{dn} .

The impact of noise can be altered or mitigated by changing the characteristics of any of the three elements: source, path or receiver. The ideal solution to a potential problem is to reduce the noise being produced by the source. The best solution available to the community, however, is to make sure that noise sensitive uses are located where they will not be exposed to high noise levels. The next best approach to mitigating noise impact is to attempt to reduce the amount of noise that reaches the receiver. This can be accomplished through the use of barriers such as walls or earthen berms, or combinations of both, along the noise path. If the use of barriers is not possible, then the only alternative available is to provide noise reduction measures in any structures associated with the activity so that at least the interior spaces are not exposed to high noise levels. **Figure T-5** on the following page shows recommended land use compatibility guidelines from the US Department of Housing and Urban Development’s *The Noise Guidebook*

FIGURE T-5 LAND USE COMPATIBILITY GUIDELINES



Source: U.S. Department of Housing and Urban Development

NATURAL FEATURES

The most important environmental factors are those dealing with natural features. From an environmental standpoint the primary physical constraints deal with issues associated with water. These include water resources, wetlands areas, and flood plain areas. There is a detailed discussion of each of these natural features included as part of the Land Use Element of the Cache Countywide Comprehensive Plan. For the purpose of the Transportation Element a brief discussion of the issues associated with each of these natural features and possible question that should be taken into consideration of any project.

Water Resources

Water resources play an important role in nearly every community, as a source of drinking, as a recreational resource, as a source of water for irrigation, and as a fishery. Water resources can be divided into two subcategories: ground water and surface water. For discussion of the Transportation Element we will be more concerned about surface water and water quality.

Surface water can range from very large rivers and lakes to small ponds and streams. Urban development can, however, have a serious negative impact on water quality. Surface waters, chiefly rivers and large lakes, frequently suffer from the effects of pollution generated by factories, urban sewage systems, power plants and agricultural runoff.

While most water quality problems are due to effluents from sewerage treatment plants, sewer system

overflows and industrial waste outfalls, new commercial and residential development can have an adverse effect on surface water quality. The source of such pollution is from urban runoff, chiefly from impervious surfaces such as streets, parking lots and sidewalks from which oil and gasoline is carried by rain into surface water.

The following questions should also be asked when conducting the wetland screening:

- Are there visual or indications of water problems on or near the site?
- Will the project involve a substantial increase in impervious surface area, and, if so, have runoff measures been included in the design?

Wetland Areas

“Wetlands” refers to those areas that are inundated by surface or groundwater with a frequency sufficient to support and under normal circumstances does or would support a prevalence of vegetative or aquatic life that requires saturated or seasonally saturated soils conditions for growth and reproduction. Wetlands generally include swamps, marshes, bogs, and similar areas such as sloughs, potholes, wet meadows, river overflows, mud flats, and natural ponds.

Wetlands can assist man through groundwater filtering, storage, recharge, flood control, nurturing wildlife, including food sources such as water fowl and fish, water purification, oxygen production, recreational locations, and aesthetics. Urbanization has heavily impacted wetlands in the United States. It is estimated that from over a third to a half of the wetlands in the United States have been destroyed. In addition to filling, creation of pollution threatens additional wetlands. Federal policy recognizes that wetlands have unique and significant public values and calls for the protection of wetlands. The following should be taken into consideration:

- Avoid long and short-term adverse impacts associated with the destruction or modification of wetlands;
- Avoid direct or indirect support of new construction in wetlands;
- Minimize the destruction, loss or degradation of wetlands;
- Preserve and enhance the natural and beneficial values served by wetlands; and,
- Involve the public throughout the wetlands protection decision making process.
- Look for available alternatives to locating the project or activity in the wetland.
- Is the proposed project or activity in compliance with conditions set forth by the U.S. Army Corps of Engineers concerning permits for dredge and fill activity?

Flood plain Areas

The evaluation of a transportation project should consider both flood hazards and possible increased flood hazards and environmental impacts resulting from construction. Federal policy defines high flood risk areas (flood plains) as those subject to a one percent or greater statistical chance of flooding in a given year. Areas identified by the Federal Emergency Management Agency (FEMA) as having special flood hazards are defined in the Flood Hazard Boundary Maps or Flood Insurance Rate Maps. The Flood Zone A and V are referred to as the “100-year flood plain”.

Such areas are expected to flood at least once every one hundred years and are normally dry areas subject to partial or complete inundation due to overflow of inland waterways or accumulation of other

surface water. Typical flood plain areas include low land along rivers and streams, flat areas in which storm water accumulates due to clay soils, and ravine areas subject to flash floods.

Impacts of locating a transportation project in a flood plain may range from property damage to loss of life when a flood occurs. Even if a transportation project is not located in a flood plain, project construction may increase flood hazards elsewhere. For example, extensive paving may result in faster runoff and substantially increase water volumes being emptied in local rivers or lakes.

The following questions should be asked when conducting the initial flood hazard screening:

- Will the project be located in the 100-year flood plain?
- Will the project change the 100-year flood plain, or affect the flood way? (The flood way is the portion of the flood plain that must be reserved in order to discharge the 100-year flood with cumulatively increasing the water surface elevation more than one foot at any point.)
- Are there available alternatives to locating the proposed project or activity in the flood plain?
- Is the proposed project or activity in compliance with conditions set forth by the U.S. Army Corps of Engineers concerning permits for dredge and fill activity?

Where these natural features cannot be avoided, the project or activity must be designed or modified so as to minimize the potential adverse impacts affecting water resources, wetland and flood plain areas. Restore and preserve the natural and beneficial values served by these natural features, and use measures which mitigate or reduce the risk of decreased water quality, flood loss, and loss of wetland areas. Mitigation must achieve protection of life, property, and of the natural and beneficial values of the natural features. **Map T-5** on the following page shows these natural features for the Cache Valley.

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MAP T-5
CACHE COUNTY PHYSICAL CONSTRAINTS MAP

BACK PAGE OF PHYSICAL CONSTRAINTS MAP

SOILS

The soils of Cache County are formed from the area's surfacial geology and are generally lake bottom sedimentary types which remained behind the receding waters of ancient Lake Bonneville. The soils play a very important part in the suitability for the development of roadways. **Table T-9** shows the road fill suitability by soil type. The ranking was developed from the USDA Soil Survey for the Cache

TABLE T-9 ROAD FILL SUITABILITY BY SOIL TYPE

Soil Type	Road Fill Suitability	Soil Type	Road Fill Suitability
Agassiz	slight	Layton	slight
Airport	moderate	Leatham	moderate
Ant Flat	severe	Lewiston	moderate
Avon	moderate	Logan	severe
Barfuss	moderate	Lucky Star	moderate
Battle Creek	severe	Maughan	moderate
Bickmore	slight	McMurdie	severe
Blackrock	moderate	Mendon	severe
Bradshaw	slight	Middle	slight
Cache	severe	Millville	moderate
Cardon	severe	Mult	moderate
Center Creek	severe	Munk	moderate
Clegg	slight	Nebeker	moderate
Cluff	slight	Nibley	severe
Collett	severe	Obray	severe
Collinston	moderate	Parleys	moderate
Crookston	moderate	Parlo	moderate
Crowshaw	moderate	Payson	severe
Curtis Creek	moderate	Picayune	moderate
Dagor	moderate	Poleline	moderate
Dateman	slight	Preston	slight
Datwyler	moderate	Provo	slight
Despain	moderate	Quinney	severe
Elwood	slight	Red Spur	moderate
Elzinga	slight	Richmond	slight
Fitzgerald	slight	Ricks	slight
Flygare	slight	Roshe Springs	moderate
Foxol	moderate	St. Mary	slight
Goring	severe	Salt Lake	severe
Green Canyon	moderate	Scave	moderate
Greenson	moderate	Scout	moderate
Hendricks	moderate	Shay	severe
Hiibner	severe	Sheep Creek	moderate
Hillfield	moderate	Smarts	moderate
Hoskin	slight	Steed	moderate
Hyrum	moderate	Sterling	slight
Jordan	severe	Timpanogos	moderate
Kidman	moderate	Trenton	severe
Kirkham	moderate	Wheelon	moderate
Lakewin	slight	Winn	moderate
LaPlatta	severe	Wood's Cross	severe
Lasil	severe	Yeats Hollow	moderate

Source: USDA Soil Survey, Cache Valley Area, Utah, 1974.

Valley Area. The following criteria were used to rank the soil types suitability for road fill.

- Slight - few existing limitations can be easily overcome
- Moderate - limitations can be overcome by careful planning and sound management
- Severe - limitations are serious enough to make use questionable and above average planning and management are required

ENVIRONMENTAL ISSUE STATEMENT

The environment issues play a very important role in development of roads as part of the transportation system.

EXISTING TRANSPORTATION FACILITIES

The existing transportation facilities within the jurisdictional boundaries of Cache County are divided into three separate groupings. These groupings are based on the ownership and maintenance responsibility for the public right-of-way. These different transportation facility's makeup the transportation networks within Cache County.

The different roads and public right-of-ways are under jurisdiction of different public entities, but they should function as a single region transportation network. This multiple ownership of roads complicates the planning process for managing the entire transportation system. The coordination of a region transportation system requires all jurisdictions look beyond their own jurisdictional boundaries to understand the needs of the system. The transportation network is broken into a set of road classifications. **Table T-10** below provides a description of each class of road, with ownership and funding sources for maintaining these different roads.

TABLE T-10 ROAD CLASS AND OWNERSHIP

TYPE	OWNERSHIP
Class A	Roads under the jurisdiction and control of the Utah Department of Transportation. These roads are constructed and maintained by UDOT from funds made available for that purpose.
Class B	Roads located in the unincorporated areas under the jurisdiction and control of Cache County. These roads are constructed and maintained by the County Road Department.
Class C	Roads located in the incorporated municipalities of Cache County. They are under the jurisdiction and control of each community. These roads are constructed and maintained by each of the different communities.
Class D	Any roadway, or other land surface route that has been or is established for use by the public for vehicles with four or more wheels that are neither a Class A, Class B, or Class C road.

Source: Utah Department of Transportation

The Class B & C road system is a program established by the Utah Legislature as a means of providing assistance to counties and incorporated municipalities for the improvement of roads and streets throughout the State. The purpose of B & C road funds is intended for construction and maintenance of county roads and municipal streets. The B & C road funds come from 25 percent highway user taxes and 1/16 percent of the state sales tax which are allocated to these funds. These funds are distributed based on a formula of population and a weighted ratio of road mileage.

STATE ROADS AND HIGHWAYS SYSTEM

State roads and highways are owned and maintained by the State of Utah through the Utah Department of Transportation (UDOT). There is a number of state and federally owned transportation facilities located throughout Cache County. The State roads and highway's system provide the primary road network. The primary function of a road system is to move traffic from City to City, and County to County, and State to State. **Table T-11** on the following page shows the Federal and State designated highways within Cache County. The table also has a description and functional classification for each of these roads. **Map T-6** graphically depicts the different state highways within Cache County.

TABLE T-11 FEDERAL AND STATE HIGHWAYS AND CLASSIFICATION

Highway	Description	Classification
US Highway 89/91	From Box Elder County line through Wellsville Canyon northerly to 400 North in Logan	Principal Arterial
US Highway 91	From 400 North in Logan northerly via North Logan, Hyde Park, and Smithfield to Utah-Idaho state line near Franklin, Idaho	Principal Arterial
US Highway 89	From Main Street at 400 North in Logan, via Logan Canyon to the Rich County line	Principal Arterial
State Highway 23	From US Highway 89/91 south of Wellsville northerly via Wellsville, Mendon, Petersboro, Newton, and Cornish to the Utah-Idaho state line near Weston, Idaho	Major Collector
State Highway 30	From the Box Elder County Line to US Highway 89/91 at Main Street at 200 North in Logan	Minor Arterial
State Highway 61	From Route 23 at Cornish easterly through Lewiston to Route 91 at Webster Junction	Major Collector
State Highway 101	From Wellsville on Route easterly via Hyrum to the Hardware Ranch with a stub connection to the Visitor's center and parking area	Major Collector
State Highway 142	From Route 23 near Newton to Clarkston; thence easterly via Trenton to US highway 91	Major Collector
State Highway 165	From Paradise northerly via Hyrum and Nibley to US Highway 89/91 in Logan	Minor Arterial
State Highway 200	From Route 61 in Lewiston northerly through to the Utah-Idaho state line near Preston, Idaho	Major Collector
State Highway 218	State Highway 23 East of Newton easterly to US Highway 91 in Smithfield	Major Collector
State Highway 237	From 700 North and 800 East in Logan Northerly to Hyde Park; thence west to US Highway 91	Minor Arterial
State Highway 238	From Route 165 East to Millville; thence northerly via Providence and River Heights to US Highway 89/91 in Logan	Minor Arterial
State Highway 239	From US Highway 91 East coincident with 1400 North to State Highway 237	Minor Arterial
State Highway 243	From US Highway 89 in Logan Canyon to Beaver Mountain Ski Resort	Major Collector
State Highway 288	From US Highway 89 at 1200 East in Logan, Utah State University, via 1200 East and 1000 North to State Highway 237	Urban Collector

MAP T-6
STATE FUNCTIONAL CLASSIFICATION SYSTEM

BACK FUNCTIONAL CLASS MAP

State Transportation Improvement Program (STIP)

The Utah Department of Transportation has developed a set of projects for the State Highways within Cache County. These projects are part of the State Transportation Improvement Program (STIP). The STIP is developed through the coordinated efforts of the Utah Department of Transportation, metropolitan planning organizations, federal agencies, transportation providers, local governments, citizens and other interested parties. The projects are funded and programed to be developed over a number of years based on the available money. In addition to the funded projects there is also a list of unfunded needs for the State Highway System. The funded projects needs for Cache County are listed below in **Table T-12**.

TABLE T-12 STATE HIGHWAY PROJECTS (1999 TO 2004)

Location	Concept	Year	Cost
Smithfield Canal NE side (North Logan)	Bridge replacement	1999	\$ 350,000
Cache Valley Corridor	Logan Range Plan	1999	500,000
Regional Ride Share Program	Program development	1999	8,000
Logan Pedestrian/Bike Path	New construction	1999	450,000
Logan Signal Coordination	Coordinate signals	2000	500,000
Logan Canyon, Tony Grove to Franklin Basin	Recon & replace Upper Twin Bridge	2000	8,450,000
1000 East, Mountain Road to 200 North	Road improvement	2000	744,000
Center Street, Logan	Roadway improvements	2000	386,142
Smithfield City Limits to Idaho State Line	Preliminary engineering	2000	500,000
SR 165, Hyrum to Nibley	Reconstruct, widen to four lanes	2002	4,200,00
Logan Canyon, Tony Grove to Franklin Basin	Reconstruction	2002	2,500,00
Cache Valley Corridor	Preliminary engineering	2002	500,000
Logan Canyon	Preliminary Engineering	CD*	1,000,000
SR-30, 1200 West to Main Street, Logan	Reconstruct to 40' width	CD	8,000,000
SR-30, 1200 West Logan to SR 23	Widening & resurfacing	CD	14,000,000
Logan River Bridge (Logan Canyon)	Bridge replacement (D674)	CD	1,000,000
Smithfield City Limits to Idaho State Line	Reconstruct & widen to 4 Lanes	CD	29,000,000
Cache Valley Corridor	Preliminary engineering	CD	8,156,250
Logan Canyon	Reconstruction & widen	CD	27,000,000

CD* - Concept Development

Source: 1999 STIP and District 1, Utah Department of Transportation

COUNTY ROAD SYSTEM

The county road's system is owned or maintained by Cache County within the unincorporated areas of the county. This system provides some of the same functions as the state highways by providing access from city to city. However, the county road system is secondary to the state highway's road system. The county road system also provides access to the individual parcels of the unincorporated areas of Cache County. This is the primary function for the county road system. Unlike the State Highway system, the county road system is made up of two types of road right-of-ways, dedicated and right-of-ways by right or use. Dedicated road right-of-ways are held in direct ownership by Cache County and road right-of-way by use or right are not owned directly by the County. They are, however, still public right-of-ways that have been used for many years by the public and cannot be closed to public access.

Cache County uses the road priority classification system for all of its road right-of-ways. This road priority system was first used to determine which roads were to be snow plowed first. Over the years it has become away to identify and classify the county road system. **Table T-13** shows the breakdown of the Cache County road priority classification system and **Map T-7** graphically depicts the county roads and their priority classification system.

TABLE T-13 CACHE COUNTY ROAD PRIORITY CLASSIFICATION SYSTEM

Road Priority	Definition
1 ST Priority	County roads that have mail and bus routes. Most of these roads are paved and receive first priority to be snow plowed.
2 ND Priority	These roads are snow plowed as needed. There is no mail or bus service to these roads.
3 RD Priority	These roads are snow plowed as needed. These roads primarily are farm roads or animal feed lot access roads.
4 TH Priority	These roads receive no services of any type, except for annual blading as required by the UDOT for being counted as a Class D road

Source: Cache County Road Department.

The County maintains approximately 460 miles of roads. The surface conditions of these roads range from paved to dirt roads. **TABLE T-14** below shows the different surface types and compares 1990 and 1996 road mileages by surface type.

TABLE T-14 CACHE COUNTY ROAD MILEAGE BY SURFACE TYPE

Surface Type	1990 Mileage	1996 Mileage	Percent Change
Paved	107.67	150.41	39.7%
Gravel	225.36	261.59	16.1%
Other (Dirt)	106.72	47.13	-56.8%
Total	439.75	459.15	4.4%

Source: Cache County Road Department.

The amount of paved roads has increased about 40 percent and gravel roads have also increased about 16 percent since 1990. However, the mileage of the other roads have declined 57 percent for the same time period. The definitions used for these road surface types are the following:

- A paved road is a road with a concrete or bituminous surface. The minimum requirement is a chip seal over a gravel surface;
- A gravel road is a road with an improved surface, graded and drained by a transverse drainage system to prevent serious impairment of the road by surface water. A gravel road has a wearing surface made of gravel, broken stone, slag, iron ore, shale, or other material which is coarser than sand.
- Other roads include the remainder of eligible roads which do not meet the definition of paved or gravel.

MAP T-7
FRONT COUNTY PRIORITY MAP

BACK OF COUNTY PRIORITY MAP

County Road Development Priorities

Cache County's current emphasis with the County's transportation network is on maintenance of the existing system. There are no new plans for development of new roads to the current transportation network. Much of the road departments current budget is committed to maintaining the existing facilities with some limited upgrading of existing roads but no development of new roadways.

Cache County has developed a set of road priorities for the County. However, these priorities are based on the making of improvements to the State Highway system. These road priorities are included below in **TABLE T-15**.

TABLE T-15 CACHE COUNTY ROAD PRIORITIES

Priority	Project
1	Improvements to US Highway 89 (Logan Canyon)
2	Cache Valley Corridor
3	Improvements to US Highway 91(Smithfield to Utah/Idaho Border)
4	Improvements to SR-165 (Nibley to Hyrum)
5	Improvements to SR-30 (Logan to Cache/Box Elder County Line)

Cache County Roads Special Service District

In 1989 Cache County created a Special Service District for the purpose of constructing, repairing and maintaining roads within the District. The boundary of the district includes all of the unincorporated areas of Cache County. The District is controlled by an administrative board of 7 members and are appointed by the County Executive and Council.

The District currently has no power to levy a tax or issue bonds payable from taxes without the approval of the Cache County Council. However, the District does receive limited funding from the Utah State Mineral Lease Account. This funding amounts to approximately \$20,000 a year. The Board of the Special Service District holds a meeting one a year and gives direction to the County's Road Department on work projects for each year.

MUNICIPAL ROAD SYSTEM

The municipal road system is made up of those roads owned and maintained by each individual municipal jurisdictions. This road system provides for access to property within the existing municipality and connection to adjoining jurisdictions. The municipal road systems are very complex and their interrelationship within the region system is very important for the planning of a regional transportation system for Cache County.

Municipal Road Priorities

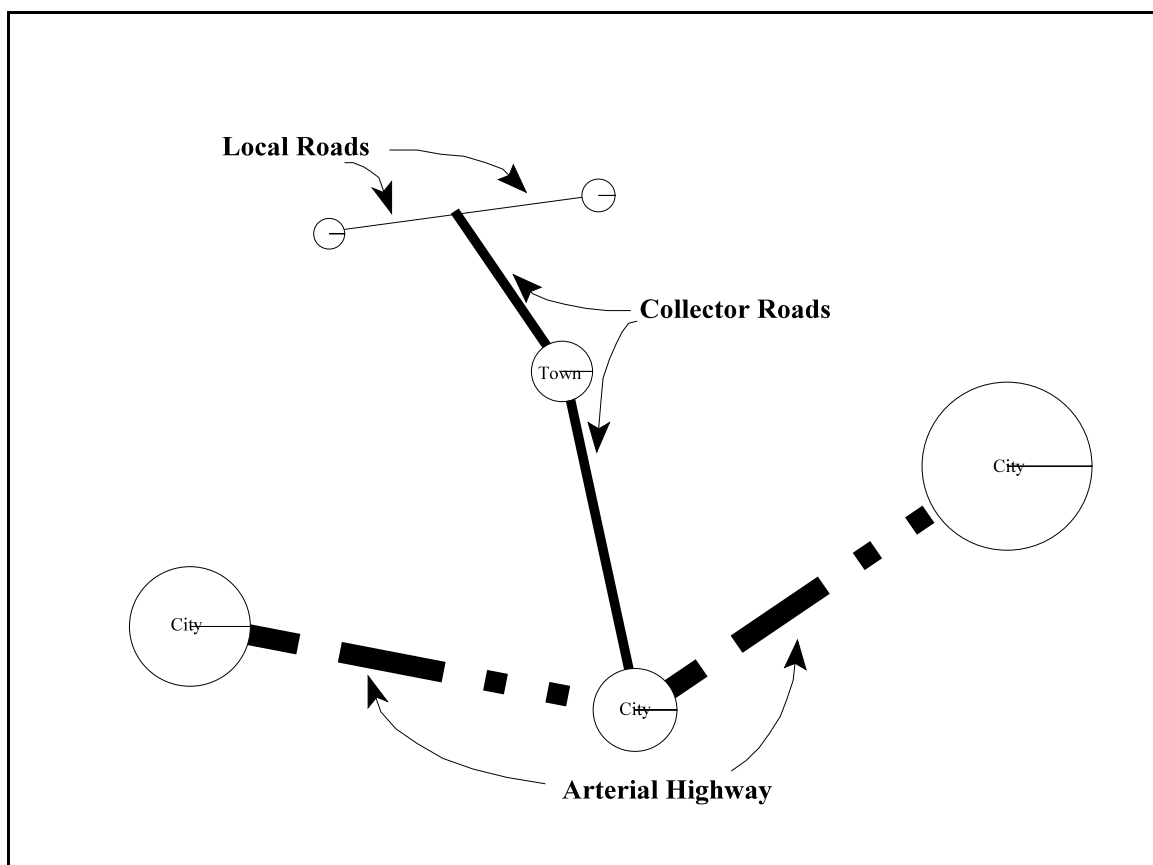
Each municipality will have their own set of priorities for road projects within their community. It is

important that these priorities be identified and mapped. Nine of the 19 incorporated communities of Cache County and the County make up the Cache Metropolitan Planning Organization (CMPO). The CMPO is responsible for transportation planning within the Logan Urbanized Area. A more detailed discussion of this organization and its road priorities are included in a separate chapter of this element.

