**ORDINANCE NO. 07-091**

**AN ORDINANCE OF THE CITY OF ROCK ISLAND, WASHINGTON, AMENDING AND UPDATING THE COMPREHENSIVE PLAN**

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**WHEREAS**, the Washington State Growth Management Act mandates the City of Rock Island adopt a Comprehensive Plan; and

**WHEREAS**, the schedule established by the Growth Management Act in RCW 36.70A.130(4) mandates that the City review and, if necessary, revise its comprehensive plan and development regulations to ensure compliance with the Growth Management Act; and

**WHEREAS**, the City adopted and implemented a Public Participation Program by resolution in February 2006; and

**WHEREAS**, the State Department of Community, Trade and Economic Development provided a "Comprehensive Plan Checklist: Technical Assistance Tool" to aide in compiling a work plan to meet said schedule; and

**WHEREAS**, the City completed the checklist to determine which elements of the Comprehensive Plan would be reviewed and updated; and

**WHEREAS**, the City adopted and implemented a Work Plan identifying which Comprehensive Plan Elements were to be reviewed during the 2006 Update; and

**WHEREAS**, the City Council and County Citizens Planning Committee met at regular and special public meetings to review proposed changes, including a duly advertised public hearing on July 26, 2007, to review and take comment on the proposed amendments; and

**WHEREAS**, all persons desiring to comment on the proposal were given a full and complete opportunity to be heard; and

**WHEREAS**, all comments from the 60-day review, conducted along with an appropriate review pursuant to the State Environmental Policy Act, were reviewed and considered; and

**WHEREAS**, the City Council finds that a detailed and thorough analysis and projection of population, housing and land use has been completed, goals and policies have been developed and related land use designations have been identified; and

**WHEREAS**, the City Council finds that the desired land use designations within the urban growth area can either be served by existing capital facilities and services or are specifically part of the City's plans and efforts to provide future capital facilities and services to the community; and

**WHEREAS,** the City Council finds that the updated comprehensive plan is consistent with the Growth Management Act and the city has completed its obligation for a periodic review and update pursuant to RCW 36.70A.130;

**NOW, THEREFORE, THE CITY COUNCIL OF THE CITY OF ROCK ISLAND, WASHINGTON, DO ORDAIN AS FOLLOWS:**

**Section 1. Amendments.** The amended Comprehensive Plan is adopted hereby as set forth in Exhibit A.

**Section 2. Ordinance to be transmitted to Department.** Pursuant to RCW 36.70A.106, this Ordinance shall be transmitted to the Washington Department of Community, Trade and Economic Development.

**Section 3. Severability.** If any section, sentence, clause or phrase of this ordinance should be held to be invalid or unconstitutional by a court of competent jurisdiction, such invalidity or unconstitutionality shall not affect the validity or constitutionality of any other section, sentence, clause or phrase of this ordinance.

**Section 4. Effective Date.** This ordinance or a summary thereof consisting of the title shall be published in the official newspaper of the City, and shall take effect and be in full force five (5) days after publication.

Passed by the City Council of the City of Rock Island, the 26th day of July, 2007.

CITY OF ROCK ISLAND

_____
Russell Clark, Mayor

ATTEST:

_____
Bonny Malone, City Clerk

APPROVED AS TO FORM:

_____
Chuck Zimmerman, City Attorney

Passed this _____ day of July, 2007
Approved this _____ day of July, 2007
Published this _____ day of August, 2007

# ROCK ISLAND "TEA CUP" AREA COMPREHENSIVE PLAN

City of Rock Island
5 North Garden
Rock Island, WA 98850

The review and update of the Rock Island "Tea Cup" Area Comprehensive Plan was a joint effort by the City of Rock Island and Douglas County. The following individuals contributed significant time and energy to the review and update process.

## ROCK ISLAND CITY COUNCIL MEMBERS

Russell Clark (Mayor)
Whitey Evenhus
Lucy Keane
Ray Pearson
Dennis Gildersleeve
Doug Shirk

## COUNTY-APPOINTED CITIZENS

Gary Vaughn
Terry Vance
Melinda Bonniwell
Jason Hetterle
Cathleen Schenck

## ROCK ISLAND CITIZENS

## CITY STAFF

## ALLIANCE CONSUTLING GROUP, INC

## COUNTY STAFF

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# INTRODUCTION

The City of Rock Island is a small recreational community located in the south central portion of Douglas County. The Rock Island Study Area, referred to as the "Rock Island Tea Cup" because of its unique geographical shape, encompasses approximately 1,575 acres of land area. The topography in the Rock Island Tea Cup is characterized by relatively flat orchard land, with seven lakes of varying sizes situated in a chain-like pattern paralleling the surrounding bluffs. The Rock Island Study Area is bordered by the bluffs on the west, north and east, with the Columbia River designating its southern border.

The City of Rock Island is located in the eastern portion of the Tea Cup and encompasses approximately 415 acres of land, while the lakes account for approximately 195 acres. According to the 2000 US Census of population there are approximately 863 people inside city limits, up from 540 in the 1990 US Census.

The Rock Island area presently offers recreational activities such as golfing and fishing to residents in the greater Wenatchee Valley area as well as to the traveling public. The Rock Island Public Golf Course is presently a nine-hole golf course that is nestled between Putters Lake and Hammond Lake. Of the seven lakes, five are primarily surrounded by publicly owned land and are open to public fishing with developed public access points.

The City of Rock Island, incorporated as a 4th class town in 1931, became a code city on December 22, 1988, with a mayor-council form of government. It experienced its first growth spurt during the construction of the Rock Island Dam, completed by Puget Power and Light in 1933. Since the completion of the dam, the City of Rock Island has been experiencing slow and steady growth up to the 1990's. However, the decade between 1990 and 2000 was a high growth period for the area with an increase of population inside city limits growing by 339 people.

The citizens of Rock Island have stated that they would like to further promote and develop the Rock Island area as a recreational destination. By capitalizing on the distinct natural amenities of the Rock Island Tea Cup, the community of Rock Island intends to reach that goal and to grow into a unique and prosperous community.

The Rock Island Tea Cup Area Comprehensive Plan has been produced by and for its citizens. It integrates their ideas, concerns and expressions of preferred growth into statements of how the city should be developed, what development regulations should accomplish, what facilities and service levels are needed, and how publicly funded improvements should support these objectives. The plan is intended to be reviewed regularly to consider possible changes in existing conditions or in the vision of the Rock Island citizens.

## WHAT IS A COMPREHENSIVE PLAN…

The Comprehensive Plan is a guide for the orderly physical development of the area, outlining desirable community goals and policies that together influence future community growth.

Judgment and evaluation of community needs, as well as public and private development decisions, can therefore be made in a rational and consistent manner.

A city and its surrounding area is a complex structure serving the many and varied needs of its citizens. Each community is comprised of a variety of land uses tied together by a network of streets, utilities and communication channels. The purpose of the comprehensive plan is to bring about coordinated land utilization in accordance with future requirements, while at the same time protecting identified critical areas and resource lands. It is also intended to ensure efficient expenditure of public funds and to promote the general health, safety and welfare of the area and the people living there.

Achievement of a balanced, attractive urban environment is possible only if the plan is sensitive to present and prospective community needs and sentiment. If the plan is to be realistic, it must be based upon sound population and economic forecasts, and it must reflect present and potential financial resources.

As the ~~basic~~ frame of reference for all administrative and regulatory measures concerned with the city's physical development, the plan serves as a basis for the following activities: zoning ordinances and subdivision regulations, development guidelines and policies, financial balance of expenditures and revenues related to a program of public facilities improvements, and an inspiration~~al~~ source that promotes civic interest that is essential to future development. Finally, effective implementation of the above activities is essential to achieve the desired concepts outlined by the plan.

## AUTHORITY…

The Rock Island Tea Cup Area Comprehensive Plan has been prepared in accordance with the requirements of RCW 36.70A, Washington State's Growth Management Act. This Comprehensive Plan includes the Rock Island Area's twenty-year vision to 2026, and it addresses all areas within the present city limits of Rock Island as well as the areas lying within the Rock Island Tea Cup Area. The plan is cooperatively developed and ultimately adopted by both the City of Rock Island City Council and the Douglas County Board of County Commissioners.

## GROWTH MANAGEMENT ACT GOALS…

RCW 36.70A.020, of the Growth Management Act, requires that Rock Island show how the adopted Comprehensive Plan meets the following planning goals contained within the Act.

***Urban Growth***. Encourage development in urban areas where adequate public facilities and services exist or can be provided in an efficient manner.
***Reduce Sprawl***. Reduce the inappropriate conversion of undeveloped land into sprawling, low density development.
***Transportation***. Encourage efficient multi-modal transportation systems that are based on regional priorities and coordinated with county and city comprehensive plans.

***Housing***. Encourage the availability of affordable housing to all economic segments of the population of this State; promote a variety of residential densities and housing types; and encourage preservation of existing housing stock.
***Economic Development***. Encourage economic development throughout the state that is consistent with adopted comprehensive plans, promote economic opportunity for all citizens of this state, especially for unemployed and for disadvantaged persons, and encourage growth in areas experiencing insufficient economic growth, all within the capacities of the state's natural resources, public services, and public facilities.
***Property Rights***. Private property shall not be taken for public use without just compensation having been made. The property rights of landowners shall be protected from arbitrary and discriminatory actions.
***Permits***. Applications for both State and local government permits should be processed in a timely and fair manner to ensure predictability.
***Natural Resource Industries***. Maintain and enhance natural resource-based industries, including productive timber, agricultural, and fisheries industries. Encourage the conservation of productive forest lands and productive agricultural lands, and discourage incompatible uses.
***Open Space and Recreation***. Encourage the retention of open space and development of recreational opportunities, conserve fish and wildlife habitat, increase access to natural resource lands and water, and develop parks.
***Environment***. Protect the environment and enhance the state's high quality of life, including air and water quality, and the availability of water.
***Citizen Participation and Coordination***. Encourage the involvement of citizens in the planning process and ensure coordination between communities and jurisdictions to reconcile conflicts.
***Public Facilities and Services***. Ensure that those public facilities and services necessary to support development shall be adequate to serve the development at the time the development is available for occupancy and use without decreasing current service levels below locally established minimum standards.
***Historic Preservation***. Identify and encourage the preservation of lands, sites, and structures that have historical or archaeological significance.
**Shorelines…**For shorelines of the state, the goals and policies of the Shoreline Management Act (RCW 90.58.020) are added as one of the goals of the GMA (RCW 36.70A.020).

## ELEMENTS OF THE COMPREHENSIVE PLAN…

The following is a list of the specific planning elements that this comprehensive plan addresses, along with a brief description of the intent of each element.

***Urban Growth Element*** - describes the area that is designated for urban growth and how this area was derived, as well as identifying important goals and policies for guiding growth and development within the area.
***Land Use Element*** - describes the ways in which land is allocated for different purposes, and what types of uses are permitted or encouraged to development at various intensities.
***Housing Element*** - describes the type, location and affordability of housing throughout the Rock Island area.
***Capital Facilities Element*** - describes the capacity and current levels of service of the existing public facilities and how these public facilities should be upgraded to serve future development.

***Utilities Element*** – describes available utility systems such as electricity, natural gas and communications, as well as establishing goals and policies to help guide development of further systems necessary to serve future growth.
***Transportation Element*** - describes the way in which transit will serve people getting to jobs, services and activities; how goods movement through the city and the region will be assured and how environmental and economic development goals will be achieved by the coordinated effects of the Transportation and Land Use Elements.
***Environment and Critical Areas Element*** - describes the criteria and methods in delineating and protecting sensitive and critical areas.
***Recreation Element*** - describes the types and locations of desired recreation facilities and identifies objectives to begin pursuit of these future opportunities.

## AMENDMENTS…

This Comprehensive Plan is subject to amendment in order to ensure internal and inter-jurisdictional consistency with the implementing regulations, as well as to maintain consistency with state laws. An evaluation of new conditions will be an integral part of the amendment process.

State law does not allow more than one comprehensive plan amendment annually, except in cases of emergency. However, it also requires that a comprehensive plan and supporting development regulations be reviewed and updated as necessary at least every 7 years. In the Rock Island area the amendment process will concurrently consider all proposed changes to the document accumulated over time since the last amendment, in order to ascertain the cumulative impact of the proposed changes.

# URBAN GROWTH

## INTRODUCTION…

Growth management is an effort to coordinate growth with the common goals that express the public interest in the conservation and wise use of our lands. A specific technique to guide urban development to areas most able to support and service it is through the designation of an urban growth area (UGA). Urban growth is generally associated with mixed uses, higher densities and the conversion of land used for agriculture, forestry, and mineral extraction. Well-planned urban growth can provide for an intensity of development that supplies employment and housing needs in concentrated areas without destruction and conversion of important rural, resource and sensitive lands.

An urban growth boundary is a line separating urban and rural areas. It represents a pre-designated limit to urban development, which in turn helps to protect resource lands and rural areas outside of that boundary. Both inside and outside of the urban growth boundary line it is important to protect open space and other natural amenities. The urban growth boundary also defines the limit within which the full range of urban services will be provided. The purpose is to promote compact urban development within and adjacent to existing urban areas to insure efficient utilization of land resources and to facilitate the economic provision of urban services. The urban growth boundary is required to be reviewed at least every ten years to ensure that the boundary is adequate to contain the growth that a community experiences.

## DESIGNATION METHODOLOGIES…

Three goals of the Growth Management Act are specific in the designation of Urban Growth Boundaries.

***Urban Growth*** - "Encourage development in urban areas where adequate public facilities and services exist or can be provided in an efficient manner." [RCW 36.70A.020]
***Reduce Sprawl*** - "Reduce the inappropriate conversion of underdeveloped land into sprawling, low density development." [RCW 36.70A.020]
***Public Facilities and Services*** - "Ensure that those public facilities and services necessary to support development shall be adequate to serve the development at the time the development is available for occupancy and use without decreasing current service levels below locally established minimum standards." [RCW 36.70A.020]

The Growth Management Act requires that Douglas County and its cities/towns establish specific criteria when designating the Urban Growth Area. These criteria generally include the following considerations:

- Each city that is located in the county shall be included within an Urban Growth Area.

- The Urban Growth Areas in the County shall include areas and densities sufficient to permit the urban growth that is projected to occur in the county for the succeeding twenty-year period.
- Urban growth should be located first in areas already characterized by urban growth that have existing public facilities and service capacities to serve such development.
- Each County shall review, at least every ten years, its designated urban growth areas and the densities permitted within both the incorporated and unincorporated portion of each urban growth area.
- Agricultural lands located within urban growth areas shall not be designated by the county or the city as agricultural land of long-term significance unless a program authorizing the transfer or purchase of development rights has been enacted.

The Douglas County Regional Policy Plan establishes other considerations in designating the urban growth area such as:

- Projected land use needs for residential, recreational, commercial and industrial uses for the 20-year planning horizon;
- Existing and forecasted public facility and service capacities;
- Land with physical constraints, such as critical areas;
- Recognizing the potentially reduced rate of conversion on land with active agricultural activities, and other land that may not be available because of ownership constraints;
- Greenbelts and open spaces;
- Maintaining an adequate supply of developable land, considering market forces;
- Existing land use and subdivision patterns;
- Status of existing developments that are still in the "review" stages;
- Build-out of existing developments and/or neighborhoods;
- Geographic, topographic and man-made features;
- Existing jurisdictional boundaries, including special improvement districts;
- Public facilities and services availability, limits and extensions;
- Designations of resource lands of long term commercial significance and critical areas;
- Potential urban/rural interface conflicts.

## JOINT PLANNING WITHIN THE URBAN GROWTH BOUNDARY…

The Douglas County Regional Policy Plan also establishes policies for joint planning within the Urban Growth Area, particularly for the following activities:

- Zoning, subdivision and other land use ordinances as well as development approvals.
- Setting level of service standards for determining adequacy and availability of public facilities and services.
- The rate, timing and sequencing of boundary changes.
- Coordination of capital improvements to an area.

The following goal and policy statements were formulated to help guide Rock Island and Douglas County in development review

## GOALS AND POLICIES…

### GOAL: Urban growth will occur within urban growth areas where adequate public utilities and services exist or can be provided in an efficient manner.

### POLICIES:

POLICY 1: Development proposals and public projects within the UGA ~~shall~~ will be jointly reviewed by the County and the City of Rock Island with final approvals continuing to reside with the County for areas outside city limits.

POLICY 2: Include all incorporated areas within the Urban Growth Area.

POLICY 3: Ensure that the urban growth area includes an adequate amount of land to accommodate projected growth over a twenty (20) year period.

POLICY 4: Periodically review the size of the urban growth area based on population projections, land use, the adequacy of existing and future utility and transportation systems, economic development strategies and capital facilities plans.

POLICY 5: Consideration shall be given to squaring up grossly irregular corporate boundaries in the development of the urban growth boundary.

POLICY 6: Ensure that growth occurring outside of the urban growth area is rural in nature.

POLICY 7: The County shall review the designated urban growth area at least every ten years and revise it as necessary to accommodate the urban growth projected to occur over the succeeding twenty (20) year period.

POLICY 8: Annexations will not occur outside of the urban growth area

POLICY 9: All lands identified within the urban growth area are subject to annexation either at the request of the owner or by initiation from the City of Rock Island.

POLICY 10: Coordinate annexation activities with the Capital Facilities Element to ensure that support infrastructure is available in a timely manner.

POLICY 11: No annexation may occur that will likely lead to a demand on the reserve capacity of any utility system that will cause the level of service to fall below those established by the comprehensive plan.

POLICY 12: Urban growth should be located first in areas already characterized by urban growth that have existing public facilities and service capacities to serve such development and second, in areas already characterized by urban growth that will be served by a combination of both existing public facilities and services and any additional needed public facilities and services that are provided by either public or private sources.

POLICY 13: Develop improvement standards for new developments occurring within the Rock Island city limits that conform to the adopted level of service standards established for each public utility or facility affected as a result of the development.

POLICY 14: Develop improvement standards for new developments occurring outside the city limits but inside the urban growth area that are mutually acceptable to the county and the city.

POLICY 15: Review all proposed developments to ensure compatibility with the densities established in the comprehensive plan.

POLICY 16: Ensure that those utilities and services necessary to support development will be adequate at the time development is available for occupancy or as otherwise specified in the comprehensive plan.

POLICY 17: Development of long range capital facilities plans will anticipate the provision of full public services throughout the urban growth area within the next twenty years.

POLICY 18: Establish levels of service for all public facilities and services below which levels further development will not be allowed.

POLICY 19: Analyze level of service options for their potential implications on capital budgets, development costs, impacts on the costs of housing and quality of life perceptions.

POLICY 20: Periodically update levels of service for all public facilities and services.

POLICY 21: Address in the Capital Facilities Element any existing deficiencies in meeting the adopted levels of services and establish a firm financing plan to seek to correct said deficiencies within six years of comprehensive plan adoption.

POLICY 22: Allow levels of service to vary within a jurisdiction on a service area basis.

POLICY 23: Coordinate level of service standards with adjacent jurisdictions wherever an interface exists.

POLICY 24: Calculate and monitor excess or reserve capacities of public facilities and services to avoid over-commitments.

POLICY 25: Ensure that any commitment of excess system capacity to potential developers includes a developer obligation to use the allocated capacity within a certain time period or be faced with the loss of the commitment.

# LAND USE

## INTRODUCTION…

As an element of the Rock Island Area Comprehensive Plan, the Land Use Element includes the City's twenty-year vision for land use. The Land Use Map graphically represents the general future land use patterns that are desired for the Rock Island Planning Area within the twenty-year planning period. The goals and policies provide a narrative description of growth and development that, together with the map, lays out the community's future. The designations and policy recommendations for areas on the map are based on a number of factors, including:

- The unique physical and social/economic characteristics in the area.
- The type of existing development.
- Existing zoning regulations.
- Ownership patterns.
- The condition of existing structures.

The Land Use maps are intended to indicate the type of future development that is desired for the area, while allowing flexibility for previously approved development. Certain land uses require additional public review and consideration, such as Essential Public Facilities- hospitals, schools, detention centers, etc. It is important to keep in mind that this plan addresses a twenty-year time period. The changes that result from the policy recommendations in this plan will likely take place slowly, over time, and will result in incremental changes. In other words these policy recommendations will not result in drastic changes overnight.

The Land Use maps and accompanying policy recommendations are meant to be used to evaluate individual land use proposals. They are intended to be a guide for both public and private actions affecting the growth and development in the area.

## EXISTING POPULATION…

The official 2000 US Census figure for the City of Rock Island was 863, an increase of 339 people from the 1990 US Census figure of 524. Within the area of the 1995 UGA, the 2000 US census figure was calculated by adding county census block numbers to the City's population, resulting in a UGA population of 1065. Within the City of Rock Island the median age is shown by the 2000 US Census to be 28.8 years, with 555 people 18 years or older. Of the 863 people inside city limits, 264 people, or 30.6%, identified themselves as being Hispanic or Latino (of any race), and 271 people, 34.1%, indicated they speak a language other than English at home. Although these numbers are not the highest within the County, they are well above the overall Douglas County figures of 19.7% Hispanic or Latino and 19.5% speaking a language other than English at home.

The median household income for Rock Island is $33,618 which is slightly below Douglas County's median household income of $38,464. Similarly, the percentage of families below the poverty level in Rock Island (11.6%) is comparable to the County numbers (11.2%). Of the occupied housing

units in the community, 85% were owner-occupied and 15% were renter-occupied. The same numbers for Douglas County are 71% and 29%, respectively.

## FORECASTED POPULATION…

The Growth Management Act requires that the designated urban growth area must include areas and densities sufficient to accommodate the urban growth projected to occur in the County for the next 20 years, according to population projections developed by the State Office of Financial Management (OFM). The numbers provided in the following Table reflect the outcome of a coordinated process between the cities/towns and the county during 2001 and 2002 where the 2000 US Census and the updated OFM high range projections were allocated to the urban and rural areas of Douglas County.

Population analysis and forecasting was conducted during this coordinated process using various methods. The guiding principles for allocating future population are historical growth trends, adopted county-wide planning policies found in the *"Douglas County Regional Policy Plan"* and the supply of vacant, buildable land within each community. The technical methods used were both trend extrapolation and shares of the overall county population, adjusted for availability of land for development. The OFM county forecast was used as the control. A considerable amount of qualitative information and future assumptions on the economy, demographics and land capacity were brought into the urban area forecasting.

**Table #1: Rock Island UGA Population Projections**

| | 2000 Census | 2005 Projection | 2010 Projection | 2015 Projection | 2022 Projection |
|---|---|---|---|---|---|
| **County Total** | 32,603 | 37,915 | 43,227 | 48,539 | 53,850 |
| Rural Areas | 6,502 | 7,582 | 8,663 | 9,744 | 10,824 |
| GEWA UGA | 21,304 | 24,969 | 28,634 | 32,299 | 35,964 |
| Bridgeport UGA | 2,093 | 2,331 | 2,569 | 2,807 | 3,046 |
| Coulee Dam UGA | 125 | 134 | 144 | 153 | 162 |
| Mansfield UGA | 329 | 356 | 383 | 411 | 438 |
| **Rock Island UGA** | **1,065** | **1,243** | **1,421** | **1,599** | **1,777** |
| Waterville UGA | 1,163 | 1,282 | 1,401 | 1,520 | 1,639 |

**Source: Douglas County Comprehensive Plan – January, 2003**

## EXISTING LAND USE…

The existing land use pattern plays an important part in the comprehensive plan preparation process. The location and extent of residential, commercial, industrial, agriculture, institutional and open space uses provides both constraints and opportunities in guiding future growth.

In the spring of 2002, a land use field inventory of the 1995 UGA was conducted by Alliance Consulting Group, Inc. Information about the remaining areas in the full Planning Area was obtained by consulting Douglas County Assessor records and available aerial photos. The resulting Existing Land Use Map, as well as Table #2, demonstrates the distribution of land uses throughout the Rock Island Planning Area.

**Table #2: Existing Land Use - 2002**

| Land Use | Acres | % of Total |
|---|---|---|
| **Single Family** | 208 | 13% |
| **Manufactured Home** | 69 | 4% |
| **Multi Family**[1] | 9 | .5 |
| **Commercial** | 35 | 2% |
| **Industrial** | 90 | 5.5% |
| **Public/Quasi-Public** | 15 | 1% |
| **Recreation** | 119 | 8% |
| **Agriculture** | 458 | 29% |
| **Vacant** | 269 | 17% |
| **Not Inventoried** | 227 | 15% |
| **Subtotal of Pacels** | 1499 | - |
| **Calculated Right-of-Way** | 76 | 5% |
| **TOTAL** | **1575** | **100%** |

The overall Planning Area contains approximately 1575 acres, which is broken down into the land within the UGA, 972 acres, and land in the rural areas, 603 acres. The city limits encompasses 415 acres while the Puget Sound Energy Power line easement takes up approximately 85 acres. The lakes in the Planning Area account for 195 acres, 115 of which are located within the UGA.

For the purposes of analyzing available land for projected growth, only the UGA was considered against the projected UGA population. An analysis of the rural population allocation and designated rural land uses is found in the Douglas County Comprehensive Plan.

## ASSUMPTIONS…

The following section forecasts projected land use needs for the Rock Island Planning Area for the next twenty years. The combination of current land use consumption patterns, forecasted population, economic considerations and current attributes of the area were used to project the future land base. Generally, projected land uses allow for intensification of development and greater economic stability of the area's economy. Land allocations and capacity analysis are estimates for the twenty-year period and it is assumed that:

[1] The only multi family uses in Rock Island are manufactured/mobile home parks

**General:**

1. In practice, not every new development project achieves the maximum density.
2. Not all parcels identified as theoretically available will be available for the development during the twenty-year horizon of the Comprehensive Plan. In fact, some parcels may never be developed.
3. Land may be undevelopable due to environmental and critical area constraints such as geological hazard, steep slopes, fish/wildlife habitat, wetlands or flood hazard areas. At least 12% of the land area within the UGA (115 acres out of 972) is submerged and unavailable for development (195 acres out of 1575). Overall, critical areas are assumed to be 15% of the overall planning area that is not available for development.
4. Utilities and streets will be available as development occurs within the Urban Growth Area. The area beneath the Puget Sound Energy power line easement is assumed to be unbuildable (85 acres out of 1575 or 5%). Overall, the land area necessary for all utilities, streets and other public infrastructure is assumed to be 25%.

**Residential:**

5. The number of dwelling units forecasted was determined by using the existing 2000 US Census figure of 3.066 persons per household.
6. General lifestyles and living patterns will continue for the anticipated twenty-year planning horizon.
7. Once a public wastewater collection and treatment system is constructed, the overall land density is expected to slightly increase. It is assumed that a public wastewater collection and treatment system will be constructed within 5 – 10 years. Until that time, residential uses will be required to maintain a one-half acre lot size as per the Chelan/Douglas Health District requirements. Overall average density of residential development throughout the planning period is 2 units per acre.
8. Until a public wastewater collection and treatment system is implemented, cluster developments will provide the only means of achieving higher densities by providing community septic systems and community open space.

**Commercial\Industrial:**

9. Only average economic conditions were considered, as opposed to trying to predict the timing of any potential business cycles.
10. Until a public wastewater collection and treatment system is implemented, commercial and industrial development will require large lot sizes. However, once the system is installed, commercial and industrial development is expected to increase.

**Recreation:**

11. There are currently 195 acres of lakes located within the Rock Island Planning Area. These lakes provide numerous recreational opportunities such as fishing, non-motorized boating, bird watching and swimming.
12. The Rock Island Planning Area is expected to become a unique, important recreational destination for Washington State residents, particularly as the community further refines and implements a comprehensive vision of recreational development in the area.
13. Of the area designated for recreational development, only 20% is anticipated to be utilized by full-time residences.