FUNCTIONAL CLASSIFICATION SYSTEM

The transportation system within the County may be further defined based on the purpose or function of each road type. The functional classification system is a process by which streets and highways are grouped into classes, or systems, according to the character or level of service they are intended to provide. This process recognizes that individual roads and highways do not serve travel demands independently. Rather, most travel involves movement through a network of roads and highways. Functional classification defines the nature of this channelization process defining the part that particular road or street should play in serving the flow of trips through a road and highway network. **Figure T-6** is a graphical illustration of a conceptual functional classification network.

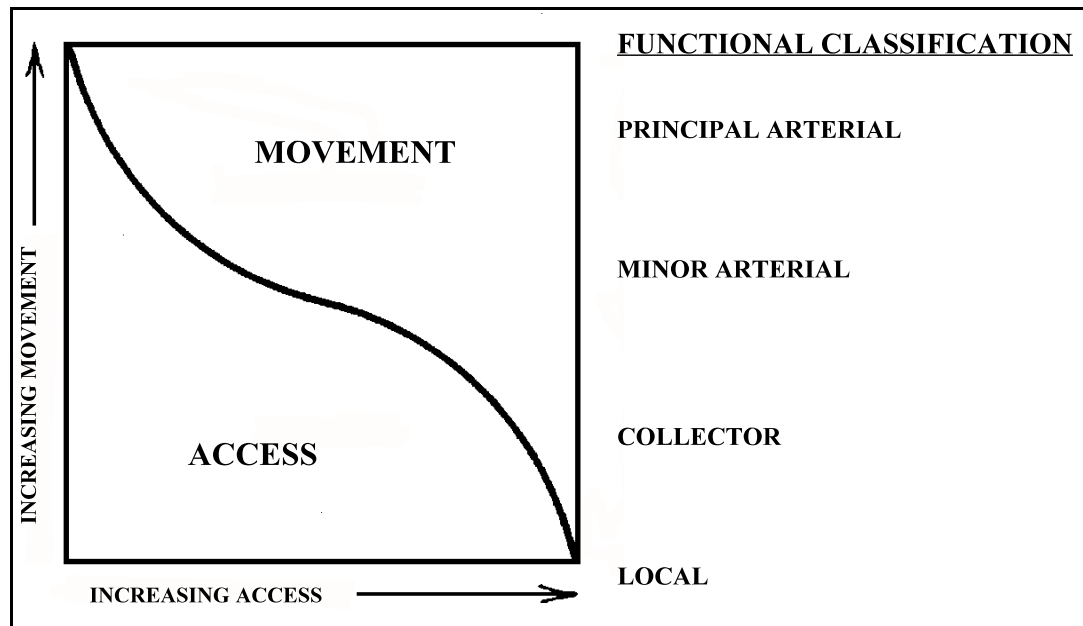
FIGURE T-6 FUNCTIONAL CLASSIFICATION NETWORK



Source: US DOT, Federal Highway Administration, 1989

A functional classification network provides a dual role in providing (1) access to property, and (2) travel mobility. For mobility, high speeds with few interruptions from intersections and driveways are desirable; for land access, low speeds are desirable. For example, a principal arterial which provides a high degree of mobility, provides limited access to preserve the high speed, high volume characteristic of the facility. If low speed access were provided on these roads, extremely hazardous conditions would be created. The opposite is true on local, low speed roads that must provide access to the adjacent land areas. The roads between these extremes are the most difficult to classify: those that must provide both mobility and land access. **Figure T-7** below graphically depicts the relationship of functionally classified systems in serving traffic mobility and land access.

FIGURE T-7 TRAFFIC MOBILITY AND LAND ACCESS



Source: US DOT, Federal Highway Administration, 1989

A tradeoff exists between vehicular access and vehicular movement as it relates to roadway function. Principal arterial streets, minor arterial streets, collector streets, and local streets have a decreasing emphasis on through traffic movement and a related increasing level of direct access. The streets which are designed to primarily facilitate through traffic flow include a variety of standards to allow for this function. Generally, these standards require more cost to implement and include; wider travel lanes, wider shoulders and clear zones, sophisticated signal timing, provisions for turn lanes, and related features.

A functional classification network provides a hierarchical system which is used to channelize traffic based on the specialized needs of meeting land access and mobility requirements. Local roads facilitate the land access functions. The arterial roads emphasize higher levels of mobility for through increased speed and movement. The collector roads offer compromise between both functions of mobility and land access.

A functional classification system divides the right-of-ways in four separate classifications. Each of these classifications has a well defined definition of the function and purpose of each of these right-of-ways. **TABLE T-16** below define the different right-of-way classifications and their definitions

TABLE T-16 RIGHT-OF-WAY FUNCTIONAL CLASSIFICATION

Definitions	
Major Arterial	The primary function of these roads is to move traffic to destinations within Cache County and to provide access in and out of the County. During the peak hours, these roads handle most of the traffic demand within the County. These roads should have limited access to adjacent land use.
Minor Arterial	Although the function of these streets is very similar to a major arterial, more compromises allow for access to adjacent lands. Generally, these streets are located on an 80' right-of-way and may connect to major arterial through intersections or directly through gradual transitions in major arterial.
Collector	These roads serve mainly internal neighborhood traffic movements or connect an area with the arterial street system. The intent is to handle through traffic for short distances. Collector streets provide the link to minor streets and are generally characterized by two lanes of traffic with an ample median/turning lane or by four lanes with no parking allowed on streets during peak hours. Right-of-way needs can be satisfied by 66 feet.
Local	The primary purpose of these streets is to provide good accessibility to land. Traffic volumes should be very low and traffic movement is slow. On-street parking combined with short lengths and reduced pavement width yields essentially a one lane street within a less than 60' right-of-way.

Source: US DOT, Federal Highway Administration, 1989

A functional classification system provides a method of identifying and standardizing roads right-of-ways. This system is currently being used by the State of Utah and many of the communities to identify their road systems. **MAP T-6** on page 33 shows the State functional class system for State Routes and Highway.

Projected Traffic 2020

The projected traffic on the countywide transportation system (state, county, & local) was developed by a travel demand model created as part of the Cache Valley Corridor Study. This travel demand model was developed by using the existing countywide transportation system and the addition of four projects expected to be developed over the next few years. The projects include the following:

- 1000 South (400 East to 250 East, Providence) - New Collector road
- 2500 North (US-91 to 200 East, No Logan) - New Collector road
- 1000 East (300 South to Summit Drive, Smithfield) - New Collector road
- SR-30 (SR-38 to SR-23, UDOT) - Rehab & Add Passing Lanes

The considerable growth assumed for Cache Valley, as well as growth in through traffic, is projected to lead to a significant deterioration in service levels on the roadways in the County, given the minimal nature of assumed improvements for the highway network over the 20 years. **Table T-17** below compares the total number of daily vehicle trips in the County, transitriders, average vehicle trip length, average vehicle trip time, average vehicle speed, and vehicle hours of delay for the existing 1995 and the 2020 projected transportation network.

TABLE T-17 COMPARISON OF 1995 AND 2020 TRAVEL CHARACTERISTICS

Measure	1995 Existing	2020 Projected	95-20 % Change
Total Vehicles	186,700	304,900	63.3 %
Number of Transit Riders	3,900	6,600	69.2 %
Avg. Trip Length (miles)	7.4	7.3	-1.4 %
Avg. Trip Time (minutes)	17.5	21.7	23.7 %
Avg. Speed (mph)	25.3	20.1	-20.4 %
Avg. Delay (minutes)	1.3	5.7	341.0 %

Source: Cache Valley Corridor Study

The impact of future growth in traffic will most heavily impact Highway 91 through and north of downtown Logan, and the north-south streets to the east of highway 91.

EXISTING TRANSPORTATION SYSTEM ISSUE STATEMENT

The impacts on the existing system will mostly be within the Logan Urbanized Area along Highway 91. The focus of any improvements should be within the Logan Urbanized area and along Highway 91. Projects in the Logan Urbanized area are under the jurisdictional planning of the Cache Metropolitan Planning Organization (CMPO). A detail discussion of the CMPO and its responsibility will take place next chapter of the Transportation Element.

CACHE METROPOLITAN PLANNING ORGANIZATION (CMPO)

Following the 1990 Census, the Logan area population surpassed the population plateau of 50,000 people. This led to the creation of a Logan Urbanized Area. **Map T-8** on the following page shows the Logan Urbanized Area. With the creation of an urbanized area comes the added responsibility of doing transportation planning by the local jurisdictions within the urbanized area. This is to be done through an organization called the Metropolitan Planning Organization. In an agreement executed on October 15, 1992 the Governor designated the Cache Metropolitan Planning Organization (CMPO) as the Metropolitan Planning Organization for the Logan Urbanized Area. The Transportation Equity Act for the 21st Century (TEA21) and the corresponding Federal Highway Administration and Federal Transit Administration regulations establish transportation planning responsibilities for the CMPO.

The Cache Metropolitan Planning Organization consists of two bodies, a legislative body and advisory committee. The legislative body, or the Executive Council, includes representatives from Cache County, Utah Department of Transportation (UDOT), Logan Transit District (LTD), as well as elected officials appointed by the mayors representing the communities of Nibley, Millville, Providence, River Heights, Logan, North Logan, Hyde Park, and Smithfield. The advisory committee is called Cache Technical Advisory Committee or CTAC advises the Executive Council on technical and other matters as assigned. The members of CTAC include local city engineers, planners, and public works officials from the same jurisdictions and agencies as the Executive Council.

LONG RANGE TRANSPORTATION PLAN

The Cache Metropolitan Planning Organization was created in 1992, the Executive Council and Technical Committee worked to develop the first Long Range Transportation Plan for the Logan Urbanized Area. The Organization adopted their first Long Range Transportation plan in 1997. The process used was a continuing, cooperative, and comprehensive transportation planning process which considered transportation modes and supports the metropolitan community development and social goals.

The Long Range Transportation Plan provides a list of transportation projects that were intended to complete the regional transportation system. Projects are included based on their a ranking using a set of valued criteria. However, there was little technical analysis used to justify their direct effect on the congestion and safety problems associated with the regions transportation system. One project as part of the first long range transportation plan was to do a study to identify the location for a new by-pass road around the Logan Urbanized Area. This project became the Cache Valley Corridor Study. This study has had a dramatic effect on how long range planning will be accomplished in the future.

CACHE VALLEY CORRIDOR STUDY

The Cache Valley Corridor Study is a multi-phase study conducted by the Cache Metropolitan Planning Organization and the Utah Department of Transportation along the Highway 89/91 corridor from Wellsville to the Utah-Idaho border. This study was done in cooperation with Logan City, Logan

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MAP T-8
URBANIZED AREA MAP

BACK OF URBANIZED AREA MAP

Transit District, Countywide Planning & Development Office, Federal Highway Administration, and Federal Transit Administration.

Phase 1, which was completed in May 1999, established the need for additional transportation improvements along the US 89/91 highway corridor and the feasibility of such improvements. This study looked at a full range of potential strategies which included the following:

- Coordinate Traffic Signals
- Intersection Improvements
- Message signs
- Ride share
- Expanded Transit Service
- Access Management along Corridor
- Widen/Restripe Existing Roadways
- New Corridor Development
- By-passing the Urban Area
- Capacity Improvements on the Existing Road System

The work done for the corridor study included data collection, development of a travel demand forecasting model, and traffic evaluation. From the data collected several alternative scenarios, representing differing levels of investment, were developed for study under projected 2020 land use conditions. **Table T-18** below is a comparison of the 2020 baseline data with the three different alternatives modeled.

TABLE T-18 COMPARISON OF 2020 BASELINE AND MODELED ALTERNATIVES

	Baseline	Alternative A	Alternative B	Alternative C
Total Vehicles	304,900	299,400	299,400	299,400
Number of Transit Riders	6,600	7,000	7,000	7,000
Average Trip Length (miles)	7.28	7.23	7.30	7.20
Average Trip Time (Minutes)	21.7	19.6	17.9	19.1
Average Speed (mph)	20.1	22.1	24.4	22.6
Average Delay (Minutes)	5.7	3.6	2.1	3.2

Source: Cache Valley Corridor Study

From the above data modeled Alternative B has the most impact on traffic in the year 2020. This alternative would cut the number of lane-miles operating at significant congestion levels almost in half while increasing the percentage of travel operating at free flow or no congestion levels to 85 percent. Alternative A would also reduce the total vehicle-hours of delay, and yield a 64 percent reduction over the entire network.

The corridor study also determined the development of a new by-pass highway west of the urban area would have little or no effect on traffic congestion now or in the future along highway 91 corridor. It is estimate that only 10 to 15 percent of the traffic passing through the urban area would

benefit from a new by-pass road. The remaining 85 percent of the traffic is coming to the urban area. The development of the proposed by-pass road would not be cost effective with the limited funds available to the area or beneficial in solving traffic congestion problems.

Phase 2 of the Cache Valley Corridor Study focused on updating the Cache Metropolitan Planning Organization's **2025 Long Range Transportation Plan** using the travel demand model created in phase 1, instead of continuing to study the need for a western by-pass road. The emphasis of phase 2 was to identify those transportation improvement projects that will have the most benefit to improving the traffic congestion problems in the Logan Urbanized Area over the next 25 years. The process of updating new long range transportation plan is currently in process. **Table T-19** shows the "Top 25" projects that were modeled as part of phase 2 of the corridor study.

TABLE T-19 CMPO "TOP 25" PROJECT LIST

Project		Cost*
12 -100 East (100 No. to 400 No.)	Logan	\$ 8.76
13 -100 West (400 So. to 1000 No.)	Logan	
18 -1400 North (1000 W. to 1200 E.)	Logan	10.72
19 -1700 South (200 W. Providence to Hwy 91 Logan)	Providence/Logan	8.23
28 -400 East (600 So. Logan to 100 No. Providence)	Logan/Providence	
34 -Main Street (400So to 1800 No) New Signal	Logan	1.15
35 -Main Street (300No to 1400 No) Remove parking/Restriping	Logan	0.01
44 -Main Street (400 No. to 1400 No.) Intersection Improvem ent.	Logan	0.57
63 -1000 North (1000 W. to 1200 E.)	Logan	9.75
64 -Parkway Rd (1400 E. Providence to SR-165 Providence)	Providence/Logan	7.56
65 -1000 West (Hwy89/91 to 2500 No.)	Logan	13.48
66 -200/400 (1500 W. to Main St.)	Logan	7.46
74 -3200 South (100 No. Providence to Hwy 89/91 Nibley)	Providence/Nibley	
79 -200 East (Millville to Smithfield)	Multi	54.20
83 -1000/1200 West (Hwy 89/91Logan to 3200 So. Nibley)	Logan/Nibley	7.07
84 -1800/1900 North (1000 W. to 1600 E.)	North Logan	16.95
88 -2500 North (1000 W. to 1800 E.)	North Logan	16.02
89 -3100 North (1800 E. to 400 W.)	North Logan	12.43
93 -400 East (SR-238) (600 So. River Heights to BLVD Logan)	River Heights/ Logan	
95 -600 South (400 E. to 1000 E.)	River Heights	3.59
101 -600 South (Main Str. To 1200 E.)	Smithfield	
109 -400 West (2500 No. Logan to 400 No. Smithfield)	Multi	26.11
118 -3700 North (Airport by-pass road)	Cache Co/Hyde Park	8.67
121 -Corridor Study (600 E./800E./1200 E.)	Multi	34.36
122 -Access Management (Raised median/driveway consolidation	Multi	2.51

* Estimated cost, in Millions of Dollars

Source: CMPO Metropolitan Long-Range Transportation Plan

These projects were evaluated and modeled to determine their impacts on improving the traffic congestion and safety problems within the Logan Urbanized Area. It has been determined that the CMPO will have about 48 million dollars over the next twenty five years. The list of "Top 25" projects amounted to approximately 250 million dollars. The long range transportation plan focused on determining the best projects.

FINANCIALLY CONSTRAINED HIGHWAY PROJECTS

In order to receive federal assistance for surface transportation projects within the urbanized area, the CMPO must have an adopted transportation plan for the urbanized area. The Transportation Equity Act for the 21st Century (TEA21) requires that the Long Range Transportation Plan for the region be a financially constrained plan. The purpose of this requirement is to ensure that the recommended improvements included in the Plan can be realistically implemented within a 20-year period based on the availability of potential funding sources to meet these needs.

TABLE T-20 CMPO FINAL ROADWAY PROJECT RANKING

Project	Project Cost*	Segment Cost*	Jurisdiction	Funded
TSM-1 - Main Str - Replace parking	\$ 0.27	\$ 0.27	Logan	
• (400No to 1400 No)				**
TSM-2 - Main Str. - Signal Coordination	\$ 1.00	\$ 1.00	Logan/North Logan	
• 800So to 1800 No				**
TSM-3 - Main Str. - Intersection Improvement	\$ 1.56	\$ 1.09	Logan	
• 400 North		0.47	Logan	**
• 1400 North	\$ 4.73			**
TSM-4 - Maine Str - Access Management		\$ 0.36	Logan	
• 800 South to 450 South		0.62	Logan	**
• 450 South to 50 South		0.45	Logan	**
• 50 South to 450 North		1.09	Logan	**
• 450 North to 850 North		2.21	Logan/No Logan	**
• 850 North to 1800 North	\$ 3.52			**
BUILD-1 - 100 East		\$ 1.87	Providence	
• 100 North (P) to 700 South		0.91	River Heights	
• 700 South to 450 South		0.72	Logan	
• 450 South to Center Street		0.02	Logan	**
• Center Street to 400 North	\$ 16.13			**
BUILD-2 - 200 East (South)		\$ 2.64	Millville	
• 200 South (M) to 500 North (M)		2.44	Providence	
• 500 North (M) to 300 South (P)		3.68	Providence	
• 300 South (P) to 700 South		2.10	River Heights	
• 700 South to 350 South		5.27	Logan	
• 350 South to 400 North	\$ 19.75			
BUILD-3 - 400 East		\$ 2.00	Millville	
• 200 South (M) to 500 North (M)		2.02	Providence	**
• 500 North (M) to 300 South (P)		4.04	Providence	**
• 300 South (P) to 700 South		3.34	River Heights	
• 700 South to 300 South		2.92	Logan	**
• 300 South to Center Street		5.43	Logan	**
• Center/400 E to 400 No/600 East	\$ 12.80			**
BUILD-4 - 400 West		\$ 6.58	No Logan/Hyde Park	
• 2500 North to 3700 North		4.65	Hyde Park	**
• 3700 North to 4600 North		1.57	Hyde	**
• 4600 North to 600 South (S)	\$ 22.89		Park/Smithfield	**
BUILD-5 - 200 East		\$ 5.71		
• 400 North to 1400 North		4.66	Logan	
• 1400 North to 2500 North		5.61	North Logan	
• 2500 North to 3700 North		2.65	No Logan/Hyde Park	**
• 3700 North to 4400 North		1.86	Hyde Park	**
• 4400 North to 600 South (S)		2.40	Hyde	**
• 600 South (S) to 100 North (S)	\$7.46		Park/Smithfield	**
BUILD-6 - 200/400 North		\$7.46	Smithfield	
• 200 N/1500 West to 400 No/Main			Logan	**

* Estimated cost, in Millions of Dollars

(S) - Smithfield, (P) - Providence, (M) - Millville

Source: CMPO Metropolitan Long-Range Transportation Plan

TRANSIT AND HIGHWAY ENHANCEMENT PROJECTS

Other type's of transportation projects that must be included in the Cache Metropolitan Planning Organization's long range transportation plan are transit and highway enhancement projects. These projects either have specific funding for type of projects under ISTEA, or are required to be included as part of the CMPO's Long Range Transportation Plan.

Transit Projects

The public transportation system and improvements to it must be included in the CMPO's Long Range Transportation plan. There is specific funding established under TEA21 for public transit, although other surface transportation funds may also be used for public transportation projects.

Enhancement Projects

Under TEA21, specific funding from the surface transportation funds was established for enhancement projects. Projects that can be eligible for funding include the following:

- Facilities for pedestrians and bicycles
- Acquisition of scenic easements and scenic or historic sites
- Scenic or historic highway programs
- Landscaping and scenic beautification
- Historic preservation
- Rehabilitation and operation of historic transportation building, structures, or facilities
- Preservation of abandoned railway corridors
- Control and removal of outdoor advertising
- Archaeological planning and research
- Mitigation of water pollution due to highway runoff

TABLE T-21 shows the transit and highway enhancement projects currently in the CMPO's Long Range Transportation Plan.

TABLE T-21 CMPO TRANSIT AND HIGHWAY ENHANCEMENT PROJECTS

Project ID	Project Description	Cost
E-1	Downtown Bicycle Parking	\$ 10,000
E-2	Pedestrian/Bicycle Path	50,000
T-3	Transit Transfer Facility	2,000,000
T-6	Transit Operating	33,600,000
T-10	Replace Elderly/Disabled Vehicles	1,650,000
T-2	Transit Maintenance Facility	3,000,000
T-4	Replacement Buses	7,000,000
T-5	Expanded Bus Fleet	4,100,000
T-8	AVL System	150,000
T-7	Transit Expanded Operating	5,270,000
T-9	Shelters	300,000

Source: CMPO Metropolitan Long-Range Transportation Plan

LONG RANGE PEDESTRIAN/BICYCLE PLAN

The Cache Metropolitan Planning Organization has also just completed a pedestrian/bicycle plan for the Logan Urbanized Area. This planning effort was to develop a comprehensive system of bikeways, pedestrian facilities, and non-motorized transportation policies that will serve existing and future users. The purpose of the pedestrian/bicycle plan is to provide direction for establishing and implementing bicycle and pedestrian projects, programs and policies for the Logan Urbanized Area.

The need for pedestrian and bicycle facilities were established in two ways: 1) Through a public involvement process and 2) with demographic analysis. At the heart of the plan is a single goal with supporting objectives. Each of these objectives are supported by projects and implementation policies to guide the implementation of the plan. The following is the goal developed for the Pedestrian/Bicycle Plan

Goal:

Increase Pedestrian Use And Bicycling as Safe And Efficient Transportation Modes

Objectives:

- Encourage and facilitate pedestrian activity.
- Designate a network of transportation facilities for bicyclists.
- Support programs for bicycle, pedestrian and driver education.
- Pursue diverse funding sources for the implementation of facilities and programs.
- Encourage and promote cooperation among local entities to initiate and continue implementation of the plan.

From this goal and its objectives a set of implementation projects were developed dealing in three areas which include projects for pedestrians, bicycles, and marketing and education. **Table T-22** list the short and long-term implementation recommendations from the **CMPO Long Range Pedestrian/Bicycle Plan**. Those project numbers coded with PBS are the short-term projects of 1 to 5 years. The projects coded with PBL are long-term projects of 5+ years.

TABLE T-22 SHORT & LONG RANGE TERM IMPLEMENTATION RECOMMENDATIONS

Project #	Project	Sponsor
PBS-01	Pedestrian/Bicycle Marketing and Education	Private Orgs/CMPO
PBS-02	Designated On-street Bicycle Route	Multi-Jurisdict/CMPO
PBS-03	Bicycle Racks on Transit Buses	City of Logan/CVTD
PBS-04	Bicycle Parking at Transit Stops	City of Logan/CVTD
PBS-05	CDB Pedestrian Enhancements	Cities/CMPO
PBS-06	CDB Bicycle Enhancements	Cities/CMPO
PBS-07	Sidewalk Connectivity Improvements	Cities/CMPO
PBS-08	Cache Valley Bonneville Shoreline Trail	Cities/Private
PBL-01	Explore/Advance Canal and Off-street Trail Enhancements	Cities/Private
PBL-02	Pedestrian/Bicycle Marketing and Education	Private Orgs/CMPO
PBL-03	Establish and Designate Recreational Gateways	Cities/CMPO
PBL-04	CDB Pedestrian Enhancements	Cities/CMPO
PBL-05	CDB Bicycle Enhancements	Cities/CMPO
PBL-06	Sidewalk Connectivity Improvements	Cities/CMPO

Source: CMPO Long Range Pedestrian/Bicycle Plan

CMPO ISSUE STATEMENT

The Cache Metropolitan Planning Organization has began phase 2 of the Cache Valley Corridor Study. As discussed earlier the emphasis of this phase will be to develop a new long range transportation plan for the Logan Urbanized Area based on the use of travel demand model to identify those projects that will have the most effect on improving the traffic problems in the Logan Urbanized Area. The long range transportation plan and programs which are developed by the CMPO should lead to the development of an integrated intermodal transportation system that facilitates the efficient, economic movement of people and goods of the Logan Urbanized Area.

INTERMODEL TRANSPORTATION SYSTEMS

A good transportation system provides for the economic health, convenience, and safety of the citizenry. The automobile, as discussed earlier, has effected the design and layout of our communities today. We know that automobiles are a primary source of air-pollution, and one of the largest contributors to urban sprawl. One of the major components of the *Transportation Equity Act for the 21st Century (TEA21)* places new emphasis on facilitating smooth intermodal connections throughout the transportation system.

An intermodel transportation system recognizes that the automobile is not the only form of transportation. There are other areas that should be given consideration as to their part of the total transportation system. These other areas include car and van pooling, mass transit, bicycling, railroads, air travel, and walking.

MODE OF TRAVEL

The methods by which individuals travel to their place of work are called the modes of travel. The use of different modes show the different methods that individuals use to travel to work. **Table T-23** shows the different modes of travel to places of work by the workers 16 years and older. The source of this data is from the *1990 Census Journey to Work* data.

Individuals will travel to different locations and for many different purposes. Some of these purposes of travel include work, shopping, personal business, school, and social/recreational. The methods by which individuals travel to these different locations or purposes are called the modes of travel. There is very little data available for the Cache County area based on the mode of travel except from *1990 Census Journey to Work* data. This data shows the different modes that individuals use to travel to work.

TABLE T-23 MODE OF TRAVEL (Worker 16 and older)

Mode of Travel	Cache County	%	Logan		Non Urban Areas	%
			Urbanized Area	% of Total		
Drove Alone	20,795	69.3	15,436	51.4	5,359	17.9
Car & Van Pool	5162	17.3	3506	11.7	1656	5.6
Transit	171	0.6	143	0.5	28	0.1
Motorcycle	137	0.5	75	0.2	62	0.2
Bicycle/Walked	2,068	6.9	1,730	5.8	328	1.1
Other	191	0.6	119	0.4	72	0.2
Work at Home	1,479	4.9	940	3.1	539	1.8
Total	30,003	100.0	21,959	73.2	8,044	26.8

Source: US Census Bureau; 1990 CTPP

The 1990 Census indicated that there were approximately 30,003 workers 16 years and older in Cache

County. The Logan Urbanized Area makeup 73.2 percent or about 21,959 of the workers 16 years and older. The non-urbanized areas of Cache County with 8,044 or 26.8 percent of all workers. The above table breaks down the mode of travel into five different modes of travel and those workers that worked out of their homes. The following is a discussion of each of those different areas.

Drove Alone

The national trend of driving alone is the number one form of commuting for individuals to their place of work. This is due primarily to the increasing ownership of private cars and increasing movement of the population from the central city to the suburban areas. This mode of travel use of vehicles is primarily known as a single occupant vehicle or SOV.

The increasing use of single occupant vehicles has and will continue to create problems for the planning and development of the regions transportation system. **Table T-8** on page 21 shows that the number of vehicles and vehicle miles traveled (VMT) is increasing and there is little evidence that this trend will be decreasing.

Driving alone is the largest mode of travel used by workers in Cache County. There are approximately 20,795 workers or 69.3 percent of all workers in Cache County who drive to work alone. Of these 51.4 percent or 15,436 of them live in the Logan Urbanized area, while 5,359 or 17.9 percent live in the non-urbanized area.

Carpooling

Carpooling first appeared on the national scene during the forties, when oil and rubber shortages dictated a more sparing use of private vehicles for personal transportation. After World War II, carpooling was quickly dropped as a national policy concern. Carpooling did not reappear until the mid-seventies, when oil crises, stimulated by the cartelization of the international oil market under the leadership of the Organization of Petroleum Exporting Countries (OPEC), renewed our national interest in alternatives to driving alone.

In Cache County carpooling is the second largest mode of travel for worker to reach their place of employment. There are approximately 5,162 workers who use some type of carpooling. Two-thirds of the workers or 3,506 individuals using carpooling live in the Logan Urbanized Area, and the remaining 1,656 workers live in the non-urban area of Cache County.

Carpooling is used by about 17.2 percent of all workers 16 years and older for Cache County. Nationally, this mode of travel is smaller at 13.4 percent. Historically, carpooling has been declining since the 1970s. This is primarily due to the low retail cost of gasoline and the increasing trend of expansion and disbursement of employment out into the suburban areas from the central city areas.

Park and Ride

The use of park and ride is a major part of carpooling. Park and ride occurs when an individual will travel to a location and leave their vehicle to carpool with another individual or a group to their final destination. Park and ride locations can either be a formal or an impromptu site. A formal park and ride site is a location where a park and ride lot has been developed for this specific purpose. An impromptu park and ride site can take many varied forms. These impromptu sites include open areas along right-of-ways, large parking lots in commercial centers, church parking lots, and any area that provide the most convenience for the individuals that carpool. **Table T-24** shows the park and ride lots and sites in Cache County.

TABLE T-24 PARK AND RIDE LOTS CACHE COUNTY

Sites	1981	Type of Parking	1998	Type of Parking
SR-91 & SR-23	4	Dirt Area on R/W	51	Paved P/R Lot (99)
SR-91 & SR-101	7	Roadway shoulder	0	Not Used
SR-91 & Greens Corner	11	R/W & Service Station	0	Not Used
SR-23 & SR-30, Petersboro	9	Dirt Area next to R/W	23	Dirt Area next to R/W
SR-30 & 600 West, Logan	17	Dirt Area next to R/W	70	Dirt Area next to R/W
Fred Meyer, Logan	19	Parking Lot	0	Parking Lot
SR-89 Smith's Food King	4	Parking Lot	0	Parking Lot
SR-30 & 1000 West, Logan	0	Dirt Area next to R/W	31	Dirt Area next to R/W
Total	71		175	

Source: UDOT Commuter Parking Survey, 1981

Nationally, the number of individuals that use carpooling has declined. However, in Cache County this trend seems to be just the opposite of the national trends. There is strong evidence of increased use of carpooling in Cache County. Based on the information in the table there is approximately a 138.7 percent increase in the number of individuals who are using park and ride.

The increase in the amount of individuals using park and ride is due to a number of major employers outside of the Cache County. Some of these major employers include Thiokol, Nucor Steel, Hill Air Force Base, and Autoliv. There are approximately 1,500 individuals employed by these firms commuting from the Cache Valley Area. These companies pay, in comparison to the local firms, very high wages for the region. These high wages will tend to offset the long commuting distances that individuals must travel for employment.

There are a number of impromptu park and ride sites. Of the 175 vehicles using park and ride 124 or 71 percent were located in an impromptu site. These are located along SR 30 at 600 and 1000 West in Logan and at the intersection SR-30 and SR-23 in Petersboro. Clearly there is a demand for a developed park and ride lot. The Utah Department of Transportation has programed and funded the development of a new park and ride lot on SR-30 at 1200 West in Logan. This park and ride lot will be developed as a paved lot with 123 stalls.

Transit

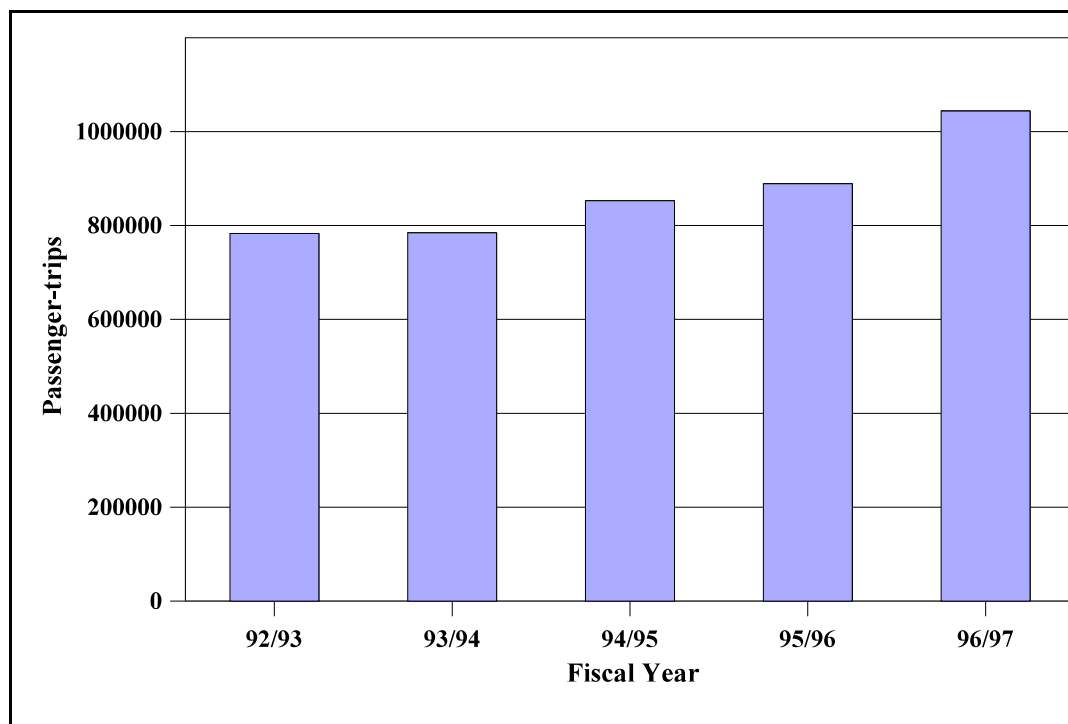
Transit as of the 1990 Census was one of the least used modes of travel. The 1990 Census showed only 169 workers or less than 1 percent use transit as a mode of travel to work. The number of workers using transit was a very small amount compared to the other modes of travel. This was due primarily to the fact there was only limited transit available in Cache County. Logan City began providing transit service through the Logan Transit District in April 1992.

Logan Transit District

The Logan Transit District (LTD) operates three transit services: fixed-route service, an express service between the Transit Center and the Utah State University Campus, and a call-a-ride service specifically for elderly and disabled passengers. All services operate only within the Logan City limits.

Approximately 1,044,303 one-way passenger-trips were carried on the LTD in fiscal year 1996-97. As **Figure T-8** shows the ridership has increased steadily since LTD started service in 1992. There was a 2.8 percent increase after the first year, and 8.7 percent increase after the second year, and a 3.7 percent increase is projected for fiscal year 1995/96. The fixed-route service has consistently comprised more than 90 percent of total annual ridership since LTD began service.

FIGURE T-8 LTD FIXED-ROUTE RIDERSHIP BY FISCAL YEAR



Source: Logan Urbanized Area Short Range Transit Plan Study, June 1996

Utah State University

Utah State University operates the “Aggie Shuttle” which consists of three fixed-routes on the Utah State University campus. The Campus Loop provides service along 1000 North, 800 East, 700 North, 1200 East, and 1100 North. The Stadium Express provides north/south service along 800 East between the USU Romney Stadium and 700 North. The Housing Loop provides north/south service between 700 North and 1100 North and east/west service on 1100 North and 1000 North. Service is provided on 30-minute headways Monday through Friday from 7:00 a.m. to 9:00 p.m., free of charge. Students make up 95 percent of the passengers, while staff and faculty comprise the remaining 5 percent.

Cache County Senior Citizen Center

The Cache County Senior Citizen Center provides demand-response and subscription service to persons 60 years of age or older. Transportation service is provided within the City of Logan on Mondays thru Fridays and countywide Wednesday and Fridays. Service is provided between 9:30 a.m. and 4:30 p.m.. Transportation is primarily provided to and from the Senior Center for senior meals, and to and from shopping and doctors’ appointments. This transit service is provided to senior citizens 60 years and older at no cost. **Table T-25** on the following page below shows the passenger trips, vehicle miles traveled, and average trip length.

TABLE T-25 PASSENGER TRIPS AND VEHICLE MILES

	1994	1995	1996	1997
One-way Passenger Trips	7,813	9,537	8,443	8,669
Vehicle Miles	36,430	33,238	30,048	28,858
Average Trip Length/Passenger	4.7	3.5	3.6	3.3

The Cache County Senior Center’s vehicle fleet consists of a 1987 Ford 15-passenger non wheelchair-accessible van, a 1989 Dodge 15-passenger non wheelchair-accessible van, and a 1994 nine-passenger wheelchair accessible bus. Three part-time employees and three volunteers make up Cache County Senior Center’s driver roster.

Other Services

In addition to the above-mentioned transit services there are a number of other groups which provide transit service. These groups include, Sunshine Terrace, Cache Employment and Training Center, Options for Independence, Bear River Health, and Cache County School District. These transit services are small but do provide transit services for the needs of special groups.

Transit Demand

There is currently in Cache County an increasing demand for transit services. The total transit demand

in the Cache Valley area was estimated to equal 2,928,935 one-way passenger-trips per year in 1995. This demand is forecasted to rise with population growth to 3,098,269 (5.8 percent) by 2001. The existing transit services are only meeting about 33 percent of the transit demand in the Cache Valley.

Many residents of the outlying Cache Valley communities have expressed the desire and demonstrated the need for transit services into Logan. Essentially none of the demand for transit services for work, college or non-program trips are currently met outside of Logan City. Trips to and from social service programs are the largest element of unmet need, with 88 percent of potential unmet demand.

The ***Logan Urbanized Area Short Range Transit Study*** made an analysis of potential alternatives to provide transit services outside of the Logan Transit District service area. The first recommend of the study was to create a Transit District to provide transit service in the remainder of Cache Valley. The transit district would provide three types of transit services. These transit services would include the following:

- Develop two commuter bus routes between Richmond and Logan and between Hyrum and Logan.
- Contract with Logan Transit District to expand transit services into North Logan and River Heights.
- Develop a Para-transit service to provide for the transit needs of individuals with disabilities that qualify under the Americans with Disabilities Act.

Bicycled or Walked

The use of bicycles and walking was the third largest mode of travel to work. Together they represented approximately 6.9 percent or 2,068 workers 16 years and older. This is just below the national average of 7.9 percent total trips. Most of the bicycling and walking trips in Cache County were located in the Logan Urbanized Area where 5.8 percent or 1,730 individuals either walked or bicycled to their place of work. Only 1.1 percent or 328 use this mode of travel outside of the Logan Urbanized Areas. The ***National Bicycling and Walking Study*** would like to increase the current percentage to 15.8% of total trips made by bicycling and walking.

Bicycles and walking are an important part of a functional intermodal transportation system. It is important to meet the demand and need of people biking and walking to work, functioning within an intermodal transportation system (accessing transit, for example), biking or walking to access schools, businesses or community facilities. A secondary focus is providing facilities for people who bike and walk for recreational and fitness and providing connections to recreational trails. Many paths or trails used primarily for recreational purposes do have a transportation function or linkage to the State transportation system.

Walkways and bikeways between businesses, commercial centers, and activity centers within and urbanized area or rural towns can almost eliminate the need for automobiles for short trips, lunch-hour excursions, conducting business, and reduce the need for short-term and employee parking facilities. Good facilities legitimize walking and biking as modes of transportation by making these alternative reliable and convenient, and by reducing hazards that is sometimes associated with “sharing the road.”

The *National Bicycling and Walking Study* concluded that many opportunities exist for replacing automobile trips with walking and bicycling trips. The Study recommends the development of action plans for State and Local governments. These action plans should include the following items:

- Organize a bicyclist/pedestrian program;
- Plan and construct needed facilities;
- Promote bicycling and walking;
- Educate bicyclist, pedestrians, and the public;
- Enforce laws and regulation.

Other Modes of Travel

There are other modes of travel that are not included in the above groupings. These other modes of travel accounted for about 1.1 percent or 330 workers.

Work at Home

There are three groups that characterize individuals that are working at home. The first group involves the suburban professional who is technically oriented, representing the so-called, and long awaited, technical revolution. The second group involves a metropolitan resident who is working at a job that is home-based by definition, such as a family day care provider. The third group involves a rural person who is engaged in agriculture.

Those engaged in farming nationally constitute almost 17 percent of those that work at home. The number of individuals that are working out of their home has increased nationally from 2.3 percent in 1960 to about 3.0 percent in 1990. This pattern may reflect factors such as 'telecommuting', and the rise of service oriented jobs, both of which are consistent with working at home. The person working at home is heavily oriented to home ownership.

In Cache County the individual that works at home is the slightly higher than the national average at 4.9 percent. This is probably due to the larger number of individuals within Cache County that fall into the third group who are engaged in agriculture.

RAILROADS

Approximately 43 miles of Union Pacific Railroad branch line extends from Cache Junction to the Idaho State line where it continues to Preston. One local trains run daily on this line distributing or redistributing raw materials and finished products to various commercial industries throughout Cache Valley.

Forty to sixty cars carrying a monthly average of 55 tons per car terminate in Cache County. At Cache Junction, the 120 to 140 cars that originate in Cache County hook up to Union Pacific trains that head southward through Ogden or northward through Pocatello on the main line. Approximately 16 trains a day travel the 17.4 miles of main line that extends through Cache County. The above figures indicate that approximately 33 percent more materials are exported by rail from Cache County than are imported.

The safety between rail and motor vehicle traffic is a major issue that should be taken into consideration. Whenever these two forms of transportation come in contact, the potential for dangerous accidents may occur. **Table T-26** shows the different railroad-street crossing types with the relative hazard associated with each type.

TABLE T-26 RAILROAD CROSSING AND RELATIVE HAZARD

TYPE OF CROSSING	RELATIVE HAZARD
Crossbucks	1.00
Stop Signs	0.58
Wigwags	0.34
Flashing Lights	0.20
Gated	0.11

SOURCE: Wasatch Front Regional Council

Based on the above table, the gated crossing is 10 times safer than the crossbuck crossing. However, a gated crossing will at times restrict the flow of traffic.

MAP T-9
RAILROAD MAP

BACK RAILROAD MAP

AIRPORTS

Almost every complaint imposed against an airport and based on either safety concerns or airport noise can be attributed to poor, inadequate, or nonexistent land use planning and zoning of property in close proximity to the airport. Residential encroachment on the airport places the most stress on an airport. Good land use and development plans, based on an in-depth compatibility study, are among the most potent and affordable ways to protect an airport while still allowing development near an airport. This process could save the local taxpayers many dollars by avoiding the purchase of additional land to protect the airport.

Airports play an important part of the County's intermodal transportation system. There are two airports of importance to Cache County, the Logan-Cache and Salt Lake International. These two airports provide the aviation needs of the region. Below is a description of these airports and the services they provide.

SALT LAKE INTERNATIONAL AIRPORT

Salt Lake International Airport, owned by the Salt Lake City Corporation and operated by the Salt Lake City Airport Authority. Salt Lake City International Airport is presently one of the fastest growing large hub airports in the country. The airport is the only major air carrier airport in the State of Utah and serves Utah, Southern Idaho and Western Wyoming. Salt Lake International Airport is the major regional airport for air carriers and business activities. Its main function is to serve the commercial side of aviation. The Salt Lake City International Airport will continue to accommodate the activities of the Utah Air National Guard, the Army Reserve, and general aviation aircraft.

LOGAN-CACHE AIRPORT

The Logan-Cache Airport is located in central Cache County, Utah, approximately five miles north of Logan City. Logan city is located approximately 80 miles north of Salt Lake City, Utah. Logan-Cache Airport serves as a major flight training facility, supports a moderate level of recreational flying, and has recently received a substantial increase in aviation demand for business jet operations. The Logan-Cache Airport is a non-towered facility. **Map T-10** on the following page shows a detailed map of the Logan-Cache Airport.

Based Aircraft

There are currently eighty-eight aircraft based at Logan-Cache Airport. Based aircraft users fall into three primary categories: 1) Utah State University Flight Training Program, 2) Business aircraft, and 3) Private individuals.

Business growth within the Logan area has resulted in increased use of the airport by business jet aircraft. The six business jets based at the airport account for 6.8% of the based aircraft fleet mix, exceeding the national fleet average of 2.4%. More than eighty transient business jets have been logged at the airport. Eleven other aircraft are registered to local businesses and are used primarily for itinerant flights to other airports.

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MAP T-10
LOGAN-CACHE AIRPORT MAP

BACK OF AIRPORT MAP

Utah State University provides an extensive flight training program for fixed wing airplanes and helicopters. The program has over 120 students enrolled, eight single-engine aircraft, two-twin engine aircraft, and six helicopters. Utah State University flights are primarily local training, practice approaches, and touch-and-goes.

The local fixed base operator, Logan Air Services, has nine registered aircraft which are available for rental or charter flights. The remaining aircraft are registered to private individuals. Most of these aircraft are stored in the 37 clear span hangars located south of the main parking apron. **Table T-27** shows the existing and projected based aircraft by type located at the Logan- Cache Airport.

TABLE T-27 EXISTING AND PROJECTED BASED AIRCRAFT BY TYPE

Aircraft	1990	1996	2001	2006	2011	2016
Single Eng.	na	65	74	82	90	98
Multi Eng Piston	na	4	4	5	5	6
Multi Eng	na	1	2	2	2	2
Turbine	na	6	7	7	8	9
Jet	na	8	6	6	7	7
Helicopter	na	4	4	4	5	5
Other						
Total	57	88	96	106	117	127

Source: Logan-Cache Airport Layout Plan, 1997

Aviation Activity

Since 1990 there has been a surge in business jet operations at the airport. As a result, itinerant operations at Logan-Cache Airport trend towards the regional average. **Table T-28** below shows the existing and projected aircraft Annual Operations.

TABLE T-28 EXISTING AND PROJECTED AIRCRAFT ANNUAL OPERATIONS

Operations	1990	1996	2001	2006	2011	2016
Local	29,390	23,650	26,100	28,900	31,800	34,400
Itinerant	3,204	18,480	20,500	22,700	22,700	27,100
Instrument	0	8,800	9,600	10,600	11,700	12,700
Total	32,594	42,130	46,600	51,600	56,800	61,500

Source: Logan-Cache Airport Layout Plan, 1997

Total operations per based aircraft at extensive training airports in the region range from 1200 to over 3700. It is estimated that total operations per based training and chartered aircraft at Logan are in the 850 to 950 range. Total operations per based private aircraft at Logan are estimated at 360.

The based aircraft fleet mix will continue to exceed national percentages for business jet aircraft, and will trend towards national averages for all other aircraft types.