## FORECASTED LAND USE…

Based on the existing pattern of uses as well as the population projections and capital facility and utility capacities, an Urban Growth Area was initially established in the 1990's that encompassed land beyond the existing city limits in order to adequately accommodate expected growth within a planning horizon of 20+ years, to 2015. As a result of the most recent planning process and significant additional technical and mapping information, a revised UGA is identified to accommodate updated population projections to the year 2022. The UGA has been changed along the westerly and northerly boundaries in part to identify adequate land for residential development and to "square up" the previous, somewhat haphazard boundaries. Additionally, land in the north east area of the community has been taken out of the UGA, primarily because there are larger parcels (5+ acres) that are currently being actively farmed.

Table #3 and #4 represent the designated future land uses within the Rock Island Planning Area. These figures represent Rock Island's 20-year land use allocation needs for residential, commercial, recreational, industrial, and agricultural uses.

**Table #3: Planning Area Break Down**

| | **Acres** | **% of Total** |
|---|---|---|
| **Planning Area** | 1575 | 100% |
| **Rural Lands** | 603 | 38% |
| **UGA** | 972 | 62% |

**Table #4: UGA Land Use Designations**

| **Designation** | **Acres** | **Percent of Total** |
|---|---|---|
| **Residential** | 367 | 38% |
| **Tourist Commercial** | 42 | 4% |
| **General Commercial** | 56 | 6% |
| **Industrial** | 139 | 14% |
| **Public** | 238 | 25% |
| **Recreation** | 130 | 13% |
| **Total UGA Designations** | **972** | **100%** |

The following sections discuss the general characteristics and locations for each type of future land use, with the goals and policies providing the more specific parameters to guide growth.

## RESIDENTIAL…

Currently, the residential land use designation encompasses 367 acres (38%) within the Planning Area. Since a pubic sewer system is not currently available the density of new development will be 2 units per acre, as is required in this area for on-site septic systems. Within 5 – 10 years, after a new wastewater collection and treatment system is constructed, densities will be closer to 5 units per acre (or more where a planned development may occur). Based on the existing density of development and the assumed change in development pattern, it is anticipated that

the overall density of residential development will be 2 units/acre, even though it is expected to increase over the planning period.

The Douglas County Comprehensive Plan has projected a total number of housing units within the Rock Island UGA in the year 2022 of 580, based on the following 2000 US Census figures:

- UGA population = 1065 people
- UGA housing units = 355 units
- Persons/household = 3.066

Within the Residential land use designation (367 acres) 23 acres is currently vacant and another 140 acres is in agricultural use (163 total). Within the Recreation land use designation (130 acres) 35 acres is vacant and 58 acres is currently in agricultural use (93 total). Based on the assumptions for future development, the available land for the required new housing units can be calculated as follows:

Residential: 163 acres available
-15% for critical areas
-25% for utilities, rights-of-way and other public infrastructure
103 acres are available

Recreation: 93 acres available
-80% used for purposes other than full time residential
19 acres available
-15% for critical areas
-25% for utilities, rights-of-way and other public infrastructure
12 acres are available

103 + 12 = 115 acres will be available for residential development within the UGA
With a projected 225 new housing units, this 115 acres is adequate to accommodate the projected density within the UGA.

## COMMERCIAL…

The existing commercial uses within the City of Rock Island provide basic services to the residents and the traveling public, as well as to people using the Rock Island Golf Course. With the city located in close proximity to East Wenatchee and Wenatchee (approximately 8 miles) and once a public sewer system is implemented, it is expected that commercial development will increase, particularly those uses oriented around recreational and/or tourist activities. The community is envisioned to include motels, restaurants, retail/specialty shops, a farmer's market and similar uses that are less land intensive.

Because the City of Rock Island has expressed the desire to promote the Rock Island Tea Cup as a recreational destination, the percentage of commercial lands to be designated for the next 20 years was increased from the present trend to 10%. 56 acres of the commercial lands will

be classified as General Commercial supporting a wide range of commercial activities, while 42 acres will be classified Tourist Commercial to focus on promoting uses that are related to recreational activities and the traveling public. These may include hotels/motels, restaurants, golf driving ranges and specialty shops.

## INDUSTRIAL…

The existing industrial land uses consist primarily of the American Metal Silicon Tech Mill, Central Washington Concrete gravel extraction operations and various vehicle repair and storage yards. With the installation of a domestic sewer system, it is assumed that future industrial development would exceed the existing trends. Within the UGA the amount of land designated for Industrial development is approximately 139 acres.

## RECREATION…

Rock Island and its surrounding area have the potential of offering many recreational opportunities for the citizens and traveling public. However, the number of recreational facilities currently located in the planning area is limited.

The City of Rock Island presently maintains one 3-acre park. This park, located directly adjacent to City Hall, provides a tennis court, basketball court and other traditional playground equipment. The Rock Island Elementary School, which provides an outdoor tennis court, basketball court and other traditional playground equipment, is located approximately one-half mile west of the city limits, within the UGA. Rock Island also owns and leases out the Rock Island Public Golf Course. The nine-hole course is situated on approximately 80 acres east of the present commercial core. The lakes located in and around Rock Island are generally open to public fishing, swimming, non-motorized boating and wildlife viewing/bird watching, providing recreation to the outdoor enthusiast. The community of Rock Island envisions their future including capitalizing and building on these types of recreational opportunities, particularly when a sanitary sewer system is developed to support lodging and eating facilities frequented by outside visitors to the area.

With the population forecasted to almost double by the year 2015, the need for additional recreational opportunities will also increase. The following table shows an average size of facility per capita that is needed for recreational activities, based on information provided by the Douglas County Parks Department.

**Table # 5: Average Recreational Facilities Per Capita**

| Type of Facility | Needs/Pop. | Current LOS* | Existing Sites | Deficiency | Future Needs |
|---|---|---|---|---|---|
| **Micro Park .5-5 acre park** | 1 site per 750 residents | 1 | 2 | 0 | 0 |
| **Connecting Trail--Sidewalk, Bike** | 2 miles/school, 1 mile/micro park | 3 miles | 0 | 3 miles | 4 miles |

| | | | | | |
|---|---|---|---|---|---|
| **trail, Crosswalk, or Trail, hard surface** | | | | | |
| **Hiking/Mt. Biking Trail** | 1.2 miles/1,000 Residents | .8 miles | 0 | .8 miles | 2 miles |
| **Shoreline Access** | 10 acres/1,000 Residents | 8 acres | 10 | 0 | 0 |

(*LOS-Level of Service) (Douglas County Parks Department, 1994)

This table reflects the need in Rock Island for future trail system facilities. A trail system connecting the lakes with each other, as well as with the commercial and residential areas and the school is seen as a positive economic benefit, particularly if it is a multi-use trail meeting various user-groups' needs. It is apparent that, given future population growth, now is the time to start allocating land and preparing to provide additional recreational facilities.

To meet the needs for recreational uses in the future, the comprehensive plan contains two designations, one specifically applicable to public facilities (not limited to recreation) and one that will encourage a mix of recreational and residential uses.

## RURAL LANDS…

Because the Rock Island Planning area contains lands that are outside of the UGA, it is important to recognize and address the future use of those areas. Through consultations with Douglas County it has been agreed that the Rock Island Area Comprehensive Plan would utilize and adopt by reference the Rural Element of the Douglas County Comprehensive Plan. As such the areas within the Planning Area but outside the UGA are designated as Rural Resource 2, Rural Resource 5 and Commercial Agriculture, consistent with the Douglas County Comprehensive Plan.

The Land Use Designations Map illustrates the community's intended future land use pattern. The map is a result of the analysis of growth and development discussed above and desirable growth and development goals and policies as described below.

# RESIDENTIAL

## INTRODUCTION…

The quality and integrity of residential neighborhoods are what define and characterize the community, thus making it unique. Maintaining these neighborhoods is important in keeping a community stable and vital. At the same time, as Rock Island grows, the intent of the policies below is to promote additional high quality residential development. With the introduction of a public wastewater collection and treatment system, an important consideration is to ensure that development standards are structured to promote moderate and higher income developments that are aesthetically pleasing.

**Residential:**

The Residential district will provide the primary location for single family residences. For future planning purposes, the density of development in this area is 5 units per acre. Until a public wastewater collection and treatment system is constructed, the Rock Island area is limited to single family residential units on one-half acre lots (5 acres). The one-half acre single-family lot size minimum will not affect existing lots of record. Existing lots that are less than one-half acre will need innovative on-site septic systems approved by the Chelan Douglas County Health District in order to be developed.

To ensure that development happening now is consistent with future development occurring after the installation of a public wastewater collection and treatment system, it is important to provide opportunities and incentives for innovative, diverse housing development through cluster developments. These cluster developments will have to include specific criteria such as connection to the public water system, installation of community septic systems as well as dry sewer lines to promote connection to the public wastewater collection and treatment system in the future, provisions for open space and access to pedestrian trails and walkways.

### GOAL: Encourage a sufficient number and variety of safe, attractive residences in a variety of neighborhoods with adequate public utilities and services for people of all incomes.

POLICY 1: Encourage residential development to locate within the urban growth area consistent with the comprehensive plan.

POLICY 2: The design criteria for residential land uses will promote the extension of pedestrian trails and walkways, will maintain residential characteristics and will promote open space.

POLICY 3: Future residential development will be guided by criteria that promotes high quality neighborhoods.

POLICY 4: Protect residential districts from excessive noise, visual, air and water pollution caused by other land uses.

POLICY 5: Establish criteria for housing and home sites that enhance the compatibility of standard residential developments.

POLICY 6: Determine the density of all types of residential development that are compatible with surrounding residential uses.

POLICY 7: Provide for multi-family uses near recreation areas that are adequately serviced by public facilities and utilities, including multi-modal transportation systems.

POLICY 8: Encourage new development to occur in such a manner as to promote neighborhood identity and pride, an attractive living environment, and minimize land use conflicts.

POLICY 9: Support increased cluster developments as a tool to allow development to occur in a manner that is consistent with a future public wastewater collection and treatment system. Cluster developments will provide for connection to the City's public water system, installation of a community on-site septic systems, open space and access to pedestrian walkways.

# COMMERCIAL

## INTRODUCTION…

The City of Rock Island would like to promote commercial uses that will serve both the citizens of the Rock Island Area as well as people coming to the area for recreation purposes and the traveling public. By creating a commercial district that will cater to tourism and recreation, the City of Rock Island will promote itself as a recreational destination. This will provide the citizens of Rock Island the economic base to implement such amenities as trails and parks.

### General Commercial:

The General Commercial land use designation will promote a wide variety of commercial uses that provide services to the residents of Rock Island. These uses can include but are not limited to grocery stores, beauty salons, restaurants, motels/hotels, specialty stores, video stores, etc.

### Tourist Commercial:

The Tourist Commercial land use designation will promote commercial uses that will provide services to the traveling public and support and encourage recreational opportunities located in Rock Island. These uses can include but are not limited to tourism activities, motels/hotels, restaurants, novelty stores, recreational activities, etc.

Design criteria should be implemented for both commercial designations outlining a common theme that would tie commercial development to the community as a whole. The design criteria can include landscaping, street trees, linkages to pedestrian trails and open space.

The following goal and policies create the ability to provide a quality environment for commercial development. They help define the scope of future development while still assuring compatibility with surrounding residential uses. By using the direction these goals and policy statements provide, the type of atmosphere the people of Rock Island desire for their commercial areas will be maintained and enhanced.

**GOAL: Create opportunities for a safe, attractive and accessible commercial district that will provide for diverse economic development and contribute to a sound economic base for the Rock Island Area while maintaining a quality environment and ensuring that adequate public facilities are provided.**

POLICY 1: Promote continued use, development, revitalization and historical preservation within established commercial areas.

POLICY 2: The expansion of commercial uses will occur adjacent to existing similarly developed areas in conformance with the comprehensive plan and in a manner sensitive to less intensive residential neighborhoods.

POLICY 3: Promote the development of commercial activities oriented to the recreation and open space opportunities of the lake system.

POLICY 4: Discourage the expansion of commercial development outside the city center except for those expansions that will serve the recreational user and the traveling public.

POLICY 5: Encourage multiple-use centers.

POLICY 6: Encourage the clustering of commercial uses that are oriented toward the rural, urban and regional market.

POLICY 7: Light industry should be allowed to locate in well designed cluster areas with commercial activities when they are compatible.

POLICY 8: Promote improvement of the area economy through diversification.

POLICY 9: Promote commercial areas to be pedestrian friendly by providing benches, landscaping, sidewalks, plazas and other such amenities.

POLICY 10: Encourage business districts in scale with the needs of the population throughout the city.

POLICY 11: Promote the image of the city center as a location for family oriented businesses, cultural, and recreational activities.

POLICY 12: Encourage new business that will, through excellence of design and the nature of the use, provide long-term benefits to the people of Rock Island.

POLICY 13: Support commercial areas with adequate streets, parking, utilities and access to public transportation.

POLICY 14: Encourage adequate circulation patterns in commercial areas and provide linkages to other land use activities.

# INDUSTRIAL

## INTRODUCTION…

Industrial development is a necessary component in solidifying a community's economic base. However, with new industrial development a number of negative impacts can be absorbed by the community. The following goal and policies were developed to provide a guideline for alleviating and internalizing these impacts with the effect of creating an attractive center for industrial activities.

### GOAL: Promote industrial development that contributes to economic diversification, growth and stability of the community without degrading its natural systems or residential living environment.

POLICY 1: Actively support economic development measures that serve to revitalize and promote the growth of existing industrial locations.

POLICY 2: Encourage small, light industries to locate in Rock Island, including those that are agriculturally related..

POLICY 3: Encourage industrial development to locate in industrial/business park areas adjacent to major street arterials, preferably on lands not suited for agricultural or residential uses.

POLICY 4: Identify lands best suited for industrial activity through the development and application of location and design criteria.

POLICY 5: Encourage, whenever possible, the extension of support facilities, infrastructure and services for industrial activity.

POLICY 6: Encourage variety and innovative design in industrial site development and encourage an attractive, high quality environment for industrial activities through good landscaping, parking and building design where land uses of distinctive character or intensities adjoin.

POLICY 7: Encourage clean industrial development that is compatible with the quality of the city and natural environment (air, water, noise, visual).

POLICY 8: Recognize mining of precious minerals, sand and gravel extraction and processing as a temporary use and develop criteria for the location, compatibility, and aesthetics to surrounding land uses and reclamation in a manner consistent with the Land Use map.

POLICY 9: Encourage the development of industries that rely on water and/or rail transportation.

POLICY 10: Encourage public/private partnerships to explore ways to revitalize and/or redevelop the existing Specialty Chemical Products plant, making it more economically viable and aesthetically pleasing.

# PUBLIC FACILITIES

## INTRODUCTION…

The purpose of the public facilities district is to preserve areas for public facilities owned by the governmental agencies where such facilities are used by the general public and/or serve the needs of the community, such as municipal buildings and public parks and recreational facilities. The following goal and policies were developed to provide a guideline for achieving these purposes.

**GOAL: Ensure adequate land for public purposes while limiting pressure to sell or developed such land for private functions.**

POLICY 1: Allow Essential Public Facilities after coordinated review with governing jurisdictions and public input.

POLICY 2: Provide landscaping and accessory uses that enhance the surrounding neighborhood.

# RURAL

## INTRODUCTION…

The Rock Island Planning Area contains land outside the UGA that are currently designated for rural development. To maintain consistency and cooperation with the Douglas County Planning Processes, this comprehensive plan agrees and adopts by reference the goals and policies of Chapter 4 Rural Land Use of the Douglas County Countywide Comprehensive Plan, as adopted in January of 2003. Additionally, this comprehensive plan supports the designation of the lands outside the UGA and within the Rock Island Planning Area as Rural Resource 2, Rural Resource 5 and Commercial Agriculture, as shown in the Douglas County Countywide Comprehensive Plan, as adopted in January of 2003.

# MINERAL RESOURCE LANDS

## INTRODUCTION…

The future of the Rock Island Planning Area is intended to be directed toward residential and recreational growth and development. As such, aesthetic values are important for both visual as well as economic reasons. Mineral extraction activities are not consistent with these aesthetic values and the future vision of the community. While recognizing that there are important benefits of an adequate supply of mineral resource lands, it is the intent of this comprehensive plan that mineral extraction activities be limited to those necessary to prepare the area for future growth and development consistent with the community's future.

### GOAL: Allow limited mineral resource extraction activities that are necessary and supportive of preparing the area for future development consistent with the comprehensive plan.

POLICY 1: Encourage dredging of mineral resources present in the Rock Island Lakes to control invasive aquatic weeds in preparation of enhancing the Lakes for recreational purposes.

POLICY 2: Allow only temporary mineral extraction activities that are the minimum necessary to prepare for future development that is respectful of the topography of the surrounding area.

POLICY 3: Mineral extraction activities solely for commercial purposes is inconsistent with the future vision of the Rock Island area as a destination for recreational activities.

# HOUSING

## INTRODUCTION…

The Housing Element has been prepared in response to the Growth Management Act of 1990 (ESHB 2929), which requires:

"*...housing element recognizing the vitality and character of established residential neighborhoods that: (a) includes an inventory and analysis of existing and projected housing needs; (b) includes a statement of goals, policies, and objectives for the preservation, improvement, and development of housing; (c) identifies sufficient land for housing, including, but not limited to, government-assisted housing, housing for low-income families, manufactured housing, multifamily housing, and group homes and foster care facilities; and (d) makes adequate provision for existing and projected needs of all economic segments of the population.*"

Additionally, the appeal of a community can often be attributed to many factors, and the quality of its housing stock is a good indicator of its viability in the long run. It is important to have an adequate stock of housing for all income types, while recognizing the vitality and character of established residential neighborhoods. For the Rock Island area, there is currently a shortage of middle and higher value housing options. The following goal and policies are intended to provide guidance for maintaining the viability of existing housing, as well as encouraging new, quality developments to diversify the community's housing stock.

## AFFORDABLE HOUSING DEFINITION…

WAC 365-195-230 requires that the Comprehensive Plan include a definition of "affordable housing." This is a difficult definition to arrive at, because what is affordable for one family can be drastically different from what is affordable for another family. A higher income family may be looking to purchase a larger home, while a lower income family may be struggling to pay the rent on an apartment that is too small for their needs. Because of this possible disparity, lending institutions use a definition of affordability that is based on a percentage of gross income. Most banks now consider 28% of a family's gross income to be available for mortgage payments or rent, including utility payments. This element will use the same definition of "affordable housing."

According to the 2000 US Census of population, the median family income for a family of four in the City of Rock Island is $33,618, compared to $38,464 for Douglas County. For this family, affordable housing would be any housing that costs $784 per month or less, including utilities.

The following goal and policies are set up to provide the opportunities for a variety of housing types that will cater to all income levels.

**GOAL: The Rock Island Area recognizes the need for a variety of housing types and densities, and the need for a range of affordable housing. The area will strive to set conditions that encourage such development, to provide public facilities that will encourage such development, and to explore public mechanisms to address the shortfalls in the market.**

POLICY 1: Require the construction of sound, safe and sanitary dwelling units.

POLICY 2: Maintain high standards for residential development, construction and maintenance. Such standards will include a diverse choice of housing types, quantities and designs.

POLICY 3: Promote the construction of affordable housing to meet the needs of the low and moderate income and elderly segments of the population.

POLICY 4: Encourage cooperation with developers and provide incentives that will add to the increased production of moderate priced housing.

POLICY 5: Recognize and accommodate special needs populations, such as those requiring nursing home care, assisted living facilities, emergency shelter or supervised environments within the development codes.

POLICY 6: Disperse throughout the area publicly assisted housing, group homes and quasi-residential uses such as day-care centers in residential neighborhoods.

POLICY 7: Allow individual property owners to meet the special needs of migrant agricultural workers to mitigate against public health and sanitation problems and to recognize the area's agricultural dependence on this labor pool, as determined by that individual's agricultural need.

POLICY 8: Encourage the rehabilitation of older housing stock where the continuation of existing residential use is appropriate.

POLICY 9: Encourage the area's housing agencies to fully utilize housing rehabilitation grant and loan programs as they may be available through local, state and federal agencies.

POLICY 10: Recognize that manufactured/modular homes are a viable housing option and the most accessible private market housing opportunity available to potential homeowners. The Residential District should allow for manufactured/modular home placements under specific conditions to ensure consistency with surrounding structures.

POLICY 11: Review and alter land use regulations as necessary to ensure provisions are made for locating manufactured/modular housing, group homes and foster care facilities in appropriate locations and under necessary conditions designed to protect the integrity of established residential neighborhoods.

POLICY 12: When a public wastewater collection and treatment system is installed, provide for accessory apartments in residential zones for low to moderate income, small family, single

person, or seasonal occupants, provided the unit maintains the appropriate residential character and quality living environment.

# CAPITAL FACILITIES

## INTRODUCTION…

The Capital Facilities Plan (CFP) is one of the elements of Rock Island's comprehensive plan required by Washington's Growth Management Act (GMA). Capital facilities and services are those things necessary to maintain the livelihood of a community. These services are, in general, provided by local government agencies and are available to all citizens of the community. Capital facilities play a large role in determining how much and what kind of development will occur where.

The CFP is a six-year plan for capital improvements that supports the city's current and future population and economy. Funding for capital improvements can be obtained from several sources including grants, loans and local revenues. Important measuring tools for identifying needed capital improvements are standards describing the desired levels of service (LOS). The CFP contains LOS standards for each public facility, and requires that new development be served by adequate facilities that meet these established standards of service (i.e., the "concurrency" requirement). The CFP also contains goals, policies and rationales that guide and implement the provision of adequate facilities.

The purpose of the CFP is to use sound fiscal policies to provide adequate public facilities consistent with the Land Use Element and concurrent with, or prior to, the impacts of development in order to achieve and maintain adopted standards for levels of service. Other coordinated capital facilities plans should be used to update and maintain the Comprehensive Plan Capital Facilities Element.

## WHY PLAN FOR CAPITAL FACILITIES…

There are three primary reasons to plan for capital facilities: 1) growth management, 2) quality of life and 3) eligibility for grants and loans.—The CFP is the element that makes the rest of the comprehensive plan real. By establishing levels of service as the basis for providing capital facilities and for achieving concurrency, the CFP determines the quality of life in the community. The requirement to fully finance the CFP (or else revise the land use plan) provides a reality check on the vision set forth in the comprehensive plan. The capacities of capital facilities that are provided in the CFP affect the size and configuration of the urban growth area.

The following goal and policy statements will provide the City of Rock Island a guideline for implementing their Capital Facilities Plan. These policies should be used to provide consistent and logical decisions during the twenty-year planning period.

**GOAL: The Rock Island Area shall endeavor to adequately provide needed public facilities to all residents within its jurisdiction in a manner that protects**

**investments in existing facilities, maximizes the use of existing facilities, and promotes orderly, compact urban growth.**

POLICY 1: Public facilities will be located and expanded in accordance with the goals and policies of the comprehensive plan within the designated urban growth area.

POLICY 2: Public facilities will be located and designed to create minimal adverse impacts on surrounding land use.

POLICY 3: Future development and redevelopment will be phased in consistent with the provision of utilities, streets, parks and other community facilities.

POLICY 4: Encourage the compatible multiple use of utility corridors and all publicly-owned facilities.

POLICY 5: Ensure that public facility planning is consistent with the comprehensive plan.

POLICY 6: Recognize and respond to the need for flood control in both new developments and on an area wide basis. Encourage the preservation of natural drainage channels for storm water runoff.

POLICY 7: Control runoff during construction to limit erosion, siltation, and stream channel scouring.

POLICY 8: Public facilities should ensure the efficient collection of water runoff at the point of introduction into major watercourses.

POLICY 9: Allow storm water retention areas to be used as partial fulfillment of open space requirements.

POLICY 10: Encourage the use of the capabilities and expertise of private industry and encourage volunteer efforts in accomplishing the purpose of recycling.

POLICY 11: Provide fire and police services and facilities adequate to ensure the safety and protection of citizens and property and encourage training programs.

POLICY 12: Assure an adequate water supply and distribution system for fire protection.

POLICY 13: Develop 6-year and 20-year Capital Facilities Project lists that will identify a phased and orderly development of public services and facilities within the defined urban growth area.

POLICY 14: Allow developers to participate in the provision of public facilities and services prior to the phased schedule as outlined in the 6-year and 20-year Capital Facilities Project lists, provided the development is consistent with the goals and policies of the comprehensive plan, and provided impacts to community services can be fully mitigated.

POLICY 15: Use the phasing schedule for public facilities and services defined in the Capital Improvement Program as a basis for land use, development approval and annexation decisions.

POLICY 16: Work toward the placement of educational facilities in urban and suburban locations that require minimal extensions of municipal services.

POLICY 17: Encourage the Eastmont School District to work with the city in recognizing the future population growth of this area and the provision of services accordingly.

POLICY 18: Encourage the continued use of the neighborhood school concept as a focal point for educational and community facilities.

POLICY 19: New public facilities shall be encouraged to provide multi-use facilities such as multi-purpose rooms, resource rooms, and recreational facilities that can be operated for various community uses.

POLICY20: Promote continued multi-jurisdictional cooperation in solid waste management planning and implementation.

POLICY 21: The costs of providing new, expanded capital facilities such as public water, sanitary sewer, stormwater and transportation facilities to new development will be the responsibility of the developer.

POLICY 22: New development within the urban growth area will be served by underground capital facilities and utilities wherever feasible.

POLICY 23: Allow for the extension of public facilities such as public water, sanitary sewer, stormwater and transportation facilities into the urban growth area without requiring annexation to occur first.

POLICY 24: Work toward design and implementation of a cost effective and efficient wastewater collection and treatment system to prevent negative impacts on the environment and the public health, and to expand the feasibility of economic development, including additional recreation opportunities.

## FINANCING…

There are a number of potential financing options the City of Rock Island will need to consider to implement the Capital Facilities Plan. The plan presumes that funding for needed capital improvements will be obtained from a variety of sources, including private, local, state and federal agencies.

### Local Funding

Local funding for projects will come primarily from the City of Rock Island's General and Revenue Funds, or from reserve accounts. The City may also need to consider bonds, levies and other revenue sources as needed for specific projects. The City's ability to finance identified improvements through many funding sources will depend partly on its current indebtedness. Revising the rate structures for utilities will also help provide the revenue needed to generate local match for state and/or federal dollars.

### State/Federal Funding

Funding from State and Federal sources, as well as others, may be available to provide portions of the funding necessary to implement improvements contemplated in this plan. Timely and up-front contact with the appropriate agencies should be made early in the planning process for a project, particularly to determine the applicability of the proposed funding source to that project. This plan has been prepared with the understanding that the City will most likely be unable to finance significant infrastructure improvements without state and/or federal assistance. To obtain this type of funding it is important for the community to attempt to fund projects on its own, to document the need for this assistance, and to demonstrate an ability to at least generate some revenues for local matching funds.

## AMENDMENT PROCESS…

Because the CFP is not intended to be a static and unchanging document, amendments to it should occur on an annual basis in response to changing conditions within the community. The most appropriate time for it to be amended is during the city's annual budget process. Amendments can be in many forms, such as the addition of projects that arise as result of unique opportunities or the unexpected availability of special funding, or deleting projects that are deemed unnecessary.

Each year during the budget process the City Council should adopt a new capital budget based on their updates to the CFP. Ideally, the Council will move each year's scheduled projects ahead by one year, while also adding projects that should be completed within five years. This would move the second year's projects into the priority position for the coming year's budget. Regardless of the list of projects, the CFP should have an annual capital budget as well as a schedule of projects that extends over a five year period at a minimum.