Current Land Use Plans and Zoning

The Logan-Cache Airport is currently located entirely within Logan City Boundaries. Logan City current General Plan, adopted in 1995 and official Zoning map, adopted March 1996 identifies the airport and recommends the following land development guidelines.

Land Development Guidelines

- Future airport property: Acquire sufficient land to construct airfield improvements, secure runway protection zones and contain the extent possible noise impacts of 65 Ldn or greater.
- Runway protection zones: Contain within airport property boundaries, no structures permitted.
- Approach areas: Permit only compatible development compliance with the City of Logan and Cache County permit system and airport safety zone policies and structure height limitations to conform to Federal Aviation Regulation (FAR) Part 77 criteria.
- Noise contours (65 Ldn or greater): Preclude noise sensitive uses i.e. schools, churches, hospitals and single family homes.
- Airport influence area/traffic pattern airspace: Review all Development projects for compatibility and compliance with Federal Aviation Regulation (FAR) Part 77 and county land use policies which may exist. Permitted development will require public disclosure to prospective buyers and noted on all plats regarding airport activity, and granting of aviation easements with restrictive provisions.

The proposed extension of Runway 17/35 will extend the airport boundary beyond the current municipal boundary of Logan City . This new area of the Logan-Cache Airport will fall under the jurisdiction of Cache County's Land Use Ordinance. The current zoning for the extension will fall within area zoned as Agriculture. The Cache County Land Use Ordinance also has an Airport Hazard Zone (AH) that covers the airport. Below is the purpose of the Airport Hazard Zone:

9-1 Purpose: To prevent or minimize airport hazards by providing a clear and unobstructed area around the existing airport facility as designated in the Logan-Cache Airport Master Plan.

The Land Use Element of Cache Countywide Comprehensive Plan, adopted Jan 1998, recognizes the airport as being an important facility to the County. The implementation policies of the Land Use Element makes the following recommendation for the Logan-Cache Airport

Follow Logan-Cache Airport Master Plan:

The Logan-Cache Airport serves as a general aviation airport and is classified as a General Utility airport by the FAA. The Logan-Cache Airport is jointly owned and operated by Cache County and Logan City. The Logan-Cache Airport Authority supervises the operations of the airport. Members of the Logan-Cache Airport Authority are appointed by both Logan City and Cache County. The service area for the Logan-Cache airport consists of Utah's Cache and Rich Counties and portions of Utah's Box Elder County and Idaho's Franklin and Bear Lake Counties.

Implementation Recommendations:

- Keep the Logan-Cache Airport Master Plan updated
- Implement the recommendations of the Airport Layout Plan
- Encourage compatible land use within close proximity to the airport.
- Maintain and enlarge the Airport Hazard Zones and Runway Protection Zones as the Logan-Cache Airport expands for safety and protection reasons.

Capital Improvement Plan

A program of recommended airport development for Logan-Cache Airport has been formulated to guide the sponsor in the systematic growth of the airport, and to aid the Federal Aviation Administration, State Department of Transportation, and Logan-Cache County Airport authority in allocating funding over the planning period. The airport development projects were broken down into three phases and programmed over a twenty year period. Phase I is short term development occurring through the year 2001. Phase II is airport development in the intermediate five year time frame from 2002 to 2006. Phase III is long term development from 2007 through 2016. This three phase program of airport development is known as the Capital Improvement Program (CIP), and **Table T-29** on the following page outlined the CIP. One of the primary capital improvement projects is the proposed extension of Runway 17/35 by 3,470 feet This extension will accommodate larger, faster aircraft now utilizing the airport. This extension will be located entirely within the unincorporated Cache County and require the County to develop a set of land use development guidelines to deal with new development around the airport.

TABLE T-29 LOGAN-CACHE AIRPORT CAPITAL IMPROVEMENT PLAN

Year & Description		Total Cost
Phase I		
1	Environmental Assessment	\$ 70,000
1	Land Acquisition for RWY 17/35 extension & Runway Protection Zones	257,000
2	Extend RWY 17/35 by 3,470 feet to the north (Inc. HIRLs, REILs, PAPIs, ODALs & signs)	2,000,000
2	Extend Parallel Taxiway B by 3,470 feet, add one exit taxiway	900,000
2	Overlay existing RWY 17/35	1,100,000
2	Relocate Runway 17 threshold by 350 feet to the north	40,000
2	Upgrade RWY 17/35	125,000
2	Install security fencing around Runway/taxiway extension	84,000
3	Install 500' sewer line to NW Executive Hanger Row	18,000
3	Repair Taxiway B failures & overlay Taxiway B	420,000
3	Expand Aircraft parking Apron 2 by 7000 Sq Yards	300,000
3	Overlay aircraft parking Apron 1	415,000
3	Overlay Taxiway A	78,000
3	Construct 500' access road to NW Executive Hanger row	38,000
4	Establish Precision Instrument Approach (GPS)	\$TBD
4	Remark RWY 17/35 with Precision Instr. Markings	140,000
5	Extend taxi lanes within Clear Span Hanger area	28,000
5	Install six Clear Span Hangers	215,000
Phase II		
6	Crack & Fog seal RWY 10/28	135,000
6	Pave fuel farm access road	38,000
9	Crack & Fog seal airport pavements (except RWY10/28)	640,000
10	Overlay Taxiway C	378,000
10	Develop Industrial Park Infrastructure (1000' road/water/sewer/electric)	150,000
Phase III		
12	Install RWY 10/28 lighting, Taxiway C retroreflectors, & signs	215,000
15	Extend taxi lanes with Clear Span Hanger area	47,000
15	Install ten Clear Span Hangers	358,000
15	Overlay Taxiway B	318,000
16	Expand aircraft Parking Apron 2 by 3000 sq yards	130,000
17	Crack & Fog seal airport pavements	775,000
18	Overlay RWY 17/35	1,160,000
19	Overlay aircraft aprons	312,000
20	Develop industrial park infrastructure (1,000' road/water/sewer/electric)	150,000
Total (20 Year Planning Period)		\$18,722,940

Source: Logan-Cache Airport Layout Plan (APL), 1997

INTERMODEL TRANSPORTATION SYSTEMS

TRANSPORTATION PROJECTS - 2000 TO 2020

The Transportation Element of the Countywide Comprehensive Plan will recommend roadway improvements to help meet the transportation needs of the Cache County through 2025. These roadway improvements include road improvement projects or new roads and projects called Transportation System Management or TSM projects. The road improvement projects address long term congestion mitigation needs through 2025. The TSM projects address short-range needs for preserving the capacity of existing facilities, increasing traffic safety, and reducing travel delays.

The identified transportation projects will provide the focus for available funding to complete those projects that will provide the most benefit to overall transportation systems. Because the transportation system is under separate jurisdictional responsibility the coordination of the different transportation projects become very critical in maintaining viability of the transportation network.

Table T-30 and **Map T-11** on the following pages show the proposed transportation projects that are currently being considered for development in Cache County. This table shows the grouping of projects by the jurisdictional responsibility for the funding and development.

TABLE T-30 PROJECTS (2001 TO 2005)

PROJECT AND SEGMENT LIMITS	CONCEPT	JURISDICTION	YEAR	COST
Cache Metropolitan Planning Organization				
1000 East - Mountain Road to 800 South	Improve, Widen, Sidewalk	Cache/RH/Logan/Prov	2000	\$ 686,475
Center Str - 400 East to Mountain Road	Improve, Widen, Sidewalk	Logan	2000	386,142
Main Str - 400 North to 1400 North	Replace parking	Logan	2001	266,000
Main Str - 800 South to 1800 North	Signal Coordination	Logan/No Logan	2002	1,200,000
Main Str - 400 North	Intersection Improvement	Logan	2001	1,308,134
Main Str - 1400 North	Intersection Improvement	Logan	2001	739,581
100 East - 700 South to 450 South	New Construction	River Heights	2002	1,091,304
400 East - Center/400 E to 400 No/600 East	New Construction	Logan	2004 - 05	5,780,000
200 East - 1400 North to 2500 North	New Construction	No Logan	2004 - 05	4,900,000
200 East - 3700 North to 4400 North	New Construction	Hyde Park	2004 - 05	3,310,000
Utah Department of Transportation				
1800 North 800 East, North Logan	Spot Improvements, turning lanes	UDOT	2001	\$ 260,000
Logan Canyon, Tony Grove to Franklin Basin	Recon & Replace Upper Twin Bridge	UDOT	2001	8,450,000
Smithfield Canal NE Side of North Logan	Bridge Replacement	UDOT	2001	350,000
400 West Sidewalk Project, Hyrum	Sidewalk Project	UDOT	2001	134,000
SR-165, Hyrum to Nibley	Reconstruct, Widen to Four Lanes	UDOT	2002	4,200,00
Logan Canyon, Tony Grove to Franklin Basin	Reconstruction	UDOT	2002	2,500,00
Smithfield City Limits to Idaho State Line	Reconstruct & Widen to Four Lanes	UDOT	2003	30,000,000
600 West 1400 North, Logan	Railroad Crossing Improvements	UDOT	CD*	268,154
SR-30, 1200 West to Main Street, Logan	Reconstruct to 40' width	UDOT	CD	8,000,000
SR-30, 1200 West Logan to SR 23	Widening & resurfacing	UDOT	CD	14,000,000
Logan Canyon; Summit to Garden City	Reconstruction & widen	UDOT	CD	18,000,000
Other Projects to Consider				
4400 S - SR-165 to SR-91/89	New Construction	County		
4200 North - 2400 West to SR-91	Reconstruct & widen	County		

CD - Concept Development (FY - 2004 & 2005)

MAP T-11

BACK

GOALS AND STRATEGIES

GOAL 1: Develop convenient alternative modes of transportation

Objectives:

- Enhance mobility of citizens
- Provide alternatives in bad weather
- Encourage pedestrian friendly land use development
- Encourage economic development by getting people to their jobs
- Reduce stress

Strategies:

- 1.1 Develop inter-county bus system
- 1.2 Provide financial incentives to maximize mass transit
- 1.3 Develop parkways for pedestrians and other modes of transportation
- 1.4 Urban development is reviewed by transit developers
- 1.5 Look at expanding alternative modes throughout the County
- 1.6 Encourage small business development
- 1.7 Expand countywide transit system through a countywide referendum
- 1.8 Involve school districts in alternative modes of transportation

GOAL 2: Control urban sprawl through prudent countywide land use planning

Objectives:

- Develop travel demand management specifications
- Encourage higher density development in residential, commercial, and industrial areas while providing for safety and essential services
- Reduce/prevent congestion on main roads
- Protect agricultural areas, open spaces, stream corridors and wildlife
- Seek alternative funding sources to maintain the transportation system (i.e., impact fees)

Strategies:

- 2.1 Establish urban growth boundaries limiting services outside the boundaries (i.e., roads)
- 2.2 Develop an Access Management Plan limiting access on major roads
- 2.3 Develop a Development Plan for major roads (i.e. US89-91, 165, 30 etc.)
- 2.4 Encourage standards along major roads
- 2.5 Encourage neighborhood commercial development
- 2.6 Develop mass transit plans, pedestrian rights of ways, etc.
- 2.7 Develop standard cross-section for all functional classifications of roads
- 2.8 Develop interblock development policies and standards encouraging responsible development
- 2.9 Encourage development on major roads
- 2.10 Limit development on private roads

GOAL 3: Safety

Objectives:

- Provide alternative modes of transportation (bike paths, mass transit, express buses, walking paths, train-light rail, etc.)
- Reduce single occupancy vehicles (SOV)
- Reduce existing and future accesses to main corridors
- Do better access management on main roads
- Develop countywide development standard
- Develop better traffic light management
- Educate county residents

Strategies:

- 3.1 Never become a non-attainment area
- 3.2 Develop standard ordinances for access management
- 3.3 Reduce the number of stops/stop lights and synchronize lights
- 3.4 Reduce the number of curb cuts
- 3.5 Create acceleration and deceleration lanes
- 3.6 Encourage park and ride
- 3.7 Encourage the development of a rural transit system
- 3.8 Develop a marketing plan for a countywide transportation plan
- 3.9 Encourage express buses

GOAL 4: Develop a countywide transportation plan/system

Objectives:

- Integrate the countywide transportation plan with the CMPO plan
- Develop a marketing, education, and cooperative strategy to implement the plan
- Develop a realistic priority process to match current revenues
- Develop alternative funding mechanisms to build and maintain the system
- Develop a transportation system that functions to move people easily, quickly, safely and economically to their destinations
- Consider multiple forms of transportation (cars, buses, light rail, bicycles, pedestrian, etc.)
- Develop an implementation strategy
- Recognize the plan as a regional system that is bigger than the cities and needs to be coordinated with the cities, county, state, surrounding states and the national system

Strategies:

- 4.1 Require countywide consistency and build on the CMPO plan
- 4.2 Involve all communities in the development and implementation through public input and cooperation
- 4.3 Develop measures to evaluate projects for prioritization
- 4.4 Identify and encourage all levels of government to provide funding and funding mechanisms
- 4.5 Transportation is a reciprocal land use and should not drive other land uses, it should be subservient
- 4.6 Base local ordinances on the plan

TRANSPORTATION ELEMENT - APPENDIX

EXISTING TRANSPORTATION FACILITIES

Congestion Management

A congestion management system is used to reduce congestion on the existing transportation facilities. Some examples of projects done under a congestion management system are signal coordination, park and ride lots, ridesharing and alternative transportation modes. In addition to these project the use of access management and corridor preservation techniques along existing and future transportation facilities help to reduce congestion within the transportation system.

Access Management

Access management is the planning, design and implementation of land use and transportation strategies that control the flow of traffic between the road and surrounding land. It applies traffic engineering principles to the location, design and operation of access drives serving activities along a highway. It evaluates the suitability of providing access to a given road, as well as the suitability of a site for land development. It addresses the basic questions—when and where access should be located, how it should be designed, and the procedures needed to administer the program. In broad context, access management is resource’s management, since it is a way to anticipate and prevent safety problems and congestion.

Access management can bring significant benefits to the community, such as:

- Postponing or preventing costly highway improvements
- Improving safety conditions along highways
- Reducing congestion and delays
- Providing property owners with safe access to highways
- Promoting desirable land use patterns
- Making pedestrian and bicycle travel safer

Streets and highways are an important resource and represent a major public investment that should be preserved. Poorly coordinated circulation systems force more trips onto the arterial roadways. This results in multiple traffic conflicts, increased congestion and a decline in traffic and pedestrian safety. This generates a demand for roadway improvement and the cycle begins again. Failure to address the congestion and safety problems ultimately leads to a deterioration in the abutting properties. These are not the inevitable of development and urban growth. Rather, they are symptoms of inadequate attention to access management to preserve the integrity of the transportation system.

Some of the symptoms of poor access management include the following items:

- High crash rates
- Poor traffic flow and congestion

- Numerous brake light activations by drivers in the through lanes
- Unsightly strip development
- Neighbors disrupted by through traffic
- Using a local street parallel to the overburdened “arterial” to make a one-way pair
- Pressures to widen an existing street or build a bypass
- Bypass routes as congested as the roadways they were built to relieve
- A decrease in property values

From a land development perspective, private investment in the abutting land development is jeopardized as traffic problems cause a decline in commercial and residential property values. The Urban Land Institute’s *Shopping Center Development Handbook* warned that poorly designed entrances and exits not only present a traffic hazard, but also cause congestion that can create a negative image of the center.

By preserving the quality of traffic service, access management helps transportation and reduces the need for expensive improvements. Studies show poor spacing, design and location of driveways could reduce average travel speed. Improvements in access could increase roadway capacity substantially. Some of the ways we do access management include the following:

- Non-traversable medians
- Auxiliary lanes
- Signal spacing
- Driveway location and design
- Driveway spacing
- Corner clearance
- Joint & cross access
- Reverse frontage

Since varying functions of streets are designed to provide varying levels of access to adjacent land uses, it follows that land-use planning must be integrated with highway planning. The purpose of this integration is to allow land uses under a certain set of access control parameters which both facilitate land access and land development and also facilitate the adjacent street function. It is clear that a proper balance of the needs for street function and the need for land access can enhance the goals of both.

Corridor Preservation

Corridor preservation is a coordinated application of various measures to obtain control of or otherwise protect, the right-of-way for an existing or planned transportation facility, so that the right-of-way and other needed land can be provided. The ultimate objective is to provide a transportation system that affords a reasonable level of service for rapidly growing metropolitan areas. In order to do this, we must make a closer tie between land development proposals and transportation investments through the integration of transportation planning and project development.

Corridor preservation is a concept utilizing the coordinated application of various measures to obtain control of or otherwise protect the right of way for a planned transportation facility. Corridor preservation techniques should be applied as early as possible after the transportation corridor is identified either along a new alignment, or along an existing facility to:

- Prevent inconsistent development;
- Minimize or avoid environmental, social and economic impacts;
- Reduce displacement;
- Prevent the foreclosure of desirable location options;
- Allow for the orderly assessment of impacts;
- Permit orderly project development;
- Reduce cost

The preservation of transportation corridors is a critical issue as the American Association of State Highway and Transportation Officials (AASHTO) predicts that surface travel demand nationally will double by the year 2020. There will be an increasing need to identify and protect potential transportation corridors.

Techniques to preserving transportation corridors have certain aspects that should be given consideration in determining the best manner in which to protect the corridor. These include the following areas of legal issues, participation of decision-makers, environmental issues, and alternative techniques that could be used for corridor preservation. As growth takes place the preservation of transportation corridors become more and more a critical issue. Questions should be asked concerning the value of preserving any corridor.

- How important will the corridor(s) be in the transportation system needed to serve the area's development pattern in the early years of the twenty-first century?
- Will the land "get-away" if nothing is done to prevent encroachment before full construction funding becomes available?
- If encroachment in the potential alignment does occur, what options will be foreclosed? What environmental, economic, and social consequences may result?
- Is development in the corridor still sufficiently modest that early protective action can make a difference?
- Will the affected communities do their share to help?

Corridor preservation is an important component in a transportation management system. Corridors must be reserved for needed transportation facilities as much as 20 years in advance of construction. Early protection of transportation corridors has both a social and economic benefit to local society. By doing nothing there is an opportunity cost to the society. Preservation of corridors is essential in order to prevent increases in land prices prior to the time land within the corridor is developed.

ANNUAL AVERAGE DAILY TRAFFIC VOLUMES

STATE ROUTE 23 - AVERAGE DAILY TRAFFIC

Description	Mileage	1995 AADT	1996 AADT	1997 AADT	2020 AADT	Percent Change
Junction SR 91	1.55	750	775	805	895	28.2
Junction SR 101 in Wellsville	0.89	1590	1190	1240	2991	15.2
North Incorporated Limits Wellsville	3.70	1010	800	835	2991	18.8
South Incorporated Limits Mendon	2.35	1490	1100	1145	3691	28.4
North Incorporated Limits Mendon	1.33	1460	915	955	3094	21.7
Junction SR 30	7.51	1615	1300	1355	1604	27.7
South Incorporated Limits Newton	0.57	1055	1020	1060	1387	26.3
Junction SR 142 in Newton	0.98	1415	1415	1475	2726	
East Incorporated Limits Newton	0.15	1415	1415	1475	5476	
Junction SR 218	2.96	1075	1315	1370	1234	
Southern Incorporated Limits Trenton	2.08	1075	1315	1370	1234	
Junction SR 142 in Trenton	1.56	1555	1610	1675	3244	
North Inc. Limits Trenton & South Inc. Limits Cornish	2.40	1465	1465	1525	2521	
Junction SR 61 in Cornish - Utah - Idaho State Line	1.60	1000	855	890	1684	

STATE ROUTE 30 - AVERAGE DAILY TRAFFIC

Description	Mileage	1995 AADT	1996 AADT	1997 AADT	2020 AADT	Percent Change
Box Elder - Cache County Line	2.83	5260	5260	5470	9844	80.4
Junction SR 23	4.11	6010	6465	6720	8101	64.2
Logan West Urbanized Boundary	2.27	8600	8690	8900	9137	135.0
West Incorporated limits Logan - SR 91	1.27	8600	8690	8900	14742	79.5

STATE ROUTE 61 - AVERAGE DAILY TRAFFIC

Description	Mileage	1995 AADT	1996 AADT	1997 AADT	2020 AADT	Percent Change
Junction SR 23	0.73	1355	1190	1240	1473	54.9
East Incorporated Limits Cornish	0.25	1780	1660	1725	1315	50.2
West Incorporated Limits Lewiston - SR 91	6.26	1890	1660	1725		59.5

STATE ROUTE 101 - AVERAGE DAILY TRAFFIC

Description	Mileage	1995 AADT	1996 AADT	1997 AADT	2020 AADT	Percent Change
Junction SR 23 in Wellsville	1.21	2345	2425	2520	10496	-14.9
Junction SR 91	0.61	3775	4800	5136	10496	9.9
East Incorporated Limits Wellsville	1.27	3555	4550	4959	10308	1.1
West Incorporated limits Hyrum	2.82	3515	4500	5020	7117	12.7
Junction SR 165 in Hyrum	0.11	1115	2500	2675	1274	8.8
East Incorporated Limits Hyrum	2.08	985	1880	1955	1052	8.2
Wasatch National Forest Boundary	13.13	885	1200	1250	1052	10.6
Hardware - Visitors Center	0.50	730	800	835	1052	15.9

STATE ROUTE 142 - AVERAGE DAILY TRAFFIC

Description	Mileage	1995 AADT	1996 AADT	1997 AADT	2020 AADT	Percent Change
Junction SR 23	0.03	745	775	806	2726	39.3
Northwest Incorporated Limits Newton	4.45	745	775	860	2013	39.3
South Incorporated Limits Clarkston	0.48	560	585	608	2013	-3.4
Center Street Incorporated Limits Clarkston	0.41	660	655	685	914	10.0
East Incorporated Limits Clarkston	4.07	700	675	705	914	8.5
West Incorporated Limits Trenton	0.27	975	940	980	716	5.4
Junction SR 23 in Trenton	2.36	1075	975	975	2934	30.3
East incorporated Limits Trenton	2.03	1075	975	975	2934	30.3
West Incorporated Limits Lewiston	1.24	1075	975	975	2266	30.3
East Incorporated limits Lewiston	1.29	1255	1205	1156	6384	14.6
West Incorporated Limits Richmond - SR 91	0.61	1475	1525	1390	6384	8.1

STATE ROUTE 165 - AVERAGE DAILY TRAFFIC

Description	Mileage	1995 AADT	1996 AADT	1997 AADT	2020 AADT	Percent Change
Center of Paradise at 9100 South	1.01	2245	2400	2495	4254	43.5
North Incorporated Limits Paradise	3.36	2130	2205	2295	4254	38.3
South Incorporated Limits Hyrum	0.61	2610	2700	2810	7564	49.1
Junction SR 101 in Hyrum	0.72	6310	6525	6785	10032	90.1
North Incorporated Limits Hyrum	0.80	7625	7885	8195	8853	112.7
South Incorporated Limits Nibley	1.02	9300	9615	9995	22202	94.2
Logan Urbanized Boundary	0.38	9300	9410	9635	24756	94.2
Junction SR 238 in Nibley	0.79	10995	11110	11375	24084	121.2
Northern Incorporated Limits Nibley	1.01	7635	7715	7900	24084	28.9
South Incorporated Limits Providence	0.52	7635	7715	7900	24084	28.9
North Incorporated Limits Providence	0.18	7635	7715	7900	24260	28.9
Logan South Incorporated Limits - SR 91	0.33	10835	10945	11205	25958	29.8

STATE ROUTE 200 - AVERAGE DAILY TRAFFIC

Description	Mileage	1995 AADT	1996 AADT	1997 AADT	2020 AADT	Percent Change
Junction SR 61 in Lewiston - Utah - Idaho State Line	1.56	1800	1865	1940	1315	

STATE ROUTE 218 - AVERAGE DAILY TRAFFIC

Description	Mileage	1995 AADT	1996 AADT	1997 AADT	2020 AADT	Percent Change
Junction SR 23	4.22	1715	1750	1820	4370	115.7
West Incorporated Limits Amalga	1.48	1715	1750	1820	3686	115.7
East Incorporated Limits Amalga	1.40	3665	3725	3880	1445	142.7
West Incorporated Limits Smithfield - SR 91 Smithfield	1.10	3840	3900	4059	2062	77.0

STATE ROUTE 237 - AVERAGE DAILY TRAFFIC

Description	Mileage	1995 AADT	1996 AADT	1997 AADT	2020 AADT	Percent Change
Junction 700 North via 800 East Logan	0.38	10305	10140	10385	11900	
Junction SR 288	0.50	8695	7825	8015	17850	
Junction SR 239 1400 North Logan	0.13	6450	5470	5600	16046	
North Inc. Limits Logan & South Inc. Limits No Logan	0.38	5330	4905	4956	23751	
1800 North	1.36	4210	4245	4290	15542	
No. Inc. Limits No. Logan & So. Inc. Limits Hyde Park	1.57	3345	3385	3465	14745	
200 West - SR 91	0.47	3345	3385	3465	920	

STATE ROUTE 238 - AVERAGE DAILY TRAFFIC

Description	Mileage	1995 AADT	1996 AADT	1997 AADT	2020 AADT	Percent Change
Junction SR 165	0.17	1710	1640	1680	915	
East Inc. Limits Nibley & West Inc. Limits Millville	1.54	1710	1640	1680	856	
No. Inc. Limits Millville & So. Inc. Limits Providence	1.54	1555	1525	1565	7733	
North Inc. Limits Providence	0.10	1555	1525	1565	13278	
South Inc. Limits River Heights	0.81	3175	3175	3250	14526	
No. Inc. Limits River Heights & So. Inc. Limits Logan	0.05	4765	4815	4930	18628	
200 West - SR 91	0.47	6235	6300	6450	17187	

STATE ROUTE 239 - AVERAGE DAILY TRAFFIC

Description	Mileage	1995 AADT	1996 AADT	1997 AADT	2020 AADT	Percent Change
Junction SR 91 - Junction SR 237	1.04	16285	16455	16665	27643	

STATE ROUTE 243 - AVERAGE DAILY TRAFFIC

Description	Mileage	1995 AADT	1996 AADT	1997 AADT	2020 AADT	Percent Change
Junction SR 89 - Beaver Mountain Ski Area	2.41	605	625	650		

STATE ROUTE 288 - AVERAGE DAILY TRAFFIC

Description	Mileage	1995 AADT	1996 AADT	1997 AADT	2020 AADT	Percent Change
Junction SR 89 via 1200 East	0.50	7150	7235	7410	17398	
1000 North SR 288 - SR 237	0.49	7910	8000	8190	8454	

STATE ROUTE 89 - AVERAGE DAILY TRAFFIC

Description	Mileage	1995 AADT	1996 AADT	1997 AADT	2020 AADT	Percent Change
Junction SR 91 in Logan	0.79	24200	24455	25040	15516	
600 East in Logan	2.08	18115	19295	18730	23167	
East Incorporated Limits Logan	0.03	18115	18295	18730	8569	
East Urban Boundary Logan	9.62	3625	3725	3815	2794	
Boy Scout Camp	9.23	2410	2505	2610	2794	
Tony Grove Ranger Station	6.07	2155	2240	2335	2794	
Junction SR 243 to Beaver Mountain Ski Area	5.04	1710	1795	1870	2794	
Cache - Rich County Line	2.59	1710	1795	1870	2794	

STATE ROUTE 91 - AVERAGE DAILY TRAFFIC

Description	Mileage	1995 AADT	1996 AADT	1997 AADT	2020 AADT	Percent Change
Box Elder - Cache County Line	6.59	13425	12605	13445	20977	
South Incorporated Limits Wellsville	0.27	13425	12605	13445	20973	
Junction SR 23	2.27	13425	13425	14320	19045	
Junction SR 101 in Wellsville	0.42	13275	14005	14929	19045	
North Incorporated limits Wellsville	3.72	13275	14865	15850	31821	
Southwest Urban Boundary - Logan	1.00	13085	13660	14479	30241	
South Incorporated Limits Logan	1.33	13890	14040	14882	30624	
Junction SR 165	0.59	29720	30035	31116	57188	
Junction SR 238 300 South Logan	0.64	27020	27305	28261	65390	
Junction 200 North SR 30 in Logan via Main Street	0.26	31975	32315	33270	40274	
400 North SR 89 in Logan	1.42	27370	27660	28320	37622	
North Inc. Limits Logan & South Inc. Limits No Logan	0.38	25830	27660	28620	30663	
North Urban Boundary Logan	0.89	25830	26705	26105	27807	
Junction 2500 North to Airport in North Logan	0.81	24950	25215	25815	42036	
North Incorporated limits North Logan	0.67	25490	25760	26375	41004	
Junction SR 237 Road to Hyde Park	0.55	25490	25760	26375	38251	
North Incorporated Limits Hyde Park	0.60	25490	25760	26375	30468	
South Incorporated Limits Smithfield	1.57	20975	21930	22455	30468	
Junction SR 218 in Smithfield	1.00	14205	14355	14700	29282	
North Incorporated Limits Smithfield	0.52	9815	9915	10315	22884	
North Urbanized Boundary	3.14	9815	10150	10550	22285	
South Incorporated Limits Richmond	1.32	9560	98855	10275	22285	
Junction SR 142 in Richmond	1.19	9685	9965	10465	10142	
North Incorporated Limits Richmond	2.09	8195	8405	8905	10142	
South Incorporated Limits Lewiston	0.40	8195	8405	8905	10976	
Junction SR 61 in Lewiston	0.25	5410	5540	5770	10976	
North Inc. Limits Lewiston - Utah - Idaho State Line	1.33	5410	5540	5770	10976	

INTERMODEL TRANSPORTATION SYSTEMS

TRAVEL TIME TO WORK

In addition to the mode of travel the travel time to work provides additional understanding concerning the travel patterns of individuals within Cache County. Like the mode of travel, the travel time to work gives a clear picture of the mobility of, and willingness of individuals to travel.

TRAVEL TIME TO WORK (Worker 16 and older)

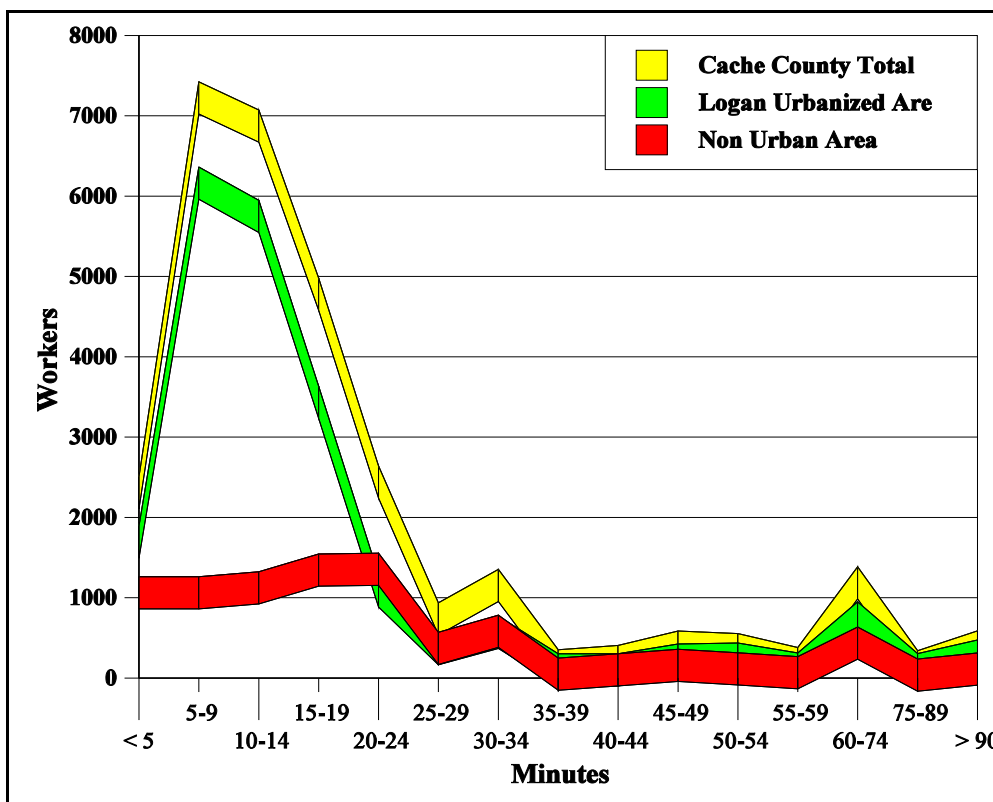
Travel Time	Cache County	% Total	Logan		Non Urban Area	% of Total
			Urbanized Area	% of Total		
Less than 5 minutes	2,310	8.1	1,695	5.9	615	2.2
5-9 minutes	7,225	25.3	6,163	21.6	1,062	3.7
10-14 minutes	6,874	24.1	5,749	20.2	1,125	3.9
15-19 minutes	4,780	16.8	3,434	12.0	1,346	4.7
20-24 minutes	2,442	8.6	1,087	3.8	1,355	4.8
25-29 minutes	738	2.6	367	1.3	371	1.3
30-34 minutes	1,155	4.0	571	2.0	584	2.0
35-39 minutes	153	0.5	104	0.4	49	0.2
40-44 minutes	208	0.7	104	0.4	104	0.4
45-49 minutes	386	1.4	226	0.8	160	0.6
50-54 minutes	354	1.2	238	0.8	116	0.4
55-59 minutes	181	0.6	114	0.4	67	0.2
60-74 minutes	1187	4.2	750	2.6	437	1.5
75-89 minutes	142	0.5	105	0.4	37	0.1
Greater than 90 minutes	389	1.4	276	1.0	113	0.4
Total	28,582	100.0	20,983	73.6	7,541	26.4

Source: US Census Bureau; 1990 CTPP

The travel time to work reveals that the bulk of workers within Cache County travel somewhere between less than 5 minutes to 24 minutes to their place of employment. Most of the population in Cache County is located in the Logan Urbanized Area. 1990 populations for Cache County the Logan Urbanized Area was 52,929. 1996 estimated population for the Logan Urbanized Area is 65,645.

The 1990 Census Journey to Work data indicated there are approximately 18,128 workers 16 years of age and older in the Logan Urbanized Area in 1990. If the number of workers in the Logan Urbanized Area increased at the same rate of population growth there would be approximately 22,483 workers.

TRAVEL TIME TO WORK BY AREA



The largest travel time to work for groups of workers fall between 5 to 24 minutes. This is primarily due to the large number of workers living within the Logan Urbanized Area. As discussed earlier 2/3 of the County's population currently reside within the Logan Urbanized Area. So longer travel time to work would not be expected.

However, there are a significant number of individuals that travel 60 to 74 minutes to work. This correlates with the large number individuals who are willing to commute to jobs outside of the County. This cross tabulation shows that significant number of individuals that are willing to commute long distances for employment. The tables on the following pages show the cross tabulation of household income by mode of travel also seems to indicate the same thing.

CROSS TABULATION OF TRAVEL TIME TO WORK BY MODE

Time Traveled (minutes)	<5	5-9	10-19	20-29	30-39	40-49	50-59	60-74	>75	Total
Total Workers										
Cache County Total	2,310	7,225	11,654	3,180	1,308	594	468	1187	531	28,824
Logan Urbanized Area	1,695	6,163	9,183	1,454	675	366	352	750	381	21,019
Non-Urban Area	615	1,062	2,471	1,726	633	228	183	437	150	7,505
Drove Alone										
Cache County Total	1,644	5,795	9,143	2,433	817	285	141	263	274	20,795
Logan Urbanized Area	1,311	5,005	7,036	1,017	361	181	99	192	234	15,436
Non-Urban Area	333	790	2,107	1,416	456	104	42	71	40	5,359
Carpooled										
Cache County Total	224	674	1,485	567	390	271	384	922	245	5,162
Logan Urbanized Area	152	548	1,207	278	227	148	243	556	144	3,506
Non-Urban Area	72	126	278	289	163	123	141	366	92	1,656
Transit										
Cache County Total	13	27	99	1	0	21	5	0	0	169
Logan Urbanized Area	6	27	82	0	0	21	5	0	0	141
Non-Urban Area	7	0	17	1	0	0	0	0	0	28
Bicycle or Walked										
Cache County Total	353	621	837	526	78	7	0	2	0	2,068
Logan Urbanized Area	181	513	795	152	76	7	0	2	0	1,740
Non-Urban Area	172	108	42	374	2	0	0	0	0	328
Other Modes										
Cache County Total	76	108	90	23	23	0	0	0	9	330
Logan Urbanized Area	45	70	63	7	11	0	0	0	0	196
Non-Urban Area	31	38	27	16	12	0	0	0	9	134

Source: US Census Bureau, 1990 CTPP

CROSS TABULATION OF HOUSEHOLD INCOME BY MODE

Household Income (\$000)	<5	5-9	10-19	20-29	30-39	40-49	50-59	60-74	>75	Total
Total Households										
Cache County Total	481	1,306	5,203	5,710	5,815	4,379	2,898	2,205	1,762	29,759
Logan Urbanized Area	408	1,130	4,243	4,414	3,959	2,750	1,963	1,570	1,278	21,715
Non-Urban Area	73	176	960	1,296	1,856	1,629	935	635	484	8,044
Drove Alone										
Cache County Total	244	808	3,476	4,035	4,141	3,008	2,023	1,606	1,353	20,694
Logan Urbanized Area	194	704	2,799	3,135	2,869	2,021	1,432	1,136	1,045	15,335
Non-Urban Area	50	104	677	900	1,272	987	591	470	308	5,359
Carpooled										
Cache County Total	60	185	780	901	1,064	890	597	426	253	5,156
Logan Urbanized Area	60	160	653	690	693	449	359	300	136	3,500
Non-Urban Area	0	25	127	211	371	441	238	126	117	1,656
Transit										
Cache County Total	9	27	58	16	31	28	0	0	0	169
Logan Urbanized Area	9	25	56	16	13	22	0	0	0	141
Non-Urban Area	0	2	2	0	18	6	0	0	0	28
Bicycle or Walked										
Cache County Total	112	201	570	377	230	198	127	84	46	1,945
Logan Urbanized Area	105	173	511	335	184	114	91	72	32	1,617
Non-Urban Area	7	28	59	42	46	84	36	12	14	328
Other Modes										
Cache County Total	7	22	92	57	61	42	18	15	16	330
Logan Urbanized Area	5	19	56	32	42	19	9	6	8	196
Non-Urban Area	2	3	36	25	19	23	9	9	8	134

Source: US Census Bureau, 1990 CTPP

CROSS TABULATION OF HOUSEHOLD SIZE BY VEHICLE AVAILABLE

# OF VEHICLES	NO	1	2	3	4	5	6	7+	Total
All Households									
Cache County Total	753	5,969	8,864	3,698	1,240	382	109	40	21,055
Logan Urbanized Area	666	4,908	6,432	2,485	812	253	90	17	15,663
Non-Urban Area	87	1,061	2,432	1,213	428	129	19	23	5,392
1-Person Households									
Cache County Total	547	2,516	454	75	5	3	0	0	3,600
Logan Urbanized Area	484	2,062	315	59	0	0	0	0	2,920
Non-Urban Area	63	454	139	16	5	3	0	0	680
2-Person Households									
Cache County Total	123	1,637	3,178	810	171	20	1	0	5,940
Logan Urbanized Area	102	1,388	2,440	524	88	16	0	0	4,558
Non-Urban Area	21	249	738	286	83	4	1	0	1,380
3-Person Households									
Cache County Total	45	710	1,344	819	181	46	13	16	3,174
Logan Urbanized Area	45	569	1,022	653	109	26	10	6	2,440
Non-Urban Area	0	141	322	166	72	20	3	10	734
4-or-more Person Households									
Cache County Total	38	1,106	3,888	1,994	883	313	95	24	8,341
Logan Urbanized Area	35	889	2,655	1,249	615	211	80	11	5,745
Non--Urban Area	3	217	1,233	745	268	102	15	13	2,596

Source: US Census Bureau, 1990 CTPP

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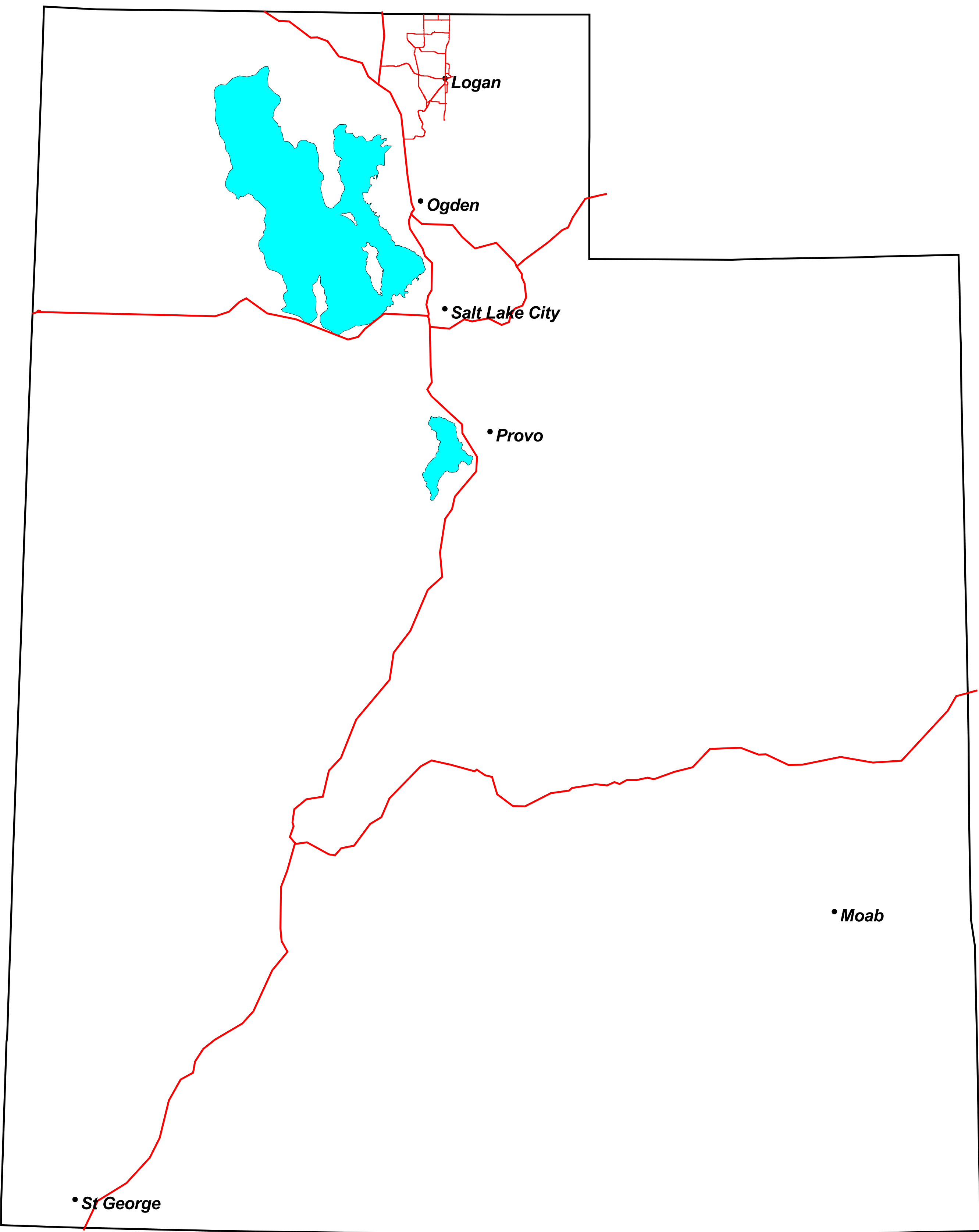
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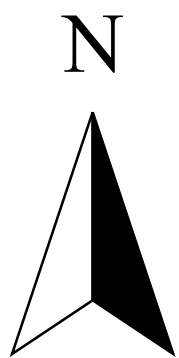
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Utah Transit Authority, *Planning with Transit: Land Use/Transit Coordination Handbook*, Salt Lake City, Utah, March 1995.