Because there will almost always be more projects than available funding, a rating system is proposed that projects can be evaluated against in determining their priority. A project's status should be based on a combination of things, primarily the goals and policies of the comprehensive plan, identified deficiencies in the existing systems, citizen input and the feasibility of obtaining funding. The following criteria and rating system is intended to provide at least a beginning quantification of these factors that can be used to initiate discussions on a project's merits.

**Table #6: CFP Prioritizing Test**

| CRITERIA | TEST | RATING |
|---|---|---|
| Justification | Project is supported by the adopted comprehensive plan. | 0 to 5 |
| Basic Infrastructure Requirement | Project is necessary to provide essential municipal services to the community. | 0 to 5 |
| Facility Needs | Project is a planned phase of an existing or previously committed project or service. | 0 to 5 |
| Service Needs | Project is necessary to maintain and operate an existing or previously committed project or service. | 0 to 5 |
| Special Needs | Community obligation to serve a special need or segment of the City's population. | 0 to 5 |
| Coordination | Coordination with other public or private projects or facilities (programs that can be treated simultaneously). | 0 to 5 |
| Mandate | The project is mandated by local, state, or federal law, or required by binding contracts. | Yes or No |

## SUMMARY INVENTORY…

### Water System:

As required by State law, the City of Rock Island has prepared a comprehensive Water System Plan that specifically identifies the system, as well as the required improvements to serve the future needs of the Rock Island Urban Growth Area. The Water System Plan was recently updated as required by the Washington State Department of Health, and is incorporated by reference into this Comprehensive Plan. Below is the executive summary from the Water System Plan, prepared by Varela and Associates, describing both the existing system as well as the necessary, identified public improvements.

The City of Rock Island's water system consists of a single pressure zone, four wells (two wells actively used for drinking water supply, one for irrigation, and one inactive well), and two reservoirs. Water system mains are 4" to 12", with the older mains being steel or AC (installed before 1962) and new mains being DI or PVC (mostly installed in the late 1980s and early 1990s). The most recent major improvements made to the system were the 2000 reservoir project, the 1989 and 1993 water main replacement projects, which replaced or extended existing mains.

The water system serves approximately 298 residential and commercial connections. Total water service area population is about 1,043. The water service area population and water

demand is projected to grow by approximately 49% over the next 20 years. Over 50% of projected growth within the water service area is expected to occur outside the City Limits within the Urban Growth Area (UGA).

Rock Island's source water quality will be in violation of the new arsenic maximum contaminant level that goes into effect January 2006. The arsenic contamination is isolated to Well #3, the City's primary well. Well #2 has elevated nitrate levels that have remained constant historically. Both the arsenic and nitrate levels found in Wells #3 and #2 respectively require the City to sample and test for these contaminants quarterly.

A summary of the existing system capacities is listed below:

- Supply capacity is adequate for current and projected water demands.
- Storage volume is adequate for current and projected water demands.
- The condition of the interior of the reservoirs is believed to be relatively good (last inspected 2000).
- Distribution system capacity is adequate to meet system demands for projected 20-year growth.
- Calculated available fire flows meet the selected criteria (2,500 gpm) in most, but not all, commercial zoned areas.
- Calculated available fire flows meet the selected criteria (approximately 1,000 gpm) in most, but not all, single-family zoned areas (R-1).
- The distribution system has a number of relatively minor deficiencies: some mains are small diameter (4") steel that will likely need to be replaced in the foreseeable future.
- Several areas of the distribution system do not fulfill fire hydrant spacing criteria.
- The City has adequate water rights for its present and projected annual withdrawal volume.
- The City has adequate water rights for its present and projected instantaneous withdrawal rate.

Identified system improvements include the following:

- The highest priority is to bring the water system into compliance with the new arsenic water quality regulations and thus provide a safer supply of drinking water to the City.
- A detailed analysis considered a number of alternatives to the arsenic water quality problem. Options such as treatment, blending, and an intertie with a neighboring water system were evaluated for their potential to solve this problem.
- Source replacement was selected as the most cost effective alternative to mitigate the arsenic problem with Well #3.
- The source replacement plan selected will include a hydrogeologic investigation to identify potential sites for a new well that will produce the desired quantity of water and be free from the arsenic found in the current well.
- Elevated levels of nitrate found in Well #2 is of concern with respect to implementation of the Well #3 replacement. The hydrogeologic investigation will need to account for this potential contaminant.
- Distribution system improvements include new or replaced mains to meet fire flow criteria and replace small diameter and aging mains.

- Numerous fire hydrants are required to fulfill the City's spacing requirements. Many of these placements can be done in conjunction with water main replacements.

Within Section 8 of the Water System Plan, a prioritization of planned system improvements for either the next six or twenty year period, as well as cost estimates is provided. These improvements are reflected in the project lists and financial anaylsis of this capital facilities element.

**Sewage Disposal**:

The city of Rock Island lies on a river deposited sand and gravel bench bordered on the South by the Columbia River. At this time the city of Rock Island does not have a domestic sewer system, therefore all sewage disposal is handled by on-site septic disposal systems approved by the Chelan/Douglas County Health District.

The soils in the study area (Rock Island Tea Cup), are classified as Type 1A Soils by the Chelan/Douglas County Health District. Type 1A Soils are very gravely coarse sands that have a high permeability rate. Due to this high permeability, the Chelan/Douglas Health District requires, at a minimum, one-half acre lot sizes for single family residences that are on public water supplies. Additionally, many of the new and/or replaced systems are being required by the Health District to be alternative sand pressure systems that require the addition of significant, suitable material to provide filtration.

Currently, there are numerous residential lots within the city limits of Rock Island that do not meet the one-half acre lot minimum. This is due to small lot sizes (7,000 sq. feet) in the original Rock Island Town Plat, and pre-1995 development of the Rock Island Tea Cup (before the present regulations set forth by the Washington State Department of Health).

All future residential development will be restricted to the one-half acre lot size per single-family residence until such time that a domestic sewer system and sewage treatment plant are developed and implemented. The city has participated in study efforts and analysis over the past few years and those efforts have demonstrated a clear need for a central sewer system to support the growth and development of the Rock Island area. The development of a domestic sewer system is a priority for the next five years due to the soil types and high water table in the Rock Island Study area, as well as support recreational and economic development opportunities that are available to the unique area of Rock Island.

To further this priority to implement a sanitary sewer system, the City, in cooperation with Douglas County, has completed a draft Wastewater Facility/General Sewer Plan that describes possible alternative wastewater collection and treatment systems. This Plan is incorporated by reference as an important component of this Comprehensive Plan, and the costs of engineering, design, construction and operation/maintenance will be considered during the overall capital facilities project list and financial analysis. The preferred alternatives for collection and treatment of wastewater described in the plan include a gravity collection system to a single lift station that pumps wastewater to an extended aeration treatment plant with ultraviolet

disinfection and year round discharge to the Columbia River. The original, overall estimate in the draft plan (developed in late 2005) for design and construction of the preferred alternative was $8,640,000. In January of 2007 that estimate has been revised to reflect increased construction and implementation costs to a total of $10,070,000.

## Transportation:

The existing transportation circulation pattern in the Rock Island Tea Cup is centered on Rock Island Road/Drive and Highway 28. Highway 28 bisects the city limits of Rock Island separating the existing industrial and commercial lands to the south from residential and commercial development to the north. Rock Island Drive intersects with Highway 28 within the city limits, then runs north to the commercial core of the city, where it turns west and runs through the Tea Cup area until it again intersects with Highway 28 approximately 2½ miles west of Rock Island's city limits.

**Table # 7: Existing Road Conditions**

| Road Name | City/County | ROW | Miles/Feet | Surface | Condition |
|---|---|---|---|---|---|
| Rock Island Drive | City | 100' | .05/3,050 | Bituminous | Good |
| Rock Island Road | County | 40' | 1.62/8,590 | Bituminous | Fair |
| Saunders Street | City | 60' | .81/4,324 | Bituminous | Good |
| Garden Avenue | City | 60' | .24/1,315 | Bituminous | Good |
| First Street | City | 30' | .24 /1,300 | Bituminous | Good |
| Second Street | City | 45' | .30/1,350 | Gravel/Oil | Poor |
| Third Street | City | 45' | .40/2,120 | Gravel/Oil | Poor |
| Douglas Avenue | City | 60' | .7/3,703 | Bituminous | Good |
| Jefferson Avenue | City | 60' | .12/650 | Gravel/Oil | Poor |
| Indiana Avenue | City | 60' | .12/650 | Gravel/Oil | Poor |
| Hanna Avenue | City | 60' | .12/650 | Gravel/Oil | Fair |
| Elgin Avenue | City | 60' | .20/1,083 | Gravel/Oil | Fair |
| Parkway Drive | City | 60' | .37/1,960 | Gravel/Oil | Fair |
| Cambridge Avenue | City | 60' | .17/950 | Gravel/Oil | Fair |
| Freemont Avenue | City | 60' | .14/960 | Gravel/Oil | Fair |
| Delaware Avenue | City | 60' | .17/935 | Gravel/Oil | Fair |
| Hanna Place | City | 60' | .12/650 | Gravel/Oil | Fair |
| Akron Avenue | City | 60' | .10/575 | Bituminous | Poor |
| Baker Avenue | City | 60' | .08/450 | Bituminous | Poor |
| Keane Avenue | City | 30' | .11/630 | Bituminous | Poor |
| Hammond Lane | City | 40' | | Bituminous | Poor |
| Idaho Avenue | County | 40' | | Bituminous | Poor |
| Riverside Drive | County | 30' | 1.17/6,185 | Gravel/Oil | Good |
| Ohio Street | County | 30' | .19/1,040 | Gravel/Oil | Good |
| Penn Avenue | County | 30' | 1.00/5,280 | Gravel/Oil | Poor |
| Center Street | County | 40' | .68/3,600 | Gravel/Oil | Poor |
| Demar Place | County | 50' | .10/550 | Gravel/Oil | Fair |

LINK Transit serves Rock Island with a regularly scheduled bus service. The bus route currently is Rock Island Road with a major stop and turn-around at the BJ'S Auto and Truck Plaza at the intersection of Rock Island Road and Highway 28. It returns along Rock Island Road.

Based on the 2000 US Census data, the Rock Island area was included in the newly established Federal Metropolitan Planning Organization (MPO), which has been implemented through the creation of the Wenatchee Valley Transportation Council (WVTC). Rock Island participated in the development of the Metropolitan Transportation Plan, titled *"Confluence 2025: A Strategic Transportation Plan for the Wenatchee Valley"*. Within this plan, all manner of transportation facilities are covered, including an inventory of existing bicycle and pedestrian facilities and identification of non-motorized deficiencies. This plan is incorporated into this plan as an important component, both as it exists and as it may be amended in the future, with Rock Island's participation.

The primary transportation improvements needed in the near future include resurfacing and repairing streets that are listed in poor condition on the above table. Additionally, the installation of curbs, gutters and sidewalks on streets listed as arterials or collectors should also be completed in the future. This is an important safety consideration as children are walking through the area to access the school, as well as being an important component of healthy lifestyles, encouraging walking and biking instead of relying on cars for transportation within the community. The City is also interested in working with the Washington State Department of Transportation (WSDOT) to implement landscaping along both sides of Highway 28 as it runs through the community, thereby creating a scenic entry feature into the City of Rock Island.

It is recognized that the scheduling of needed street improvements may be somewhat dependant on when/if sanitary sewer is installed. The preferred plan would install the wastewater collection system in existing streets/rights-of-way where feasible. It will be important to consider this as street projects are implemented in the interim.

The classification of the public streets and roads located in the Rock Island Planning Area is important for receiving funding for upgrading and improving the circulation system within the Tea Cup. The following street classification system is established by the policies contained in the Transportation Element of this comprehensive plan. It is based in part on present and forecasted land uses, and attempts to take into consideration the existing classification systems of both the WSDOT and Douglas County. Future design standards will be based on this system and should be jointly developed and agreed to by Douglas County and the City of Rock Island to provide consistent and uniform standards for local developers. (Please see the Street Classification Map)

**Table #8: Street Classifications**

| Street | Classification |
|---|---|
| 1st Street SW | Collector |
| 2nd Street SW | Collector |
| 3rd Street SW | Arterial |
| 4th Street SW | Local Access Commercial/Industrial |
| Penn Avenue | Arterial |
| Rock Island Road/Drive | Arterial |
| Saunders | Arterial |
| Riverside Drive | Arterial |
| Nature Shores Drive | Local Access Commercial/Industrial |
| Parkway Drive | Collector |
| Columbia Cove Lane | Local Access Residential |
| Ohio Street | Arterial |
| Patrick Court | Local Access Residential |
| DeMar Place | Local Access Residential |
| Center Street | Collector |
| Douglas Street | Collector |
| Keane | Local Access Residential |
| Jefferson | Local Access Residential |
| Indiana | Local Access Residential |
| Hanna Street | Local Access Residential |
| Hanna Place | Local Access Residential |
| Garden Street/Idaho | Arterial |
| Freemont | Local Access Residential |
| Delaware | Arterial |
| Baker | Local Access Residential |
| Akron | Local Access Residential |
| Elgin | Local Access Residential |
| Cambridge | Local Access Residential |

**Parks:**

Rock Island and the surrounding area have the potential of offering many recreational opportunities for the citizens and traveling public. Recreation and tourism are consistently identified throughout this comprehensive plan as an important economic development tool. The summary below is based on and supported by the more detailed Recreation Element found in this comprehensive plan.

The City of Rock Island presently maintains one three-acre park. This park, which is located directly adjacent to the Rock Island City Hall, provides a tennis court, basketball court and other traditional playground equipment. The Rock Island Elementary School, which provides an outdoor tennis court, basketball court and other traditional playground equipment, is located

approximately one-half mile west of the Rock Island city limits. The City of Rock Island also owns the Rock Island Public Golf Course, a nine-hole course situated on approximately 80 acres east of the present commercial core. The ponds that are located in and around Rock Island are open to public fishing, providing recreation to the outdoor enthusiast.

The City of Rock Island has indicated that they would like to develop a trail system throughout the Rock Island Tea Cup. This system would provide a recreational path that would connect the public-lakes to the residential and commercial cores of Rock Island. The trail system would provide an outlet for walkers, joggers and bikers to exercise and enjoy the natural environment, without being endangered by vehicular traffic. Further information is included in this comprehensive plan within the Recreation Element, and a table of Average Recreational Facilities Per Capita is provided in the Land Use Element.

**Public Works Equipment:**

The following is a list of existing maintenance equipment owned by the City of Rock Island:

*1 Backhoe (1994)
*1 Dump Truck (1970)
*1 Grader (1973)
*1 Orchard Tractor (1968)
*1 Riding Lawnmower (2003)
**1 Ford F150 (year)
*1 Ford Ranger (year)
*1 Ford Taurus (year)

Currently, the City of Rock Island employs one full time and one part-time public works employee. After discussions with city personnel, it appears that there will be a few equipment upgrades within the next five years. The most costly of these items will be purchasing a water truck and street sweeper.

**Educational Facilities:**

The Rock Island area public education service is provided by the Eastmont School District. Eastmont became a district of the first class on July 1, 1968. Rock Island Elementary School is situated on 10 acres, and has a capacity of approximately 260-270 students. Currently, the school has classes from kindergarten through 4$^{th}$ grade, and has an estimated student population for the 2006/2007 school year of 220 students. The student population is expected to continue increasing over the next few years by 20 – 40 students.

## Fire Protection:

Fire protection for the city of Rock Island is provided by the Douglas County Fire District #2. The fire station is located on Rock Island Drive, adjacent to the Rock Island City Hall. The fire equipment located in Rock Island includes one engine that carries 1,000 gallons of water and one brush truck that carries 300 gallons of water. The fire station is operated by one resident and one volunteer.

Douglas County Fire District #2 provides support coverage for fires from their stations located in East Wenatchee and Pangborn Memorial Airport. Response times from these two stations are approximately 10 minutes.

The fire equipment located in Rock Island is adequate for the city's future needs. However, the number of volunteers in the Rock Island Area is a concern for Douglas County Fire Officials. The city should try to increase the number of fire department volunteers for future fire protection. This can be done by an advertising campaign to get the community involved.

## Police Protection:

Police protection is currently provided through a contract with the Douglas County Sheriff's office. The City of Rock Island receives the same police coverage as Douglas County in whole. The Sheriff's Department routinely patrols the Rock Island Tea Cup and at this time police protection is adequate.

In 2004, the City worked with the Sheriff's Department and was able to provide them with a room in the council chambers in which they use as a sub-station. This allows them to be present in the community more often and a place to take care of paperwork without having to drive back to the headquarters. This has come to be a beneficial use of space and an asset to the community.

## Solid Waste Services:

Solid waste services for Rock Island are provided by Waste Management of Greater Wenatchee. The services that are provided are by contracts with private landowners for solid waste pick up and disposal. The City provides recycle services at the City's Recycle Center located at the city shop. This center is available to the residents to drop-off their recyclable household items year-round.

Douglas County through an Interlocal Agreement with it's participating jurisdictions, currently the cities of Bridgeport, East Wenatchee, and Rock Island, and the towns of Mansfield and Waterville have mutually agreed to regionally plan on solid and hazardous waste issues and concerns in order to comply with RCW 70.95 and RCW 70.105. Douglas County Board of Commissioners adopted Douglas County Comprehensive Solid Waste Management Plan (SWMP) and established the Douglas County Solid Waste Advisory Committee (SWAC). By

interlocal agreement, the Douglas County Solid Waste Program Office is the department responsible for updating the SWMP, administering the SWAC approved budget and work schedule, and assisting the participating jurisdictions in implementing the programs identified within the adopted SWMP.

**Table 9: Capital Facilities Six-Year Project List: 2007 through 2012**

| 2007-2012 Project List | Time Frame | Estimated Cost | Potential Funding |
|---|---|---|---|
| **Water System Projects** | | **$615,500** | |
| Arsenic Compliance Plan | | | CDBG, PWTF, County, City |
| Test Well | | $45,000 | |
| Prodution well | | $74,000 | |
| Pump | | $25,000 | |
| Main lines from well to distribution system | | $120,000 | |
| Building for piping, electical, controls | | $32,000 | |
| Building piping | | $20,000 | |
| Electrical & controls | | $45,000 | |
| Rehab/replace Well #2 | | $74,000 | |
| Engineering, Environmental, Admin, Other | | | CDBG, PWTF, County, City |
| Hydrogeo investigation well#2 | | $25,000 | |
| Eng, incp, admin | | $108,750 | |
| Environmental review process | | $15,000 | |
| Sity purchase | | $25,000 | |
| Legal administrative | | $6,750 | |
| **Street Projects** | | **$1,017,000** | |
| Saunders Road Project | 2007 | $263,000 | WSDOT |
| 3rd St Overlay | 2007 | $11,000 | City |
| Garden Ave | 2007 | $613,000 | State |
| Akron Overlay | 2008 | $7,000 | City |
| Baker Ave Overlay | 2008 | $5,000 | City |
| 1st St Overlay | 2008 | $5,000 | City |
| Douglas St Overlay | 2009 | $13,000 | City |
| Keane Ave Overlay | 2009 | $7,000 | City |
| Jefferson Ave Overlay | 2010 | $8,000 | City |
| Indiana Ave Overlay | 2010 | $12,000 | City |
| Hanna Ave Overlay: to 2nd | 2011 | $11,000 | City |
| Hanna Aver Overlay: to Culdesac | 2011 | $12,000 | City |
| Hammond Lane Overlay | 2012 | $50,000 | City |
| **Parks Projects** | | **$175,000** | |
| Trail feasibility study | 2007 | $50,000 | IAC Grant |
| Recreation Master Plan | 2008 | $75,000 | IAC Grant, Chelan County PUD, City, Douglas County |
| Handicap accessibility improvements and restrooms | 2007 | $50,000 | IAC Grant, Chelan County PUD, City, Douglas County |
| **Public Works Equipment** | | **$0** | |
| | | | |
| | | | |
| | | | |

| 2007-2012 Project List | Time Frame | Estimated Cost | Potential Funding |
|---|---|---|---|
| **Public Buildings/City Hall Equipment** | | **$90,000** | |
| Update Computer Hardware | 2007 | $5,000 | City |
| Additional storage for City Hall | 2009 | $75,000 | City, CDBG |
| Replace windows at City Hall | 2009 | $10,000 | City |
| **Wastewater Treatment System** | | **$8,600,000** | |
| Development of new system | | $8,600,000 | RD Loan/Grant, CDBG, STAG |

**Twenty Year Project List**

Water Distribution System

8" main loop Rock Island Dr with Douglas St.
Replace 4" with 8" line south of Rock Island Dr.
Replace main to meet fire flow standards for the school
Replace 6" with 8"-Hanna Place
Replace 6" with 8"-Garden Ave
Add Fire Hydrants throughout

# UTILITIES

## INTRODUCTION…

The Utilities Element has been developed in accordance with Section 36.70A.070 of the Growth Management Act (GMA) to address utility services within the Rock Island area during the ensuing 20-year planning horizon. It consists of, "The general location, proposed location, and capacity of all existing and proposed utilities, including, but not limited to, electrical lines, telecommunication lines, and natural gas lines." General utility corridors and purveyors are identified, along with a goal and policies to help guide the future development of these services. The Utilities Element describes how the goals in the other plan elements will be implemented through the utility policies and regulations and is an important element in implementing comprehensive plan objectives. The Element has also been developed in accordance with the County-Wide Planning Policies and has been integrated with all other planning elements to ensure consistency throughout the comprehensive plan.

Utilities includes: electricity, natural gas, telecommunications and cable . The current purveyors of these services are listed below:

| | |
|---|---|
| Electricity- | Douglas County PUD |
| Natural Gas- | Cascade Natural Gas |
| Telecommunications- | Verizon |
| Cable Television- | Charter Cable |

The Utilities Element reflects certain key assumptions:

- Utility providers are the best identifiers of utility problems and the solutions needed to overcome them.
- Levels of service and concurrency requirements do not apply to private utilities. They are required by state law to provide service to anyone requesting it who has the ability to pay for the extension. The Washington Utilities and Transportation Commission (WUTC) requires that privately owned utilities demonstrate that existing rate payers not subsidize new customers. Privately owned utilities are not public facilities although they provide a public service. They are required to provide the same level of service to urban and rural customers.
- The function of the Utilities Element is to facilitate the provision of utility service through incentives and cooperative approaches. Regulation is an alternative of last resort, and, if pursued, must be consistent with the authority of other regulatory bodies having jurisdiction over utility providers.
- At the heart of utilities lies the ability to pay. Emphasis is clearly on cost-effective solutions, both in the short and the long term, that are consistent with the serving utilities' public service obligations.

**GOAL:** To facilitate the development of all utilities at the appropriate levels of service to accommodate growth that is anticipated to occur in the area in a fair and timely manner.

POLICY 1: The policies and regulations of the many different state agencies that regulate the provision of utility services need to consider and reflect local issues and situations.

POLICY 2: A full range of services should be provided where they are cost effective within the entire urban growth area.

POLICY 3: Encourage development of vacant properties adjacent to established utility systems, according to the appropriate zoning classification and/or land use designation.

POLICY 4: Insure that development takes into account the timely provision of adequate and efficient utility systems.

POLICY 5: The cost of on-site utility improvements or site preparation for developments, will be the responsibility of private enterprise.

POLICY-Encourage purveyors to extend utilities to those areas needing services within the urban growth area.

POLICY 7: Encourage utility purveyors to coordinate their system planning efforts with the comprehensive plan and other planning efforts pertaining to land use, other utilities and other community facilities.

POLICY 8: Promote the planned development and phasing of utility and public facility construction consistent with capital improvement programs.

POLICY 9: Promote multi-jurisdictional cooperation for utility planning and implementation.

POLICY10: Utility installations and system upgrades should be done in a manner sensitive to the surrounding land uses.

POLICY 11: Require the under-grounding of utility wires, where feasible, especially within a view corridor and/or around the lakes and river.

POLICY 12.-Encourage utility purveyors to have capital improvement planning and programs that are consistent with the comprehensive plan.

POLICY 13: Insure the adequate sizing of utility trunk lines and main lines consistent with Capital Improvement Program recommendations, with development paying for its share of the cost of such construction.

POLICY 14: Promote the coordinated development, review, update and implementation of city, county and public utility capital improvement programs consistent with the comprehensive plan.

# TRANSPORTATION

## INTRODUCTION…

Transportation plays a key role in making the Comprehensive Plan work. It serves as a partner to crucial land use and economic development decisions, often behind the scenes. The Transportation Element closely ties together transportation and land use decisions to ensure that the ~~city's~~ area's transportation system responds as appropriately as possible to population growth and development within stringent funding constraints.

Based on the 2000 US Census of population, the Rock Island area has been incorporated into a Metropolitan Planning Organization (MPO) that is administered by the Wenatchee Valley Transportation Council. This entity, made up of local governments and port districts in the area, is charged with the responsibility of planning for regional transportation within the defined boundaries of the MPO. Rock Island and Douglas County participated in the development of the required Metropolitan Transportation Plan (MTP), titled *"Confluence 2025: A Strategic Transportation Plan for the Wenatchee Valley"*, that serves as the foundation for the local needs in the area. As such, the MTP is incorporated by this reference into the Transportation Element of the comprehensive plan.

Overall, ~~t~~he Transportation Element addresses the motorized and non-motorized transportation needs of the Rock Island Area. It represents the community's policy regarding projected transportation needs (current and future), location and condition of the existing traffic circulation system, the cause, scope and nature of transportation problems, level of service standards, street classifications and associated transportation problems the Area must address regarding growth in the next twenty-years. As specified in the Growth Management Act, new developments will be prohibited unless transportation improvements or strategies to accommodate the impacts of development are made concurrent with the development. Such improvements and strategies must be in place or financially planned for within six years of development use.

The type and availability of transportation resources are major factors in the development of land use patterns, while conversely, the way land is used greatly influences the need and location for new transportation. The relationship between transportation and land use is one of continuous interaction, and their planning must be coordinated. The current land use plan, the future land use map and the Transportation Element are highly dependent on each other and need to be carefully coordinated.

An inventory of the existing transportation system, as well as a description of identified improvement projects is provided both in the Capital Facilities Element of this comprehensive plan as well as in *Confluence 2025*, the Wenatchee Valley Transportation Council Metropolitan Transportation Plan.

The following goal and policy statements are designed to guide the City of Rock Island and Douglas County in making consistent decisions on future transportation needs.

**GOAL:** To provide an effective transportation network with adequate capacity to meet the demand for travel in the Area, at the adopted Level of Service.

POLICY 1: Encourage public participation in all transportation related decisions.

POLICY 2: Support initiation and expansion of public transit service within and around Rock Island, to surrounding communities and to employment centers.

POLICY 3: Ensure mobility for all residents within the Urban Growth Area, including the elderly and persons with disabilities, by providing an accessible and affordable transportation system.

POLICY 4: Adopt levels of service for the transportation infrastructure and services that reflect the preference of the community.

POLICY 5: Allow development to occur only when those proposals accompany specific documentation or proposed plans showing how the transportation system can adequately support the needs of existing and proposed development; and showing that the proposal is consistent with the maintenance and enhancement of the current transportation infrastructure in accordance with the other elements of the comprehensive plan.

POLICY 6: Coordinate with all service providers regarding the location of major utility and transportation corridors and the construction of roadway and utility improvements.

POLICY 7: Coordinate planning, construction, and operations of transportation facilities and programs through the North Central Regional Transportation Planning Organization (RTPO) and with the Metropolitan Planning Organization (MPO).

POLICY 8: The city and county will review all development proposals, realignment and vacation petitions, variance requests, subdivision plats and commercial and industrial construction site plans to ensure consistency with the Transportation Element.

POLICY 9: Ensure adequate and safe access to property via a system of public and private roads.

POLICY 10: Within the Urban Growth Area, classify streets according to the following system that is consistent with federal, state, regional and local guidelines to maximize the funding available.

> **Arterials:** Streets that are designed to carry a high proportion of the total urban area traffic, and usually either serves traffic going from the central business district to outlying residential areas, or traffic entering and leaving the urban area. They also provide a connection to collector streets, and provide intra-community continuity while maintaining identifiable neighborhoods. (These streets are classified by Washington State DOT and Federal Highways as Major Arterials and/or Major Collectors.)

**Collectors:** Streets that are designed to provide access service and traffic circulation within residential neighborhoods and commercial/industrial areas. They differ from the above arterials in that they may penetrate residential neighborhoods, distributing traffic from arterials to the ultimate destination or vice-versa.

**Local Access:** Streets that have a primary function of providing access to abutting land and to collector and arterial streets. They offer the lowest level of mobility and through traffic in residential neighborhoods should be deliberately discouraged. Local Access Streets are further classified according to the primary intended use of the area, based on the comprehensive plan land use designations map:

- **Local Access – Commercial/Industrial:** Streets that serve primarily commercial and industrial uses with adequate structural and design features to serve traffic typical for these areas, including larger trucks. Important features include, but are not limited to, adequate sight distance, turning radius, travel lane widths, etc.
- **Local Access - Residential:** Streets that primarily serve residential uses with design components to slow down traffic and to discourage through traffic.

POLICY 11: Provide an inter-connected network of streets and trails for ease, access and variety of travel modes.

POLICY 12: Apply design standards that result in attractive and functional transportation facilities.

POLICY13: Assure the provision of streets, sidewalks and walkways that comply with the Americans with Disabilities Act (ADA) requirements.

POLICY 14: Consider natural landscape features in the design of transportation facilities.

POLICY 16: Encourage a safe, coordinated system of bikeways, walkways and trails, including through routes, to meet existing and anticipated needs for non-motorized transportation, by using safe, well-marked facilities that are unobstructed.

POLICY 17: Design transportation facilities within the Rock Island Area that minimize adverse environmental and neighborhood land use conflicts and impacts resulting from both their construction and operation.

POLICY 18: Ensure that any transportation improvements or strategies required to mitigate impacts are constructed or financed concurrent with development.

POLICY 19: Economic and residential growth decisions will be tied to either the ability of the existing transportation system to accommodate the increased demand, or to new and/or improved transportation facilities being provided concurrently with the proposed development.

POLICY 20: Control the location and spacing of commercial driveways and the design of parking lots to avoid traffic and pedestrian conflicts and confusing circulation patterns.

POLICY 21: Provide suitable ratios of off-street and on-street parking based on land use needs and the design character of each district of the Area.

POLICY 22: Establish a Transportation Inventory Program to provide current information regarding such things as traffic counts, accidents, speed studies, signs/markings, singlal and street lights, pavement conditions, etc., needed for facility planning and maintenance.

POLICY23: Use a community involvement program to promote continuous monitoring of the major transportation concerns by the citizens of the area, and to provide for effective citizen input to the planning/decision making process.

POLICY 24: The city will maintain an annually updated listing of analyzed and prioritized road improvement needs based on the comprehensive plan.

POLICY 25: Encourage the use of innovative funding tools, such as local improvement districts (LID), road reimbursement areas, etc., to discourage piecemeal construction of-streets.

POLICY 26: All road construction projects-will meet or exceed the minimum requirements for stormwater runoff.

# ENVIRONMENT & CRITICAL AREAS

## INTRODUCTION…

The quality of life of different communities is directly related to the quality of environmental factors, such as air and water quality and the natural resources base of the area. Many times the subtle and prolonged degradation of these things can undermine the community's appeal and viability. The following goals and policies are intended to provide some measure of protection to the environmental elements that contribute to the quality of life in the community.

The GMA states that local governments must classify, designate and regulate to protect critical areas. Critical areas include the following areas and ecosystems: (a) wetlands; (b) areas with a critical recharging effect on aquifers used for potable water; (c) fish and wildlife habitat conservation areas; (d) frequently flooded areas; and (e) geologically hazardous areas. The following pages and accompanying reference maps describe the City's classification and designation of these critical areas, as well as goals and policies that lay the foundation for regulations to protect them.

Amendments to the GMA now require that local governments include "best available science" in designating critical areas, and in developing policies and development regulations to protect the functions and values of critical areas. These amendments also require counties and cities to give special consideration to conservation or protection measures necessary to preserve or enhance anadromous fisheries. The City has utilized the most current science that is available as a final product in developing classification systems and in designating critical areas, and in developing the goals and policies contained within the plan. A full review of the 2006 analysis is located in the Appendix of this plan. During the periodic amendments of this comprehensive plan, updated information will be included and considered as it becomes available. The City and County are currently, 2006, updating the Shoreline Master Program, which should be referenced for all development on or near the shoreline.

The following goals and policies are intended to guide the development of protective measures, both regulatory and non-regulatory, for the critical areas found within the Rock Island UGA. For purposes of protecting critical areas outside of the UGA but within the Planning Area, the goals, policies and implementing protective measures developed and administered by Douglas County are incorporated herein by reference.

## GENERAL GOAL AND POLICIES…

**GOAL:** Preserve and protect the quality of the area's natural features and maintain a harmonious relationship between the man-made community and the natural environment.

POLICY 1: Coordinate conservation strategies and efforts with appropriate state and federal agencies and private conservation organizations to take advantage of both technical and financial assistance and to avoid duplication of efforts.

POLICY 2: Encourage the development of an education program that promotes the value of critical areas and that promotes public and private stewardship of these lands.

POLICY 3: Promote the recycling of all usable materials and alternative solid waste disposal methods.

POLICY 4: Utilize site planning, setbacks, buffers, erosion control and knowledge about soils, hydrology, fish and wildlife habitat to promote development that is compatible with the natural environment.

POLICY 5: Development proposals in critical areas shall be critically reviewed for environmental impacts, and approval may be made only when other reasonable alternatives cannot be found.

POLICY 6: Respect the development limitations present in critical areas and manage these resources in a manner consistent with their unique restraints and special values.

POLICY 7: Encourage development that is compatible with the natural environment and minimizes impacts to significant natural and scenic features.

POLICY 8: Local government should work closely with private organizations and those agencies that manage public lands to ensure that local interests are emphasized.

POLICY 9: Allow for open space and recreational use of critical areas where such use does not negatively impact the critical areas.

POLICY 10: Encourage the restoration and enhancement of critical areas.

POLICY 11: Protect critical areas by encouraging the use of innovative techniques on or adjacent to critical areas. Such techniques may include: purchase of development rights, transfer of development rights, clustering, conservation easements, land trusts, and the Public Benefit Rating System.

POLICY 12: In designating and protecting critical areas, the City will include best available science in developing policies and development regulations to protect the functions and values of critical areas. In addition, the City will give special consideration to conservation or protection measures necessary to preserve or enhance anadromous fisheries.

POLICY 13: The goals and policies of the City's Shoreline Master Program, as it exists now or as it may be amended in the future, are considered an element of the comprehensive plan, and are included by reference as if fully set forth herein.

POLICY 14: Agricultural activities, including commercial and hobby farms, are encouraged to incorporate best management practices concerning animal keeping, animal waste disposal, fertilizer use, pesticide use, and stream corridor management.

POLICY 15: Fertilizer and pesticide management practices of schools, parks, and other non-residential facilities that maintain large landscaped areas should be evaluated in relation to best management practices as recommended by the Cooperative Extension Service or a licensed chemical applicator.

POLICY 16: Incorporate considerations for surface water runoff, flood plain issues and maintaining water quality during the design and construction of new developments, including roads and utility corridors.

POLICY 17: Protect water quality as an important aspect of the public health, the local economy, the environment, and a high quality of life.

POLICY 18: Consideration should be given to supporting water quality education programs that inform local citizens and visitors about water quality issues and steps they can take to protect our water resources.

POLICY 19: Consider participation in the local watershed planning process currently ongoing with local jurisdictions, state and federal agencies and interest groups/organizations.

POLICY 20: Storm water which is collected by a storm sewer system should not be directly discharged into water sources without appropriate treatment.

POLICY 21: Encourage and support future and ongoing water quality monitoring programs.

POLICY 22: Encourage appropriate regulatory agencies to actively pursue violators which illegally discharge waste into rivers, lakes and streams.

**Wetlands...**

Wetlands serve a multitude of functions that are crucial to human well-being and ecosystem balance. Because of their interconnectedness with the geology, climate, aquifers and a myriad of other factors in a given area, they are a dynamic feature of the natural environment. Some of these functions include floodwater retention, sediment entrapment, water purification, groundwater recharge, maintenance of stream flows, shoreline stabilization, habitat for fish and wildlife, grazing areas for livestock, recreation, aesthetic values and education and research opportunities. It is the intent of these policies to provide the maximum protection reasonable from the encroachment of changes in land use that would diminish the wetlands' diversity of values or degrade their quality.

Wetlands are defined as areas that are inundated or saturated by surface water or ground water at a frequency and duration sufficient to support, and that under normal circumstances do support, a prevalence of vegetation typically adapted for life in saturated soil conditions. Wetlands generally include swamps, marshes, bogs, and similar areas. Wetlands do not include those artificial wetlands intentionally created from non-wetland sites, including, but not limited to, irrigation and drainage ditches, grass-lined swales, canals, detention facilities, wastewater treatment facilities, farm ponds,

and landscape amenities, or those wetlands created after July 1, 1990, that were unintentionally created as a result of the construction of a road, street, or highway. Wetlands may include those artificial wetlands intentionally created from non-wetland areas created to mitigate conversion of wetlands. (RCW 36.70A.030(21))

**GOAL:** The City's wetlands will be protected to the greatest extent possible because they provide important functions which help define the quality of life in the community.

POLICY 1: Wetland areas will be identified and rated according to the Eastern Washington Wetland Rating System developed by the Washington State Department of Ecology.

POLICY 2: When classifying and/or assessing a wetland area, historical information on the area in question, as well as the dynamic nature of wetlands, will be recognized and considered.

POLICY 3: Based on their quality demonstrated by the classification system, wetlands will be protected as much as reasonable from alterations due to land use changes that may create adverse impacts to the wetland.

POLICY 4: Whenever feasible, innovative techniques that enhance a wetland and promote it as a useful, functioning part of a development will be encouraged during development review processes.

POLICY 5: Coordinate wetland preservation strategies and efforts with appropriate local, state and federal agencies and private conservation organizations to take advantage of both technical and financial assistance, and to avoid duplication of efforts.

POLICY 6: Activities or uses which would strip the shoreline of vegetative cover, cause substantial erosion or sedimentation or adversely affect aquatic life should be prohibited.

POLICY 7: Recognize that wetlands and streams are dynamic areas that respond to natural forces with consequences to other natural areas, fish and wildlife and to other property owners.

POLICY 8: Wetlands will be identified according to the methodology described in the most current Federal Manual for Identifying and Delineating Jurisdictional Wetlands.

POLICY 9: For development proposals which encompass wetland areas as shown on the reference maps for wetland areas, there will be a site-specific review process required to determine if a wetland truly exists and, if so, what the functions and values of that wetland are, what the impacts of the project will be and the mitigation measures required to address those impacts.

POLICY 10: Reference maps for wetland areas will be drafted based on information from the National Wetland Inventory (NWI), Washington Department of Fish and Wildlife Priority Habitat and Species maps, the Douglas County Soil Survey and any historical data and/or data gathered during the review of previous development proposals and projects.

**Fish and Wildlife Habitat Conservation Areas...**

The North Central Washington area is fortunate to have natural resources encompassing a large variety of environments. As demonstrated in national studies, many people participate in recreational activities that involve wildlife, including hunting, fishing, photography of wildlife, bird watching and feeding, among other things. Recreationally-oriented tourist activities may provide a possible avenue for economic development in the area, capitalizing on these numerous natural resources through promotion of the area as a recreational paradise. To that extent, as well as for the inherent importance of wildlife and the natural environment to the quality of life, it is the intent of these policies to recognize the importance of protecting fish and wildlife habitat conservation areas.

**GOAL:** Protect fish and wildlife habitat areas as an important natural resource for the City, particularly in regard to their economic, aesthetic and quality of life values.

POLICY 1: The City will use the Washington Department of Fish and Wildlife's (WDFW) Priority Habitat and Species (PHS) maps to identify and map critical wildlife habitat conservation areas within the urban growth area, and will encourage the preservation of blocks of habitat and the connections between them.

POLICY 2: The City will consider the impacts of new development on the quality of land, wildlife and vegetative resources as part of its environmental review process and require any appropriate mitigation measures. Such mitigation may involve the retention and/or enhancement of habitats.

POLICY 3: If a development proposal is located in or near a habitat conservation area shown on the City's reference maps, a consultation and recommended mitigation measures, if needed, will be requested from the appropriate State and/or Federal resource agency.

POLICY 4: Land uses adjacent to fish and wildlife habitat areas should not negatively impact those areas. Additionally, if a change in land use occurs, adequate buffers should be provided to protect the important habitat areas.

POLICY 5: Activities allowed in fish and wildlife habitat conservation areas and open space will be consistent with the species located there, including all applicable state and federal regulations and/or best management practices for the activity regarding that species.

POLICY 6: Recognize the importance of protecting, and where feasible enhancing, fish and wildlife habitat conservation areas. When development occurs, restoration of lost and/or damaged fish and wildlife habitat will be achieved.

POLICY 7: Identify and protect any fish and wildlife habitat areas with which endangered, threatened, or sensitive species have a primary association.

POLICY 8: For development proposals which encompass fish and wildlife habitat conservation areas as shown on the WDFW PHS maps, there will be a site-specific review process required to determine if a habitat area truly exists and, if so, what the functions and values of that habitat are, what the impacts of the project will be and the mitigation measures required to address those impacts.

POLICY 9: The following threatened or endangered species (State and/or Federal) and important habitat types are known to exist in the Rock Island Area:

> **Species** - Bald Eagle, Spring Chinook Salmon, Steelhead, Bull Trout (State and/or Federal Threatened or Endangered Species); Golden Eagle, Rio Grande Wild Turkey, Osprey (State and/or Federal Candidate Species).
>
> **Habitats** - Open water, wetlands, riparian, islands, cliffs, talus slopes, shrub steppe, and natural open space.

**Aquifer Recharge Areas....**

Critical Aquifer recharge areas (CARA) are those areas where surface water feeds directly into potable groundwater. Groundwater is an essential natural resource that the residents of the City depend on as an important source of drinking water. Because remediation of contaminated groundwater is very costly, protecting and sustaining it has become of primary importance in recent years. One way to assure this resource is adequately maintained is to protect areas that provide a critical recharging effect to that groundwater resource. The City maintains a "Well-head Protection" plan as part of its water planning document. Within the City and its urban growth area, the exact nature of the aquifer(s) and their recharge areas is not fully understood. It is the intent of these policies to recognize the importance of protecting aquifer recharge areas. Because of the inter-relatedness of the aquifers, population increases and environmental concerns, it is necessary to protect all of the critical aquifer recharge areas as they become known.

**GOAL:** The City seeks to protect the public health, safety and welfare of its residents by providing protection of potable water sources, primarily through careful monitoring and control of areas demonstrated to be critical aquifers and/or which play a crucial role in recharging our groundwater supplies.

POLICY 1: Identify, map and maintain critical groundwater supply areas, aquifer recharge areas, areas with a high groundwater table and/or unconfined aquifers used for potable water. Ensure that the wells owned and maintained by the City as part of the public water system are protected through Douglas County's regulations for areas outside of the city limits.

POLICY 2: When these areas are identified, they will be encouraged to be incorporated as Groundwater Management Areas.

POLICY 3: Identify and protect critical aquifer recharge areas during development reviews. Standards should be developed that take into account the recharge limiting effects of impermeable surfaces or other factors that might adversely affect ground water quality or quantity.

POLICY 4: Protect the availability of potable water by minimizing the potential for contamination of ground water sources from residential, commercial and industrial activities.

POLICY 5: The City prohibits the disposal of hazardous materials within an Aquifer Recharge Area.

POLICY 6: Agricultural activities, including commercial and hobby farms, are encouraged to incorporate best management practices concerning animal keeping, animal waste disposal, fertilizer use, pesticide use and stream corridor management.

POLICY 7: Fertilizer and pesticide management practices of schools, parks, golf courses and other non-residential facilities that maintain large landscaped areas should be evaluated at the time of development in relation to Best Management Practices as recommended by the Cooperative Extension Service. Existing facilities are strongly encouraged to also incorporate these BMPs.

POLICY 8: It is the responsibility of the developer(s) to prove that their proposal would not adversely affect the recharge of an aquifer.

POLICY 9: Development which could substantially and negatively impact the quality of an aquifer will not be allowed unless it can be demonstrated conclusively that these negative impacts would be overcome in such a manner as to prevent the adverse impacts.

POLICY 10: The installation of underground fuel or storage tanks within a known critical recharge area will be prohibited. Installation in any other areas will be subject to applicable federal, state and local regulations.

POLICY 11: Require sites determined to have a high or medium vulnerability for contamination to comply with strict protection measures, as contained in the City's regulations to protect critical areas.

POLICY 12: All existing and proposed developments that are above a critical aquifer recharge area will be required to connect to any wastewater collection and treatment system that may be implemented in the future.

POLICY 13: Promote conservation for recharging and protecting the ground water aquifer from overuse.

POLICY 14: Establish a standard for development that protects ground water aquifers from pollution caused by failed septic systems, industrial, agricultural or commercial activities or improper disposal of chemicals or hazardous wastes.

**Frequently Flooded Areas...**

Frequently Flooded Areas are defined as those areas that have a one percent or greater chance of flooding in any given year. These areas may include, but are not limited to, streams (including intermittent ones), draws/ravines, rivers, wetlands, draws and the like. For the City, the most common flooding problems occur during extreme peak runoff events of short duration. These peak flows will occur with very little warning from the dry canyons and intermittent streams in the urban growth area and surrounding City. They are caused primarily by heavy rain on snow-covered, frozen ground in the spring, or from severe thunder storms during other times of the year.

The intent of these policies is to promote an efficient use of land and water resources by allocating frequently flooded areas to the uses for which they are best suited. It is also important and necessary to discourage obstructions to floodways and flood flows as well as prohibiting uses which pollute or deteriorate natural waters and water courses.

**GOAL:** Protect the frequently flooded areas that are known to be critical parts of the natural drainage system by limiting and controlling potential alterations and/or obstructions to those areas.

POLICY 1: Reduce danger to health by protecting surface and ground water supplies from the impairment which results from incompatible land uses.

POLICY 2: Discourage land use practices that may impede the flow of flood water or cause danger to life or property. This includes, but is not limited to, filling, dumping, storage of materials, structures, buildings, and any other works which, when acting alone or in combination with other existing or future uses, would cause damaging flood heights and velocities by obstructing flows.

POLICY 3: Permit and encourage land uses compatible with the preservation of the natural vegetation which is a principal factor in the maintenance of constant rates of water flow through the year and which sustain many species of wildlife and plant growth.

POLICY 4: Avoid fast runoff of surface waters from developed areas to prevent pollution materials such as motor oils, paper, sand, salt and other debris, garbage and foreign materials from being carried directly into the Columbia River, other public waters, or into critical aquifer recharge areas.

POLICY 5: Prevent the development of structures in areas unfit for human usage by reason of danger from flooding, unsanitary conditions, or other hazards.

POLICY 6: Promote the preservation of the remaining, significant natural drainages that are an important part of the storm water drainage system.

POLICY 7: Assure high quality collection of water runoff prior to the point of introduction into major watercourses and/or into critical aquifer recharge areas.

POLICY 8: As new development occurs, require that the increase in stormwater run off from new impervious surfaces such as roofs, streets, sidewalks, etc. is handled on-site in a system approved by either the City or Douglas County

POLICY 9: Seek to map areas that are potential flood hazard areas and/or have experienced historical flooding events but are not currently included in the Federal Emergency Management Agency's mapping efforts.

**Geologically Hazardous Areas...**

Geologically hazardous areas are defined as "areas that, because of their susceptibility to erosion, sliding, earthquake or other geologic events, are not suited to the siting of commercial, residential or industrial development consistent with public health or safety concerns". These hazardous areas pose a threat to the health and safety of citizens when development is sited in areas of significant hazard. In some cases the risk to development from geological hazards can be reduced or mitigated to acceptable levels by engineering design or modified construction practices. However, when the risks can not be sufficiently mitigated, development needs to be prohibited.

To better understand the particular aspects of the different types of geologic hazards, the following summary descriptions are provided.

**Erosion Hazard Areas...**Erosion is relatively common within certain areas of the City and its UGA, due to hydrologic and geologic characteristics, vegetative conditions, wind and human land use. By minimizing the negative impacts of human land use on these areas, the damage to the natural environment as well as to human-built systems is reduced. The two major factors for erosion are related to wind and water activity.

**Landslide Hazard Areas (Steep Slopes)...**Landslide hazard areas are those areas that are subject to potential slope failure. These include slopes of 15% or greater that are underlain by weak, fine grained unconsolidated sediments, jointed or bedded bedrock, or landslide deposits, including the top and toe of such areas. It is necessary to protect the public from damage due to development on, or adjacent to, landslides; to preserve the scenic quality and natural character of City's hillsides; and to protect water quality. See Slope Map.

**Seismic Hazard Areas...**Earthquakes cannot be eliminated. However, there have been no specifically identified areas within the area that would pose significant, predictable hazards to life and property resulting from earthquakes and the associated ground shaking, differential settlement, and/or soil liquefaction.

**Mine Hazard Areas...**Mine hazard areas are defined as "areas directly underlain by, adjacent to, or affected by mine workings such as adits, tunnels, drifts, or air shafts." Mine hazards may also include steep and unstable slopes created by open mines. There has been little or no historical subsurface mining within the City and its UGA that could have left areas honeycombed with

abandoned mine tunnels. Similarly, any open mining is required to have both an approved erosion control plan and an approved reclamation plan that will address steep and unstable slopes.

**Volcanic Hazard Areas...** Volcanic hazard areas are defined as "areas subject to pyroclastic flows, lava flows, and inundation by debris flows, mudflows, or related flooding resulting from volcanic activity." Because there is no valley or river flowing through the community that heads on or near a volcano, there would be no significant damage to people and/or property expected from debris flows, mudflows or related flooding resulting from volcanic activity. The area is generally far enough distant from the nearest volcano (Glacier Peak) to virtually eliminate the hazards of damage to people and/or property resulting from pyroclastic flows, or lateral blasts. However, if there were to be a significant ash fall east of Glacier Peak, small debris flows would be possible in the rivers and valleys that flow into the Columbia River.

The intent of the following goals and policies is to reduce the threat posed to the health and safety of citizens in areas of significant geologic hazard by providing guidance for reviewing a development proposal that may be near a geologic hazard.

**GOAL:** The City will provide appropriate measures to either avoid or mitigate significant risks that are posed by geologic hazard areas to public and private property and to public health and safety.

POLICY 1: When probable significant adverse impacts from geologically hazardous areas are identified during the review of a development application, documentation which fully addresses these potential impacts and identifies alternative mitigation measures to eliminate or minimize the impacts will be required, thereby reducing the threat posed to the health and safety of citizens.

POLICY 2: Grading and clearing for both private developments and public facilities/services will be limited to the minimum necessary to accomplish engineering design, with reclamation of disturbed areas being a top priority at the completion of the construction project.

POLICY 3: To minimize blowing soil during development, appropriate water and/or mulch material will be required on any areas without a vegetative cover, as indicated in the approved erosion control plan.

POLICY 4: To maintain the natural integrity of landslide hazard areas and to protect the environment, and the public health and safety, an adequate buffer of existing vegetation will be maintained around all sides of the landslide hazard areas.

POLICY 5: At such time there is a seismic hazard identified and mapped in the City or its urban growth area, any application for development in or near that area must show it's location in relation to the hazard area, and/or it must be designed so that it will be as safe from any earthquake damage as a similar development which is not located in a seismic hazard area.

POLICY 6: Promote the development of education programs that explain both the dangers and effects of earthquakes, as well as emergency procedures individuals can take should an earthquake occur.

POLICY 7: The City should approve, condition or deny proposals, as appropriate, based on the degree to which significant risks posed by geologic hazard areas to public and private property and to public health and safety can be avoided or mitigated.

POLICY 8: Minimize the negative impacts of wind and water erosion resulting from development and construction on erosion hazard areas.

POLICY 9: An erosion control plan should be submitted by the applicant for a development, prior to approval of the proposal. Further, to minimize blowing soil during development, appropriate water and/or mulch material should be applied to any areas without a vegetative cover.

POLICY 10: Reduce the threat posed to the health and safety of citizens when commercial, residential, or industrial development is sited in areas of significant geologic hazard, including but not limited to landslide, seismic, mine and volcanic hazard areas.

POLICY 11: All proposed development projects should be evaluated to determine whether the project is proposed to be located in a Geologic Hazard Area, its potential impacts on the hazard area, and the potential impact of geologic hazards on the proposed project.

POLICY 12: All proposed development projects located within a Geologic Hazard Area, or which have the potential to adversely affect the stability of one of these areas, should be required to conduct a technical study by a qualified consultant to evaluate the actual presence of geologic conditions giving rise to the geologic hazard.

POLICY 13: Any new residential land division that is determined to be in a Geologically Hazardous Area should have a note placed on the face of the plat and on the title report stating that the hazard is present.

# RECREATION

## INTRODUCTION…

The City of Rock Island and its surrounding area offer a variety of recreational opportunities for the citizens and traveling public. The lakes, river, cultural and geological amenities within close proximity to the city leaves Rock Island poised to serve many recreational users. Each facility provides a variety of amenities and is in a different stage of development, thus the full potential of recreation in the Rock Island planning area remains untapped.

The community of Rock Island envisions a future that capitalizes on the natural environment with expanded recreational opportunities. Citizens are particularly optimistic regarding the community's potential for commercial development once the sanitary sewer system is developed. The system will provide the necessary infrastructure to support restaurant and lodging establishments that are required to sustain the tourism industry.

In planning for the future, the residents of Rock Island will create a friendly outdoor atmosphere to promote the City of Rock Island and the surrounding area as a destination area for tourists and recreational users. The amenities that will be developed include: a trail system that connects the lakes to various destinations within town and each other; public swimming and fishing facilities at the lakes; expansion of the golf course to an eighteen-hole course; and the addition of a multi-purpose sports complex. The community seeks to create a balance between active and passive recreation opportunities. In order to accomplish this, they will expand or formalize amenities that encourage passive recreation activities such as bird/wildlife viewing and highlighting other cultural opportunities.

The development and expansion of these recreational activities will encourage private investment into commercial tourism. This added investment will improve and stabilize the local economy and contribute to meeting the need for goods and services of local residents. , This can be achieved by capitalizing on the available natural resources and beauty of the area to entice tourism and recreational activity.

Open space and recreational needs can be met in part by preserving areas that are not suitable for development due to physical limitations or other substantial public interest reasons. The transmission corridor for the Bonneville Power Association and the Chelan County PUD power lines (see Land Use Designations Map) is one area that is not suitable for development due to easement restrictions placed on those properties by the utility purveyors. Also, if an area is determined to be environmentally sensitive, intensive recreational use may not be compatible, while passive uses such as viewing platforms or interpretive sites can be educationally beneficial.

As residential development expands, sensitive areas may be subjected to further encroachment. By providing buffer areas between the two, impacts to the sensitive areas may be minimized. The buffer area can also be used to the advantage of the development in that it can provide open space and/or low-intensity recreational opportunities for the surrounding residents, and generally enhance the amenities of the development.

By carefully considering the design of development proposals, the community can be better served by designs that appear to be consistent and inter-connected (i.e., connecting parks/public use lands by pedestrian/bicycle trails). Development proposals will strive to achieve consistency and consider existing and potential surrounding land uses.