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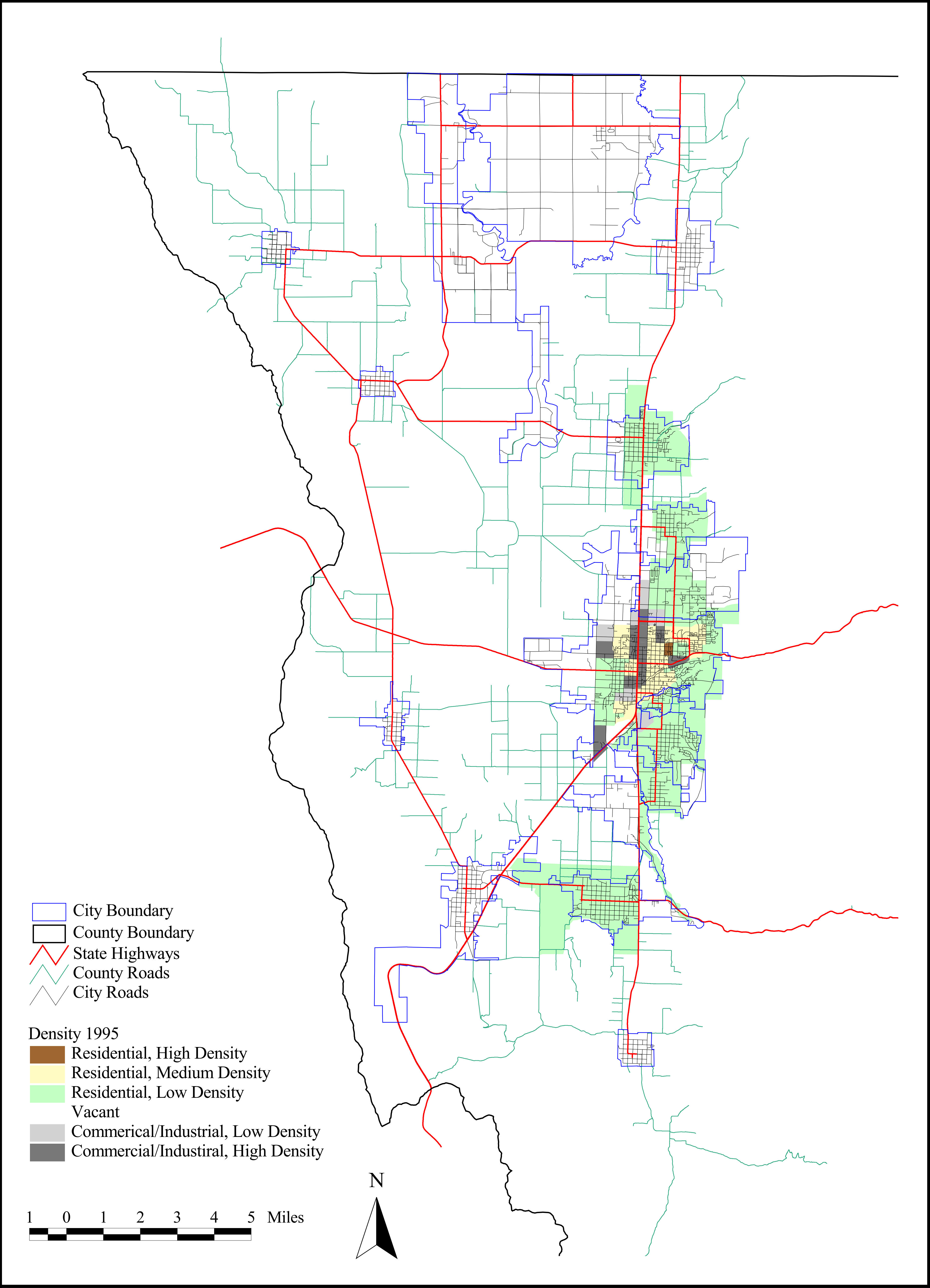
STATE OF UTAH ***REGIONAL TRANSPORTATION SYSTEM***

MAP T-1

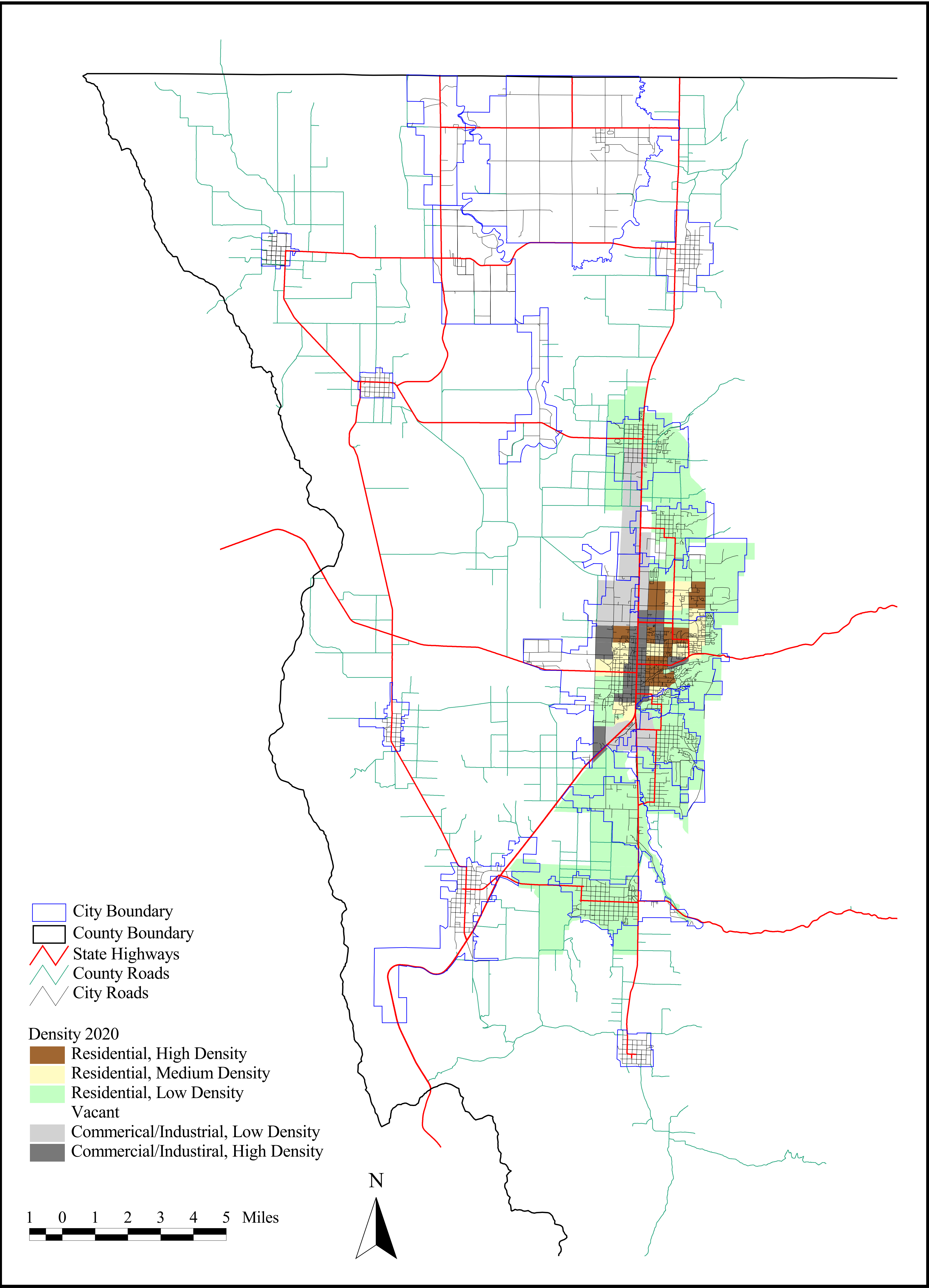


***WESTERN UNITED STATES
REGIONAL TRANSPORTATION SYSTEM***

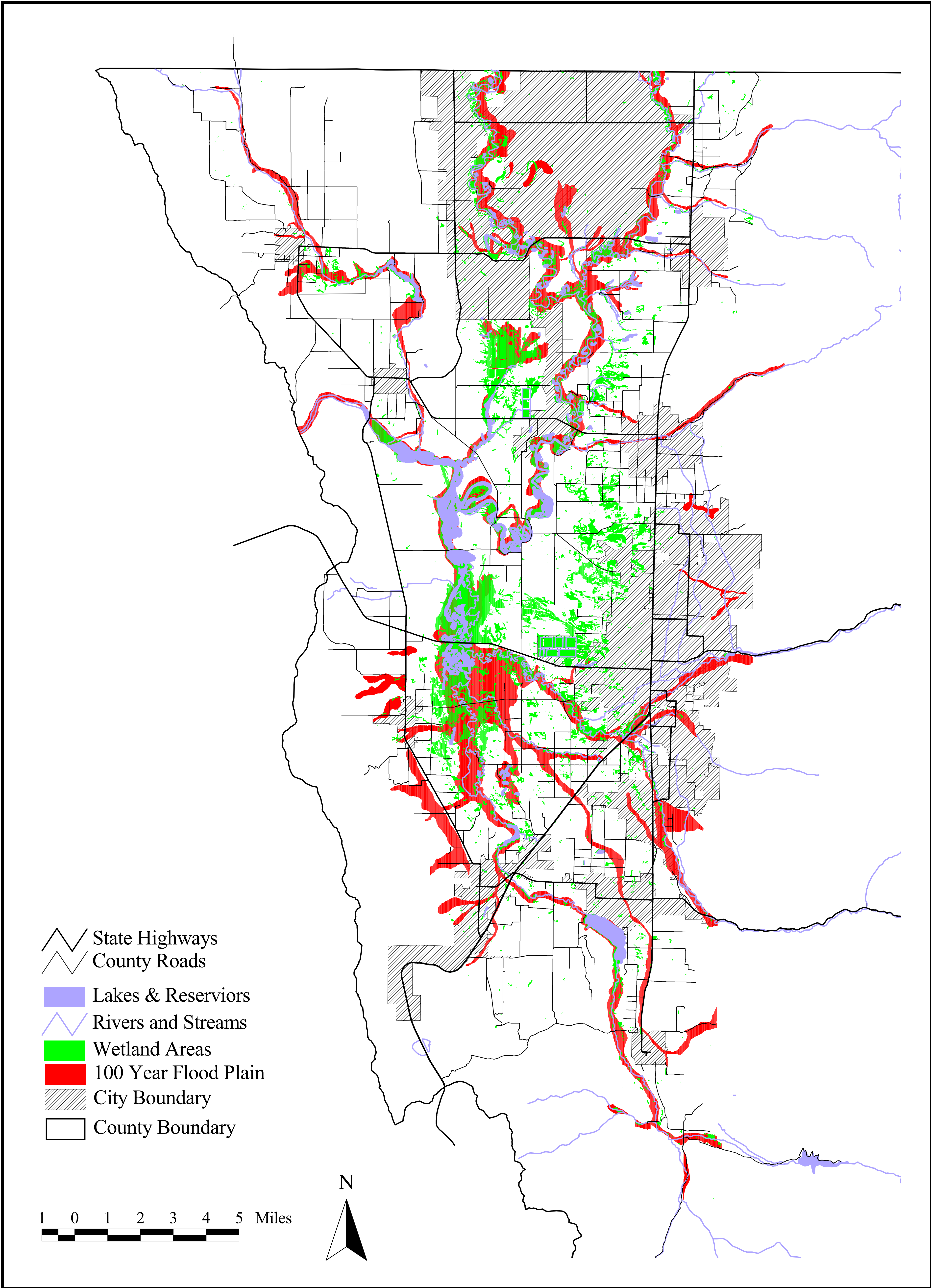
MAP T-2



***CACHE COUNTY
POPULATION AND EMPLOYMENT DENSITIES
1995***

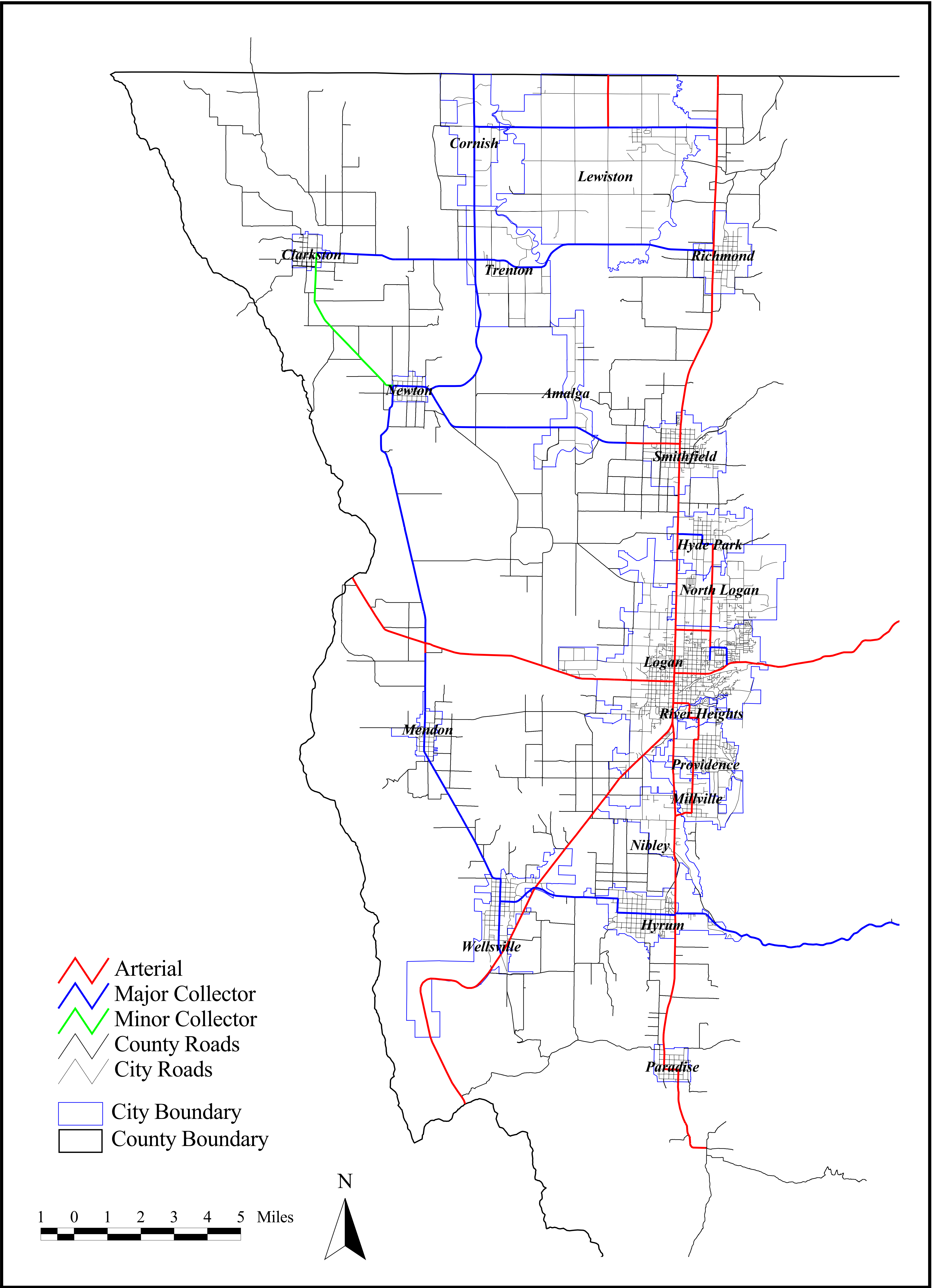


***CACHE COUNTY
POPULATION AND EMPLOYMENT DENSITIES
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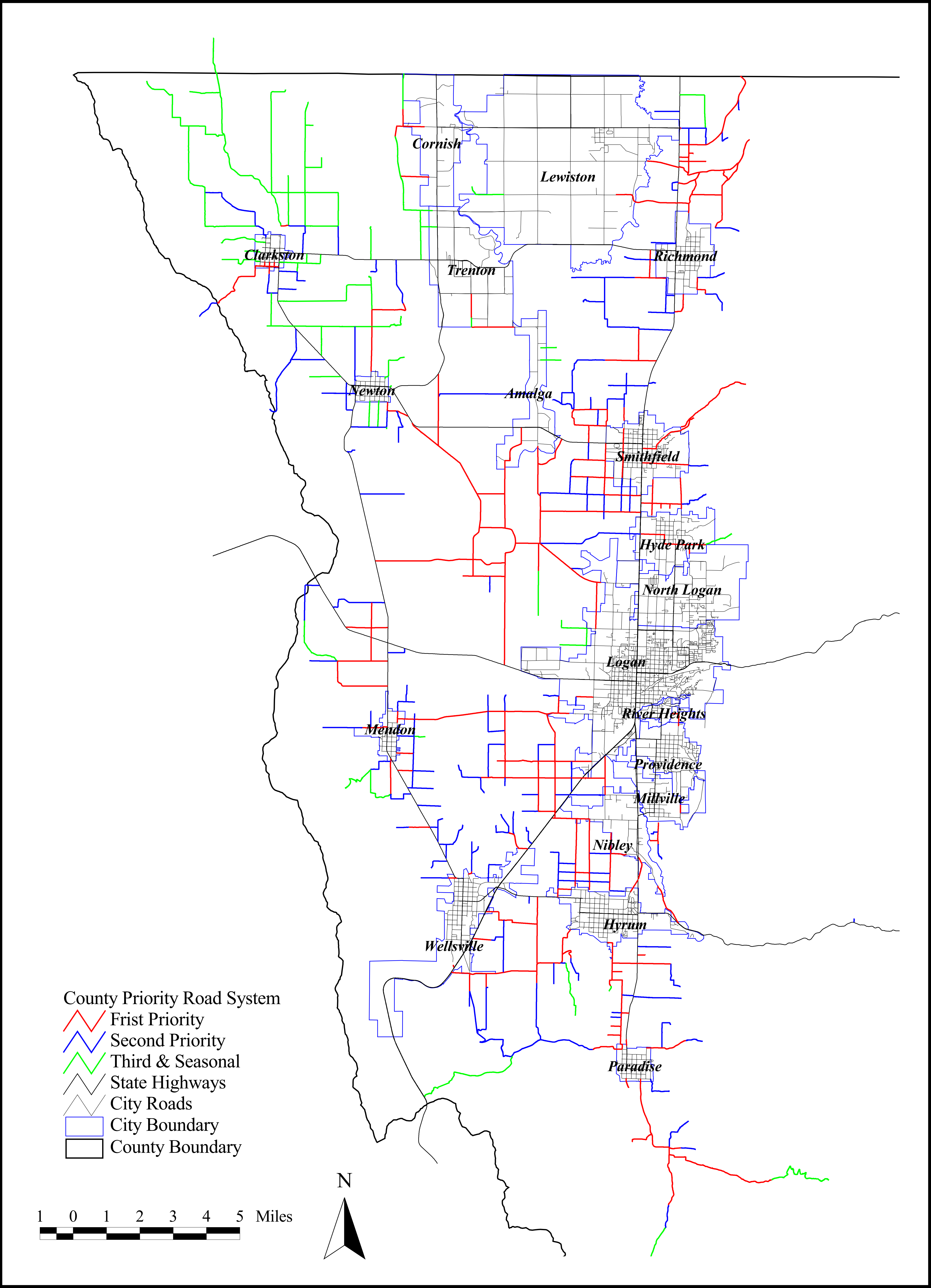


CACHE COUNTY PHYSICAL CONSTRAINTS

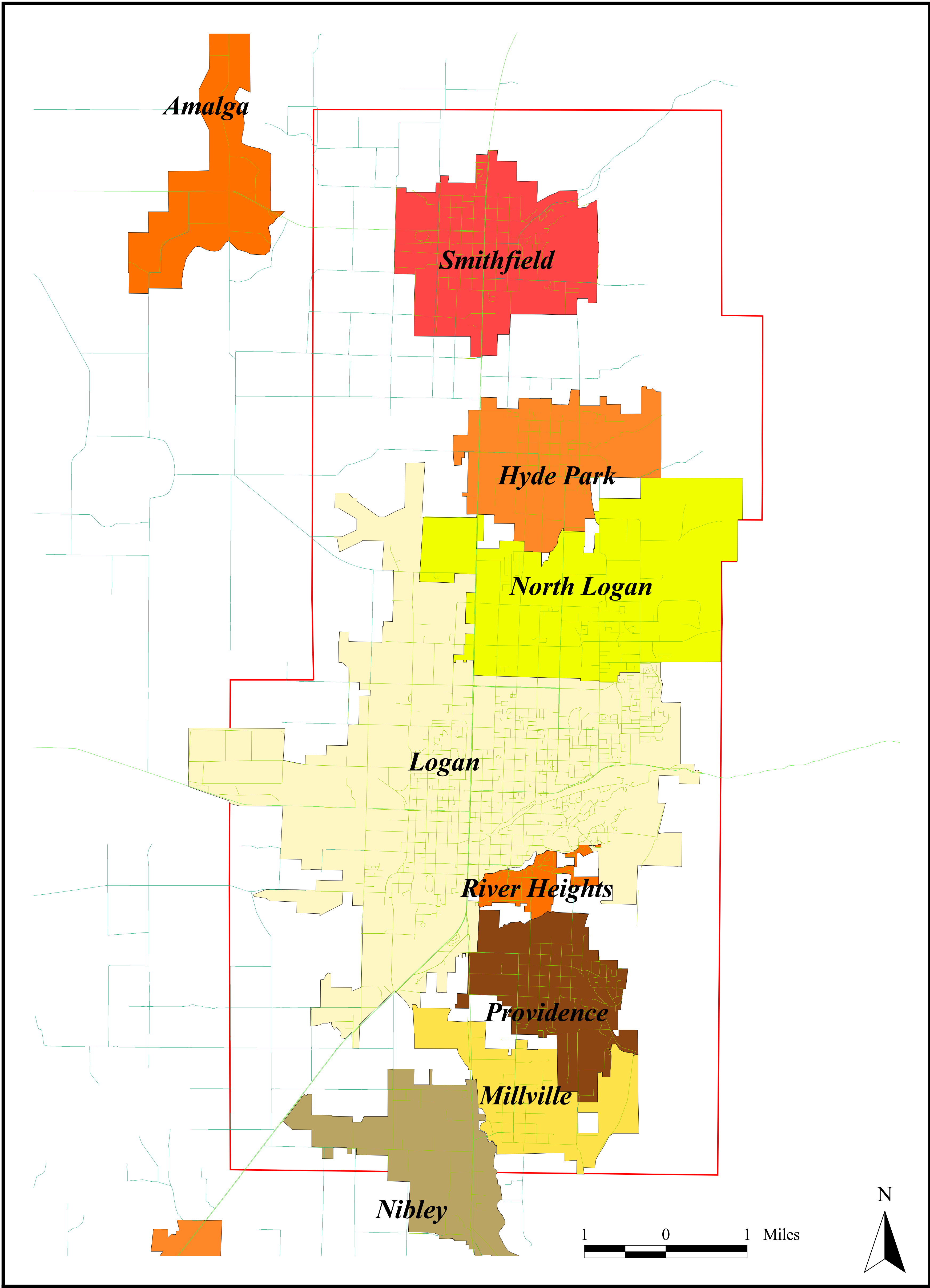
MAP T-5



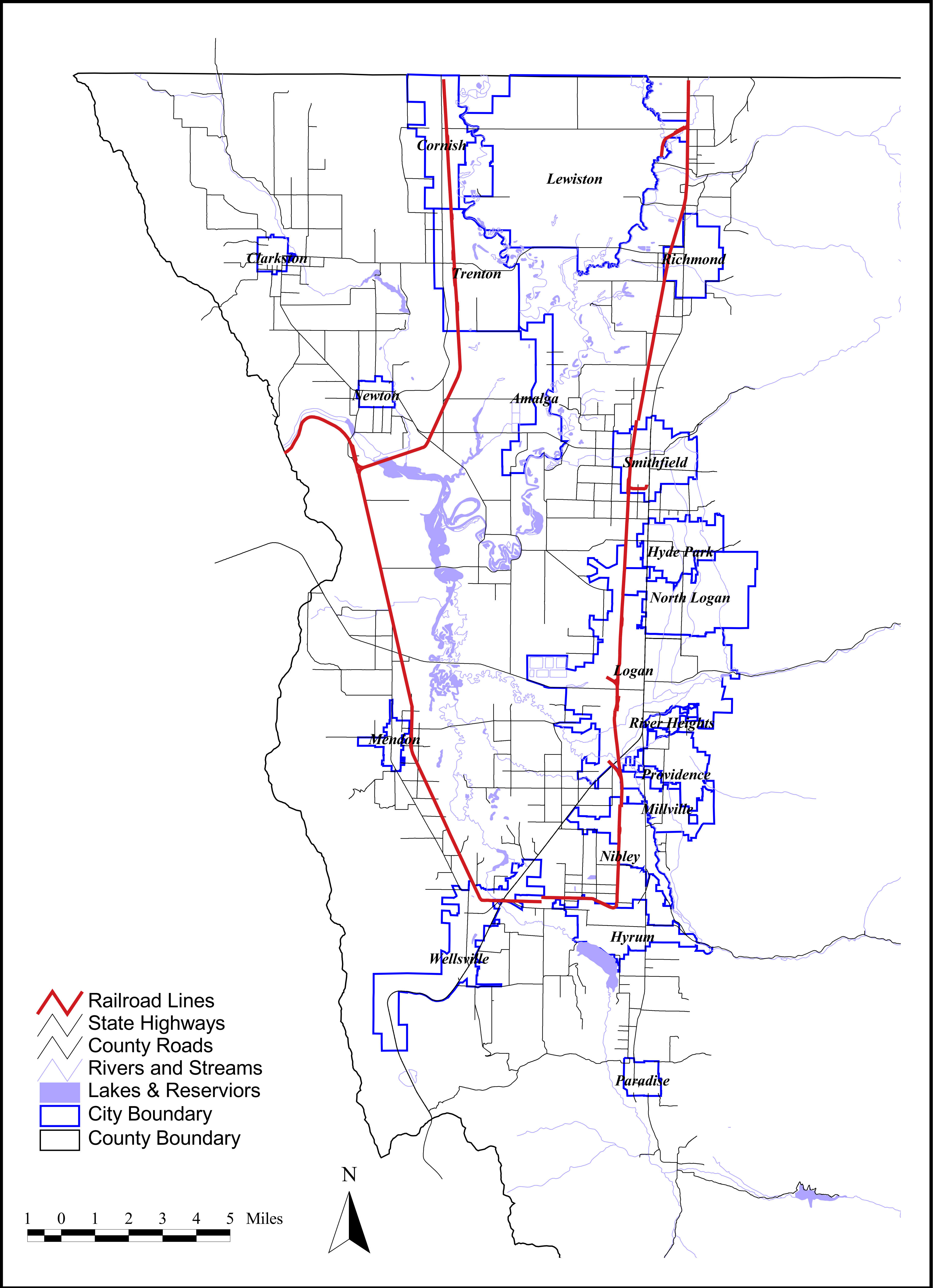
CACHE COUNTY
STATE FUNCTIONAL CLASSIFICATION SYSTEM
MAP T-6



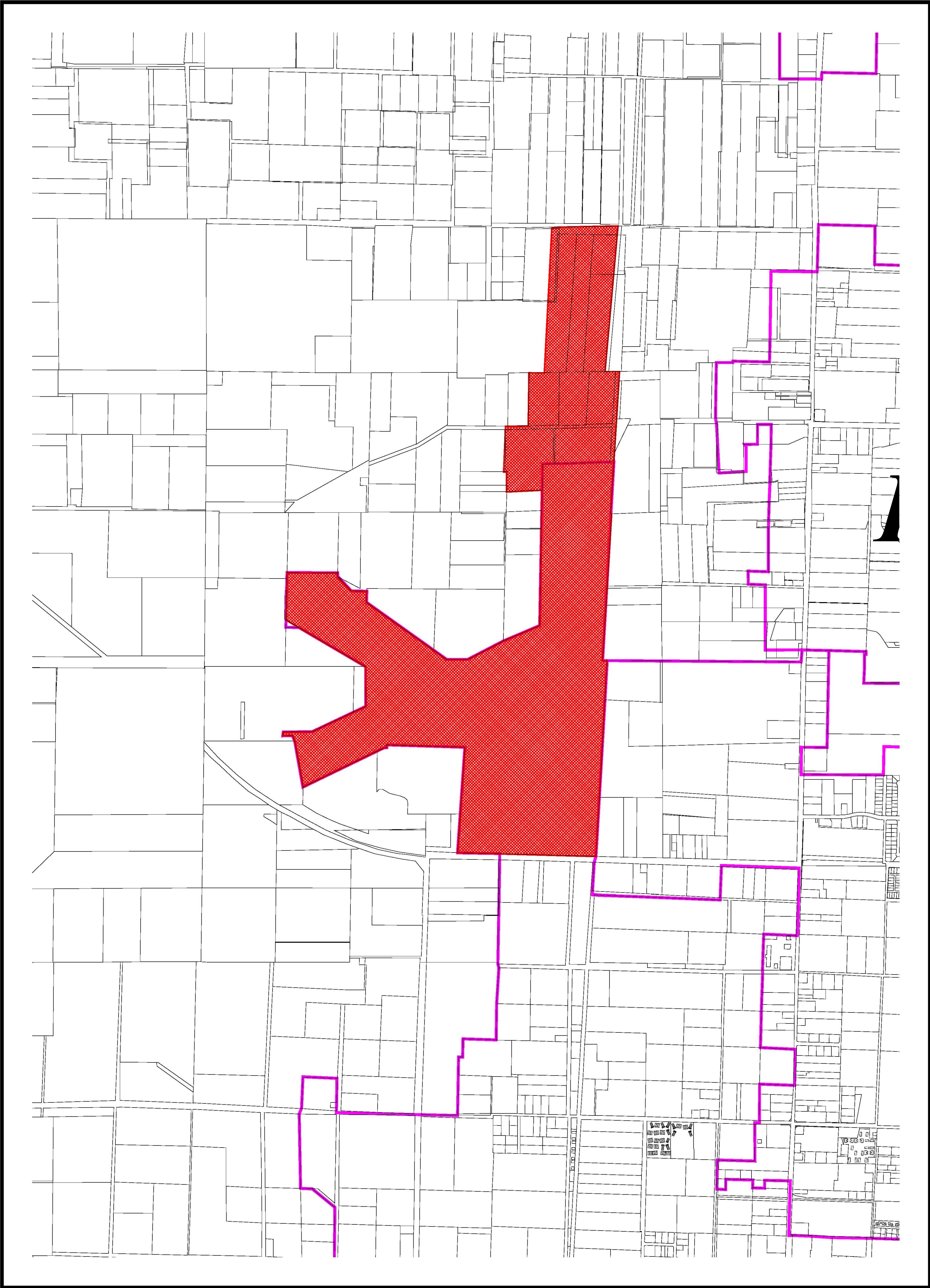
***CACHE COUNTY
COUNTY PRIORITY ROAD SYSTEM***



CACHE COUNTY
LOGAN URBANIZED AREA

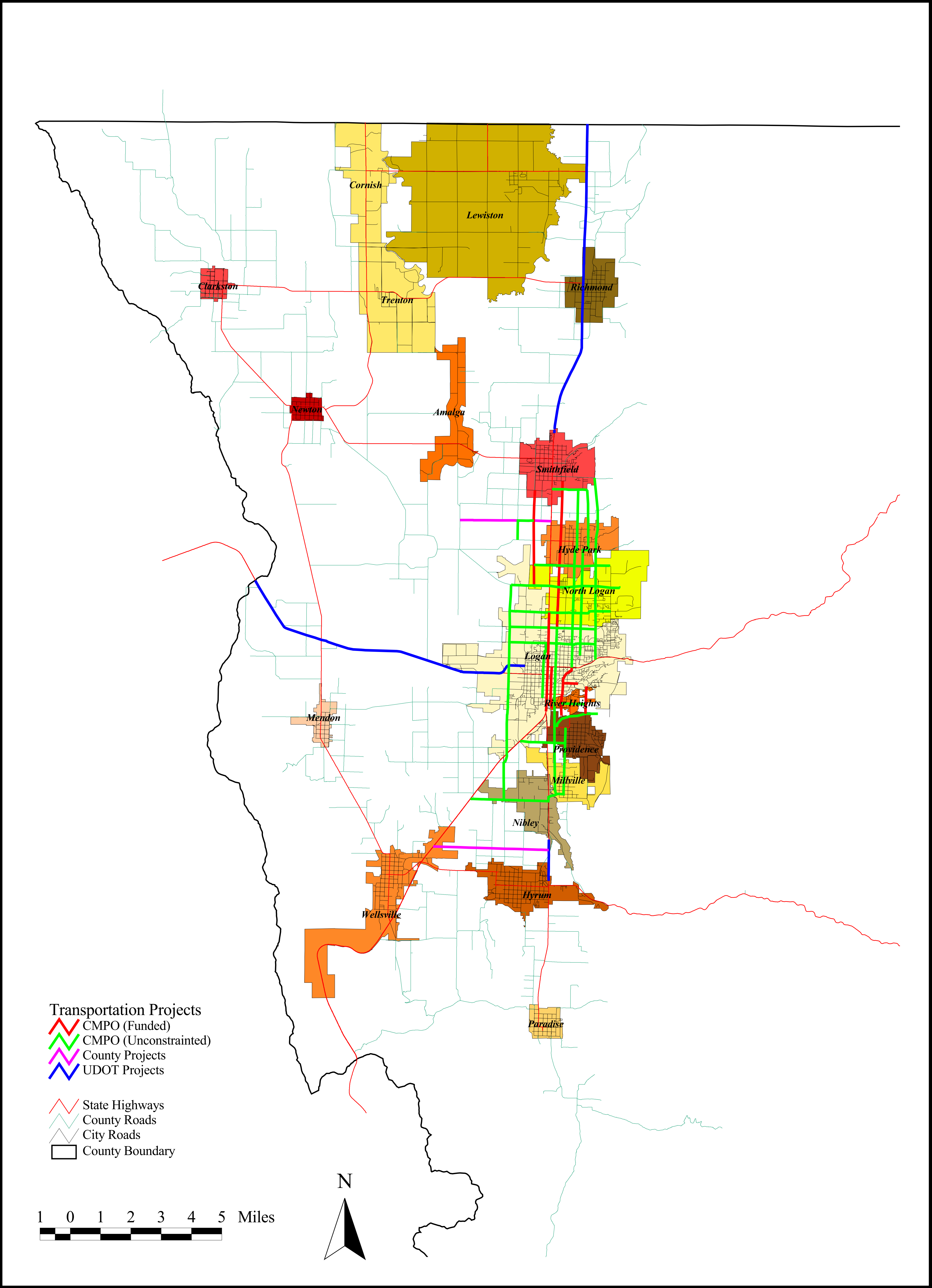


***CACHE COUNTY
RAILROAD SYSTEM***



CACHE COUNTY
LOGAN-CACHE AIRPORT





***CACHE COUNTY
TRANSPORTATION PROJECTS (2000 - 2020)***

INFRASTRUCTURE ELEMENT

The Infrastructure Element of the Cache Countywide Comprehensive Plan is not available at this time (5/24/01)

CACHE COUNTY
CORPORATION

M. LYNN LEMON
COUNTY EXECUTIVE/SURVEYOR

120 NORTH 100 WEST
LOGAN, UTAH 84321
Tel 435-752-5935
Fax 752-9169

COUNTY COUNCIL

DARREL L. GIBBONS
CHAIRMAN
CORY YEATES
V. CHAIRMAN
SARAH ANN SKANCHY
C. LARRY ANHDER
GUY RAY PULSIPHER
H. CRAIG PETERSEN
LAYNE M. BECK
STEPHEN M. ERICKSON
CLERK

CACHE COUNTY

RESOLUTION NO. 1999- 23

A RESOLUTION ADOPTING A MODERATE INCOME HOUSING PLAN AS AN
ELEMENT OF THE CACHE COUNTYWIDE COMPREHENSIVE PLAN.

The County Council of Cache County, State of Utah, in a regular meeting, lawful notice of which has been given, finds that Utah Code Ann. §17-27-307 provides that, as part of its general plan, Cache County should adopt a plan for moderate income housing within the unincorporated areas of the County, and that it should be incorporated as an element of the Cache Countywide Comprehensive Plan.

THEREFORE, BE IT RESOLVED BY THE CACHE COUNTY COUNCIL, that the attached Moderate Income Housing Plan be adopted and incorporated as an element of the Cache Countywide Comprehensive Plan, pursuant to Utah Code Ann. §17-27-307.

DATED this 26th day of October, 1999.



CACHE COUNTY COUNCIL

By: Darrel L. Gibbons
Darrel L. Gibbons, Chairman

ATTEST:

Daryl R. Downs
Daryl R. Downs
Cache County Clerk

AFFORDABLE HOUSING ELEMENT

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INTRODUCTION

In Utah and Cache County, the demand for affordable housing has become an increasingly serious challenge in the 1990s. The price of homes and rents in Utah have increased faster than income as the economic growth in the 1990's has created higher land and construction costs. These trends are expected to continue, putting even greater demands upon already stressed housing resource. Some communities have experienced an acute shortage of affordable housing while others are losing affordable housing to rapidly increasing housing costs, commercial encroachment, diminishing federal subsidy to housing efforts, and an inability to respond to quickly changing conditions. Local government has only limited control over issues that affect housing price-changing demographics.

In 1996, the Utah legislature passed HB295 to mandate preparation and inclusion of an affordable element within the county's and municipalities' general plans so that each jurisdictions would systematically assess their housing situations. The goal of the Affordable Housing Element is to encourage a variety of housing to allow persons with low and moderate incomes to benefit from and to fully participate in all aspects of neighborhood and community life. State Law mandates the affordable housing element shall include the following items:

- An estimate of the existing supply of moderate income housing within the County;
- An estimate of the proposed need for moderate income housing (five year periods);
- A survey of current residential zoning;
- An evaluation of how existing zoning densities affect opportunities for moderate income housing, and;
- A description of the County's program to encourage an adequate supply of moderate income housing.

The assessment of the affordable housing need has been done by using a model developed by the State of Utah's Department of Community and Economic Development. The tables and data shown throughout the Affordable Housing Element are primarily based on 1990 Census data and are used as inputs into the model. The model developed by the State was used to derive the affordable housing need.

Cache County as part of the Land Use Element of the *Countywide Comprehensive Plan* identified the need of developing policy on a affordable housing. The general implementation policies include the following policy dealing with affordable housing.

DEVELOP AND IMPLEMENT A COUNTY-WIDE POLICY FOR MODERATE-INCOME HOUSING (USC 10-9-307 & 17-27-307)

The Utah Legislature has determined that municipalities and counties should afford a reasonable opportunity for a variety of housing. This should include moderate-income housing to meet the needs of people desiring to live in a community. Moderate-income housing should be encouraged to allow persons with moderate incomes to benefit from, and to fully participate in, all aspects of neighborhood and community life. Moderate-income housing is defined as housing occupied or reserved for occupancy by households with a gross household income equal to or less than 80 percent of the median

gross income of the metropolitan-statistical area for households of the same size.

Implementation Recommendations:

- Estimate the existing supply of moderate-income housing located within the municipalities and county
- Estimate and revise annually the need for moderate-income housing in the municipalities and county for the next five years
- Survey total residential zoning
- Show an evaluation of how existing zoning density's affect opportunities for moderate-income housing
- Development of a program by municipalities and the County to encourage an adequate supply of moderate-income housing

The Affordable Housing Element of the *Cache Countywide Comprehensive Plan* evaluates the County's affordable housing as a whole and then separates the unincorporated areas from the municipalities. This will give a better understanding of the housing needs within Cache County and identify the jurisdictional responsibility to meet those. However, the primary focus of the goals and strategies of the Affordable Housing Element will be on the unincorporated areas of Cache County. The implementation policies developed as part of this element will serve as recommendation to the Cache County Planning Commissions and County Council for improving and maintaining affordable housing within the unincorporated areas of Cache County.

POPULATION AND DEMOGRAPHIC INFORMATION

The demographics of Cache County indicate a fairly homogenous population. The 1990 Census indicated there were 70,183 persons living in 21,055 households, making an average household size of 3.29 persons. Of the total population there were 35,208 male and 34,975 female residents of Cache County. Approximately 95.0 percent of Cache County population is white, with 97.6 percent of non-Hispanic origin. The remaining 5 percent or roughly 3,500 persons are of minority races, Black, American Indian, Asian, Pacific Islander, or other, living within the County. Approximately 41.2 percent of Cache County's population is between 1 and 19 years old, 43.0 percent between ages of 20 and 49, and only 15.8 percent are age 50 or older.

Population Trends

Cache County has maintained a steady growth rate of 2 to 2.5 percent a year since 1950. Most of Cache County's increase in population has been natural due to births. The County, at times, has experienced surges of out and in-migration, but has maintained a fairly constant growth rate. This may not seem like a large growth rate, but if the County continues to maintain this growth rate the population will double every 25 to 30 years. Table AH-1 below shows the breakdown of the basic population and household assumptions for Cache County. These basic assumptions are the minimum levels used for the Affordable Housing Model in deriving the housing needs.

TABLE AH-1 POPULATION AND HOUSEHOLD ASSUMPTIONS (1990 & 1996)

	County Total	Municipal Total	Unincorporated Total
1990 Population (1990 Census)	70,183	65,379	4,804
1996 Population (1996)	85,408	80,082	5,326
1990 Household Size (1990 Census)	3.29		
1990 Household Size (GOPB, County)	3.37		
1996 Household Size (GOPB, County)	3.28		
Projected Household Size, 2002 (GOPB, County)	3.21		
1990 Income Limit - Family of 4 - "Low Income" (80%)	\$24,950		
1996 Income Limit - Family of 4 - "Low Income" (80%)	\$32,000		

Source: 1990 Census, Utah State GOPB Model

Most of Cache County's population of currently lives within the existing incorporated communities of the County. Table AH-1 shows the population breakdown by municipal and unincorporated area population. In 1996 there were 5,326 persons who lived in the unincorporated area of Cache County, which is 6.2 percent of the total population of Cache County. The annualized growth rate from 1990 to 1996 for the unincorporated area was 1.4 percent while the municipalities grew at a slightly higher rate of 2.9 percent.

Employment Trends

The employment growth trends indicate the population of Cache County is increasing at a somewhat faster rate than housing growth. Table AH-2 shows that non-agricultural employment has been growing about 5.2 % annually. This trend is expected to continue during the next few years.

TABLE AH-2 CACHE COUNTY NON-AGRICULTURAL EMPLOYMENT 1990, 1996, & 2000

	1990	1996	2000	*AAGR
Mining	0	5	5	0.1%
Construction	1,083	1,957	2,249	6.9%
Manufacturing	8,890	10,351	12,514	3.2%
Trans., Comm., & Public Utilities	603	963	1,594	9.2%
Trade (Wholesale & Retail)	5,314	7,171	10,920	6.8%
Finance & Real Estate	567	846	1,218	7.2%
Service	4,873	6,314	8,654	5.4%
Government	8,507	10,018	14,816	5.2%
Total	29,837	37,625	51,970	5.2%

Source: Workforce Service, 1990 Census

** Annual Average Growth Rate*

The employment sectors that have shown the most growth since 1990 have been the finance and real estate, transportation, communication, and public utility's sectors. The construction and trades are the next fastest growing sectors of employment. The office of Workforce Services indicates the overall projection of employment sectors will continue to add new jobs, but this growth will be at a much slower rate. This is due primarily to the very low unemployment rate and decline in a net in-migration for the state as a whole.

Income Levels

The income of a person is a very important factor in the ability of that individual or family to provide for their housing needs. Table AH-3 shows the median household income for Cache County in 1990, 1996 and the percent change.

TABLE AH-3 CACHE COUNTY MEDIAN HOUSEHOLD INCOME (1990 AND 1996)

	1990	1996	*AAGR
Cache County	\$ 26,949	\$ 32,879	2.5 %

Source: U S Bureau of the Census

**AAGR - Annual Average Growth Rate*

The share of earnings in Cache County comes from the manufacturing sector (28%). Overall, the personal income for Cache County ranks at 13 among the counties in the State. The per capita's personal income for Cache County in 1996 was \$16,022.

The income levels for Cache County are based on the HUD Home Program Income Limits. Table AH-4 shows the number families based on the percentage of the median income for 1990 and 1996 for Cache County.

TABLE AH-4 PERCENTAGE OF MEDIAN INCOME BY FAMILY FOR CACHE COUNTY

Affordable Housing Income Category	Greater than 80%	80% of Median Income	50% of Median Income	30% of Median Income	Total
Number of Families 1990					
County Total	11,222	3,325	2,339	3,244	20,130
Municipal Total	10,958	3,255	2,308	3,191	19,712
Unincorporated Total	264	70	31	53	418
Number of Families 1996					
County Total	13,009	4,437	3,380	4,596	25,422
Municipal Total	12,656	4,333	3,308	4,521	24,548
Unincorporated Total	353	104	72	75	604

In 1990, 56 percent of Cache County's population met the affordable housing income categories. In 1996, the number of families which met the affordable housing categories decreased by 5 percent to 51 percent. The overall decrease could be contributed to a number of different factors such as increased income, and availability lower cost housing, and other factors.

COST OF LIVING

A review of the cost of living for an area provides a useful and reasonably accurate measure of living costs within an urban area. The housing index for the fourth quarter of each year was used from the American Chamber of Commerce Researchers Association (ACCRA) Cost of Living Index. The *ACCRA Cost of Living Index*, a national report published quarterly, uses the following housing criteria to calculate the cost of living index for housing:

- Apartment, monthly rent - two bedrooms, unfurnished, excluding all utilities except water, 1 1/2 or 2 baths, approximately 950 sq. ft.
- Total purchase price - 1,800 sq. ft. living area new house, 8,000 sq. ft. lot, urban area with all utilities.
- Mortgage Rates - effective rate, including points and origination fee, for 30-year conventional fixed-rate mortgages.
- Monthly Payments - principal and interest, using mortgage rate and assuming 25% down payment.

Table AH-5 on the following page shows the fourth quarter cost of living composite and housing index for the Logan Urbanized Area. The index measures relative price levels for consumer cost of housing. The average for all participating places, equals 100, and each participants' index is read as a percentage of the average for all places.

TABLE AH-5 ACCRA COST OF LIVING INDEX LOGAN URBANIZED AREA (1990 -1997)

Fourth Quarter	Composite Index	Housing Index
1990	93.2	91.3
1991	94.7	87.8
1992	93.0	85.3
1993	94.5	97.7
1994	101.8	107.7
1995	103.6	117.3
1996	103.0	114.4
1997	102.1	114.3

Source: ACCRA Cost of living Index

Table AH-5 shows a definite increase in the housing costs within the Logan Urbanized Area. Since 1994 the housing costs have been some of the highest in the State of Utah for metropolitan areas. This is a definite problem when trying to meet the housing needs of the lower income groups.

Population and Demographic Issues Statement

The primary issues associated with population and demographic dealing with affordable housing are location and density of population in Cache County. Currently, 93 percent of the population of the County lives in the existing municipalities, while 7 percent lives in the unincorporated area of Cache County. This breakdown of where individuals live alone is a very important factor in the development of an affordable housing policy for unincorporated Cache County.

The reason for limited population within the unincorporated County is due to the physical constraints and limitation with the unincorporated areas of the County. Currently, there are limited or no municipal services (public water and sewer systems) provided in the unincorporated areas of the County. Any new residential development has been limited due to the requirements of an individual well or spring and septic system for each home. This places limits on the size of a lot to accommodate a well and septic system. Many times the existing physical constraints require the lot to be larger than the minimum ½ acre.

The limited urban service and the physical constraint will continue to be the limiting factors dealing with residential development within the unincorporated areas of Cache County. Currently, the potential for higher density housing development becomes very remote today and in the future. These factors limit the options that the Counties to provide for affordable housing.

EXISTING HOUSING

The existing housing information is divided into two groups of dwelling units based on the 1990 Census, owner and renter occupied dwelling units. This section will consider the different aspects of each group. The existing housing section will discuss the current housing stock, affordability and housing trends.

Current Housing Stock

Table AH-6 shows the number of owner and rental-occupied units based on the 1990 Census market value and rent. Most of the owner-occupied dwelling units (92 percent) are located within the existing municipalities while 8 percent of the owner occupied dwelling units are located in the unincorporated areas of the County. Table AH-6 shows the number of dwelling units by occupancy as a percentage of median income.