A detailed list of desired capital improvements, estimated costs, potential funding source will be included in the capital facilities element, with the priority for these improvements determined generally by availability of funding. Other considerations include timing, such as holding off on trail or sidewalk improvements until after waterline, sewer line, or other underground projects are completed.

## GOALS POLICIES AND OBJECTIVES…

It is the city of Rock Island's goal to achieve quality facilities while keeping costs down. One way to accomplish this is to keep the facilities simple, by maintaining the natural environment as much as possible. The following goals, policies and objectives provide the citizens of Rock Island the tools necessary to implement a recreational network that will enhance the natural beauty of the area.

**GOAL 1:** Preserve, maintain and enhance the natural beauty of the area by providing sufficient quantities and equitably distributed parks, open spaces and recreational facilities

POLICY 1: Encourage grass-roots citizen organizations/committees to become actively involved in encouraging, promoting and providing for the recreational opportunities in the area.

POLICY 2: Work with other agencies and organizations to pursue funding of a more detailed master plan for recreational opportunities in the Planning Area.

POLICY 3: Assure all recreation facilities have basic infrastructure including parking and restroom facilities.

POLICY 4: Develop new facilities only when assurances are in place that funds are available to pay for the facility and continued maintenance.

POLICY 5: Work with other agencies and organizations to pursue funding of a more detailed master plan for recreational opportunities in the Planning Area

Objective: Form an advisory Park and Recreation Board to make recommendations to city council regarding development facilities.

Objective: Formalize recreation activities by hiring a director or coordinator to serve as staff to park and recreation board; run summer recreation program, coordinate events, lead effort to expand golf course, etc.

Objective: Develop water recreation facilities

a. Designate beach and swimming areas;
b. Provide boat launch area to promote use of lakes for paddle boats, canoes, etc.;
c. Develop amenities for sports fishing (cleaning, etc.)

Objective : Develop trail systems

a. Map existing trails;
b. Designate location for interconnected trail system;
    i. Trail around Hideaway;
    ii. Trail above Rock Island to take advantage of view.
    iii. Develop bicycle camps (fencing-patrolling)

Objective : Develop "Events" to promote the area.

a. Kid's fishing day
b. R/C boat races

Objective : Develop park amenities

a. Skate Park
b. Amphitheater
c. Tables, picnic shelters, play equipment
d. Arboretum

Objective : Develop Sports Complex

a. Assure fields are built to tournament quality and standards.

**GOAL 2:** Assure that all recreation facilities are accessible to all age groups, income levels and needs.

POLICY 1: Encourage development of support programs for senior citizens that will improve access to recreational facilities.

POLICY 2: Enhance site access to recreation facilities by linking walkways, bikeways, equestrian trails and parking areas to adjoining land uses and to transit systems where feasible.

POLICY 3: Assure accessibility issues are addressed at the planning and design stage of facility development.

POLICY 4: Assure ADA access standards are met, especially regarding access to lakes.

**GOAL 3:** Support designation of environmentally sensitive areas to be retained as open space, and consider impacts to the environment and the overall quality of life in the Rock Island area as new facilities are implemented.

POLICY 1: Recreational facilities will be designed so as to have no substantial adverse effect on unique cultural, environmentally sensitive or geologic features. They should be signed so as to promote responsible use of the facilities.

POLICY 2: Recommend pedestrian and equestrian amenities such as benches, planters, plazas, drinking fountains, water features, exercise stations, hitching rails and waste receptacles along park/trail development.

POLICY 3: In all cases of residential development adjacent to sensitive areas and the shoreline environment, landscape buffering, berms, and/or natural features will be used to mitigate potential impacts.

POLICY 4: Encourage low-maintenance designs for parks and recreational facilities.

POLICY 5: Allow for the long term acquisition, dedication and management of open space as well as passive and active recreational uses.

POLICY 6: Recognize activities such as hang gliding, para-sailing, non-motorized boating, fishing and other similar activities as viable recreational uses where feasible.

# APPENDIX A:
# CAPITAL FACILITIES 6-YEAR FINANCIAL ANALYSIS

This analysis is based on revenues and expenditures from the City's budget. The analysis looks at the patterns in the various accounts and attempts to discern trends in the revenues generated and expenses paid. Projection factors are assigned to each item in a fund using Excel spreadsheets that generated this analysis.

Due to careful budgeting over many years, the City of Rock Island has maintained stable accounts. However, large scale projects for sewer and water could strain the budget. The City may want to consider developing reserve accounts. Reserve accounts serve several vital functions in a city budget, such as building up revenue for expensive items, supporting emergency needs and are a good source of "matching funds" for grants and loans.

The following six year projects are outlined in this analysis.

| 2006-2012 Project List | Time Frame | Estimated Cost | Potential Funding |
|---|---|---|---|
| **Water System Projects** | | **$717,500** | |
| Arsenic Compliance Plan | 2008 | | CDBG, PWTF, County, City |
| Test Well | | $45,000 | |
| Production well | | $74,000 | |
| Pump | | $25,000 | |
| Main lines from well to distribution system | | $120,000 | |
| Building for piping, electrical, controls | | $32,000 | |
| Building piping | | $20,000 | |
| Electrical & controls | | $45,000 | |
| Rehab/replace Well #2 | | $74,000 | |
| Contingencies, Taxes, Admin | | $282,500 | |
| Engineering, Environmental, Admin, Other | 2008 | | CDBG, PWTF, County, City |
| Hydro investigation well#2 | | $25,000 | |
| Engineering/administration | | $108,750 | |
| Environmental review process | | $15,000 | |
| Site purchase | | $25,000 | |
| Legal costs | | $6,750 | |
| New Computer System | 2006 | $4,000 | City |

| 2006-2012 Project List | Time Frame | Estimated Cost | Potential Funding |
|---|---|---|---|
| **Street Projects** | | **$1,017,000** | |
| Saunders Road Project (sidewalks) | 2007 | $263,000 | WSDOT |
| 3rd St Overlay | 2007 | $11,000 | City |
| Garden Ave (sidewalks) | 2007 | $613,000 | State |
| Akron Overlay | 2008 | $7,000 | City |
| Baker Ave Overlay | 2008 | $5,000 | City |
| 1st St Overlay | 2008 | $5,000 | City |
| Douglas St Overlay | 2009 | $13,000 | City |
| Keane Ave Overlay | 2009 | $7,000 | City |
| Jefferson Ave Overlay | 2010 | $8,000 | City |
| Indiana Ave Overlay | 2010 | $12,000 | City |
| Hanna Ave Overlay: to 2nd | 2011 | $11,000 | City |
| Hanna Aver Overlay: to Cul-de-sac | 2011 | $12,000 | City |
| Hammond Lane Overlay | 2012 | $50,000 | City |
| Purchase Sweeper Used | 2007 | $10,000 | City |
| **Parks Projects** | | **$175,000** | |
| Trail feasibility study | 2007 | $50,000 | IAC Grant |
| Recreation Master Plan | 2008 | $75,000 | IAC Grant, Chelan County PUD, City, Douglas County |
| Handicap accessibility improvements and restrooms | 2007 | $50,000 | IAC Grant, Chelan County PUD, City, Douglas County |
| Parks New Mower | 2007 | $10,000 | City |
| **Public Works Equipment** | | **$35,000** | |
| Public Works Truck | 2008 | $20,000 | City |
| Utility Vehicle | 2008 | $15,000 | City |
| **Public Buildings/City Hall Equipment** | | **$90,000** | |
| Update Computer Hardware | 2007 | $5,000 | City |
| Additional storage for City Hall | 2009 | $75,000 | City, CDBG |
| Replace windows at City Hall | 2009 | $10,000 | City |
| **Wastewater Treatment System** | | **$8,600,000** | |
| Development of new system | | $8,600,000 | RD Loan/Grant, CDBG, STAG |

**Twenty Year Project List**

Water Distribution System
- 8" main loop Rock Island Dr with Douglas St.
- Replace 4" with 8" line south of Rock Island Dr.
- Replace main to meet fire flow standards for the school
- Replace 6" with 8"-Hanna Place
- Replace 6" with 8"-Garden Ave

Add Fire Hydrants throughout City

Purchase: Water, Street, Sewer used 4,000 gallon water truck

## Current Expense Fund…

The current expense fund is a large and complex account. Revenues come from several sources and support a wide variety of the City's operating expenses and some capital projects.

### Current Expense Fund

| | 2001 | 2002 | 2003 | 2004 | 2005 | 2006 |
|---|---|---|---|---|---|---|
| | Actual | Actual | Actual | Actual | Actual | Budgeted |
| Beginning Balance | 33,343 | 40,462 | 19,304 | 17,723 | 41,418 | 60,117 |
| Taxes | 85,339 | 85,897 | 103,093 | 127,658 | 136,265 | 135,000 |
| Licenses and Permits | 4,802 | 4,294 | 5,009 | 6,984 | 5,202 | 6,000 |
| Intergovernmental | 60,708 | 30,571 | 17,454 | 24,053 | 44,123 | 50,000 |
| Charges for Goods & Services | 83 | 350 | 69 | 54 | | 400 |
| Fines and Forfeits | 514 | 0 | 0 | 168 | | 300 |
| Miscellaneous | 15,210 | 2,955 | 1,963 | 1,807 | 2,530 | 3,000 |
| Grant for capital projects | | | | | | |
| Other Financing Sources | 19,670 | 18,692 | 27,369 | 27,000 | 28,000 | 30,000 |
| Total Incoming | 186,327 | 142,759 | 154,957 | 187,724 | 175,454 | 224,700 |
| Total Resources | 219,670 | 183,221 | 174,261 | 205,447 | 216,872 | 284,817 |
| Expenditures | | | | | | |
| General Government | 87,621 | 84,871 | 74,253 | 65,112 | 68,798 | 70,000 |
| Security of Persons and Property | 65,000 | 65,000 | 65,000 | 70,417 | 32,500 | 65,000 |
| Physical Environment | 3,780 | 5,578 | 7,388 | 11,899 | 8,609 | 10,000 |
| Transportation | | 0 | 0 | 0 | | |
| Economic Environment | 23,230 | 9,368 | 10,376 | 16,048 | 28,209 | 20,000 |
| Mental & Physical Health | 0 | 0 | 0 | 0 | | |
| Culture and Recreational | 0 | 0 | 0 | 0 | | 0 |
| Total Operating Expenditures | 179,631 | 164,816 | 157,017 | 163,476 | 138,115 | 165,000 |
| Debt Service | 1,691 | 1,673 | 1,688 | 1,722 | 15,556 | 2,000 |
| Capital Outlay | | 0 | 0 | 0 | 0 | 0 |
| Total Expenses | 181,323 | 166,489 | 158,704 | 165,198 | 153,672 | 167,000 |
| Excess( Deficit) of Resources Over Uses | 38,348 | 16,732 | 15,556 | 40,249 | 63,200 | 117,817 |

| | 2001 | 2002 | 2003 | 2004 | 2005 | 2006 |
|---|---|---|---|---|---|---|
| | Actual | Actual | Actual | Actual | Actual | Budgeted |
| Non-revenues | 9,785 | 9,199 | 10,817 | 10,538 | 10,653 | 11,000 |
| Non-expenditures | 7,670 | 6,627 | 8,651 | 9,369 | 13,736 | 10,000 |
| Ending Net Balance | 40,462 | 19,304 | 17,723 | 41,418 | 60,117 | 118,817 |

## PROJECTIONS

| | 2007 | 2008 | 2009 | 2010 | 2011 | 2012 |
|---|---|---|---|---|---|---|
| | Projected | Projected | Projected | Projected | Projected | Projected |
| Beginning Balance | 118,817 | 144,326 | 150,624 | 157,728 | 214,243 | 271,869 |
| Taxes | 138,991 | 141,770 | 144,606 | 147,926 | 150,885 | 153,903 |
| Licenses and Permits | 5,363 | 5,471 | 5,580 | 6,476 | 6,605 | 6,738 |
| Intergovernmental | 36,089 | 36,811 | 37,547 | 42,423 | 43,272 | 44,137 |
| Charges for Goods & Services | 142 | 145 | 148 | 218 | 223 | 227 |
| Fines and Forfeits | 174 | 177 | 181 | 235 | 240 | 245 |
| Miscellaneous | 4,991 | 5,091 | 5,192 | 3,390 | 3,458 | 3,527 |
| Grant for capital projects | | | 50,000 | | | |
| Other Financing Sources | 28,560 | 29,131 | 29,714 | 31,229 | 31,854 | 32,491 |
| Total Incoming | 214,310 | 218,596 | 272,968 | 231,898 | 236,536 | 241,267 |
| Total Resources | 333,127 | 362,922 | 423,592 | 389,627 | 450,780 | 513,136 |
| Expenditures | | | | | | |
| General Government | 77,654 | 79,207 | 80,791 | 77,430 | 78,979 | 80,558 |
| Security of Persons and Property | 60,775 | 61,991 | 63,230 | 62,890 | 64,148 | 65,431 |
| Physical Environment | 7,600 | 7,752 | 7,907 | 10,479 | 10,689 | 10,903 |
| Transportation | 0 | 0 | 0 | 0 | 0 | 0 |
| Economic Environment | 28,773 | 29,349 | 29,936 | 25,583 | 26,095 | 26,617 |
| Mental & Physical Health | 0 | 0 | 0 | 0 | 0 | 0 |
| Culture and Recreational | 0 | 0 | 0 | 0 | 0 | 0 |
| Total Operating Expenditures | 174,802 | 178,298 | 181,864 | 176,383 | 179,911 | 183,509 |
| Parks New Mower | $10,000 | | | | | |
| Public Works Truck | | $20,000 | | | | |
| Utility Vehicle | | $15,000 | | | | |
| Update Computer Hardware | $5,000 | | | | | |
| Additional storage for City Hall/Expansion | | | $75,000 | | | |
| Replace windows at City Hall | | | $10,000 | | | |
| Total Expenses | 189,802 | 213,298 | 266,864 | 176,383 | 179,911 | 183,509 |
| Other Financing Uses | 0 | 0 | 0 | 0 | 0 | 0 |
| Total Expenditures and Other | 189,802 | 213,298 | 266,864 | 176,383 | 179,911 | 183,509 |
| Excess( Deficit) of Resources Over Uses | 143,326 | 149,624 | 156,728 | 213,243 | 270,869 | 329,627 |
| Non-revenues | 11,000 | 11,000 | 11,000 | 11,000 | 11,000 | 11,000 |
| Non-expenditures | 10,000 | 10,000 | 10,000 | 10,000 | 10,000 | 10,000 |

| | 2007 | 2008 | 2009 | 2010 | 2011 | 2012 |
|---|---|---|---|---|---|---|
| | **Projected** | **Projected** | **Projected** | **Projected** | **Projected** | **Projected** |
| Ending Net Balance | 144,326 | 150,624 | 157,728 | 214,243 | 271,869 | 330,627 |

### Observations/Assumptions

Taxes: Overall, this portion of the current expense fund has tended to grow to reflect tax increases and population growth. A conservative projection of 2% annually based on 2005 actual budget was use as the projection. Taxes are the largest share of current expense fund revenues.

Licenses & Permits and Charges for services: This portion of the fund fluctuates greatly depending on the number of services sought in any given year. When the new Wastewater treatment plant is developed new permits are expected to increase; however, it is not clear if the facility will be operational in the six year analysis timeframe, therefore, an average (2001-2005) with a 2% increase is used for all projections.

Intergovernmental and Miscellaneous revenues funds show a fluctuation in revenue therefore, an average (2001-2005) with a 2% increase is used for all projections.

Other Financing Sources: The City has historically received funds under this category. A 2% annual increase is expected over the next 6 years.

EXPENSES

Government Services, Security and Physical Environment: Expenses have remained relatively stable since 2001. A 2% annual increase was projected (based on the average expense between 2001-2005) for the next 6 years.

Economic Environment: This category includes expenses associated with Planning and Building permit and review. Expenditures in this category fluctuated somewhat; however, with the on going development potential the actual expenses from 2005 were used with a 2% increase for the annual projection.

### Analysis

The City has identified several projects that would be funded through this account. The projects are smaller in scale and could be funded by the City; however, grants will be sought for the City Hall storage project. Grants will enable the City to redirect funding to other areas of need.

### City Street Fund…

The City Street Fund generates the bulk of its revenue from property and fuel taxes. The fund ensures that streets are maintained, and provides funds for storm drainage, traffic control, snow removal, and street cleaning.

**Street Fund 101**

| | 2001 | 2002 | 2003 | 2004 | 2005 | 2006 |
|---|---|---|---|---|---|---|
| | Actual | Actual | Actual | Actual | Actual | Budgeted |
| Beginning Balance | 47,201 | 61,536 | 132,681 | 101,631 | 79,853 | 79,853 |
| Taxes | | | | | | 38,500 |
| Intergovernmental | 4,013 | 3,562 | 2,829 | 4,366 | 22,047 | 246,750 |
| Charges for Goods & Services | 168,348 | 106,147 | 18,257 | 17,960 | | |
| Miscellaneous | | | | 2,063 | 2,214 | 1,500 |
| Capital Contributions | 30,663 | 44,995 | 1,707 | | | |
| Total Incoming | 203,025 | 154,704 | 22,792 | 24,389 | 144,131 | 286,750 |
| Total Resources | 250,226 | 216,240 | 155,474 | 126,020 | 223,984 | 366,603 |
| Expenditures | | | | | | |
| General Government | 0 | | 78 | 1,233 | | |
| Transportation | 52,074 | 51,364 | 53,765 | 44,934 | 104,113 | 63,500 |
| Total Operating Expenditures | 52,074 | 51,364 | 53,843 | 46,167 | 104,113 | 63,500 |
| Capital Outlay | 136,615 | 32,195 | 0 | 0 | 40,983 | 235,216 |
| Total Expenses | 188,689 | 83,559 | 53,843 | 46,167 | 145,096 | 298,716 |
| Excess( Deficit) of Resources Over Uses | 61,536 | 132,681 | 101,631 | 79,853 | 78,887 | 67,887 |
| Non-revenues | | | | | | 26,166 |
| Non-expenditures | | | | | | |
| Ending Net Balance | 61,536 | 132,681 | 101,631 | 79,853 | 78,887 | 94,053 |

**PROJECTIONS**

| | 2007 | 2008 | 2009 | 2010 | 2011 | 2012 |
|---|---|---|---|---|---|---|
| | Projected | Projected | Projected | Projected | Projected | Projected |
| Beginning Balance | 94,053 | 83,053 | 77,553 | 71,053 | 64,553 | 55,053 |
| Taxes | | | | | | |
| Licenses and Permits | | | 2,000 | 2,000 | 2,000 | 2,000 |
| Intergovernmental | 60,000 | 60,000 | 60,000 | 60,000 | 60,000 | 60,000 |
| Miscellaneous | | 1,500 | 1,500 | 1,500 | 1,500 | 1,500 |
| Capital Contributions | | | | | | |
| Other Financing Sources | | | | | | |
| Total Incoming | 60,000 | 61,500 | 63,500 | 63,500 | 63,500 | 63,500 |
| Total Resources | 154,053 | 144,553 | 141,053 | 134,553 | 128,053 | 118,553 |
| Expenditures | | | | | | |
| Transportation | 50,000 | 50,000 | 50,000 | 50,000 | 50,000 | 50,000 |
| Capital Outlay | | | | | | |
| Purchase Sweeper Used | $10,000 | | | | | |
| 3rd St Overlay | $11,000 | | | | | |
| Akron Overlay | | $7,000 | | | | |
| Baker Ave Overlay | | $5,000 | | | | |
| 1st St Overlay | | $5,000 | | | | |
| Douglas St Overlay | | | $13,000 | | | |

| | 2007 | 2008 | 2009 | 2010 | 2011 | 2012 |
|---|---|---|---|---|---|---|
| | **Projected** | **Projected** | **Projected** | **Projected** | **Projected** | **Projected** |
| Keane Ave Overlay | | | $7,000 | | | |
| Jefferson Ave Overlay | | | | $8,000 | | |
| Indiana Ave Overlay | | | | $12,000 | | |
| Hanna Ave Overlay: to 2nd | | | | | $11,000 | |
| Hanna Aver Overlay: to Cul-de-sac | | | | | $12,000 | |
| Hammond Lane Overlay | | | | | | $50,000 |
| Total Expenses | 71,000 | 67,000 | 70,000 | 70,000 | 73,000 | 100,000 |
| Ending Net Balance | 83,053 | 77,553 | 71,053 | 64,553 | 55,053 | 18,553 |

**Observations/Assumptions**

Revenue: While many cities dedicate a percentage of taxes to the Street Fund(s), Rock Island has historically used an intergovernmental transfer for capital projects.

Expenses: Transportation costs are projected at a flat rate. The largest increase in expenses is expected to support projects identified on the 6-year plan.

**Water Fund…**

The water fund is a proprietary fund, which means it is allowed to generate the revenues in user fees to cover the normal costs for maintenance and debt service. Therefore, this fund is made up entirely of user fees and connection costs to balance the fund.

**Water Funds 401**

| | 2001 | 2002 | 2003 | 2004 | 2005 | 2006 |
|---|---|---|---|---|---|---|
| | Actual | Actual | Actual | Actual | Actual | Budget |
| Beginning Net | 250,381 | 166,708 | 143,516 | 92,915 | 74,535 | 91,894 |
| Revenue and other | 119,372 | 111,083 | 113,286 | 110,094 | 136,017 | 138,737 |
| Grant/Loan | | | | | | |
| Total Resources | 369,752 | 277,791 | 256,802 | 203,009 | 210,552 | 230,631 |
| Expenses | | | | | | |
| Arsenic Project | | | | | | |
| Administrative & Other | 120,729 | 134,275 | 163,887 | 128,474 | 118,658 | 127,950 |
| Expenditures and Other | 120,729 | 134,275 | 163,887 | 128,474 | 118,658 | 127,950 |
| Excess( Deficit) of Resources Over Uses | 249,023 | 143,516 | 92,915 | 74,535 | 91,894 | 102,681 |
| Non-revenues | | | | | | |
| Non-expenditures | 82,315 | | | | | |
| Ending Net Balance | 166,708 | 143,516 | 92,915 | 74,535 | 91,894 | 102,681 |

**PROJECTIONS**

| | 2007 | 2008 | 2009 | 2010 | 2011 | 2012 |
|---|---|---|---|---|---|---|
| | Projected | Projected | Projected | Projected | Projected | Projected |
| Beginning Net | 102,681 | 114,964 | 141,806 | 106,730 | 72,776 | 39,984 |
| Revenue and other | 141,512 | 144,342 | 147,229 | 150,174 | 153,177 | 156,241 |
| Grant/Loan | | 553,950 | | | | |
| Total Resources | 244,193 | 259,306 | 289,035 | 256,904 | 225,953 | 196,225 |
| Expenses | | | | | | |
| Arsenic Project | | 537,000 | | | | |
| Administrative & Other | 129,230 | 180,500 | 182,305 | 184,128 | 185,969 | 187,829 |
| Total Expenditures and Other | 129,230 | 717,500 | 182,305 | 184,128 | 185,969 | 187,829 |
| Excess( Deficit) of Resources Over Uses | 114,964 | -458,194 | 106,730 | 72,776 | 39,984 | 8,396 |
| Ending Net Balance | 114,964 | 141,806 | 106,730 | 72,776 | 39,984 | 8,396 |

**Observations/Assumptions**

Revenue for the water fund is expected to increase at 2% annually. Expenses, outside of capital improvements, are expected to be 1% annually. Capital projects found in the Water Plan reflect the need to rebuild/improve the city well contaminated with arsenic. It is assumed that the City will contribute 10% of the estimated project costs.

**Analysis**

The City should continue to closely monitor the water needs, especially if the new sewer plant triggers an increase in development of industrial, commercial and residential land uses.

**Sewer Fund…**

Rock Island is seeking federal, state and county funding to develop and implement a new wastewater treatment plant. Some funding is currently in place and draft plans have been completed. Once a location can be secured and an environmental review completed then construction plans can be made.

The City may benefit from creating a construction account.

# APPENDIX B:
# CRITICAL AREA ANALYSIS ~ 2006 UPDATE

**Wetlands…**
The wetlands analysis was completed by reviewing maps and data from the National Wetlands Inventory (USFWS), and the Douglas County Soil Survey (USDA). In addition, there are hydric/hydrologic soils that can be used to improve the defined outline of wetland areas. The partially hydric soil indicated by the hydric soil classification, provided by NRCS, enhance the defined area of wetlands. A hydric soil is a soil that formed under conditions of saturation, flooding, or ponding long enough during the growing season to develop anaerobic conditions. Hydric soils along with vegetation and wetland hydrology are used to define wetlands. Hydrologic soil classification D indicates "a very slow infiltration rate (high runoff potential) when thoroughly wet." (NRCS). Within the Rock Island UGA boundary there are several identified wetlands (the lakes and Columbia River) in the NWI and several areas with hydrologic D soils, although they are rock outcrops. Hydric soils were not found within the UGA.

NWI- Hammond, Pit, Putters and Marina Lakes, plus the Columbia River are shown. Repeated within the PHS polygon data.

NRCS soils hydrologic groups- see report. Map data available.
No hydric soils indicated.

**Hydrologic Group - Dominant Condition**
Hydrologic soil groups are based on estimates of runoff potential. Soils are assigned to one of four groups according to the rate of water infiltration when the soils are not protected by vegetation, are thoroughly wet, and receive precipitation from long-duration storms.

The soils in the United States are placed into four groups A, B, C, and D, and three dual classes, A/D, B/D, and C/D. Definitions of the classes are as follows:

**A.** Soils having a high infiltration rate (low runoff potential) when thoroughly wet. These consist mainly of deep, well drained to excessively drained sands or gravelly sands. These soils have a high rate of water transmission.
**B.** Soils having a moderate infiltration rate when thoroughly wet. These consist chiefly of moderately deep or deep, moderately well drained or well drained soils that have moderately fine texture to moderately coarse texture. These soils have a moderate rate of water transmission.
**C.** Soils having a slow infiltration rate when thoroughly wet. These consist chiefly of soils having a layer that impedes the downward movement of water or soils of moderately fine texture or fine texture. These soils have a slow rate of water transmission.
**D.** Soils having a very slow infiltration rate (high runoff potential) when thoroughly wet. These consist chiefly of clays that have a high shrink-swell potential, soils that have a high water table, soils that have a claypan or clay layer at or near the surface, and soils that are shallow over nearly impervious material. These soils have a very slow rate of water transmission.

Dual hydrologic groups, A/D, B/D, and C/D, are given for certain wet soils that can be adequately drained. The first letter applies to the drained condition, the second to the undrained. Only soils that are rated D in their natural condition are assigned to dual classes.