TABLE AH-6 DWELLING UNITS BY OCCUPANCY FOR CACHE COUNTY 1990

	County Total	Municipal Total	Unincorporated Total
Owner Occupied			
30% of Median Income	560	532	28
50% of Median Income	3,590	3,411	179
80% of Median Income	5,267	4,919	348
Greater than 80%	1,456	1,335	121
Total Specified	10,873	10,197	676
Not Specified	2,288	1,890	398
Total Owner Occupied	13,161	12,087	1,074
Renter Occupied			
30% of Median Income	2,698	2,653	45
50% of Median Income	3,838	3,772	66
80% of Median Income	876	864	12
Greater than 80%	136	134	2
No Cash Rent	221	203	18
Total Specified	7,769	7,626	143
Not Specified	91	54	37
Total Renter Occupied	7,860	7,572	180

Source: 1990 Census

Based on the 1990 Census the median market value for owner-occupied dwellings in Cache County was \$116,000. This number would be consistent with homes in the unincorporated areas and municipalities. Over the last eight years, since the census, the housing costs in Cache County have risen to be one of the highest costs for urban areas in the State of Utah. Housing costs have increased steadily to a high of 117 percent of the national average in 1995 based on the *ACCRA Cost of Living Index*. This is primarily due to the lack of speculation housing being developed within Cache County as a whole. Currently, most of the newly constructed single-family dwellings in all of Cache County are custom homes which tend to cost more than speculation housing.

Like the owner occupied dwelling units, most of the rental units (97 percent) are located within the existing municipalities. The unincorporated area of the County has no provisions to allow multi-family

dwelling units. The 1990 Census showed the median gross monthly rent for renter occupied dwelling units in Cache County to be \$335. Based on the data in the table on the previous page, the median gross rent for both the unincorporated areas and municipalities of Cache County should be consistent with the overall median gross rent of the County. Like the market value for owner occupied dwelling units, the rental rate also increased by 4.6 percent a year since 1990. The vacancy rate for renter occupied dwelling units since 1990 has been approximately 1.1 percent. This low vacancy rate has contributed to an increased rental rate and has encouraged an increased demand for building multi-family units within the municipalities of the County.

Housing Affordability

The price of housing is the result, in large part, of demand and supply; population changes, especially net in-migration and net out-migration, employment fluctuations and changes in income. In Cache County, as well as the rest of Utah, housing price movements have corresponded very closely with demographic and economic trends. When the County and State experienced net out-migration and sluggish growth in income and employment (1985-1990), housing prices were stagnant. The rapid acceleration of prices in the 1990's coincides with the in-migration beginning in 1990-1991 and stronger growth in both employment and income.

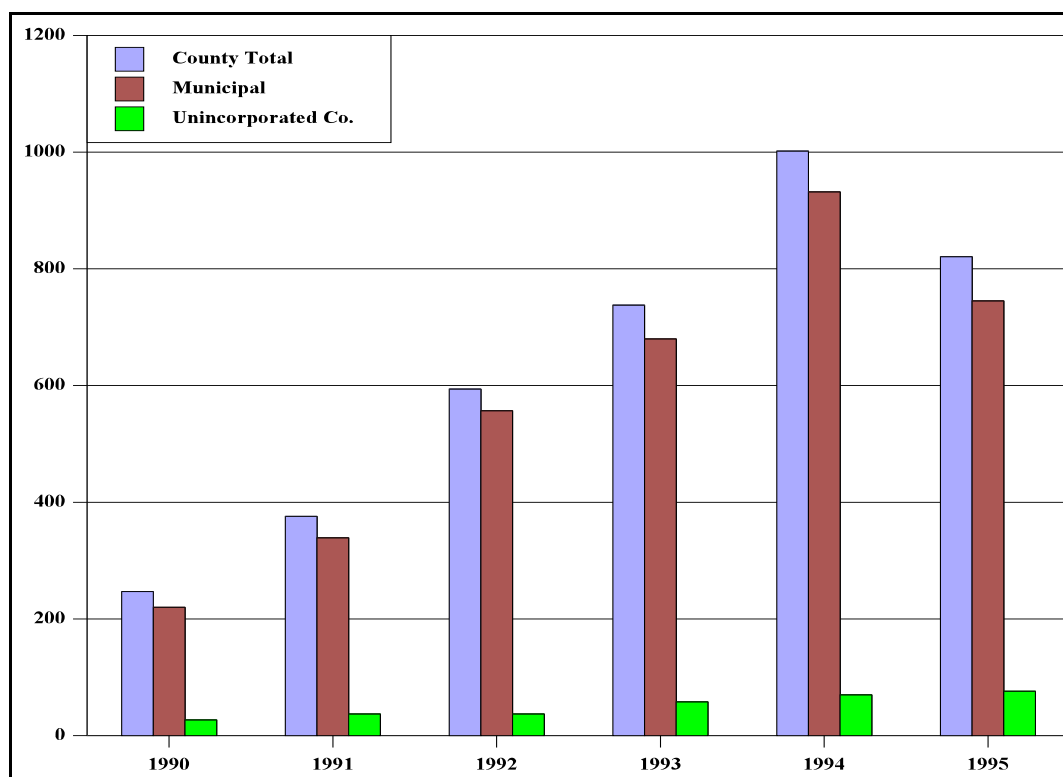
The increase in housing prices has not had the negative impact on housing demand and affordability that one would expect at first glance. Since higher prices have different consequences for different households. For those individuals who already own homes, higher housing prices have improved their ability to afford higher priced homes. For example an individual whose home was valued at \$70,000 in 1990 has seen the value of the home increase to more than \$120,000 by 1997, creating \$50,000 in additional equity or wealth. This inflation-created equity becomes an important factor in the down payment for a future home purchase. It allows the individual in this example to purchase another home that is priced well beyond what their income would allow because they can reduce the monthly payment by making a substantial down-payment using the inflation-created equity. The increase in housing prices actually assists, rather than deter, the individual from buying a higher-priced and higher quality home

The groups of people whose affordability has been adversely affected by increases in housing prices are primarily those living in rental housing and those new households created each year by marriages, divorces and by children leaving home. Generally, these groups of individuals have not benefitted from rising home equity created by higher housing prices. With little prospect for home-ownership, these individuals are prevented from owning the very asset that has proven to be the best source of wealth accumulation for current homeowners.

Housing Trends

Since the 1990 Census residential construction has substantially increased. The Figure AH-1 on the following page shows the new residential construction from 1990 to 1995. The information in the graphic shows the total number of new residential constructions for Cache County with the data broken down into municipal and unincorporated areas.

FIGURE AH-1 NEW RESIDENTIAL CONSTRUCTION 1990 TO 1995



Source: Annual Report of socioeconomic Characteristics, 1997

In 1990 there were only 247 new residential dwelling units built in Cache County with 220 developed within the existing municipalities and 27 were built in the unincorporated County. In 1995 there were 821 new dwelling units developed in Cache County with 745 new dwelling units developed within the existing municipalities and 76 built in the unincorporated County. The overall number of new dwelling units developed from 1990 to 1995 were 3,778. Dwelling units built in municipalities totaled 3,473 or 92 percent of the total number. The remaining 7 percent or 305 dwelling units were developed in the unincorporated areas of the County. The unincorporated areas of Cache County have, in the last six years, experienced an overall 2.6 percent growth rate in the number of new residential dwelling units.

Existing Housing Issue Statement

Since 1990 the number of new residential housing units within Cache County has increased substantially. The numbers of new residential building permits does show that it has peaked and the overall number of new permits is declining per year. However, the number of permits in the unincorporated area is continuing to show slight increases over time. This may be due to a number of

different factors. The different factors include the following:

- Lower cost of land in the unincorporated county.
- Availability of land
- Increased fees within the municipalities.
- Increasing construction cost
- Personal desire to live in rural areas

Whatever these factors are this trend is expected to continue overtime. Really the only limiting factor will be physical constraints. These physical constraints will be the availability of a good culinary water source and the ability to develop an operable septic system.

AFFORDABLE HOUSING NEEDS SUMMARY

The need for affordable housing within Cache County is evident based on the current cost of existing housing in Cache County. The model developed by the Utah State Department of Community and Economic Development was used to determine the overall need for affordable housing. Table AH-7 below shows the estimated affordable housing needs based on the output of the model.

TABLE AH-7 ESTIMATED AFFORDABLE HOUSING NEEDS (YEAR END 1996)

Affordable Housing Category	80% of Median Income	50% of Median Income	30% of Median Income
Household Income	\$32,000	\$20,000	\$12,000
Maximum Purchase Price	\$99,700	\$60,900	\$35,000
Maximum Monthly Rent	\$726	\$426	\$226
County-Current Supply (year end 1996)			
1990	-922	-874	-2,193
Net change - 1990 to 1996	263	-774	-1,218
Current Supply	-659	-1,648	-3,411
County-Projected Supply (year end 2001)			
Current Supply (1996)	-659	-1,648	-3,411
New Demand (1997 to 2001)	-746	-704	-912
Projected Supply	-1,404	-2,352	-4,324
Annual Average Affordable Housing Need	281	470	865
Municipal-Current Supply (year end 1996)			
1990	-877	-844	-2,113
Net change - 1990 to 1996	155	-495	-1,226
Current Supply	-722	-1,339	-3,339
Municipal-Projected Supply (year end 2001)			
Current Supply (1996)	-722	-1,339	-3,339
New Demand (1997 to 2001)	-703	-477	-862
Projected Supply	-1,425	-1,816	-4,201
Annual Average Affordable Housing Need	285	363	840
Unincorporated-Current Supply (year end 1996)			
1990	-46	-29	-82
Net change - 1990 to 1996	71	-32	-12
Current Supply	26	-61	-94
Unincorporated-Projected Supply (year end 2001)			
Current Supply (1996)	26	-61	-94
New Demand (1997 to 2001)	-68	-147	-35
Projected Supply	-43	-208	-129
Annual Average Affordable Housing Need	9	42	26

There is a need for additional affordable housing to be built in Cache County. It is very important to understand the outputs from this model should only be considered as a gross representation of a potential outcome if the current housing trends continue at the same rate. Output of this model should only serve

as an indicator that there is a need for affordable housing and there should be some effort made to lessen the potential impacts on the demand for more affordable housing.

Another method for considering the need of affordable housing is to consider the share of housing based on type and jurisdiction. Table AH-8 below shows the share of housing unit types by jurisdiction based on the 1990 Census.

TABLE AH-8 SHARE OF HOUSING UNIT TYPES BY JURISDICTION (1990)

	County Total	% of County	Municipal Total	% of County	Unincorporated Total	% of County
Total Housing Units	22,053	100.0	20,543	93.2	1,510	6.8
Owner-Occupied Units	13,161	59.7	12,087	91.8	1,074	8.2
Renter-Occupied Units	7,860	35.6	7,680	97.7	180	2.3
Vacant Units	1,032	4.7	776	75.2	256	24.8

Source: 1990 Census

More than 93 percent of the total housing units are located within the existing municipalities, with less than 7 percent in the unincorporated areas of the County. Only limited municipal services, such as culinary water and no sewer systems are provided in the unincorporated areas of the County. The ***Cache Countywide Comprehensive Plan*** does not encourage these municipal type services to be provided now or in the future in the unincorporated areas of the County.

Affordable Housing Needs Issues Statement

The model provides only a rough estimate of the future need for affordable housing within Cache County. Since the focus of this element is on the unincorporated area, it is important to understand that the unincorporated County only has a very small share of the total housing units of the County. In the past it has not been the intent of the County to restrict any housing type within the unincorporated areas of the County. As Cache County develops the new land use ordinance for the unincorporated areas of the County there should be an effort to put no limits on the development of different residential housing where possible.

The physical constraints will limit the overall density and certain type of residential housing units. As discussed earlier most development will require the use of individual wells and septic systems. This alone will limit the size and type of residential housing projects. High density residential housing development will require municipal type services such as water and sewer systems. So any developments of these types should be done in the existing municipalities where these services are available. This recommendation is consistent with the development policy of the Land Use Element of the ***Cache Countywide Comprehensive Plan*** of “Urban development within the existing urban areas”.

REGULATION AND ORDINANCES

Cache County and the municipalities of the County have a limited but very important roles in providing affordable housing within each jurisdiction. Each jurisdiction has a limited power to regulate the overall number of affordable housing units built within their community. Under Utah State Code, each county and municipality has a responsibility for developing their own ordinances and they administer them separate from one another. Within enabling laws of the State of Utah, there are very few requirements for individual jurisdictions to cooperate with one another. These limited requirements, tax structure and revenues sources for a community, create more of an atmosphere of competition rather than cooperation.

These circumstances create a very difficult situation in trying to create affordable housing within the County. A community may have some effect on the affordable housing policies of their community through general plans, land use regulations, and fees and development exactions.

Land Use Regulations

Land use regulations are often considered one of the major barriers to the development of affordable housing and are reflected in the cost of housing. The three major areas where land use regulations have the most effect on the cost of housing are:

- Large Lot Zoning
- Standards imposed by zoning and subdivision regulations
- Requirements for installation of off-site facilities

Currently, the County's Land Use Ordinance is designed to assure a compatible interrelationship of land uses in such a way that the health, safety, and general welfare of the county are promoted and protected. The objectives of land use ordinances is to establish regulations that provide locations for all essential uses of land and buildings and to ensure that each is located appropriately.

Cache County's Land Use Ordinance currently allows three types of residential housing within the current agricultural zoning. These housing types include the following:

- Single-Family Dwelling;
- Accessory Apartment with a single-family dwelling, and;
- Temporary Mobile Home for farm workers.

The information used by the model for the housing needs analysis was limited to 1990 Census and local building permit data. Accessory apartments and temporary mobile homes were not accounted for in the data used by the model. The information on these housing types were not include in the model because they were difficult to identify number of these uses and incorporate them into the model for the needs analysis. However, these two housing types tend to be of low rent and providing housing opportunities for individuals with income of less than 50 and 30 percent of the median income. It is estimated that there are some 200 units of both accessory apartments and temporary mobile homes currently being used within the unincorporated county. The total number housing units cannot be confirmed but it does indicate that there are additional housing units available for individuals in the lower income levels.

Cache County through the ***Countywide Comprehensive Plan*** has recognized the need for affordable housing. As part of the update of the County's land use regulation, based on the implementation policies of the Plan, the County will give careful consideration to provide for the need for affordable housing in the unincorporated County.

Barriers and Incentives

The primary barrier to developing affordable housing within the unincorporated County is the lack of urban services. Most of the requirements of the County's Land Use Ordinance are centered around the need for basic services (culinary water and sewage disposal). There are a limited number of public water systems within the unincorporated areas of the county and no sewer systems available.

The minimum lot size for a single-family dwelling within the unincorporated County is ½ acre. This is primarily due to the need for an individual well and septic system for each individual dwelling unit. Because of physical constraints such as high water table, soils, wetlands and others, causes most lots for new dwelling units to exceed 1 acre. These physical constraints have not encouraged urban type's residential development in the unincorporated area of the county. The municipal services necessary for large developments has encouraged these developments to take place in the existing municipalities.

Regulations and Ordinances Issue Statement

Cache County is currently in the process of rewriting their land use ordinance. This is primarily based on the changes recommended by the implementation policies of the Land Use Element of the ***Cache Countywide Comprehensive Plan***. It has been and will continue to be the intent of the County to not limit the development of residential housing within the unincorporated areas of the County. However, the physical environment will place some restrictions on the type and density of any residential development in the County.

GOALS AND STRATEGIES

GOAL 1: Cache County should continue to work to meet the affordable housing needs of the citizens in the unincorporated areas in Cache County

Objectives:

- Not limit the opportunities for providing affordable housing in unincorporated areas of the County
- Encourage the development affordable housing where possible

Strategies:

- 1.1 Keep the planning and approval process simple for individual applicants
- 1.2 Keep the County Land Use Ordinance from become overly restrictive to prevent affordable housing

GOAL 2: As Cache County develops the new Land Use Ordinance, based on the implementation policies of the Land Use Element, the current provisions which provide for affordable housing should be maintained.

Objectives:

- Continue to provide for affordable housing opportunities within Cache County Land Use Ordinance
- Continue opportunities for affordable housing in the unincorporated areas of Cache County

Strategies:

- 2.1 Improve the standards in the land use ordinance for Accessory Apartment in existing single family dwelling
- 2.2 Better define the standards of the Temporary Uses in the County Land Use Ordinance
- 2.3 Improve the enforcement of the Temporary use standards
- 2.4 Better define the definition of family in the Land Use Ordinance

APPENDIX

The following tables are the primary inputs to the Affordable Housing Model used to do the needs analysis. These table show the detail breakdown of the data used in the model. Much of the information in the tables used with the text of the Affordable Housing Element is based on this information and additional data sources to augment the information.

OWNER OCCUPIED UNITS - 1990 Census

1990 Market Value	County Total	Municipal Total	Unincorporated Total
Less than \$15,000	45	45	0
\$15,000 to \$19,999	46	41	5
\$20,000 to \$24,999	75	70	5
\$25,000 to \$29,999	150	137	13
\$30,000 to \$34,999	244	239	5
\$35,000 to \$39,999	415	458	20
\$40,000 to \$44,999	485	756	27
\$45,000 to \$49,999	817	756	61
\$50,000 to \$59,999	1,873	1,802	71
\$60,000 to \$74,999	2,838	2,657	181
\$75,000 to \$99,000	2,429	2,262	167
\$100,000 to \$124,999	809	742	67
\$125,000 to \$149,000	276	264	12
\$150,000 to \$174,999	148	132	16
\$175,000 to \$199,999	75	65	10
\$200,000 to \$249,999	87	78	9
\$250,000 to \$299,999	21	19	2
\$300,000 to \$399,999	28	26	2
\$400,000 to \$499,999	3	0	3
\$500,000 or More	9	9	0
Total Specified	10,873	10,197	676
Not Specified	2,288	1,890	398
Total Owner Occupied	13,161	12,087	1,074

RENTAL UNITS - 1990 Census

1990 Gross Monthly Rent	County Total	Municipal Total	Unincorporated Total
Less than \$100	31	31	0
\$100 to \$149	156	156	0
\$150 to \$199	345	344	1
\$200 to \$249	789	776	13
\$250 to \$299	1,377	1,346	31
\$300 to \$349	1,519	1,503	16
\$350 to \$399	1,104	1,083	21
\$400 to \$449	697	674	23
\$450 to \$499	518	512	6
\$500 to \$549	227	224	3
\$550 to \$599	210	210	0
\$600 to \$649	176	167	9
\$650 to \$699	182	182	0
\$700 to \$749	81	81	0
\$750 to \$999	131	129	2
\$1,000 or More	5	5	0
No Cash Rent	221	203	18
Total Specified	7,769	7,626	143
Not Specified	91	54	37
Total Renter Occupied	7,860	7,680	180

MONTHLY OWNER COSTS AS A PERCENTAGE OF INCOME - 1990 Census

Household Income	Owner Households			Renter Households		
	County Total	Municipal Total	Unincorporated Total	County Total	Municipal Total	Unincorporated Total
less than \$10,000:						
Less than 20 percent	148	146	2	27	27	0
20 to 24 percent	157	146	11	30	30	0
25 to 29 percent	114	113	1	73	70	3
30 to 34 percent	84	84	0	122	122	0
35 percent or more	347	304	43	1,377	1371	6
Not computed	41	36	5	146	143	3
\$10,000 to \$19,999:						
Less than 20 percent						
20 to 24 percent	835	794	41	477	474	3
25 to 29 percent	126	114	12	529	515	14
30 to 34 percent	98	91	7	544	539	5
35 percent or more	97	89	8	363	350	13
Not computed	289	279	10	691	686	5
	0	0	0	73	71	2
\$20,000 to \$34,999:						
Less than 20 percent						
20 to 24 percent	1,419	1,332	87	1,454	1,425	29
25 to 29 percent	567	532	35	357	348	9
30 to 34 percent	497	470	27	196	193	3
35 percent or more	243	226	17	92	86	6
Not computed	195	174	21	78	78	0
	0	0	0	63	54	9
\$35,000 to \$49,999:						
Less than 20 percent						
20 to 24 percent	1,925	1,783	142	724	700	24
25 to 29 percent	601	575	26	37	37	0
30 to 34 percent	176	162	14	9	9	0
35 percent or more	55	50	5	0	0	0
Not computed	15	6	9	0	0	0
	0	0	0	28	26	2
\$50,000 or more:						
Less than 20 percent	2,484	2,355	129	275	270	5
20 to 24 percent	290	269	21	0	0	0
25 to 29 percent	33	30	3	0	0	0
30 to 34 percent	17	17	0	0	0	0
35 percent or more	14	14	0	0	0	0
Not computed	6	6	0	4	2	2
Total	10,873	10,197	676	7,769	7,626	143

HOUSING STOCK INFORMATION-1990

HOUSING STOCK OCCUPANCY AND AGE - 1990 Census

	County Total	Municipal Total	Unincorporated Total
Persons per Room			
Owner Occupied Units	8,192	7,570	622
0.50 or less	4,458	4,048	410
0.51 to 1.0	419	388	31
1.01 to 1.50	75	65	10
1.51 to 2.0	17	16	1
2.01 or more			
Renter Occupied Units			
0.50 or less	3,343	3,263	80
0.51 to 1.0	3,558	3,479	79
1.01 to 1.50	671	652	19
1.51 to 2.0	235	235	0
2.01 or more	53	51	2
Housing Stock Age			
Owner Occupied Units			
1989 to March 1990	150	132	18
1985 to 1988	923	792	131
1980 to 1984	1,335	1,134	201
1970 to 1979	4,111	3,789	322
1960 to 1969	1,691	1,603	88
1950 to 1959	1,200	1,131	68
1940 to 1949	839	790	49
1939 or earlier	2,912	2,716	196
Renter Occupied Units			
1989 to March 1990	88	83	5
1985 to 1988	491	488	3
1980 to 1984	1,130	1,120	10
1970 to 1979	1,621	1,595	26
1960 to 1969	1,051	1,041	10
1950 to 1959	882	843	39
1940 to 1949	594	581	13
1939 or earlier	2,003	1,929	74

TOTAL NEW CONSTRUCTION 1990 TO 1995 (New Residential Units Permitted)

	1990	1991	1992	1993	1994	1995	Total
County							
Single Family	171	199	353	398	444	447	2,012
Duplex & Multi Family	76	165	230	326	509	296	1,602
Mobile Home/Cabins	*	12	11	14	49	78	164
Total	247	376	594	738	1,002	821	3,778
Municipal							
Single Family	144	174	323	358	385	383	1,767
Duplex & Multi Family	76	165	230	314	509	296	1,590
Mobile Home/Cabins	*	*	4	8	38	66	116
Total	220	339	557	680	932	745	3,473
Unincorporated							
Single Family	27	25	30	40	59	64	245
Duplex & Multi Family	0	0	0	12	0	0	12
Mobile Home/Cabins	0	12	7	6	11	12	48
Total	27	37	37	58	70	76	305

*Included with the count of single family units.

NEW SUBSIDIZED UNITS 1990 TO 1995 (New Units Permitted)

	1990	1991	1992	1993	1994	1995	Total
County							
Owner Occupied Units							
(by afford ability category)							
80% of Median Income							
50% of Median Income							
30% of Median Income							
Greater than 80%							
Total							
Rental Units (by afford ability category)							
80% of Median Income							
50% of Median Income					7		7
30% of Median Income			40		81		121
Greater than 80%							
Total							12
Municipal							
Owner Occupied Units							
(by afford ability category)							
80% of Median Income							
50% of Median Income							
30% of Median Income							
Greater than 80%							
Total							
Rental Units (by afford ability category)							
80% of Median Income							
50% of Median Income							
30% of Median Income							
Greater than 80%							
Total							
Unincorporated							
Owner Occupied Units							
(by afford ability category)							
80% of Median Income							
50% of Median Income							
30% of Median Income							
Greater than 80%							
Total							
Rental Units (by afford ability category)							
80% of Median Income							
50% of Median Income							
30% of Median Income							
Greater than 80%							
Total							

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