**Soil Survey: Douglas County, Washington**
**Survey Status: Update**
**Correlation Date: 02/01/1998**
**Distribution Date: 11/21/2002**

| Map Symbol | Soil Name | Rating |
|---|---|---|
| 75 | BURCH LOAM, 3 TO 8 PERCENT SLOPES | B |
| 81 | CASHMERE FINE SANDY LOAM, 8 TO 15 PERCENT SLOPES | B |
| 87 | CASHMONT GRAVELLY SANDY LOAM, 3 TO 8 PERCENT SLOPES | B |
| 90 | CASHMONT SANDY LOAM, 3 TO 8 PERCENT SLOPES | B |
| 100 | CHEVIOT-RALLS-GRINROD COMPLEX, 15 TO 30 PERCENT SLOPES | B |
| 165 | ENTIAT-ROCK OUTCROP-TORRIORTHENTS COMPLEX, 30 TO 70 PERCENT SLOPES | D |
| 168 | ESQUATZEL SILT LOAM, 0 TO 3 PERCENT SLOPES | B |
| 224 | LOGY VERY STONY SANDY LOAM, 3 TO 15 PERCENT SLOPES | B |
| 231 | MALAGA GRAVELLY FINE SANDY LOAM, 0 TO 8 PERCENT SLOPES | B |
| 232 | MALAGA COBBLY FINE SANDY LOAM, 0 TO 8 PERCENT SLOPES | B |
| 268 | POGUE EXTREMELY STONY FINE SANDY LOAM, 3 TO 25 PERCENT SLOPES | B |
| 274 | QUINCY LOAMY FINE SAND, 0 TO 15 PERCENT SLOPES | A |
| 427 | TORRIORTHENTS, VERY STEEP | A |

**Fish and Wildlife Habitat Conservation Areas...**
Washington Department of Fish and Wildlife *"Priority Habitats and Species List"* indicates that there are several priority habitats and species with in the Rock Island UGA. In addition, the area is surrounded by shrub-steppe habitat which has priority species use, such as mule deer and several species of grouse. Fish habitat for resident species exists in all of the lakes and most are stocked annually for recreational opportunities by the Washington Department of Fish and Wildlife. In the Columbia River several fish species, both resident non-salmonids and anadromous salmonids, some of which are ESA listed, occur within the UGA.

*PHS point and polygon*
No heritage points within the UGA. For fish and wildlife polygons, the habitat listed is related to waterfowl concentrations on the Columbia River and Lakes listed in the NWI. Also the islands in the Col. River. NO MAP DATA necessary. 3 listed species occur in the immediate vicinity (steelhead, spring Chinook, and bull trout).

*From the SMP inventory and characterization:*

The following information is taken from the draft Regional Shoreline Master Program update process Rock Island is participating in with Douglas County and the Cities of Bridgeport and East Wenatchee. This excerpt provides data and information related to both wetlands and other fish and wildlife habitat that was generated during the required inventory, analysis and characterization for this RSMP update process.

*"This reach begins at RM 455.9, extends westerly for approximately 1.2 miles, and contains 67.7 acres. There are five wetland types (NWI) in the reach. The habitat rating average of 4.9 is due to the limited existing habitat, vertical and horizontal corridor functions (barriers) and number of roads/railroad. The soils are comprised of 22% geologic hazard as defined under the DCC. The area is predominantly zoned Industrial (78%) with some Public and Rural Resource 2 designated areas. This reach is completely within the Rock Island Urban Growth Area, has the railroad crossing and three high tensile wire bundles across the Columbia River at it's western edge. The uplands are primarily in residential development and industrial areas that breaks up to steep slopes followed by a terrace with dryland and irrigated agricultural uses. The average parcel size is 13.4 acres, with 11.3 acres of public lands. This reach has both Douglas County and City of Rock Island jurisdictional areas. Impervious surfaces cover 6.1% of the area.*

*<u>Rock Island Teacup Area (Oxbow Lakes)</u>*
*The series of lakes that make up this subsection are hydrologically connected to each other and to the Columbia River through groundwater interactions. Putter's Pond is a series of small lakes that includes Pit and Marina Lakes as they are separated only by thin slivers of land (about a car width), much of which has been changing as there is a gravel mining operation that has been deepening the lakes (improving fish habitat and reducing the level of aquatic vegetation) and providing these narrow bands of sand and gravel to improve the recreational values of the lakes.*

*<u>Hammond Lake 1</u>*
*This reach is on the western half of the lake, is 1.2 miles in length, and contains 49.4 acres. The south shore of the lake, along SR28 is included in the Rock Island Reach One description. The shoreline is in a mix of recreational uses, Rock Island Golf Course, low density residential development and a small area of irrigated agriculture. There is one boat launch on the north side of the lake. Much of the residential developed area is housing and yards, and 13.2% soils of a geologic hazard as defined under the DCC. There are five wetland types (NWI) in the reach and comprises 13% of the area and has several non-native species of trees, including Russian Olive. The uplands are primarily in irrigated agriculture on the north east end, and golf course on the rest. The habitat rating average of 1.2 is due to the limited existing habitat, vertical and horizontal corridor functions (barriers) and number or location of developed areas, although the golf course is used extensively by Canada Geese year around. There are four different types of zoning in this reach. Most of the area is zoned as Public (79%), followed by Mixed Recreation (21%), and Rural Resource 20 (<1%), Residential Low (<1%). The average parcel size is 15.3 acres, with 16.1 acres (81%) of public lands (City of Rock Island). Impervious surfaces cover 2.8% of the area (roads).*

*<u>Hammond Lake 2</u>*
*This reach is on the western half of the lake, is 0.6 miles in length, and contains 24.3 acres. The shoreline is in a mix of low density residential development, shrubsteppe and irrigated agriculture. There is one unimproved boat launch on the southeast corner of the lake. Much of the residential*

*developed area is housing and yards, and 27.6% soils of a geologic hazard as defined under the DCC. There are five wetland types (NWI) in the reach and comprises 15% of the area and has several non-native species of trees, including Russian Olive. The uplands are primarily in irrigated agriculture and shrubsteppe, leading to cliffs and talus that are located on the east side of Batterman Road. The habitat rating average of 1.9 is due to the limited existing habitat, vertical and horizontal corridor functions (barriers) and number or location of developed areas. There are five different types of zoning in this reach. Most of the area is zoned as Rural Resource 20 (56%), followed by Residential Low (30%), Commercial Agriculture 10 (8%), Public (5%), and Mixed Recreation (<1%). The average parcel size is 28.5 acres, with 3.5 acres (14%) of public lands (City of Rock Island). Impervious surfaces cover 20.4% of the area (roads).*

*Putter's Pond 1, includes part of Pit Lake*

*This reach includes part of Pit Lake, a juvenile fishing pond. The reach is on the northwestern part of the lake, is 0.5 miles in length, and contains 17.7 acres. The shoreline is in a mix of residential development within the City of Rock Island, and 2.8% soils of a geologic hazard as defined under the DCC. There are three wetland types (NWI) in the reach and comprises 2.8% of the area. The uplands are in residential and commercial development. The habitat rating average of 0.4 reflects those attributes; limited existing habitat, vertical and horizontal corridor functions (barriers) and developed areas. There are four different types of zoning in this reach. Most of the area is zoned as Residential Low (64%), Commercial (18%), Public (18%), and Mixed Recreation (<1%). The average parcel size is 1 acre, with 4.4 acres (25%) of public lands (City of Rock Island). Impervious surfaces cover 28.4% of the area (16.1% roads).*

*Putter's Pond 2, includes part of Pit Lake*

*This reach includes part of Pit Lake, a juvenile fishing pond. The reach is on the north part of the lake, is 0.8 miles in length, and contains 26.2 acres. The shoreline is in a mix of recreational uses and undeveloped area above Saunders Road (but within the urban growth area) and 0.8% soils of a geologic hazard as defined under the DCC. There are two wetland types (NWI) in the reach and comprises 11% of the area. The uplands are primarily in shrubsteppe and irrigated agriculture. The habitat rating average of 1.2 is due to the limited existing habitat, vertical and horizontal corridor functions (barriers) and number or location of developed areas. There are three different types of zoning in this reach. Most of the area is zoned as Mixed Recreation (77%), Public (23%), followed by Residential Low (<1%). The average parcel size is 16.2 acres, with 9.5 acres (36%) of public lands (City of Rock Island). Impervious surfaces cover 26.2% of the area (roads).*

*Putter's Pond 3*

*This reach is on the northeastern part of the lake, is 0.5 miles in length, and contains 16.7 acres (some area shared with Hammond Lake Reach 1). The shoreline is all part of the Rock Island Golf Course and has 3.6% soils of a geologic hazard as defined under the DCC. There are two wetland types (NWI) in the reach and comprises <1% of the area. The uplands are primarily part of Hammond Lake or in shrubsteppe to the northeast. The habitat rating average of 0 is due to no priority habitats, vertical and horizontal corridor functions (barriers), although the golf course is used extensively by Canada Geese year around. The entire area is zoned as Public. The average parcel size is 11.8 acres, with 100% in public lands (City of Rock Island). Impervious surfaces cover 0% of the area.*

*Putter's Pond 4*

*This reach is comprised of rock, sand and gravel- the dividing lanes/peninsulas created between the small lakes making up this area. There are trees and wetland habitat areas intermixed among the shoreline areas of this reach. The length is approximately 0.3 miles and 11.2 acres. Please note the shorelines are shared among the other reaches so the short length is misleading.*

*Putter's Pond 5- includes part of Marina Lake*

*This reach is on the western part of the lake, is 0.4 miles in length, and contains 14.8 acres. The shoreline is in industrial and residential uses, and 0% soils of a geologic hazard as defined under the DCC. The industrial use is the sand and gravel mining operation along the south end of the reach, near SR28. There are three wetland types (NWI) in the reach and comprises 3.3% of the area and has several non-native species of trees, including Russian Olive. The uplands are commercial and residential development (City of Rock Island). The habitat rating average of 0.5 is due to the limited existing habitat, vertical and horizontal corridor functions (barriers) and number or location of developed areas. There are two different types of zoning in this reach. Most of the area is zoned as Tourist Commercial (98%) and Public (2%), followed. The average parcel size is 6.5 acres, with 5.3 acres (36%) of public lands (City of Rock Island). Impervious surfaces cover 30% of the area (21% roads).*

*Putter's Pond 6- includes most of Marina Lake*

*This reach includes most of Marina Lake. The reach is on the western part of the lake, is 0.2 miles in length, and contains 7 acres. The shoreline is in a mix of residential development within the City of Rock Island, and 0% soils of a geologic hazard as defined under the DCC. There are two wetland types (NWI) in the reach and comprises 11.5% of the area. The uplands are in residential and commercial development. The habitat rating average of 1.5 reflects those attributes; limited existing habitat, vertical and horizontal corridor functions (barriers) and developed areas. There are three different types of zoning in this reach. Most of the area is zoned as Residential Low (83%), Commercial (1.4%), and Rural Resource 20 (16%). The average parcel size is 3.8 acres, with 0 acres of public lands. Impervious surfaces cover 11.3% of the area (roads)."*

## Aquifer Recharge Areas…

The Rock Island Area sits over two aquifer types. The eastern third of the area is the aquifer named the "Columbia Plateau basaltic rock aquifers" which is primarily an igneous and metamorphic rock aquifer. The western two-thirds of the area is the aquifer listed is "Other rocks" although in examining the soil characteristics of the tea-cup it appears similar to other areas shown as "Pacific Northwest basin-fill aquifers" which is primarily an unconsolidated sand and gravel aquifer that extends north and south through the Columbia River bottom. This also is supported by the fact that the area is an oxbow of the Columbia River. NO MAP. The entire area is within in the Central Columbia Plateau- Yakima Basin (CCYK) aquifer study area.

Classification

The USGS defines the underlying "Columbia Plateau basin-fill aquifers" as unconsolidated sand and gravel aquifer. Furthermore, Rock Island is within the Central Columbia Plateau- Yakima Basin (CCYK) aquifer study area. These study areas cover the entire UGA.

A potential area of concern are soils with a high (quick) permeability; where potential pollutants could reach an aquifer before being "cleansed" by the natural filtration process of traveling through soil layers or wetland actions (see Permeability Map). Permeability classes for Ksat values are: very rapid 141 - 705, rapid 42 - 141, moderately rapid 14 - 42, moderate 4 - 14, moderately slow 1.4 - 4, slow 0.42 - 1.4, very slow 0.01 - 0.42, impermeable 0.00 - 0.01. There are 464 acres in moderately rapid and 8.8 acres in rapid.

Source- USGS. Part of the National Water Quality Assessment Program- Central Columbia Plateau-Yakima River Basin:

*"During Cycle I of NAWQA, most of the work within the CCYK study unit focused on assessing the status and trends in the quality of freshwater streams and aquifers, and to provide a sound understanding of the natural and human factors that affect the quality of these resources (see Publications).*

*During Cycle II, most of the program's effort will be on examining water quality trends, understanding the mechanisms by which contaminants move through hydrologic systems and characterizing the potential effects of contaminants and other water-quality disturbances on humans and aquatic ecosystems. To describe water quality trends, previous surface water and groundwater sites will be re-examined to characterize decadal changes. To understand the mechanisms affecting the transport of contaminants through the hydrologic system and their potential impacts within the study unit, two topical studies will be performed (see Scientific Topics). These topical studies will include the Agricultural Chemical Transport Study (ACTS) designed to understand the transport of agricultural chemicals through the groundwater and surface water and the Nutrient Enrichment Effects (NEET) study designed to examine the response of aquatic biota to varying levels of nutrients as a result of natural and management conditions. The majority of this work will be conducted between 2002 and 2005."*

NRCS Soil analysis- using permeability characteristics- see permeability report. Map data available.

Soil Type Summary for Rock Island- all soils in UGA.

| **Soil Name** | **Acres** | **Musym** |
|---|---|---|
| BURCH LOAM, 3 TO 8 PERCENT SLOPES | 5.8 | 75 |
| CASHMERE FINE SANDY LOAM, 8 TO 15 PERCENT SLOPES | 3.4 | 81 |
| CASHMONT GRAVELLY SANDY LOAM, 3 TO 8 PERCENT SLOPES | 10.7 | 87 |
| CASHMONT SANDY LOAM, 3 TO 8 PERCENT SLOPES | 6.5 | 90 |
| CHEVIOT-RALLS-GRINROD COMPLEX, 15 TO 30 PERCENT SLOPES | 7.0 | 100 |
| ENTIAT-ROCK OUTCROP-TORRIORTHENTS COMPLEX, 30 TO 70 PERCENT SLOPES | 6.6 | 165 |
| ESQUATZEL SILT LOAM, 0 TO 3 PERCENT SLOPES | 4.6 | 168 |
| LOGY VERY STONY SANDY LOAM, 3 TO 15 PERCENT SLOPES | 0.3 | 224 |
| MALAGA COBBLY FINE SANDY LOAM, 0 TO 8 PERCENT SLOPES | 57.4 | 232 |
| MALAGA GRAVELLY FINE SANDY LOAM, 0 TO 8 PERCENT SLOPES | 423.1 | 231 |
| POGUE EXTREMELY STONY FINE SANDY LOAM, 3 TO 25 PERCENT SLOPES | 65.5 | 268 |
| QUINCY LOAMY FINE SAND, 0 TO 15 PERCENT SLOPES | 159.2 | 274 |

| Soil Name | Acres | Musym |
|---|---|---|
| TORRIORTHENTS, VERY STEEP | 90.6 | 427 |

**Frequently Flooded Areas…**

The City of Rock Island has areas within the community that are subject to periodic flooding, particularly from spring runoff. Through a reference map, this Comprehensive Plan attempts to provide information to the residents of the community as to the location of these potential flood hazards. This map is not intended to represent an engineered study of the precise location of these areas. However, the community has chosen to identify them in order to begin to alleviate the potential for public and private costs associated with flooding situations. Potential protection measures will be developed in the implementation ordinances of the community, with the Frequently Flooded and Natural Drainage Areas Reference Map serving as the guide for either requiring the application of these measures or requiring that an engineering report be completed by the applicant for a project to determine the exact nature of the potential flood hazard area. This map should be updated as any engineering reports are completed, and at such time as flooding occurs which can be documented.

Frequently Flooded Areas are defined as those areas that have a one percent or greater chance of flooding in any given year. These areas may include, but are not limited to, streams (including intermittent ones), rivers, lakes, wetlands and the like.

Flooding is the temporary covering of the soil surface by flowing water from any source, such as streams overflowing their banks, runoff from adjacent or surrounding slopes, inflow from high tides, or any combination of sources. The best guide for frequently flooded areas is the Federal Insurance Rate Map often called FIRM data; it indicates no frequently flooded areas within the UGA boundary. Flooding Frequency Classes (complied by US Dept of Agriculture Natural Resources Conservation Service) are based on the interpretation of soil properties and other evidence gathered during soil survey field work. Flooding frequency class is the number of times flooding occurs over a period of time and expressed as a class. While there are several classes only one occurs in Rock Island (see Frequently Flooding Map).

OCCASIONAL, 0.23 acres, indicates flooding is expected infrequently under usual weather conditions, 5 to 50 percent chance of flooding in any year or 5 to 50 times in 100 years.

RARE, 105 acres, flooding unlikely but possible under unusual weather conditions, 1 to 5 percent change of flooding in any year or nearly 1 to 5 times in 100 years.

FIRMs- map data available. 32.5 acres in Zone A, 193.5 acres in Zone X and 745.8 acres in X500.

THE FOLLOWING INFORMATION WAS COLLECTED IN THE SPRING OF 2006 FROM THE NATURAL RESOURCE CONSERVATION SERVICE

**Flooding Frequency Class - Dominant Soil**
**Beginning Month : January**
**Ending Month : December**

Flooding is the temporary covering of the soil surface by flowing water from any source, such as streams overflowing their banks, runoff from adjacent or surrounding slopes, inflow from high tides, or any combination of sources. Flooding Frequency Class are based on the interpretation of soil properties and other evidence gathered during soil survey field work. Flooding frequency class is the number of times flooding occurs over a period of time and expressed as a class.

The classes are:
**NONE**, no reasonable possibility of flooding, near 0 percent chance of flooding in any year or less than 1 time in 500 years.
**VERY RARE**, flooding is very unlikely but possible under extremely unusual weather conditions, less than 1 percent change of flooding in any year or less than 1 time in 100 years but more than 1 time in 500 years.
**RARE**, flooding unlikely but possible under unusual weather conditions, 1 to 5 percent change of flooding in any year or nearly 1 to 5 times in 100 years.
**OCCASIONAL**, flooding is expected infrequently under usual weather conditions, 5 to 50 percent change of flooding in any year or 5 to 50 times in 100 years.
**FREQUENT,** flooding is likely to occur often under usual weather conditions, more than 50 percent change of flooding in any year or more than 50 times in 100 years, but less than 50 percent change of flooding in all months in any year.
**VERY FREQUENT**, flooding is likely to occur very often under usual weather conditions, more than 50 percent chance of flooding in all months of any year.

**Soil Survey: Douglas County, Washington**
**Survey Status: Update**
**Correlation Date: 02/01/1998**
**Distribution Date: 11/21/2002**

| Map Symbol | Soil Name | Rating |
|---|---|---|
| 75 | BURCH LOAM, 3 TO 8 PERCENT SLOPES | None |
| 81 | CASHMERE FINE SANDY LOAM, 8 TO 15 PERCENT SLOPES | None |
| 87 | CASHMONT GRAVELLY SANDY LOAM, 3 TO 8 PERCENT SLOPES | Rare |
| 90 | CASHMONT SANDY LOAM, 3 TO 8 PERCENT SLOPES | Rare |
| 100 | CHEVIOT-RALLS-GRINROD COMPLEX, 15 TO 30 PERCENT SLOPES | None |
| 165 | ENTIAT-ROCK OUTCROP-TORRIORTHENTS COMPLEX, 30 TO 70 PERCENT SLOPES | None |
| 168 | ESQUATZEL SILT LOAM, 0 TO 3 PERCENT SLOPES | Rare |
| 224 | LOGY VERY STONY SANDY LOAM, 3 TO 15 PERCENT SLOPES | Rare |
| 231 | MALAGA GRAVELLY FINE SANDY LOAM, 0 TO 8 PERCENT SLOPES | None |
| 232 | MALAGA COBBLY FINE SANDY LOAM, 0 TO 8 PERCENT SLOPES | None |
| 268 | POGUE EXTREMELY STONY FINE SANDY LOAM, 3 TO 25 PERCENT SLOPES | None |
| 274 | QUINCY LOAMY FINE SAND, 0 TO 15 PERCENT SLOPES | None |
| 427 | TORRIORTHENTS, VERY STEEP | None |

NRCS soils frequent flooding.- 22.1 acres in rare, the rest none, Map and report data available.

**Permeability Class - Dominant Soil**
**Top Depth : 0**
**Bottom Depth : 0**
**Rating : Slowest**
Soil permeability is the quality of the soil that enables water or air to move through it. Historically soil survey has used permeability as term for saturated hydraulic conductivity (Ksat). Saturated hydraulic conductivity is measured as the amount of water that would move vertically through a unit area of saturated soil in unit time under hydraulic gradient. Ksat is expressed as micrometers per second.

Permeability classes for Ksat values are: very rapid 141 - 705, rapid 42 - 141, moderately rapid 14 - 42, moderate 4 - 14, moderately slow 1.4 - 4, slow 0.42 - 1.4, very slow 0.01 - 0.42, impermeable 0.00 - 0.01.

**Soil Survey: Douglas County, Washington**
**Survey Status: Update**
**Correlation Date: 02/01/1998**
**Distribution Date: 11/21/2002**

| Map Symbol | Soil Name | Rating |
|---|---|---|
| 75 | BURCH LOAM, 3 TO 8 PERCENT SLOPES | 9 |
| 81 | CASHMERE FINE SANDY LOAM, 8 TO 15 PERCENT SLOPES | 28.200001 |
| 87 | CASHMONT GRAVELLY SANDY LOAM, 3 TO 8 PERCENT SLOPES | 28.200001 |
| 90 | CASHMONT SANDY LOAM, 3 TO 8 PERCENT SLOPES | 28.200001 |
| 100 | CHEVIOT-RALLS-GRINROD COMPLEX, 15 TO 30 PERCENT SLOPES | 9 |
| 165 | ENTIAT-ROCK OUTCROP-TORRIORTHENTS COMPLEX, 30 TO 70 PERCENT SLOPES | 28.200001 |
| 168 | ESQUATZEL SILT LOAM, 0 TO 3 PERCENT SLOPES | 9 |
| 224 | LOGY VERY STONY SANDY LOAM, 3 TO 15 PERCENT SLOPES | 28.200001 |
| 231 | MALAGA GRAVELLY FINE SANDY LOAM, 0 TO 8 PERCENT SLOPES | 28.200001 |
| 232 | MALAGA COBBLY FINE SANDY LOAM, 0 TO 8 PERCENT SLOPES | 9 |
| 268 | POGUE EXTREMELY STONY FINE SANDY LOAM, 3 TO 25 PERCENT SLOPES | 28.200001 |
| 274 | QUINCY LOAMY FINE SAND, 0 TO 15 PERCENT SLOPES | 91.699997 |
| 427 | TORRIORTHENTS, VERY STEEP | 28.200001 |

**Geologically Hazardous Areas…**
Geologically hazardous areas are defined as "areas that, because of their susceptibility to erosion, sliding, earthquake or other geologic events, are not suited to the siting of commercial, residential or industrial development consistent with public health or safety concerns". These hazardous

areas pose a threat to the health and safety of citizens when development is sited in areas of significant hazard. In some cases the risk to development from geological hazards can be reduced or mitigated to acceptable levels by engineering design or modified construction practices. However, when the risks can not be sufficiently mitigated, development needs to be prohibited.

**Erosion Hazard Areas...**Erosion is relatively common within certain areas of the City and its UGA, due to hydrologic and geologic characteristics, vegetative conditions, wind and human land use. By minimizing the negative impacts of human land use on these areas, the damage to the natural environment as well as to human-built systems is reduced. The two major factors for erosion are related to wind and water activity.

**Landslide Hazard Areas (Steep Slopes)...**Landslide hazard areas are those areas that are subject to potential slope failure. These include slopes of 15% or greater that are underlain by weak, fine grained unconsolidated sediments, jointed or bedded bedrock, or landslide deposits, including the top and toe of such areas. It is necessary to protect the public from damage due to development on, or adjacent to, landslides; to preserve the scenic quality and natural character of City's hillsides; and to protect water quality. See Slope Map.

Slopes:
NRCS soils Slope (15% and 40%). MAP data and report available.

**Seismic Hazard Areas...**Earthquakes cannot be eliminated. However, there have been no specifically identified areas within the area that would pose significant, predictable hazards to life and property resulting from earthquakes and the associated ground shaking, differential settlement, and/or soil liquefaction.

Predictable hazards to life and property resulting from earthquakes and the associated ground shaking, differential settlement, and/or soil liquefaction are explained in Appendix C. All of Rock Island has soil identified by the *Liquefaction Susceptibility and Site Class Maps for Washington State* classified C-D (229 acres) and B (248 acres) with 229 acres in very low to low liquefaction susceptibility; the remaining rated as bedrock. See also Liquefaction and Earthquake Rating Maps.

**Mine Hazard Areas...**Mine hazard areas are defined as "areas directly underlain by, adjacent to, or affected by mine workings such as adits, tunnels, drifts, or air shafts." Mine hazards may also include steep and unstable slopes created by open mines. There has been little or no historical subsurface mining within the City and its UGA that could have left areas honeycombed with abandoned mine tunnels. Similarly, any open mining is required to have both an approved erosion control plan and an approved reclamation plan that will address steep and unstable slopes.

**Volcanic Hazard Areas...** Volcanic hazard areas are defined as "areas subject to pyroclastic flows, lava flows, and inundation by debris flows, mudflows, or related flooding resulting from volcanic activity." Because there is no valley or river flowing through the community that heads on or near a volcano, there would be no significant damage to people and/or property expected from debris flows, mudflows or related flooding resulting from volcanic activity. The area is generally far enough distant from the nearest volcano (Glacier Peak) to virtually eliminate the hazards of damage to people and/or property resulting from pyroclastic flows, or lateral blasts. However, if

there were to be a significant ash fall east of Glacier Peak, small debris flows would be possible in the rivers and valleys that flow into the Columbia River.

Statewide Volcanic Hazards layer (WDNR)
*Liquefaction Susceptibility and Site Class Maps for Washington State*
by Stephen P. Palmer, Sammantha L. Magsino, Eric L. Bilderback, James L. Poelstra, Derek S. Folger, and Rebecca A. Niggemann Washington State Department of Natural Resources, Division of Geology and Earth Resources

Table X. Site class designations defined in Building Seismic Safety Council (1997).

| **Site class** | **Average shear wave velocity in the upper 100 feet (30m)** | **Rock or soil category** |
|---|---|---|
| A | Greater than 5000 ft/sec (greater than 1520 m/sec) | Hard rock |
| A-B | | Hard rock-rock |
| B | 2500 to 5000 ft/sec (760 to 1520 m/sec) | Rock |
| B-C | | Soft rock |
| C | 1200 to 2500 ft/sec (360 to 760 m/sec) | Very stiff soil or soft rock |
| C-D | | Very to stiff soil |
| D | 600 to 1200 ft/sec (180 to 360 m/sec) | Stiff soil |
| D-E | | Stiff to soft soil |
| E | E less than 600 ft/sec (less than 180 m/sec) | Soft soil |
| F | soils susceptible to potential failure under seismic loading, such as liquefiable soils or sensitive clays, peats, or organic clays thicker than 10 ft (3 m); thick sections of clays; special category indicating a geotechnical evaluation should be performed to assess amplification potential | Geohaz Report |

Hazards layer results
6.0 acres in Site Class B, 6.3 acres in Site Class C and 914 acres in D. 6.0 acres in Bedrock, 861 acres in Low to Moderate, 53.4 acres in Very Low to Low, and 6.3 acres in Very Low liquefaction susceptibility. Map data available.

**Soil Hazard…**The National Resource Conservation Service has identified soils with severe building limitations, *for houses with full basements*, based on soil types/properties [WAC 365-190-080(4)(d)(i)(A)]. There are several such soils with in the City UGA (see Geologic Soil Hazard Map).

Soil hazards are identified by the NRCS for soils with severe building limitations, for houses with full basements, based on soil types/properties [WAC 365-190-080(4)(d)(i)(A)]. Rock Island has 179 acres in Very Limited soils, and 206 acres in Some What limited soils. See Geologic Hazard Building Map. NRCS adds this clarification:

The ratings are based on soil properties, site features, and observed performance of the soils. A high water table, flooding, shrinking and swelling, and organic layers can cause the movement of footings. A high water table, depth to bedrock or to a cemented pan, large stones, slope, and flooding affect the ease of excavation and construction. Landscaping and grading that require cuts and fills of more than 5 or 6 feet are not considered.

NRCS Soil analysis *Severe building soils- houses with full basements*

*"Dwellings with basements are structures built on shallow foundations on undisturbed soil. The ratings are based on soil properties, site features, and observed performance of the soils. A high water table, flooding, shrinking and swelling, and organic layers can cause the movement of footings. A high water table, depth to bedrock or to a cemented pan, large stones, slope, and flooding affect the ease of excavation and construction. Landscaping and grading that require cuts and fills of more than 5 or 6 feet are not considered.*

*The limitations are considered not limiting if soil properties and site features are generally favorable for the indicated use and limitations are minor and easily overcome. A somewhat limiting limitation indicates soil properties or site features are not favorable for the indicated use and special planning, design, or maintenance is needed to overcome or minimize the limitations. A very limiting limitation indicates soil properties or site features are so unfavorable or so difficult to overcome that special design, significant increases in construction costs, and possibly increased maintenance are required. Special feasibility studies may be required where the soil limitations are very limiting."*

**Soil Survey: Douglas County, Washington**
**Survey Status: Update**
**Correlation Date: 02/01/1998**
**Distribution Date: 11/21/2002**

| Map Symbol | Soil Name | Rating | Dominant Component(s) and Reason(s) |
|---|---|---|---|
| 75 | BURCH LOAM, 3 TO 8 PERCENT SLOPES | Not limited | |
| 81 | CASHMERE FINE SANDY LOAM, 8 TO 15 PERCENT SLOPES | Somewhat limited | Component - CASHMERE (85%)<br>• Slope |
| 87 | CASHMONT GRAVELLY SANDY LOAM, 3 TO 8 PERCENT SLOPES | Very limited | Component - CASHMONT (85%)<br>• Flooding |
| 90 | CASHMONT SANDY LOAM, 3 TO 8 PERCENT SLOPES | Very limited | Component - CASHMONT (85%)<br>• Flooding |
| 100 | CHEVIOT-RALLS-GRINROD COMPLEX, 15 TO 30 PERCENT SLOPES | Very limited | Component - CHEVIOT (40%)<br>• Slope<br>• Content of large stones<br>Component - RALLS (30%)<br>• Slope |

| Map Symbol | Soil Name | Rating | Dominant Component(s) and Reason(s) |
|---|---|---|---|
| | | | • Shrink-swell<br>Component - GRINROD (20%)<br>• Slope<br>• Depth to hard bedrock |
| 165 | ENTIAT-ROCK OUTCROP-TORRIORTHENTS COMPLEX, 30 TO 70 PERCENT SLOPES | Very limited | Component - ENTIAT (50%)<br>• Slope<br>• Depth to soft bedrock |
| 168 | ESQUATZEL SILT LOAM, 0 TO 3 PERCENT SLOPES | Very limited | Component - ESQUATZEL (85%)<br>• Flooding |
| 224 | LOGY VERY STONY SANDY LOAM, 3 TO 15 PERCENT SLOPES | Very limited | Component - LOGY (85%)<br>• Flooding<br>• Slope |
| 231 | MALAGA GRAVELLY FINE SANDY LOAM, 0 TO 8 PERCENT SLOPES | Not limited | |
| 232 | MALAGA COBBLY FINE SANDY LOAM, 0 TO 8 PERCENT SLOPES | Not limited | |
| 268 | POGUE EXTREMELY STONY FINE SANDY LOAM, 3 TO 25 PERCENT SLOPES | Somewhat limited | Component - POGUE (85%)<br>• Slope |
| 274 | QUINCY LOAMY FINE SAND, 0 TO 15 PERCENT SLOPES | Not limited | |
| 427 | TORRIORTHENTS, VERY STEEP | Very limited | Component - TORRIORTHENTS (80%)<br>• Slope<br>• Content of large stones |
| 458 | WATER | Not Rated | Component - WATER (100%)<br>• Not Rated; Slope<br>• Not Rated; Fragments > 75mm |

Severe building limitation- 126.6 acres in Very limited, and 68.9 acres in Some What limited (total 841). See Report, Map data available. [WAC…(4)(d)(i)(A)]

# Rock Island
# Teacup Planning Area
# Existing Landuse Inventory
# 2002

- City Limits
- Urban Growth Area
- Water
- Roads
- Utility Corridor
- Agriculture
- Commercial
- Industrial
- Manufactured Home
- Multi Family
- Not in Inventory
- Public
- Quasi Public
- ROW
- Recreation
- Residential
- Vacant
- Water
- Parcels

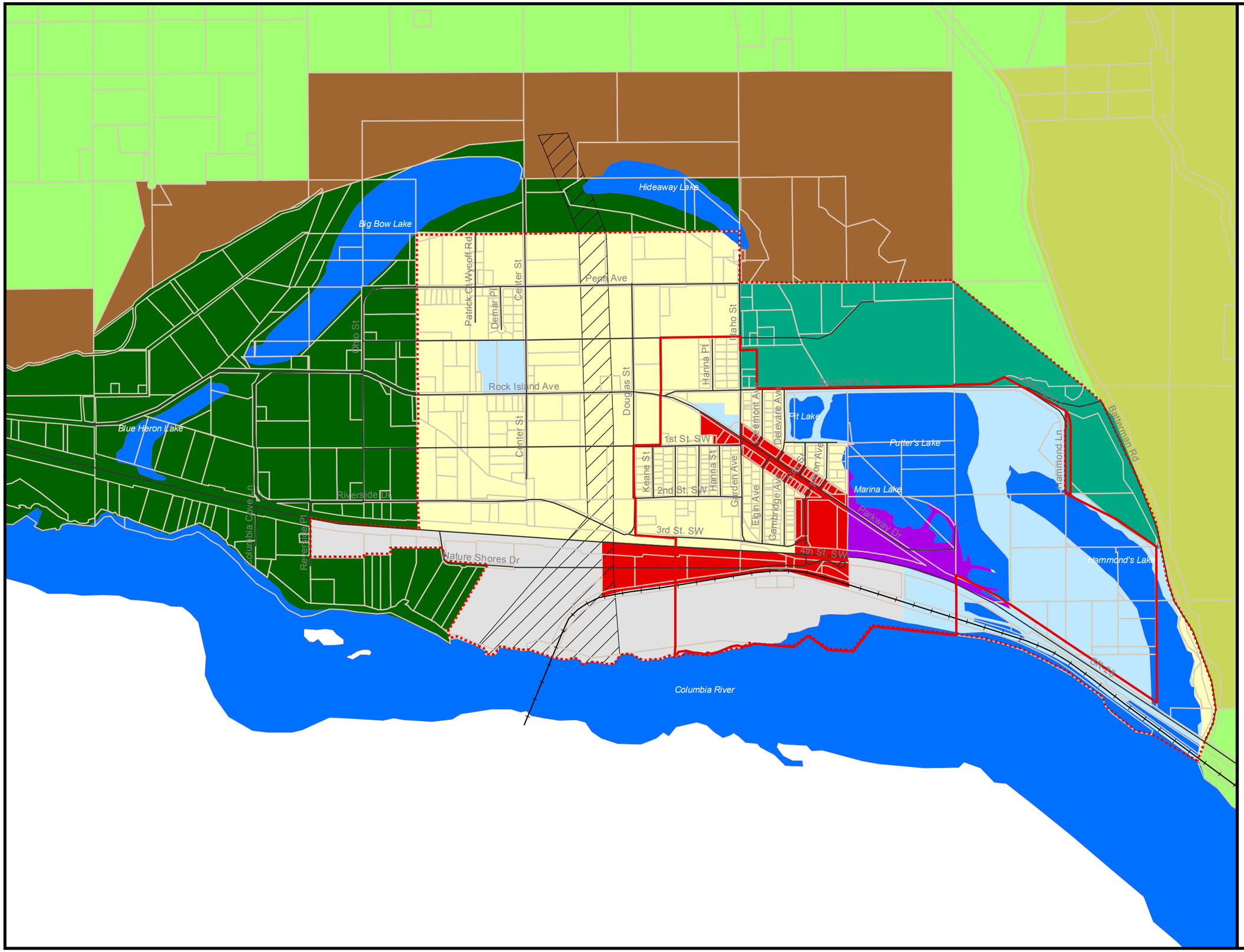
0 800 1,600

Feet

1:12,000

Disclaimer:
Data is from the best available source; however, it is subject to change and should not be used as an accurate measurement. February 2007

ALLIANCE CONSULTING GROUP, INC.




# City of Rock Island Teacup Planning Area Land Use Designations

## Legend

- City Limits
- Urban Growth Area
- Parcels
- Water
- Utility Corridor
- Roads
- Railroads

### Land Use Designations

- Residential
- General Commercial
- Tourist Commercial
- Recreation Mixed Use
- Industrial
- Public

### County Land Use Designations

- Commercial Agriculture 10
- Rural Resource 2
- Rural Resource 5
- Rural Resource 20

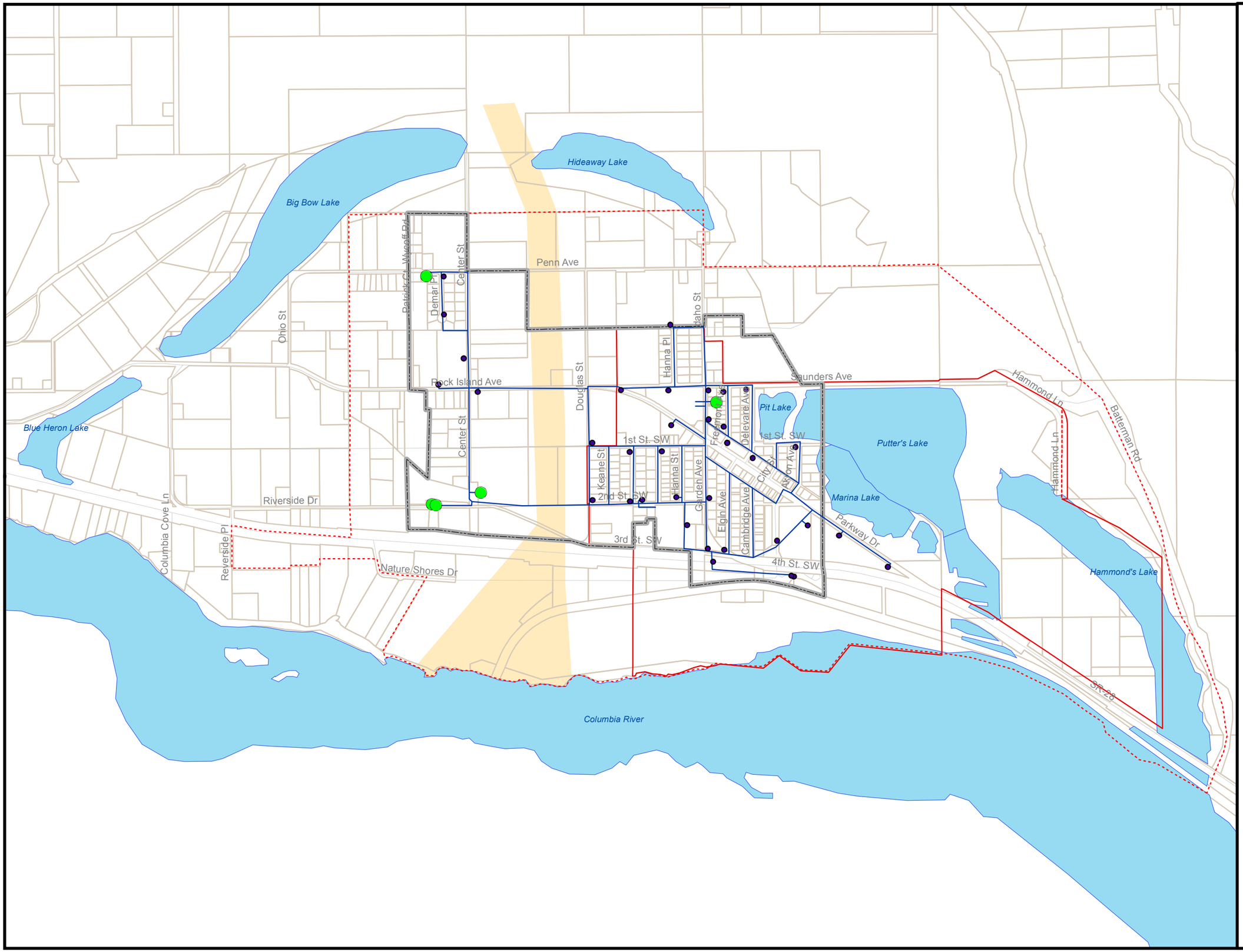
0 1,100 2,200

Feet

1:13,200

Disclaimer:
Data is from the best available source; however, it is subject to change and should not be used as an accurate measurement. Alliance Consulting Group, Inc. July 2007

# Rock Island
# Teacup Planning Area
# Water System Map




- Water Hydrants
- Wells/Reservoirs
- Water Lines
- Water Service Area
- City Limits
- Urban Growth Area
- Roads
- Water
- Parcels
- Utility Corridor

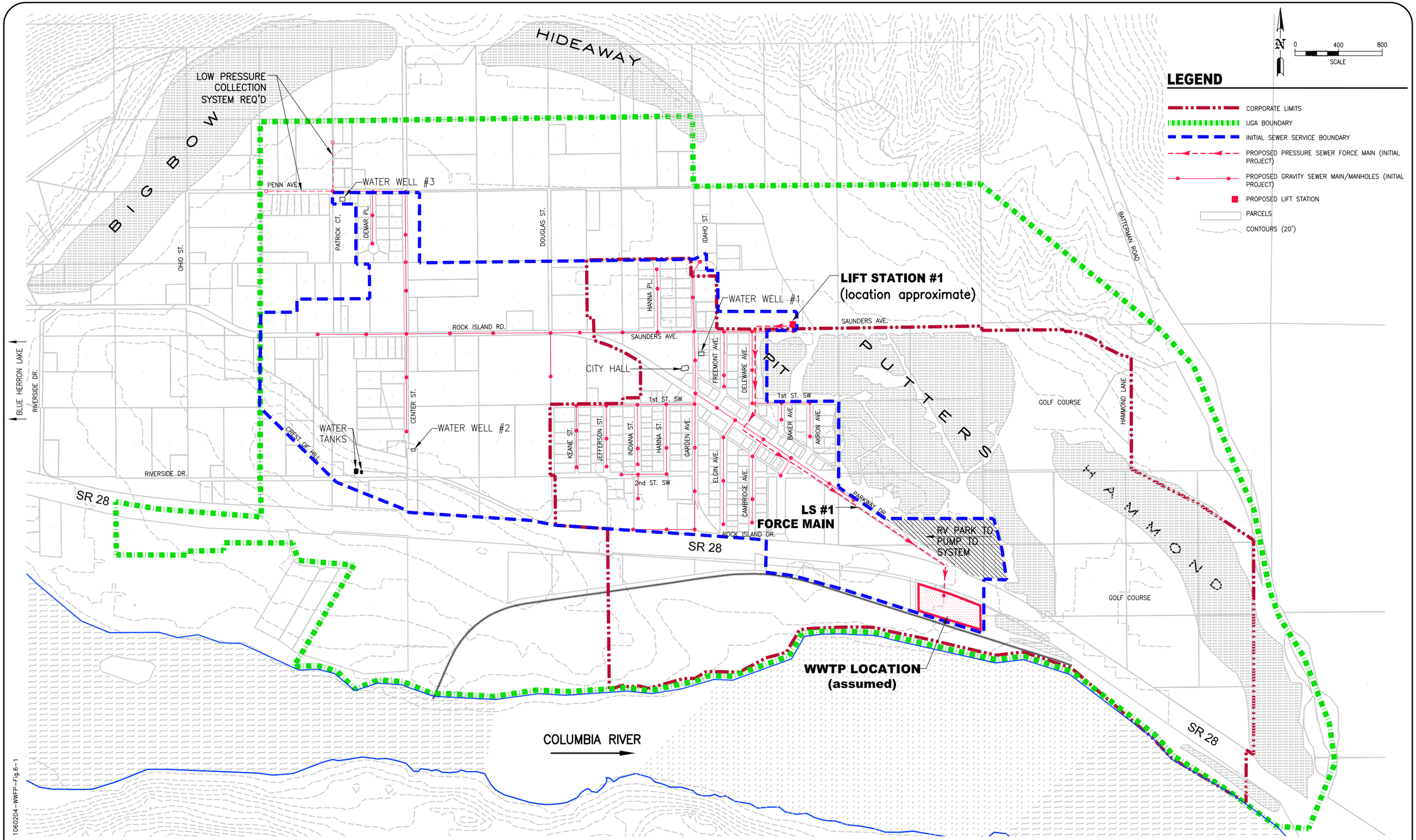
0 800 1,600

Feet

1:12,000

Disclaimer:
Data is from the best available source; however, it is subject to change and should not be used as an accurate measurement. February 2007

ALLIANCE CONSULTING GROUP, INC.




1060204-WWFP-Fig.6-1

| NO | DATE | BY | CKD. | APP. | REVISIONS |
|---|---|---|---|---|---|
| | | | | | |

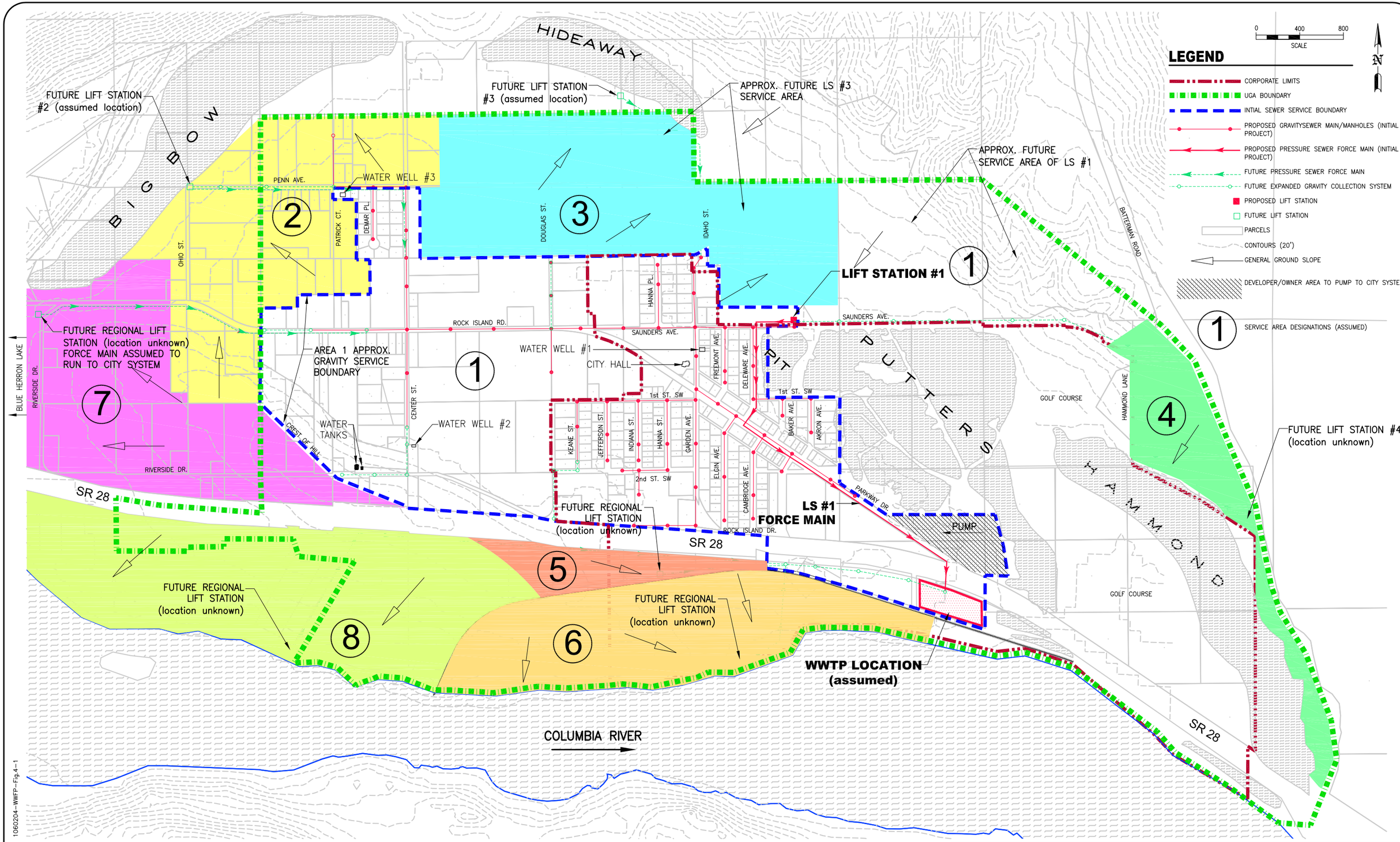
SCALE: AS-SHOWN
DESIGNED: -
DRAWN: TVP
CHECKED:
APPROVED:
PROJ. NO.: 106-02-04
DATE: 02/24/06

VARELA AND ASSOCIATES, INC.
ENGINEERING AND MANAGEMENT

**CITY OF ROCK ISLAND, WASHINGTON**
WASTEWATER FACILITIES PLAN

PROPOSED INITIAL SANITARY SEWER COLLECTION SYSTEM

FIGURE
**6-1**




1060204-WWFP-Fig.4-1

| NO | DATE | BY | CKD. | APP. | REVISIONS |
|---|---|---|---|---|---|
| | | | | | |

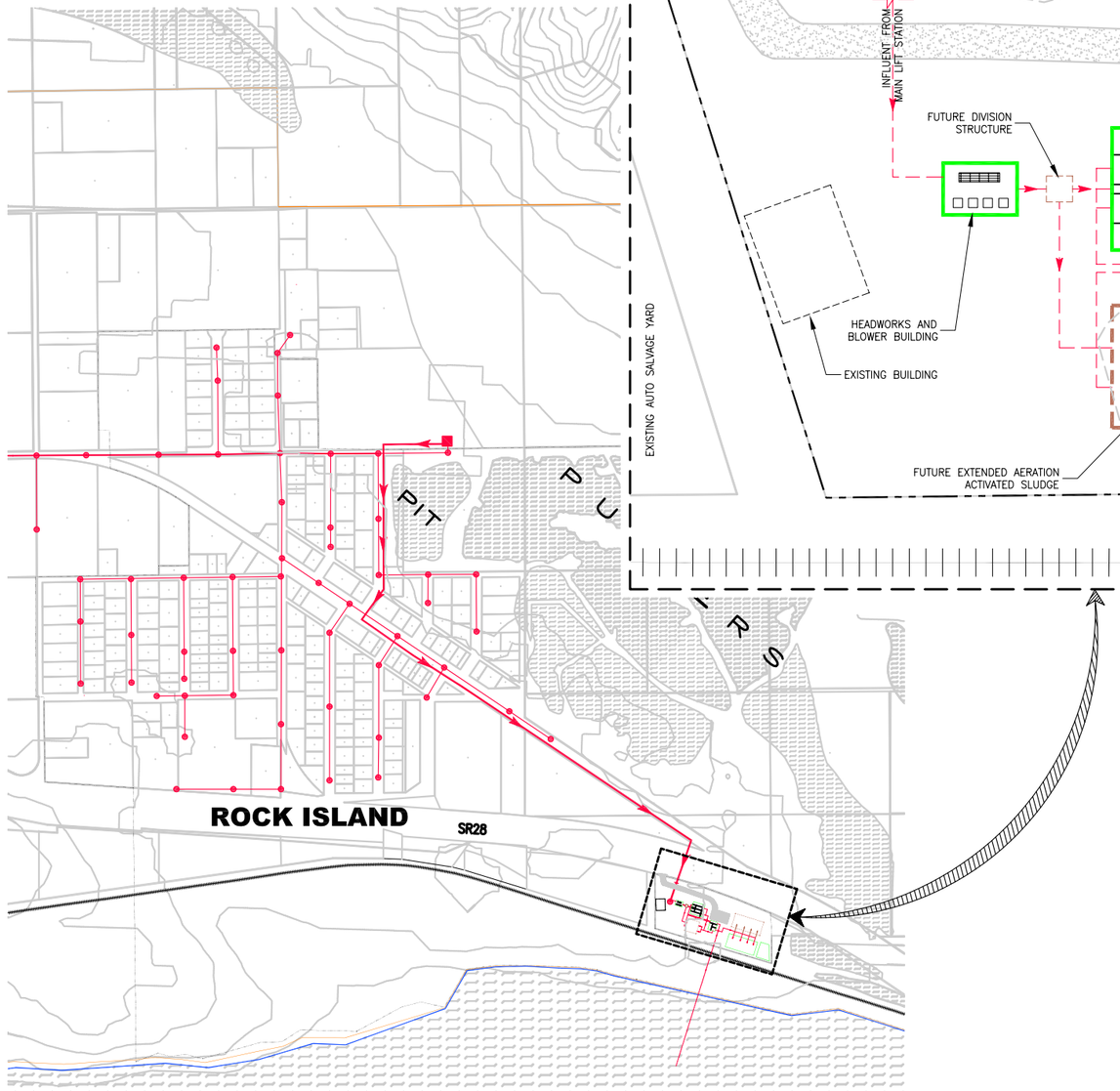
SCALE: AS-SHOWN
DESIGNED: -
DRAWN: TVP
CHECKED:
APPROVED:
PROJ. NO.: 106-02-04
DATE: 02/24/06

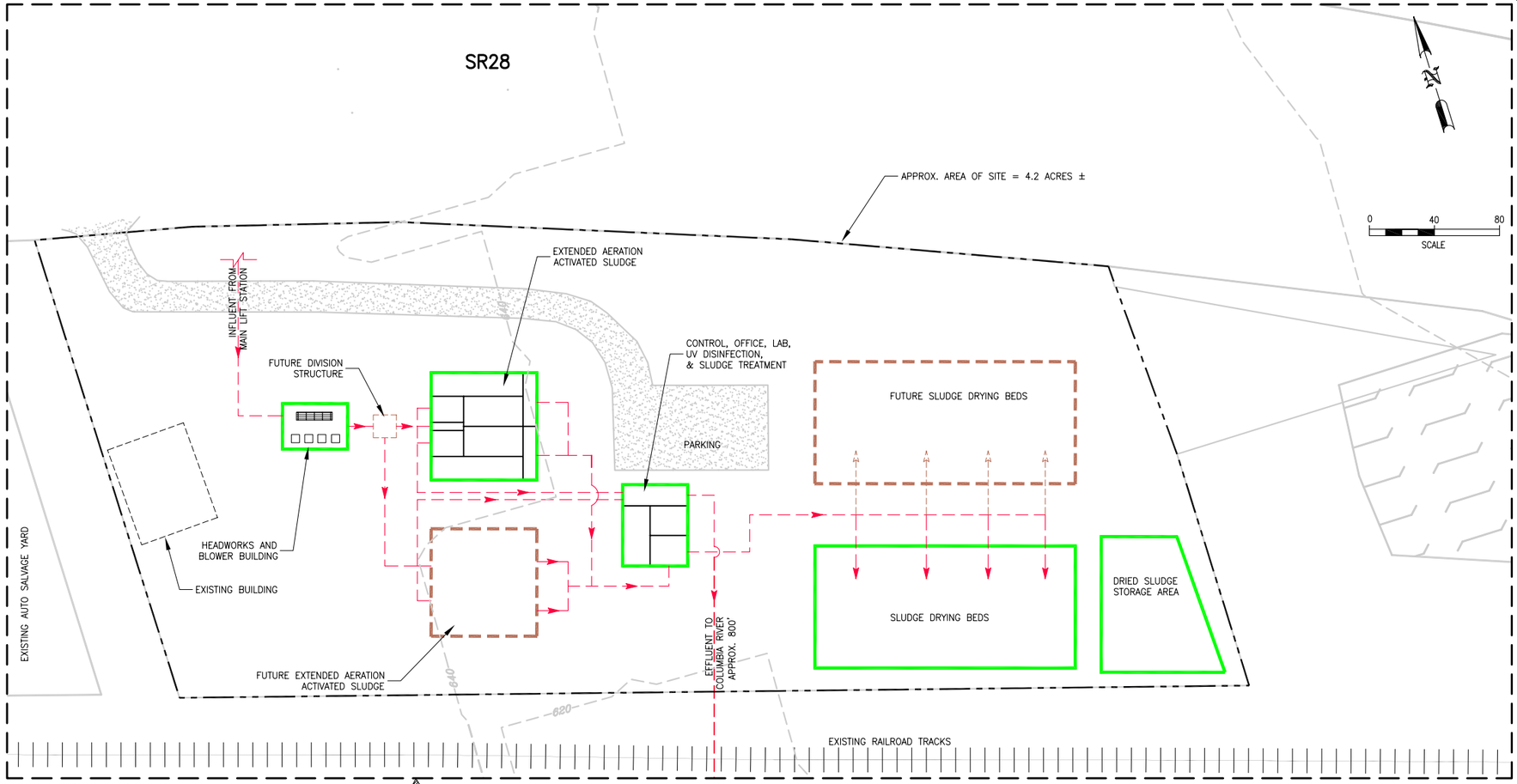
**VARELA AND ASSOCIATES, INC.**
ENGINEERING AND MANAGEMENT

**CITY OF ROCK ISLAND, WASHINGTON**
WASTE WATER FACILITIES PLAN

SANITARY SEWER COLLECTION SYSTEM SERVICE AREAS

FIGURE
**4-1**




## PRELIMINARY SITE LAYOUT

### NOTES:

1. DESIGN FLOW (20–YEAR) = 225,000 GPD; FUTURE = 450,000 GPD

2. PRELIMINARY LAYOUT BASED ON EXTENDED AERO–MOD CONFIGURATION OF EXTENDED AERATION ACTIVATED SLUDGE.

3. PRELIMINARY TREATMENT – ROTARY FINE SCREEN. DISINFECTION BY UV. SLUDGE HANDLING – CHEMICAL ADDITION, GRAVITY DRAIN, SLUDGE DRYING BEDS.

4. PROPOSED SITE – WSDOT MAINTENANCE SITE; APPROX. 4.2 ACRES

1060204–WWFP–Fig.6–2

| NO | DATE | BY | CKD. | APP. | REVISIONS |
|---|---|---|---|---|---|

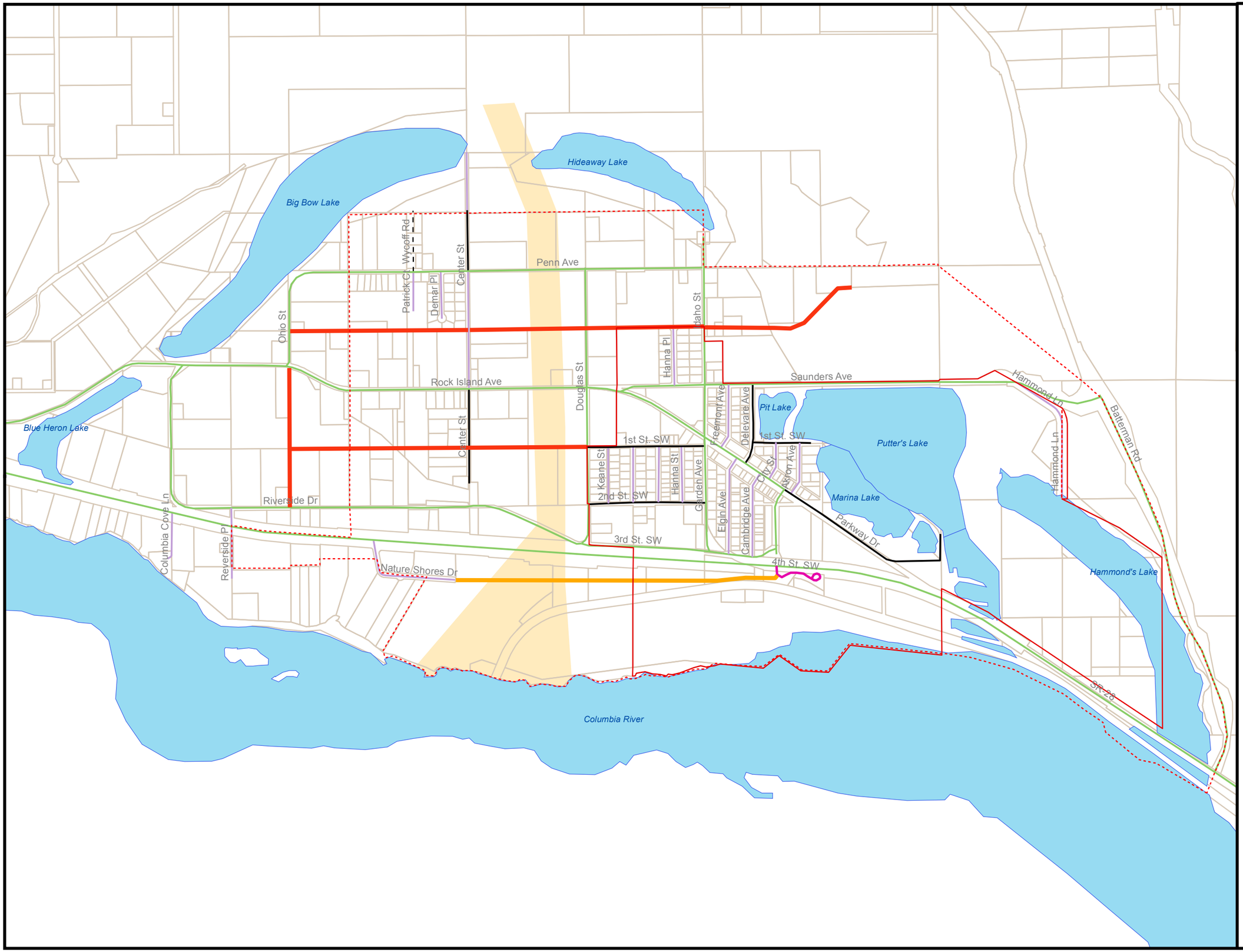
SCALE: AS–SHOWN
DESIGNED: DVC/JCP
DRAWN: TVP
CHECKED:
APPROVED:
PROJ. NO.: 106–02–04
DATE: 02/24/06

VARELA AND ASSOCIATES, INC.
ENGINEERING AND MANAGEMENT

**CITY OF ROCK ISLAND, WASHINGTON**
WASTE WATER FACILITIES PLAN

PRELIMINARY TREATMENT PLANT SITE LAYOUT

FIGURE
**6-2**




# Rock Island Teacup Planning Area Transportation Map

- City Limits
- Urban Growth Area
- Utility Corridor
- Parcels
- Water
- Arterials
- Collector
- Local Access
- Local Access-Commercial/Industrial
- Future Collector
- Future Local Access Commercial/Industrial
- Private

0 900 1,800

Feet

1:12,000

Disclaimer:
Data is from the best available source; however, it is subject to change and should not be used as an accurate measurement. February 2007

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# Rock Island Teacup Planning Area Geologic Hazards: Building with Basements

- City Limits
- Urban Growth Area
- Water
- Roads
- Parcels
- Somewhat limited
- Very limited

0 800 1,600

Feet

1:12,000

Disclaimer:
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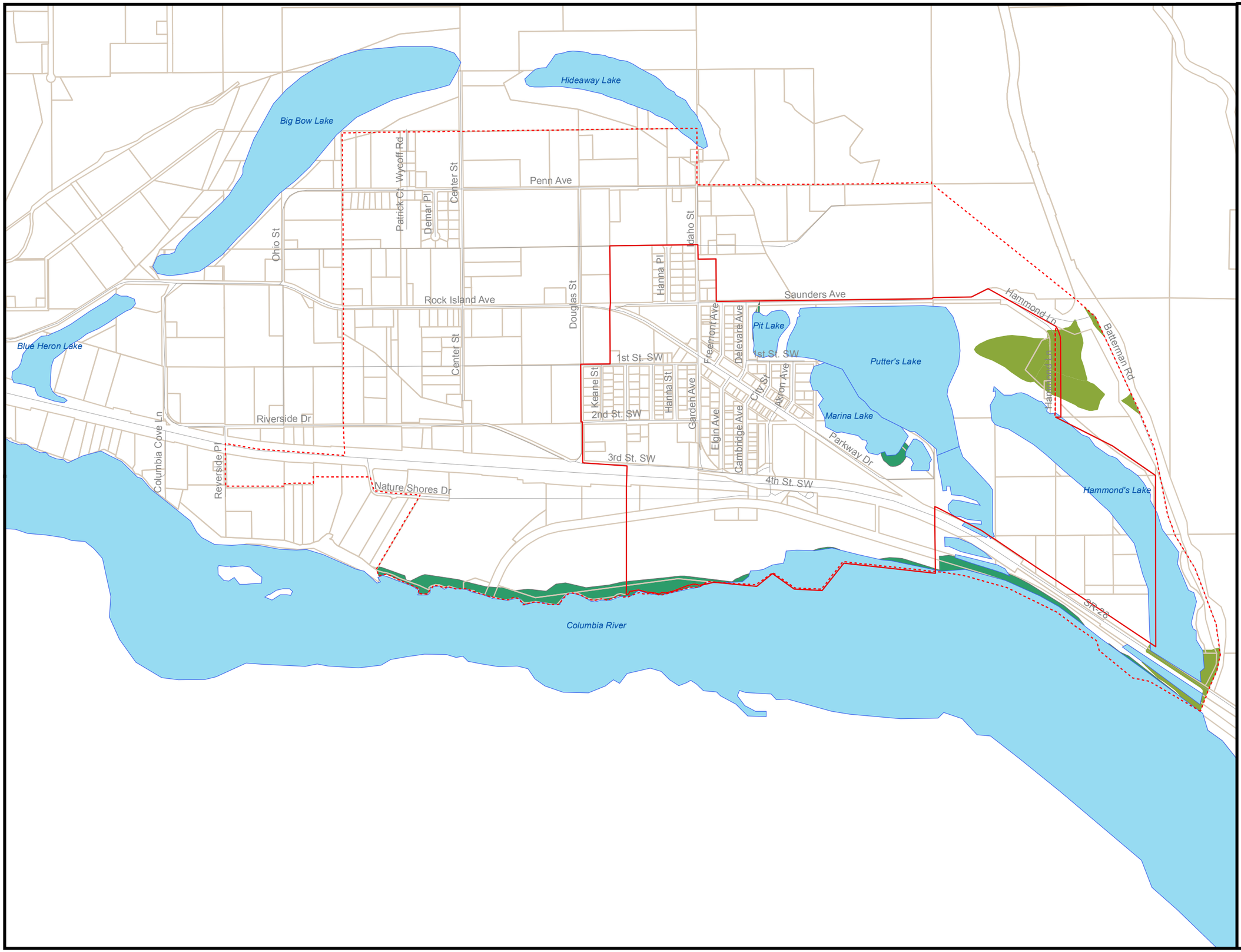
# Rock Island Teacup Planning Area Soil Flood Data & Federal Insurance Rating Map




- City Limits
- Urban Growth Area
- Water
- Roads
- Parcels
- Soils: Rare Flood Area
- 100-year Flood Area

0 800 1,600

Feet

1:12,000

Disclaimer:
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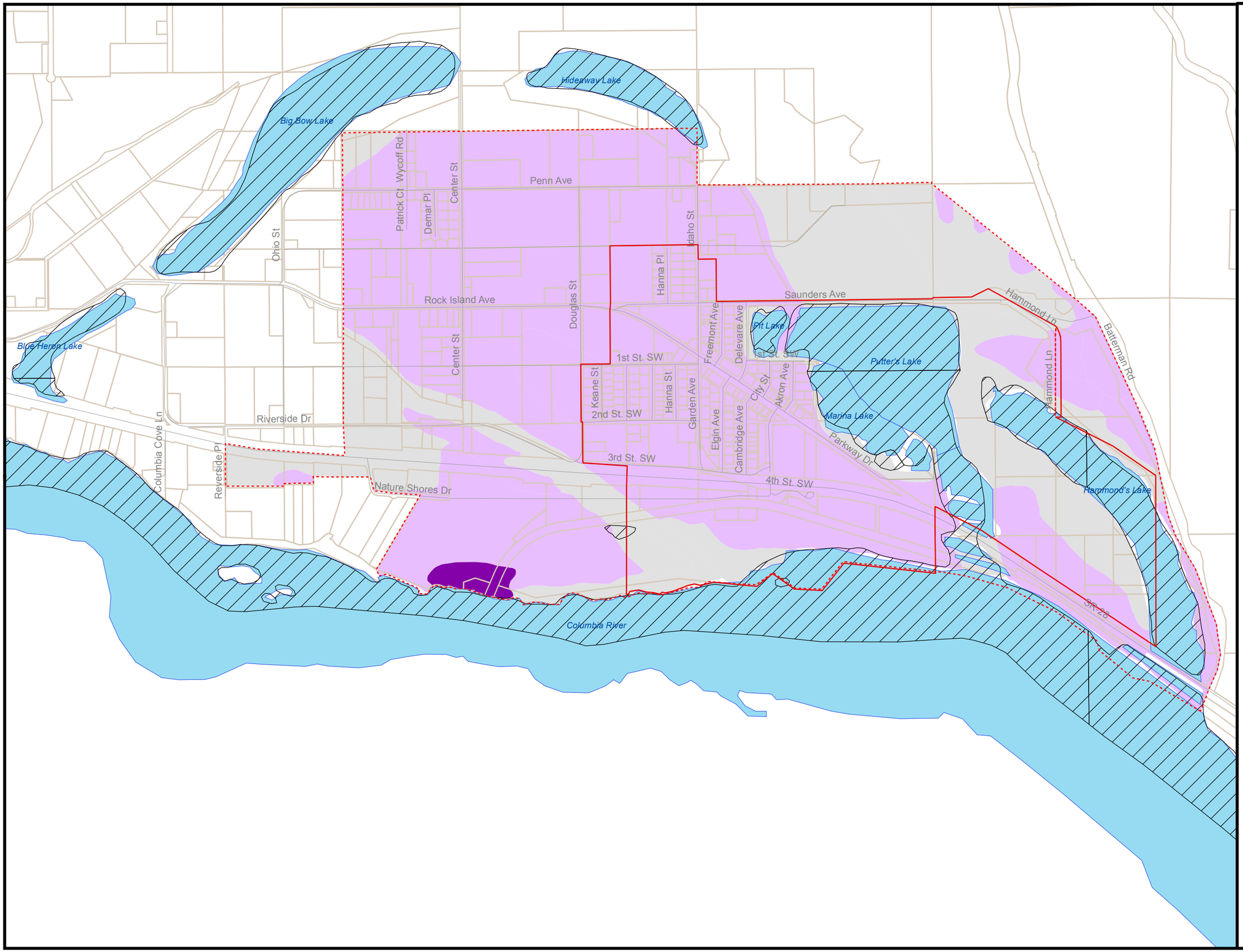
# Rock Island Teacup Planning Area Hydrologic Soils & Wetland Map




- City Limits
- Urban Growth Area
- Water
- Roads
- Parcels
- National Wetlands Inventory
- A: High Infiltration
- B: Moderate Infiltration
- D: Low Infiltration

0 800 1,600

Feet

1:12,000

Disclaimer:
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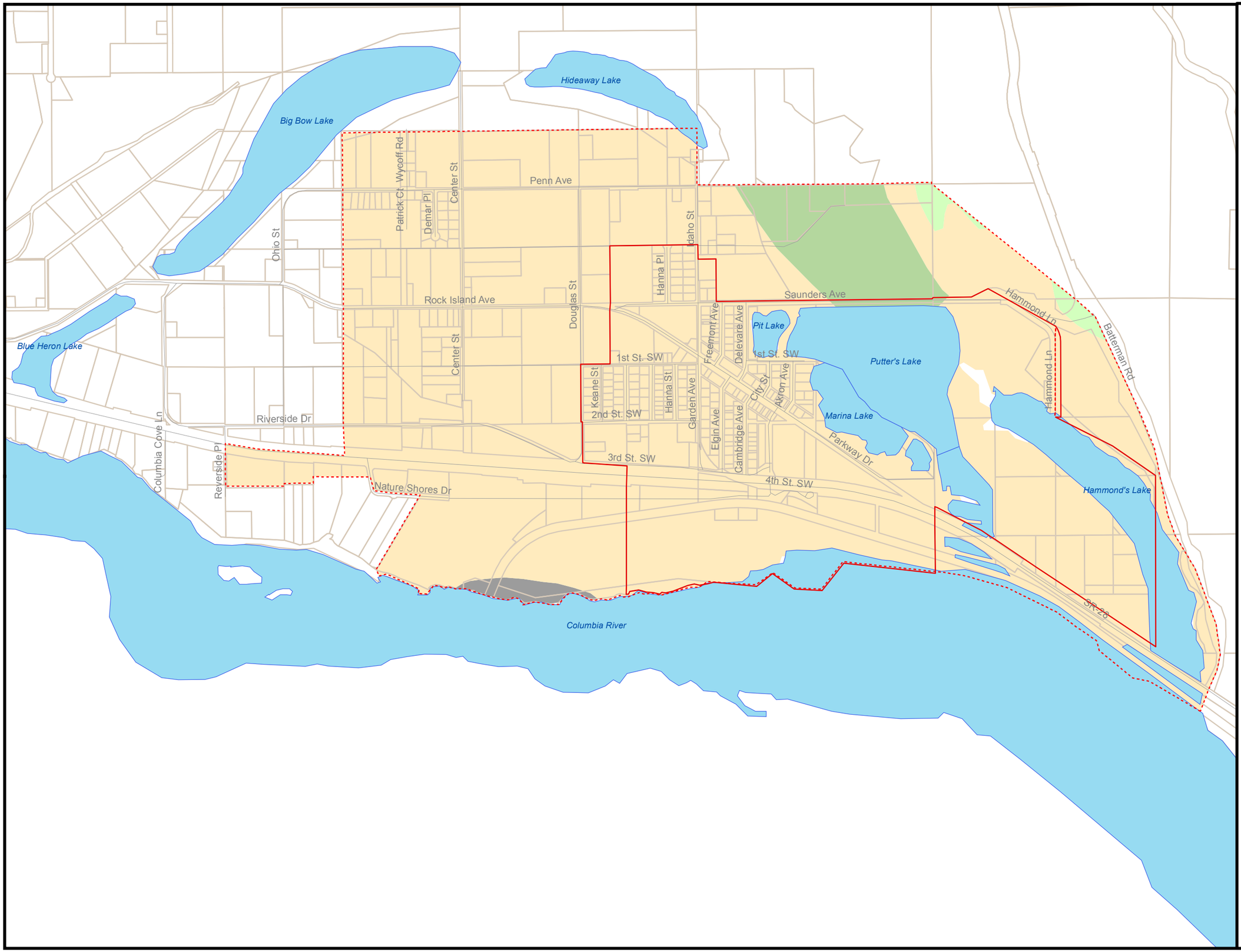
# Rock Island
# Teacup Planning Area
# Liquefaction Map




- City Limits
- Urban Growth Area
- Water
- Roads
- Parcels
- bedrock
- very low
- very low to low
- low to moderate

0 800 1,600

Feet

1:12,000

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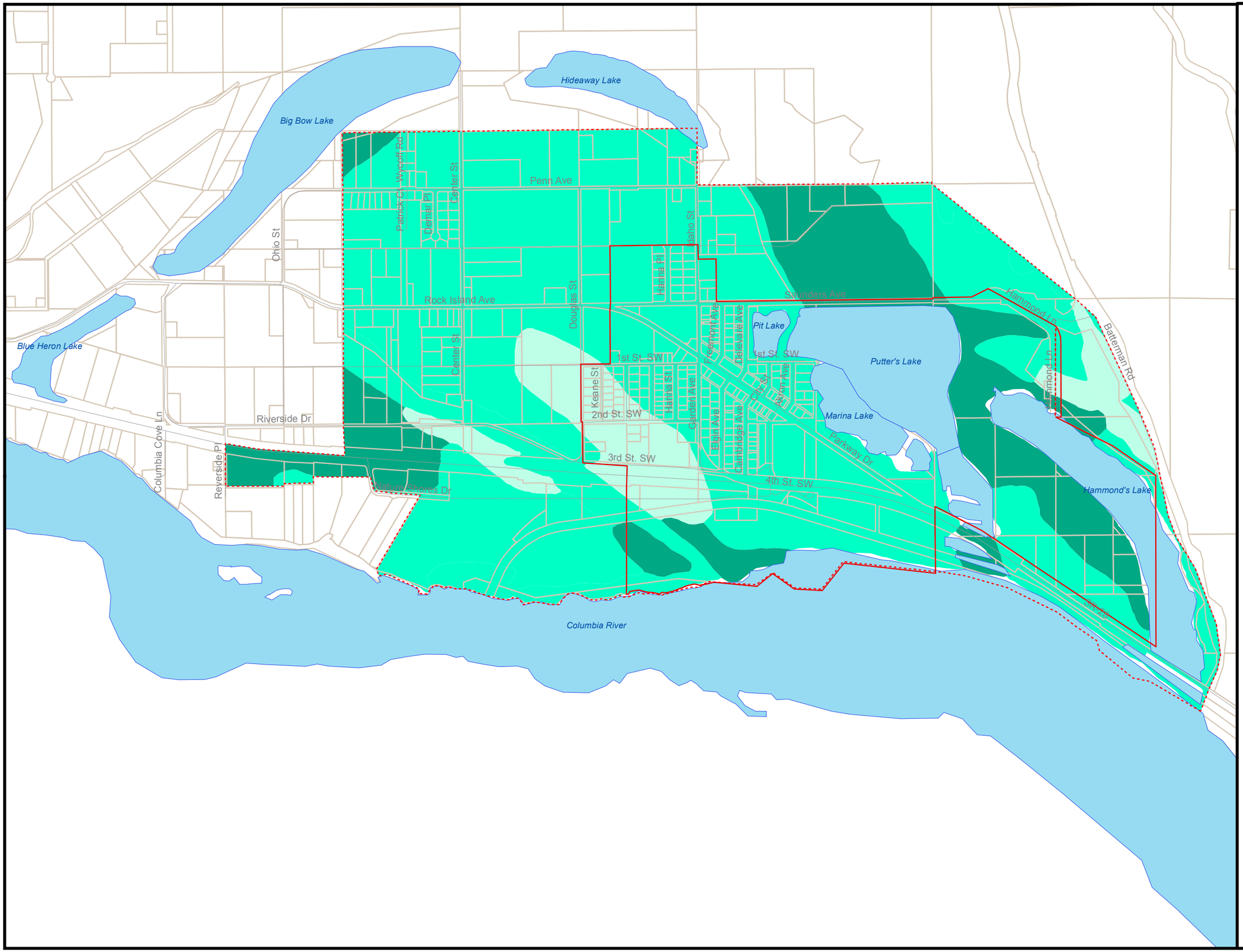


Rock Island
Teacup Planning Area
Soil Permeability Rate

- City Limits
- Urban Growth Area
- Water
- Roads
- Parcels
- 9: Moderate
- 28.2: Moderately Rapid
- 91.7: Rapid

0 800 1,600
Feet

1:12,000

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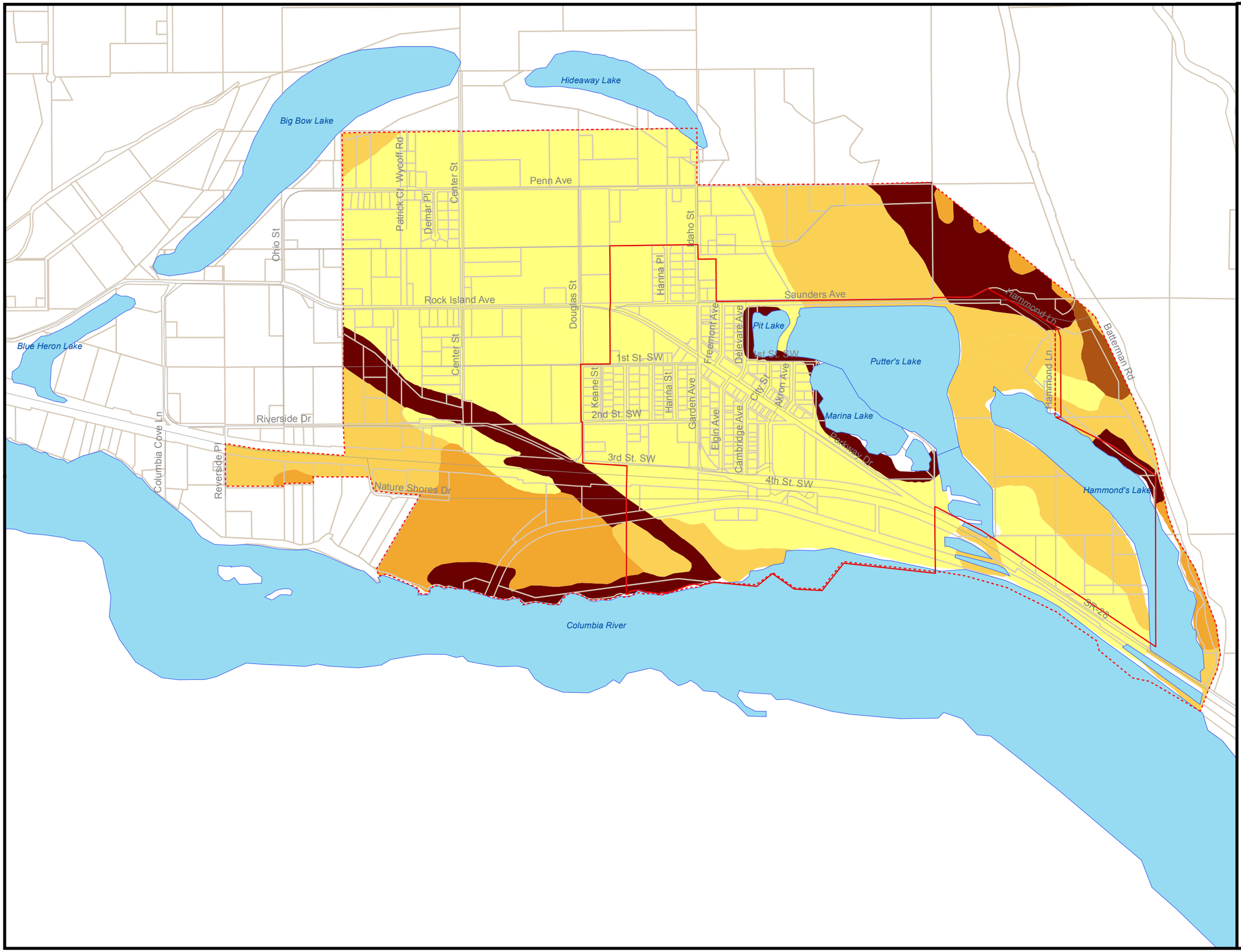


Rock Island
Teacup Planning Area
Slope Map

- City Limits
- Urban Growth Area
- Water
- Roads
- Parcels
- 2 - 4 Slope
- 5 - 9 Slope
- 10 - 14 Slope
- 15 - 24 Slope
- 25-50 Slope

0 800 1,600
Feet

1:12,000

Disclaimer:
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